

**THE JOINT SOLID WASTE MANAGEMENT PLAN  
FOR HOUSTON COUNTY AND CITIES OF  
CENTERVILLE, PERRY, AND WARNER ROBINS**

**Prepared by**

**The Middle Georgia Regional Development Center**

**for**

**Houston County and Cities of Centerville, Perry, and Warner Robins**

**February 2007**

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# INTRODUCTION

In 1990, the Georgia General Assembly passed the Georgia Comprehensive Solid Waste Management Act. The intent of the General Assembly in developing and adopting this legislation was to establish a solid waste management planning process necessary to prevent environmental degradation, to manage resources and to effectively reduce and manage solid waste for the State and its residents.

The Act specifies that in order to receive a permit, grant or loan for a solid waste management facility, each city and county shall develop or be included in a comprehensive solid waste management plan. The Act requires that any request for a solid waste handling facility permit or funding for publicly owned and operated solid waste management facilities or equipment must be consistent with the solid waste management plans of all affected local governments. The most recent Solid Waste Management Plan for Houston County and the Cities of Centerville, Perry, and Warner Robins was adopted in February 1993.

To guide the preparation of local, multi-jurisdictional or regional plans, the Act mandated the preparation of Minimum Planning Standards and Procedures for Solid Waste Management. These Minimum Standards are adopted by the Georgia Department of Community Affairs Board; the most recent addition became effective on January 1, 2004. Based on these Minimum Standards, the Joint Solid Waste Management Plan for Houston County and the Cities of Centerville, Perry, and Warner Robins has the following components.

1. An **Overview of the Area** that includes a discussion of location, topography, population, and commercial and industrial activity in the area;
2. A **Waste Disposal Stream Analysis** that assesses who is generating the waste in the county and what they generate. This section of the report also includes the projected waste stream for the ten-year planning period.
3. Five Core Planning Elements that relate back to the Waste Disposal Stream Analysis; **Waste Reduction, Collection, Disposal, Land Limitation, and Public Education and Involvement**. Each of the elements must include an inventory and assessment and a list of needs and goals. For the Collection and Disposal Elements, a contingency strategy in the event of disruption to the primary option must be identified. The contingency strategy must include an alternative collection/disposal option on an interim basis and the estimated time to bring the contingency option on line. The Land Limitation Element must include a procedure the local governments will follow to determine if a proposed facility, public or private, is consistent with the plan.
4. A **Disaster Debris Management Plan** that specifies what procedures the local governments will follow for the collection and disposal of significant volumes of waste and/or special wastes resulting from any type of disaster, encouraging waste reduction (recycling) of such waste and public notification of the programs established to handle waste generated by a disaster.

5. After all the elements have been inventoried and assessed and the needs and goals have been identified, the Plan must identify an **Implementation Strategy** that includes specific actions that will be taken over the ten-year planning period to address the needs and goals expressed in the planning elements. The Strategy will consist of a table that lists the names of all jurisdictions included in the Plan, the activities, the year or years the activities are covering, the party or parties responsible for managing the activities, the estimated cost of the activities, and the funding source. The first five years of the Implementation Strategy will serve as the first Short-Term Work Program, while the second five-year period will be updated in accordance with the planning schedule established and revised from time to time by the Georgia Department of Community Affairs.

# OVERVIEW OF AREA

## Location in the State

Houston County was created in 1821. Houston County totals 379.8 square miles and is located in the approximate geographic center of the State of Georgia. It is also situated in the southern part of the Middle Georgia region. There are three incorporated areas in Houston County; City of Centerville, City of Perry, and City of Warner Robins. The Cities of Centerville and Warner Robins are located in the northern quadrant of the county, while the City of Perry is located in the southern portion of the county. Map 1 provides a geographic context of Houston County and the Cities of Centerville, Perry, and Warner Robins as they relate to the State, the Region, and within Houston County itself and is presented in Appendix A of this report.

Houston County is approximately 95 miles south of Atlanta and is easily accessible from all directions as a result of being served by Interstate 75 and a number of federal and state highways. It is home of Robins Air Force Base, Georgia's largest single employer, and one of the best Air Museums in the country, the Museum of Aviation. Several of the county's special events include the World Class Air Show and International City Festival in Warner Robins, the Georgia National Fair, the Mossy Creek Barnyard Arts and Crafts Festival, and the Dogwood Festival in Perry.

## Topography

The Coastal Plain is the major topographic feature found in Houston County. The Coastal Plain covers the entire county and is comprised of a series of rolling divides between the creeks that flow in an east to west course to the Ocmulgee River. The soil is composed of fine to coarse sand and in places combined with white kaolin.

## Current and Projected Population

According to the 2000 Census, Houston County had a population of 110,765, an increase of 24.2 percent of the 1990 figure. The City of Centerville's 2000 population was 4,278, or a 31.6 percent increase from 1990; the City of Perry showed a slight increase of 1.6 percent, or 150 persons from 1990-2000; the City of Warner Robins gained 11.6 percent during that time period; while the total population in unincorporated Houston County increased dramatically from 32,779 to 48,081, or 46.7 percent. Over the last 20 years, Houston County has seen a significant in-migration similar to other counties in the Middle Georgia region, such as Jones, Monroe, Peach, and Putnam,

By viewing the projected population totals highlighted in Table 1a, Houston County, as a whole, will show substantial growth during the planning period and beyond (44.8%). Unincorporated Houston County is projected to continue to gain in total population, as presented in Table 1b. The greatest increases in total population, however, will be in the incorporated areas of Centerville, Perry, and Warner Robins as shown in Tables 1c-1e. Aggressive annexation policies within their water/sewer service areas and infill development will cause total population in these communities to climb dramatically by the end of the planning period.

**TABLE 1a**  
**Total Population, 2000-2020**  
**Houston County -Total**

YEAR	TOTAL POPULATION
2000	110,765
2005	126,837
2010	131,818
2015	141,343
2020	150,869

Source: 2000 U.S. Census; MGRDC

**TABLE 1b**  
**Total Population, 2000-2020**  
**Unincorporated Houston County**

YEAR	TOTAL POPULATION
2000	48,081
2005	51,807
2010	53,915
2015	55,658
2020	57,532

Source: 2000 U.S. Census; MGRDC

**TABLE 1c**  
**Total Population, 2000-2020**  
**City of Centerville**

YEAR	TOTAL POPULATION
2000	4,278
2005	5,915
2010	7,256
2015	8,477
2020	9,655

Source: 2000 U.S. Census; MGRDC

**TABLE 1d**  
**Total Population, 2000-2020**  
**City of Perry**

YEAR	TOTAL POPULATION
2000	9,602
2005	10,931
2010	11,849
2015	12,656
2020	13,466

Source: 2000 U.S. Census; MGRDC

**TABLE 1e**  
**Total Population, 2000-2020**  
**City of Warner Robins**

YEAR	TOTAL POPULATION
2000	48,804
2005	58,184
2010	58,798
2015	64,552
2020	70,216

Source: 2000 U.S. Census; MGRDC

Another key population variable that impacts solid waste generation is age distribution. In 2000, 28.2 percent of the county residents were age 17 or younger, while 9.3 percent were age 65 or older. During the planning period, the percentage of population age 17 or younger will decline slightly, while the percentage of the population age 65 or older and working age adults (age 35-54) will significantly increase. Working age adults will continue to be attracted to employment opportunities at Robins Air Force Base and related economic activities. Many retirees are expected to make Houston County their home in the future as seen in recent retirement villages being developed in the County. This is a significant trend regarding solid waste since the reduced amount of waste usually generated by senior adults will likely be offset by the amount generated by the younger generations. It is a trend worthy of further research in the future.

Houston County is not considered a seasonal destination where people decide to establish a temporary residence for a number of months and then return to their permanent home. There are several motels and other establishments that cater to individuals who are in town for an extended stay due to business or temporary project assignments. The 2000 Census identified a total of 252 seasonal housing units, or less than 0.6 percent of the total units in the County.

## Total Households and Household Size

As with the trend in total population, the total number of households will show very extensive growth from 2000-2020 as presented in Table 2. This is due in large part to the continued in-

migration trend that has taken place over the last 20 years. The unincorporated area of the County and the three communities are expected to see significant gains in the number of households.

**TABLE 2**  
**Total Households, 2000-2020**

YEAR	TOTAL HOUSEHOLDS
2000	40,911
2005	47,504
2010	49,556
2015	53,337
2020	56,505

Source: 2000 US Census; MGRDC

As shown in Table 3, the average household size is projected to decline for the first part of the planning period, and then level off by 2015. This trend can be contributed to the growing population in the age groups which no longer have children living with them or still have children in the house, but have reached the desired family size. With the small household size comes a reduction in solid waste generation in the residential sector.

**TABLE 3**  
**Average Household Size, 2000-2020**

YEAR	AVG. HOUSEHOLD SIZE
2000	2.65
2005	2.61
2010	2.58
2015	2.57
2020	2.57

Source: 2000 US Census; Woods and Poole Economics, Inc.,

## Business and Industrial Activity

The 2000 Census reveals that of the 48,653 employed civilians, 19.0 percent, or 9,223, were in the Public Administration industry. This can largely be attributed to the large number of Houston County civilians employed at Robins Air Force Base along with those employed with Houston County and the incorporated communities. The educational, health, and social services industry employs the second largest number of employees; 8,628, or 17.7 percent of the total. Houston County civilians employed at the Board of Education and at the Medical Center Complex and related medical offices account for a large percentage of the total. A distant third is the manufacturing industry that employed 11.3 percent, or 5,503 persons. Table 4 presents the year 2000 percentage of employment for all industry categories.

**TABLE 4**  
**Percent of Employment by Industry, 2000**

CATEGORY	% OF EMPLOYMENT
Total Employed Civilian Employment	100%
Agriculture, Forestry, Fishing, Hunting, & Mining	0.6%
Construction	5.9%
Manufacturing	11.3%
Wholesale Trade	2.4%
Retail Trade	12.1%
Transportation, Warehousing, & Utilities	4.2%
Information	1.3%
Finance, Insurance, & Real Estate	5.4%
Professional, Scientific, Management, Administrative, and Waste Management Services	7.2%
Educational, Health, and Social Services	17.7%
Arts, Entertainment, Recreation, Accommodation, and Food Services	8.1%
Other Services	4.9%
Public Administration	19.0.0%

**Source: 2000 US Census**

Looking into the future:

Although significant emphasis within Houston County is focused around Robins Air Force Base and its sustainability, Houston County is also seeking to diversify its economy. It can be argued that Houston County's most pressing economic development need is diversification of the local economy. Houston County and the entire Middle Georgia region must plan for the worst-case scenario and seek to lessen the region's dependence on the Base. The region can take advantage of the highly skilled workforce on the Base by attracting similar private sector aerospace companies. However, efforts should still be made to attract un-related industries to the area to continue a much-needed diversification of the economy.

In September 2004, the Office of Economic Adjustment (OEA) awarded a grant to the Middle Georgia Regional Development Center (MGRDC) to assist with developing a regional economic diversification plan designed to lessen the region's overall economic dependency on Defense expenditures. The need for such a plan was necessitated by the net impact Robins Air Force Base has on the region's economy and the impending 2005 Base Realignment and Closure (BRAC) recommendations. The Base had an annual net payroll of \$1.218 billion, annual expenditures of \$246 million, and a retiree payroll of \$472 million in fiscal 2004. In addition, the value of indirect jobs created because of the Base was estimated to be over \$870 million.

In developing the regional economic diversification plan, industry growth and decline patterns for Houston County, as well as other regional counties were studied and analyzed at length. It was determined that a greater demand for services is typically generated by a strong, high-paying government sector. Higher paying government jobs help to “pump” money into the county’s economy thereby positively affecting other industry sectors (i.e., demand for services and retail sales). Analysis performed as a result of the diversification plan confirmed that continued service industry growth is anticipated for Houston County. Specifically, the health care industry is projected to burgeon in Houston County, consistent with the national growth trend for this industry.

The final result of the diversification planning process was creation of the *Middle Georgia Economic Diversification Strategy and Action Plan*. The plan contains five industry-specific activities or avenues for possible economic diversification. The top viable opportunity sectors included:

- Healthcare;
- Tourism;
- Trucking, Warehousing, and Distribution;
- Retirement Industry Development; and
- Recruitment of State Agencies

Each industry identified in the plan contained recommended implementation actions, responsible agencies, coordinating agencies, potential sources for funding assistance, and a timeline with measurable milestones and targets. Houston County stakeholders have initiated action regarding some of these economic growth and diversification opportunities, as well as pursuing other development opportunities. (Joint Comprehensive Plan for Houston County and the Cities of Centerville, Perry, and Warner Robins-Community Assessment, pp. 95-96.)

# WASTE DISPOSAL STREAM ANALYSIS

The purpose of the waste disposal stream analysis is to inventory waste stream generators (e.g. residential, commercial, industrial, C & D, etc.), identify the types of waste that is contributed to the waste disposal stream (e.g. paper, plastic, metal, etc.), and give an estimate for these various components as a percentage of the overall waste stream. Data from this analysis can be used in several ways, including determining the quantity of material available for recovery, measuring the effectiveness of existing recycling programs, and right-sizing solid waste and recycling facilities. The following discussion and analysis was drawn from data provided in the *Georgia Statewide Waste Characterization Study (Final Report)* for the State of Georgia and the Middle Georgia Regional Development Center (RDC) service area. To develop composition estimates for the Middle Georgia RDC service area, field sampling was performed at the Houston County Landfill in Kathleen. This particular landfill was chosen due to the extended wastesheds from which waste is received. A total of 37 samples were taken at this facility during September 13-15, 2004. The percentage of waste composition by generator and type determined for the Middle Georgia service area from this study will be assumed to apply for Houston County and the Cities of Centerville, Perry, and Warner Robins.

## Current Waste Stream Composition

### *Total Landfilled MSW Composition*

Table 5 outlines the landfilled MSW composition for the Middle Georgia Region/Houston County and the State of Georgia. The two largest groups of landfilled waste for Houston County and the State of Georgia are paper and organics. The biggest differences between Houston County and the State of Georgia in terms of waste landfilled are in the areas of paper, glass, and C&D. In Houston County, the largest paper materials landfilled were corrugated cardboard (13.8 percent of total) and other (non-recyclable - 8.3 percent of total). These paper materials were also the largest statewide; 11.0 and 10.5 of the total, respectively. For the organics group, food waste was the largest material landfilled both for Houston County (11.3% of total) and statewide (12.0% of the total.). Other prevalent materials landfilled for Houston County were film plastic (7.8%), miscellaneous rigid plastic (5.4%), newspaper (5.3%), yard wastes (5.0%), miscellaneous electronics (4.3%), miscellaneous C&D (3.4%), and textiles (3.4%).

**TABLE 5**  
**Comparative Table of Landfilled MSW Composition**  
**(Middle Georgia Region/Houston County and the State of Georgia)**

Group	Middle Georgia/ Houston County	State of Georgia	Difference from State Average
<i>Paper</i>	35.50%	38.70%	-3.20%
<i>Plastic</i>	16.40%	15.80%	0.60%
<i>Glass</i>	1.70%	3.70%	-2.00%
<i>Metal</i>	5.30%	5.40%	-0.10%
<i>Organics</i>	27.20%	27.10%	0.10%
<i>C &amp; D</i>	8.00%	6.00%	2.00%
<i>Inorganics</i>	5.80%	3.30%	-2.50%
<b>Total %</b>	<b>100.00%</b>	<b>100.00%</b>	<b>N/A</b>

Source: Appendix J and Section 4, *Georgia Statewide Waste Characterization Study (Final Report)*, R.W. Beck

### *Landfilled MSW Composition by Generating Sector*

As presented in Table 6.1, the paper group had the highest percentage landfilled composition for both the residential and commercial groups in Houston County, though the residential sector's percentage was considerably higher. The second highest group was organics, and likewise, the residential group's percentage was much higher than that of the commercial sector. The commercial group had significantly higher percentages of metals, C&D and inorganics, which would appear reasonable considering the type uses that are in the commercial group.

Looking at the specific materials identified under the paper and organics groups, corrugated cardboard (paper) and food wastes and yard wastes (organics) had the highest percentages for both groups. Under the Plastics group, which had the third highest percentage for the residential and commercial sectors, film plastic and other rigid plastic dominated the other landfilled materials. Moving to only the commercial sector: (1) C&D; carpet and other C&D accounted for most of that category; and (2) Inorganics; other electronics dominated this group.

Comparing Houston County with the State of Georgia (see Table 6.2) by generating sector, the most significant differences are:

- Houston County has a higher percentage of paper landfilled than that of the entire state in the residential sector. Examining this category more closely reveals that the percentage of corrugated cardboard in Houston County is double (12.0% vs. 6.0%) that of the State of Georgia, and that is where the difference in the paper group lies.
- Houston County has a lower percentage of paper landfilled than that of the State of Georgia in the commercial sector. This difference can be attributed to the considerably

lower percentage of other (non-recyclable) paper in Houston County as compared with the entire state.

