ORIGINAL PLAN – JUNE 1991

PLAN UPDATED – JUNE 1997

PLAN SUBMITTED TO DEQ – JULY 2004

PLAN REVISED – MAY 2005

FINAL REPORT

COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN

CITY OF DANVILLE

VIRGINIA

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BRIEF SUMMARY

The following Comprehensive Solid Waste Management Plan for the City of Danville was adopted in 1991, updated in 1997 and again in June 2004 as required by the amended Solid Waste Regulations. The 2004 plan update extends the current planning period 20-years through 2024. Since 1990, the City has made significant progress in its reduce, reuse, and recycle efforts. Some of the more significant accomplishments are as follows:

RECYCLING

- 100% of the arboreal material has been removed from the waste stream and is currently being processed by the Danville Composting Facility. The facility is processing approximately 10,700 tons of loose leaves, yard waste, grass clippings, etc. per year into compost and is providing it free to area residents. The facility's compost is in high demand during spring and fall and hundreds of pickup trucks per week can be seen picking up compost and mulch. In addition, the facility maintains a firewood stock pile which also is free to area residents and is very busy during winter months.
- Drop-off Recycling Program

DISPOSAL

- The City's long-term disposal has been addressed by closing the landfill, adjacent to the airport, and entering a long-term contract with Waste Management for operation of a local Transfer Station for solid waste. At a cost of $6.00 per ton in 1990, the annual tonnage at the landfill was 113,168 tons. At the Transfer Station cost of $33.89 per ton in 1994, the amount disposed of dropped dramatically to 68,728 tons. It is anticipated that most of the decreased tonnage was reduced, reused, or recycled. The current cost per ton at he Transfer Station is $42.87.
- The City implemented weekly curbside collection of yard waste. Yard waste is collected separately and is recycled at the Compost Facility into compost/mulch.
- The City has also created innovative recycling programs such as the curbside white goods collection that has diverted 100% of the white goods from the Transfer Station.
- The corrugated cardboard collection program which was started by the City and then transferred to First Piedmont as a private enterprise.

FUNDING

- The long-term funding and financing of the City's Solid Waste Program was established when the Solid Waste Enterprise Fund was created in 1990. The fund established the Solid Waste fee which is charged on each residential utility bill. The fee has been amended over the years to cover 100% of the Solid Waste costs for all collection, disposal, and recycling operating and capital costs. It is reviewed annually for accuracy.
- In 1990, the Comprehensive Solid Waste Management Plan has guided the City to successfully meet the 25% recycling requirement.

MISCELLANEOUS

- Comprehensive Litter Collection Program

1.0 Introduction

1.1 Purpose of Plan

Effective July 1, 1989, the Virginia General Assembly enacted Section 10.1-1411 of the Virginia Waste Management Act which mandated the development and implementation of local solid waste management plans. These regulations required each local government to recycle 10 percent of the solid waste stream by December 31, 1991; 15 percent by the end of 1993; and 25 percent by the end of 1995. Pursuant to this legislative action, the Virginia Department of Waste Management adopted regulations specifying waste management program and plan requirements.

Effective August 1, 2001, the Virginia Waste Management Board amended the Regulations for Solid Waste Management Planning to require additional plan items such as consideration of the Waste Management Hierarchy, updated Recycling Program Activities, and a Methodology to monitor the amount of Solid Waste of each type produced and recycled within the area of the Solid Waste Management Plan.

A complete revised Solid Waste Management Plan in compliance with the 2001 revisions is required to be submitted to the department no later than July 1, 2004.

In addition to demonstrating how the Virginia recycling mandates will be met, each plan must include:

1. An integrated waste management strategy giving preference to alternatives in the following order of priority: source reduction, reuse, recycling, waste-to-energy incineration, incineration for volume reduction, landfilling;
2. Discussion as to how the plan will be implemented;
3. Solid waste management objectives;
4. A description of stages of progress toward meeting the objectives and a schedule for their accomplishment;
5. A description of funding and resources necessary;
6. A strategy for providing the necessary funds and resources;

7. A strategy for public education and information on recycling;
8. Consideration of public / private partnerships and private sector participation, with existing private recycling operations incorporated in the plan and their expansion encouraged;
9. Describe how 25% recycling rate requirement will be met or exceeded, including calculations methodology;
10. Recycling calculation methodology;
11. All known solid waste disposal sites; and
12. Methodology to monitor amount of each types of waste.

In response to these legal and regulatory requirements and to ensure sound waste management decision-making, the City of Danville developed the 1990 comprehensive waste management plan. The plan was revised in 1997 and again in 2004. The plan will be utilized as a road map for updating existing and developing new solid waste management services, facilities, and programs for the current planning period which extends 20-years to 2024.

1.2 Planning Process

To assist the City of Danville in developing the original plan, the City Public Works Department engaged Hazen and Sawyer, P.C., an environmental engineering and consulting firm, to evaluate available waste management alternatives, assess their appropriateness for implementation in Danville, and to prepare the waste management plan draft and final reports. Input from Danville City staff and representatives from the general public and business community was obtained throughout the course of this project to revise the original plan.

1.3 Solid Waste Advisory Committee

To provide for citizen input in the planning process and to give the City guidance and assistance in implementing recycling, the City established the Solid Waste Advisory Committee. The Committee is comprised of representatives from business and industry, non-profit organizations, and private citizens. The Committee was directed to help City officials make sound decisions on solid waste management issues and to

provide recommendations for current and future solid waste management programs. A listing of Advisory Committee members and their affiliations is provided in Appendix A.

Copies of the first draft of the Waste Management Plan were distributed to all Advisory Committee members. The Committee met to discuss the plan and make recommendations for its revision. The revised plan incorporating Committee input was distributed for additional Committee member review. This draft was approved by the Committee for submittal to the Danville City Council. The Council met to approve the draft for public review and comment. A copy of the City Council Resolution adopting the revised plan is in Appendix B.

1.4 Public Hearing and Plan Approval Process

In accordance with the Virginia Regulations for the Development of Solid Waste Management Plans and City of Danville policy, a public meeting on the draft waste management plan was held. The public meeting was publicized in accordance with Danville policy, with copies of the plan made available to all who requested them. A copy of the Public Notice and the public input and comments can be found in Appendix B.

In addition, the entire plan was posted on the City of Danville website at www.danville-va.gov for input and review by the public.

Despite the extensive publicity on the plan and the public meeting, no public comments were received on the plan during the comment period. Documentation concerning the public meeting and a copy of the City Council resolution are included in Appendix B.

1.5 Danville Solid Waste Management Goals and Objectives

One of the first steps in the planning process was to identify goals and objectives for solid waste management in Danville. The City of Danville will continue to evaluate available waste management alternatives and assess their appropriateness for

implementation in Danville. The goals and objectives for the June 2004 Plan update are as follows:

1. Establish the framework for effective long-range programs.
2. Manage waste in a fashion that balances cost-effectiveness with conserving resources and protecting the environment.
3. Involve the private sector in implementing waste management services wherever practical.
4. Utilize waste management practices that best conserve resources and protect the environment.
5. Provide the public with desired services at the appropriate service levels.
6. Implement effective short-range programs.
7. Take a creative, as opposed to traditional, approach.
8. Manage waste in the most cost-effective fashion.
9. Participate in regional efforts.

The following additional objectives were considered as requirements and therefore were not subjected to the ranking process:

- Comply with regulations of the Virginia Waste Management Board.
- Establish a program for management of waste according to the State hierarchy.
- Meet Virginia's recycling goals.

It was also decided that meeting the minimum legal requirements was not to be included among the selected objectives. All solid waste management facilities and programs shall be designed and operated to meet or exceed the requirements specified in all federal, state, and local environmental regulations as well as building, zoning, and all other applicable regulations.

Provided in the following chapter is a description of Danville and an overview of current waste generation and management practices.

2.0 Background

2.1 Description of Danville

The City of Danville, Virginia is located on the Dan River, 200 miles from the eastern seaboard on the North Carolina / Virginia border and encompasses 44.5 square miles. Danville which is centrally located between Martinsville, Roanoke, Lynchburg, and South Boston, Virginia had an estimated population of 53,000 in 1990 and was expected to experience a decline of 1,000 people by the year 2010. The 2000 census however showed a decline of almost 5,000 people to a population of 48,411 (See U.S. Bureau Table DP-1). The population was estimated to be 47,597 in 2002 and is expected to continue to decrease slightly by the year 2024.

As reflected in the West Piedmont Planning District employment projections presented in Table 2-1, Danville is a community with a strong manufacturing base, employing approximately 37 percent of its work force. Major Danville manufacturers produce textiles, tobacco products, tires, glass, fiber board, food products and other durable and non-durable goods. The remaining 63 percent of the work force is employed by government and non-manufacturing businesses; primarily service, wholesale, and retail trade enterprises.

Total employment was estimated to be 29,485 in 1990 and was expected to increase to 31,233 by the year 2024. The employment picture since 1990, however, has gone in the other direction. Total employment was estimated to be 23,990 in 1995 and was 21,895 in the 2000 census (See U.S. Census Bureau Table DP-3). It is expected to decrease slightly by the year 2010. Unemployment in Danville has averaged between seven and ten percent and the median family income for 2000 was estimated to be $26,900 (See U.S. Census Bureau Table DP-3).

Largely due to its extensive manufacturing activities, Danville's transportation infrastructure is well developed for moving freight into and out of the City. From a waste management perspective, this will be particularly advantageous for transporting recyclables to outlying markets. Major transportation routes to Danville include

Table 2-1

Employment by Industry, Selected Years, 1983-2035 (Total Number of Jobs)

	1983	1990	1995	2000	2005	2015	2035
Total Employment	28710	29485	23990	30638	31165	31302	30265
Farm	0	0	0	0	0	0	0
Ag. Serv., For. Fish.	68	98	121	139	154	170	182
Mining	5	4	3	3	3	2	2
Construction	1010	1013	963	939	920	868	763
Total Manufacturing	10561	10783	10780	10818	10804	10689	10277
Nondurable Goods	10004	10132	10108	10123	10090	9967	9570
Food+Kindred		174	165	160	155	149	136
Textiles		7882	7628	7468	7311	6933	6430
Paper+Allied		0	0	0	0	0	0
Chemicals+Allied		18	15	14	13	11	9
Petroleum Refining		0	0	0	0	0	0
Durable Goods	557	651	674	695	714	722	707
Primary Metals		0	0	0	0	0	0
Stone, Clay, + Glass		73	77	79	83	88	86
Transp. + Public Util.	681	668	665	671	680	669	621
Wholesale Trade	1020	068	1069	1088	1115	1123	1077
Retail Trade	5411	5983	6352	6715	7022	7273	7298
Finance, Ins., + R.E.	1148	1292	1377	1450	1505	1539	1504
Services	5739	5690	5853	6037	6190	6271	6038
Total Government	3069	2886	2807	2778	2772	2698	2503
Federal, Civilian	185	190	194	197	201	201	196
Federal, Military	218	218	218	218	218	218	218
State and Local	2668	2478	2395	2361	2353	2279	2089

Notes: Projected two-digit employment data in manufacturing are shown only for selected industries. Therefore, they will not add to total durable employment and total nondurable employment. Historical two-digit manufacturing employment data are presently unavailable for publication.

Source: Bureau of Economic Analysis, Regional Economic Analysis Division, 1988, Regional Solid Waste Management Plan, 1989 Update by West Piedmont Planning District.

Table DP-1. Profile of General Demographic Characteristics: 2000

Geographic area: Danville city, Virginia

[For information on confidentiality protection, nonsampling error, and definitions, see text]

Subject	Number	Percent
Total population	**48,411**	**100.0**
SEX AND AGE		
Male	22,024	45.5
Female	26,387	54.5
Under 5 years	2,910	6.0
5 to 9 years	3,114	6.4
10 to 14 years	3,300	6.8
15 to 19 years	3,141	6.5
20 to 24 years	2,681	5.5
25 to 34 years	5,563	11.5
35 to 44 years	6,772	14.0
45 to 54 years	6,687	13.8
55 to 59 years	2,504	5.2
60 to 64 years	2,237	4.6
65 to 74 years	4,702	9.7
75 to 84 years	3,584	7.4
85 years and over	1,216	2.5
Median age (years)	40.5	(X)
18 years and over	37,139	76.7
Male	16,203	33.5
Female	20,936	43.2
21 years and over	35,367	73.1
62 years and over	10,867	22.4
65 years and over	9,502	19.6
Male	3,383	7.0
Female	6,119	12.6
RACE		
One race	48,032	99.2
White	26,075	53.9
Black or African American	21,352	44.1
American Indian and Alaska Native	81	0.2
Asian	291	0.6
Asian Indian	71	0.1
Chinese	47	0.1
Filipino	80	0.2
Japanese	19	-
Korean	21	-
Vietnamese	24	-
Other Asian [1]	29	0.1
Native Hawaiian and Other Pacific Islander	14	-
Native Hawaiian	5	-
Guamanian or Chamorro	5	-
Samoan	1	-
Other Pacific Islander [2]	3	-
Some other race	219	0.5
Two or more races	379	0.8
Race alone or in combination with one or more other races: [3]		
White	26,390	54.5
Black or African American	21,535	44.5
American Indian and Alaska Native	203	0.4
Asian	351	0.7
Native Hawaiian and Other Pacific Islander	29	0.1
Some other race	336	0.7

Subject	Number	Percent
HISPANIC OR LATINO AND RACE		
Total population	**48,411**	**100.0**
Hispanic or Latino (of any race)	612	1.3
Mexican	360	0.7
Puerto Rican	57	0.1
Cuban	28	0.1
Other Hispanic or Latino	167	0.3
Not Hispanic or Latino	47,799	98.7
White alone	25,813	53.3
RELATIONSHIP		
Total population	**48,411**	**100.0**
In households	46,732	96.5
Householder	20,607	42.6
Spouse	8,083	16.7
Child	13,060	27.0
Own child under 18 years	9,436	19.5
Other relatives	3,280	6.8
Under 18 years	1,582	3.3
Nonrelatives	1,702	3.5
Unmarried partner	773	1.6
In group quarters	1,679	3.5
Institutionalized population	1,078	2.2
Noninstitutionalized population	601	1.2
HOUSEHOLD BY TYPE		
Total households	**20,607**	**100.0**
Family households (families)	12,931	62.8
With own children under 18 years	5,386	26.1
Married-couple family	8,083	39.2
With own children under 18 years	2,752	13.4
Female householder, no husband present	4,036	19.6
With own children under 18 years	2,297	11.1
Nonfamily households	7,676	37.2
Householder living alone	6,983	33.9
Householder 65 years and over	3,143	15.3
Households with individuals under 18 years	6,301	30.6
Households with individuals 65 years and over	6,792	33.0
Average household size	2.27	(X)
Average family size	2.89	(X)
HOUSING OCCUPANCY		
Total housing units	**23,108**	**100.0**
Occupied housing units	20,607	89.2
Vacant housing units	2,501	10.8
For seasonal, recreational, or occasional use	83	0.4
Homeowner vacancy rate (percent)	2.8	(X)
Rental vacancy rate (percent)	11.6	(X)
HOUSING TENURE		
Occupied housing units	**20,607**	**100.0**
Owner-occupied housing units	11,975	58.1
Renter-occupied housing units	8,632	41.9
Average household size of owner-occupied units	2.28	(X)
Average household size of renter-occupied units	2.25	(X)

- Represents zero or rounds to zero. (X) Not applicable.

[1] Other Asian alone, or two or more Asian categories.

[2] Other Pacific Islander alone, or two or more Native Hawaiian and Other Pacific Islander categories.

[3] In combination with one or more of the other races listed. The six numbers may add to more than the total population and the six percentages may add to more than 100 percent because individuals may report more than one race.

Source: U.S. Census Bureau, Census 2000.

Table DP-2. Profile of Selected Social Characteristics: 2000

Geographic area: Danville city, Virginia

[Data based on a sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see text]

Subject	Number	Percent
SCHOOL ENROLLMENT		
Population 3 years and over enrolled in school	**11,141**	**100.0**
Nursery school, preschool	783	7.0
Kindergarten	705	6.3
Elementary school (grades 1-8)	5,358	48.1
High school (grades 9-12)	2,586	23.2
College or graduate school	1,709	15.3
EDUCATIONAL ATTAINMENT		
Population 25 years and over	**33,196**	**100.0**
Less than 9th grade	3,987	12.0
9th to 12th grade, no diploma	6,467	19.5
High school graduate (includes equivalency)	10,198	30.7
Some college, no degree	6,330	19.1
Associate degree	1,607	4.8
Bachelor's degree	2,852	8.6
Graduate or professional degree	1,755	5.3
Percent high school graduate or higher	68.5	(X)
Percent bachelor's degree or higher	13.9	(X)
MARITAL STATUS		
Population 15 years and over	**39,020**	**100.0**
Never married	9,926	25.4
Now married, except separated	18,191	46.6
Separated	2,088	5.4
Widowed	4,529	11.6
Female	3,775	9.7
Divorced	4,286	11.0
Female	2,520	6.5
GRANDPARENTS AS CAREGIVERS		
Grandparent living in household with one or more own grandchildren under 18 years	**1,278**	**100.0**
Grandparent responsible for grandchildren	670	52.4
VETERAN STATUS		
Civilian population 18 years and over	**37,114**	**100.0**
Civilian veterans	5,530	14.9
DISABILITY STATUS OF THE CIVILIAN NONINSTITUTIONALIZED POPULATION		
Population 5 to 20 years	**10,111**	**100.0**
With a disability	709	7.0
Population 21 to 64 years	**25,294**	**100.0**
With a disability	6,538	25.8
Percent employed	51.2	(X)
No disability	18,756	74.2
Percent employed	75.3	(X)
Population 65 years and over	**9,061**	**100.0**
With a disability	4,218	46.6
RESIDENCE IN 1995		
Population 5 years and over	**45,553**	**100.0**
Same house in 1995	27,317	60.0
Different house in the U.S. in 1995	17,852	39.2
Same county	5,855	12.9
Different county	11,997	26.3
Same state	8,887	19.5
Different state	3,110	6.8
Elsewhere in 1995	384	0.8

Subject	Number	Percent
NATIVITY AND PLACE OF BIRTH		
Total population	**48,411**	**100.0**
Native	47,711	98.6
Born in United States	47,484	98.1
State of residence	37,262	77.0
Different state	10,222	21.1
Born outside United States	227	0.5
Foreign born	700	1.4
Entered 1990 to March 2000	364	0.8
Naturalized citizen	277	0.6
Not a citizen	423	0.9
REGION OF BIRTH OF FOREIGN BORN		
Total (excluding born at sea)	**700**	**100.0**
Europe	150	21.4
Asia	199	28.4
Africa	59	8.4
Oceania	-	-
Latin America	278	39.7
Northern America	14	2.0
LANGUAGE SPOKEN AT HOME		
Population 5 years and over	**45,553**	**100.0**
English only	43,922	96.4
Language other than English	1,631	3.6
Speak English less than "very well"	610	1.3
Spanish	900	2.0
Speak English less than "very well"	403	0.9
Other Indo-European languages	471	1.0
Speak English less than "very well"	90	0.2
Asian and Pacific Island languages	185	0.4
Speak English less than "very well"	90	0.2
ANCESTRY (single or multiple)		
Total population	**48,411**	**100.0**
Total ancestries reported	*38,336*	*79.2*
Arab	83	0.2
Czech[1]	32	0.1
Danish	15	-
Dutch	289	0.6
English	3,696	7.6
French (except Basque)[1]	424	0.9
French Canadian[1]	86	0.2
German	1,680	3.5
Greek	185	0.4
Hungarian	5	-
Irish[1]	2,232	4.6
Italian	321	0.7
Lithuanian	-	-
Norwegian	66	0.1
Polish	99	0.2
Portuguese	21	-
Russian	77	0.2
Scotch-Irish	620	1.3
Scottish	594	1.2
Slovak	8	-
Subsaharan African	634	1.3
Swedish	106	0.2
Swiss	52	0.1
Ukrainian	17	-
United States or American	6,433	13.3
Welsh	75	0.2
West Indian (excluding Hispanic groups)	11	-
Other ancestries	20,475	42.3

-Represents zero or rounds to zero. (X) Not applicable.

[1]The data represent a combination of two ancestries shown separately in Summary File 3. Czech includes Czechoslovakian. French includes Alsatian. French Canadian includes Acadian/Cajun. Irish includes Celtic.

Source: U.S. Bureau of the Census, Census 2000.

Table DP-3. Profile of Selected Economic Characteristics: 2000

Geographic area: Danville city, Virginia

[Data based on a sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see text]

Subject	Number	Percent
EMPLOYMENT STATUS		
Population 16 years and over	**38,388**	**100.0**
In labor force	21,895	57.0
Civilian labor force	21,868	57.0
Employed	19,668	51.2
Unemployed	2,200	5.7
Percent of civilian labor force	10.1	(X)
Armed Forces	27	0.1
Not in labor force	16,493	43.0
Females 16 years and over	**21,547**	**100.0**
In labor force	11,365	52.7
Civilian labor force	11,365	52.7
Employed	10,165	47.2
Own children under 6 years	**3,214**	**100.0**
All parents in family in labor force	2,315	72.0
COMMUTING TO WORK		
Workers 16 years and over	**19,262**	**100.0**
Car, truck, or van - - drove alone	15,383	79.9
Car, truck, or van - - carpooled	2,633	13.7
Public transportation (including taxicab)	401	2.1
Walked	381	2.0
Other means	193	1.0
Worked at home	271	1.4
Mean travel time to work (minutes)[1]	18.7	(X)
Employed civilian population 16 years and over	**19,668**	**100.0**
OCCUPATION		
Management, professional, and related occupations	4,707	23.9
Service occupations	3,342	17.0
Sales and office occupations	4,924	25.0
Farming, fishing, and forestry occupations	33	0.2
Construction, extraction, and maintenance occupations	1,547	7.9
Production, transportation, and material moving occupations	5,115	26.0
INDUSTRY		
Agriculture, forestry, fishing and hunting, and mining	15	0.1
Construction	865	4.4
Manufacturing	5,351	27.2
Wholesale trade	508	2.6
Retail trade	2,747	14.0
Transportation and warehousing, and utilities	585	3.0
Information	257	1.3
Finance, insurance, real estate, and rental and leasing	798	4.1
Professional, scientific, management, administrative, and waste management services	1,047	5.3
Educational, health and social services	4,292	21.8
Arts, entertainment, recreation, accommodation and food services	1,684	8.6
Other services (except public administration)	917	4.7
Public administration	602	3.1
CLASS OF WORKER		
Private wage and salary workers	16,167	82.2
Government workers	2,587	13.2
Self-employed workers in own not incorporated business	871	4.4
Unpaid family workers	43	0.2

Subject	Number	Percent
INCOME IN 1999		
Households	**20,608**	**100.0**
Less than $10,000	3,511	17.0
$10,000 to $14,999	2,089	10.1
$15,000 to $24,999	4,027	19.5
$25,000 to $34,999	2,940	14.3
$35,000 to $49,999	2,979	14.5
$50,000 to $74,999	3,019	14.6
$75,000 to $99,999	980	4.8
$100,000 to $149,999	634	3.1
$150,000 to $199,999	145	0.7
$200,000 or more	284	1.4
Median household income (dollars)	26,900	(X)
With earnings	14,623	71.0
Mean earnings (dollars)[1]	40,747	(X)
With Social Security income	7,651	37.1
Mean Social Security income (dollars)[1]	10,521	(X)
With Supplemental Security Income	1,365	6.6
Mean Supplemental Security Income (dollars)[1]	5,645	(X)
With public assistance income	1,083	5.3
Mean public assistance income (dollars)[1]	2,125	(X)
With retirement income	4,310	20.9
Mean retirement income (dollars)[1]	13,527	(X)
Families	**12,975**	**100.0**
Less than $10,000	1,419	10.9
$10,000 to $14,999	940	7.2
$15,000 to $24,999	2,024	15.6
$25,000 to $34,999	1,941	15.0
$35,000 to $49,999	2,383	18.4
$50,000 to $74,999	2,504	19.3
$75,000 to $99,999	819	6.3
$100,000 to $149,999	566	4.4
$150,000 to $199,999	128	1.0
$200,000 or more	251	1.9
Median family income (dollars)	36,024	(X)
Per capita income (dollars)[1]	17,151	(X)
Median earnings (dollars):		
Male full-time, year-round workers	29,620	(X)
Female full-time, year-round workers	21,384	(X)

Subject	Number below poverty level	Percent below poverty level
POVERTY STATUS IN 1999		
Families	**2,064**	**15.9**
With related children under 18 years	1,728	27.1
With related children under 5 years	880	36.7
Families with female householder, no husband present	**1,482**	**36.3**
With related children under 18 years	1,384	47.5
With related children under 5 years	648	55.4
Individuals	**9,369**	**20.0**
18 years and over	5,590	15.6
65 years and over	1,115	12.3
Related children under 18 years	3,756	33.9
Related children 5 to 17 years	2,598	31.4
Unrelated individuals 15 years and over	2,473	26.2

-Represents zero or rounds to zero. (X) Not applicable.

[1]If the denominator of a mean value or per capita value is less than 30, then that value is calculated using a rounded aggregate in the numerator. See text.

Source: U.S. Bureau of the Census, Census 2000.

Table DP-4. Profile of Selected Housing Characteristics: 2000

Geographic area: Danville city, Virginia

[Data based on a sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see text]

Subject	Number	Percent
Total housing units	**23,108**	**100.0**
UNITS IN STRUCTURE		
1-unit, detached	16,113	69.7
1-unit, attached	387	1.7
2 units	988	4.3
3 or 4 units	1,295	5.6
5 to 9 units	1,220	5.3
10 to 19 units	1,120	4.8
20 or more units	980	4.2
Mobile home	1,005	4.3
Boat, RV, van, etc	-	-
YEAR STRUCTURE BUILT		
1999 to March 2000	74	0.3
1995 to 1998	354	1.5
1990 to 1994	616	2.7
1980 to 1989	1,790	7.7
1970 to 1979	3,974	17.2
1960 to 1969	4,266	18.5
1940 to 1959	7,431	32.2
1939 or earlier	4,603	19.9
ROOMS		
1 room	263	1.1
2 rooms	487	2.1
3 rooms	1,869	8.1
4 rooms	5,294	22.9
5 rooms	5,578	24.1
6 rooms	3,686	16.0
7 rooms	2,705	11.7
8 rooms	1,615	7.0
9 or more rooms	1,611	7.0
Median (rooms)	5.2	(X)
Occupied housing units	**20,607**	**100.0**
YEAR HOUSEHOLDER MOVED INTO UNIT		
1999 to March 2000	3,389	16.4
1995 to 1998	4,819	23.4
1990 to 1994	3,136	15.2
1980 to 1989	3,086	15.0
1970 to 1979	2,441	11.8
1969 or earlier	3,736	18.1
VEHICLES AVAILABLE		
None	3,574	17.3
1	7,953	38.6
2	5,987	29.1
3 or more	3,093	15.0
HOUSE HEATING FUEL		
Utility gas	13,059	63.4
Bottled, tank, or LP gas	507	2.5
Electricity	5,513	26.8
Fuel oil, kerosene, etc	1,254	6.1
Coal or coke	-	-
Wood	149	0.7
Solar energy	6	-
Other fuel	82	0.4
No fuel used	37	0.2
SELECTED CHARACTERISTICS		
Lacking complete plumbing facilities	173	0.8
Lacking complete kitchen facilities	195	0.9
No telephone service	1,150	5.6

Subject	Number	Percent
OCCUPANTS PER ROOM		
Occupied housing units	**20,607**	**100.0**
1.00 or less	20,174	97.9
1.01 to 1.50	364	1.8
1.51 or more	69	0.3
Specified owner-occupied units	**10,803**	**100.0**
VALUE		
Less than $50,000	2,916	27.0
$50,000 to $99,999	5,653	52.3
$100,000 to $149,999	1,259	11.7
$150,000 to $199,999	497	4.6
$200,000 to $299,999	297	2.7
$300,000 to $499,999	132	1.2
$500,000 to $999,999	49	0.5
$1,000,000 or more	-	-
Median (dollars)	71,900	(X)
MORTGAGE STATUS AND SELECTED MONTHLY OWNER COSTS		
With a mortgage	5,937	55.0
Less than $300	117	1.1
$300 to $499	1,044	9.7
$500 to $699	1,752	16.2
$700 to $999	1,720	15.9
$1,000 to $1,499	903	8.4
$1,500 to $1,999	232	2.1
$2,000 or more	169	1.6
Median (dollars)	709	(X)
Not mortgaged	4,866	45.0
Median (dollars)	226	(X)
SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1999		
Less than 15.0 percent	5,288	48.9
15.0 to 19.9 percent	1,661	15.4
20.0 to 24.9 percent	1,108	10.3
25.0 to 29.9 percent	710	6.6
30.0 to 34.9 percent	473	4.4
35.0 percent or more	1,431	13.2
Not computed	132	1.2
Specified renter-occupied units	**8,627**	**100.0**
GROSS RENT		
Less than $200	1,020	11.8
$200 to $299	1,109	12.9
$300 to $499	3,681	42.7
$500 to $749	1,717	19.9
$750 to $999	316	3.7
$1,000 to $1,499	114	1.3
$1,500 or more	81	0.9
No cash rent	589	6.8
Median (dollars)	404	(X)
GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1999		
Less than 15.0 percent	1,775	20.6
15.0 to 19.9 percent	1,239	14.4
20.0 to 24.9 percent	792	9.2
25.0 to 29.9 percent	765	8.9
30.0 to 34.9 percent	611	7.1
35.0 percent or more	2,630	30.5
Not computed	815	9.4

- Represents zero or rounds to zero. (X) Not applicable.

Source: U.S. Bureau of the Census, Census 2000.

Highways 86 and 29, running north-south and Highways 58 and 360, running east-west. At least nineteen motor freight carriers serve the Danville region. Norfolk Southern Railway Company maintains rail lines which traverse the City in an east-west direction and north-south, just east of downtown. Primary freight yards for all rail lines are located on both sides of the Dan River, east of the Worsham Street Bridge. Twenty-one to twenty-two trains travel through Danville each day, including two passenger trains. Eleven working trains operate daily in the City, moving cargo to and from the freight yards. Danville's rail lines connect the City directly to Potomac Yards, VA; New Orleans, LA; Kansas City, KA: East St. Louis, MO; North Hagerstown, MD: and Chicago, IL. The Danville Municipal Airport, located on the east side of town, maintains three paved runways ranging in length from 4,046 to 5,000 feet. The runways have been lengthened and significant increases in hangar space and airport facilities have been undertaken.

Urban concentration and growth

As can be seen on the attached Long-range Comprehensive Use Plan, the areas designated for commercial/industrial expansion are located primarily in the east and south quadrants of the City. The north and west quadrants are primarily residential/retail concentration.