- Houston County’s percentage of C&D in the commercial sector is almost twice as large as that in State of Georgia. The difference lies in the percentage of carpet and other C&D materials.
- Houston County’s percentage of inorganics in the commercial sector is twice as large as for the State of Georgia. The reason for this difference can be found in the percentage of other electronics (6.7% vs. 2.0%).

**TABLE 6.1**  
**Comparative Table of Landfilled MSW Composition by Generating Sector**  
**(Middle Georgia Region/Houston County)**

<b>Group</b>	<b>Middle Georgia/ Houston County Residential</b>	<b>Middle Georgia/ Houston County Commercial</b>
<i>Paper</i>	41.10%	30.20%
<i>Plastic</i>	15.20%	17.60%
<i>Glass</i>	2.70%	0.90%
<i>Metal</i>	3.80%	6.80%
<i>Organics</i>	29.30%	25.20%
<i>C &amp; D</i>	5.20%	10.60%
<i>Inorganics</i>	2.70%	8.70%
<b>Total %</b>	<b>100.00%</b>	<b>100.00%</b>

Source: Appendix J and Section 4, *Georgia Statewide Waste Characterization Study (Final Report)*, R.W. Beck

### *Landfilled MSW Composition for Construction and Demolition Waste*

Table 7 presents a comparison between Houston County and the State of Georgia by generating sector for construction and demolition waste. The residential construction and demolition segment was slightly higher in Houston County than that of the State. This difference is explained by a greater percentage of wood, inerts, and other C&D.

As described above, the Houston County commercial sector had almost twice the percentage of construction and demolition waste landfilled than for the State of Georgia, with the difference being in carpet and other C&D materials.

**TABLE 6.2**  
**Comparative Table of Landfilled MSW Composition by Generating Sector**  
**(State of Georgia)**

<b>Group</b>	<b>State of Georgia Residential</b>	<b>State of Georgia Commercial</b>
<i>Paper</i>	37.10%	39.30%
<i>Plastic</i>	16.60%	15.60%
<i>Glass</i>	4.60%	3.20%
<i>Metal</i>	5.10%	5.50%
<i>Organics</i>	29.80%	26.80%
<i>C &amp; D</i>	3.90%	5.80%
<i>Inorganics</i>	2.80%	3.90%
<b>Total %</b>	<b>100.00%</b>	<b>100.00%</b>

Source: Appendix J and Section 4, *Georgia Statewide Waste Characterization Study (Final Report)*, R.W. Beck

**TABLE 7**  
**Comparative Table of Landfilled MSW Composition by Generating Sector for**  
**Construction and Demolition Waste**  
**(Houston County and the State of Georgia)**

<b>Sub-group</b>	<b>Middle Georgia/Houston County Residential</b>	<b>Middle Georgia/Houston Co. Commercial</b>	<b>State of Georgia Residential</b>	<b>State of Georgia Commercial</b>	<b>Residential Difference (from the State of GA)</b>	<b>Commercial Difference (from the State of GA)</b>
<i>Drywall</i>	0.10%	0.00%	0.30%	0.30%	-0.20%	-0.30%
<i>Wood</i>	2.20%	0.90%	1.30%	2.30%	0.90%	-1.40%
<i>Inerts</i>	0.70%	1.00%	0.20%	0.60%	0.50%	0.40%
<i>Carpet</i>	0.00%	4.20%	1.10%	1.50%	-1.10%	2.70%
<i>Other C &amp; D</i>	2.20%	4.50%	1.00%	1.10%	1.20%	3.40%
<b>% of C &amp; D within all generating sectors</b>	<b>5.20%</b>	<b>10.60%</b>	<b>3.90%</b>	<b>5.80%</b>	<b>+1.30%</b>	<b>+4.80%</b>

Source: Appendix J and Section 4, *Georgia Statewide Waste Characterization Study (Final Report)*, R.W. Beck

## *Commonly Recycled Materials Disposed*

The *Georgia Waste Characterization Study* mentioned a statistic that cannot be overlooked in this Plan. Over 24 percent of all materials disposed in this area are made from commonly recycled paper. Newspaper and corrugated cardboard were found to be disposed in very significant quantities in the community, with recyclable metals, plastics, and glass found at relatively lower disposal rates.

## *Future Waste Stream Generation*

Based on information provided by Houston County and the City of Centerville's solid waste hauler, the total annual tons of MSW for Houston County was calculated (109,048 tons), then that figure was used to derive the disposal rate per person, which is 4.71 pounds. During the planning period, Houston County and the Cities of Centerville, Perry and Warner Robins desire to maintain this disposal rate.

To accurately anticipate waste amounts for the planning period, consistent with population trends and projections, the Middle Georgia Regional Development Center developed a methodology to determine the Houston County annual anticipated solid waste disposal amounts to assist the community in its solid waste management planning. Using the population projections in Table 1a, an annual population change was derived. This was combined with the Houston County per capita disposal rate to create Table 8 that presents projected MSW disposal in Houston County for the planning period.

**TABLE 8**  
**Anticipated Waste Amounts for Houston County Using Current Houston County**  
**Capita MSW Disposal Rate (2005-2020)**

Year	Houston County Population (Estimate)	Houston County Per Capita MSW Disposal Rate (Pounds per Person per Day)	Houston County MSW Disposal (Pounds per Day)	Houston County MSW Disposal (Pounds per Year)
2005	126,837	4.71	597,402	218,051,730
2006	127,833	4.71	602,093	219,764,102
2007	128,829	4.71	606,785	221,476,375
2008	129,825	4.71	611,476	223,188,649
2009	130,821	4.71	616,167	224,900,922
2010	131,818	4.71	620,863	226,614,995
2011	133,723	4.71	629,835	229,889,895
2012	135,628	4.71	638,808	233,164,876
2013	137,533	4.71	647,780	236,439,857
2014	139,438	4.71	656,753	239,714,838
2015	141,343	4.71	665,726	242,989,818
2016	143,188	4.71	674,415	246,161,650
2017	145,033	4.71	683,105	249,333,482
2018	146,878	4.71	691,795	252,505,314
2019	148,723	4.71	700,485	255,677,145
2020	150,869	4.71	710,593	259,366,441

Source: Middle Georgia RDC; Houston County; Centerville Sanitation

# WASTE REDUCTION ELEMENT

The Waste Reduction Element includes an inventory and assessment of four areas of waste reduction; source reduction, recycling, yard trimming mulching/composting, and special management items. Based on the assessment of the adequacy of waste reduction programs in Houston County and a review of the targets identified in the Waste Stream Analysis, a list of needs and goals are presented.

## Inventory and Assessment

### *Source Reduction*

Source reduction is just that, reducing the amount of waste at the source before it enters the waste stream. This can take on many different forms, such as reusing products for several different purposes (a plastic coffee container for a planter, plastic bags from grocery store as a lunch bag, etc.), industrial process changes, or waste exchanges. It also can involve conducting waste audits for the residential, commercial, and industrial sectors and even providing financial incentives in these sectors to encourage greater participation in this effort.

It is very difficult to catalog the number of residents who have an active source reduction program in their homes, though many probably do some type of source reduction without realizing it. Source reduction participation in the workplace (commercial and industrial sectors) has also been difficult to determine.

Each year, the City of Warner Robins hosts a massive action to dispose of dated office equipment, used furniture, and aging and/or damaged vehicles.

Keep Warner Robins Beautiful supported the Nike Reuse-A-Shoe program in the spring of 2006. Shoes were collected in two locations and transported to Atlanta by local volunteers.

Source reduction technical options utilized at Robins Air Force Base include product reuse, reduced material volume, reduced toxicity of products, increased product lifetime, and decreased consumption. Through the implementation of source reduction activities at RAFB, landfill capacity and natural resources are conserved; less energy is used during product manufacture; and air, water, and land pollution are reduced.

The source reduction programs described above are only the “tip of the iceberg.” There is much more that needs to be done and should be done to expand this waste reduction opportunity in the community:

- The latest communication technology should be used to reach as many citizens in Houston County as possible and educate them on thinking twice about throwing out a

container or other items and looking at their reuse potential and on using fewer disposable products.

- Businesses, industries, and government offices need to participate by conducting waste audits and looking at ways they reuse materials they would normally discard, or changing certain processes within their operations to make it feasible to re-use.
- Food waste is one of the largest landfilled items in this area. KWRB, along with other organizations, can work with restaurants and other establishments where food is served to find viable options to reducing food wastes before it enters the waste stream.

The more that can be taken out at the source will mean less to collect and dispose, thus a cost savings to all concerned.

## *Recycling*

Southland Waste Systems of Georgia (SWS) located at 108 Highway 247 Spur in Kathleen, as part of their contract with Houston County, collects household recyclables in the unincorporated area. The recyclables collected are newspapers, plastics, aluminum cans, and tin cans. The recyclables are transported by SWS to Macon Iron and Paper in Macon. Houston County also recycles tires from their residents at their landfill.

The City of Centerville operates a recycling center where residents and businesses can deposit recyclable items. The recyclable materials accepted at the recycling center are: glass, newspaper, magazines, office paper, print cartridges, cell phones, aluminum, cardboard, plastics, metal cans, motor oil, antifreeze, and eyeglasses. At the center, there are 14 total containers, including roll-offs, compactors, tanks, carts, and trailers. The recyclables are sold and transported to various markets where the City can obtain the best price.

The City of Perry's recycling center, identified on Map 2, accepts paper, glass, aluminum and cardboard. The Center contains a trailer unit with four receiving bins, one for each type of recyclable. The materials are then sorted, and the Happy Hour Center collects and transports the materials to their location in Warner Robins.

The City of Warner Robins does not, at this time, have a comprehensive recycling collection program. There are, however, numerous private recycling and buy-back centers in Warner Robins that accept items such as aluminum scrap/beverage cans, metals, paper, telephone books, corrugated board, scrap iron, and glass. Keep Warner Robins Beautiful maintains a current data base for distribution as needed.

Annually, Keep Warner Robins Beautiful secures local sponsorship for Chunk-A-Junk Car, a program offering removal of junk cars at no charge to citizens of Houston County. From 35-200 vehicles are collected during the program. Pending sponsorship, Keep Warner Robins Beautiful plans to expand the program by lengthening the time frame.

The City of Warner Robins participates with the Houston County Association for Exceptional Children (HCAEC) in their recycling program for glass, aluminum, cardboard, paper, tennis shoes, etc.

Some of the local schools have bins for certain recyclables (glass, aluminum, paper, and cardboard) and encourage their students, faculty, and staff to participate in the program. These recyclables are collected by the Happy Hour Center.

Recycling efforts at Robins AFB help conserve energy and natural resources, provide raw materials for key domestic industries, reduce air and water pollution, cut greenhouse gas emissions, promote the development of cleaner technologies, and expand job markets within the recycling industry. The Robins recycling program has saved over 6,000 tons annually of solid waste from entering Georgia's landfills. Approximately 50 percent of the total solid wastes generated at Robins AFB are recycled. Items including paper, plastic, cardboard, wood, tires, electronic equipment, metal, used oil, and batteries are all recycled.

As described above, the public and private sectors, including Robins Air Force Base, have done a commendable job in collecting and processing recyclable materials. However, as mentioned in great length in the Waste Stream Analysis, much more can and needs to be accomplished in this waste reduction venue if the goal is to be reached, particularly with the fact that a large percentage of commonly recyclable materials are disposed in the municipal solid waste stream by both the residential and commercial sectors.

- There is significant progress in recycling various materials in Houston County, however:
  - Houston County and the Cities of Centerville, Perry, and Warner Robins should look into ways to increase the recycling participation rate among residential customers particularly as it relates to newspapers and plastics.
  - The KWRB can work with local businesses and industries to start new or expand existing recycling programs.
- There is little effort to date to recycle film plastic and other rigid plastics, particularly in the commercial sector where the rates are the largest. This again could be a program that KWRB can play an important role in defining reasonable options.
- KWRB should work in coordination with the private recycling buy-back centers and the State to help increase the markets for the recycled materials, thus generating a constant demand and selling price for these materials.
- For recycling efforts to be truly effective, citizens, businesses and industries need to be encouraged to purchase recycled products, thus completing the recycling circle. To begin this process and set the example for the private sector, the three local governments should institute policies that will set the stage for the purchase of more recycled products. KWRB can then work with local businesses and industries to establish similar policies.

### *Yard Trimming Mulching/Composting*

At the Houston County Solid Waste Disposal Facility, yard waste, wood and tree trimmings that come from curbside pickup and other customers using the landfill are separated on site. The

material is then ground into mulch and is used by the landfill and the Public Works Department with the rest given to the citizens of Houston County.

The Houston County Public Works Department also has a portable roadside chipper that is used to grind tree limbs and debris when performing maintenance to county roads. The mulch is stored for future use by the County or hauled to the landfill and stockpiled with other mulch that was created from the operation noted above.

In the City of Centerville, yard waste collected from the curbside pickup is transported to the Diversified Carriers' mulching/composting site in Warner Robins. After these materials have been broken down into mulch, it is made available to the general public.

Yard trimmings (grass clippings and leaves) in the City of Perry are collected, and some are stored for composting. The resulting mulch material is used in the City's flower beds and other landscaped areas. The Georgia National Fairgrounds and Agricenter in Perry has a mulch and composting operation to serve their needs.

The Great Christmas Tree Round-up, a successful county-wide program was implemented by Keep Warner Robins Beautiful in 1991. Local sponsors provide chipping equipment, manpower, and tree seedlings to hand out in exchange for used Christmas trees. The program collects an average of seven tons of mulch each year. The mulch is available throughout the year to citizens for a fee and to Warner Robins departments at no charge.

The City of Warner Robins contracts with Diversified Carriers, Inc. for mulching and composting of yard waste. Yard waste and storm debris is collected from each business and residential unit or complex on a weekly basis by Transwaste Services, Inc. Transwaste Services transports the debris to Diversified's composting facility located at 107 Plantation Road (see Map 2). The City maintains one crew that also collects or cleans up debris and material suitable for composting that either is not accepted by Transwaste Services or results from City street, utility and drainage system maintenance, and construction. This debris is taken to the Diversified Carriers' composting site.

In 2004, Robins AFB opened the on-base composting facility to use yard waste as compost for base beautification projects. An estimated 700 tons of yard waste is composted annually at Robins, which is used for the benefit of Base residents and employees.

In cooperation with the Houston County landfill, damaged wooden pallets are transported to the wood chipping area at the Houston County Landfill where the wood is chipped. The chipped mulch is made available to county residents at no charge. Roughly 1,000 tons of industrial wood is mulched for county residents.

In assessing the mulching and composting program in Houston County, there are opportunities to increase participation and reduce the disposal of these wastes in the community's landfills. The latter is particularly important since 5.0 percent of the total landfilled composition and 7.5 percent of the residential landfilled composition is from yard wastes. Trees and stumps are not grinded, thus its residue material is not used for other purposes. Establishing a program to grind

trees and stumps and its subsequent impact on reducing this landfilled waste has to be weighed against the economics of operating such a program over the long-term. Home composting, along with establishing demonstration sites, has an enormous potential for expansion. It would be good to learn the percentage of residential households who do have home composts and use that as a base on which to grow the program.

### *Special Management Items*

In unincorporated Houston County special management items are handled in the following manner:

- Electronics are collected during curbside pickup and transported to the Houston County Solid Waste Disposal Facility. Large quantities from local businesses or industries are referred to a recycler.
- Household hazardous waste is not routinely accepted by the landfill or curbside pickup. Instead, the County has established an education program for its citizens and other customers on how to properly dispose of these items.
- Tires are collected in roll-off containers at the Houston County Landfill from residents and other customers. The County transports them to MTR of Georgia, Inc. (owned by Greenman/TTRI of Springfield, Tennessee) located at 138 B Sherrell Avenue in Jackson, Georgia for recycling.
- Lead acid batteries are referred to local recyclers in the automotive industries.
- White goods are collected during the curbside pickup and stored by the contractor until such time they are rendered to a metal recycler, such as Macon Iron and Paper. The County also accepts white goods at the landfill. They are segregated and stored until they are provided to a metal recycler.

In the City of Centerville:

- Electronics are collected and transported in a large container by the City's private collection hauler. Those that can be recycled are taken to Macon Iron and Paper in Macon. Televisions and computer monitors are not recycled and considered trash and are taken to the Taylor County landfill.
- Batteries are collected in a trailer and transported by the City's private collection hauler to a local battery company (Franklin Battery).
- White goods are collected in an open-top container and transported by the City's private collection hauler to Macon Iron and Paper.
- Anti-freeze and oil are hauled by a private company from the City's recycling center without charge to the City.

In the City of Perry:

- Advance Disposal picks up white goods from citizens by appointment and transports them to the Houston County landfill. Electronics are handled in the same manner.
- The primary hazardous material generated in Perry is paint. The City of Perry will pick up paint once notified. After collection, paint is stored at the recycling center and available for free to any person. The great majority of the paint is recycled in this manner. The remaining paint usually is dried and disposed of at the Houston County landfill. If

the paint is not recycled or dried, it is run through a paint filter, mixed with sand and disposed at the Houston County landfill.

- If a lead acid battery needs to be disposed, the citizen is told to take the item to a private recycler.
- All other household hazardous material is disposed according to EPD guidelines.

In the City of Warner Robins:

- During 2006, Keep Warner Robins Beautiful co-hosted the first annual E-Cycling Day during Keep America Beautiful's Great America Clean Up. Using an Atlanta-based sponsorship, more than 38,000 pounds of electronics from businesses, municipalities, corporations, schools, and individuals were collected.
- Special management items are collected by Transwaste at curbside on a weekly basis and taken to the Houston County Landfill or sold to private disposal companies. Several automotive businesses accept batteries and used motor oil. White goods are accepted by metal recyclers.

It appears that each local community has done an excellent job in reducing the landfilling of special management items from the residential sector. As revealed by the Waste Stream Analysis, there is still substantial work that needs to be done in the commercial/industrial sector. This is certainly evident in the fact that 5.9 percent of the landfilled composition is other ferrous/non-ferrous, and 6.7 percent is other electronics. Again, this is where the KWRB and the four government entities can play a role in determining where this waste is being generated and educating the appropriate parties on proper source reduction and recycling methods for these materials.

## Waste Reduction Needs and Goals

Based on the inventory and assessment and existing solid waste reduction facilities and programs in Houston County/City of Centerville, City of Perry, and City of Warner Robins, the following needs have been identified.

### *Source Reduction Needs*

- Expand knowledge and understanding among local residents on reusing containers in their homes and purchasing fewer disposable products.
- Conduct waste audits in local businesses and industries to determine opportunities for reusing in-house materials and other source reduction options.
- Coordinate with local restaurants and other establishments where food is served in determining viable options to disposing food wastes into the waste stream.

**Goal: To change the attitudes and behaviors of Houston County residents and businesses to the extent that reusing and reducing over disposing waste is the norm.**

## *Recycling*

- Expand residential, business, and industry participation in the local recycling program by making recycling as easy as possible for the participant.
- Establish Phone Book Recycling Day program that includes having messages in the phone books advertising this recycling event.
- Establish recycling programs in the schools and apartment complexes.
- Establish comprehensive recycling program in the City of Warner Robins.
- Establish recycling program for film plastic and rigid plastics, particularly in the commercial/industrial sector.
- Establish greater coordination with private recycling and buy-back centers, as well as the State of Georgia to increase markets for recycled materials.
- Adopt policies in the public and private sectors that encourages the purchase of more recycled products.

**Goal: To make it as convenient, easy, and inexpensive as possible for residents, businesses, and industries to recycle.**

**Goal: To create consistent markets and pricing for recycled materials.**

**Goal: To significantly reduce the percentage of commonly recycled paper and other materials that are disposed of in the MSW landfills.**

**Goal: To bring the message home--close the recycling circle and buy recycled products.**

## *Mulching/Composting*

- Examine the feasibility of purchasing a tub grinder that can be shared with several entities to grind large branches and stumps in order to reduce the percentage of residential landfilled composition coming from this source of waste. Such a purchase may be justified if it is used as part of the community's disaster debris management plan.
- Widely circulate the message about the availability of tree mulch at the various locations in Houston County.
- Conduct survey of local residents to determine participation in home composting and use that figure to expand the program.
- Establish home composting demonstration sites throughout the county as both an educational tool and application tool for citizens of all ages in the community.

**Goal: To create the mindset that yard waste is better in creating new life than decaying in a landfill.**

### *Special Management Items*

- Reduce the ferrous/non-ferrous and other electronics landfilled composition percentage in the commercial/industrial sectors.
- Expand the participation in E-Cycling Day and other efforts in Houston County to collect and recycle electronic items.
- Expand the participation in the collection of anti-freeze and oil.
- Expand the education program on the proper disposal of household hazardous wastes, lead acid batteries, and tires.

**Goal: To insure certain commonly used materials by individuals and industries are properly managed in order to reduce the risk of environmental contamination.**

# COLLECTION ELEMENT

This section of the report will provide: (1) Information on the types of collection arrangements, contracts, agreements, ordinances, etc. established to ensure adequate public or private collection capability for solid waste, recyclables, and yard trimmings; (2) Adequacy of existing collection systems to meet existing and future population needs in the planning area; (3) Identification of the frequency of illegal dumping in the planning area and methods for correcting the problem; and (4) A contingency strategy for the interim collection of solid waste generated within the local government's jurisdiction in the event the primary collection option becomes interrupted. This element concludes with a statement of needs and goals for current and future collection programs that sets forth an effective, affordable collection system for the ten-year planning period.

## Inventory and Assessment

### *City of Centerville*

The City of Centerville contracts with Centerville Sanitation, Inc. located at 2599 Elberta Road in Centerville for weekly door-to-door collection service for household waste, yard waste, and white goods. This contract is in effect until 2013 with a renewable ten-year option. Approximately 3,000 residential customers, or 100 percent of the households participate. A monthly charge billed by the City is as follows: Base rate - \$15.00; Senior citizens - \$11.00; and Lexington Trace Apartments - \$12.00

Commercial and industrial establishments are also provided service by Centerville Sanitation, Inc. The primary method of collection from these sources is pull-out carts, front-end containers roll-offs, compactors, and special pick-ups. Commercial customers are billed by the City as follows: Commercial carts - \$25.50; Roll offs - \$120.00 plus landfill fees; Compactors - \$300.00.

Centerville Sanitation, Inc. transports the residential and commercial waste collected in the City of Centerville to the Fort Valley transfer station located at 612 South Camelia Road in Fort Valley, Georgia. From there, it is taken to the Allied Services MSW Landfill.

Solid waste collection within the City of Centerville, both residential and commercial/industrial, is adequate to meet the current and future needs of the population.

### **Frequency of Illegal Dumping**

There is no major problem with illegal dumping within the City of Centerville due to effective enforcement by the City Marshall of the City's codes and ordinances related to illegal dumping. Enforcement measures include daily inspections of possible dumping areas. Those caught illegally dumping are issued citations and are summoned to Municipal Court for pending legal

action. The City considers the existing measures to enforce and penalize illegal dumping as adequate.

### **Contingency Strategy in Event of Disruption of Primary Service**

Centerville Sanitation, Inc. has an alternative company, Peach State Sanitation to assist in the event the primary option is unavailable. It would take approximately 24 hours to bring this contingency option on line.

Public outreach and information regarding the changes would be handled through the local news media.

### *City of Perry*

The City of Perry contracts with Advance Disposal located at 4291 Interstate Drive in Macon for the weekly curbside collection of household waste and white goods. The contract with Advance Disposal is in effect until June 2008. Yard trimmings are collected weekly at the curb by the City of Perry. A total of 3,565 households, or 100 percent, participate in the collection program. The City of Perry charges \$19.50 on the monthly utility bill.

The City of Perry contracts with Advance Disposal for commercial waste collection. The primary method of this collection is either by pull-out carts, front-end containers, roll-offs, or compactors.

Solid waste collection within the City of Perry, both residential and commercial, is adequate to meet both existing and future needs of the community.

### **Frequency of Illegal Dumping**

The City of Perry has very little problem with illegal dumping. There is a citywide ordinance prohibiting illegal dumping, and enforcement of that ordinance is handled by the Community Development Department.

The City takes a proactive approach in stopping illegal dumping. The city periodically inspects construction sites to ensure that illegal dumping is not occurring. On vacant sites, the City relies on complaints since there is no legal right to enter the property without probable cause. If a person is caught in the act of illegal dumping, he/she is issued a citation. The measures in place are considered adequate.

### **Contingency Strategy in Event of Disruption of Primary Service**

The City of Perry has several contingency plans in place in the event of a short-term disruption of primary service. First, the City will attempt to contract with another hauler to provide collection services. The second plan is to rent equipment and provide the collection services

themselves. If the disruption is long-term, the City will contract with another hauler or purchase equipment and handle the collections. It would take approximately five (5) days to implement.

Public outreach and information regarding the changes would be handled through the local news media.

### *City of Warner Robins*

The collection of residential and commercial waste (except roll offs), yard debris, and bulk items in the City of Warner Robins is done through a contract for collection and disposal with the Solid Waste Management Authority of Crisp County. The Authority contracts with Transwaste Services, Inc. located at 411 Roosevelt Avenue, Albany, Georgia for collection services. The contract began July 1, 1998 and is for 25 years with provision for five extensions of five years each.

Pick up for residential waste is at the curbside once per week for household waste, yard trimmings, bulk items, etc. The residential fee is \$15.50 per month and is collected by the City of Warner Robins as part of the monthly utility bill. There are approximately 17,900 residential customers.

There are 127 private compactors at multi-family complexes, businesses, and mobile home parks. Charges for these users are handled as a commercial account. All residents participate except where refuse is handled by an apartment complex or mobile home park as a commercial account.

Commercial garbage collection ranges from one 90-gallon cart pickup once per week to eight-cubic yard containers with six pickups per week. There are approximately 1,550 commercial customers.

Construction, demolition, and clean-up debris is collected by contacting the City's Public Works Department to request a roll-off unit. The City franchises three companies to provide this service. Customers are billed by the City on a monthly basis on their utility bill. The franchised haulers are:

- Advanced Disposal Services - 4291 Interstate Drive, Macon
- McGalliard Waste Services - Route 3, Box 4320, Hawkinsville
- Southland Waste Systems - 108 Highway 247 Spur in Kathleen, Georgia

### **Frequency of Illegal Dumping**

Illegal dumping is a random problem in the City of Warner Robins, but not one that is constant. The principle problem seems to be with small contractor debris. In addition, some brown goods and carpet are also dumped illegally even though the City has curbside pick-up for residents. Some of the illegal dumping occurs at compactor sites by people who should not be using the compactor.

The City of Warner Robins has an ordinance against illegal dumping. It is enforced by the City Code Enforcement Office and City Police Department. Techniques used to enforce the ordinance include: surveillance by person and motion-activated camera; searching dumps for evidence of perpetrator; interviewing possible witnesses and other police techniques. When persons are caught, they are given a court summons and taken to Municipal Court. The Court usually fines the perpetrator, gives them community service duty, and makes them clean up the debris they dumped at the site. The City believes the measures to enforce the illegal dumping ordinance and penalize the perpetrator are adequate.

### **Contingency Strategy in Event of Disruption of Primary Service**

In the event the City's primary collection service is disrupted, the City of Warner Robins would immediately seek collection services from another provider. This could be accomplished within 24-48 hours with implementation between 4-5 days. If no such provider could be found, the City has the ability to collect and haul limited amounts of debris and could provide roll-off units at various locations for emergency use. There are four to five waste collection companies serving the Warner Robins area, thus it is very unlikely that another provider could not be found for emergency service.

### *Unincorporated Houston County*

The Houston County Board of Commissioners contracts with Southland Waste Systems of Georgia (SWS) located at 108 Highway 247 Spur in Kathleen, Georgia for the weekly curbside collection of household waste, recyclables, yard trimmings, and white goods in the unincorporated area of Houston County. The contract is for five years with a two-year option for renewal. This service covers 17,165 customers, or 90-95 percent participation. Each participating household is charged \$11.00 per month by the County. The remaining households either take their garbage directly to the landfill or they own a business and take their household garbage to their commercial bins. Individuals must file for an exemption, which is approved by the County staff.

Commercial and industrial establishments are responsible for contracting with various haulers in the community for their solid waste collection. The primary method of this collection is either by front-load containers, roll-off containers, or roll-out containers.

Solid waste collection within unincorporated Houston County, both residential and commercial/industrial is adequate to meet the current and future needs of the population.

### **Frequency of Illegal Dumping**

The County does consider illegal dumping to be a significant problem in the unincorporated area with particular concern with litter on the highways. The County has an illegal dumping and litter ordinance and is enforced by the Code Enforcement Officer from the Houston County Sheriff's

Office. If there is a complaint, he investigates the problem, determines the person responsible, issues a ticket, and uses the judicial system where necessary to enforce the citation.

### **Contingency Strategy in Event of Disruption of Primary Service**

In the event of disruption of the County's primary collection service, the contract would be transferred or reassigned with written authorization. It would take approximately 15-30 days to implement contingency plan.

Public outreach and information regarding the changes would be handled through the local news media.

## **Solid Waste Collection Needs and Goals**

Based on the inventory and assessment and existing solid waste collection programs in Houston County/City of Centerville, City of Perry, and City of Warner Robins, the following needs have been identified.

- Establish a comprehensive recycling collection in the City of Warner Robins.
- Maintain the existing residential collection systems in the Cities of Centerville, Perry, and Warner Robins and the unincorporated area of Houston County.
- Reduce the frequency of illegal dumping by citizens, visitors, and contractors at vacant areas and roadsides in Houston County.

**Goal: To establish an effective, comprehensive (household waste, recyclables, and yard waste) and affordable collection program that meets the needs of general population and business/industry over the ten-year planning period.**

**Goal: To establish a continuing, comprehensive, and coordinated approach to address illegal dumping in Houston County.**

# DISPOSAL ELEMENT

This element of the solid waste management plan will include an inventory of the type, capacity, ownership, location, and types of wastes accepted for each disposal facility used or planned to be used during the planning period. From this inventory, an assessment is made to determine if the existing facilities and current practices will be adequate throughout the ten-year planning period. Based on the inventory and assessment, a statement of needs and goals as they relate to current and future options will be presented. Finally, a contingency strategy for the interim disposal of the solid waste generated within the local government's jurisdiction in the event the primary option becomes interrupted is identified. Such a strategy will include: (1) the alternative disposal option(s) the local government will use on an interim basis; and (2) the estimated length of time it will take the local government to bring the contingency disposal option(s) on line, if that becomes necessary.

## Inventory and Assessment

### *Disposal Facilities*

There are three solid waste disposal facilities serving Houston County and the Cities of Centerville, Perry, and Warner Robins. The location of the Houston County landfills are presented on Map 2.

### **Houston County Solid Waste Landfill**

The Houston County MSW Landfill is owned and operated by Houston County, and is located at 2080 Highway 247 in Kathleen. Based on the 2004 Solid Waste Annual Report, there were a total of 160,058 tons of waste disposed at this facility (Waste from Robins AFB accounts for 11,132 tons, or 7.0 percent of the total waste disposed.) With a remaining capacity of 4,742,937 cubic yards and rate of fill of 815 cubic yards per day, the remaining capacity for this landfill is estimated to be 22.4 years. There is sufficient land for future expansion to meet the current demand for the next 100 years. Waste disposed at this facility includes household and commercial materials such as paper, plastics, glass, metal, and certain organic materials (no yard waste). Yard debris is placed at a designated area on the landfill site for mulching and grinding operations. Map 3 illustrates the master plan for this landfill. Houston County has established a methane gas extraction system at Phase 1 of the MSW Landfill and is studying its use as a possible energy source. The County has plans to expand this system to Phases 2 and 3 of the Landfill within the next ten years.

### **Houston County C&D Landfill**

Houston County also operates a private C&D landfill at 2080 Highway 247 in Kathleen near the MSW facility described above. According to the 2004 Solid Waste Annual Report, there were a

total of 47,132 tons of construction and demolition waste disposed at this facility. With a remaining capacity of 3,627,233 cubic yards and rate of fill of 280 cubic yards per day, the remaining capacity for this landfill is estimated to be 49.8 years. C&D waste disposed at this landfill includes drywall, wood, carpet, inerts, and other construction and demolition materials.

### **Allied Services MSW Landfill**

The Allied Services MSW Landfill, a privately owned and operated facility by Allied Services, LLS is located at 208 Southern States Road, Maulk, Georgia. Based on the 2004 Solid Waste Annual Report, there were a total of 1,202,142 tons of waste disposed at this facility. With a remaining capacity of 38,524,149 cubic yards, and rate of fill of 5,867 cubic yards per day, the remaining capacity for this landfill is estimated to be 25.3 years. Waste disposed at this facility includes household and commercial materials such as paper, plastics, glass, metal, and certain organic materials (yard debris and trimmings but no limbs or stumps).

In reviewing the three disposal facilities serving the four local governments in Houston County, it is very evident that there is sufficient capacity to handle projected demand throughout the planning period.

### *Thermal Treatment Technologies*

There are no thermal treatment technologies (e.g., waste-to-energy, refuse-derived fuel, wood waste incinerator, tire-derived fuel, co-firing industrial boiler) located in Houston County or the Cities of Centerville, Perry, and Warner Robins.

## **Contingency Strategy In Event of Disruption to Primary Option**

This includes a contingency strategy for the interim disposal of the solid waste generated within the local government's jurisdiction in the event the primary disposal option becomes interrupted. This contingency strategy must identify at a minimum:

- Alternative disposal option(s) the local government will use on an interim basis; and
- Estimated length of time it will take the local government to bring the contingency disposal option(s) on line, if that becomes necessary.