2.2 Solid Waste Generation

In 1990, Danville's citizens, businesses, and institutions produced and disposed of an estimated 310 tons of solid waste per day or 113,168 tons per year. On a per capita basis, that averaged 11.7 pounds per day. An additional 14,300 tons per year of material was estimated to be generated by Danville sources and recycled. If added to the total waste stream, the new total would be 127,468 tons. The 2004 estimate of disposal is 70,564 tons per year. A description of the materials handled through each management method is provided in Chapter 3 on current waste management practices.

Upon approval of the revised Solid Waste Plan, the City will begin a more comprehensive method of tracking and recording of waste generated within the plan area. This method is outlined in Appendix G of the plan.

Table 2-2 and Figure 2-1 provide population and solid waste tonnage projections through the year 2024. Tonnage projections were based on a per capita generation rate of 11.7 derived from Danville landfill tipping fee records for population projections developed by the City Planning Department and the West Piedmont Planning District Commission. Figures are also provided showing the per capita generation rate increasing one percent per year as projected by Franklin Associates (1988) in their study entitled "Characterization of Municipal Solid Waste in the United States," prepared for the EPA. An analysis of commercial and industrial development trends indicated that no significant changes in business activity are expected over the next 20 years. Therefore, business activity did not affect the projections provided in Table 2-2. Current industrial scrap materials recycled were omitted from these calculations since their classification as waste is highly questionable and since this plan addresses increasing recycling and the disposal of remaining wastes.

2.2.1 Residential Waste Generation

As reported in the previous section, the total amount of waste generated and managed by the City Sanitation Division on a per capita is approximately 11.7 in 1990 and 8.2 in 2004. It is projected to remain flat in the planning period. Of that amount, an estimated 26 percent is collected from City residences by Sanitation Division crews, while an estimated additional 16 percent is yard waste collected curbside by recycling crews. The total portion of the waste stream coming from the residential sector is 42 percent or 28,762 tons in 1995.

As of the 1990 census, the City of Danville had approximately 23,297 residential units. The 2000 census reflects approximately 23,108 total housing units. Table 2-3 shows the residential waste stream broken down on a per household basis, while Table 2-4 shows the total annual household waste generated compared to all waste generated

within the City. Figure 2-2 indicates the residential waste breakdown and compares this with the total amount of non-residential waste.

2.2.2 Non-residential Waste Generation

Due in part to the fact that Danville has over a third of its work force in the manufacturing industrial sector, a large portion of the waste stream is generated by manufacturing firms. Based on Transfer Station scale data, the portion of the waste stream being disposed of at the Transfer Station and coming from non-residential sources comprises approximately 68 percent of the waste stream. Table 2-5 shows projections of the residential and non-residential waste stream through the year 2024, assuming no new major generators come on-line or existing ones go out of business during that time period. Figure 2-3 shows the percentages of major sources or types of waste generated within the City. A more detailed characterization of residential and non-residential waste is provided in Section 10.0.

TABLE 2-2
City of Danville
20-Year Waste Generation Projections

Year	Estimated Population	Per Capita Generation	Daily Tonnage (0% Increase per Year)	Annual Tonnage	Per Capita Generation	Daily Tonnage (1% Increase per Year)	Annual Tonnage
1990	53,000	11.7	310	113,168	11.7	310	113,168
1991	52,900	11.7	309	112,955	11.8	313	114,084
1992	52,800	11.7	309	112,741	11.9	315	114,099
1993	52,700	11.7	308	112,528	12.1	318	115,699
1994	52,600	11.7	308	112,314	12.2	320	116,941
1995	52,500	7.2	188	68,728	7.1	188	68,728
1996	52,400	7.2	188	68,728	7.2	190	69,415
1997	52,300	7.2	188	68,728	7.3	192	70,109
1998	52,200	7.2	188	68,728	7.4	194	70,810
1999	52,100	7.2	188	68,728	7.5	196	71,518
2000	48,411	8.0	193	70,564	8.2	198	72,223
2001	48,000	8.0	193	70,564	8.3	199	72,956
2002	47,596	8.1	193	70,564	8.5	201	73,685
2003	47,000	8.2	193	70,564	8.6	203	74,422
2004	47,000	8.2	193	70,564	8.6	205	75,166
2005	47,000	8.2	193	70,809	8.7	207	75,918
2006	47,000	8.2	193	70,809	8.8	209	76,677
2007	47,000	8.2	193	70,809	8.9	211	77,443
2008	47,000	8.2	193	70,809	9.0	213	78,218
2009	47,000	8.2	193	70,809	9.1	215	79,000
2010	47,000	8.2	193	70,902	9.2	217	79,790
2015	47,000	8.2	193	70,902	9.2	217	79,790
2020	47,000	8.2	193	70,902	9.2	217	79,790
2024	47,000	8.2	193	70,902	9.2	217	79,790

2004 UPDATE REVISED

FIGURE 2-1

City of Danville Tonnage Projections

20-Year Estimates

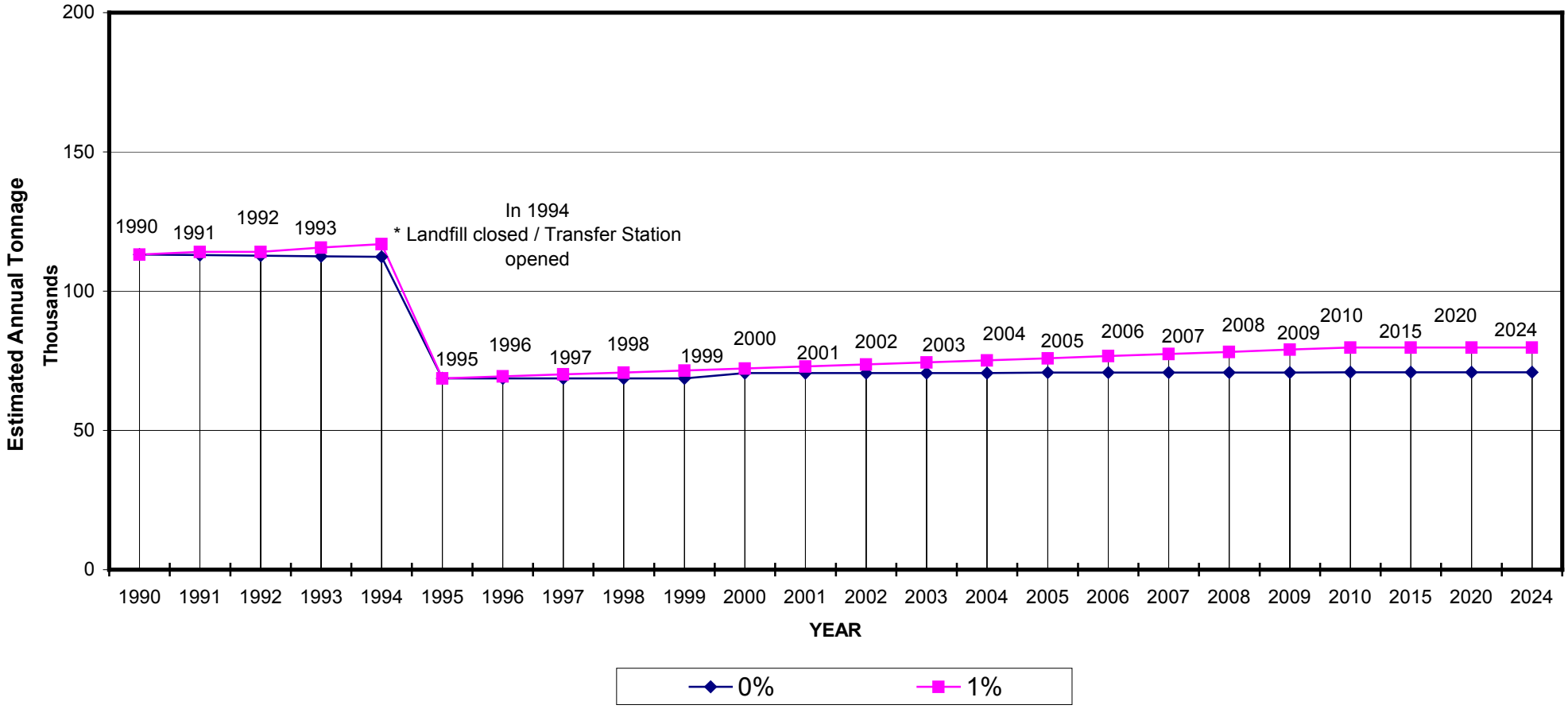


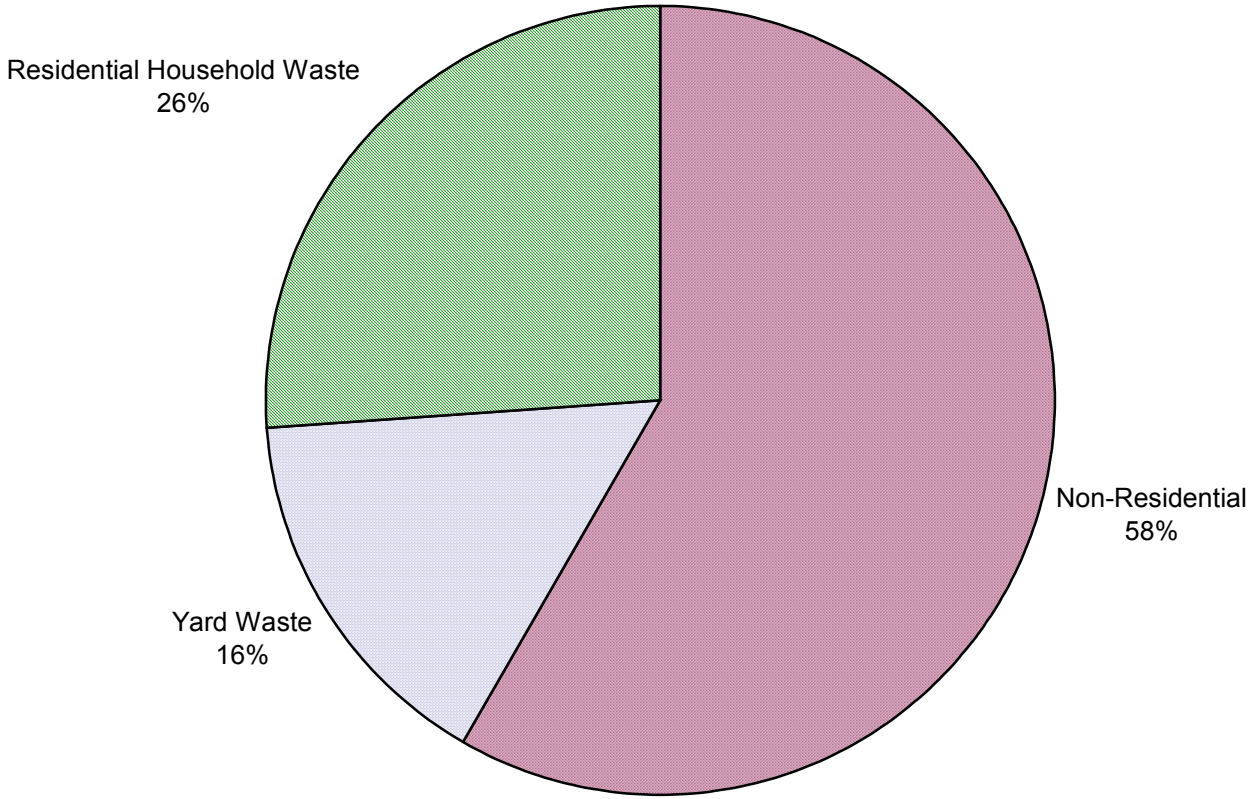
TABLE 2-3
City of Danville
Residential Waste Generation

Year	Population	Total Per Capita Waste Generation (lbs/day)	Total Waste Generated (tons/year)	Per Household Residential Refuse Generation (1) (tons/year)	Number of Households	Total Generated Household Refuse (tons/year)	Percent of Total
1990	53,000	11.7	113,168	0.918	23,297	21,378	19
1991	52,900	11.8	114,084	0.927	23,253	21,551	19
1992	52,800	11.9	114,099	0.936	23,209	21,725	19
1993	52,700	12.1	115,699	0.945	23,165	21,901	19
1994	52,600	12.2	116,941	0.955	23,121	22,078	19
1995	52,500	6.4	68,724	0.780	23,077	18,000	26
2000	48,411	7.1	70,564	0.780	23,108	18,000	26
2005	47,000	7.3	70,809	0.780	23,108	18,000	26
2010	47,000	7.3	70,902	0.780	23,108	18,000	26
2015	47,000	7.3	70,902	0.780	23,108	18,000	26
2020	47,000	7.3	70,902	0.780	23,108	18,000	26
2024	47,000	7.3	70,902	0.780	23,108	18,000	26

1-CALCULATED BY AMOUNT ACROSS WEIGHT SCALE AT TRANSFER STATION BY CITY CREWS STARTING IN 1995.
- DOES NOT INCLUDE YARD WASTE

REVISED 2004 UPDATE

FIGURE 2-2
RESIDENTIAL VS. NON-RESIDENTIAL WASTE



*1995 Totals

2004 UPDATE

TABLE 2-4
Waste Projections by Source Category

Year	Household Refuse	Bulky Materials	Yard Waste	Total Residential Waste	Non-Residential Total	Total Waste Generated
1990	21,378	6,790	7,922	36,090	77,079	113,168
1991	21,551	6,845	7,986	36,382	77,703	114,084
1992	21,725	6,900	7,143	35,768	78,331	114,099
1993	21,901	6,956	7,878	36,735	78,965	115,699
1994	22,078	7,012	8,250	37,340	79,603	116,941
1995	18,000		10,672	28,762	40,056	68,728
2000	18,000		10,672	28,672	41,892	70,564
2005	18,000		10,700	28,700	42,109	70,809
2010	18,000		10,700	28,700	42,202	70,902
2015	18,000		10,700	28,700	42,202	70,902
2020	18,000		10,700	28,700	42,202	70,902
2024	18,000		10,700	28,700	42,202	70,902

REVISED 2004 UPDATE

Bulky Material included in Household Waste after 1994.

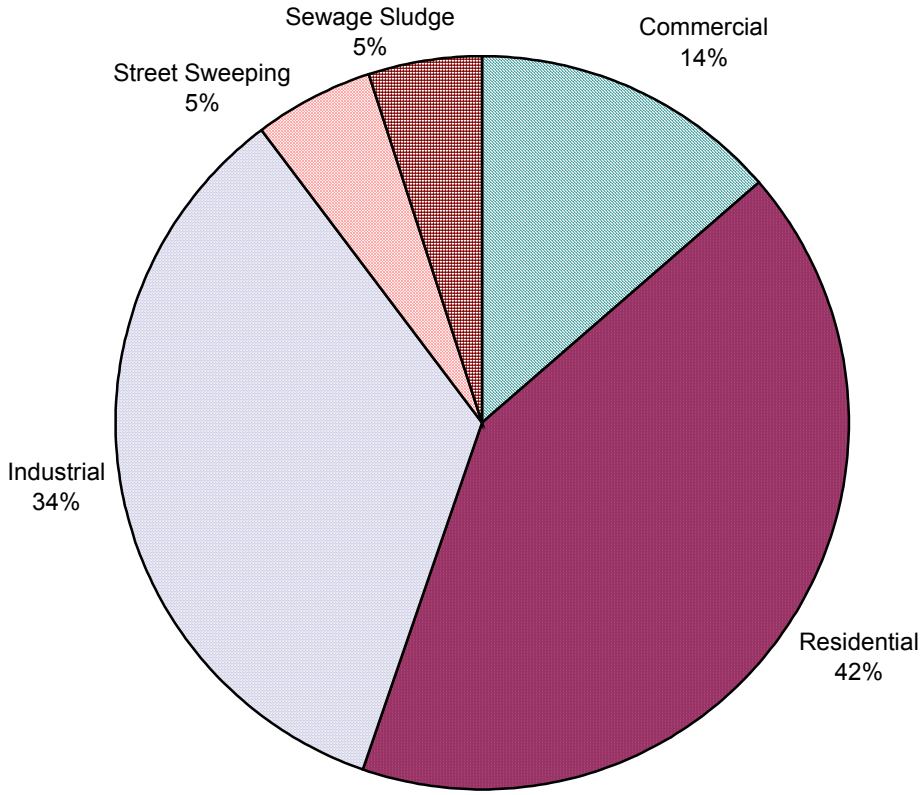
TABLE 2-5
City of Danville Waste Projections by Source (Tons)

Category of Waste	YEAR											
	1990	1991	1992	1993	1994	1995	2000	2005	2010	2015	2020	2024
RESIDENTIAL	36,090	36,382	35,768	36,735	37,340	28,672	28,672	28,700	28,700	28,700	28,700	28,700
COMMERCIAL	9,089	9,144	9,199	9,254	9,309	9,365	9,646	9,907	9,966	9,966	9,966	9,966
INDUSTRIAL	18,553	18,432	18,311	18,190	18,070	23,605	24,956	24,695	24,636	24,636	24,636	24,636
STREET SWEEPING	3,395	3,442	3,490	3,538	3,586	3,586	3,590	3,600	3,650	3,650	3,650	3,650
SEWAGE SLUDGE (Dry Tons)	20,370	20,655	20,941	21,229	21,519	3,500	3,700	3,907	3,950	3,950	3,950	3,950
BOILER ASH	6,790	6,885	6,980	7,076	7,173							
TOBACCO DUST	4,187	4,246	4,305	4,364	4,423							
WOODY WASTE	10,185	10,327	10,471	10,615	10,759							
OTHER	4,508	4,571	4,634	4,698	4,762							
TOTAL	113,167	114,084	114,099	115,699	116,941	68,728	70,564	70,809	70,902	70,902	70,902	70,902

REVISED 2004 UPDATE

* Sewer sludge in dry tons after 1994.
* After 1994: Tobacco Dust, Boiler Ash, Woody Waste, and other is combined with Industrial.

Figure 2-3
WASTE SOURCE CHARACTERIZATION



*1995 Totals
Sewer sludge in dry tons.
Tobacco Dust, Boiler Ash, Woody Waste, and other combined with Industrial.
Residential includes yard waste and household waste.

2004 UPDATE

3.0 Solid Waste Management System

3.1 Collection

3.1.1 Residential

(A) Residential solid waste collection is provided to City residents by the Danville Public Works Department. The service is funded through a monthly fee applied to each dwelling's utility bill. The fee is currently $13.80 per household per month. The residential services include garbage / trash / bulky items / debris collection, yard waste, recycling, loose leaf collection, recycling drop off centers, and operation of a composting facility. Additional collection services such as trailer rentals and collection of appliances are available at additional fees.

(B) Household garbage collection service is provided to the City residents (single-family to three-family dwelling) by the Danville Public Works Department as part of the monthly fee. Four-family dwellings or more, apartment buildings, or trailer parks have the option of using City services or contracting with a private firm. Garbage and trash are collected once per week and residents must provide their own 20-32 gallon waste containers. The containers are collected either in the back yard or at the curb. Currently, collections are made using seven rear-loader garbage trucks (plus one spare) staffed by a driver and two collectors. Approximately 18,800 residential units are collected each week by City crews. Apartment complexes and trailer parks of 4 units or more have the option to contract with private firms.

(C) Large bulky items and smaller debris, which is placed at the curb on the regular residential pick up day, is also collected by the garbage rear-loaders.

(D) Yard waste collection service is provided to the City residents by the Danville Public Works Department on a weekly basis. Yard waste, which is placed at the curb on collection day, is collected using four rear-load garbage trucks staffed by a driver and a collector. Yard waste is collected separately and taken to the City's Compost and Mulch facility for reuse and recycling. Care is taken during collection to avoid

contamination of the yard waste with plastic bags, garbage or other debris which would impact the quality of the composted and mulched final product.

(E) Loose leaf collection service is provided to the City residents between October 1 and January 31 by the Danville Public Works Department. Six trailer-mounted leaf vacuums and six tow-behind leaf vacuums are utilized to collect 3,000 to 4,000 tons of loose leaves annually. The leaves are deposited at the compost and mulch facility for use in the final facility product.

(F) Litter control - Between 1990 to 2000, the City of Danville maintained a three-person crew to collect litter on a five days per week basis from major thoroughfares. The Danville City Beautiful Coordinator handled complaints about litter and illegal dumping and worked with the generators to remedy problems that arise. In 2001, the three-person crew was divided into three separate crews which uses Danville Adult Detention inmates to staff the collection crews. See Table 3-1 for collection quantities and projections.

The City of Danville is committed to continuing operation of three full-time Litter Collection Crews. Trucks and equipment have been dedicated to this task. Education of elementary school age children will continue to be addressed. The City's future Litter Program will consist of the existing three litter collection crews and will continue to utilize Adult Detention Labor wherever possible. The litter collected is not now nor will it be sorted or treated, other than disposal as refuse.

TABLE 3-1 Litter Pick Up Collection Report			
Year	**No. of Bags Collected**	**Year**	**No. of Bags Collected**
2001	**14,992**	**2008**	**11,568**
2002	**13,701**	**2009**	**11,452**
2003	**12,164**	**2010**	**11,337**
2004	**12,042**	**2015**	**10,780**
2005	**11,922**	**2020**	**10,241**
2006	**11,803**	**2024**	**9,729**
2007	**11,685**		

3.1.2 Business

All businesses as well as owners and occupants of residential dwellings containing more than four units per building are responsible for making their own solid waste collection arrangements. Numerous private solid waste commercial collection firms are available to choose from.

3.1.3 Industrial

All industries are responsible for making their own solid waste collection arrangements. Numerous private solid waste commercial collection firms are available to choose from.

3.1.4 Evaluation of Solid Waste Collection

A. Residential

Annually as part of the City's budget process, an evaluation of the adequacy of the number of collection routes for household refuse, yard waste, bulky debris, loose leaves, litter, white goods, and drop-off recycling will be reviewed by the Public Works Department and the results of the evaluation will be reflected in the annual request for manpower, equipment, and funds for operation.

B. Business / Commercial / Industrial

Since the City does not collect the waste for business/commercial/industrial, the evaluation will consist of monitoring the availability of private collections and disposal for the area's business/commercial/industrial. The results of the monitoring will be noted in the periodic updates of this Solid Waste Plan.

3.2 Disposal

The City currently collects and files documents concerning all known solid waste disposal sites per 130-120-D, closed, inactive, and active within the area of the Solid Waste Management Plan. The central archive authorized to receive and record information on known active and closed disposal sites will be the Public Works office at 998 South Boston Road. A copy of all documentation is forwarded to the Director of DEQ. All new sites will be recorded at the same location and documentation forwarded to the director of DEQ.

The following waste disposal sites are located within the solid waste plan area:

(A) The Danville Landfill (Permit #122) located adjacent to the Danville Regional Airport, opened in 1974 and received its last solid waste in August 1993. It was closed and capped by September 1994 pursuant to subtitle "D" regulations. The 100-acre landfill, which was scheduled to be expanded in the 1990s, was closed due to impacts on the nearby airport and the lack of current technology such as leachate collection and impervious liner. The 1990 Solid waste Management Plan was amended June 24, 1997 to reflect the modification. Post closure monitoring and maintenance has been ongoing since 1994 and a Corrective Action Plan (CAP) for Groundwater contamination has been submitted to DEQ on June 10, 2004.

In addition to the closed landfill at the airport, a pre-1970 landfill is located at the end of Sanitary Road.

(B) The Danville Transfer Station (PBR# 15) located on Gypsum Road replaced the Danville landfill in 1993. The Transfer Station was constructed by Waste

Management of the Piedmont as a result of an agreement executed between Waste Management and the City on February 3, 1993. It has a capacity of 500 tons per day and is owned and operated by Waste Management of the Piedmont under a 25-year contract with the City of Danville (15 years initially and two 5-year extensions). The Danville Transfer Station (DTS) receives acceptable privately collected, residential, commercial, and industrial waste in addition to the residential garbage / trash and debris collected by Danville Public Works. Area residents also have the option to dispose of waste at DTS for the per ton fee. Solid waste from DTS is transported to the Maplewood Recycling and Waste Disposal Facility (Permit #540) located in Amelia County, VA. The expected life of this landfill is 30 years.

(C) The Danville Compost Facility (PBR# 10) accepts yard waste collected by private haulers, tree services, and the Public Works Department and is free of charge. All yard waste, loose leaves, and arboreal material collected by Danville Public Works has been diverted from the landfill to the recycling compost facility. See more information under Recycling.

(D) Sanitary Road Closed Municipal Landfill

This landfill was closed and capped in 1971. It is located adjacent to the Danville Expressway at Sanitary Road.

3.3 Reuse/Recycle

The City of Danville has initiated a number of recycling programs in progressing towards achieving the state mandate of recycling 25% by 1995. The City's recycling efforts have consistently exceeded the 25% since that time.

A pilot program for the collection of aluminum cans and glass containers was initiated in the Grove Park neighborhood on January 5, 1990. Two-hundred Seventy (270) homes were provided with weekly curbside collection service by the Public Works Sanitation Division. The City Beautiful Committee and two of the local garden clubs assist in promoting participation in the program. In May 1990, the pilot program was expanded to four more neighborhoods bringing the number of homes on line to

approximately 985. The collected recyclables are donated to Goodwill Industries. Participation in the program has been averaging 50-60 percent, with the weekly set-out rate equaling approximately 25 percent. An average of 6,279 lbs. of glass and 483 pounds of aluminum per week are collected, which is equivalent to 6.4 lbs. of glass and .5 lbs. of aluminum, or 6.9 lbs. of material per week / per household served. The cost of this program to the City is estimated to be approximately $1.40 per household / per month. Based on this recovery rate, an average of 63.4 tons per week or 3,297 tons per year of materials would be collected if the program were to be expanded to all 1-4 unit residential dwellings in Danville. This tonnage equates to 2.9 percent of the total solid waste now being landfilled. The City opted to pursue drop-off centers as a method of encouraging residential recycling rather than curbside.

In addition to the above programs in Danville, the Danville Register and Bee newspaper publisher has initiated a pilot drop-off center for newspapers, and Goodwill Industries operates five drop-off centers for glass and aluminum cans. Goodwill also collects glass and aluminum from selected Danville taverns. Despite the participation levels achieved in Goodwill's programs, a decline in the value of glass and volatile aluminum markets have prompted Goodwill Industries to refrain from further program expansions.

A number of Danville businesses are involved in recycling some of their office package and/or manufacturing waste. Such programs range from the recovery and shipment of a single type of high value material to comprehensive programs involving extensive efforts to reduce, reuse and recycle as much waste as is economically and technically feasible. Currently, program details and tonnage figures are known for only a few of these businesses. In an attempt to better identify existing business waste recycling practices underway in Danville, the City conducted a survey of major waste generating businesses. Due to the low response rate, Danville Solid Waste Advisory Committee members and City staff are pursuing other avenues to obtain this type of information. Some businesses are being interviewed directly while others are being encouraged to report their activities to City staff. The difficulty in obtaining tonnage information on

the amount of waste being recycled hampers the City's ability to account for such recycling levels in this solid waste management plan.

3.3.1 Current Recycling

As of July 1, 2004, the following recycling programs have been implemented:

1. **Drop-off Recycling Facilities**

   Currently, the City of Danville operates three drop-off recycling centers. Items collected in these centers include newsprint, mixed paper, and OCC, plastic, glass, aluminum and steel cans. The roll-off boxes are taken to a Materials Recovery Facility in Greensboro, North Carolina for processing of the recyclable materials.

2. **White Goods Collection**

   The City operates a curbside white goods collection program. The residents or business calls the City for a scheduled pickup. The City will collect the appliance from curbside and take it to a local scrap yard for recycling.

3. **Scrap Metal Collection**

   The City maintains a scrap metal roll-off box located at the Public Works Motorpool Complex. All metal items from the operation of the Motorpool and other City departments are deposited in this box for recycling. In addition, the Solid Waste Department collects recyclable metal items which are placed curbside and deposits them in the scrap metal box. Every effort is made to eliminate all recyclable metal bulk debris such as swing sets, car parts, and other miscellaneous metals from the waste stream. The City's Motorpool recycles all metal products in addition to oil and antifreeze.

4. **Curbside Yard Waste Recycling**

   All residential yard waste is collected curbside by City crews. It is kept separate from the waste stream for recycling.

5. **Compost Facility**

   All yard waste and arboreal material collected by the City crews from residential locations is deposited at the compost site for processing. City tree crews and contractors also deposit wood waste at the Compost Facility. Firewood is offered free to the public for its use as firewood.

3.3.2 Reuse

- The City annually receives the asphalt millings from its resurfacing programs and reuses the asphalt millings for aggregate base in its trail program. It is also used for parking lots and access roads. It is a reuse of construction materials.
- Mulch and compost are reused by area residents fro the Compost Facility.
- Tires from the Motorpool are recapped and reused.
- Sludge from the City's Wastewater Treatment Plant is dried and land applied.
- Millings from the Resurfacing Program are reused for new asphalt.

3.4 Public Education and Promotion of Recycling

Danville's waste management and recycling education program is coordinated by the City Beautiful Committee. It has addressed civic groups, clubs, schools, and other organizations. Presentations are made on subjects ranging from the construction, design and cost of landfills to how to recycle. Danville's elementary and middle school children receive instruction on litter control and recycling.

Danville's local media helps to promote recycling and cover news events. Large cleanup events and recycling promotions are also frequently covered by Channel 13 in Lynchburg, Virginia. The City plans to broaden its education efforts as described in Section 3.0 of this plan.

3.5 Regional Waste Management Activities

Danville has limited suitable space available for landfill expansions or new landfill development. Danville officials recognize that it will be necessary to look beyond the City limits for long-range solid waste disposal capacity. City staff and officials will stay involved in discussions with representatives of neighboring municipalities and counties to keep abreast of developments within the regional and explore opportunities for regional cooperation in solid waste management planning and facility development. Currently, the City's solid waste is being disposed of at the Maplewood Recycling & Waste Disposal Facility which has a projected life of 30 years.

3.5.1 West Piedmont Planning District

The West Piedmont Planning District (WPPD) is comprised of Franklin, Henry, Patrick, and Pittsylvania Counties and the municipalities within the geographic boundaries which they define. The West Piedmont Planning District Commission (WPPDC), located in Martinsville, Virginia, has the capability of assisting member local governments with planning efforts and providing technical assistance as requested. The WPPDC prepared a Regional Solid Waste Management Plan update in 1989 which was financed in part through a grant from the Virginia Department of Waste Management. The Commission is not playing a direct role in solid waste management planning at this time other than serving as a source of planning data and a clearinghouse on regional activities.

4.0 Source Reduction and Materials Reuse

4.1 Introduction

At the top of Danville and Virginia's hierarchy of preferred waste management options is source reduction followed by materials reuse. Source reduction involves changing purchasing practices, manufacturing processes, and housekeeping and materials management practices to reduce the amount or toxicity of waste generated. Materials reuse involves utilizing discarded products or materials for the same or new purpose without their undergoing a physical change (for example, refilling beverage containers versus crushing the glass to make new containers).

4.2 Source Reduction Strategy

The City of Danville views both source reduction and recycling to be critically important in managing its solid waste stream. Important as they are however, local government is limited in its capability to change the waste generation practices of other organizations and individuals. Danville plans to take an active role in promoting waste reduction and reuse by conducting the following on going activities:

- Informing waste generators about waste reduction and reuse benefits, opportunities, and techniques;
- Providing incentives for source reduction and reuse; and
- Practicing source reduction and reuse in City government operations, thereby serving as a model for others.

Often, individuals and businesses alike are simply not conscious of their wasteful behavior. As clearly evidenced by the impact of Earth Day 1990, public awareness campaigns can markedly change consumer purchasing habits and recycling behavior. This in turn impacts private sector manufacturing and public relations activities, as well as the decisions of elected officials. Frequently, a simple change in perspective on waste as misplaced resources rather than useless materials is all that is needed to trigger business managers to implement successful waste reduction/reuse programs.

This is particularly true for larger corporations with significant in house resources to investigate waste generation and management alternatives.

4.3 Education

Danville will initiate a number of source reduction/reuse educational activities targeting both the general public and businesses. The objectives of these efforts will be to:

- Inform businesses and individuals of the costs and difficulties associated with waste disposal in Danville;
- Describe the wasteful nature of American society in light of other countries;
- Provide information on methods and programs available to institute waste reduction programs and modifying consumer habits; and
- Provide information on the potential savings and other benefits that can be achieved when less waste is produced.

Some of the activities planned for implementation include the following:

- Development and distribution of printed materials outlining waste reduction/reuse tips for the general consumer and businesses;
- Development of a waste audit and source reduction handbook for use by Danville businesses and institutions;
- Organizing and hosting seminars and discussion forums for business representatives;
- Development of educational fliers or worksheets for distribution to school children; and
- Establishment of backyard composting education program in conjunction with organizations such as 4-H and the Virginia Agriculture and Consumer Services Department.

These and other public awareness and educational activities will be integrated with recycling promotion activities to ensure that both topics are appropriately and cost effectively addressed. Communications strategies are discussed further in Section 5.0.

4.4 Incentives

While many individuals and businesses will continue to practice source reduction/reuse and recycling once motivated to implement such practices over an initial period, others will need incentives on an on-going basis; and a small minority may never be motivated to change their practices unless doing so is required and enforced.

Incentives planned for implementation by Danville are:

- Establishment of a waste collection and disposal fee system that reflects the true costs of implementing Danville's comprehensive waste management program; and
- Establishment of an awards program to recognize outstanding recycling programs and individual efforts.

4.5 In-house Source Reduction/Reuse

The City of Danville clearly recognizes that in order to motivate residents and businesses to change their waste generation and management behavior, the City must "practice what it preaches". Therefore, the City will establish a Waste Reduction and Recycling Task Force comprised of representatives from the Office of the City Manager, Public Works Department, Sanitation and Buildings and Grounds Divisions, Office of Purchasing, City schools, and other key City government offices to identify and implement waste reduction measures, to expand the existing recycling program to include collection of additional materials, and to modify City procurement procedures to encourage purchase of products which generate less waste, are easier to recycle and/or are made from recyclable materials.

There are numerous educational publications prepared by State and national organizations and selected communities which are generic (e.g. not location – specific) in nature. Many of these are available free of charge and are suitable for distribution in Danville as is. Danville will seek the assistance of the Virginia Waste Minimization

Program in obtaining such materials and in guiding Danville in its outreach and in-house programs development. For all education, awareness and promotion activities, Danville will draw heavily upon the publications and activities of other communities in developing its programs.

5.0 Recycling

5.1 Methods of Achieving Commonwealth Goals

To continue to achieve the mandated recycling levels specified by the Commonwealth of Virginia and to meet the City's own recycling objectives. Danville will need to continue its existing recycling programs, establish new programs, and increase public education regarding the benefits and methods of recycling. Cost however is of high concern to Danville officials and residents, due to current local economic conditions and the nationwide recession. Consequently, programs which would be desirable from a convenience standpoint should be delayed if their implementation would prevent Danville from establishing programs which are likely to achieve higher tonnage diversion levels.

Keeping these issues and conclusions in mind, Danville, with the assistance of its consultants, evaluated the full range of recycling options and identified strategies felt to best achieve both City and Commonwealth Waste Management objectives. Danville's approach toward expanding recycling involves targeting the most prevalent, easily recoverable materials in the waste stream to achieve recycling mandates, namely, yard wastes and selected recyclable materials generated by businesses, while providing the opportunity for all residents to recycle household materials through a cost-effective city-wide drop-off center program. Later phases will involve pursuing the recycling of materials which are more difficult to recover or have less waste reduction impact and providing incentives to further increase residential and business participation in recycling. These recycling strategies are described in the following sections and are grouped by source and type of materials targeted for recovery. Recovery estimates and calculation methods are presented in Chapter 10.

5.2 Non-household Recyclable Materials

As presented in Chapter 2, it is estimated that approximately 58 percent of Danville's waste stream is generated by non-household sources. While several of Danville's larger businesses and institutions including City government have initiated in-house

recycling programs, a large amount of potentially recyclable material is still being landfilled.

In the absence of legal incentives, non-household waste recycling is driven by economics, convenience, and knowledge of recycling opportunities. Factors limiting non-household recycling activities in Danville to date include little economic incentive (Danville's tip fee was low relative to other localities in 1990) lack of local processors for some materials, particularly high grade office paper and corrugated containers, and lack of awareness of recycling benefits, opportunities and procedures (First Piedmont started paper and OCC recycling in 1996).

5.2.1 Role of City of Danville

The City of Danville's approach to increasing business and institutional waste recycling is to stimulate additional private-sector activity while minimizing City involvement in handling non-residential materials directly. Residential solid waste will be recycled by City crews whenever possible; especially yard waste, white goods, and steel/metal debris.

Danville views the role of the City most appropriately to be as follows:

- Provide technical information and assistance on recycling methods and opportunities;
- Serve as a catalyst for expansion of the existing collection, processing and marketing infrastructure;
- Continue setting waste collection and disposal fees to reflect the true costs of solid waste management services; and
- Serve as model by expanding its in-house recycling efforts to include all feasible materials and offices.
- Recycle materials such as yard waste and white goods.
- Operate drop-off recycling sites of mixed paper, glass, aluminum, newsprint, OCC, tin cans, plastic, etc.

In the event that efforts in the above areas are insufficient to continue to meet state goals, the City of Danville will evaluate the need for instituting mandatory recycling ordinances and/or bans on the disposal of selected recyclable materials, assuming that adequate alternative outlets for those materials exist. Danville will consider developing processing facilities, thereby serving as a market of last resort, if private sector alternatives cannot be identified.

In light of having limited resources, Danville will target its efforts initially on large quantity, high quality recyclables generators. Other criteria for selecting target recipients of City assistance include demonstrated management commitment for implementing recycling and serviceability of the generator's facilities. Danville will also work with businesses and trade organizations to provide information, printed materials, and guidance on how they, in turn, can assist the smaller quantity generators. In the following section, target materials and their sources are presented along with programs for addressing them.

5.2.2 Priority Non-household Waste Recycling Programs

Process – Specific

In Danville, the process-specific wastes currently being landfilled that are most prevalent and in a relatively clean form are boiler ash, textile scraps, tobacco dust, and construction debris. Many of these wastes are on a downward trend due to the weakening of textiles and tobacco industries. The incoming industries are generally less waste producers such as telecommunications, shipping warehouses, woodworking, etc.

In light of the fact that large quantities of these materials are generated by just a few sources, technical assistance or incentives provided by the City could have a significant impact on reducing the quantity of waste now being landfilled. Hence, the City will make this activity a priority, starting with conversion of the marketing information in Appendix D to a directory of market outlets for recyclable materials to be distributed to Danville businesses.

Paper

In 1990, Danville lacked local processors for high grade paper and old corrugated containers (OCC). Therefore, a large amount of these materials were being landfilled even though they were relatively easy for the generator to recover and had a relatively high value in the secondary materials market. This is particularly true for generators of small to moderate volumes of OCC and large quantity generators of high grade paper, although several large volume OCC generators are also still sending this material to the landfill. The City worked with First Piedmont to create a waste paper dealer in Danville. Using traditional business development incentives and commitment on the part of the City to assist with promoting paper and OCC recycling, along with the recycling of other materials, First Piedmont was encouraged to begin newsprint and OCC recycling. Attraction of a waste paper dealer that accepts newspaper and mixed paper as well as high grades and OCC has further increased recycling opportunities for City residents, institutions, and businesses.

Danville will explore the potential for prospective waste paper dealer(s) to establish a "dump and sort" operation for mixed non-residential waste loads containing high quantities of uncontaminated OCC and possibly other materials. Plans are for a tipping fee to be charged for handling such loads which is lower than the landfill tipping fee, thereby giving waste generators and haulers an economic incentive to utilize this facility in lieu of the Transfer Station.

Provision of additional processing infrastructure, paired with economic incentives and program promotion should significantly reduce the amount of

non-residential paper and OCC going to the Transfer Station. Once this system is on line, banning the disposal of OCC from the Transfer Station will be feasible if doing so is determined to be necessary because of poor voluntary participation.

Commercial Glass and Cans

The potential exists to recover significant quantities of glass containers and aluminum and bi-metal beverage cans from Danville area restaurants, hotels, taverns and other food and beverage service establishments. Due to the tonnage generated, pick-up service is usually needed in order for such facilities to participate in the recovery and recycling of these materials. Danville plans to encourage and support private operations such as Goodwill Industries who offer collection service by publicizing service availability, encouraging participation, and publicly recognizing businesses that have established recycling programs. If independent private collection services are determined to be inadequate to serve potential program participants, then Danville will consider contracting with a private hauler, recycling firm or using City crews to provide this as a City service on a regularly-scheduled basis.

Plastics

As is true nationwide, plastic packaging products are utilized by Danville businesses and institutions at a rapidly increasing rate. Many of these materials are recyclable and have a high per-ton value relative to other secondary products. However, plastic grades must often be kept separated, and contaminant allowances are typically low. These factors coupled with the high volume-to-weight ratio of plastics makes these materials more difficult to recycle than other material types.

No plastics processors are located in Danville, however, several market outlets are within an acceptable range, assuming adequate shipping quantities of plastics can be recovered. The City of Danville plans to work directly with large quantity plastic waste generators to identify site-specific recycling options, and

will provide general information and guidance concerning plastics recycling opportunities.

Scrap Metal

Danville has a well established scrap metal industry which is already recovering the majority of available scrap metals in the City's waste stream. Danville's role here is to promote diversion of as much scrap metal as possible through existing local outlets.

5.3 Household Recyclable Materials

As described in Section 3.0, recycling programs are now underway that collect some of the newspapers, glass containers, aluminum cans, textiles and scrap metal generated by Danville residences. These materials are collected primarily through Reynolds Aluminum and Goodwill Industries drop-off and buy-back center operations, newspaper collections sponsored by the Danville Register and Bee, and the City of Danville drop-off facility collection program. Factors that have limited expansion of household waste recycling to date include limited public funding and lack of local processors for selected materials including paper, plastic containers, and steel food cans.

In expanding household waste recycling, Danville plans to continue promoting the use of existing recycling centers and to consider establishing additional centers. These centers will be unstaffed and equipped initially to receive newspapers, glass containers, aluminum and bi-metal beverage cans, and PET and HDPE plastic containers. Other materials such as old corrugated containers and steel food cans will be considered for addition in later implementation phases. The centers will be located in highly visible frequent use areas whenever possible such as at shopping centers or parks and recreation areas.

The 1990 curbside pilot program was phased out to direct resources toward implementing recycling programs determined to better meet Danville's recycling

objectives. The drop-off center network is now in place. Danville will continue to evaluate curbside recycling options for future implementation.

Danville recognizes that reliance on drop-off centers for diversion of recyclables from the residential waste stream will necessitate implementation of an extensive promotion campaign and provision of participation incentives. A basic approach to promoting recycling which Danville will use as a guide is presented in the following section. Danville will consider implementing policy measures such as banning the disposal of selected recyclables in the landfill to further increase drop-off and buy-back utilization if voluntary participation falls below levels needed to achieve Danville's recycling objectives.

5.4 Recycling Education and Promotion Strategies

A reoccurring theme in Danville's waste reduction and recycling plan is community involvement. Without strong educational and promotional programs, public awareness and participation will be haphazard and difficult to achieve. Residents' willingness to accept new solutions to Danville's solid waste problems, which may require both increased costs and changed habits, may depend on the quality of the communication programs.

The following is an approach for implementing Danville's educational and promotional plan, subject to modifications and expansion as it is implemented by the City:

Public Works personnel will organize and spearhead the promotional and educational efforts. Information dissemination to both the media and the private sector will be a key responsibility of City staff in carrying out this program.

5.4.1 The Preliminary Planning Process

The process of planning the communications program focuses on the basics of a public relations campaign. As with the development of most plans, a very important initial step is to identify specific program goals and objectives. Danville's source reduction and recycling communications goals include:

- Educating the public about the role of waste reduction and recycling in the management of solid waste;
- Informing the public about Danville's drop-off and business recycling programs and services, as well as all other available recycling options; and
- Promoting active public involvement and participation in recycling.

In addressing these goals, communications objectives will be developed that identify measurable accomplishments to be achieved in specified time intervals.

5.4.2 Themes and Messages

The next step in the planning process will be to identify key source reduction and recycling themes and general messages which will communicate them. Effective promotion of source reduction and recycling in Danville will address the following themes to the extent that resources are available:

- Packaging reduction
- Process waste reduction
- Reduction of toxicity of the waste stream
- Resource conservation
- Products reuse
- Special waste management
- Recycling benefits
- Recycling opportunities and procedures
- Materials markets
- Solid waste collection ordinances
- Solid waste disposal regulations and ordinances

Simple, well-presented messages to promote each theme will clarify the information to be communicated and the actions desired on the part of the audience.

5.4.3 Target Audiences

Choosing target audiences for each message will increase the probability of participation among different groups. Targeted groups likely to receive the focused messages include:

- School children
- Manufacturing firms
- Industry
- Small businesses
- Residential participants
- Institutions
- Government employees
- News and editorial media
- Environmental, neighborhood and civic groups.

Opinion leaders will also be identified in the public and private sector. Danville Public Works will obtain their support and assistance in implementing the communications program through Chamber of Commerce and Danville Development Council meetings, business activities and direct contact.

5.4.4 Implementation Strategies

The next phase of the planning process will involve developing specific implementation strategies to achieve the communication objectives. These strategies will address one or more of the following needs:

- Capturing the attention of each target audience;
- Effectively delivering each communication message in the target audiences own "language";
- Motivating the audience to take action;
- Providing feedback and reinforcing behaviors; and
- Receiving useful input-feedback from participants at appropriate intervals.

Danville will work to select the techniques which will most effectively accomplish each objective within the available resource limits. Danville will attempt to expand resources through effective coordination of activities with that of other organizations involved in promoting recycling and by obtaining volunteer assistance where appropriate. Additionally, private sector contributions toward printed materials, advertisements, and other such products will be pursued. Once specific implementation strategies are identified, the strategies will be collectively assessed to determine an overall schedule and budget for implementation.

5.4.5 Media Usage

In tackling the issue of media coverage, Danville has determined that the most cost-effective strategy for the City's communication program is to seek extensive free media coverage such as news stories, editorials, and public service announcements (PSA) rather than involving significant use of paid advertisements. Although the size of the communication budget has dictated choosing the free media coverage option, there are three major drawbacks of relying on free media coverage: the inability to fully control the informational content released; the extent to which media coverage is provided; and the time such coverage is released. Danville will address these drawbacks by implementing the following strategy:

- Conduct periodic media briefings with the news and editorial staff of each medium in the Danville area. Information packets for the media representatives will be distributed that include pertinent facts and figures to be communicated plus a listing of ways in which the media could provide ongoing assistance.
- Identify and cultivate relationships with media representatives interested in recycling and solid waste management.
- Issue periodic news releases when events or decisions likely to elicit media coverage occur. Special events will be developed such as opening ceremonies and demonstration projects to attract media coverage.
- Working with Danville Register and Bee to develop a special advertising section, the cost of which is to be borne by private sector advertisers. Such a section will enable Danville to publish a large amount of information yet retain control

over the final wording and layout without creating concerns over Danville's buying advertising space directly.

- Enlist the support of radio. In addition to public service announcements radio stations will often promote good causes to increase their community service air time and as a means of demonstrating their support for their listeners' community.

5.4.6 Direct and Indirect Mail

The distribution of mail either directly or indirectly (for example: newspaper inserts), will enable Danville to select the exact product to be delivered, as well as target audiences who will receive it. The use of mail, as well as door hangers, is particularly appropriate when the audience is a portion of the community at large and the general public would be an inappropriate audience.

The production of take-home items such as brochures, booklets, flyers, grocery bags, refrigerator magnets and other printed material can be very valuable in promoting and ensuring proper participation if carefully designed and effectively distributed. It is not uncommon for such materials to become out-of-date before all supplies are distributed. Danville solid waste staff plan to prepare a realistic, detailed distribution plan and timetable in advance of publishing printed materials to keep content current throughout the distribution period and verify that the appropriate quantity will be printed.

5.4.7 Direct Contact

Direct, one-on-one communication is vital when two-way exchange of information is required. One-on-one communication is highly effective in gaining individual support and motivating individuals to take action. However, one-on-one communication is time consuming and labor intensive. In light of Danville's limited personnel resources, care must be taken to limit such communications to only those situations which are clearly necessary and beneficial. This is especially difficult in light of the high public interest in recycling. Mistakes commonly made in this regard are excessive publication of one's telephone number and creation unrealistic expectations concerning the type

and degree of assistance that can be received. Both of these errors result in circumstances where demand for service exceeds the response capabilities of the service provider. These circumstances result in over taxation of personnel resources as well as frustration on the part of those desiring service. Such situations can not always be avoided, but Danville will use the following strategies to alleviate the problem:

- Exercise caution prior to publicizing address and telephone information. Danville will make sure that the information requested by respondents is available for distribution and adequate distribution resources are available.
- Prepare printed materials whenever possible to meet information needs shared by a large number of inquirers. Danville will inform and train personnel in advance to handle changes in the nature and/or quantity of information requests expected. Information distributed in printed form allows for more personnel capable of processing the information requests, and fewer number of personnel needed.
- Establish a speakers' bureau comprised of trained volunteers to make presentations to neighborhoods, environmental and civic groups. This will free Danville staff and enable speakers to reach groups of people instead of addressing their information needs on an individual basis. Speakers bureaus can be very effective if the speakers are properly trained and equipped. Fact sheets can assist the speakers in fielding questions after the presentations.

6.0 Special Waste Management

6.1 Introduction

Some components of the waste stream present special problems and do not lend themselves well to traditional waste management options. Though usually requiring some type of special attention, the handling of these special waste materials is typically integrated into the overall waste management system. These materials comprise a small, yet potentially harmful and problematic component of the solid waste stream. The most notable of these special waste materials and those addressed in this section are the following:

- Scrap tires
- Lead acid batteries
- Waste motor oil
- White goods
- Land clearing and construction debris
- Sludges
- Septage
- Boiler ash
- Mining and agricultural waste
- Spill residues
- Needles and other sharps

Improper disposal of special wastes is often attributed to a lack of acceptable alternatives, inadequate knowledge of proper disposal methods, and in some cases, simple carelessness.

6.2 Strategies for Implementation

The objectives of the City's special waste management program is to establish an efficient, cost-effective, environmentally-sound means of collection, storage, reuse, recycling, and/or proper disposal. Following are the City's current and proposed management strategies for each type of special waste material.

6.2.1 Scrap Tires

A rule-of-thumb used for estimating the magnitude of the scrap tire problem is that approximately 0.65 tires are generated per capita per year weighing an average of 20

pounds each. Therefore, approximately 34,450 tires or 345 tons of waste tires are generated each year in Danville which require special management.

Whole tires disposed of in landfills have a tendency to "float" back to the surface. Exposed tires provide cover and nesting space for vectors such as rats. The tendency of tires to trap water produces noxious odors and provides breeding grounds for disease transmitting mosquitoes and bacteria. Scrap tire piles have caught fire, and under these conditions – or if burned in solid waste incinerators without proper air emission control equipment – produce an average of 138 pounds of particulates per ton of tires.

Currently in Danville, tires are disposed of in the Solid Waste Transfer Station in whole or split form. Split tires are accepted for $42.87 per ton and whole tires for $5.00 per tire. This economic differential has prompted tire dealers to have their waste tires split prior to disposal.

The City's three Litter Crews collect illegally dumped tires in the right-of-way immediately when discovered. This discourages the build-up of illegal tire dump sites. Tires collected are sliced and disposed of at the Transfer Station.

To improve the management of scrap tires, the City of Danville plans to:

1. Slice all City collected tires prior to their disposal, until acceptable markets can be identified.
2. Recycle and recap all City Motorpool generated waste tires.
3. Educate tire retailers, wholesalers, manufacturers and re-manufacturers on appropriate scrap tire collection, storage and disposal procedures as well as marketing opportunities which are identified.
4. Regulate all sites in the City where used tires are stored, collected, or accumulated on a regular basis to prevent conditions which promote the breeding of pests (e.g., standing water in tires) or present a fire hazard.

5. Work to identify and upgrade existing scrap the storage sties to conform to procedures developed for preventing environmental, health and/or safety hazards.
6. Take all feasible steps to establish markets for recovered tires.
7. Continue to charge a per tire fee which adequately covers all aspects of the City's tire management program.

6.2.2 Lead Acid Batteries

Lead acid batteries should not be disposed of in the landfill due to their toxic heavy metals content which could be released to the environment. Currently, the City prohibits the disposal of auto batteries at the Transfer Station.

Lead acid batteries enjoy a favorable market and fairly well established infrastructure for collection and recovery. Advance Auto purchases automobile batteries in Danville, and all auto battery retailers are required to accept old batteries in exchange for the purchase of new ones. Management problems revolve around the do-it-yourself mechanics and small service shops lacking direct access to collection infrastructure and with "backyard" battery recyclers who recover the lead, but dump gallons of lead-saturated acid and lead-contaminated casings on the ground.

The following strategy will be implemented to improve the management of lead acid batteries in Danville:

1. Recycle all lead acid batteries used by City Motorpool or found illegally dumped on right-of-way.
2. Identify enterprises which are purchasing batteries for lead recovery and determine if each operation is environmentally suitable.
3. Provide educational literature to local battery wholesalers and retailers outlining recycling options and proper storage and transportation methods.
4. Actively support state requirement that all distributors of lead acid batteries accept used batteries returned for recycling by customers who purchase new batteries.
5. Require that all facilities for collection and storage of lead acid batteries be designed to prevent leakage to the environment.

6. Encourage all retailers to participate in a publicity program to inform consumers of available battery exchange programs.
7. Encourage all retailers to charge a deposit on batteries, refundable upon exchange.

6.2.3 Waste Motor Oil

Motor oil can lead to surface water, groundwater, and air pollution when improperly discarded. Crankcase oil drainings have been reported to account for more than 40 percent of the total oil pollution of our nation's harbors and waterways. The Association of Government Oil Recycling Officials estimates that recycling used oil could reduce U.S. petroleum imports by 25.5 million barrels of oil per year. Recycled oil is typically burned as a source of recoverable energy, or can be re-refined into lubricants of comparable quality to virgin oil products.

Currently, the City provides no used oil collection services. However, all used motor oil and hydraulic fluid generated by the City garage is recovered for collection by a contractor for processing into fuel. To improve used motor oil management practices in Danville, the City plans to:

1. Recycle all material from City Motorpool applications.
2. Solicit the cooperation of local high-volume vehicle lubricating centers in providing drop-off facilities for used motor oil brought in by the public.
3. Evaluate the need for additional collection sites to be provided by the City once participating vehicle service centers have been identified.
4. Work with the media and Danville service stations to promote use of the City-wide private drop-offs, including the posting of signs notifying customers of oil collection sites as required by the Commonwealth.
5. Consider procurement of re-refined used oil for use in all technically feasible lubricating applications.
6. Consider requiring that all vehicle service centers in the City offer used oil collected at their facility for recovery through acceptable market outlets.

6.2.4 White Goods

White goods, or large worn out and discarded appliances, are problematic to dispose of due to their high bulk and relatively poor compatibility and the potential for PCBs to be contained in their capacitors. These expended durable goods generally contain a high percentage of recyclable ferrous metal.

Recovery of white goods from the waste stream ahs the potential of adding to the tonnage diversion overall and reducing operational problems and space requirements associated with bulky items. Approximately 23.5 lbs/capita of white goods are generated each year. This would amount to approximately 624 tons in the City of Danville. The City of Danville currently contracts with a local scrap metal dealer to recycle white goods collected curbside by the City. Over 11 tons of white goods are collected each month, or approximately 21 percent of the projected amount of white goods available. To improve the management of white goods, the City of Danville will encourage the disposal option at the time of purchase of a new appliance. This option is the most efficient since the appliance is collected at the time a new one is delivered. It is then recycled by the business. White goods are not accepted at the Transfer Station for disposal.

6.2.5 Land Clearing and Construction Debris

Land clearing and construction debris, because of its relatively inert nature, can be buried in landfills specifically designed for that purpose which are less environmentally restrictive than municipal solid waste landfills. Therefore, the primary concern with its disposal in municipal solid waste landfills is the space consumed by this material. The City of Danville does not operate a construction and demolition debris landfill. Construction and demolition debris generated in Danville can be taken to the Construction and Demolition Landfill operating in Pittsylvania County by the First Piedmont Corporation. It is estimated that construction and demolition waste and land clearing debris comprises of 10-15 percent of the non-household waste stream now being disposed of in Danville.

Large land clearing debris is generally burned on site instead of being transported to a landfill. To improve the management of land clearing; smaller wood waste taken to the City compost site will be segregated at a receiving area near the Compost Facility gate. Material will be processed as follows:

1. Trees of suitable type and size are presently being cut into cartable length and offered free as firewood to the public. Danville will continue with this program.
2. Trees unsuitable for firewood will be shredded. This material will be offered to the public as mulch and compost.
3. Danville will investigate the diversion of salvageable scrap lumber and other building supplies to Habitat for Humanity or similar organizations or offer it to the public.
4. Danville will investigate the use of a portable or permanent air curtain incinerator to burn land clearing and wood construction debris.
5. Inert soils, rock, asphalt, and other clean rubble will be stockpiled for use in City construction and grading projects.
6. The City will encourage salvage of wood from demolition of buildings or barns.

6.2.6 Sludge

The Danville Wastewater Treatment Plant is currently operated for the City by American Water Services, Inc. (DEQ Permit No. VA0060593). The sludge generated from the Wastewater Treatment Plant is the only sludge known to be generated in the plan area. It is disposed of by drying and land-applying pursuit to the plant's VPDES permit. No other sludge is anticipated within the plan area within the duration of this plan.

6.2.7 Septage

Danville currently has a policy to prohibit the disposal of any waste containing free liquids in the Transfer Station or Compost Facility.

6.2.8 Boiler Ash

Boiler ash is currently generated by only one industry, which is Dan River Inc. The ash is disposed of through a private hauler and is available for recycling if the appropriate use can be found.

6.2.9 Mining and Agricultural Waste

There are no significant quantities of mining or agricultural waste generated in Danville, and none is received at the Transfer Station with the exception of small volumes of nursery or vegetable garden/greenhouse waste. Agricultural waste, when received, will be included in the yard waste composting program, assuming the material does not contain significant pesticide residues.

6.2.10 Spill Residues

The Transfer Station receives spill residues only when they are generated by municipal operations and only if they have been absorbed by the use of an absorbent material and are non-hazardous. The City has a contract with a nearby hazardous waste management firm (Dishman Inc.) to clean up any hazardous spills.

Spills from private operations and trucking companies are the responsibility of those companies for contracting with a spill response unit. In the event that the responsible party cannot do so in an expedient manner, the City will contract for the remediation and charge the responsible party. Waste from private party spill clean-up will not be accepted by the City and must be disposed of at an appropriate facility. Most non-hazardous spill residues are received by First Piedmont Corporation.

6.2.11 Special Waste

Special waste, generated from residential customers, is handled on a case by case basis. If a resident finds special waste in a house or storage building, they may call the Public Works Department for proper disposal. The waste is picked up by a supervisor and a chemist from Waste Water Treatment is used to determine if it is hazardous waste. Hazardous waste is disposed of by a licensed hazardous waste disposal firm.

6.2.12 Medical Sharps Waste

The City has implemented a Sharps Container Program to minimize the danger of solid waste collectors being injured by medical needles disposed of improperly by residential generators. The City will drop off an empty sharps container to a household which requests one and collect the filled container for proper disposal. This program is free of charge and has resulted in significant reduction of injured solid waste collectors.

TABLE 6-1
City of Danville Special Waste Projections In Tons

YEAR	Tires	Oil	Oil Filters	Antifreeze	Refrigerant	Batteries	Sludge	Land Clearing Stumps, Debris
1995 (Actual)	5,000	267	N/A	N/A	N/A	272	N/A	N/A
2005	5,500	294	1	26	1	299	3,600	N/A
2010	6,050	323	2	30	1.5	329	3,600	N/A
2015	6,655	355	3	35	2	362	3,600	N/A
2020	7,321	391	4	40	2	398	3,600	N/A
2024	8,053	430	5	40	2	438	3,600	N/A

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7.0 Composting

7.1 Introduction

Composting of the organic fraction of the solid waste stream is an integral component of Danville's Comprehensive Solid Waste Management Plan. This section discusses the role of composting in Danville's integrated solid waste management program, describes the compostable fraction of the waste stream, identifies strategies which have been selected for composting implementation, and illustrates the potential for these strategies to divert a significant portion of the waste stream from the landfill.

7.2 Role of Composting in Managing Danville's Waste Stream

Segregation and composting of selected organic materials of the waste stream is viewed by the City of Danville as fundamental to achieving the recycling mandates of the Commonwealth. Composting of these materials significantly reduces the volume of waste requiring landfilling, produces material with the potential to be marketed as a soil additive, and produces a stable material suitable for beneficial reuse as mulch and/or compost. Due to problems which frequently result from the landfilling of fresh or organic materials (such as subsidence and the formation of leachate and landfill gas), diversion of these materials from the sanitary landfill has a direct positive effect on landfill operations, landfill closure and post-closure use of municipal landfill sites.

7.3 Compostable Fraction of the Waste Stream

The types of waste to be included in the composting program for the City of Danville are primarily, but not exclusively, organic materials derived as by-products from agriculture, gardening, lawn and tree care, and allied forest product industries. The City will continue evaluating the waste stream in search of non-traditional materials which may be added on the basis of known desirable properties, such as macronutrient and micronutrient content, as well as the lack of undesirable constituents such as heavy metals, toxics, flammable, reactive or corrosive properties, or dusts and vapors which may be hazardous to workers. Materials suspected of potential pathogenic activity will also be subject to careful examination.