### *Houston County*

In the event there is a disruption of service at the Houston County Solid Waste Landfill, Houston County would enter into a contract with the Allied Services MSW Landfill for the period of time that the Houston County landfill was temporarily out of service and would direct Southland Waste Services, the County's solid waste collection hauler, to utilize this landfill. It would take approximately 5-7 days business days for Houston County to bring this contingency disposal option on line.

### *City of Centerville*

Centerville Sanitation, Inc. remains a customer with the Houston County Landfill. In the event the primary option for waste disposal is interrupted, Centerville Sanitation will use the Houston County Landfill to dispose of residential and commercial waste collected in the city limits of Centerville. This contingency plans should be in place within 24 hours.

### *City of Perry*

The City of Perry has a contingency plan to dispose of all materials at the Advanced Disposal Services Landfill in Twiggs County in the event there is a disruption to their current disposal facility; the Houston County MSW and C&D Landfills. The contingency plan would be implemented within 24 hours.

### *City of Warner Robins*

It is likely that in the event that there is a disruption to the current disposal facility, the Houston County Landfill, the Solid Waste Management Authority of Crisp County would transport all the waste collected by Transwaste Services, Inc. in the City of Warner Robins to its own landfill in Crisp County. This could be accomplished within 24-48 hours after the disruption occurred. If necessary, the City of Warner Robins could reactivate an old transfer station while waiting for the switch in disposal sites to take place.

## Assurance of Ten-Year Disposal Capacity

Each local government is required by the Georgia Comprehensive Solid Waste Management Act of 1990 to provide ten-year capacity assurance whether it relies on its own landfill, another local government, regional authority, private entity, or any combination of these for disposal of the solid waste generated within its jurisdiction. Below is a summary of the assurances that have been submitted by the three participating local governments in this plan.

### *Houston County*

To satisfy this requirement, Houston County has obtained a letter from the Public Works Department Director certifying there is sufficient capacity at its landfill to meet the ten-year capacity requirement. This document is presented in Appendix B of this report.

### *City of Centerville*

The City of Centerville has received a letter from Southern State Environmental Services certifying that there is sufficient capacity at the Taylor County Regional Landfill to dispose of

Centerville's solid waste for at least the next ten years. The supporting documentation for this landfill is presented in Appendix B of the report.

### *City of Perry*

The City of Perry has been received from Houston County certifying that there is sufficient capacity at the Houston County Landfill to meet the solid waste demand from the City of Perry for at least the next ten years. This document is presented in Appendix B of this report.

### *City of Warner Robins*

The City of Warner Robins has obtained a letter from Houston County certifying there is sufficient capacity at its landfill to meet the 10-year capacity requirement. This document is presented in Appendix B of this report.

## Solid Waste Disposal Needs and Goals

Based on the inventory and assessment and existing solid waste facilities available for the disposal of solid waste generated within the Cities of Centerville, Perry, and Warner Robins and unincorporated Houston County, the following needs have been identified.

- Maintain the existing cost-effective solid waste disposal strategy.
- Establish a satisfactory contingency strategy for the interim disposal of solid waste in the event the primary disposal option is interrupted.
- Expand existing methane gas extraction system to Phases 2 and 3 of the Houston County MSW Landfill.

**Goal: To assure that the landfill facilities that are utilized to dispose of the solid waste that is generated within Houston County have sufficient capacity to meet the needs during the planning period.**

**Goal: Provide for the proper extraction of methane gas at the Houston County MSW Landfill, while at the same time studying its possible use as a possible energy source.**

# LAND LIMITATION ELEMENT

The Land Limitation Element is designed to accomplish the following:

- Identify on a map those areas that are considered unsuitable for the development of solid waste handling facilities;
- Establish a strategy to discourage the location of such facilities in the areas identified on the map as unsuitable;
- Establish a decision-making process for the selection of sites for new solid waste handling facilities; and
- Establish a procedure Houston County and the Cities of Centerville, Perry, and Warner Robins will follow to determine if a proposed solid waste handling facility, public or private, is consistent with the local solid waste management plan. For EPD to issue or renew a permit for a solid waste handling facility, the facility or facility expansion must be consistent with the local government solid waste management plan.

## Identification of Unsuitable Areas

The identification of the unsuitable areas begins with the establishment of factors that must be considered in making this decision. The limiting factors described below apply to municipal solid waste landfills but also should be applied locally to other types of solid waste handling facilities, such as, recycling centers, recovery centers, transfer stations, and composting centers. These factors have been grouped into two categories: exclusionary and restricting.

### *Exclusionary Factors*

Exclusionary in this case means that a municipal solid waste facility would not be allowed under any circumstances because of local or state regulations, the presence of certain uses already on the property, or the presence of certain sensitive natural resources. Factors that are considered exclusionary for this study are: (1) airports; (2) public, federal and state lands; (3) wetlands and floodplains; (4) river corridors; and (5) local land development regulations.

### **Airports**

DNR Rule 391-3-4-.05(1)(c) requires that new solid waste landfill units or lateral expansions of existing units shall not be within 10,000 feet of any public use or private use airport runway end used by turbojet aircraft or within 5,000 feet of any public use or private use airport runway end used by only piston type aircraft. The runway facilities that would have an impact on this study: Middle Georgia Regional Airport in Bibb County and Robins Air Force Base in north Houston County.

## **Local, State, and Federal Lands**

There are certain local, state, and federal lands that are committed to other uses where landfill development would be prohibited. These lands include Robins Air Force Base, Oaky Woods WMA, and Georgia Fairgrounds and Agricenter.

## **Floodplains and Wetlands**

DNR Rule 391-3-4-.05(1)(d) stipulates that any solid waste landfill located in the 100-year floodplain shall not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in a washout of solid waste so as to pose a threat to human health or the environment. Despite these restrictions, to best protect the floodplains, future municipal landfill facilities should be excluded from these areas.

DNR Rule 391-3-16-.03(3)(e) establishes that solid waste landfills may constitute an unacceptable use of a wetland.

## **River Corridors**

DNR Rule 391-3-16-.04(4)(h) prohibits the development of new solid waste landfills within protected river corridors. The Ocmulgee River that forms the eastern boundary of Houston County has been classified as a protected river.

## **Local Land Development Regulations**

DNR Rule 391-3-4-.05(1)(a) requires that the site must conform to all local zoning/land use ordinances and that written verification of such be submitted to EPD. The City of Centerville's land development regulations do not allow solid waste landfills either as a permitted or conditional use in any zoning district. In the City of Perry, landfills are allowed in the M-2 district, General Industrial District with a special exception. Landfills are not permitted in the City of Warner Robins, but transfer stations and composting sites are permitted as a conditional use in the M-2 Heavy Industrial District; while in unincorporated Houston County, landfills are a permitted use in the M-2 Heavy Industrial/Manufacturing District.

## *Restricting Factors*

The factors considered to be restrictive to the development of a solid waste landfill include steep slopes and shallow rock, significant groundwater recharge areas, water supply watersheds municipal water supplies, fault areas and seismic impact zones and DRI review process.

## **Steep Slope and Shallow Rock**

Steep slopes present a challenge to the design of municipal solid waste landfills in the development of effective water control. The absence of sufficient groundcover created by shallow rock also hampers the design of municipal solid waste landfills.

## **Water Supply Watersheds**

DNR Rule 391-3-16-.01(7)(c)1 requires that at any location within a small water supply watershed, new solid waste landfills must have synthetic liners and leachate collection system. There are no small water supply watersheds located in Houston County or in the Cities of Centerville, Perry, and Warner Robins.

## **Significant Groundwater Recharge Areas**

DNR Rule 391-3-4-.05(1)(j) requires new solid waste landfills or expansions of existing facilities within two miles of significant groundwater recharge areas to have liners and leachate collection systems, with the exception of facilities accepting waste generated from outside the county in which the facility is located. In that case, the facility must be totally outside of any area designated a significant groundwater recharge area.

## **Public Water Supplies**

Within two miles upgradient of a surface water intake, state regulations (DNR Rule 391-3-4-.05(1)(k)) require that landfills be lined and have leachate collection.

## **Fault Areas**

DNR Rule 391-3-4-.05(1)(f) requires that new landfill units and lateral expansions of existing landfills shall be located within 200 feet of a fault that has had displacement in the Holocene Epoch unless the owner or operator demonstrates to EPD that an alternative setback distance of less than 200 feet will prevent damage to the structural integrity of the landfill unit and will be protective of human health and the environment. There are no known fault areas located in Houston County or the Cities of Centerville, Perry, and Warner Robins.

## **Seismic Impact Zones**

DNR Rule 391-3-4-.05(1)(g) prohibits the development of new landfill units and lateral expansions in seismic impact zones unless the owner or operator demonstrates to EPD that all containment structures, including liners, leachate collection systems, and surface water control systems are designed to resist the maximum horizontal acceleration in lithified earth material for the site. There are no known seismic impact zones in Houston County or the Cities of Centerville, Perry, and Warner Robins.

## DRI Review Process

The Georgia Department of Community Affairs has established specific thresholds, rules, and procedures for identification and review of Developments of Regional Impact (DRI) as required by the Georgia Planning Act.

The rules require:

- Local governments must submit any development project that meets or exceeds the thresholds for DRI review. According to the thresholds table contained in Chapter 110-12-3-.03, any new waste handling facility or expansion of use of existing facility by more than 50 percent in a metropolitan or non-metropolitan area would require DRI review. The likely trigger in the case of Houston County, Perry, and Warner Robins to begin the local DRI review process would be an application for a permitted or conditional use permit (if applicable) to the respective Planning and Zoning Office.
- The Regional Development Center must review the project in accordance with procedures listed in Chapter 110-12-3-.05.
- The local government must not take action furthering the project during DRI review.
- The local government should consider the DRI review comments and findings in making its decisions related to the project.

A map displaying a composite map of the exclusionary and restrictive factors is provided as Map 4.

## Land Limitation Strategies

### *Discouraging Location in Unsuitable Areas*

The following would pertain only to the City of Perry, City of Warner Robins, and Houston County. The City of Centerville's Land Development Ordinance does not permit landfills and other solid waste handling facilities within any district in their jurisdiction, thus unsuitable areas would not be an issue.

- Is it within a zoning district where it is permitted or conditional use?
- If it is within such a zoning district, the applicant certifies and the planning and zoning staff verifies:
  - Facility meets State requirements for siting near airports;
  - Facility is not in a 100-year floodplain, jurisdictional wetland or river corridor;
  - Facility will not be located in one of the local, state, or federal lands mentioned above;
  - Facility will not be located on steep slopes or shallow rock;
  - Facility serving county only in which it is located and located two miles of significant groundwater recharge area will have liners and leachate collection system; regional facilities will be totally out of significant recharge area;

- Facility within two miles of surface water intake will have liners and leachate collection system.
- Has the DRI review process been completed for the new solid waste handling facility or expansion of such facility, and has comments and findings from the review been considered in making decisions related to the project?
- If any of the above cannot be certified by the applicant and verified by planning and zoning staff, then the permit application is denied.

### *Selection of Sites for New Solid Waste Handling Facilities*

The following would pertain only to the Houston County and the Cities of Perry and Warner Robins. The City of Centerville's Land Development Ordinance does not permit landfills and other solid waste handling facilities in any district within its jurisdiction, thus the selection of sites would not be an issue.

#### **City of Perry**

- If the facility is within a M-2 District where it requires a Special Exception, and it has been certified by the applicant and verified by the City not to be in an unsuitable area described above, then the application will be placed on the agenda for review by the Perry Planning Commission and City Council as prescribed by the procedures set forth in the Perry Land Development Ordinance (PLDO).
- The Perry Planning Commission and City Council will review and make a decision on the merit of the application based on the special exception standards set forth in the PLDO, DRI review comments and findings, and other testimony presented at the hearing.
- The applicant has the right to appeal a denied application according to procedures outlined in the PLDO.
- § Prior to issuing a special exception for the new solid waste handling facility, it must be documented by the applicant that the new facility has complied with all laws, rules, and regulations of the city, county, state, and federal governments, including the development of a Hydrological Assessment in accordance with the provisions of DNR Rule 391-3-4-.05(1)(k).

#### **City of Warner Robins**

- If the facility is within M-2 District where transfer stations and composting facilities only are considered a conditional use, and it has been certified by the applicant and been verified by the City of Warner Robins not to be in an unsuitable area described above, then the application will be placed on the agenda for review by the Warner Robins Planning Commission and City Council as prescribed by the procedures set forth in the Comprehensive Land Development Resolution.
- The Planning Commission and City Council will review and make a decision on the merit of the application based on the conditional use standards set forth in the Resolution, DRI review comments and findings, and other testimony presented at the hearing.

- The applicant has the right to request an appeal of a denied application according to the procedures provided in the Resolution.
- § Prior to issuing a conditional use permit for the new solid waste handling facility, it must be documented by the applicant that the new facility has complied with all laws, rules, and regulations of the city, county, state, and federal governments, including the development of a Hydrological Assessment in accordance with the provisions of DNR Rule 391-3-4-.05(1)(k).

## **Houston County**

- § If the facility is within a M-2 District and it has been certified by the applicant and verified by the County not to be in an unsuitable area described above and that the new facility complies with all laws, rules, and regulations of the county, state, and federal government, including the development of a Hydrological Assessment in accordance with the provisions of DNR Rule 391-3-4-.05(1)(k) then the zoning permit will be approved.

## **Procedure for Plan Consistency**

In order for EPD to issue or renew a permit for a solid waste handling facility, the facility or facility expansion must be consistent with a local government solid waste management plan. The plan shall specify a procedure the local government(s) will follow to determine if a proposed facility, public or private, is consistent with the plan. Identified below is the procedure that Houston County and the Cities of Perry and Warner Robins will use to determine plan consistency. Because solid waste handling facilities are not permitted within the City of Centerville by its Land Development Ordinance, this jurisdiction would respond back to EPD that such a facility would not be consistent with the Solid Waste Management Plan.

### *Public Involvement and Notification*

- The applicant will file a Request for Plan Consistency Determination application with the respective local government city clerk's office in which the solid waste handling facility will be located.
- Within 60 days from the date of the application, the County Commission or City Council will conduct a public hearing to hear the applicant's request to determine if the proposed facility is consistent with the plan.
- To assure satisfactory public involvement and notification for this public hearing, the respective City or County will be responsible for undertaking the following activities:
  - Place a legal notice in the legal organ no more than 30 days and no less than 15 days prior to the public hearing.
  - Place a sign on the property identifying the purpose and the date, time, and location of the hearing no less than 45 days prior to the date of the public hearing.
  - Affected parties including:

- Local governments that are contiguous to the City/County and other local governments that are likely to be affected by the proposed facility;
  - Any local authorities, special districts, or other entities that are likely to be affected by the proposed facility;
  - Regional Development Center served by the City/County and other regional development centers that are contiguous to the local government or that are likely to be affected by the proposed facility; and
  - Affected state agencies that are likely to be affected by the proposed facility.
- Have copies of the applicant's and staff's analysis reports for public inspection no less than 15 days prior to date of the public hearing.
  - The City/County will have copies at the hearing of the standards that will be used to make a plan consistency determination and the procedures for conducting the public hearing.
  - At the public hearing, the applicant will have ten minutes to present his/her arguments for plan consistency; others in audience for plan consistency will have a total of ten minutes combined to present their arguments; those in the audience opposed to plan consistency will have ten minutes total to present their arguments; and finally, the applicant will have five minutes for a rebuttal.
  - After hearing all the arguments for and against Plan Consistency and taking into consideration the applicant's and staff's analysis reports, the respective governing body will vote either for or against Plan Consistency utilizing the standards in making a plan consistency determination. This vote must take place at the next regularly scheduled meeting after the public hearing.
  - The applicant will be notified by certified mail no later than three business days after the decision is rendered of the governing body's decision.
  - If the governing body has determined that the proposed solid waste handling facility is consistent with the local solid waste management plan, the Chief Elected Officer of the City/County will send a letter to the Director of Georgia DNR-EPD notifying of the governing body's decision.
  - If the governing body has determined that the proposed solid waste handling facility is not consistent with the local solid waste management plan, the applicant will have the right to request an appeal of the decision. The request for appeal must be received in the City/County Clerk's office not later than 15 days after receiving written notification of the governing body's decision. The request for appeal must state the reason that the appeal should be granted.
  - If the request for appeal is not received within the 15-day period, the Chief Elected Officer of the City/County will send a letter to the Director of Georgia DNR-EPD notifying of the governing body's decision.
  - The request for appeal will be placed on the agenda of the next regularly scheduled meeting provided this meeting is at least ten days after the date the appeal was filed.
  - If the decision is made to deny the appeal, then no further action on the application by the governing body will be required.
  - If the decision is made to approve the appeal, then the application will be placed on the agenda for the next regularly scheduled meeting. There will be no public

hearing prior to rendering a decision; the local governing body will follow its normal meeting procedures. The governing body will consider any new information that was not presented at the initial public hearing.