In addition to the physical and chemical composition of a material under consideration, there are other factors which will be evaluated prior to the material's inclusion in the composting program. These factors include the ease with which the material can be segregated from the rest of the waste stream, quantity of the material, continuity of supply of the material, and any special processing or handling requirements.

Table 7-1 identifies materials which are present in the waste stream in high volumes and have already been determined potentially suitable for composting and/or co-composting. As can be seen from the table, full-scale implementation of a composting program can result in a 15 percent or greater reduction in the waste stream.

TABLE 7-1

AVAILABLE COMPOSTABLE MATERIALS

MATERIAL	ANNUAL GENERATION IN TONS	PERCENT OF WASTE STREAM	SEASONAL VARIABILITY*	MAXIMUM DIVERSION RATE (%)
Sawdust	550	0.5	N	100
Yard Waste	10,700	16.0	Y	100
Tobacco Dust	4,200	3.7	Y	100
Sludge	3,900	5.0	N	100
TOTALS **	**16,550**	**25.2**		**380**

* Up to 50% seasonal variability
** Projected annual tonnage available by the year 2010 = 16,550

7.4 Implementation Strategy for Composting

The City of Danville Sanitation Division will separate collection of residential arboreal wastes as appropriate, and will encourage separation of bulk loads of wastes by incoming haulers. Any clean loads of suitable arboreal materials will be stockpiled in a designated location at the existing compost facility. Residential loads of segregated yard waste and brush will be de-bagged as necessary and stockpiled at the same location.

The existing facility operations will consist of segregation of selected organic wastes, pre-processing of bulky materials, mulch production and windrow composting. Pre-processing of bulky materials will be achieved through the use of the rotary shear grinder at the Compost Facility. Chipping equipment will be used to make mulch from wood waste. Firewood and other useable wood will be available for sale to the public. A diversion rate of 5.6 percent of the solid waste stream is expected initially from windrow composting of yard waste. Additional tonnages will be diverted from the distribution of firewood and mulch.

Finished product from the full-scale composting facility will be offered free to the public or the Virginia Department of Transportation in bulk, used as needed for Utilities, Public Works or other City operations.

Since beginning operation in 1991, the City's composting facility has successfully diverted 100% of the residential yard waste from the Transfer Station. The facility is constantly re-evaluating the availability of arboreal and organic materials which may be available from the community to add to the compost facility. Approximately 10,000 tons are processed annually and 100% of it is returned to the residents and area businesses in the region.

The compost and mulch produced is of a good quality and in high demand in the spring and fall of each year.

8.0 Consideration of Waste-to-Energy/Incineration

A variety of waste-to-energy technologies exists, some more proven than others. All involve the production of refuse-developed fuel and/or the combustion of municipal solid waste (MSW) to make steam and/or electricity. Benefits of these technologies include pathogen and organic materials destruction, significant volume reduction of the incoming waste stream, and conversion of discarded material into a valuable energy product for public use.

Potential drawbacks to these technologies include the relatively high capital and O & M costs, perceived public impressions of incineration, stringent air pollution control requirements and current regulatory uncertainties about ash management.

Based upon a review of the technologies available, the total solid waste stream and recycling projections, and planning and implementation issues, it is concluded that waste-to-energy technology is not appropriate for implementation by the City of Danville at this point in time. This conclusion is supported by the following reasons:

- Interest in promoting and establishing programs for increased reduction, reuse, recycling, and composting of solid waste in the City of Danville as the top priority;
- The need to allow the time necessary to determine the success of these preferred management methods prior to sizing and pursuing the establishment of waste-to-energy facility; and thereby avoiding the risks and problems associated with facility over or undersizing;
- Concerns about the comparative cost of waste-to-energy to other options; and
- Interest in investigating the possibility that other nearby communities (e.g. counties, towns) may be receptive to exploring a regional approach to solid waste management with the City of Danville.

Danville officials are aware, however, that the solid waste industry is rapidly changing as demonstrated by the significant changes that have already occurred in terms of technical achievement, environmental impacts, regulatory compliance and system economics. Therefore, the City of Danville will continue to stay abreast of changes in waste-to-energy

and incineration technologies and the factors affecting their feasibility. Additionally, City staff and officials will continue to explore opportunities for regional cooperation in the establishment of waste-to-energy and other regional waste management facilities.

Danville will explore the possibility of incineration of land clearing waste and construction debris through the use of an air curtain incinerator pit or mobile unit.

Currently, the City is aware of no incineration of waste within the plan area and there is no historical data available to provide for past incineration if any occurred. Current projections of incineration quantities are zero for the full span of the solid waste plan time/area.

9.0 Waste Management Disposal Needs

9.1 Landfill Existing Conditions

The City of Danville closed its municipal landfill in 1993 in compliance with subtitle D Regulations. Although the landfill had significant land space available, the landfill waste was a negative impact on the adjacent Danville Regional Airport. The landfill attracted significant numbers of birds which the FAA routinely expressed concern about.

In addition, the landfill did not have current Subtitle D technology, such as water and gas monitoring and impervious liners.

9.2 Future Capacity Requirements

The City replaced its municipal landfill by entering into a long-term agreement with Waste Management of the Piedmont to acquire the necessary property and construct a 300-ton per day Transfer Station (See Table 9-1 for tonnage projections). The contract which was executed was for a term of 15 years and included construction and operation of the Transfer Station and disposal of the waste at a waste management facility. The current location for disposal is Maplewood Recycling & Waste Disposal Facility (Permit No. 540) located in Amelia County, Virginia. The expectant life at this landfill is 30 years. The Waste Management Agreement has an initial term of 15 years, which expires in 2007, and two five-year extensions, which will accommodate waste transfer disposal until the year 2017. After 2017, the City anticipates rebidding the Transfer Station agreement with continued disposal at Maplewood Recycling & Waste Disposal Facility or a similar Subtitle D Waste Disposal Site within the region.

9.3 Evaluation of Transfer Station

The Danville Transfer Station, which is privately owned and operated by Waste Management, has a capacity of 300 tons per day. It is currently being operated at a rate of 110 tons per day. The Station has a capacity three times the current rate. The waste generation for the plan area is projected to be flat. The volume of waste through the Transfer Station will be evaluated at each extension period for the

Transfer Station Agreement or rebidding. By Public Works to ensure adequate transfer capacity for the plan area.

TABLE 9-1
City of Danville
20-Year Landfill and Transfer Station Tonnage Projections

Year	Estimated Population	Per Capita Generation	Daily Tonnage	Annual Tonnage (Actual to Landfill or Transfer Station)
1990	53,000	11.7	310	113,168
1991	52,900	11.8	313	114,084
1992	52,800	11.9	315	115,007
1993	52,700	12.1	318	115,937
*1994	52,600	12.2	320	116,875
*1995	52,500	5.3	139	50,791
1996	52,400	5.4	142	51,671
1997	52,300	5.6	146	53,445
1998	52,200	5.6	147	53,656
1999	52,100	5.5	144	52,558
2000	48,411	6.0	144	52,602
2001	48,000	5.5	133	48,599
2002	47,596	5.1	122	44,373
2003	47,000	4.8	114	41,575
*2004	47,000	3.5	82	29,979
2005	47,000	3.3	78	28,550
2006	47,000	3.3	78	28,550
2007	47,000	3.3	78	28,550
2008	47,000	3.3	78	28,550
2009	47,000	3.3	78	28,550
2010	47,000	3.3	78	28,550
2015	47,000	3.3	78	28,550
2020	47,000	3.3	78	28,550
2024	47,000	3.3	78	28,550

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Reason for decrease in annual tonnage:
* Danville Landfill closed in 1994.
* Transfer Station opened in 1995.
* First Piedmont opened private transfer station in 2004 in adjacent jurisdiction.

10.0 Implementation of Plan Components

10.1 Implementation Schedule and Milestones for Achieving State Goals

In previous chapters, Danville's waste management plan components were identified. This section describes how these components will be implemented over the 20-year planning period. In Figure 10-1, a detailed implementation schedule is provided, showing how Danville plans to achieve the Virginia recycling mandates. Figure 10-2 shows key milestones for implementing the planned waste management services and facilities through the year 2024. As shown in these Figures, high-priority source reduction, recycling and composting strategies were initiated in 1991. In 2005 - 2010, materials recovery programs initiated in earlier years will be evaluated, fine tuned, and expanded, while some new programs will be established. Evaluations needed prior to implementing additional new programs will be performed and decisions made regarding the degree to which policy initiatives, such as source separation ordinances and materials bans, will be needed.

The tonnage diversions potential of recovery programs fully on line will be enhanced through the provision of additional participation incentives and the inclusion of more materials in the recovery system as technologies and markets for them improve.

Figure 10-1: Danville Source Reduction / Recycling / Composting Implementation Schedule

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Management Option	2005 - 2010	2010 - 2015	2015 - 2020	2020 - 2024
Source Reduction	• Expand in-house programs.			
Non-household Materials Recycling	• Work with Danville Development Council to attract recycling dealers to Danville, providing incentives as necessary. • Poll business and industry to track recycling amounts.	• Identify target generators and initiate technical assistance program. • Evaluate need to establish additional infrastructure. • Consider need for glass recycling route for business and commercial. • Begin office paper recycling route and pass on to private hauler as a public private partnership.		
Household Recyclable Materials Collection	• Continue to operate three drop-off recycling locations.	• Evaluate pros, cons, and options for expanding drop-off program and initiate expansion as deemed appropriate. • Make system improvements, collect additional materials as determined feasible. • Evaluate potential for expansion use of Adult Detention inmates as a recycling resource.		

Management Option	2005 - 2010	2010 - 2015	2015 - 2020	2020 - 2024
Tires Recovery	• Work with tire manufacturers and distributors to ensure use of environmentally sound collection and storage methods. • Establish additional tire management regulations if needed.		• Educate and encourage consumers to dispose of tires at vendor where new ones are purchased.	
Lead Acid Batteries Recycling	• Identify safe handling methods and acceptable market outlets. • Educate retailers/ wholesalers on preferred management options. • Encourage retailers/ wholesalers to inform customers about battery exchange opportunities.	• Evaluate need for City to provide additional collection sites.	• Educate consumers on current disposal options for batteries.	
Used Motor Oil Recovery	• Identify market outlets and solicit cooperation of lube centers in serving as public drop points. • Encourage waste oil handlers to send oil to an acceptable recovery outfit.	• Educate consumers about proper recycling of motor oil at auto stores.		

Management Option	2005 - 2010	2010 - 2015	2015 – 2020	2020 - 2024
White Goods Recycling	• Continue to recover and sell white goods to a local buyer. • Explore cooperative marketing opportunities. • Modify and expand programs as needed.		• Continue to educate consumers on proper disposal of white goods. • Continue to operate curbside collection recycling of white goods.	
Land clearing and Construction Debris Management	• Assess waste quantity and characteristics. Develop recovery plan and divert clean wood items for reuse. • Evaluate means of improving firewood cutting and distribution program.	• Educate contractors and property owners to incinerate waste wood rather than bury waste wood.		• Continue to operate free firewood pile. • Investigate incineration of land clearing and demolition debris.
Sludge	• Continue land application of sludge.			
Special Waste	• Continue pick-up and delivery service for sharps containers.			

Management Option	2005 - 2010	2010-2015	2015-2020	2020-2024
Composting	• Continue operating composting facility. Use compost/mulch in City operations wherever practical. • Continue separate collection of yard wastes from residences. • Publicize availability of recycled mulch/compost free to area residents • Publicize availability of free firewood. • Continue diverting 100% of yard waste from landfill to compost facility. • Continue curbside collection of separate yard waste. • Continue to develop compost markets.	• Expand capability of composting components.		
Reduction / Recycling / Composting Education and Promotion	• Promote existing source reduction and recycling programs and opportunities. • Educate the residents on use of compost and mulch. • Evaluate success of initial efforts and further expand program.	• Develop communications plan. • Expand program as outlined in plan. • Utilize coordinating groups of industry for combining the recycling power or purchasing power. • Encourage industry to apply for State environmental excellence award.		

10.2 Recycling Calculation Methodology

The City of Danville has met or exceeded the mandated recycling rate for each responding period to the Virginia DEQ. Amended Regulations for the Development of Solid Waste Management Plans (9 VAC 20-130-10 et seq.) became effective on August 1, 2001. The amended regulations require that Regions as well as each city, county, and town not part of a designated Region in the Commonwealth develop complete, revised solid waste management plans. Section 9 VAC 20-130-120 B & C of the Regulations requires that a minimum recycling rate of 25% of the total municipal solid waste generated annually in each city, county, town, or region be maintained. It also requires that the plan describe how this rate shall be met or exceeded and requires that the calculation methodology be included in the plan. Section 9 VAC 20-130-165 D establishes that every city, county, and town in the Commonwealth, or solid waste management planning region shall submit to the department by April 20 of each year, the data and calculations required in 9 VAC 20-130-120 B & C for the preceding calendar year.

Approved calculation methods are outlined in the rules and provide plan submitters with a choice of using weight or volume estimates. The City of Danville has opted to use weight estimates based on actual scale data of solid waste received weight estimates for materials recycled derived from the best available data and information sources. Provided in this section is a description of the methodology utilized to develop projections of the source, type and quantity of materials expected to be recycled through the implementation of the programs outlined in this plan. These projections were developed using the DEQ calculation procedures to the extent feasible. The basic formula for calculating recycling rates to be used for final estimates, as provided by the Virginia Department of Environmental Quality, is as follows:

Calculated Recycling Rate

[P + S] / [P + S + M] X 100 = Recycling Rate

P = Principal Recyclable Material
S = Supplemental Recyclable Material
M = Total Municipal Solid Waste

Part I - Principal Recyclable Material (PRM): PRMs include paper, metal (except automobile bodies), plastic, glass, commingled, yard waste, waste wood, and textiles taken from the MSW generation. The total weight in **tons** of all PRMs collected for recycling represents the letter "**P**" in the Recycling Rate Calculation.

Part II – Supplemental Recyclable Material (SRM): Recycled SRMs include waste tires, used oil, used oil filters, used antifreeze, abandoned automobiles removed, batteries, sludge (composted), electronics, and large diameter tree stumps (>6" diameter) taken from the MSW generation. For a material to classify as "reused" a solid waste material must be separated from the municipal solid waste stream and used, without processing or changing its form, for the same or another end use. Reused SRMs include construction waste, demolition waste, debris waste and ash from non-industrial sources. The total weight in **tons** of all SRMs collected for recycling and/or reuse represents the letter "**S"** in the Recycling Rate Calculation.

Vegetative and Yard Waste Material may only be counted towards the recycling rate if they are being mulched or composted, and used for agricultural or landscaping purposes. Sludge that is de-watered and then land applied is not included as a SRM.

Part III – Total Municipal Solid Waste (MSW) Disposed: Use the total amount in tons of MSW that was disposed of during the reporting period for each of the source categories (Household, Commercial, Institutional, and Other). "Disposed" means delivery to a permitted sanitary landfill or waste incinerator for disposal and excludes industrial wastes. Totals for each of these categories should include only the amount of MSW generated by and then disposed of by the reporting jurisdiction(s). Industrial waste and by-products should not be included in the MSW calculation. The total weight in tons of MSW disposed of represents the letter "**M**" in the Recycling Rate Calculation.

10.2.1 Household Recyclables

Presented in Tables 10-1 through 10-7 are projections of household recyclables to be recovered through the programs outlined in Sections 5.0 – 7.0. As explained in the tables, estimates for total tons of each material generated are derived from estimates of per household generation rates from the Virginia Market Development Study, from estimates prepared by Franklin Associates or Danville Sanitation Division estimates based on truck volumes and landfill scale data. Recovery rate estimates were provided by the City's solid waste management planning consultant and are based on knowledge of recovery levels achieved from existing programs comparable to those planned for Danville plus City of Danville and Danville non-profit organization recycling

program recovery levels. Recovered Percent of Total figures provided in the shaded columns reflect the percentage of the total waste stream that would be diverted by achieving the projected recovery rates. These values are provided simply to demonstrate the impact of implementing activities targeting each material and are not used in final calculations of household waste recycling levels which are presented in Table 10-8. This summary table shows projected recovered tonnages by material type for each year of the planning period and the estimated percentage of the total household waste stream which they comprise. The total per year recycled tonnage estimates are repeated in the final calculations presented in Table 10-13.

10.2.2 Commercial Non-household Recyclables

Tables 10-9 through 10-12 present projections of the tonnage of principal recyclable materials (PRMs) from non-household sources generated and expected to be recovered through the year 2024 as well as an estimate of industrial recyclables known to have been recycled in 1990. Table 10-9 provides a breakdown of the sources of commercial waste based on employment projections and estimated per employee waste generation levels for Danville. Producing these projections provided the opportunity to apply estimated commercial waste characterization data to the waste tonnage estimates for each class of business to generate tonnage estimates for PRMs from commercial sources. Assuming that the primary target materials and sources are corrugated containers and high-grade paper from offices, corrugated and computer printout from retail businesses, and glass and aluminum beverage containers and corrugated containers from restaurants, the commercial PRM recovery levels shown in the final column are projected. The total recovered PRM tonnage estimates from this table are entered in the final calculations (Table 10-13).

10.2.3 Industrial Non-household Recyclables

The quantity of industrial non-household PRMs could not be based on regional, state or national date, since the nature of industrial operations varies dramatically from location to location and with it the nature of industrial waste. In order to avoid making projections on the composition of industrial waste that had the potential to be

TABLE 10-1
City of Danville Recyclables Projections
MATERIAL: OLD NEWSPAPERS

Year	Number of Households	Total Generated (tons)*	Recovery Rates (percent)	Material Recovered (tons)	Recovered Percent of Total (%)
1990	23,297	3,047	9	274	0.76
1991	23,253	3,041	11	338	1.07
1992	23,209	3,036	2	70	0.20
1993	23,165	3,030	4	128	0.34
1994	23,121	3,024	10	300	0.80
1995	23,077	3,018	11	324	1.13
2000	23,108	3,022	9	276	1.00
2005	23,108	3,022	9	276	1.00
2010	23,108	3,022	9	276	1.00
2015	23,108	3,022	9	276	1.00
2020	23,108	3,022	9	276	1.00
2024	23,108	3,022	9	276	1.00

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* source: VA MARKET DEVELOPMENT STUDY using the value of 5.03 pounds/household/week

TABLE 10-2
City of Danville Recyclables Projections
MATERIAL: GLASS CONTAINERS

Year	Number of Households	Total Generated (tons*)	Recovery Rates (percent)	Material Recovered (tons)	Recovered Percent of Total (%)
1990	23,297	1,296	3	37	0.03
1991	23,253	1,294	4	52	0.05
1992	23,209	1,291	8	100	0.28
1993	23,165	1,289	1	16	0.07
1994	23,121	1,286	2	33	0.08
1995	23,077	1,284	3	33	0.10
2000	23,108	1,286	4	47	0.13
2005	23,108	1,286	4	48	0.15
2010	23,108	1,286	4	48	0.18
2015	23,108	1,286	4	48	0.18
2020	23,108	1,286	4	48	0.18
2024	23,108	1,286	4	48	0.18

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* source: VA MARKET DEVELOPMENT STUDY using the value of 2.14 pounds/household/week

TABLE 10-3
City of Danville Recyclables Projections
MATERIAL: ALUMINUM CANS

Year	Number of Households	Total Generated (tons*)	Recovery Rate (percent)	Material Recovered (tons)	Recovered Percent of Total (%)
1990	23,297	285	1	2	0.00
1991	23,253	284	3	9	0.03
1992	23,209	284	2	1.5	0.00
1993	23,165	284	3	10	0.03
1994	23,121	282	4	11	0.03
1995	23,077	282	5	12	0.03
2000	23,108	282	4	10	0.03
2005	23,108	282	4	10	0.03
2010	23,108	282	4	10	0.03
2015	23,108	282	4	10	0.03
2020	23,108	282	4	10	0.03
2024	23,108	282	4	10	0.03

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* source: VA MARKET DEVELOPMENT STUDY using the value of 0.47 pounds/household/week

TABLE 10-4
City of Danville Recyclables Projections
MATERIAL: HDPE/PET CONTAINERS

Year	Number of Households	Total Generated (tons*)	Recovery Rate (percent)	Material Recovered (tons)	Recovered Percent of Total (%)
1990	23,297	224	0	0	0.00
1991	23,253	224	2	5	0.00
1992	23,209	224	15	33	0.09
1993	23,165	224	8	17	0.05
1994	23,121	222	8	16	0.05
1995	23,077	222	8	17	0.07
2000	23,108	222	8	17	0.07
2005	23,108	222	9	20	0.07
2010	23,108	222	9	20	0.07
2015	23,108	222	9	20	0.07
2020	23,108	222	9	20	0.07
2024	23,108	222	9	20	0.07

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* source: VA MARKET DEVELOPMENT STUDY using the value of 0.37 pounds/household/week

TABLE 10-5
City of Danville Recyclables Projections
MATERIAL: YARD WASTE

Year	Number of Households	Total Generated (tons*)	Recovery Rate (percent)	Material Recovered (tons)	Recovered Percent of Total (%)
1990	23,297	7,922	1	79	0.21
1991	23,253	7,986	20	1,597	4.39
1992	23,209	7,143	100	7,143	100
1993	23,165	7,878	100	7,878	100
1994	23,121	8,250	100	8,250	100
1995	23,077	10,672	100	10,672	100
2000	23,108	10,672	100	10,672	100
2005	23,108	10,700	100	10,700	100
2010	23,108	10,700	100	10,700	100
2015	23,108	10,700	100	10,700	100
2020	23,108	10,700	100	10,700	100
2024	23,108	10,700	100	10,700	100

REVISED 2004 UPDATE

* source: DANVILLE SANITATION DIVISION ESTIMATES using the value of 13.08 pounds/household/week until 1994.
Using actual weight scale amount in 1994 and 1995.

TABLE 10-6
City of Danville Recyclables Projections
MATERIAL: ALL STEEL / TIN

Year	Number of Households	Total Generated (tons*)	Recovery Rate (percent)	Material Recovered (tons)	Recovered Percent of Total (%)
1990	23,297	273	0	0	0.00
1991	23,253	275	2	5	0.00
1992	23,209	277	2	2	0.00
1993	23,165	279	5	3	0.00
1994	23,121	281	7	4	0.00
1995	23,077	284	29	81	0.28
2000	23,108	270	30	80	0.28
2005	23,108	270	33	88	0.30
2010	23,108	270	33	90	0.31
2015	23,108	270	33	90	0.31
2020	23,108	270	33	90	0.31
2024	23,108	270	33	90	0.31

REVISED 2004 UPDATE

* source: VA MARKET DEVELOPMENT STUDY using the value of 0.45 pounds/household/week

TABLE 10-7
City of Danville Recyclables Projections
MATERIAL: WHITE GOODS

Year	Number of Households	Total Generated (tons*)	Recovery Rate (percent)	Material Recovered (tons)	Recovered Percent of Total (%)
1990	23,297	624	1	6	0.01
1991	23,253	623	20	126	0.3
1992	23,209	622	22	136	0.4
1993	23,165	621	33	208	0.6
1994	23,121	620	22	126	0.3
1995	23,077	618	32	200	0.7
2000	23,108	618	49	300	1.0
2005	23,108	618	49	300	1.0
2010	23,108	618	49	300	1.0
2015	23,108	618	49	300	1.0
2020	23,108	618	49	300	1.0
2024	23,108	618	49	300	1.0

REVISED 2004 UPDATE

* source: FRANKLIN ASSOCIATES using the value of 1.03 pounds/household/week

TABLE 10-8
City of Danville Residential Recyclables Projections
(TONS/YEAR)

Year	Recycled Newspaper	Recycled Glass	Recycled Aluminum	Recycled Plastic	Recycled Yard Waste	Recycled Steel / Tin	Recycled White Goods	Total Recycled	Residential Recycling Rate (%)*
1990	274	37	2	0	79	0	6	398	1
1991	338	52	9	5	1,597	5	126	2,132	6
1992	700	100	1.0	33	7,143	2	136	8,115	23
1993	128	16	10	17	7,878	3	208	8,260	23
1994	300	33	11	16	8,250	4	126	8,380	23
1995	324	33	12	17	10,672	81	200	11,339	39
2000	276	47	10	17	10,672	80	300	11,402	39
2005	276	48	10	20	10,700	88	300	11,442	39
2010	276	48	10	20	10,700	90	300	11,464	39
2015	276	48	10	20	10,700	90	300	11,464	39
2020	276	48	10	20	10,700	90	300	11,464	39
2024	276	48	10	20	10,700	90	300	11,464	39

REVISED 2004 UPDATE

* AS PERCENTAGE OF TOTAL RESIDENTIAL WASTE GENERATION

TABLE 10-9
DANVILLE COMMERCIAL WASTE PROJECTIONS
(TONS/YEAR)

Year	Total Waste Generated	Office	Light Industry	Retail	Restaurant	Total Commercial Waste
1990	113,168	2,232	481	2,277	4,099	9,089
1991	114,084	2,245	484	2,291	4,124	9,144
1992	114,099	2,259	487	2,304	4,149	9,199
1993	115,699	2,272	490	2,318	4,174	9,254
1994	116,941	2,286	493	2,332	4,199	9,309
1995	68,724	2,300	496	2,346	4,224	9,365
2000	70,564	2,369	511	2,417	4,351	9,646
2005	70,809	2,432	524	2,482	4,468	9,907
2010	70,902	2,447	527	2,497	4,495	9,966
2015	70,902	2,447	527	2,497	4,495	9,966
2020	70,902	2,447	527	2,497	4,495	9,966
2024	70,902	2,447	527	2,497	4,495	9,966

REVISED 2004 UPDATE

TABLE 10-10
CALCULATIONS: COMMERCIAL WASTE GENERATION

Material	GENERATION RATE BY CLASS OF BUSINESS (%)			
	Offices	Light Industry	Retail	Restaurants
Container Glass	0.7	0.0	0.8	9.2
Aluminum Cans	0.9	0.0	0.4	0.3
Steel Cans	0.1	0.0	0.0	0.0
Newspaper	8.2	3.9	0.0	0.0
Corrugated	15.8	0.0	41.9	12.5
Computer Printout	13.5	0.0	7.2	0.0
Office Ledger	17.3	5.9	5.3	1.3
Mixed Paper (1)	40.8	34.8	29.2	5.4
Plastic Bottles	0.0	0.0	0.0	0.3
Ferrous Scrap	0.4	0.0	0.6	1.4
Non-Ferrous Scrap	0.0	0.0	0.0	0.1
Food Waste (1)	0.0	0.7	3.4	56.3
Yard Waste	0.0	0.0	0.7	0.0
Textiles	0.0	0.0	0.7	0.0
NEC (1,2)	2.3	54.7	10.5	13.2
Principal Recyclables	**56.9**	**9.8**	**57.6**	**25.1**
Per Employee Rate (3)	**0.2**	**0.4**	**0.5**	**2.3**

2004 UPDATE REVISED

NOTE: (1) DO NOT COUNT AS "PRINCIPAL RECYCLABLE MATERIALS"
(2) NEC = Not Elsewhere Classified
(3) TONS PER YEAR PER FULL TIME EMPLOYEE

TABLE 10-11
NON-RESIDENTIAL RECYCLING PROJECTIONS
(TONS PER YEAR)

Year	Total Waste	Non-Residential Waste Generated	Principal Recyclables Generated	Principal Recyclables Recycled	PRM Recycling Rate (%)*
1990	113,168	77,079	6,728	113	1.7
1991	114,084	77,703	6,768	228	3.4
1992	114,099	78,331	6,809	345	5.1
1993	115,699	78,965	6,850	580	8.5
1994	116,941	79,603	6,891	818	11.9
1995	68,728	40,056	3,485	1,296	18.7
2000	70,564	41,892	3,645	1,472	20.6
2005	70,809	42,109	3,663	1,676	22.9
2010	70,902	42,202	3,672	1,843	25.0
2015	70,902	42,202	3,672	1,843	25.0
2020	70,902	42,202	3,672	1,843	25.0
2024	70,902	42,202	3,672	1,843	25.0

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* AS PERCENTAGE OF COMMERCIALLY GENERATED RECYCLABLES

TABLE 10-12
ESTIMATED INDUSTRIAL TARGET RECYCLABLES (TONS)

Target Materials	Baseline Recycling	Additional Material Landfilled	Total Target Material	Recycling Rate (%)*
Corrugated Containers	27	6,197	6,224	0.4
Textiles	573	1,299	1,872	30.6
Plastic	0	1,521	1,521	0.0
Ferrous Metals **	5,000	519	5,519	90.6
Non-Ferrous Metals	700	482	1,182	59.2
Other PRM	0	4,267	4,267	0.0
TOTAL	**6,300**	**10,019**	**16,319**	**38.6**

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* AS PERCENTAGE OF TOTAL INDUSTRY GENERATED RECYCLABLES

TABLE 10-13
PROJECTED RECYCLING RATE CALCULATIONS

Materials	1990	1991	1992	1993	1994	1995	2000	2005	2010	2015	2020	2024
Household PRM/SRM Recycled	319	535	972	382	150	667	730	742	764	764	764	764
Yard Waste PRM/SRM Recycled	79	1,597	7,143	7,878	8,250	10,672	10,670	10,700	10,700	10,700	10,700	10,700
Commercial PRM/SRM Recycled	113	228	345	580	818	1,296	1,472	1,676	1,843	1,843	1,843	1,843
Industrial PRM/SRM Recycled	6,300	7,357	8,414	9,468	10,515	11,553	12,912	14,417	15,889	15,889	15,889	15,889
Tobacco Dust SRM Recycled	4,187	4,246	4,305	4,364	4,423	4,483	4,470	0	0	0	0	0
TOTAL RECYCLED	**10,998**	**13,963**	**21,179**	**22,672**	**24,156**	**28,671**	**30,254**	**27,535**	**29,196**	**29,196**	**29,196**	**29,196**
PERCENT	**10%**	**12%**	**19%**	**20%**	**21%**	**42%**	**43%**	**39%**	**41%**	**41%**	**41%**	**41%**

* Includes projected amounts reused ore recovered.

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highly inaccurate, tonnage estimates were developed for the PRMs to be targeted for recovery based on the following sources:

Sanitation Division estimates of those materials entering the landfill;

- Industry interviews and survey questionnaires; and
- A survey of secondary materials buyers in Danville known to be handling target PRMs from Danville sources.

Target PRMs enter the landfill in a relatively clean, often-segregated form; hence their quantity was relatively easy to estimate in comparison to other waste materials. Since the remainder of the industrial fraction could not be characterized, a middle-of-the-road assumption was made that 50 percent of this balance was principal recyclable materials, none of which would be recycled.

The assumptions and approaches described above form the basis for the figures presented in Figure 10-12. A baseline recycling column was added to account for existing Danville industrial waste recycling tonnages which have been documented to date.