- The decision of the governing body will be final. There will be no other appeals to the governing body.
- The Chief Elected Officer of the City/County will send a letter to the Director of the Georgia DNR-EPD notifying of the governing body's decision.

### *Analyzing Anticipated Impact of Proposed Facility on Existing Waste Management Facilities*

To assess the anticipated impact the proposed facility has on the existing waste management facilities, the applicant and the City/County staff will prepare a report that will analyze the following information:

- What are the need(s) presented in the local Solid Waste Management Plan that justifies the development of the proposed facility;
- How will the proposed facility meet the need(s) established in the local solid waste management plan;
- What are the operational and financial impacts to the existing waste management facilities that will result if the proposed facility is constructed; and
- How will the new facility provide better level of service to the residents of the City/County than would otherwise be provided by the existing facilities.

The City/County staff will provide a summary of the comments received from affected parties related to the impact of the proposed facility on existing waste management facilities.

### *Analyzing Anticipated Impact of Proposed Facility on Adequate Collection and Disposal Capability within Planning Area*

To assess the anticipated impact of the proposed facility on collection and disposal capability within the planning area, the applicant and City/County staff report will include the following analysis:

- What are the existing collection and disposal capabilities as defined by the local solid waste management plan;
- What deficiencies in the existing collection and disposal capabilities that are identified in the solid waste management plan would be reduced or eliminated if the proposed facility is constructed; and
- How will the new facility provide better collection and disposal capability than would otherwise be provided by existing facilities.

The City/County staff will provide a summary of the comments received from affected parties related to the impact of the proposed facility on collection and disposal capability.

## *Analyzing Anticipated Impact upon Achieving Waste Reduction Goal*

Since the State of Georgia no longer has a waste reduction goal, any impact would be based on any local waste reduction goal. In this case, the applicant's and City/County staff's analysis report would address the following:

- What is the local waste reduction goal as outlined in the local solid waste management plan?
- If there is no local waste reduction goal in the SWMP, then no further information would be required;
- If there is a local waste reduction goal in SWMP, then the following information is required:
  - How will the proposed facility help the local governments in the planning area achieve their waste reduction goal.

## Land Limitation Needs and Goals

Based on the strategies for discouraging location in unsuitable areas and the selection of sites for new solid waste handling facilities, and the procedure for plan consistency, the following land limitation needs are outlined below:

- Establish an in-office review process at the City of Perry, City of Warner Robins, and Houston County Planning and Zoning Offices to implement strategy to discourage location of solid waste handling facilities in unsuitable areas.
- Establish a public involvement and notification process for determining plan consistency as outlined in the solid waste management plan report.
- Develop a Request for Plan Consistency Determination Application with specific instructions to be completed by applicants desiring a hearing before the respective elected body.
- Develop specific standards to be used by the respective governing bodies to make decisions on Plan Consistency Determinations.
- Establish formats for the applicant and staff analysis reports.
- Establish list of affected parties to receive comments for Plan Consistency Determinations.

**Goal: To insure all future solid waste handling facilities in Houston County are not located in unsuitable areas.**

**Goal: To provide a fair hearing on all applications for Plan Consistency Determination that includes an effective process to notify and involve the public, protects the rights of the applicant, and promotes a sound analysis of the facts that enables policy makers to make the best possible decisions.**

# **EDUCATION AND PUBLIC INVOLVEMENT ELEMENT**

This element includes an inventory and assessment of the programs and activities undertaken by Houston County and the Cities of Centerville, Perry, and Warner Robins or other agencies and organizations in the community to educate the general public and school-age children about solid waste management issues and to gain their active involvement in solid waste minimization, litter prevention, and beautification. To gain a good perspective on solid waste education and public involvement in Houston County, the inventory and assessment section is divided into three main categories: local government programs, school system programs, and litter control programs. There are no Solid Waste Advisory Committee or Task Force or Regional RDC programs that are currently underway or expected in the foreseeable future.

## **Local Government Programs**

### **City of Centerville**

The City of Centerville has a local chapter of the Keep America Beautiful program that organizes local clean-up and beautification projects, implements a yard of the month program, staffs the Centerville Recycling Center, and provides educational materials to the public on recyclables accepted at the recycling center.

### **City of Perry**

The City of Perry operates three solid waste education and public involvement programs; Keep America Beautiful, Perry Beautification Committee, and Great American Clean-Up Week. The Keep America Beautiful program in Perry promotes education dedicated to litter and graffiti prevention, beautification, waste minimization, and community improvement. It also teaches young people how to care for, preserve, and protect the environment. The Perry Beautification Committee is a volunteer organization that focuses on the same areas as KAB. It promotes environmentalism and sustainability through a public education program in the local schools. During the Great American Clean-Up Week, the citizens of Perry can put any item out by the road, except vehicles and batteries, and the City will dispose of them. This is an annual event usually held each spring.

### **City of Warner Robins**

The primary tool used by the City of Warner Robins to educate and involve the public about environmental issues is Keep Warner Robins Beautiful. The mission of KWRB is to educate the public and promote interest in the improvement of the environment of Warner Robins. KWRB is governed by a 20-member appointed Board of Commissioners, with daily management conducted by a paid Executive Director.

Each year Keep Warner Robins Beautiful compiles a supplemental newspaper insert. Articles describe current environmental issues, feature KWRB/*Great American Clean Up* support programs, and highlight volunteers, partners, and contributions.

The Keep Warner Robins Beautiful portion of the City of Warner Robins web site ([www.warner-robins.org/kwrp.htm](http://www.warner-robins.org/kwrp.htm)) includes details on the following programs: Appreciation, Beautification, Litter Control, Recycling, and Water Education. The web site is currently being revised to include information regarding grasscycling, mulching, and composting.

Valuable partnerships with local media allow Keep Warner Robins Beautiful to provide information to a large population of Houston County and the surrounding area. Monthly articles published in the *Houston Daily Journal* reach 10,307 subscribers; monthly articles published in *The Macon Telegraph* newspaper reach 11,307 subscribers. Articles published periodically in the *Buyers Connection* reach 20,500; comments published in the *Warner Robins Buyer's Guide* reach 35,000. Two separate public service announcements recorded with radio station WNNG AM-1350 by prominent members of the business sector air a minimum of six times per day, reaching a listening audience of 49,000. Public service announcements for scheduled programs/events are submitted to two broadcasting companies which air on 15 radio stations, reaching a combined listening audience of 500,000. Similar announcements submitted to two television stations reach citizens of 22 counties.

To pay tribute to the valuable resources available to KWRB, an *Annual Volunteer Recognition & Awards Banquet* is held in the spring. Volunteers, business, corporations, and media are recognized with plaques, awards, and certificates.

## **Houston County**

Keep Warner Robins Beautiful routinely conducts tours of the Houston County Solid Waste Disposal Facility and collects information on Houston County's landfill operations and recycling program.

Houston County also sponsors tours of their landfill facility for area civic groups and organizations, such as Perry and Warner Robins leadership classes, Rotary Clubs, colleges, and schools.

## **School System Programs**

### **City of Centerville**

The City of Centerville does not operate any school education and involvement programs.

## **City of Perry**

The City of Perry has a recycling education program in the local elementary schools. The program consists of 8-16 hours of monthly classroom lectures. The City also promotes class field trips to the City's recycling center as part of this program.

## **City of Warner Robins**

KWRB is responsible for training, scheduling, and monitoring a team of volunteers to conduct *EnviroScope* presentations to elementary school students within Houston County. Presentations visually present both point and nonpoint sources of pollution; discuss environmental damage sustained by air, water, and land; and demonstrate methods to correct existing situations while alerting students to potential hazards.

Each fall, Keep Warner Robins Beautiful initiates contact with Warner Robins area schools to secure representatives to serve on the *KWRB Youth Advisory Board*. Students, grades 5-12, stay busy during the school year working on projects of their own and alongside KWRB members. Because education is our primary objective, YAB members tour facilities such as the Houston County Landfill, the city mulch site currently operated by Diversified Carries, Inc., Happy Hour Recycling Workshop, and Anchor Glass Container Corporation. Youth also take an active part in the *Great Christmas Tree Round-Up* by offering tree seedlings in exchange for live Christmas trees. To celebrate and honor *Arbor Day*, YAB students hand out tree seedlings and print material to merchants and customers in prominent shopping districts. During April, YAB members join Keep America Beautiful's nationwide *Great American Clean Up* by participating in a combined effort of the City of Warner Robins, Keep Warner Robins Beautiful, and Robins Air Force Base to remove litter and debris from Bay Gall Creek and Wellston Trail. The YAB year ends with the presentation of certificates signed by the Mayor of Warner Robins and the Chairman of Keep Warner Robins Beautiful.

## **Houston County**

Representatives from Houston County's solid waste collection contractor, Southland Waste Systems of Georgia (SWS), visits area schools and gives presentations on recycling and other solid waste issues.

The Houston County Solid Waste Department conducts tours of the Houston County landfill for area schools and will visit the local schools upon request to give presentations.

# Litter Prevention

## City of Centerville

The City of Centerville has no specific program designed to address litter prevention. The City of Centerville, however, has several ordinances enforced by the City Marshall dealing with public nuisances, including height regulations for grass and weeds.

## City of Perry

The City of Perry participates in the Keep America Beautiful campaign. The KAB litter control program focuses primarily on prevention through education, including one offered to local schools. The local KAB campaign also organizes some volunteer work to clean up problem areas.

The City also has an ordinance prohibiting littering and is enforced by the Police and Code Enforcement Departments.

## City of Warner Robins

Using guidelines established through the Georgia Department of Transportation *Adopt-A-Highway* program, KWRB implemented similar *Adopt-A-Road* and *Adopt-A-Park* programs. Businesses, churches, organizations, and individuals adopt public parks and major thoroughfares. To remain active, participants are required to host quarterly cleanups. Further, KWRB continues to assist GA DOT by administering and monitoring the *Adopt-A-Highway* program in Warner Robins. Currently six miles of railroad tracks; 130 acres of public parks; two cemeteries; and 27 miles of streets, roads, and highways are under adoption. For areas not included in above-mentioned programs, the Georgia Department of Corrections (Houston Judicial Circuit) regularly schedules probationary workers to remove litter from locations designated by City/KWRB personnel.

From 1989-1999, KWRB conducted an annual *Photometric Index Statistical Litter Survey*. In 2000 Keep America Beautiful restructured the analysis into the *Annual Litter Index Survey*. Results obtained each year are used by KWRB to gauge the effectiveness of litter programs in specific areas within the community.

## Robins Air Force Base

Local community participation is an important aspect of Robins AFB because citizens want to know about and participate in decisions that may affect their community. The environmental outreach programs seek to continue and expand the open lines of communication that exist between Robins AFB and citizens of Houston and surrounding counties. The programs also seek to address specific community concerns, incorporate Local, State, and National environmental

programs, and to guide Robins AFB in conducting timely community relations activities. Such outreach activities and programs that Robins AFB employees participate include:

- National Earth Day
- America Recycles Day
- Keep Warner Robins Beautiful Commission
- Clean Cities Coalition
- Clean Air Coalition
- Environmental Advisory Board
- Macon Chamber of Commerce Safety and Environmental Committee

## Education/Public Involvement Needs and Goals

Using the inventory and assessment of existing solid waste education and public involvement as a guide, the following needs and goals are presented below.

- Expand community educational programs on the benefits of solid waste minimization, beautification and litter control by increasing the number of PSAs, radio and TV interviews, community and neighborhood exhibits, classroom presentations, and brochure distribution.
- Increase the number of citizen volunteers, businesses/industries, and civic organizations involved in litter prevention, beautification and community involvement, and solid waste minimization efforts and their work in the local school systems.

**Goal: Develop effective solid waste education programs and tools that will maximize the understanding of solid waste management issues in Houston County and the Cities of Centerville, Perry, and Warner Robins among the youth and adult residents.**

**Goal: Provide opportunities and incentives that will maximize the participation of local citizens, businesses/industries, and civic organizations in local solid waste management programs and activities.**

# DISASTER DEBRIS MANAGEMENT PLAN

## Introduction

To minimize the possible loss of lives and property during a disaster, local governments in coordination with the State spend endless hours in disaster preparedness. Unfortunately, one of the most important aspects of disaster preparedness that is usually overlooked at the local level is dealing with the collection and disposal of large volumes of waste created in the aftermath of a disaster.

Disaster debris can have both short-term and long-term impacts. In the short-term, during the first few hours after an event, debris could be an impediment to critical transportation and emergency services, as well as be a potential threat to health and safety to emergency personnel and citizens. While in the long-term, if not properly addressed, disaster debris can create potential problems for commerce and for public health and safety related to fires in wood debris and decay of household or industrial-type wastes.

With this said, the Minimum Standards for Solid Waste Management Planning requires that each community address within its Solid Waste Management Plan procedures for the collection and disposal of residential and commercial debris generated by natural and man-made disasters, procedures for waste reduction of this debris, and public notification of the local disaster debris management process.

The potential natural and man-made disasters that will be the focus of this plan include: **hurricane, tornado, flood, ice storm, wildfire, earthquake, and terrorism**. Other types of disasters not included in this list may occur, and regardless of type, the procedures identified in this plan will remain largely unchanged.

The types of debris created by the above natural and man-made disasters that should be managed include:

- **Vegetation** - Tree limbs, trunks and stumps, and other vegetative materials.
- **Sediment** - Deposited by floodwater and wind.
- **Construction and Demolition Materials** - From homes, businesses, and industries partially or totally destroyed during the disaster or from construction sites.
- **Metals**
- **White Goods (Appliances)** - With particular concern for those appliances containing Freon® or other refrigerant.
- **Municipal Solid Waste**
- **Animal Carcasses**
- **Hazardous Waste**

# Management Structure

The Houston County Emergency Management Agency is responsible for the coordination of mitigation, preparedness, response, and recovery efforts pertaining to major natural and man-made disasters. In response to disaster debris management, the EMA Director will coordinate with the Houston County Director of Administration and representatives from the Cities of Centerville, Perry, and Warner Robins to implement the procedures set forth in this Plan. The primary local contacts are listed below.

## **Houston County Office of Emergency Management**

Mr. Jimmy Williams, Houston County EMA Director and Fire Chief  
200 Carl Vinson Parkway  
Warner Robins, GA 31088  
Phone: (478) 2000  
Fax: (478) 328-0618

## **City of Centerville**

Mr. Patrick Eidson  
300 E. Church Street  
Centerville, GA 31028  
Phone: (478) 953-4734  
Fax: (478) 953-4797

Mr. Larry Coy  
Centerville, Sanitation, Inc.  
116 Timber Ridge Drive  
Warner Robins, GA 31088  
Phone: (478) 218-7763  
Fax: (478) 218-2120

## **City of Perry**

Mr. Lee Gilmour, City Manager  
P.O. Box 2030  
Perry, GA 31069-6030  
Phone: (478) 988-2700  
Fax: (478) 988-2705

Mr. Willie Thornton  
Perry Sanitation Department  
P.O. Box 2030  
Perry, GA 31069  
Phone: (478) 988-2700  
Fax: (478) 988-2705

**City of Warner Robins**

Mayor Donald Walker  
P.O. Box 1488  
Warner Robins, GA 31099-1488  
Phone: 929-1133  
Fax: 929-1941

Mr. Joe Musselwhite  
Warner Robins Sanitation Department  
P.O. Box 1488  
Warner Robins, GA 31099-1488  
Phone: (478) 328-1080  
Fax: (478) 929-1150

**Houston County**

Mr. Tommy Stalnaker, Director of Operations  
Houston County Public Works Department  
2018 Kings Chapel Road  
Perry, GA 31069  
Phone: (478) 987-4280  
Fax: (478) 988-8007

Mr. Terry Dietsch  
Houston County Solid Waste Department-Disposal  
2018 Kings Chapel Road  
Perry, GA 31069  
Phone: (478) 987-0089  
Fax: (478) 987-0102

Mr. Larry Fairchild  
Houston County Solid Waste Department-Collection  
2018 Kings Chapel Road  
Perry, GA 31069  
Phone: (478) 987-4299  
Fax: (478) 988-8007

Mr. Travis McLendon  
Houston County Public Works Roads and Bridges  
2018 Kings Chapel Road  
Perry, GA 31069  
Phone: (478) 987-4280  
Fax: (478) 988-8007

## Keep Warner Robins Beautiful

Ms. Debra Jones, Executive Director  
Keep Warner Robins Beautiful  
Address:  
Phone: (478) 929-7298  
Fax: (478) 929-7298

## Implementation Plan

The implementation portion of the DDMP has been divided into three phases:

- Phase I: Initial Debris Assessment
- Phase II: Mitigating Threats to Public Health and Safety
- Phase III: Orderly Recovery of Community and Less Immediate Threats to Public Health and Safety

### *Phase I: Initial Debris Assessment*

The initial survey of disaster debris will be conducted by Public Works employees and first responders. The initial survey would consist of a “windshield” assessment or visual examination to determine: **predominate types of waste; location of waste; and approximate quantity (tons or cubic yards)**. Using information from this assessment, temporary debris management sites (TDMS) would be identified.