10.2.4 Total Recycling Rate

Table 10-13 reflects the results of entering the projected Danville household and non-household recycling rates into the Department of Waste Management recycling rate formula presented at the beginning of this section. Included in the formula numerator are projected tonnages of household, commercial non-household and industrial non-household PRMs plus supplemental recyclable material and wood waste, which Danville is composting as discussed in Section 7.0. Included in the formula denominator are total household waste tonnage projections plus total non-household PRM tonnage projections. As can be seen by the resultant recycling rate percent figures, the City of Danville is expected to exceed minimum State recycling mandates through full implementation of this plan.

10.3 Funding & Construction Schedules

Continued effective implementation and operation of the programs and facilities described in this plan does require significant operating funds as well as administrative and field personnel. No significant capital projects are anticipated after 2004. The Composting Facility, Transfer Station, and Landfill Closure have all been accomplished prior to 2004. All future operating and capital costs will be funded through the monthly Solid Waste fee charged to households and businesses. This fee is reviewed annually for adequacy.

10.3.1 Capital Costs

Table 10-14 summarizes the estimated capital costs of planned solid waste management facilities through the year 2024.

TABLE 10-14 Projected Capital Costs for Danville Solid Waste Management Facilities	
Yard waste composting/mulch production facility	Complete
Existing landfill closure	Complete
Construct Transfer Station	Complete

10.3.2 Current Operating Costs

Current annual budget amounts for FY 2004-2005 (see attached budget in Appendix E) are as follows:

Recycling Drop-off Sites, White Goods Collection ..... $99,971.
Recycling Composting Site Operation ..... $95,567.
Yard Waste Recycling Collection Costs .....$464,511.
Leaf Recycling Collection Costs.....$242,414.
Post Closure Landfill Maintenance.....$110,818.
Waste and Debris Collection and Disposal .....$2,154,538.

10.3.3 Transfer Station Tipping Fees

The Danville landfill was closed in 1993 and replaced by the Danville Transfer Station. Table 10-15 shows the costs of disposal since inception. The costs are adjusted annually by the Consumer Price Index and have averaged 2.3% in the past 10 years. The current cost is $42.87 per ton. Waste Management of the Piedmont has a 25-year disposal contract with the City.

TABLE 10-15 Transfer Station Costs		
Year	**Cost Per Ton**	**Consumer Price Index Increase**
1994	$33.89	2.7%
1995	$34.81	2.7%
1996	$35.72	2.6%
1997	$36.65	2.1%
1998	$37.41	1.9%
1999	$38.11	1.5%
2000	$39.10	2.6%
2001	$40.43	3.4%
2002	$41.20	1.9%
2003	$42.11	2.2%
2004	$42.87	1.8%
Average percent of increase:		2.3%

10.4 Financing Mechanisms

In 1990, the City established a Solid Waste Enterprise Fund and established a monthly user fee which now covers all costs of collection, recycling, disposal, and capital improvements. The monthly fee which is charged on residential and commercial electric bills is $13.80 per month (residential) and $2.00 per month (commercial). The following Residential Solid Waste Programs are in effect in 2004:

- Back Yard Residential Refuse Collection
- Curbside Yard Waste Collection (Recycling)
- Loose Leaf Collection in Fall (Recycling)
- Compost / Mulch Facility Operation (Recycling)
- Closed Landfill Post-closure Costs
- Recycling Drop-off Sites (Recycling)
- Disposal of Residential Waste at Transfer Station
- Free Sharps Container Collection for Residents

This fee is evaluated annually for adequacy to fund all solid waste services and is adjusted if needed.

10.5 Conclusion

As demonstrated by this Solid Waste Management Plan, the City of Danville is embarking on an aggressive and progressive strategy for reducing, recycling and composting solid waste and disposing of the remainder in a manner that is environmentally sound. The successful implementation of plan components should result in recycling levels that significantly exceed minimum requirements of the Commonwealth of Virginia. While implementation of this plan marks a significant change in the way Danville solid wastes are managed, the end result should be cost-effective and equitable for all waste management system users. The City of Danville will continue to seek public involvement in evaluating and fine-tuning its waste management programs to ensure high public acceptance and the proper management of solid waste.

COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN

2004 UPDATE - REVISED

Appendix A
ADVISORY COMMITTEE

APPENDIX A

2004 DANVILLE SOLID WASTE ADVISORY COMMITTEE

Members and Their Affiliations

Name	Affiliation
Stuart Sutphin	Virginia Extension Service
H.I. Slayton	Citizen Representative
Lee Robertson	City Beautiful Committee
Mark Stegall	Goodwill Industries
Darren Conner	Dewberry
Don Nodtvedt	Nestle USA
Richard Turner	Industrial Development Authority
Scott Thompson	Thompson's Inc.

City Staff:

Richard Drazenovich	Director of Public Works
Thomas Spicer	Sanitation Division Director

DANVILLE SOLID WASTE ADVISORY COMMITTEE
March 22, 2005

A meeting of the Danville Solid Waste Advisory Committee was held on Tuesday, March 22, 2005 in the City of Danville, Public Works Conference Room.

Those in attendance are as follows:

Richard Drazenovich, Public Works Director
Richard Turner, Industrial Development Authority
Stuart Sutphin, Virginia Extension Service
Mark Stegall, Director of Goodwill Industries
Lee Robertson, City Beautiful Committee
Tom Spicer, Sanitation Division Director, Public Works
Don Nodtvedt, Nestle
Scott Thompson, Thompson's Inc.
H.I. Slayton, Citizen Representative
Denise Tatum, Secretary, Public Works

Richard Drazenovich opened the meeting and welcomed everyone. Those in attendance introduced themselves.

SOLID WASTE MANAGEMENT PLAN OVERVIEW

The original Comprehensive Solid Waste Management Plan, adopted in 1991, was recommended to City Council by the Advisory Committee, which consists of citizen representation from contractors, businesses and other interested parties. Each 2004 Solid Waste Advisory Committee member was sent a draft of the revised plan for review in advance of the meeting. Comments/recommendations will be incorporated into this plan and sent to City Council pending any modifications. Public citizen input, representatives and public notice would also be included in this revision.

This plan has been placed on the City's main web page for review. The web page address is: www.danville-va.gov .

Rick stated that we had the option of re-doing the whole plan or amending the plan. Some accomplishments have included closing the landfill, opening the Transfer Station and Compost facility, recycling drop-off, and resolution of the white goods issue. The main purpose of this plan is to comply with the amended Solid Waste Regulations that requires we revise the plan. The focus is on existing services rather than adding a lot of new costs into the systems.

RECYCLING

Rick noted that we have met the 25% recycling requirement because of the Compost facility. The drop-off containers have not really helped much due to the fact that there is not a lot of recycling industry in town. Greensboro is the nearest Material Recovery Facility (MRF) where it can be separated out and then recycled. Our asphalt millings from the resurfacing contracts are reused as crushed stone base in our parking lots and trails. This has been included as a reuse material in our

recycling report. Richard Turner asked if the 25% recycling would change. Rick responded that he did not anticipate changes in the near future.

Discussed recyclable product income for the products that we generate. We are saving landfill space, as well as $42.00 per ton for the landfill. These are offsetting costs, but there are no incoming revenues. The mulch is given back to the residents.

Don Nodtvedt added that Nestle has a cost avoidance of $1.8 million.

Mark Stegall added that their aluminum recycling is through Anhauser Busch. The clothing that cannot be sold in the stores ends up in salvage that is sold by a broker.

This plan centers on keeping service up and costs down as well as educating the public of environmental issues, such as litter and recycling and proper disposal of special waste, such as motor oil and batteries.

PLAN REVISIONS

The State Regulations require a plan for tracking disposed waste generated and recycling within the plan area. This includes polling the industries as to what they generate and what they recycle. Tom Spicer added that we would poll industries such as Nestle, Goodwill, Corning and Goodyear who are doing recycling. Rick added that polling businesses would allow us to exchange information.

Solid waste generation, upon closure of the landfill, was approximately 113,000 to 120,000 tons of waste. This dropped to 45,000 tons after closure. This indicated that numerous industries that were disposing at the landfill are now recycling or reusing. Sludge is now being dried and land applied.

Residential solid waste is $13.80 per month, which covers refuse/bulk debris/yard waste/loose leaves/drop-off centers as well as the operation of the Compost facility. Three City drivers are maintaining litter control with the assistance of inmate crews. The main roads are picked up on a weekly basis. Rick noted that the plan is not proposing any changes in our current systems.

Public Notification will be published on March 23, 2005 to allow a 15-day comment period on this plan. A public meeting is scheduled for March 30, 2005 at the Public Works Office.

RECOMMENDATIONS

Tom suggested that in the future, recycling of electronics could be added to this plan.

Don suggested partnering with Habitat for Humanity for the recycling of aluminum cans.

Suggestions from the Solid Waste Advisory Committee:

1. Utilize coordinating groups of industry for combining the recycling power or purchasing power.
2. Encourage industry to apply for the State Environmental Excellence Award.
3. Evaluate potential for expansion use of Adult Detention inmates as a recycling resource.

APPENDIX A

1990 DANVILLE SOLID WASTE ADVISORY COMMITTEE

Members and Their Affiliations

Name	Affiliation
F.W. Townes, III (Chairman)	Townes Funeral Home
James Wrenn	Goodyear Tire & Rubber Co.
Robert Thompson	President, John W. Daniel Co.
Mrs. L.M. Weringo	Girl Scout Recycling Coordinator
Mark Stegall	Director, Goodwill Industry
Mrs. Susan Hoffman	Averett College
Mrs. Sharon Scott	Averett College
Joseph Kauffman	Insurance Broker
John Gayk	Danville Development Council
Ken Parrish	Dan River Mills
Mrs. Joanne Ezell	City Beautiful Committee
Joe Bloomer	Memorial Hospital
H.I. Slayton	Citizen Representative

City Staff

Charles F. Church	City Manager
W.V. Cousins	Director of Public Works
Thomas M. Spicer	Sanitation Division Director
Stephen Hudson	Purchasing Director
John Sweeney	Director of Utilities

COMPREHENSIVE

SOLID WASTE

MANAGEMENT PLAN

2004 UPDATE - REVISED

Appendix B

CITY COUNCIL RESOLUTION ADOPTING PLAN and PUBLIC PARTICIPATION

PRESENTED: May 3, 2005

ADOPTED: May 3, 2005

RESOLUTION NO. 2005-05.03

A RESOLUTION ADOPTING THE REVISED 2004 COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN FOR THE CITY OF DANVILLE.

WHEREAS, the City of Danville, Virginia, must adopt a Comprehensive and Integrated Solid Waste Management Plan as required by the Virginia Waste Management Board; and

WHEREAS, a Public Meeting was held for public comments and questions; and

WHEREAS, the Solid Waste Management Advisory Committee and City staff have reviewed the Comprehensive Solid Waste Management Plan and recommend it to the Council for its approval.

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Danville, Virginia, that the 2004 Comprehensive Waste Management Plan for the City of Danville, Virginia, a copy of which is attached hereto, be, and the same is hereby, approved and adopted.

APPROVED:

MAYOR

ATTEST:

Annette Y. Crane, CMC
CLERK

Approved as to
Form and Legal Sufficiency:

City Attorney

I certify this to be a true
and correct copy of the original
document on file in my office.
Annette Y. Crane, CMC, City Clerk
BY Annette Y. Crane

OFFICE OF THE
CITY ATTORNEY

CITY OF
DANVILLE, VIRGINIA

Affidavit of Publication

Personally appeared before me,

Angela Guill
Business Office
at the

Danville Register & Bee

A newspaper published in the City of Danville, who states on oath that the advertisement entitled
PUBLIC NOTICE
.....duly
published in the aforesaid newspaper

Danville Register & Bee

In the issues dated 3/23/05

/s/ Business Office

Subscribed and sworn before me this 1ST

day of APRIL 2005

Notary Public

My Commission Expires: January 31, 2006.

Public Notice

The City of Danville hereby gives public notification that a public meeting will be held at 5:00 P.M., Wednesday, March 30, 2005 in the City of Danville Public Works Office, 998 South Boston Road, Danville, Virginia to discuss the revised Solid Waste Management Plan required pursuant to Virginia Waste Management Regulations 9 VAC 20-130-130.

The purpose of the public participation is to acquaint the public with the comprehensive and integrated Solid Waste Management Plan and how the standards and the requirements of the Virginia Solid Waste Management regulations will be met. Public participation is also to identify issues of public concern, to facilitate communication, and to receive comments.

This notice serves as the official announcement of a 15-day comment period, beginning Wednesday, March 23, 2005. The Solid Waste Management Plan can be reviewed at the Public Works Office, 998 South Boston Road, Danville, Virginia or on the City of Danville website at www.danville-va.gov. Questions or comments can be sent to pubworks @ci.danville.va.us. All interested persons can contact Mr. Richard Drazenovich, at (434) 799-5245 to answer questions or written comments can be sent to 998 South Boston Road, Danville, Virginia 24540. The 15-day comment period will end on Thursday, April 7, 2005. For all interested parties, the public meeting will be held at 5:00 PM, Wednesday , March 30, 2005, in the City of Danville Public Works Office, 998 South Boston Road, Danville, Virginia.

53846mn032305

City of Danville, Virginia
COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN
PUBLIC MEETING
March 30, 2005

Pursuant to the Virginia Waste Management Regulations 9 VAC 20-130130, the City of Danville, Public Works Director, Richard Drazenovich, called the public meeting to order at 5:00 p.m. on Wednesday, March 30, 2005 at the Public Works Office, 998 South Boston Road, Danville, Virginia.

Those in attendance at the meeting:

Richard Drazenovich, Director of Public Works
Thomas Spicer, Sanitation Division Director of Public Works
Richard Turner, 2004 Danville Solid Waste Advisory Committee Member
Mark Wilson, TELvista Co.
David Allen, TELvista Co.
Denise Wyatt, Senior Secretary of Public Works

Notice of the Public Meeting had been duly published in the Danville Register and Bee on Wednesday, March 23, 2004.

Those in attendance gave no public input or comments.

The meeting was adjourned.

PUBLIC COMMENT PERIOD
March 23, 2005 – April 7, 2005

Notice of a 15-day comment period for the 2004 Comprehensive Solid Waste Management Plan was published in the Danville Register and Bee on Wednesday, March 23, 2004. The Plan was made available at the City of Danville Public Works Office and through the City's web page.

There were no public comments received during the 15-day comment period between March 23 and April 7, 2005 either in person, in writing, or via email.

APPENDIX B

PRESENTED: June 4, 1991

ADOPTED: June 4, 1991

RESOLUTION NO. 91-6.11

A RESOLUTION ADOPTING A COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN FOR THE CITY OF DANVILLE.

WHEREAS, the City of Danville, Virginia must adopt a Comprehensive Solid Waste Management Plan to meet State Recycling Rates of its waste stream; and

WHEREAS, these target figures are ten (10) percent by December 31, 1991, fifteen (15) percent by December 31, 1993, and twenty-five (25) percent by December 31, 1995; and

WHEREAS, the Solid Waste Management Advisory Committee and City staff have reviewed the Comprehensive Solid Waste Management Plan and recommend it to the Council for its approval;

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Danville, Virginia that the Comprehensive Waste Management Plan for the City of Danville, Virginia, a copy of which is attached hereto, be, and the same is hereby, approved and adopted.

AND BE IT FURTHER RESOLVED that the City Manager, Charles F. Church, be, and he is hereby, authorized and

directed to submit the Comprehensive Solid Waste Management Plan to the Virginia Department of Solid Waste Management.

APPROVED:

MAYOR

ATTEST:

CLERK

Approved as to
Form and Legal Sufficiency:

City Attorney

Deputy City Clerk

THE COUNCIL
CITY OF
DANVILLE, VIRGINIA

COMPREHENSIVE

SOLID WASTE

MANAGEMENT PLAN

2004 UPDATE - REVISED

Appendix C

VIRGINIA SOLID WASTE MANAGEMENT REGULATIONS

9 VAC 20-130-10. Definitions.

The following words and terms when used in this chapter shall have the following meaning, unless the context clearly indicates otherwise:

"Abandoned material" means any material that is: disposed of; burned or incinerated; or accumulated, stored or treated (but not recycled) before or instead of being abandoned by being disposed of, burned or incinerated.

"Agricultural waste" means all solid waste produced from farming operations, or related commercial preparation of farm products for marketing.

"Board" means the Virginia Waste Management Board.

"Commercial waste" means all solid waste generated by establishments engaged in business operations other than manufacturing or construction. This category includes, but is not limited to, solid waste resulting from the operation of stores, markets, office buildings, restaurants and shopping centers.

"Composting" means the manipulation of the natural aerobic process of decomposition of organic materials to increase the rate of decomposition.

"Construction waste" means solid waste that is produced or generated during construction, remodeling, or repair of pavements, houses, commercial buildings, and other structures. Construction wastes include, but are not limited to, lumber, wire, sheetrock, broken brick, shingles, glass, pipes, concrete, paving materials, and metal and plastics if they are part of the construction material or empty containers for such materials. Paints, coatings, solvents, asbestos-containing material, any liquid, compressed gases, or semi-liquids and garbage are not construction wastes.

"Contamination" means the degradation in quality of naturally occurring water, air, or soil resulting either directly or indirectly from human activity.

"Debris waste" means waste resulting from land clearing operations. Debris wastes include, but are not limited to, stumps, wood, brush, leaves, soil, and road spoils.

"Demolition waste" means solid waste produced by destruction of structures and their foundations and includes the same materials as construction wastes.

"Department" means the Department of Environmental Quality.

"Director" means the Director of the Department of Environmental Quality or his designee.

"Discarded material" means a material that is: (i) abandoned material as defined in this chapter; (ii) recycled material as defined in this chapter; or (iii) considered inherently waste-like.

"Disposal" means the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste into or on any land or water so that such solid waste or any constituent of it may enter the environment or be emitted into the air or discharged into any waters.

"Facility" means solid waste management facility unless the context clearly indicates otherwise.

"Friable asbestos" means any material containing more than 1.0% asbestos by weight that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure and regulated as a special waste.

"Garbage" means readily putrescible discarded materials composed of animal, vegetable or other organic matter.

"Groundwater" means any water below the land surface in the zone of saturation.

"Hazardous waste" means a "hazardous waste" as defined by the Virginia Hazardous Waste Management Regulation, 9 VAC 20-60-12 et seq.

"Household waste" means any waste material, including garbage, trash and refuse, derived from households. Households include single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and day-use recreation areas. Household wastes do not include sanitary waste in septic tanks (septage), which is regulated by other state agencies.

"Incineration" means the controlled combustion of solid waste for disposal.

"Incinerator" means a facility or device designed for the treatment for volume reduction of solid waste by combustion.

"Industrial waste" means any solid waste generated by manufacturing or industrial process that is not a regulated hazardous waste. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: electric power generation; fertilizer/agricultural chemicals; food and related products/byproducts; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.

"Industrial waste landfill" means a solid waste landfill used primarily for the disposal of a specific industrial waste or a waste that is a byproduct of a production process.

"Institutional waste" means all solid waste emanating from institutions such as, but not limited to, hospitals, nursing homes, orphanages, and public or private schools. It can include regulated medical waste from health care facilities and research facilities that must be managed as an regulated medical waste.

"Integrated waste management plan" means a governmental plan that considers all elements of waste management during generation, collection, transportation, treatment, storage, disposal, and litter control and selects the appropriate methods of providing necessary control and services for effective and efficient management of all wastes. An "integrated waste management plan" must provide for source reduction, reuse and recycling within the jurisdiction and the proper funding and management of waste management programs.

"Jurisdiction" means a local governing body; city, county or town; or any independent entity, such as a federal or state agency, which join with local governing bodies to develop a waste management plan.

"Landfill" means a sanitary landfill, an industrial waste landfill, or a construction /demolition/debris landfill.

"Large diameter tree stumps" means tree stumps larger than six inches in diameter.

"Litter" means all waste material disposable packages or containers, but not including the wastes of the primary processes of mining, logging, farming, or manufacturing.

"Mulch" means woody waste consisting of stumps, trees, limbs, branches, bark, leaves and other clean wood waste that has undergone size reduction by grinding, shredding, or chipping, and is distributed to the general public for landscaping purposes or other horticultural uses.

"Municipal solid waste" means waste that is normally composed of residential, commercial, and institutional solid waste and residues derived from the combustion of these wastes.

"Open dump" means a site on which any solid waste is placed, discharged, deposited, injected, dumped or spilled so as to create a nuisance or present a threat of a release of harmful substances into the environment or present a hazard to human health. Such a site is subject to the open dump criteria in 9 VAC 20-80-180.

"Permit" means the written permission of the director to own, operate or construct a solid waste management facility.

"Person" means an individual, corporation, partnership, association, a governmental body, a municipal corporation or any other legal entity.

"Principal recyclable materials" means paper, metal (except automobile bodies), plastic, glass, yard waste, wood, and textiles. "Principal recyclable materials" does not include large diameter tree stumps.

"Recycled material" means a material that is derived from recycling.

"Recycling" means the process of separating a given waste material from the waste stream and processing it so that it may be used again as a raw material for a product, which may or may not be similar to the original product. For the purpose of this chapter, recycling shall not include processes that only involve size reduction.

"Refuse" means all solid waste products having the character of solids rather than liquids and that are composed wholly or partially of materials such as garbage, trash, rubbish, litter, residues from clean up of spills or contamination, or other discarded materials.

"Regional boundary" means the boundary defining an area of land that will be a unit for the purpose of developing a waste management plan, and is established in accordance with 9 VAC 20-130-180 through 9 VAC 20-130-220.

"Regulated medical waste" means solid wastes so defined by the Regulated Medical Waste Management Regulations (9 VAC 20-120-10 et seq.) as promulgated by the Virginia Waste Management Board.

"Residential waste" means household waste.

"Resource recovery system" means a solid waste management system that provides for collection, separation, recycling and recovery of energy or solid wastes, including disposal of nonrecoverable waste residues.

"Reuse" means the process of separating a given solid waste material from the waste stream and using it, without processing or changing its form, other than size reduction, for the same or another end use.

"Rubbish" means combustible or slowly putrescible discarded materials that include but are not limited to trees, wood, leaves, trimmings from shrubs or trees, printed matter, plastic and paper products, grass, rags and other combustible or slowly putrescible materials not included under the term "garbage."

"Sanitary landfill" means an engineered land burial facility for the disposal of solid waste that is so located, designed, constructed and operated to contain and isolate the solid waste so that it does not pose a substantial present or potential hazard to human health or the environment.

"Scrap metal" means bits and pieces of metal parts such as bars, rods, wire, or metal pieces that may be combined together with bolts or soldering that are discarded material and can be recycled. For the purposes of this chapter, this definition includes the reclaimable metal parts of white goods.

"Site" means all land and structures, other appurtenances, and improvements on them used for treating, storing, and disposing of solid waste. This term includes adjacent land within the facility boundary used for the utility systems such as repair, storage, shipping or processing areas, or other areas incident to the management of solid waste. (Note: This term includes all sites whether they are planned and managed facilities or open dumps.)

"Sludge" means any solid, semisolid or liquid wastes with similar characteristics and effects generated from a public, municipal, commercial or industrial waste water treatment plant, water supply treatment plant, air pollution control facility, or any other waste producing facility.

"Solid waste" means any garbage, refuse, sludge and other discarded material, including solid, liquid, semisolid or contained gaseous material, resulting from industrial, commercial, mining and agricultural operations, or community activities but does not include (i) solid or dissolved material in domestic sewage, (ii) solid or dissolved material in irrigation return flows or in industrial discharges that are sources subject to a permit from the State Water Control Board, or (iii) source, special nuclear, or byproduct material as defined by the Federal Atomic Energy Act of 1954, as amended.

"Solid waste management facility ('SWMF')" means a site used for planned treating, storing, or disposing of solid waste. A facility may consist of several treatment, storage, or disposal units.

"Source reduction" means any action that reduces or eliminates the generation of waste at the source, usually within a process. Source reduction measures include process modifications, feedstock substitutions, improvements in feedstock purity, improvements in housekeeping and management practices, increases in the efficiency of machinery, and recycling within a process.

"Source separation" means separation of materials from the waste stream by the waste generator of materials that are collected for use, reuse, or recycling.

"Special wastes" means solid wastes that are difficult to handle, require special precautions because of hazardous properties or the nature of the waste creates waste management problems in normal operations.

"Supplemental recyclable material" means waste tires, used oil, used oil filters, used antifreeze, automobile bodies, construction waste, demolition waste, debris waste, batteries, ash, sludge or large diameter tree stumps, or material as may be authorized by the director.

"Transfer station" means any solid waste storage or collection facility at which solid waste is transferred from collection vehicles to haulage vehicles for transportation to a central solid waste management facility for disposal, incineration or resource recovery.

"Trash" means combustible and noncombustible discarded materials and is used interchangeably with the term rubbish.

"Used or reused material" means a material which is either:

1. Employed as an ingredient (including use as an intermediate) in a process to make a product, excepting those materials possessing distinct components that are recovered as separate end products; or

2. Employed in a particular function or application as an effective substitute for a commercial product or natural resources.

For purposes of these regulations, "used or reused material" means a given solid waste material that is separated from the waste stream and used, without processing or changing its form, for the same or another end use.

"Vegetative waste" means decomposible materials generated by yard and lawn care or land-clearing activities and includes, but is not limited to, leaves, grass trimmings, and woody wastes such as shrub and tree prunings, bark, limbs, roots, and stumps.

"Waste exchange" means any system to identify sources of wastes with potential for reuse, recycling or reclamation and to facilitate its acquisition by persons who reuse, recycle or reclaim it, with a provision for maintaining confidentiality of trade secrets.

"White goods" means any stoves, washers, hot water heaters or other large appliances. For the purposes of this chapter, this definition also includes, but is not limited to, such Freon-containing appliances as refrigerators, freezers, air conditioners, and dehumidifiers.

"Yard waste" means decomposable waste materials generated by yard and lawn care and includes leaves, grass trimmings, brush, wood chips, and shrub and tree trimmings. Yard waste shall not include roots or stumps that exceed six inches in diameter.

9 VAC 20-130-20. Authority for regulations.

These regulations are promulgated pursuant to Chapter 14 (§ 10.1-1400 et seq. and specifically §§ 10.1-1402, 10.1-1411 and 10.1-1413.1) of Title 10.1 of the Code of Virginia, which authorizes the Virginia Waste Management Board to promulgate and enforce such regulations as may be necessary to carry out its duties and powers and the intent of the Virginia Waste Management Act and the federal acts.

9 VAC 20-130-30. Policy.

It is the policy of the Virginia Waste Management Board to require each region designated pursuant to 9 VAC 20-130-180 through 9 VAC 20-130-220, as well as each city, county and town not part of such a region, to develop comprehensive and integrated solid waste management plans that, at a minimum, consider and address all components of the following hierarchy:

1. Source reduction;
2. Reuse;
3. Recycling;
4. Resource recovery (waste-to-energy);
5. Incineration; and
6. Landfilling.

9 VAC 20-130-40. Purpose of regulations.

The purpose of these regulations is to:

1. Establish minimum solid waste management standards and planning requirements for protection of the public health, public safety, the environment, and natural resources throughout the Commonwealth; promote local and regional planning that provides for environmentally sound and compatible solid waste management with the most effective and efficient use of available resources;

2. Establish procedures and rules for designation of regional boundaries for solid waste management plans;

3. Establish state, local government, regional or area served by the plan responsibility for meeting and maintaining the minimum recycling rates of 25%;

4. Establish the requirement in compliance with the Virginia Waste Management Act, §§ 10.1-1411 and 10.1-1408.1 D 1 (vi) of the Code of Virginia, for withholding issuance of permits for solid waste management facility;

5. Provide for reasonable variance and exemptions; and

6. Provide for reporting and assessment of solid waste management in the Commonwealth in accordance with the Virginia Waste Management Act, § 10.1-1413.1 of the Code of Virginia.

9 VAC 20-130-50. Administration of regulations.

The director is authorized and directed to administer and enforce these regulations in accordance with the Virginia Waste Management Act, §§ 10.1-1400 through 10.1-1457 of the Code of Virginia.

9 VAC 20-130-60. Applicability of regulations.

A. This chapter applies to all cities, counties, towns, designated regions (under 9 VAC 20-130-180) and permitted solid waste facilities. Any county and town within that county may mutually agree to unite for the purpose of solid waste management planning, and upon joint written notification to the director, shall be deemed to be a single unit for development of a local solid waste management plan.

B. Any cities, counties, and towns may be represented by a planning district, public service authority, or designated region that has been adopted under 9 VAC 20-130-90 B.

C. The plan may (subject to statutory authority) specify that all solid waste must be recycled at the rate established by the plan regardless of the point of origin of the solid waste. Solid wastes from both public and private sources shall be subject to such requirement.

9 VAC 20-130-70. Enforcement and appeal.

A. All administrative enforcement and appeals taken from actions of the director relative to the provisions of this chapter shall be governed by the Virginia Administrative Process Act (§ 9-6.14:1

et seq. of the Code of Virginia). Enforcement of this chapter will be in accord with §§ 10.1-1186, 10.1-1411 and 10.1-1455 of the Code of Virginia.

B. After July 1, 2000, no permit for a solid waste management facility shall be issued unless the local or regional applicant has a plan approved in accordance with this chapter and the permit complies with the statutory requirements of the Virginia Waste Management Act, §§ 10.4-1411 and 10.1-1408.1 D 1 (iv) of the Code of Virginia.

9 VAC 20-130-80. (Repealed.)

9 VAC 20-130-90. Relationship to other bodies of regulation.

A. This chapter is a solid waste management regulation that specifies minimum standards and planning requirements for solid waste management in the Commonwealth, including solid waste management planning by regional or local governmental entities of the Commonwealth and assessment of solid waste management in the Commonwealth. If there is a mutually exclusive conflict between this chapter and other adopted nonhazardous solid waste management regulations of this agency, the provisions of this chapter are superior. In any detail where there exists no mutually exclusive conflict between this chapter and other regulations of the board, compliance with all regulations is required.

B. Multi-jurisdictional plans developed in fulfillment of the requirements of this chapter must be adopted under authority of the Regional Cooperation Act (Chapter 42 (§ 15.2-4200 et seq.) of Title 15.2 of the Code of Virginia), the Virginia Water and Waste Authorities Act (Chapter 51 (§ 15.2-5100 et seq.) of Title 15.2 of The Code of Virginia), the provisions of the Code of Virginia governing joint exercise of powers by political subdivisions (§ 15.2-1300), or other authority as applicable.

C. If there is a mutually exclusive conflict between this chapter and the Virginia Hazardous Waste Management Regulations, the provisions of the hazardous waste regulations are superior. In any detail where no such mutually exclusive conflict exists, compliance with all regulations is required.

9 VAC 20-130-100. (Reserved.)

9 VAC 20-130-110. Schedule for plan development.

A. Every city, county and town in the Commonwealth shall develop a solid waste management plan or amend an existing solid waste management plan and submit it for approval in accordance with this chapter. Existing plans may be amended by addendum of items such as consideration of the waste management hierarchy, the recycling program implementation activities and other requirements of this chapter that are not a part of the existing plan. A local jurisdiction participating in an authorized regional solid waste management plan is not required to develop a separate plan.

B. A complete, revised solid waste management plan in compliance with this chapter shall be provided to the department no later than July 1, 2004.

C. The department shall review and approve or return comments on the deficiencies in each plan submitted in accordance with 9 VAC 20-130-110 A no later than 90 days from the date the plans are received. In the event the department is unable to complete its review within 90 days, the applicant will be notified and given a date as to when the review will be completed.

D. Each submitter who receives comments on its solid waste management plan under subsection C of this section shall submit a corrected solid waste management plan to the department no later than 90 days following receipt of notification of deficiencies.

E. Plans approved without alteration shall become effective upon notification. If after review of the corrected plan submitted pursuant to subsection D of this section, the department cannot approve the corrected solid waste management plan because it finds the plans not to be in accordance with this chapter, it will issue a notice of intent to disapprove to the submitter. The notice of intent to disapprove shall set forth (i) the reason for the disapproval, (ii) what is required for approval, and (iii) the right of the submitter to an informational proceeding under Article 3 of the Virginia Administrative Process Act (§ 9-6.14:1 et seq. of the Code of Virginia). The department will give priority consideration for review of corrected plans where the local or regional body has a pending permit application for a solid waste management facility.

F. The director may revoke the approval of any plan or require its revision and resubmittal if there is evidence that there has been significant deviation from the plan. The department will issue a notice of intent to revoke or require revision and resubmittal of a plan. The notice of intent shall set forth (i) whether the department intends to revoke or require revision and resubmittal of the plan, (ii) the reason the department intends to take the action, and (iii) the right of the submitter of the plan to an informational proceeding under Article 3 of the Virginia Administrative Process Act (§ 9-6.14:1 et seq. of the Code of Virginia).

9 VAC 20-130-120. Mandatory plan contents.

A. The solid waste management plan shall include:

1. An integrated waste management strategy;

2. A discussion as to how the plan will be implemented;

3. Objectives for solid waste management within the jurisdiction;

4. Definition of incremental stages of progress toward the objectives and schedule for their implementation;

5. Descriptions of the funding and resources necessary, including consideration of fees dedicated to future facility development;

6. Strategy for the provision of necessary funds and resources;

7. Strategy for public education and information on source reduction, reuse, and recycling; and

8. Consideration of public and private sector partnerships and private sector participation in execution of the plan. Existing private sector recycling operations should be incorporated in the plan and the expansion of such operations should be encouraged.

B. A minimum recycling rate of 25% of the total municipal solid waste generated annually in each city, county, town or region shall be maintained. The plan shall describe how this rate shall be met or exceeded.

C. Calculation methodology shall be included in the plan.

1. The plan shall describe the method of calculating the rate of recyclng. The following formula shall be used:

Rate = (Recycled/Total) X 100%

Where, "Recycled" equals the amount of principal recyclable material received during the previous 12 months for recycling and "Total" is the amount of municipal solid waste generated within the jurisdiction during the previous 12 months.

The amounts may be expressed in the following units:

a. The actual weight of each component.
b. The volume of each component.
c. The estimated weight of each component based on the most accurate survey or estimated per capita weight.

2. The amount of supplemental recyclable material that is reused or recycled may be added into both the "Recycled" and "Total" amounts in each calculation method.

3. Any local government or regional solid waste management body that is participating in the used tire management program sponsored by the department may add the amount of those tires to both the "Recycling" and "Total" amounts in the recycling rate calculation.

4. Any local government or regional solid waste management body may include mulched yard waste in both the "Recycled" and "Total" amounts simultaneously for the required recycling rate calculations if it can be demonstrated that the finished mulch will be marketed or otherwise used productively. In addition, any local government or regional solid waste management body may include composted yard waste in both the "Recycled" and "Total" amounts simultaneously for the required recycling rate calculations if it can be demonstrated that the finished compost will be marketed or otherwise used productively.

5. Any local government or regional solid waste management body may include used oil, used oil filters, and used antifreeze in the "Recycled" and "Total" amounts if it can be demonstrated that the oil, used oil filters and used antifreeze will be marketed or used productively.

6. Where a source reduction of any municipal solid waste material or reuse of a principal recyclable material is documented to have occurred, is accurately quantified and is requested as a petition for a variance in accordance with 9 VAC 20-130-230, the director may issue a credit for the amount to be added into the "Recycled" and "Total" amounts in each calculation method. The credit may be for a part of the source reduction or reuse amount if the director finds that to be more appropriate. The director shall grant such a credit only where an effective recycling program is being implemented. The director shall not grant the credit if the minimum recycling rate of 25% is being achieved.

7. These regulations shall permit a credit, to be added into the "Recycled" and "Total" amounts in each calculation method, of one ton for each ton of recycling residue generated in Virginia and deposited in a landfill permitted under subsection M of § 10.1-1408.1 of the Code of Virginia. The total annual credits shall not exceed one-fifth of the 25% required recycling rate.

D. All known solid waste disposal sites, closed, inactive and active, within the area of the solid waste management plan shall be documented and recorded at a centralized archive authorized to receive and record information and a copy shall be sent to the director. All new sites shall be recorded at the same central data source.

E. A methodology shall be utilized to monitor the amount of solid waste of each type produced within the area of the solid waste management plan and to record the annual production by solid waste types at a centralized archive and a copy shall be sent to the director. Waste types include but are not limited to broad classes such as municipal solid waste, construction/demolition/debris, industrial, regulated medical waste, white goods, friable asbestos, petroleum contaminated soil and the major categories of principle and supplemental recyclable materials.

9 VAC 20-130-130. Public participation.

A. Prior to submission of a solid waste management plan or a major amendment to the plan to the department, the submitter shall publish a notice and hold a public hearing on the plan in accordance with the procedures of the local government or regional planning agency. A record of the public hearing, a copy of all written comments and the submitter's response to all comments received shall be submitted with the plan.

B. Plan developers shall, in accordance with their own rules and procedures, provide for extensive participation by the public through the use of citizen advisory committees and public meetings during the development of the plan.

9 VAC 20-130-140. Plan objectives.

Every solid waste management plan shall be a fully integrated waste management plan that considers all elements of waste management. The plan shall:

1. Include consideration of the hierarchy defined in 9 VAC 20-130-30 giving preference to alternatives in the following order of priority: source reduction, reuse, recycling, resource recovery, incineration, and landfilling;
2. Clearly and explicitly demonstrate the manner in which the goals of the mandatory objectives defined in 9 VAC 20-130-120 shall be accomplished;

3. Include, when developed locally, a copy of the local governing body's resolution adopting the plan; and

4. Include, when developed regionally, a copy of the resolution approving the plan adopted in accordance with the Virginia Area Development Act, the Virginia Water and Waste Authorities Act, the provisions of the Code of Virginia governing joint exercise of powers by political subdivisions § 15.2-1300 of the Code of Virginia, or other authority as applicable.

9 VAC 20-130-150. Incorporated data.

The local government or regional solid waste management plan shall include data and analyses of the following type for each jurisdiction. Each item below shall be in a separate section and labeled as to content:

1. Population information and projections for 20 years of population growth and development patterns;

2. Urban concentrations, geographic conditions, economic growth and development, markets for the reuse and recycling of materials, transportation conditions, and related factors;

3. Estimates of solid waste generation from households, commercial institutions, industries and other types of sources, including the amounts reused, recycled, recovered as a resource, incinerated and landfilled. Estimates should identify special waste to include, at least, the following: stumps, land-clearing debris and construction wastes, motor vehicle tires, waste oil, batteries, sludges, mining wastes, septage, agricultural wastes and spill residues;

4. A listing of existing and planned solid waste collection, storage, treatment, transportation, disposal and other management facilities, their projected capacities, expected life and systems for their use;

5. All milestones in the implementation of the solid waste management plan over the 20-year projection and the parties responsible for each milestone;

6. A description of programs for solid waste reduction, reuse, recycling, resource recovery, incineration, storage, treatment, disposal and litter control;

7. A description of outreach programs for waste exchange, public education and public participation;

8. The procedures for and results of evaluating solid waste collection, including transfer stations; and

9. The assessment of all current and predicted needs for solid waste management for a period of 20 years and a description of the action to be taken to meet those needs.

9 VAC 20-130-160. (Repealed.)

9 VAC 20-130-165. Waste information and assessment program.

A. The owners or operators of all permitted facilities that treat, store, or dispose of solid waste shall report by March 31 of each year the amount of solid waste, by weight or volume, received and managed in the Commonwealth during the preceding calendar year. The report shall identify solid waste by the following categories: (i) municipal solid waste; (ii) construction and demolition debris; (iii) industrial waste; (iv) regulated medical waste; (v) vegetative and yard waste; (vi) incinerator ash; (vii) sludge other than sludge that is land applied in accordance with § 32.1-164.5 of the Code of Virginia; (viii) tires; (ix) white goods; (x) friable asbestos; (xi) petroleum contaminated soil; and (xii) other special waste. For each such category the report shall include an estimate of the amount that was generated outside of the Commonwealth and the jurisdictions where such waste originated.

The report shall also estimate the amount of solid waste managed or disposed of by each of the following methods: (i) recycling; (ii) composting; (iii) landfilling; (iv) incineration (v) sending off site for further management; and (vi) stored on site on December 31 of the reporting year. This section shall not apply to captive waste management facilities. The report is to be sent to the department regional office for the facility's location.

Information on the available capacity and expected life of the facilities at the disposal rates submitted in this subsection shall be included in the annual report required by this section.

B. At the option of the facility owner, the data collected may include an accounting of the facility's economic benefits to the locality where the facility is located including the value of disposal and recycling facilities provided to the locality at no cost or reduced cost, direct employment associated with the facility, and other economic benefits resulting from the facility during the preceding calendar year.

C. No facility shall be required pursuant to this section to provide information that is a trade secret as defined in § 59.1-336 of the Code of Virginia.

D. Every city, county and town in the Commonwealth, or solid waste management planning region approved pursuant to 9 VAC 20-130-180, shall submit to the department by April 30 of each year, the data and calculations required in 9 VAC 20-130-120 B and C.

9 VAC 20-130-170. (Repealed.)

9 VAC 20-130-175. Amendments to plans.

A. Amendments to the plans shall be classified as major or minor. These classifications are described in this section below.

1. Major amendments shall include any addition, deletion, or cessation of operation of any solid waste facility; any increase in landfill capacity; any change that moves toward implementation of a waste management strategy that is lower in the waste management hierarchy; and any change to membership in the approved area.

2. Minor amendments shall include any change that moves toward implementation of a waste management strategy that is higher in the waste management hierarchy and any nonsubstantive administrative change such as a change in name.

B. Any amendments to the plans shall be approved by the department prior to implementation.

C. Major amendments shall require the same public participation as detailed in 9 VAC 20-130-130 before being submitted to the department for approval.

D. Minor amendments shall be submitted directly to the department for approval.

E. The department shall review amendments and approve or return comments on the deficiencies in each amendment submitted in accordance with this section no later than 90 days from the date the plans are received. In the event the department is unable to complete its review within 90 days, the applicant will be notified and given a date as to when the review will be completed.

F. Each submitter who receives comments on his solid waste management plan under subsection E of this section shall submit a corrected amendment to the department no later than 90 days following notification of deficiencies.

G. Amendments approved without alteration shall become effective upon notification. If after review of the corrected amendment submitted pursuant to subsection F of this section, the department cannot approve the corrected amendment because it finds the amendment not to be in accordance with this chapter, it will issue a notice of intent to disapprove to the submitter. The notice of intent to disapprove shall set forth (i) the reason for the disapproval, (ii) what is required for approval, and (iii) the right of the submitter to an informational proceeding under Article 3 of the Virginia Administrative Process Act (§ 9-6.14:1 et seq. of the Code of Virginia). The department will give priority consideration for review of corrected amendments when the local or regional body has a pending permit application for a solid waste management facility.

9 VAC 20-130-180. Designation of regions.

The director has been authorized by the Governor to designate regional boundaries defining areas and jurisdictions to be considered for joint development of solid waste management plans. Only those regions meeting the standards established in this chapter will be considered. Any group of jurisdictions may petition the director for designation as a region, and, if the proposed region meets the standards established for designation, the director shall approve the request.

9 VAC 20-130-190. Development of designated regions.

A. At least 14 days prior to designating a regional boundary for solid waste management planning, the director shall place a notice of the proposed regional boundary and an opportunity to comment in the Virginia Register of Regulations and in a newspaper of general circulation within the proposed region.

B. If, as a result of the notices required by subsection A of this section, the director feels a significant need exists to hold a public hearing on the issues, a public hearing shall be held in the proposed region prior to the designation. At least 14 days prior to the public hearing, a notice of the proposed public hearing shall appear in the same publications as the notice under subsection A of this section.

9 VAC 20-130-200. Considerations in designating a regional boundary.

A. The following shall be considered in designating regional boundaries:

1. Geographic areas or jurisdictions which have a history of cooperating to solve problems in environmental or other related matters;

2. Existing regional management systems, authorities or similar institutions;

3. The size, configuration and location of the regional areas should have sufficient solid waste contribution and market availability to support the solid waste management system;

4. Solid waste types within areas and mutuality of solid waste management interests;

5. Geologic, hydrologic, soil and groundwater conditions; availability of land and soils; and natural barriers and ecosystems; and

6. Existing planning areas established for purposes other than solid waste management including the existence of informational databases containing data related to that needed for solid waste management planning.

B. Areas included within a planning boundary may be local or regional.

1. A local area may include a city, town or county and any towns within the county that through mutual agreement join with the county for the purpose of developing a plan.

2. A regional area may include:

a. The jurisdictions with existing regional planning district boundaries;

b. Any combination of local governments formally joined to form a region or service authority, or

c. Existing waste management or public service authorities.

9 VAC 20-130-210. Criteria for designating a regional planning agency.

A. The director may authorize an official committee or public body as authorized to develop, adopt and promulgate the solid waste management plan.

B. Prospective regional planning agencies shall have:

1. Demonstrated ability to plan, manage or operate solid waste management services; or

2. Completed planning that resulted in successful implementation of solid waste management facilities or services.

C. An entity designated as responsible for developing a regional solid waste management plan shall:

1. Be an organization that represents the executive boards of jurisdictions within the region;

2. Have planning authority for the regional area;

3. Be capable of readily starting the plan development work tasks;

4. Have an established methodology for resolving conflicts, making planning decisions and providing public participation in the development of the plan;

5. Have experience in environmental planning and have a staff experienced in the work tasks involved in such planning;

6. Have established a methodology and authority sufficient to implement the plan once it is complete and approved; and

7. Have access to informational resources within the region.

9 VAC 20-130-220. Amendment of regional boundary.

The director may amend a regional boundary based on an application from the governing body or bodies of the region. Along with the application, each locality (within the original region and any locality being added) must submit a letter acknowledging the change in the boundary.

9 VAC 20-130-230. Petitioning for variance or exemption.

A. Any person regulated by this chapter may petition the director to grant a variance or an exemption from any requirement of this chapter subject to the provisions of this section. Any petition submitted to the director is also subject to Article 3 of the Virginia Administrative Process Act (§ 9-6.14:1 et seq. of the Code of Virginia).

B. The petition shall be submitted to the director by certified mail and shall include:

1. The petitioner's name and address;

2. A statement of petitioner's interest in the proposed action;

3. A description of desired action and a citation of the regulation from which a variance is requested;

4. A description of need and justification for the proposed action, including impacts from existing operations and market conditions (if, based on the evidence submitted in a petition, the director determines that market conditions within a county, city, town or region make unreasonable the mandatory recycling rates specified in this chapter and that the market conditions are beyond the control of the county, city, town or region, a variance from those rates may be issued);

5. The duration of the variance, if applicable;

6. The potential impact of the variance on public health or the environment;

7. Other information believed by the applicant to be pertinent; and

8. The following statement signed by the petitioner or authorized representative:
"I certify that I have personally examined and am familiar with the information submitted in this petition and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

9 VAC 20-130-240. (Repealed.)

FORMS

Form DEQ 50-25, Solid Waste Information and Assessment Program – Reporting Table (rev. 6/00).

Form DEQ 50-30, Locality Recycling Rate Report (rev. 4/01).

COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN

2004 UPDATE - REVISED

Appendix D
MARKETING

2004 Recyclable Materials Markets Assessment

Current Market Conditions 2004

The markets for potentially recyclable materials, such as old newspapers, corrugated containers, metals, and arboreal materials, in the Danville solid waste stream for are relatively stable at the present time. The Danville area is served by a number of local and regional scrap dealers which should ensure a relatively healthy market, ferrous metals. Local waste collection firm accepts old corrugated containers, and ONP grades of paper. Lack of a mixed waste paper dealer in Danville, however, does limit recycling opportunities in this area . Glass and plastics offer a particular challenge due to the lack of a nearly market.

In order for Danville waste generators to access existing and future markets for ONP and other recyclables, materials which are collected in recycling programs must be processed according to specifications of the market for that material. In effect, the buyer of the materials is the customer, the collected and prepared materials are products to be promoted, and the waste generator is the sales agent competing with all other programs attempting to access the same market. If materials collection, handling, processing, and storage are viewed from this perspective, rather than the traditional perspective of managing waste for disposal, recyclables processing and manufacturing enterprises will grow to regard Danville generators as preferred suppliers of secondary materials. The following should be considered when marketing all materials collected for recycling:

1. Recyclables end-users require a constant flow of materials in the quantity that meets their process demands.
2. End-users have high quality requirements to assure that contaminants will not interfere with manufacturing process and/or final product integrity.

3. End-users have differing transportation and handling specifications to match their specific materials handling capabilities. The following specifications determine whether a buyer will take materials, and how much they are willing to pay:
    a. Physical dimensions
    b. Densities
    c. Container and bale tying requirements
    d. Point of delivery (Danville docks or theirs)

    Danville can anticipate stabilizing existing markets for materials, and enabling the entrance into new markets, provided they can demonstrate consistent adherence to requirements of the materials users. Failure to meet requirements can result in rejection of a load, reduced prices on subsequent loads, or in some instances refusal to do any further business with the supplier. In nearly all recycling programs and for most materials, finding and maintaining markets for the materials is the limiting factor. To hedge Danville's standing in the secondary materials marketplace, all materials handling, and processing systems should be designed in order to meet the most stringent specifications, and yet be flexible enough to meet requirements of multiple markets and changing conditions over time.

    Recyclable material prices vary widely. A summary of research findings for recyclable materials follows which describes prices, conditions of the markets, and transportation requirements. Changes in any one of these three categories may impact the other two. Recyclable materials markets may pay for goods, take materials without payment or may charge to haul the materials away.

(A) Paper

Over 45 different grades of waste paper are bought and sold in the United States. Regarding post-consumer sources, three general grade categories are particularly important:

Low grade:	Newspaper
	Corrugated containers
High grade:	White ledger
	Computer paper
Mixed:	Many types of paper have a very low resale value

According to the Virginia Department of Waste Management, paper markets as a whole are growing while markets for some types of paper, such as old newspaper (ONP) are depressed. In general, while market outlets for most paper grades remain constant, the prices paid for secondary paper products fluctuate and are dependent upon world economies, and the rise and fall of supply and demand.

The American Paper Institute estimates that 20.877 million tons of waste paper were used by domestic mills in 1989 with a growth of 20% over the next three years. As de-inking facilities continue to come on line during the next year, ONP capacity will increase by approximately 400,000 tons/year. Mill capacity should jump 19% by 1992, and increase of 633,000 tons/year. ONP is the main grade of waste paper collected from residences. ONP can be recycled into newsprint, insulation, packing and building materials or shredded for animal bedding.

Old corrugated containers (OCC) are presently recycled, nationally, at a rate of approximately 50 percent. Increases in collection could bring the total to 60 percent by 1995. As the largest source of waste paper collected for recycling, OCC will grow 2.32 million tons/year by 1992, up 22.1% from 1989 levels.

Recycled mixed paper demand in the United States has decreased 18 percent in the last 10 years. A major stumbling block is the widespread use of laser printers which makes the de-inking process more difficult.

The Commonwealth of Virginia is presently in an over-supply situation for paper. As technology catches up with supply, demand will increase and push prices and market availability higher. In all cases, the long-term markets for each type of paper will depend upon the price of using virgin materials and demand for recycled paper products.

Due to currently low prices, transportation costs may result in a net loss of revenue for mixed and old newspaper. However, funds from other types of paper and savings resulting from avoided disposal costs may offset the losses.

PAPER MARKETS

Dealers	Materials handled
FCR Corporation Greensboro, NC	OCC, newsprint, mixed paper
First Piedmont Corp. Chatham, VA	Newsprint, OCC

(B) Plastics

All plastics are either thermosets or thermoplastics. Thermosets comprise approximately 13 percent of U.S. plastics sales. They cannot be remelted and are unlikely to be recyclable into a product of the same type. Thermoplastics can be remelted and remolded into new plastic products. Resin types most prevalent in the waste stream and some of their typical uses are:

Polyethylene teraphthalate (PET):	Soft drink and liquor bottles, fiber fill, industrial strapping
High density polyethylene (HDPE):	Milk jugs, detergent bottles, motor oil containers

Low density polyethylene (LDPE):	Film products such as grocery and trash bags
Polypropylene (PP):	Battery cases, furniture, conduit
Polystyrene (PS):	Styrofoam, prescription bottles, clear food trays
Polyvinyl chloride (PVC):	Pipe, conduit, gutters, siding, flooring

Three types of post-consumer scrap plastics have the most well-developed market potential: PET and HDPE containers and, with growing potential, LDPE film. A variety of pre-consumer scrap plastics (scrap generated in-plant by plastic product manufacturers) has strong market potential when source-separated and kept free of contamination. As reliable supplies of reclaimed plastic become available due to increased collection activities, increasing numbers of plastic product manufacturers will seek scrap plastics to feed their industrial processes. Markets for polyethylene scrap have been growing, in part due to a shortage of ethylene monomers, the raw material source of polyethylene.

The market for goods which can be produced from recycled plastic is growing; however, products manufactured from batches of single polymers require pure ingredients. Landscaping materials, "plastic lumber" and other products can be produced from mixed plastic resins.

PLASTIC MARKETS

Dealers	Materials handled
FCR Corp. Greensboro, NC	Mixed plastics

(C) Container Glass

Although container glass faces competition from aluminum and plastic containers, environmental and recycling concerns have helped glass retain its

share of the market. The U.S. Department of Commerce reported that product shipments of glass containers rose 1.3 percent in 1989 with additional growth predicted over the next five years.

In the Danville market region, glass must be separated by color: amer, green, and flint. Flint, or clear glass, brings the highest price of the three. Labels, lids and caps usually can be left on the glass containers; however, as many contaminants as possible should be removed. Crushing the glass before shipment will increase the amount per trailer which can be loaded; however, the cost of the crushing equipment must be factored into the economic equation.

Both the demand and prices paid for processed cullet (clean, crushed glass) are strong due to the fact that domestic plants are able to use over 40% of recycled glass in each batch of feedstock used to make new glass containers.

Glass must be sorted by color because most containers are made of clear glass, for product appeal. Products which degrade in sunlight are packaged in brown or green glass. Strict separation in the recycling collection process aids in keeping glass color variance to a minimum. Changes in specifications in the future may change the sorting requirements. There is also an increasing market for mixed glass with application as an aggregate in construction and road paving materials.

GLASS MARKETS

Dealer	Material
FCR Corporation Greensboro, NC	Mixed Glass

(D) Metals

Metals, including steel, iron and aluminum comprise about 8.7% of the nation's waste stream.

Scrap metal processing is complex and requires specialized equipment. Due to different processing requirements, many handlers specialize in specific types of metal, versus handling all grades. Metal is sorted for recycling into the following grades: ferrous scrap (steel, tin, iron or iron-containing metal); non-ferrous scrap (aluminum, brass, and copper) and white goods (enameled metal appliances. Non-ferrous scrap has relatively high market value and is in steady demand. For this reason, such material scrap generated by business and industry rarely enters the waste stream destined for disposal.

- **Steel**

  Steel is recycled at a rate of 66 percent according to he Steel Can Recycling Institute. Oxygen furnaces use 20-30 % scrap content per "heat", while electric arc furnaces can use up to 100% recycled steel scrap. New steel production techniques reduced the industry's per ton energy consumption by 34% in the past 18 years.

  Tin-plated steel cans and bimetal beverage cans were recycled at a rate of 21.6% in 1989. Most food containers (including #10 cans) are made of tin-plated steel. Carbonated beverage containers are made with steel bodies and aluminum tops.

- **Aluminum**

  Reynolds Aluminum estimates that 22 million pounds of aluminum were recycled in Virginia last year. Aluminum can be recycled repeatedly and the process has been in existence since 1904. The demand for this product will continue to be stable for the foreseeable future with prices

generally high relative to other recyclable materials but fluctuating with changes in the economy.

- **White Goods**

Used household appliances (white goods) contain motors and capacitors which must be removed in most instances prior to their sale. For environmental reason, removal of freon is also required. Some buyers will purchase the motors separately, but most require that capacitors be removed before arrival on their premises.

METAL MARKETS

Dealer	Material
FCR Corporation Greensboro, NC	Steel cans, bi-metal cans, aluminum cans.
Hayes Iron & Metal Providence, NC 336-388-5986	All types of metal
Goodwill Industries of Danville	Aluminum cans
Martinsville Iron & Metals 1331 Virginia Avenue Martinsville, VA 24112 276-632-9781	Steel, copper, aluminum cans, stainless, aluminum, bimetal, appliances, steel food cans.
Don's Auto Recycling 737 Ferry Road Danville, VA 24541 434-799-6333	Appliances (no motors, black boxes or freon), car parts (starters, alternators), radiators, aluminum, irony, aluminum cans, copper, brass, steel

(E) Compost

The issue for evaluating the market for compost is not finding markets willing to pay the best price for materials, but rather, finding users for the materials produced. Compost and wood mulch are considered more and more valuable as

soil conditioners and landscaping cover. They typically do not serve as a replacement for fertilizer due to low nutrient values. As an additive to soils or as a dressing, compost improves the following characteristics types of soil:

- Water retention capacity
- Drainage capacity
- Aggregate formation
- Aeration

Soil properties are improved the most in regions of the country with soil properties extremely different from compost. The Piedmont region, with its sandy-clay to clay soils stands to benefit considerably by the loamy texture and organic content of compost. In addition to its use as a soil conditioner, compost is suitable as a replacement for potting soil mixes and peat moss in the nursery and landscaping industry.

The major requirements for marketing compost are to identify potential users and educate them as to the benefits and qualities of compost. Promotion of backyard composting is an effective means of allowing the public a hands-on experience with the process and the product. Assurances of non-pathogenicity will be an important part, particularly where sludge containing products are concerned.

Researchers at Virginia Polytechnic Institute and State University who sent surveys to nursery operators across the state indicate that there is considerable interest in compost as a substitute to currently utilized soil additives, and that a substantial market exists for such materials. The survey results were, however, anonymously reported, and no information exists on those parties which might be interested in compost. Listed in Table D-2 are other potential compost user groups and common applications.