### *Phase II: Mitigating Threats to Public Health and Safety*

The next phase of the implementation process takes place in the immediate hours after the disaster where the focus would be in mitigating threats to public health and safety. During this critical time, one of the primary concerns is transportation and access by emergency and rescue vehicles. The EMA Director, in coordination with local emergency and public works personnel, would identify the primary routes and establish a plan to clear and remove debris from these routes. In identifying these routes, the highest priority should be given to providing access to critical services, such as hospitals, first responder stations, water treatment and wastewater treatment plants, power generation or relay stations, airports, and government buildings coordinating emergency services.

Initial debris removal along critical roads would likely involve moving debris from driving surfaces to less obtrusive locations along the rights-of-way. When this is not possible, the debris would be collected off these roads and transported to the nearest TMDS. Debris that is involved with potentially live power lines should not be addressed until appropriate utility personnel arrive on the scene and deactivate those lines.

The limited collection and hauling that would be conducted in this phase would be accomplished for the most part by city and/or county vehicles and equipment. Additional equipment would be

rented locally or mutual aid agreements would be activated where possible as a backup. Assistance from the Georgia Forestry Commission and other state and federal land management agencies may be requested if necessary through the Georgia Emergency Management Agency.

### *Phase III: Response to Orderly Recovery and Less Immediate Threats to Public Health and Safety*

#### **Collection**

The third and final phase is to ensure the community's orderly recovery and to address the less immediate threats to health and safety. The first priority in this phase of the process is to eliminate waste that may contain hazardous materials with potential exposure to the public or present a potential health hazard (animal carcass, spoiled food, or sewage-contaminated waste). In addition, debris situated on the public rights-of-way also needs to be addressed.

The collection and hauling of the waste would be accomplished with a combination of equipment from local government, adjoining governments with which mutual aid agreements have been established, state and federal agencies, and outside contractors. Taking into consideration the amount and type of waste to be collected and hauled, the order of selection for equipment would be as follows:

- Local government,
- Local mutual aid agreements,
- Request assistance through GEMA, and
- Outside contractors.

#### **Public Notification**

During this time, Houston County EMA office will work with TV, radio, and print media to deliver public announcements to inform the public of facility locations to receive waste, restrictions of the types of waste that will be accepted at the facilities and hours of operation. The PSAs will also make the private property owners aware of their individual responsibility for cleanup and any public service that may be provided, if any. In short, the items that would need to be communicated to the general public are:

- Available pickup and resident responsibility;
- Scheduling of pickup or availability of the facility locations to receive waste;
- Waste separation requirements prior to pickup or prior to delivery to a collection station;
- Definition of household hazardous wastes and description for handling these items; and
- Contact person to obtain more information.

#### **Disposal**

Below is the procedure in which Houston County and the Cities of Centerville, Perry, and Warner Robins would handle the removal and disposal of the various types of waste.

**Vegetation** – This is expected to be the largest segment of the disaster debris waste stream. The hierarchy for handling vegetative waste is as follows:

- Chipping for use as a mulch or boiler fuel at the TDMSs;
- Controlled burning through use of an air curtain destructor (ACD) or similar device at the TDMSs;
- Disposal at Houston County landfill operations; and
- Open burning.\*

\* Would use as last resort because of its impact on the County's air quality.

**Sediment** – If the material is suspected that it will be contaminated by wastewater or contaminated water, it would be hauled and disposed at Houston County's landfill operations.

**Construction and Demolition Debris** – C&D waste would be sorted from all of the waste brought to the TDMSs and, depending on the type of disaster and nature of cleanup required, would be recycled. The remainder of the material would be sent to Houston County's landfill operations.

**Metals** – Metals that are readily recoverable from the waste at the TDMSs would be set aside for recycling. A scrap metal pile would be designated at the TDMS for this purpose. A contractor (selected in advance) would collect and recycle the scrap metal for this pile.

**White Goods (Appliances)** – White goods would be separated and stockpiled at the TDMSs and a contractor (selected in advance) would process and recycle these items. Appliances containing Freon® or other refrigerant would have such material removed prior to recycling or disposal.

**Municipal Solid Waste** – Because of the large volume of waste expected from residential and commercial users after a disaster, the frequency of collection would need to be substantially increased, thus necessitating more staff and equipment. The Cities of Centerville, Perry, and Warner Robins and Houston County would consider providing 40-yard roll-off containers at the TDMSs for residential use only that would be directly hauled to the Houston County landfill operations.

**Animal Carcasses** – Houston County would work with local agribusinesses to identify a solution to wholesale animal carcass disposal created by the disaster. Those carcasses found along the public rights-of-way will have to be the responsibility of the individual communities and taken to the Houston County landfill operations.

**Hazardous Waste** – Houston County would identify contractors qualified to collect, transport, and dispose household hazardous waste for assistance. It may be necessary, depending on the quantity, to contract with a waste handler to provide temporary household hazardous waste collection facility for the entire county. A one-day event would be scheduled as soon as practical and properly advertised. Residents would be encouraged to segregate household hazardous wastes from other wastes and bring the separated waste to the temporary collection facilities on the designated day. Household hazardous waste that is hauled to the TDMSs would be segregated from the waste stream, particularly the C&D waste stream.

Another potential hazardous waste source includes ruptured fuel tanks and chemical storage units within industrial facilities. In the event of a major release, members of the hazmat team would take steps to isolate and contain the waste. The Georgia Department of Natural Resources Environmental Protection Division would be contacted immediately regarding this event.

# IMPLEMENTATION STRATEGY

The Implementation Strategy represents the culmination of the information collected and analyzed in the preceding elements. In essence, it is a schedule for relevant current programs and future planned programs for each element and cover a ten-year planning time frame.

The Implementation Strategy will be present in the form of a table that identifies the year-by-year schedule for implementing the identified strategies. The table will include the five core elements (Collection, Disposal, Waste Reduction, Public Education/Involvement, and Land Limitation) and for this Plan will also include the Debris Management Plan.

There will be a table for each of the participating jurisdictions (Houston County, City of Centerville, City of Perry, and City of Warner Robins). On each table will be included headings, such as Activity, Year(s) Activity to be Implemented, Party or Parties Responsible for Implementation, Estimated Cost of Activity and Funding Source. The first five years of the Implementation Strategy will serve as the first Short-Term Work Program. The second half of the Implementation Strategy will be updated in accordance with the planning schedule established and revised from time to time by the Georgia Department of Community Affairs.

On the following pages, the Implementation Strategies for Houston County and the Cities of Centerville, Perry, and Warner Robins are presented.

## Houston County Solid Waste Management Plan

DESCRIPTION	STWP YEAR										LIKELY PROJECT INVOLVEMENT	ESTIMATED COST	POSSIBLE FUNDING SOURCES			
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16						
<b>COLLECTION</b>																
Goal: To establish an effective, comprehensive (household waste, recyclables, and yard waste) and affordable collection program that meets the needs of general population and business/industry over the ten-year planning period.																
Goal: To establish a continuing, comprehensive, and coordinated approach to address illegal dumping in the unincorporated area of Houston County.																
1	Operate and maintain existing weekly curbside collection of household waste, yard waste, recyclables, and white goods under contract with a private waste collection company.	X	X	X	X	X	X	X	X	X	X	X	X	Houston County, Private Waste Collection Company	\$11.00/customer/month	User Fees and Insurance Tax
2	Continue to assess the extent and nature of illegal dumping within the unincorporated area of Houston County.	X	X	X	X	X	X	X	X	X	X	X	X	Houston County	Staff	Houston County
<b>DISPOSAL</b>																
Goal: To assure the landfill facility that is utilized to dispose of the solid waste that is generated within the unincorporated area of Houston County has sufficient capacity to meet the needs during the planning period.																
Goal: Provide for the proper extraction of methane gas at the Houston County MSW Landfill, while at the same time studying its possible use as a possible energy source.																
1	Dispose household waste in the county's MSW Landfill.	X	X	X	X	X	X	X	X	X	X	X	X	Houston County	\$20.50/tonn	Tipping Fees
2	Dispose construction and demolition waste in existing county's C & D Landfill.	X	X	X	X	X	X	X	X	X	X	X	X	Houston County	\$15.50/ton	Tipping Fees
3	Operate a Methane Gas Extraction System at MSW Landfill and evaluate use of gas as energy source.	X	X	X	X	X	X	X	X	X	X	X	X	Houston County	\$100,000	Tipping Fees

4	Evaluate onsite wastewater treatment, install, and operate.	X	X	X	X	X	X	X	X	X	X	X	X	X	Houston County	\$500,000	Tipping Fees
5	Construct new 8.1-acre cell (Phase 3 Cells 4-5) at existing MSW Landfill.	X													Houston County	\$2,430,000	Tipping Fees
6	Construct new 6.3-acre Cell (Phase 3 Cells 6-7) at existing MSW Landfill.														Houston County	\$1,890,000	Tipping Fees
7	Construct Sediment Pond 3 for Existing MSW Landfill to serve Phase 4.														Houston County	\$50,000	Tipping Fees
8	Construct new 8.2-acre Cell (Phase 4 Cells 1-2) at existing MSW Landfill.														Houston County	\$2,460,000	Tipping Fees
9	Construct new 11-acre Cell (Phase 4 Cells 4-5) at existing MSW Landfill.														Houston County	\$3,300,000	Tipping Fees
10	Permit horizontal expansion of MSW and C & D Landfill on existing property.														Houston County	\$250,000	Tipping Fees
11	Construct Sediment Pond 5 at existing C & D Landfill.														Houston County	\$50,000	Tipping Fees
12	Construct new Cell (Cell 4) at existing C & D Landfill.														Houston County	Construction by County	Tipping Fees
13	Construct New Cell (Cell 5) at existing C & D Landfill.														Houston County	Construction by County	Tipping Fees
14	Construct New Cell (Cell 6) at existing C & D Landfill.														Houston County	Construction by County	Tipping Fees



7	Circulate the message about the availability of tree mulch at various areas in Houston County, including the Houston County MSW Landfill.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Houston County	Houston County
8	Continue the existing program of collecting white goods, electronics, and tires and transporting them to the proper markets.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Private hauler, County	Users Fees and Insurance Tax
<b>PUBLIC EDUCATION AND INVOLVEMENT</b>																	
Goal: Develop effective solid waste education programs and tools that will maximize the understanding of solid waste management issues in unincorporated Houston County among youth and adult residents.																	
Goal: Provide opportunities and incentives that will maximize the participation of local citizens, businesses/industries, and civic organizations in local solid waste management programs and activities.																	
1	Conduct on-site landfill tours and establish other education programs to minimize disposal of waste and increase understanding of the environmental aspects of Landfill Management.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Houston County	Tipping Fees
2	Explore options to increase the number of citizen volunteers, businesses/industries and civic organizations involved in litter prevention, beautification and community involvement, and solid waste minimization efforts in unincorporated Houston County and the local schools.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Houston County	Houston County
<b>LAND LIMITATION</b>																	
Goal: To insure all future solid waste handling facilities in unincorporated Houston County are not located in unsuitable areas.																	
Goal: To provide a fair hearing on all applications for Plan Consistency Determination that includes an effective process to notify and involve the public, protect the rights of the applicant, and promote a sound analysis of the facts that enable policymakers to make the best possible decisions.																	
1	Implement an in-office review process at the Houston County Planning and Zoning Office to implement strategy to discourage location of solid waste handling facilities in unsuitable areas.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Houston County	Houston County
2	Establish and implement a public involvement and notification process for determining plan consistency as outlined in SWMP.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Houston County	Houston County
3	Develop and update, when necessary, a Request for Plan Consistency Determination Application with specific instructions to be completed by applicants.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Houston County	Houston County
4	Develop and implement specific standards to make decisions on Plan Consistency Determinations.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Houston County	Houston County

5	Establish and update, when necessary, a list of affected parties to receive comments for Plan Consistency Determinations.	X	X	X	X	X	X	X	X	X	X	X	X	Houston County	Staff Time in Budget	Houston County
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**DISASTER DEBRIS MANAGEMENT**

1	Implement the Disaster Debris Management Plan as outlined in the SWMP.	X	X	X	X	X	X	X	X	X	X	Houston County EMA, GEMA, FEMA	Staff Time in Budget	Houston County, GEMA, FEMA
2	Conduct periodic review of Disaster Debris Management Plan and update where necessary.	X	X	X	X	X	X	X	X	X	X	Houston County EMA, Cities of Centerville, Perry and Warner Robins, GEMA, FEMA	Staff Time in Budget	Houston County, Cities of Centerville and Warner Robins, GEMA, FEMA

## City of Centerville Solid Waste Management Plan

	DESCRIPTION	STWP YEAR								LIKELY PROJECT INVOLVEMENT	ESTIMATED COST	POSSIBLE FUNDING SOURCES			
		06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14				14-15	15-16	
<b>COLLECTION</b>															
Goal: To establish an effective, comprehensive (household waste, recyclables, and yard waste) and affordable collection program that meets the needs of general population and business/industry over the ten-year planning period.															
Goal: To establish a continuing, comprehensive, and coordinated approach to address illegal dumping in the City of Centerville.															
1	Assure that City has adequate system for garbage collection (door-to-door).	X	X	X	X	X	X	X	X	X	X	X	Contract with private sanitation hauler	\$663,285/yr.	Sanitation Fees
2	Operate and maintain existing recycling center.	X	X	X	X	X	X	X	X	X	X	X	City/Keep Centerville Beautiful Commission	\$6,000/yr.	Sanitation Fees, Private Donations
3	Operate and maintain weekly collection of yard waste under contract with a private waste collection company.	X	X	X	X	X	X	X	X	X	X	X	Contract with private sanitation hauler	\$165,821/yr.	Sanitation fees
4	Continue enforcement by City Marshall of City's codes and ordinances related to illegal dumping.	X	X	X	X	X	X	X	X	X	X	X	City of Centerville	Staff Time in Budget	City
<b>DISPOSAL</b>															
Goal: To assure that the landfill facility that is utilized to dispose of the solid waste that is generated within the City of Centerville has sufficient capacity to meet the needs during the planning period.															
1	Dispose City's residential waste to Fort Valley Transfer Station, which is then taken to Allied Services MSW Landfill.	X	X	X	X	X	X	X	X	X	X	X	Contract with private sanitation hauler	\$96,000/yr.	Sanitation Fees
2	Continue to work with the City of Warner Robins to dispose of the City's yard waste at the Diversified Carriers' mulching and composting site in Warner Robins.	X	X	X	X	X	X	X	X	X	X	X	Contract with private sanitation hauler	\$165,821/yr.	Sanitation Fees
<b>WASTE REDUCTION</b>															
Goal: To make it convenient, easy, and as inexpensive as possible for residents, businesses, and industries to recycle.															
Goal: To create consistent markets and pricing for recycled materials.															

<p>Goal: To significantly reduce the percentage of commonly recycled paper and other materials that are disposed of in the MSW landfills.</p> <p>Goal: To bring the message home—close the recycling circle and buy recycled products.</p> <p>Goal: To change the attitudes and behaviors of City of Centerville residents and businesses to the extent that reusing and reducing over disposing waste is the norm (see Strategy #1 under Public Education and Involvement).</p> <p>Goal: To create the mindset that yard waste is better in creating new life than decaying in a landfill (see also Strategy #1 under Public Education and Involvement).</p> <p>Goal: To insure certain commonly used materials by individuals and industries are properly managed in order to reduce the risk of environmental contamination.</p>															
1	Recycle the newspapers, cardboard, metals, batteries, tires, white goods, motor oil, and antifreeze that is collected at the City's recycling center.	X	X	X	X	X	X	X	X	X	X	X	City, Keep Centerville Beautiful Commission	\$2,500/yr.	Sanitation Fees, Private Donations
2	Continue to work with various markets to obtain the best price for the recyclable materials collected at the City's recycling center.	X	X	X	X	X	X	X	X	X	X	X	City, Keep Centerville Beautiful Commission	Staff Time in Budget	Sanitation Fees, Private Donations
3	Explore methods to encourage the purchase of recycled products in the public and private sector within the City of Centerville.	X	X	X	X	X	X	X	X	X	X	X	City, Keep Centerville Beautiful Commission	Staff Time in Budget	Sanitation Fees, Private Donations
4	Circulate the message about the availability of tree mulch at the Diversified Carriers' mulching/composting site in Warner Robins.	X	X	X	X	X	X	X	X	X	X	X	City, Keep Centerville Beautiful Commission	Staff Time in Budget	Sanitation Fees, Private Donations
5	Continue the existing program of collecting electronics, batteries, white goods, anti-freeze, and oil and transporting them to the proper markets.	X	X	X	X	X	X	X	X	X	X	X	Private hauler	\$2,000/yr.	Sanitation Fees

**PUBLIC EDUCATION AND INVOLVEMENT**  
 Goal: Develop effective solid waste education programs and tools that will maximize the understanding of solid waste management issues in the City of Centerville among youth and adult residents.  
 Goal: Provide opportunities and incentives that will maximize the participation of local citizens, businesses/industries, and civic organizations in local solid waste management programs and activities.