TABLE D-1	
Major Compost User Groups and Applications	
Private Residential	
• Garden applications for food • Non-food garden and yard applications	
Private Food	
• Field crops for food and feed • Garden crops for food and feed	• Fruit trees • Vineyards
Private Non-food	
• Greenhouses • Nurseries • Golf courses • Landscape contractors	• Turfgrass producers • Industrial park grounds • Cemeteries • Fertilizer and topsoil producers
Public Agencies	
• Public parks • Playgrounds • Military and prison installations	• Public grounds • Roadside landscape and medians
Land Reclamation	
• Landfill cover • Strip min land reclamation • Sand and gravel pit restoration	

COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN

2004 UPDATE - REVISED

Appendix E
CURRENT BUDGET

CITY OF DANVILLE
A WORLD CLASS ORGANIZATION"
Calculation of Contribution to (from) Fund Balance/General Fund
Sanitation Fund
F/Y 04-05 Work Budget

	F/Y 03-04		F/Y 04-05	
Revenues:				
Interest Income on Investments	$ 17,000		$ 10,000	
Rental of Bulk Collection Trailer	6,000		8,000	
Residential Charges	3,104,500		3,124,500	
Sale of Recyclables	1,000		1,000	
Appliance Disposal Charge-CFC	3,000		3,000	
Appliance Disposal Charge-Non CFC	1,500		2,000	
Transfer Station Host Fees	10,000		10,000	
Disposal of Yard Waste	395		395	
Estimated Income		$ 3,143,395		$ 3,158,895
Expenditures:				
Refuse Collection-Residential	$ 2,154,538		$ 2,223,529	
Landfill Operations	252,818		248,604	
Composting Operations	135,567		129,849	
Yardwaste	464,513		469,105	
Leaf Collection	242,414		249,221	
Recycling	99,971		92,092	
Operating expenses		(3,349,821)		(3,412,400)
Net Operating Income (Loss)		$ (206,426)		$ (253,505)
Add:				
Depreciation		182,000		182,000
Deduct:				
Debt Service Principal		(23,030)		(21,971)
Capital Expenditures from Current Operating Funds		-		-
Net Income After Adjustments		$ (47,456)		$ (93,476)
Contribution From (To) Fund Balance		$ 47,456		$ 93,476

APPENDIX E

CITY OF DANVILLE, VIRGINIA
BUDGET FOR FISCAL YEAR 2004-2005
SANITATION FUND

KEYORG	Object	Object Title	01-02 Amount	02-03 Actual	03-04 Budget	03-04 Six Months Actual	04-05 Dept. Request	04-05 City Manager Recommended
REVENUES								
REVENUE FROM USE OF MONEY & PROPERTY								
5800000	41750	INTEREST INCOME ON INVESTMENTS	$ 31,459	$ 18,711	$ 17,000	$ 6,896	$ 10,000	$ 10,000
5800000	41910	RENTAL INCOME	7,320	5,760	6,000	3,840	8,000	8,000
			$ 38,779	**$ 24,471**	**$ 23,000**	**$ 10,736**	**$ 18,000**	**$ 18,000**
CHARGES FOR SERVICES								
5800000	42656	SALE OF RECYCLABLES	$ 196	$ 903	$ 1,000	$ 13	$ 1,000	$ 1,000
5800000	42658	APPLIANCE DISPOSAL CHARGE-CFC	3,080	3,240	3,000	1,360	3,000	3,000
5800000	42660	APPLIANCE DISPOSAL CHARGE-NON CFC	3,015	3,195	1,500	1,515	2,000	2,000
5800000	42662	TRANSFER STATION HOST FEES	6,929	7,100	10,000	250	10,000	10,000
5800000	42664	DISPOSAL OF YARD WASTE	-	-	395	-	395	395
5800000	42702	RESIDENTIAL SALES	3,046,078	3,026,505	3,104,500	1,503,217	3,124,500	3,124,500
			$ 3,059,298	**$3,040,943**	**$ 3,120,395**	**$ 1,506,355**	**$ 3,140,895**	**$ 3,140,895**
TRANSFERS IN								
5800000	6101	TRANSFER FROM GENERAL FUND	$ 9,200	$ -	$ -	$ -	$ -	$ -
			$ 9,200	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
		TOTAL REVENUES	**$ 3,107,277**	**$3,065,414**	**$ 3,143,395**	**$ 1,517,090**	**$ 3,158,895**	**$ 3,158,895**

CITY OF DANVILLE, VIRGINIA

BUDGET FOR FISCAL YEAR 2004-2005

SANITATION FUND

KEYORG	Object	Object Title	01-02 Actual	02-03 Actual	03-04 Budget	03-04 Six Months Actual	04-05 Dept. Request	04-05 City Manager Recommended
APPROPRIATIONS								
SANITATION - REFUSE								
5827701	51100	SALARIES & WAGES-REGULAR	$ 711,849	$ 684,074	$ 697,907	$ 546,195	$ 668,127	$ 668,127
5827701	51150	SALARIES & WAGES-REGULAR-OT	-	-	-	-	61,285	61,285
5827701	51450	FICA TAXES	43,877	41,546	53,147	19,757	55,800	55,800
5827701	51525	RETIREMENT-ERS	36,839	32,872	40,335	16,387	44,056	44,056
5827701	51550	PENSION EXPENSE	(29,676)	(17,470)	-	-	-	-
5827701	51650	WORKER'S COMPENSATION-SELF-INSURED	9,281	9,279	6,000	(4,238)	3,000	3,000
5827701	52175	PROFESSIONAL HEALTH SERVICES	-	-	-	62	-	-
5827701	52202	REPAIRS & MAINTENANCE-RADIO	240	240	240	120	240	240
5827701	52230	CONTRACTORS	718,587	742,566	701,516	338,510	701,516	701,516
5827701	52275	ADVERTISING	2,499	1,336	1,000	1,892	1,000	1,000
5827701	52349	OUTSIDE PURCHASED SERVICES-MISC	-	-	-	2,108	-	-
5827701	52500	AUTOMOTIVE/MOTOR POOL-RADIO EQUIP	1,620	1,470	1,440	720	1,440	1,440
5827701	52550	AUTOMOTIVE/MOTOR POOL-VEHICLES	156,991	131,556	120,600	131,699	112,800	112,800
5827701	52600	AUTOMOTIVE/MOTOR POOL-EQUIPMENT	-	-	-	474	-	-
5827701	52650	PRINT SHOP	1,457	1,328	500	2,386	500	500
5827701	54050	POSTAL SERVICES	-	-	-	-	-	-
5827701	54650	GENERAL LIABILITY INSURANCE	4,756	1,054	1,195	682	1,495	1,495
5827701	55815	ADMINISTRATIVE EXPENSE	396,408	462,047	462,047	231,024	485,150	485,150
5827701	55930	MATERIALS AND SUPPLIES	19,504	15,109	10,000	16,972	10,000	10,000
5827701	56050	UNIFORMS & WEARING APPAREL	14,745	12,037	10,000	4,819	10,000	10,000
5827701	56242	DUES & ASSOC MEMBERSHIPS	185	190	600	133	600	600
5827701	57000	CUSTOMER SERVICE ALLOCATION	44,174	44,440	48,011	15,289	66,520	66,520
		DIVISION TOTAL	$ 2,133,336	$ 2,163,674	$ 2,154,538	$ 1,324,992	$ 2,223,529	$ 2,223,529

CITY OF DANVILLE, VIRGINIA
BUDGET FOR FISCAL YEAR 2004-2005
SANITATION FUND

KEYORG	Object	Object Title	01-02 Actual	02-03 Actual	03-04 Budget	03-04 Six Months Actual	04-05 Dept. Request	04-05 City Manager Recommended
APPROPRIATIONS								
SANITATION - YARDWASTE								
5827702	51100	SALARIES & WAGES-REGULAR	$ 347,092	$ 306,862	$ 278,416	$ 55,754	$ 250,896	$ 250,896
5827702	51150	SALARIES & WAGES-REGULAR-OT	-	-	-	-	45,423	45,423
5827702	51450	FICA TAXES	20,998	17,337	21,298	9,204	22,665	22,665
5827702	51525	RETIREMENT-ERS	17,811	14,389	17,677	7,639	15,096	15,096
5827702	51650	WORKER'S COMPENSATION-SELF-INSURED	5,562	5,328	6,000	3,342	3,000	3,000
5827702	52201	REPAIRS & MAINTENANCE-EQUIPMENT	98	-	-	-	-	-
5827702	52202	REPAIRS & MAINTENANCE-RADIO	80	80	80	40	80	80
5827702	52230	CONTRACTORS	39,515	12,743	34,890	41,296	24,890	24,890
5827702	52349	OUTSIDE PURCHASED SERVICES-MISC	-	-	-	491	-	24,890
5827702	52500	AUTOMOTIVE/MOTOR POOL-RADIO EQUIP	840	1,260	1,260	630	1,260	1,260
5827702	52550	AUTOMOTIVE/MOTOR POOL-VEHICLES	107,627	130,298	93,696	11,334	90,616	90,616
5827702	52600	AUTOMOTIVE/MOTOR POOL-EQUIPMENT	2,470	13,730	4,386	1,566	8,184	8,184
5827702	54650	GENERAL LIABILITY INSURANCE	552	684	780	438	965	965
5827702	54900	TRAVEL/TRAINING EXPENSE	-	-	-	-	-	-
5827702	55930	MATERIALS AND SUPPLIES	8,280	7,948	3,350	8,387	3,350	3,350
5827702	56050	UNIFORMS & WEARING APPAREL	4,625	5,042	2,680	2,962	2,680	2,680
		DIVISION TOTAL	$ 555,550	$ 515,701	$ 464,513	$ 143,083	$ 469,105	$ 493,995

CITY OF DANVILLE, VIRGINIA

BUDGET FOR FISCAL YEAR 2004-2005

SANITATION FUND

KEYORG	Object	Object Title	01-02 Actual	02-03 Actual	03-04 Budget	03-04 Six Months Actual	04-05 Dept. Request	04-05 City Manager Recommended
APPROPRIATIONS								
SANITATION - LEAF COLLECTION								
5827703	51100	SALARIES & WAGES-REGULAR	$ 188,718	$ 153,301	$ 195,059	$ 6,278	$ 170,628	$ 170,628
5827703	51150	SALARIES & WAGES-REGULAR-OT	-	-	-	-	30,282	30,282
5827703	51450	FICA TAXES	377	-	14,922	-	15,369	15,369
5827703	51525	RETIREMENT-ERS	-	-	12,387	-	12,768	12,768
5827703	52202	REPAIRS & MAINTENANCE-RADIO	39	39	40	20	40	40
5827703	52349	OUTSIDE PURCHASED SERVICES-MISC	-	-	-	31	-	-
5827703	52500	AUTOMOTIVE/MOTOR POOL-RADIO EQUIP	420	-	-	-	-	-
5827703	52550	AUTOMOTIVE/MOTOR POOL-VEHICLES	5,257	5,160	2,580	645	2,708	2,708
5827703	52550	AUTOMOTIVE/MOTOR POOL-EQUIPMENT	18,048	7,530	14,456	10,842	14,456	14,456
5827703	52650	PRINT SHOP	-	-	-	375	-	-
5827703	55930	MATERIALS AND SUPPLIES	2,741	3,530	1,650	6,109	1,650	1,650
5827703	56050	UNIFORMS & WEARING APPAREL	846	314	1,320	56	1,320	1,320
		DIVISION TOTAL	$ 216,446	$ 169,874	$ 242,414	$ 24,356	$ 249,221	$ 249,221

CITY OF DANVILLE, VIRGINIA
BUDGET FOR FISCAL YEAR 2004-2005
SANITATION FUND

KEYORG	Object	Object Title	01-02 Actual	02-03 Actual	03-04 Budget	03-04 Six Months Actual	04-05 Dept. Request	04-05 City Manager Recommended
APPROPRIATIONS								
SANITATION - LANDFILL								
5827704	52230	CONTRACTORS	$ 83,323	$ 78,865	$ 103,975	$ 31,981	$ 103,975	$ 103,975
5827704	52349	OUTSIDE PURCHASED SERVICES-MISC	-	-	-	2,282	-	-
5827704	52650	PRINT SHOP	-	-	-	39	-	-
5827704	57960	DEPRECIATION EXPENSE	140,919	136,792	142,000	68,400	142,000	142,000
5827704	58275	INTEREST ON G/O BONDS	9,074	7,989	6,843	3,878	2,629	2,629
		DIVISION TOTAL	**$ 233,316**	**$ 223,646**	**$ 252,818**	**$ 106,580**	**$ 248,604**	**$ 248,604**

CITY OF DANVILLE, VIRGINIA

BUDGET FOR FISCAL YEAR 2004-2005

SANITATION FUND

KEYORG	Object	Object Title	01-02 Actual	02-03 Actual	03-04 Budget	03-04 Six Months Actual	04-05 Dept. Request	04-05 City Manager Recommended
APPROPRIATIONS								
SANITATION - COMPOSTING								
5827705	51100	SALARIES & WAGES-REGULAR	$ 64,484	$ 60,107	$ 56,769	$ 23,484	$ 51,109	$ 51,109
5827705	51150	SALARIES & WAGES-REGULAR-OT	-	-	-	-	885	885
5827705	51450	FICA TAXES	4,537	4,198	4,343	2,535	4,569	4,569
5827705	51525	RETIREMENT-ERS	3,849	3,484	3,058	2,104	3,362	3,362
5827705	51650	WORKER'S COMPENSATION-SELF-INSURED	(191)	(201)	2,405	(281)	500	500
5827705	52200	REPAIRS & MAINTENANCE-BUILDINGS	456	-	-	-	-	-
5827705	52201	REPAIRS & MAINTENANCE-EQUIPMENT	36,455	36,944	20,075	6,115	20,075	20,075
5827705	52202	REPAIRS & MAINTENANCE-RADIO	240	240	240	120	240	240
5827705	52225	MAINTENANCE SERVICE CONTRACTS	414	119	-	-	-	-
5827705	52230	CONTRACTORS	-	-	600	869	600	600
5827705	52349	OUTSIDE PURCHASED SERVICES-MISC	-	-	-	351	-	-
5827705	52500	AUTOMOTIVE/MOTOR POOL-RADIO EQUIP	180	180	180	90	180	180
5827705	52550	AUTOMOTIVE/MOTOR POOL-VEHICLES	2,796	3,864	3,042	-	3,444	3,444
5827705	53000	UTILITIES-HEAT,LIGHTS,WATER	1,404	207	-	105	-	-
5827705	54650	GENERAL LIABILITY INSURANCE	133	136	155	84	185	185
5827705	55975	GASOLINE,LUBRICANTS,ETC	5,345	6,738	4,500	3,739	4,500	4,500
5827705	56050	UNIFORMS & WEARING APPAREL	-	699	200	-	200	200
5827705	57960	DEPRECIATION EXPENSE	36,723	32,875	40,000	16,440	40,000	40,000
		DIVISION TOTAL	**$ 156,825**	**$ 149,590**	**$ 135,567**	**$ 55,754**	**$ 129,849**	**$ 129,849**

CITY OF DANVILLE, VIRGINIA

BUDGET FOR FISCAL YEAR 2004-2005

SANITATION FUND

KEYORG	Object	Object Title	01-02 Actual	02-03 Actual	03-04 Budget	03-04 Six Months Actual	04-05 Dept. Request	04-05 City Manager Recommended
APPROPRIATIONS								
SANITATION - RECYCLING								
5827706	51100	SALARIES & WAGES-REGULAR	$ 9,505	$ 17,310	$ 40,866	$ 5,547	$ 43,360	$ 43,360
5827706	51450	FICA TAXES	597	985	3,126	1,822	3,316	3,316
5827706	51525	RETIREMENT-ERS	506	818	2,594	1,191	2,851	2,851
5827706	51650	WORKER'S COMPENSATION-SELF-INSURED	105	301	1,635	(115)	500	500
5827706	52201	REPAIRS & MAINTENANCE-EQUIPMENT	-	-	1,000	1	1,000	1,000
5827706	52203	REPAIRS & MAINTENANCE-VEHICLES	5,386	4,060	5,000	-	5,000	5,000
5827706	52230	CONTRACTORS	10,782	33,313	30,000	28,435	20,000	20,000
5827706	52500	AUTOMOTIVE/MOTOR POOL-RADIO EQUIP	180	180	180	90	180	180
5827706	52550	AUTOMOTIVE/MOTOR POOL-VEHICLES	15,361	15,336	15,300	75	15,600	15,600
5827706	52600	AUTOMOTIVE/MOTOR POOL-EQUIPMENT	-	60	-	3	-	-
5827706	54650	GENERAL LIABILITY INSURANCE	82	59	70	38	85	85
5827706	55930	MATERIALS AND SUPPLIES	-	15	-	1,131	-	-
5827706	55975	GASOLINE,LUBRICANTS,ETC	-	-	-	26	-	-
5827706	56050	UNIFORMS & WEARING APPAREL	-	100	200	100	200	200
5827706	57500	MACHINERY & EQUIPMENT PURCHASES	-	-	-	-	-	-
		DIVISION TOTAL	$ 42,504	$ 72,537	$ 99,971	$ 38,344	$ 92,092	$ 92,092

CITY OF DANVILLE, VIRGINIA
BUDGET FOR FISCAL YEAR 2004-2005
SANITATION FUND

KEYORG	Object	Object Title	01-02 Actual	02-03 Actual	03-04 Budget	03-04 Six Months Actual	04-05 Dept. Request	04-05 City Manager Recommended
APPROPRIATIONS								
DEBT SERVICE REDEMPTION								
5827707	58200	BOND MATURITIES-GENERAL	$ 21,508	$ 22,236	$ 23,030	$ 23,030	$ 21,971	$ 21,971
		DIVISION TOTAL	$ 21,508	$ 22,236	$ 23,030	$ 23,030	$ 21,971	$ 21,971
		FUND TOTAL	$ 3,359,485	$ 3,317,258	$ 3,372,851	$ 1,716,139	$ 3,434,372	$ 3,459,262

COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN

2004 UPDATE - REVISED

Appendix F

1997 PLAN UPDATE

APPENDIX F

City of Danville, Virginia

Department of Public Works

P.O. Box 3300
Danville, Virginia 24543
(804) 799-5245
FAX: (804) 799-6458

Richard Drazenovich
Director
Public Works Department

James S. Harr
Asst. P. W. Director/
Director Administrative Servs.

T. Eugene Franklin, Director
Streets Maintenance Division

J. U. Dykes, Director
Buildings & Grounds Division

A. Kent Shelton, City Engineer
Engineering Division Director

Thomas M. Spicer, Director
Sanitation Division

June 24, 1997

Mr. Bob Wickline
Department of Environmental Quality
P. O. Box 10009
Richmond, Virginia 23240-0009

Subject: Solid Waste Management Plan Update

Dear Mr. Wickline:

As you requested in your April 22, 1996 letter, I am submitting to you the attached report updating the 1991 Comprehensive Solid Waste Management Plan.

If you require additional information, please feel free to contact me at (804)799-5245.

Sincerely,

RD Drazenovich

Richard Drazenovich,
Public Works Director

RD:amp

cc: Tom Spicer, Sanitation Division Director

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CITY OF DANVILLE, VIRGINIA

COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN

1997 UPDATE

In 1989 the Virginia General Assembly enacted legislation mandating the development and implementation of local solid waste management plans. The plans were due July 1, 1991. The following information is an update and a supplement to the City of Danville's plan submitted in June 1991.

The City of Danville has experienced two substantial changes since the comprehensive plan was submitted:

- The City has constructed and operated a woody-waste grinding and composting facility since 1992. It recycles approximately 8,500 tons of wood waste, leaves, and grass annually. One hundred percent of the City of Danville's yard waste is processed through this facility.

- The City owned and operated landfill was closed in September 1993 and the solid waste was redirected to a transfer station, which is privately owned and operated. The solid waste disposed of through this transfer station is landfilled at a private landfill in Kernersville, North Carolina.

The conversion from a City-owned landfill to a transfer station disposal method has dramatically reduced the amount of reportable waste within the City's jurisdiction. Much of the industrial waste which was previously disposed of at the City landfill is now either recycled privately or disposed of in a private landfill in Pittsylvania County. Attached to this report are the following updated tables and figures with the new waste generation projections.

Table 2-2 - City of Danville Twenty Year Per Capita Waste Generation Projection

Figure 2-2 - Residential Vs. Non-Residential Waste Chart

Table 2-3 - Residential Waste Generation

Table 2-4 - Waste Projection By Source

Table 2-5 - Waste Projection By Source

Except for the implementation of a transfer station and composting facility, the City has adhered to the plan submitted in 1991. The City has exceeded recycling goals set in reporting years of 1993 and 1995 and fully expects to successfully meet the goals in 1997.

COMPREHENSIVE

SOLID WASTE

MANAGEMENT PLAN

2004 UPDATE - REVISED

Appendix G

METHOD OF TRACKING WASTE GENERATION

METHOD OF TRACKING WASTE GENERATED WITHIN THE CITY LIMITS OF DANVILLE

Solid Waste Regulations require that a methodology shall be utilized to monitor the amount of solid waste of each type produced within the area of the solid waste management plan and to record the annual production by solid waste types at a centralized archive and a copy shall be sent to the director. Waste types include but are not limited to broad classes such as municipal solid waste, construction/demolition/debris, industrial, regulated medical waste, white goods, friable asbestos, petroleum contaminated soil and the major categories of principle and supplemental recyclable materials.

As required in the regulations and upon acceptance of the Solid Waste Management Plan revision, the City of Danville will follow these procedures to track waste generation:

<u>WASTE GENERATION QUANTITY</u>

1. All waste disposal facilities used by waste generators in the plan area will be polled to report the amount of waste which is being generated from City sources. These facilities include:
   A. First Piedmont Corporation Transfer Station
   B. First Piedmont Construction / Demolition Landfill and Paper Recycling.
   C. Waste Management Transfer Station in Danville
   D. City of Danville Compost Facility
   E. Scrap metal:
      1. Don's Recycling
      2. Hayes Iron and Metal
   F. Wastewater Treatment:
      1. American Water Systems - Land Applied Sludge.
2. The reported tonnages will be placed into a source category as required in the Solid Waste Regulation listed above.

RECYCLING QUANTITIES

1. Major Industries, businesses, and facilities in the plan area will then be polled to report all recycling/reuse products in the reporting year.
2. The report will include primary recyclables and supplemental recyclables (A sample form is included).

TIME TABLE

A schedule for implementation of the waste tracking is as follows:

December 2004	• Final acceptance by DEQ of Solid Waste Plan. • Meet with businesses, industries, and recyclers to explain form and due dates.
August 2005	• Mail out reporting forms. ** Report forms due January 2006.*
January 2006	• Collect 2005 reporting forms and tabulate responses.
February 2006	• Compile 2005 Report and submit to DEQ. ** Submit annually thereafter.*

CENTRALIZED ARCHIVE

All information resulting from monitoring the amount of solid waste generated within the Solid Waste Plan area will be archived at the Public Works Department, located at 998 South Boston Road. All information will be submitted to DEQ based on the above schedule.

CITY OF DANVILLE

Primary & Supplemental Recyclables Tracking Report for Calendar Year 2005

Business Name: _____ **Date:** _____

Address: _____ **Phone No.:** _____

_____

Part I: Principal Recyclable Material (PRM)

PRM TYPE	RECYCLED AMOUNT (TONS)
Paper	_____
Metal	_____
Plastic	_____
Glass	_____
Commingled	_____
Yard Waste (composted or mulched)	_____
Waste Wood (chipped or mulched)	_____
Textiles	_____
TOTAL PRM	_____ (P)

Part II: Supplemental Recyclable Material (SRM)

SRM TYPE	RECYCLED AMOUNT (TONS)
Waste Tires	_____
Used Oil	_____
Used Oil Filters	_____
Abandoned automobiles removed	_____
Batteries	_____
Sludge (composted)	_____
Electronics	_____
Tree Stumps (> 6" Diameter)	_____
Other	_____
SUBTOTAL (Recycled SRM)	_____

SRM TYPE	REUSED* AMOUNT (TONS)
Construction Waste	_____
Demolition Waste	_____
Debris Waste	_____
Ash	_____
Other	_____
SUBTOTAL (Reused SRM)	_____
TOTAL SRM	_____ (S)

** Material separated from the waste stream and used, without processing or changing its form, for the same or another end use.*

CITY OF DANVILLE

OTHER MATERIALS

OPTIONAL: Use this page to report and summarize information for the "Other" categories on Page 1 of this form.

SRMs, "Other" material:

Material	Tons Recycled
TOTAL SRMs Recycled (to "Other" entry, Page 1)	

SRMs, "Other" material:

Material	Tons Reused
TOTAL SRMs Reused (to "Other" entry, Page 1)	

Conversion Table For General Guidance Only

Material	Volume	Weight in Pounds
Metal		
Aluminum Cans, Whole	One cubic yard	50-74
Aluminum Cans, Flattened	One cubic yard	250
Aluminum Cans	One full grocery bag	1.5
Ferrous Cans, Whole	One cubic yard	150
Ferrous Cans, Flattened	One cubic yard	850
Automobile Bodies	One vehicle	2,000
Paper		
Newsprint, Compacted	One cubic yard	720-1,000
Newsprint	12" stack	35
Corrugated Cardboard, Loose	One cubic yard	300
Corrugated Cardboard, Baled	One cubic yard	1,000-2,000
Plastic		
PETE, Whole, Loose	One cubic yard	30-40
PETE, Whole, Loose	Gaylord	40-53
PETE, Whole, Baled	30" x 62"	500
Film, Baled	30" x 42" x 48"	1,100
Film, Baled	Semi-Load	44,000
Film, Loose	Standard grocery bag	15
HDPE (Dairy Only), Whole, Loose	One cubic yard	24
HDPE (Dairy Only), Baled	32" x 60"	400-500
HDPE (Mixed), Baled	32" x 60"	900
Mixed PET & Dairy, Whole, Loose	One cubic yard	32
Mixed PET, Dairy & Other Rigid (Whole, Loose)	One cubic yard	38
Mixed Rigid, No Film	One cubic yard	49
Glass		
Glass, Whole Bottles	One cubic yard	600-1,000
Glass, Semi-Crushed	One cubic yard	1,000-1,800
Glass, Crushed (Mechanically)	One cubic yard	800-2,700
Glass, Whole Bottles	One full grocery bag	16
Glass, Uncrushed to Manually Broken	55 gallon drum	125-500
Arboreal		
Leaves, Uncompacted	One cubic yard	250-500
Leaves, Compacted	One cubic yard	320-450
Leaves, Vacuumed	One cubic yard	350
Wood Chips	One cubic yard	500
Grass Clippings	One cubic yard	400-1,500
Other		
Battery (Heavy Equipment)	One	60
Battery (Auto)	One	35.9
Used Motor Oil	One gallon	7.4
Used Oil Filters (Uncrushed)	55 gallon drum	66 lbs./Used Oil + 110 lbs./Ferrous Metal
Used Oil Filters (Crushed)	55 gallon drum	16.5 lbs./Used Oil+ 368 lbs./Ferrous Metal
Tire – Passenger Car	One	20
Tire – Truck, Light	One	35
Tire – Semi	One	105
Antifreeze	One gallon	8.42
Food Waste, Solid & Liquid Fats	55 gallon drum	412

COMPREHENSIVE

SOLID WASTE

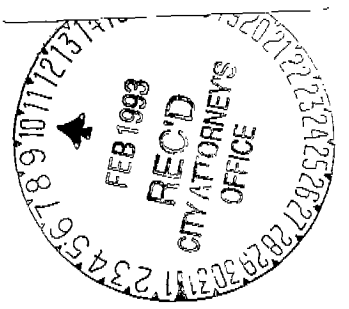
MANAGEMENT PLAN

2004 UPDATE - REVISED

Appendix H

DANVILLE TRANSFER STATION AGREEMENT

City Clerk Contract No.
10202



CITY OF DANVILLE, VIRGINIA

"Solid Waste Disposal"

THIS AGREEMENT, made as of the 3 day of February 1993, by and between the CITY OF DANVILLE, a municipal corporation of the Commonwealth of Virginia, with its principal offices at 427 Patton Street, Danville, Virginia 24541, hereinafter referred to as the "City," and WASTE MANAGEMENT OF CAROLINAS, INC., with its principal offices at 3303 North Glenn Avenue, Winston-Salem, North Carolina 27105, hereinafter referred to as the "Contractor;"

WITNESSETH

THAT WHEREAS, the City desires and intends to obtain outside services for the disposal of non-hazardous and non-special waste generated by the City's commercial, industrial and residential generators, all of which services are hereinafter collectively referred to as the "Project," and the Contractor desires, intends and has agreed to provide and perform the same for the City; now, therefore,

FOR AND IN CONSIDERATION of the mutual and respective covenants and agreements herein contained and made with respect to the performance and accomplishment of said Project by the Contractor and the payment therefor by the City, the City and the Contractor do hereby covenant and agree as follows:

SECTION 1 - DEFINITIONS

1.1 ACCEPTABLE WASTE

Shall include household waste, non-household waste, sliced tires, refuse, garbage, trash, bulky waste, construction and remodeling debris, commercial waste, and industrial waste excluding special and hazardous waste, dead animals over 50 lbs., yard waste and white goods.

1.2 AGREEMENT

Wherever the words "Agreement" or "Contract" are used, it shall mean and include the actual agreement to include contract provisions, specifications, bond, insurance certificates and addenda.

1.3 CONTRACTING OFFICER OR CONTRACT MANAGER

Wherever the words "Contract Administrator" or "Contract Manager" are used, they shall mean the Director of Public Works of the City of Danville.

1.4 FORCE MAJEURE

From and after the Commencement Date, the Contractor's performance hereunder may be suspended and its obligations hereunder excused in the event and during the period that such performance is prevented by a cause or causes beyond the reasonable control of the Contractor unless such cause or causes are a result of action or nonaction by the Contractor. Such causes shall include, but not be limited to, acts of God, acts of war, riot, fire, explosion, accident, flood or sabotage; lack of adequate fuel, power or raw materials, judicial administrative or governmental laws, regulations, requirements, rules, orders or actions; injunctions or restraining orders; the failure of any governmental body to issue or grant, or the suspension or revocation or modification of any license, permit or other authorization necessary for the construction, transportation and/or disposal operation envisioned by this Agreement; national defense requirements; provided, however, a decision adverse to Contractor in Waste Management of Carolinas, Inc. v. William W. Cobey, Jr., Secretary, North Carolina Department of Environment, Health, and Natural Resources shall not be considered an event of force majeure.

1.5 LANDFILL

The word "Landfill" refers to the Piedmont Landfill and Recycling Center in Kernersville, North Carolina, or another approved site which meets the applicable criteria of Subtitle D of the Resource Conservation and Recovery Act of 1976, as amended, and which is owned and/or operated by Contractor.

1.6 PERFORMANCE BOND

Wherever the word "Performance Bond" is used, it shall mean security approved by the City and furnished by the Contractor as a guarantee that the Contractor will execute the work in accordance with the term of the Contract and will pay all lawful claims.

1.7 PRIVATE HAULER

Individuals or entities authorized and permitted by the City to haul and disposal of waste collected within the City.

1.8 SURETY

Wherever the word "Surety" is used, it shall mean the party who is bound with and for the Contractor to insure the payment of all lawful debts pertaining to and for the acceptable performance of the Contract.

1.9 TRANSFER STATION

Wherever the word "Transfer Station" is used herein, the term shall mean the facility to be engineered, designed, constructed, owned and operated by the Contractor at a location within the city limits of Danville which is acceptable to both parties.

1.10 HAZARDOUS WASTE

"Hazardous Waste" means any substance or solid, semisolid, liquid, or gaseous waste that by reason of its composition or characteristics is a hazardous waste or substance as defined in any federal, state, or local law, rule or regulation.

1.11 SPECIAL WASTE

"Special Waste" means any discarded material from a non-residential source meeting any of the following descriptions:

a. Containerized waste (e.g., a drum, portable tank, lugger box, roll-off box, pail, bulk tanker, etc.) listed in b. - e. below.

b. Waste containing free liquids.

c. Waste from a pollution control process.

d. Residue from a spill of a non-hazardous chemical substance or commercial product or a waste listed in a. - c., or e.

e. Contaminated non-hazardous residuals from the cleanup of a facility generating, storing, treating, recycling or disposing of wastes, chemical substances or commercial products listed above in a. - d.

f. Friable asbestos waste from building demolition or cleaning; wall board, wall spray coverings, pipe insulation, etc. Non-friable asbestos is not a special waste unless it has been processed, handled or used in such a way that asbestos fibers may be freely released.

g. Commercial products or chemicals which are off-specification, outdated, unused or banned. Outdated or off-specification, uncontaminated food or beverage products in original consumer containers are not included in this category, however, containers which once held commercial products or chemicals are included unless the container is empty.

h. Untreated bio-medical waste - Any waste capable of inducing infection due to contamination with infectious agents from a bio-medical source including but not limited to a medical practitioner, hospital, medical clinic, nursing home, university medical laboratory, mortuary, taxidermist, veterinarian, hospital or animal testing laboratory. Sharps from these sources must be rendered harmless or placed in needle puncture proof containers.

i. Treated bio-medical wastes - Any wastes from a bio-medical source including but not limited to a hospital, medical clinic, nursing home, medical practitioner, mortuary, taxidermist, veterinarian hospital, animal testing laboratory, or university medical

laboratory which has been autoclaved or otherwise heat treated or sterilized so that it is no longer capable of inducing infection. Any sharps from these sources must be rendered harmless or placed in needle puncture proof containers.

j. Liquids and sludges from septic tanks, food service grease traps, or washwater and wastewaters from commercial laundries, laundromats and car washes unless these wastes are managed at commercial or public treatment works.

k. Chemical-containing equipment removed from service. Examples: filters, cathode ray tubes, lab equipment, acetylene tanks, fluorescent light tubes, etc.

l. Waste produced from the demolition or dismantling of industrial process equipment or facilities contaminated with chemicals from the industrial process.

1.12 SERVICES

Unless the context clearly indicates otherwise, wherever the word "Services" is used, it shall mean the disposal of the City's non-hazardous, non-special solid waste and shall include the operation of a transfer station and transportation of Acceptable Waste to the Landfill for disposal.

SECTION 2 - SCOPE OF SERVICES TO BE PROVIDED BY THE CONTRACTOR

2.1 SCOPE OF SERVICES

The Contractor shall furnish and maintain all trucks, labor, tools, machines, material and equipment necessary and required for the handling and disposal of Acceptable Waste generated within the City and delivered to the Transfer Station.

2.2 TRANSFER STATION

a. The Contractor shall purchase and improve a minimum five acre site acceptable to both parties within the confines of the City of Danville suitable for a transfer station operation.

b. The Contractor shall make all improvements to the site including, but not limited to, construction of a paved access road and extension of necessary utilities. Contractor shall provide to City for information purposes copies of site and construction plans.

c. The Contractor shall design, construct, and operate a fully-equipped minimum 300 ton/day capacity transfer station (including the furnishing and installation of scales, scalehouse and record keeping equipment) for the receipt of Acceptable Waste from the City, Private Haulers, or City residents. The size of the Transfer Station may be increased to allow Contractor to accept waste at the Transfer Station from sources other than the City.

d. Prior to commencing operations, the Contractor agrees to submit to the City its operating plans for Transfer Station including its proposed labor force, equipment, hours of operation, and standard operating procedures.

e. The hours of operation shall accommodate scheduled City residential collection.

The Transfer Station may be closed on the following holidays:

New Years' Day Holiday
Thanksgiving Day Holiday
Christmas Day Holiday

f. The Contractor agrees to install, construct, maintain, and operate in good working order and to have available on all days in which the Transfer Station is open, a scale to be used in weighing City's Acceptable Waste deposited at the Transfer Station. The Contractor agrees to cause normal maintenance and calibration of the scale to be performed in accord with manufacturer's recommendation. The City may, on a monthly basis and during normal business hours, inspect the scale and test the accuracy of same. In the event the scale is not operable at any time, vehicles will be charged based upon the full truck cubic yardage capacity calculated at 500 pounds per cubic yard.

g. The City, at its discretion, may station one or more of its employees at the Transfer Station. These employees will cause to be diverted recyclables, white goods, tires, yard waste or other materials not to be transferred to the Sanitary Landfill.

h. All Acceptable Waste that is delivered to the Transfer Station shall be received and hauled by the Contractor to the Landfill on the day of receipt, except waste delivered to the Transfer Station after 4:00 p.m. may be stored overnight in transfer trailers. Such waste shall be hauled to the Landfill on the following working day.

i. Upon City's request, Contractor shall provide roll-off containers at the Transfer Station for yard waste, recyclable materials identified by the City and white goods. For purposes of this Agreement, yard waste shall include leaves, grass, brush and agricultural waste. Yard waste and white goods may not be accepted for disposal at the Landfill and, therefore, shall be segregated from the waste stream and placed in the roll-off containers provided by Contractor or disposed of in another manner by the City. The rental charges for the roll-off containers and charges for Contractor's services in hauling the waste and/or recyclables to another disposal and/or processing facility and the applicable disposal and/or processing fees are not included in the remuneration to Contractor described in this Agreement.

j. Yard waste, including but not limited to leaves, grass, brush and agricultural waste; pallets; wood scraps and white goods may be delivered to the Transfer Station and diverted from the waste stream by City to a disposal facility other than the Landfill which disposal facility is permitted to accept such materials. Diverted waste which is delivered to the

Transfer Station by third parties will be billed by Contractor to such third party on behalf of the City. Contractor shall charge City an additional fee for such services, which fee shall be negotiated with City.

k. The Contractor shall maintain the Transfer Station area in a neat and orderly manner. All litter resulting from the operation of the Transfer Station shall be collected on a daily basis.

l. After a 15 minute delay the Contractor will give the City's municipal trucks priority.

2.3 HAULING

a. All trucks used for transporting waste to the Landfill shall be in good repair, painted, numbered, and thoroughly emptied daily.

b. Proposed truck routes within the City shall be subject to approval by the City.

c. The Contractor shall provide the Services in such a manner as to create no nuisance. Any waste spilled or scattered in any area other than the disposal site shall be promptly cleaned up by the Contractor. Cleanup of all spills by Contractor, whether at the Transfer Station site, in transit to, or at the Landfill shall be done promptly and is the sole responsibility of the Contractor.

2.4 DISPOSAL

a. The Contractor shall use a waste disposal method that complies with all federal, state and local environmental regulations.

b. Contractor shall obtain all necessary federal, state and local permits required to dispose of Acceptable Waste and operate the transfer station; said permits shall be obtained prior to commencement of the Services.

c. Contractor shall provide the City with copies of all permits to dispose of Acceptable Waste that are required by the local, state and federal governments. Furthermore, the City shall be notified immediately of any action by a governmental entity to revoke, suspend or otherwise alter a permit necessary to operate hereunder.

d. Contractor shall dispose of City's Acceptable Waste only in a landfill which has been opened, is operated and maintained and is closed AND MAINTAINED AFTER CLOSURE in accordance with local, state, and federal law.

2.5 EMERGENCY CONDITIONS

a. The Contractor shall continue to accept the City's Acceptable Waste at the Landfill regardless of the operating status of the Transfer Station. If the Transfer Station is inoperable due to the fault of the Contractor, then the City shall be compensated for all of its direct additional costs incurred in transporting the waste to the Landfill. If the station is inoperable due to the fault of the City, then the Contractor shall be compensated for all of its damages attributable to the closure of the Transfer Station. If the Transfer Station is closed due to a force majeure event, then Contractor shall use its best efforts to reopen the Transfer Station as soon as possible.

b. If the Transfer Station is closed and Contractor provides no transportation services to City, Contractor shall charge City only for landfill fees according to Exhibit A, "Rate Schedule" for waste delivered from within the City.

c. If the Landfill cannot accept the City's Acceptable Waste due to a force majeure event, Contractor shall continue to operate the Transfer Station and transfer the waste to an alternate disposal site.

d. Contractor shall be compensated by the City for its actual additional expenses for the first six months including overhead and profit incurred while disposing of City waste during a force majeure event. Contractor shall have the right to select an alternate disposal site subject to the approval of the City. In the event the City rejects Contractor's proposed alternate disposal site, Contractor shall dispose of the waste at the site designated by the City.

e. In the event that the alternate site is used for more than six months Contractor and the City shall renegotiate Contractor's remuneration. The adjustment to Contractor's compensation shall be retroactive to the end of the six month period.

f. The Contractor and the City shall negotiate an equitable adjustment of Contractor's compensation to compensate for any costs incurred or delays experienced by Contractor as a result of a force majeure event at the Transfer Station or Landfill.

2.6 DISPOSAL OF RESIDUE AND OTHER SOLID WASTE FROM A RESOURCE RECOVERY FACILITY

a. If the City itself, or acting through a third party, or another entity, should develop a resource recovery facility within the Danville City limits, notwithstanding anything to the contrary in this Agreement, the City shall have the right to require the Contractor to deliver all Acceptable Waste handled at the Transfer Station pursuant to this Agreement to such a resource recovery system subject to the following conditions: (1) The City shall give twelve (12) months notice prior to the date that such delivery shall commence; and (2) the City and the Contractor shall negotiate the amount of compensation to be paid the Contractor for such transportation services.

b. If such a resource recovery facility is developed, Contractor and the City shall negotiate the amount of compensation to be paid to Contractor and mutually agreeable terms and conditions for disposing of the non-hazardous waste associated with a resource recovery facility.

SECTION 3 - CONTRACTOR'S RELATIONSHIP TO THE CITY

3.1 CONTRACTOR AS INDEPENDENT CONTRACTOR

It is expressly agreed and understood that the Contractor is in all respects an independent Contractor as to the Services and is in no respect any agent, servant, or employee of the City. This Contract specifies the Services to be done by the Contractor, but the method to be employed to accomplish the Services shall be the responsibility of the Contractor.

3.2 SUBCONTRACTING

Contractor may subcontract Services to be performed hereunder with the prior approval of the City, which approval shall not be unreasonably withheld. No such approval will be construed as making the City a part of, or to, such subcontract, or subjecting the City to liability of any kind to any subcontractor. No subcontract, under any circumstances, shall relieve the Contractor of its liability and obligation under this Contract; and despite any such subcontracting the City shall deal through the Contractor, and subcontractor will be dealt with as workmen and representatives of the Contractor.

3.3 NOVATION

The Contractor shall not assign or transfer, whether by Assignment or Novation, any of its rights, duties, benefits, obligations, liabilities, or responsibilities under this Contract except to a wholly owned subsidiary of Waste Management of North America, Inc. without the written consent of the City; provided, however, that assignments to banks, trust companies or other financial institutions for the purpose of securing bonds or letters of credit may be made without the consent of the City. Assignment or Novation of this Contract shall not be valid unless the Assignment or Novation expressly provides that the assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered and materials, tools and equipment supplied for the performance of the Services under this Contract in favor of all persons, firms or corporations rendering such labor or services or supplying such materials, tools and equipment.

3.4 INSPECTION OF SERVICES

The Contractor shall furnish the Contract Manager or his authorized representative with every reasonable opportunity for determining whether or not the Services are performed in accordance with the requirements of the Contract. The Contract Manager may appoint qualified persons to inspect the Contractor's operations and equipment, and Contractor shall permit these authorized representatives to make such inspections at a reasonable time and place.

SECTION 4 - CODES AND STANDARDS

4.1 Contractor shall provide transportation in accordance with the applicable regulations of the U.S. Environmental Protection Agency, U.S. Department of Transportation, U.S. Interstate Commerce Commission, and any other federal agency having jurisdiction as well as Regulatory Agencies of States through which shipments must travel.

4.2 The disposal method and sites offered must be approved and permitted for solid waste disposal by the Virginia Department of Waste Management when disposal occurs in Virginia. Any disposal outside of Virginia must meet the applicable standards and regulations in the jurisdiction where disposal will occur.

4.3 All practices, materials, and equipment shall comply with the Federal Occupational Safety and Health Act, as well as any pertinent Federal, State and/or local Safety or Environmental Codes.

SECTION 5 - CITY'S RESPONSIBILITIES

The City shall do and provide for the Contractor, in a timely manner so as not to delay the Contractor in the performance of this Agreement, the following:

5.1 Designate Richard Drazenovich, Director of Public Works, or his designee or successor, to act as the City's contract administrator with respect to the Services to be rendered under this Agreement. Unless provided otherwise elsewhere in this Contract, the Contract Administrator is hereby authorized to act on behalf of the City as to all matters relating to this Contract and/or Services being performed hereunder. The Contract Administrator shall decide any and all questions which may arise as to the quantity, character and quality of Services performed or to be performed pursuant to this Contract.

5.2 Give prompt written notice to Contractor whenever City observes or otherwise becomes aware of any development that affects the scope or timing of Contractor's Services.

SECTION 6 - TIME FOR PERFORMANCE

6.1 IMPLEMENTATION SCHEDULE

Contractor shall take all reasonable steps to comply with the following timetable:

a. Not later than March 27, 1993 - submit proposed transfer station site layout and building design to City for approval (see section 2.2 "b").

b. Not later than April 27, 1993 - begin construction of transfer station.

c. On July 27, 1993 - commence operation of the transfer station.

In the event this Contract is awarded after January 31, 1993, the above schedule shall be adjusted to compensate for the delay.

6.2 CONTRACT TERM

The Agreement for operation of the Transfer Station, transportation, and disposal services shall commence upon execution of this Agreement by both parties and continue until June 30, 2008. The Agreement shall automatically extend for additional periods of five (5) years each at the base price as adjusted cumulatively by CPI unless at least one year prior to the expiration of the then existing term one party gives the other notice of its desire to terminate the Agreement at the end of the term.

SECTION 7 - REMUNERATION

7.1 PAYMENTS TO THE CONTRACTOR

a. The City shall pay the Contractor monthly in arrears for Services performed according to the fee schedule provided in Exhibit "A" attached hereto. The Contractor shall submit the invoices in triplicate on or about the fifteenth day of each calendar month. All such invoices will be paid by the City within fifteen (15) days after receipt unless any items thereon are questioned, in which event that portion of the payment in question will be withheld pending verification of the validity of the claim. The Contractor shall provide complete cooperation during any such verification procedure. Invoices shall contain such information as may be agreed upon by the City and the Contractor.

b. Commencing on July 1, 1994, and on each subsequent July 1, the per ton fee schedule shall be adjusted and revised according to the C.P.I. formula set forth in Exhibit "B" attached hereto and incorporated herein by reference.

c. In addition to the foregoing, Contractor shall be entitled to receive a per ton fee adjustment to cover an increase in the per ton fee equal to the amount of any fee, surcharge, duty, tax, or other charges of any nature imposed by the federal government, any agency thereof, the state wherein the [redacted] Landfill is located (or to be located), the state where the Transfer Station is located, any agency thereof, or by any local governmental agency, which is payable solely by reason of the nature of the operations conducted by the Contractor and any other sales or service taxes of general application to the transportation services provided pursuant to this Agreement or the operation of the [redacted] Landfill. Contractor shall be responsible for documenting the impact of such adjustment. In the event the parties are unable to agree on the appropriate amount of such increase, the matter shall be submitted to non-binding mediation by an independent third party selected by Contractor and the City. Any delay in implementing the adjustment in the per ton fee shall be held in abeyance and granted retroactively to the date of the application of the tax or surcharge. An adverse decision to Contractor in Waste Management of Carolinas, Inc. v. William W. Cobey, Jr., Secretary, North Carolina Department of Environment, Health, and Natural Resources shall not qualify as a reason for an increase pursuant to this paragraph.

After all appeals, if any, have been exhausted

d. In the event a surcharge, duty or tax of a type described in paragraph 7.1(c) herein and levied after execution of this Agreement is subsequently reduced or abolished, the per ton fee shall be reduced accordingly.

e. The Contractor shall also be entitled to an automatic increase in the per ton fee to offset the increased cost of operating the Landfill as a result of increases in costs of operations at the Landfill resulting from changes in federal, state or local environmental or other law or regulation which become effective after the award of this contract, concerning the receipt, disposal or handling of solid waste at the ~~Sanitary~~ Landfill. The revised rate shall be based on the verified cost of the change divided by the lifetime capacity of the Landfill cell as applied to each ton of waste.

f. For purposes of determining City's aggregate tonnages for payment, all Acceptable Waste which is accepted at the Transfer Station and disposed of at the Landfill as well as City Acceptable Waste which is transported by the generator or Contractor to the Landfill shall be included in the determination of waste tonnages generated per month. No waste source generator within the City of Danville shall be charged a higher per ton disposal fee than the City rate. Any Special Waste accepted by and delivered to Landfill by generator or contractor shall count toward City's aggregate tonnages.

g. The City may impose a host fee of up to $1.00 per ton of waste accepted at the Transfer Station from sources outside the City at any time during the term of this Agreement. At the City's election, any such host fee imposed may be increased annually by the Consumer Price Index. The City shall notify Contractor in writing of its election to impose a host fee and Consumer Price Index increases to such fee.

7.2 SUBCONTRACTOR PAYMENTS

a. Within seven (7) days after the receipt of amounts paid to the Contractor by the City for Services performed by any subcontractor under this agreement, the Contractor shall either:

(1) pay any subcontractors for their proportionate share of the total payment received from the City attributable to the Services performed by the subcontractor under this Agreement; or

(2) notify the City and the subcontractor, in writing, of Contractor's intention to withhold all or a part of the subcontractor's payment with the reason for nonpayment.

b. The Contractor shall pay interest to any subcontractor on all amounts owed by the Contractor that remain unpaid after seven (7) days following receipt by the Contractor of payment from the City for Services performed by the subcontractor under this Agreement, except for amounts withheld as allowed in subsection a.(2) above.

c. Unless otherwise provided under the terms of this Agreement, interest shall accrue at the rate of one percent per month.

d. The Contractor shall include in each of its subcontracts a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower-tier subcontractor.

e. The Contractor's obligation to pay to a subcontractor pursuant to this section may not be construed to be an obligation of the City. No contract modification may be made for the purpose of providing reimbursement for such charges.

SECTION 8 - PERFORMANCE

8.1 RIGHT TO REQUIRE PERFORMANCE

The failure of the City at any time to require performance by the Contractor of any of the provisions herein shall in no way affect the right of the City thereafter to enforce same. Nor shall waiver by the City of any breach of any provision hereof be taken or held to be waiver of any succeeding breach of such provision or as a waiver of any provision itself.

8.2 BONDS

a. Contractor shall provide to the City a performance payment bond in the amount of Six Hundred Thousand and No/100 Dollars ($600,000.00) made payable to the City, as security for the faithful performance of the Contract. The surety company or companies shall be acceptable to the City and authorized to transact business in the State of Virginia. In the event the bond or letter of credit is not delivered within thirty (30) days of execution of this Agreement, then this Contract shall be ruled null and void.

b. The bond will provide assurance of faithful performance of discharge of all duties and responsibilities attendant thereto required by law or as provided herein by the Contractor of all aspects, terms and conditions of the Contract.

SECTION 9 - INDEMNIFICATION

9.1 It is understood and agreed that the Contractor takes title to and ownership of the City's Acceptable Waste upon its delivery to the Transfer Station and is solely responsible for its disposal after that time.

9.2 Contractor agrees to indemnify, save harmless, and defend the City from and against any and all liabilities, claims, penalties, fines, administrative sanctions, forfeitures, suits, and the costs and expenses incident thereto (including costs of defense, settlement, and reasonable attorneys' fees), which

it may hereafter incur, become responsible for, or pay out as a result of death or bodily injuries to any person, destruction, or damage to any property, contamination of or adverse effects on the environment, or any violation of governmental laws, regulations, or orders caused solely by a negligent act, negligent omission, or willful misconduct of Contractor's employees, or its subcontractors in the performance of the Agreement.

9.3 City, to the extent permitted by State law, agrees to indemnify, save harmless, and defend Contractor from and against any and all liabilities, claims, penalties, forfeitures, suits, and the costs and expenses incident thereto (including costs of defense, settlement, and reasonable attorneys' fees), which it may hereafter incur, become responsible for, or pay out as a result of death or bodily injuries to any person, destruction, or damage to any property, contamination of or adverse effects on the environment, or any violation of governmental laws, regulations, or orders caused, in whole or in part by the City's breach of any warranty, term, or provision of the Agreement, or any negligent act, negligent omission, or willful misconduct of the City's employees, or subcontractors in the performance of this Agreement.

fines, administrative sanctions,

SECTION 10 - INSURANCE

The Contractor shall not commence the Services under this Contract until it has obtained all the insurance required hereunder and such insurance has been approved by the City; nor shall the Contractor allow any subcontractor to commence Services on his subcontract until all such insurance has been so obtained and approved. Approval of the insurance by the City shall not relieve or decrease the liability of the Contractor hereunder.

10.1 Workers' Compensation including Occupational Disease and Employer's Liability Insurance: The Contractor shall take out and maintain during the life of this Contract Worker's Compensation and Employer's Liability Insurance for all of this employees to be engaged in Services on the project under this Contract in an amount not less than the minimum allowed by the State Corporation Commission, and in case any such Services is sublet, the Contractor shall require the subcontractor similarly to provide Workers' Compensation and Employer's Liability Insurance for all of the latter's employees to be engaged in such Services.

10.2 Comprehensive General Liability Insurance: The Contractor shall maintain during the life of this Contract comprehensive general liability insurance as shall protect its interests and the City of Danville and its officers, agents and employees from claims for damages for personal injury, including death, as well as from claims for property damage, which may arise from operations under this Contract, whether such operation be by Contractor or by any subcontractor, or by anyone directly or indirectly employed by either of them. The amount of such insurance shall be not less than a combination single limit of One Million Dollars ($1,000,000.00) per occurrence for bodily injury and property damage and One Million Dollars ($1,000,000.00) aggregate on completed operations. The comprehensive general liability insurance shall provide the following coverages:

Comprehensive
Premises-Operation
Products/Completed Operations Hazard
Contractual Insurance
Independent Contractor and Subcontractor
Broad Form Property Damage
Personal Injury

10.3 Automobile liability insurance with minimum combined single limits of One Million Dollars ($1,000,000.00) per occurrence. This insurance shall include bodily injury and property damage for the following vehicles:

Owned Vehicles
Non-owned Vehicles
Hired Vehicles

10.4 All policies shall name the City of Danville, its officers, agents, and employees as additional insureds. This coverage shall be reflected on the Certificates of Insurance, which will be provided to the City with any endorsements or riders thereto. Each Certificate of Insurance shall require that notice be given thirty (30) days prior to cancellation or material change in the policies to the Director of Purchasing.

10.5 The Contractor shall furnish one copy each of Certificates of Insurance herein required for each copy of the Agreement which shall specifically set forth evidence of all coverage required by subparagraphs 10.1, 10.2 and 10.3. The form of certificate shall be acceptable to the City. The Contractor shall furnish to the City copies of any endorsements that are subsequently issued amending coverage or limits.

10.6 The Contractor shall either (1) require each of his subcontractors to procure and to maintain during the life of his subcontract subcontractor's insurance of the type and in the same amounts as specified in the preceding schedule; or (2) insure the activities of his subcontractors in his own policy.

SECTION 11 - DEFAULT - TERMINATION

11.1 DEFAULT

If the Contractor fails to begin the Services under this Contract within the time specified, or fails to perform the Services with sufficient workmen and equipment or with sufficient materials to insure the completion of said Services within the specified time, or shall perform the Services in an unsatisfactory manner, or shall neglect or refuse to remove materials or perform anew such Services as shall be rejected as defective or unsuitable, or shall discontinue the prosecution of the Services, or if the Contractor shall become insolvent or be declared bankrupt, or shall commit any act of bankruptcy or insolvency, or shall make an assignment for the benefit of creditors, or from any other cause whatsoever shall not carry on the Services in

an acceptable manner, the City shall give notice in writing to the Contractor and his surety of such failure, delay, neglect, refusal, or default, specifying the same, and if the Contractor, within a period of twenty (20) days after such notice, shall not proceed in accordance therewith, then the City Manager acting for and on behalf of the City shall, upon receipt of a written certificate from the Contract Officer of the fact of such failure, delay, neglect, refusal, or default and of the failure of the Contractor to comply with such notice, have full power and authority to declare the forfeiture of this Contract, and to forfeit the rights of the Contractor in this Contract, and the City Manager at his option may call upon the surety to complete the Services in accordance with the terms of this Contract or may enter into a new contract for the completion of the Services. All costs and charges incurred by the City, together with the cost of completing the Services, shall be deducted from any monies due or which may become due on this Contract; provided, however, if the Transfer Station fails to receive Acceptable Waste for a period of seven (7) consecutive days after operation of the Transfer Station commences and such failure is due to Contractor's fault, the City may, without further delay, terminate this Contract, declare the forfeiture thereof and proceed with the remedies set forth herein.

In case the expense so incurred by the City shall be less than the sum which would have been payable under this Contract if it had been completed by the Contractor and had not been forfeited by the City, then the Contractor shall be entitled to receive the difference, subject to any claims or liens thereon which may have been filed with the City or any prior assignment filed with it. In case such expense shall exceed the sum which would have been payable under this Contract, the Contractor and the surety shall be liable and shall pay to the City the amount of such excess.

11.2 TERMINATION FOR CONVENIENCE

Notwithstanding any other provision of this Contract to the contrary, the City may at its option, with six (6) months prior notice, terminate the Agreement without breach. Should the City elect this option, the Contractor may elect to sell the Transfer Station and rolling stock used in the performance of this Agreement at Contractor's depreciated value. In such event the City's purchase of the Transfer Station shall be deemed allowable and allocable in accordance with the Contract terms and shall not be deemed to be a modification of the Contract.

11.3 NON-APPROPRIATION

In the event sufficient funds are not appropriated by the Council of the City of Danville, Virginia after the first fiscal period of this Agreement; or, if appropriated, are not allocated or available; or, in the event the amounts due hereunder are to be paid with funds given to the City by another private or government entity, and such funds are not sufficient for renewal of this Agreement after the initial term; the City may, without breach, upon prior written notice to Contractor, terminate the Contract in whole or in part; provided, however, this provision shall not apply if City appropriates funds to engage another contractor to provide the same or similar services, appropriates funds to provide the same or similar services itself or contracts with another entity to provide the same or similar services.

the State of North Carolina to the extent applicable, ordinances of interested localities in North Carolina, to the extent applicable

SECTION 12 - COMPLIANCE WITH LAWS, RULES AND REGULATIONS

12.1 The Contractor, its officers, agents, employees and subcontractors, in the performance of this Agreement shall comply with all applicable statutes and laws of the United States and the Commonwealth of Virginia, the Charter and ordinances of the City of Danville, and the applicable rules and regulations of the agencies of each.

12.2 The Contractor shall, at his own expense, secure and maintain a City of Danville business license for the life of the Agreement.

SECTION 13 - CONFORMANCE OF AGREEMENT WITH THE LAW

13.1 It is the intent and understanding of the parties to this Agreement that each and every provision of law required to be inserted in this Agreement shall be and is inserted herein. Furthermore, it is hereby stipulated that every such provision is deemed to be inserted herein, and if through mistakes or otherwise, any such provision is not inserted in correct form, then this Agreement shall upon application of either party, be amended by such insertion so as to comply strictly with the law and without prejudice to the rights of either party.

If this Agreement contains any unlawful provisions, not an essential part of the Agreement and which appears not to have been a controlling or material inducement to the making hereof, the same shall be deemed of no effect, and shall upon the application of either party be stricken from the Agreement without affecting the binding force of the Agreement as it shall remain after omitting such provision.

SECTION 14 - ENFORCEMENT

14.1 This Agreement and the performance hereof shall be governed by and enforced under the laws of the Commonwealth of Virginia; provided, however, it is expressly understood that the Landfill must operate in accordance with the laws of the State of North Carolina, and that aspect of Contractor's performance is therefore governed by the laws of North Carolina.

SECTION 15 - NOTICES

15.1 All written notices required to be given by the Contractor to the City shall be addressed and mailed or delivered to Stephen J. Hudson, Director of Purchasing, City of Danville, Post Office Box 3300, Danville, Virginia 24543.

15.2 All such notices required to be given by the City to the Contractor shall be addressed and mailed or delivered to Robert Joiner, General Manager, Waste Management of Carolinas, Inc., 3303 North Glenn Avenue, Winston-Salem, North Carolina 27105; with a copy to: Region General Counsel, Waste Management, Inc., 2600 Delk Road, Marietta, Georgia 30067.

SECTION 16 - SUCCESSORS; ASSIGNMENT

16.1 The City and the Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives, to the other with respect to all covenants and agreements herein contained and made. Neither the City nor the Contractor shall, however, assign or transfer any of its interest in or rights or obligations under this Agreement without the prior written consent of the other; provided, however, Contractor may assign its interest in the Agreement to another wholly owned subsidiary of Waste Management of North America, Inc.

SECTION 17 - EXHIBITS; ENTIRE AGREEMENT; AMENDMENTS

17.1 The following exhibits are attached hereto and are by reference included and incorporated as a part hereof as if herein fully set forth:

Exhibit A:	Fee Schedule
Exhibit B:	CPI Formula
Exhibit C:	Performance and Payment Bonds
Exhibit D:	RFP 92/93-034, "Solid Waste Disposal"
Exhibit E:	Waste Management "Proposal for Solid Waste Disposal" dated October 16, 1992
Exhibit F:	Certificate of Insurance

It is understood and agreed that in the event of any inconsistency or conflict between the terms of such exhibits and those set forth in the express provisions of this Agreement regarding the obligations and duties of either party, then the express provisions of this Agreement shall be controlling and prevail.

17.2 This Agreement, together with the said exhibits attached hereto, represents the entire agreement between the City and the Contractor and supersedes all prior negotiations, representations, agreements, and understandings, written or oral, made by either or both with respect to this Agreement and project.

17.3 The terms, conditions, and provisions of this Agreement may be modified, amended, supplemented, deleted, or cancelled only with the consent of and by prior written instrument duly signed by both the City and the Contractor.

17.4 This is an Agreement for the performance of specific services described herein. The operation of the Transfer Station by Contractor shall not be deemed to be a public function and the City shall not acquire an interest in the real or personal property or improvements or fixtures at the Transfer Station unless it purchases the Transfer Station pursuant to Paragraph 11.2 herein. Under no circumstances shall the operation of the Landfill by Contractor be deemed a public function, nor has City acquired an interest, ownership or otherwise, in the real or personal property or improvements or fixtures at the Landfill by virtue of this Agreement.

IN WITNESS WHEREOF, the City and Contractor have each caused this Agreement to be signed and sealed in its behalf, by its duly authorized officers or principals in four (4) original counterparts, each of each counterparts shall be deemed the original Agreement without the need to account for the other and all of which counterparts together shall constitute but one and the same Agreement.

THE CITY OF DANVILLE, VIRGINIA

By: _____
City Manager

ATTEST:

_____
City Clerk

WASTE MANAGEMENT OF CAROLINAS, INC.

By: _____
Harry Habets

Its: Vice President

_____

COMMONWEALTH OF VIRGINIA

CITY OF DANVILLE

The foregoing instrument was acknowledged before me this 3 day of February, 199 3, by A. Ray Griffin, Jr., City Manager of the City of Danville, Virginia, a municipal corporation, on behalf of the corporation.

Marguerite L. McCormick
Notary Public

My commission expires: 11-30-93

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STATE OF GEORGIA

COBB COUNTY

The foregoing instrument was acknowledged before me this 3rd day of February, 199 3, by Harry Habets, Vice President, Waste Management of Carolinas, Inc., on behalf of the corporation.

Mary Helen Heck
Notary Public

My commission expires: November 22, 1995

Danville.Agm

EXHIBIT A

RATE SCHEDULE

The City shall compensate Contractor for the Services pursuant to the following rate schedule:

*Annual Tonnages	Transfer & Haul Rate	Disposal Rate	Total Rate
Up to and including 67,500 tons per year	$14.00	$19.00	$33.00
67,500 - 108,000 tons per year	$12.00	$19.00	$31.00
Over 108,000 tons per year	$11.00	$19.00	$30.00

* Calculated pursuant to paragraph 7.1(f).

The Annual Tonnages referenced above shall be calculated every twelve months of the contract term. For purposes of establishing City's rate during the first year of the Contract, the parties shall assume that City's tonnages shall be between 67,500 and 108,000 tons per year. Rates for subsequent years shall be based on the prior year's actual tonnages. In the event City fails to achieve the tonnages necessary to qualify for the rate charged during any given year including the initial year, City shall pay Contractor in a lump sum payment, the difference between the appropriate rate and the rate actually charged multiplied by the City's aggregate tonnages during such year. In the event City's tonnages during any given year qualify the City for a reduced rate during such year, Contractor shall rebate to City in a lump sum payment the difference between the rate actually charged and the appropriate rate as multiplied by the City's aggregate tonnages during such year.

In any event, the City shall guarantee a minimum annual tonnage of 20,000 tons to Contractor from any source during the term of this Contract.

EXHIBIT B

CPI ADJUSTMENTS

Contractor's rates as specified in this Agreement shall be adjusted on July 1, 1994, and every succeeding July 1 during the term hereof to reflect changes in the Consumer Price Index (CPI) to be effective for the following 12 months of the Contract. The method of adjustment shall be 100% of the change in CPI with a 6.5% cap on such increase or decrease. CPI shall be defined as the "Consumer Price Index for all Urban Consumers, U.C. City Average, All Items (1982-84 = 100) issued by the United States Department of Labor, Bureau of Labor Statistics, or the successor of that index. The CPI increase shall be based upon the CPI rate published in December of the preceding year of each increase.

In the event Contractor has increased its rates pursuant to Section 7.1(c) to cover a component of the CPI such as fuel, Contractor shall delete such component from its CPI calculation for the period such surcharge is in place.