1	Continue existing Keep America Beautiful Chapter program that includes local clean-up and beautification projects, a yard of the month program, and a comprehensive public education program involving the local schools, civic organizations, developers, business community, citizen volunteers and news media that promotes source reduction, recycling, and home composting, and includes the distribution of the brochures developed under the previous work program.	X	X	X	X	X	X	X	X	X	X	X	City of Centerville, Keep Centerville Beautiful Comm. Local Schools, Business Community, Developers, Citizens, and News Media	\$2,500/yr.	Sanitation Fees, Private Donations
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2	Explore options to increase the number of citizen volunteers, businesses/industries and civic organizations involved in litter prevention, beautification and community involvement, and solid waste minimization efforts in the City of Centerville and the local schools.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Sanitation Fees, Private Donations	Staff Time in Budget	City of Centerville, Keep Centerville Beautiful Commission, Local Schools, Business Community, Developers, Citizens, and News Media	
<b>DISASTER DEBRIS MANAGEMENT</b>																						
1	Implement the Disaster Debris Management Plan as outlined in the SWMP.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	City GEMA FEMA HUD	Staff Time in Budget	City Houston EMA GEMA FEMA	
2	Conduct periodic review of Disaster Debris Management Plan and update where necessary.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Houston County, City of Centerville, City of Perry, and City of Warner Robins GEMA FEMA	Staff Time in Budget	Houston EMA City of Centerville, City of Perry and City of Warner Robins GEMA, FEMA	

## City of Perry Solid Waste Management Plan

DESCRIPTION	STWP YEAR								LIKELY PROJECT INVOLVEMENT	ESTIMATED COST	POSSIBLE FUNDING SOURCES				
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14				14-15	15-16		
<b>COLLECTION</b>															
<b>Goal:</b> To establish an effective, comprehensive (household waste, recyclables, and yard waste) and affordable collection program that meets the needs of general population and business/industry over the ten-year planning period. <b>Goal:</b> To establish a continuing, comprehensive, and coordinated approach to address illegal dumping in the City of Perry.															
1	Continue with private hauler for weekly collection of solid waste.	X	X	X	X	X	X	X	X	X	X	X	Staff	\$300,000 Annually	Solid Waste Fund
2	Continue to regulate private collections at active construction projects.	X	X	X	X	X	X	X	X	X	X	X	Staff	Staff Time	Solid Waste Fund
3	Continue to assess the extent and nature of illegal dumping within Perry.	X	X	X	X	X	X	X	X	X	X	X	Staff	\$2,000 Annually	Solid Waste Fund
<b>DISPOSAL</b>															
<b>Goal:</b> To assure the landfill facility that is utilized to dispose of the solid waste that is generated within the City of Perry has sufficient capacity to meet the needs during the planning period.															
1	Work with Houston County to monitor capacity at landfill.	X	X	X	X	X	X	X	X	X	X	X	Staff	Staff Time	Solid Waste Fund
2	Continue disposing of all waste collected at the Houston County Landfill.	X	X	X	X	X	X	X	X	X	X	X	Staff	\$20,000 Annually	Solid Waste Fund

**WASTE REDUCTION**

Goal: To make it convenient, easy and inexpensive as possible for residents, businesses, and industries to recycle.

Goal: To create consistent markets and pricing for recycled materials.

Goal: To significantly reduce the percentage of commonly recycled paper and other materials that are disposed of in the MSW landfills.

Goal: To bring the message home—close the recycling circle and buy recycled products.

Goal: To change the attitudes and behaviors of City of Perry residents and businesses to the extent that reusing and reducing over disposing waste is the norm (see Strategy #1 under Public Education and Involvement).

Goal: To create the mindset that yard waste is better in creating new life than decaying in a landfill (see also Strategies #1 and #3 under Public Education and Involvement).

Goal: To insure certain commonly used materials by individuals and industries are properly managed in order to reduce the risk of environmental contamination.

1	Continue to operate recycling center.	X	X	X	X	X	X	X	X	X	X	X	Staff	\$1,500 Annually	Solid Waste Fund
2	Explore possibility of curbside recycling program.	X											Staff	Staff Time	Solid Waste Fund
3	Continue to work with various markets to obtain the best price for the recyclable materials collected at the City's recycling center.	X	X	X	X	X	X	X	X	X	X	X	Happy Hour Center	Staff Time in Budget	Private Donations
4	Explore methods to encourage the purchase of recycled products in the public and private sector within the City of Perry.	X	X	X	X	X	X	X	X	X	X	X	Staff	Staff Time in Budget	Solid Waste Fund
5	Circulate the message about the availability of tree mulch at various areas in Houston County.	X	X	X	X	X	X	X	X	X	X	X	City, Keep Perry Beautiful	Staff Time in Budget	Solid Waste Fund
6	Continue the existing program of collecting white goods and paint and transporting them to the proper markets.	X	X	X	X	X	X	X	X	X	X	X	Private hauler, City	\$2,000 Annually	Solid Waste Fund

**PUBLIC EDUCATION AND INVOLVEMENT**

Goal: Develop effective solid waste education programs and tools that will maximize the understanding of solid waste management issues in the City of Perry among youth and adult residents.

Goal: Provide opportunities and incentives that will maximize the participation of local citizens, businesses/industries and civic organizations in local solid waste management programs and activities.

1	Continue to operate existing public education on waste reduction (recycling, source reduction and mulching/composting) that includes the development of new promotional material.	X	X	X	X	X	X	X	X	X	X	X	Staff	\$2,000 Annually	Solid Waste Fund
2	Continue public education programs concerning illegal dumping.	X	X	X	X	X	X	X	X	X	X	X	Staff	\$2,000 Annually	Solid Waste Fund

3	Continue to work with Keep Perry Beautiful to support programs benefiting residents and businesses in Perry.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Staff	\$1,000 Annually	Solid Waste Fund
4	Educate residents and businesses on changes in solid waste management policy through web site, flyers, and utility bills.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Staff	\$2,000 Annually	Solid Waste Fund
5	Ensure that public education and information focuses on all other aspects of solid waste management not describe above, including costs.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Staff	\$2,000 Annually	Solid Waste Fund

**LAND LIMITATION**

Goal: To insure all future solid waste handling facilities in the City of Perry are not located in unsuitable areas.

Goal: To provide a fair hearing on all applications for Plan Consistency Determination that includes an effective process to notify and involve the public, protect the rights of the applicant, and promote a sound analysis of the facts that enable policymakers to make the best possible decisions.

1	Maintain maps indicating the land excluded from solid waste facility development based on zoning, land use, and other factors.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Staff	Staff Time	Solid Waste Fund
2	Educate potential developers about the City's siting requirements and the process to demonstrate consistency with the Solid Waste Management Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Staff	Staff Time	Solid Waste Fund
3	Enforce policy that no facilities will be sited in City without determination of consistency with the Solid Waste Management Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Staff	Staff Time	Solid Waste Fund

**DISASTER DEBRIS MANAGEMENT**

1	Implement the Disaster Debris Management Plan as outlined in the SWMP.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	City of Perry, Houston County EMA, GEMA, FEMA	Staff Time in Budget	Solid Waste Fund, GEMA, FEMA
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## City of Warner Robins Solid Waste Management Plan

DESCRIPTION	STWP YEAR										LIKELY PROJECT INVOLVEMENT	ESTIMATED COST	POSSIBLE FUNDING SOURCES		
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16					
<b>COLLECTION</b>															
<b>Goal:</b> To establish an effective, comprehensive (household waste, recyclables, and yard waste) and affordable collection program that meets the needs of general population and business/industry over the ten-year planning period. <b>Goal:</b> To establish a continuing, comprehensive, and coordinated approach to address illegal dumping in the City of Warner Robins.															
1	Contract with private collection company to collect residential and commercial waste, yard waste, and bulk items on a weekly basis.	X	X	X	X	X	X	X	X	X	X	X	City Private Collection Company	\$5,000,000	Solid Waste Fees
2	Contract with private hauler to collect construction and demolition waste.	X	X	X	X	X	X	X	X	X	X	X	City Private Haulers	\$260,000	Solid Waste Fees
3	Periodically assess collection system and fees charged. Adjust fees and contracts as required.		X		X		X			X			City	Time of Staff Mayor and City Council	City
4	Continue to assess the extent and nature of illegal dumping within the City of Warner Robins.	X	X	X	X	X	X	X	X	X	X	X	City	Time of Staff	City
<b>DISPOSAL</b>															
<b>Goal:</b> To assure the landfill facility that is utilized to dispose of the solid waste that is generated within the City of Warner Robins has sufficient capacity to meet the needs during the planning period.															
1	Dispose residential, commercial waste, and bulk items at Houston County landfill.	X	X	X	X	X	X	X	X	X	X	X	City County Private Company	\$230,000	Solid Waste Fees

2	Dispose of yard waste at Composting Center of Diversified Carriers, Inc. (City's contractor).	X	X	X	X	X	X	X	X	X	X	X	X	X	X	City Private Company	\$210,000	Solid Waste Fees	
3	Dispose of C&D waste at Houston County C&D landfill.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	City County Private Hauler	\$200,000	Solid Waste Fees	
<b>WASTE REDUCTION</b>																			
Goal: To make it convenient, easy, and inexpensive as possible for residents, businesses, and industries to recycle.																			
Goal: To create consistent markets and pricing for recycled materials.																			
Goal: To significantly reduce the percentage of commonly recycled paper and other materials that are disposed of in the MSW landfills.																			
Goal: To bring the message home—close the recycling circle and buy recycled products.																			
Goal: To change the attitudes and behaviors of City of Warner Robins residents and businesses to the extent that reusing and reducing over disposing waste is the norm (see Strategies #2-4 under Public Education and Involvement).																			
Goal: To create the mindset that yard waste is better in creating new life than decaying in a landfill (see also Strategies 2-4 under Public Education and Involvement).																			
Goal: To insure certain commonly used materials by individuals and industries are properly managed in order to reduce the risk of environmental contamination (see also strategy #1 under Collection).																			
1	Maintain listing of groups and business that accept or collect recyclables and provide to the public.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	City KWRB	Staff Time Volunteer Time	General Fund	
2	Promote volunteer efforts for waste reduction, litter control and pumping through KWRB and code enforcement.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	City KWRB	Staff Time Volunteer Time	General Fund Private Funds	
3	Host and or sponsor KWRB programs such as Christmas Tree Round-Up, E-cycling Day, Chunk-A-Junk Car Day, Adopt a Road, Nike-Reuse-A-Shoe, Great America Clean Up, etc.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	KWRB, City Private Groups, GDOT, RAPB, HCAEC, Volunteers	Staff Time Volunteer Time \$5,000/yr.	General Fund	
4	Continue to work with various markets to obtain the best price for the recyclable materials.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Private Recycling and Buy-back Centers	Staff Time	Private Funds	
5	Explore methods to encourage the purchase of recycled products in the public and private sector within the City of Warner Robins.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	KWRB, City, Private Groups	Staff Time	General Fund	

6	Circulate the message about the availability of free mulch at the Diversified Carriers' mulching/composting site in Warner Robins.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	KWRB, City	Staff Time	General Fund
<b>PUBLIC EDUCATION AND INVOLVEMENT</b>																				
Goal: Develop effective solid waste education programs and tools that will maximize the understanding of solid waste management issues in the City of Warner Robins among youth and adult residents.																				
Goal: Provide opportunities and incentives that will maximize the participation of local citizens, businesses/industries, and civic organizations in local solid waste management programs and activities.																				
1	Continue training volunteers to conduct educational workshops in schools using EnviroScape demonstration models.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	KWRB, City, Board of Education	\$1,500 (for purchase of one new model)	KWRB, City
2	Prepare annual newspaper supplemental insert; contents to include recycling, source reduction, grasscycling, mulching, and composting information.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	KWRB, City, DCA, KGaB, Local newspaper, volunteers	\$1,700/year	KWRB, City
3	Update KWRB portion of City of Warner Robins website to include recycling, source reduction, grasscycling, mulching, and composting information.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	KWRB, City	Budgeted staff time	N/A
4	Continue existing partnership with local radio stations to schedule prominent business personalities to record environmental public service announcements promoting recycling, source reduction, grasscycling, mulching, and composting.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	KWRB, City, Local Radio Stations, Local Business Personalities and/or Celebrities.	Budgeted staff time	N/A
5	Continue recognition of volunteers/sponsors/supporting departments through various programs.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	KWRB, City	\$3,000/year	KWRB, City
6	Continue to educate/motivate/involve youth, grade 5-12, through the KWRB Youth Advisory Board program.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	KWRB, City, Houston County Landfill, Diversified Carriers Compost facility, GFC, DCA, KGaB	\$2,000/year	KWRB, City

7	Conduct Annual Litter Index Survey as prepared by KAB, Inc.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	KWRB, City, Local Sponsor	\$150/year	KWRB, City
<b>LAND LIMITATION</b>																						
Goal: To insure all future solid waste handling facilities in the City of Warner Robins are not located in unsuitable areas. Goal: To provide a fair hearing on all applications for Plan Consistency Determination that includes an effective process to notify and involve the public, protect the rights of the applicant, and promote a sound analysis of the facts that enable policymakers to make the best possible decisions.																						
1	Implement an in-office review process at the Warner Robins Planning and Zoning Office to implement strategy to discourage location of solid waste handling facilities in unsuitable areas.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	City of Warner Robins	Staff Time in Budget	City of Warner Robins
2	Establish and implement a public involvement and notification process for determining plan consistency as outlined in SWMP.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	City of Warner Robins	Staff Time in Budget	City of Warner Robins
3	Develop and update when necessary a Request for Plan Consistency Determination Application with specific instructions to be completed by applicants.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	City of Warner Robins	Staff Time in Budget	City of Warner Robins
4	Develop and implement specific standards to make decisions on Plan Consistency Determinations.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	City of Warner Robins	Staff Time in Budget	City of Warner Robins
5	Establish and update when necessary a list of affected parties to receive comments for Plan Consistency Determinations.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	City of Warner Robins	Staff Time in Budget	City of Warner Robins
<b>DISASTER DEBRIS MANAGEMENT</b>																						
1	Implement the Disaster Debris Management Plan as outlined in the SWMP.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	City Houston EMA GEMA FEMA	Staff Time in Budget	City GEMA FEMA HUD

2	Conduct periodic review of Disaster Debris Management Plan and update where necessary.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Houston County, City of Centerville, City of Perry and City of Warner Robins GEMA FEMA	Staff Time in Budget	Houston EMA, City of Centerville, City of Perry and City of Warner Robins GEMA, FEMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
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Abbreviations:

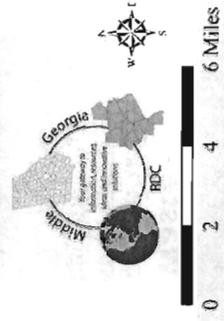
- GEMA Georgia Emergency Management Agency
- FEMA Federal Emergency Management Agency
- HUD U.S. Department of Housing and Urban Development
- RAFB Robins Air Force Base
- GDOT Georgia Department of Transportation
- KWRB Keep Warner Robins Beautiful
- HCAEC Houston County Association for Exceptional Children

Solid Waste Management Plan

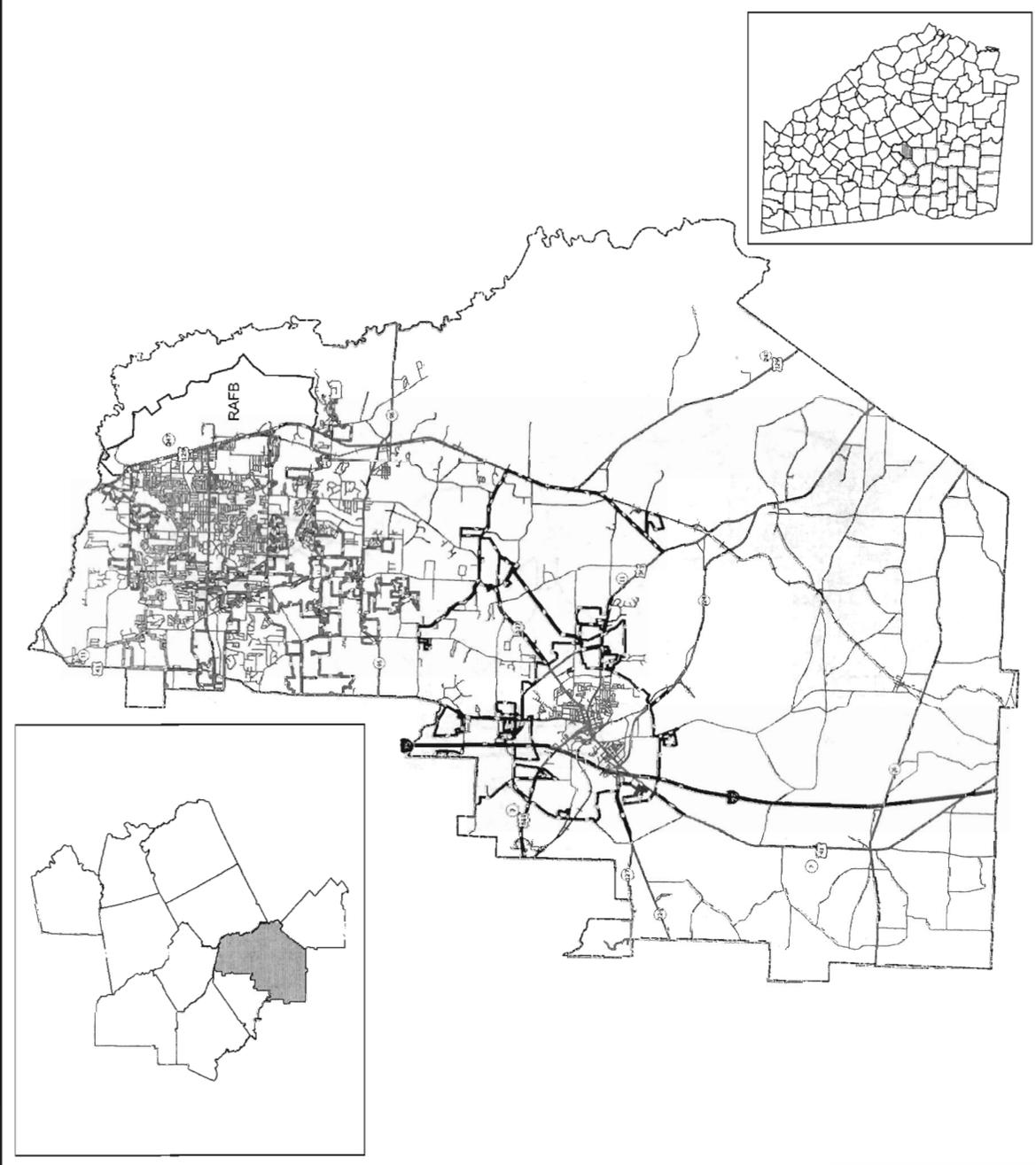
Location - State, Region & County

Legend

- Centerville
- Perry
- Warner Robins
- Houston County
- Railroad
- Interstate
- City Street
- County Road
- State Highway



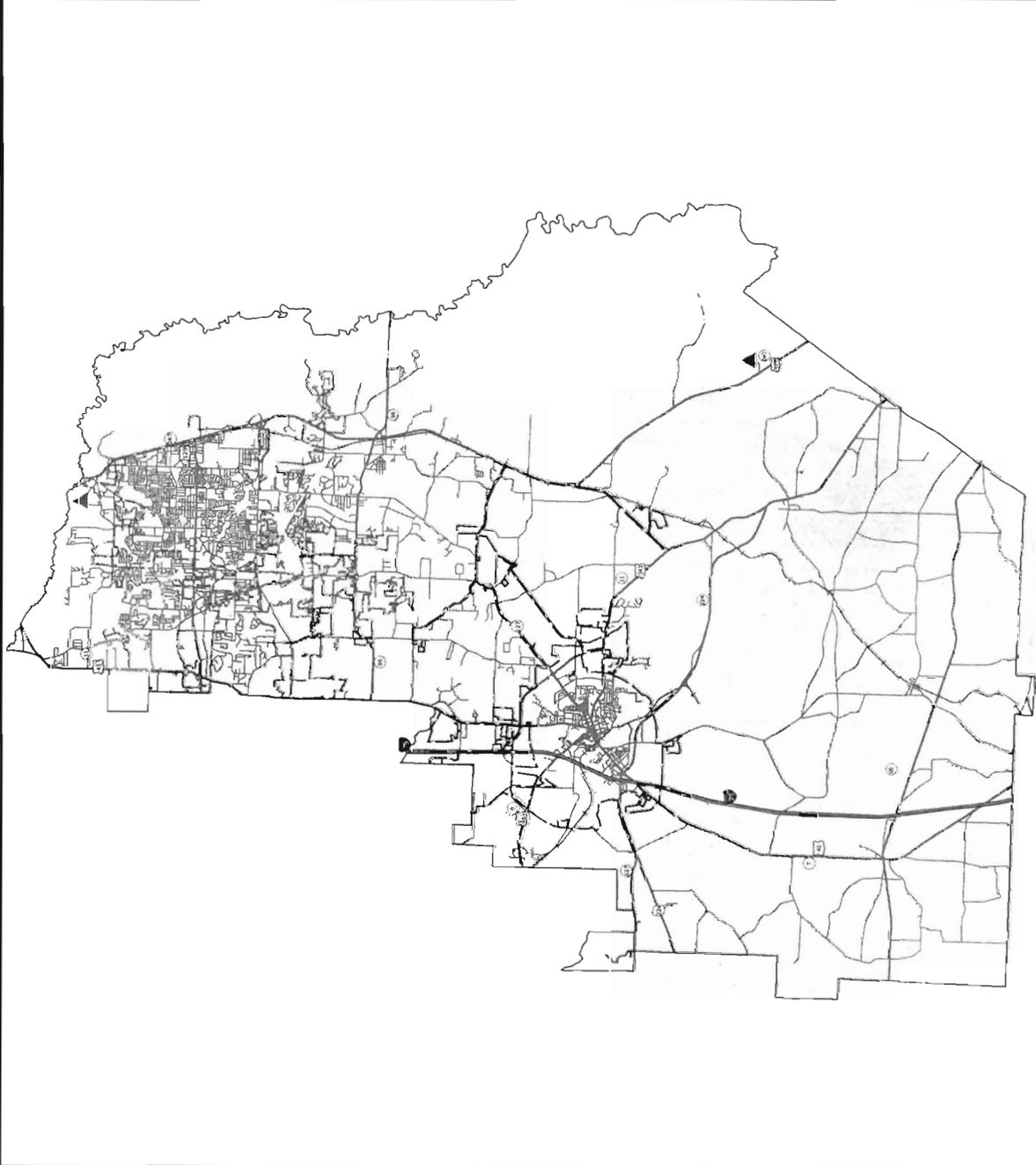
Map 1

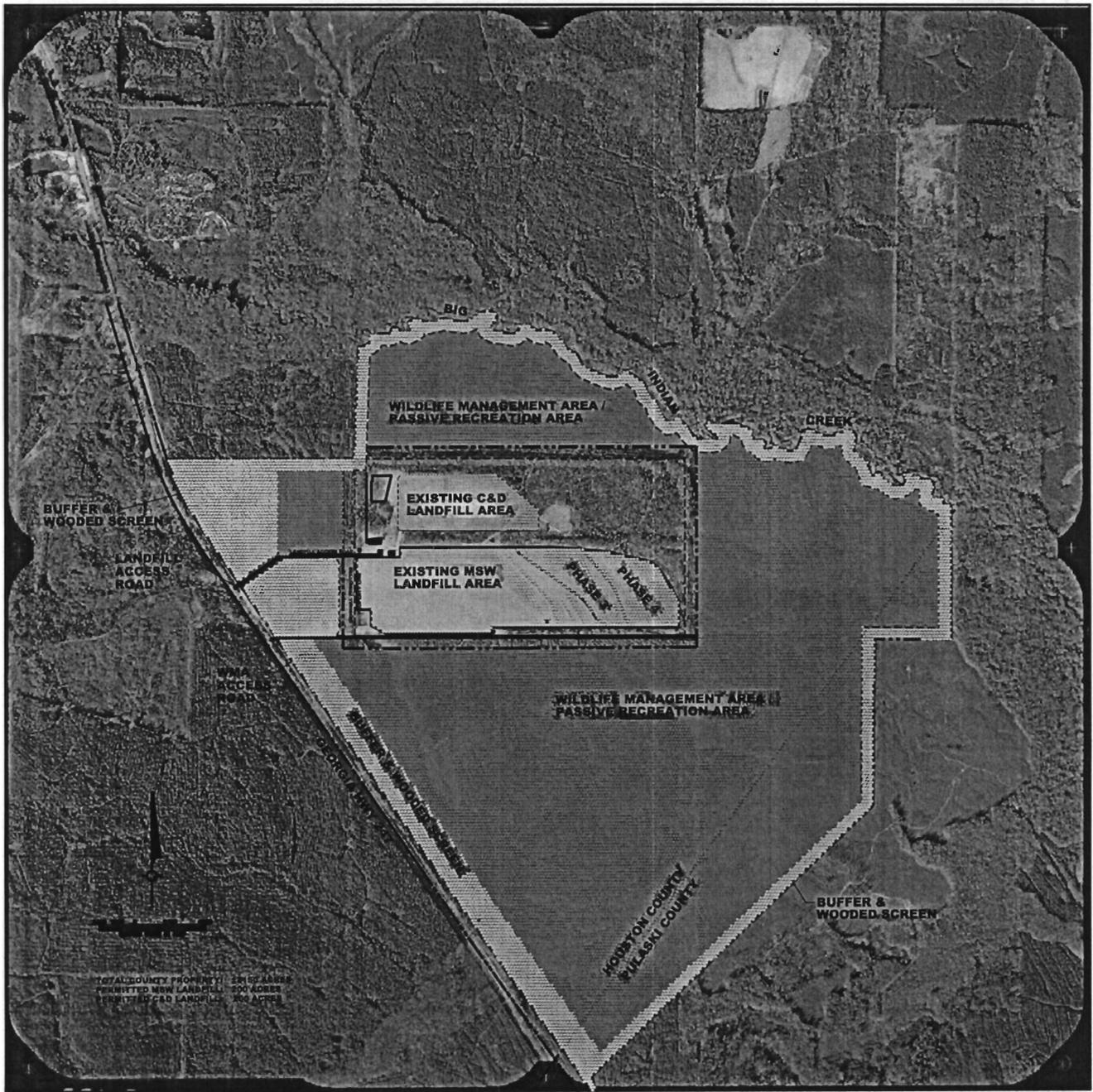


### Solid Waste Management Facilities

**Legend**

- Warner Robins Composting Center
- Houston County Landfill
- Perry Recycling Center
- Houston County
- Centerville
- Perry
- Warner Robins
- Rail Road
- Interstates
- City Street
- County Road
- State Highway



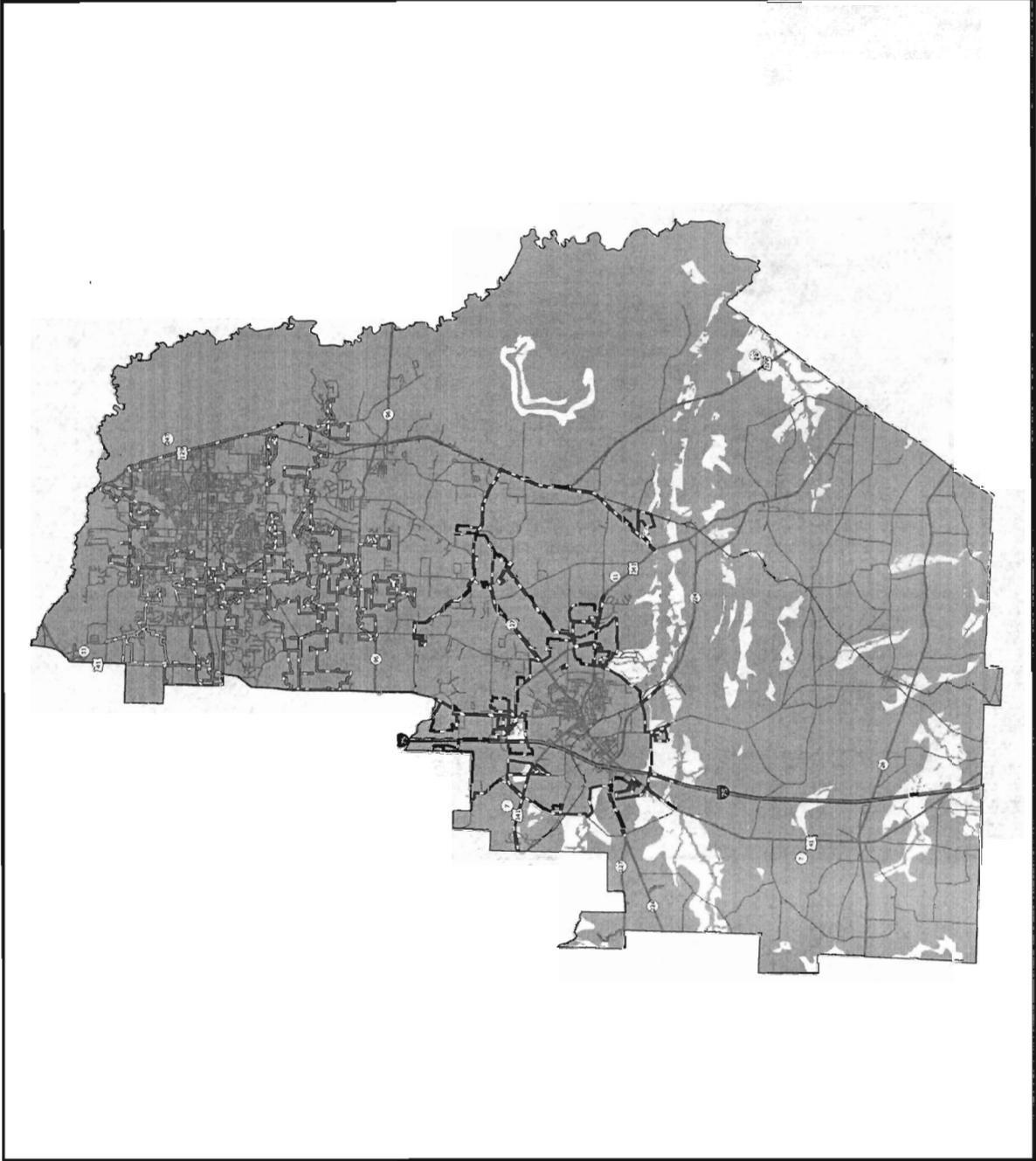


**HOUSTON COUNTY LANDFILL MASTER PLAN**  
 FOR  
**HOUSTON COUNTY BOARD OF COMMISSIONERS**

### Limiting Factors

**Legend**

- Unsuitable Environmental Areas
- Suitable Areas
- Houston County
- Centerville
- Perry
- Warner Robins
- Rail Road
- Interstate
- City Street
- County Road
- State Highway



HOUSTON COUNTY PUBLIC WORKS DEPARTMENT

2018 Kings Chapel Road  
Perry, Georgia 31069  
(478) 987-4280 • Fax (478) 988-8007



October 18, 2006

Chairman Ned Sanders  
Houston County Commissioner  
200 Carl Vinson Parkway  
Warner Robins, GA 31069

RE: Solid Waste Permit Number: 076-020D (SL)  
076-024D (CD)

Dear Chairman Sanders:

This letter serves as a disposal capacity assurance for waste generated by Houston County from 2007 to 2017. The stated capacity (10 years) is assurance supporting the ten (10) year Solid Waste Plan. However, Houston County has permitted capacity for the next 30+/- years and land availability for an additional 100+/- years. This assurance is based upon Houston County disposing of 15,000 +/- tons of waste at this facility on an annual basis.

We thank Houston County for this business partnership and look forward to providing environmentally sound waste disposal options for the foreseeable future.

Sincerely

A handwritten signature in cursive script that reads 'Tommy Stalnaker'.

Tommy Stalnaker  
Director of Operations



**SOUTHERN STATES ENVIRONMENTAL SERVICES**

TAYLOR COUNTY LANDFILL  
P.O. BOX 199 • MAULK, GEORGIA 31058  
PHONE 478-862-2504 • FAX 478-862-2888

October 19, 2006

City of Centerville  
300 East Church Street  
Centerville, GA 31028-0199

Dear City of Centerville

This letter serves as a disposal capacity assurance for waste generated by City of Centerville from 2006 to 2016. The Georgia EPD permit number for this facility is 133-003D(SL). This assurance is based upon City of Centerville disposing of approximately N/A cubic yards of waste or approximately 13,200 tons of waste at this facility on an annual basis. Projected Life of Remaining Airspace of Landfill volume is 41 years.

We thank the City of Centerville for this business partnership and look forward to providing environmentally sound waste disposal options for the foreseeable future.

Sincerely,

Tercsa Blackston  
Office Manager

HOUSTON COUNTY PUBLIC WORKS DEPARTMENT

2018 Kings Chapel Road  
Perry, Georgia 31069  
(478) 987-4280 • Fax (478) 988-8007



October 18, 2006

Mayor Jim Worrall  
City of Perry  
P. O. Box 2030  
Perry, GA 31069-2030

Re: Solid Waste Permit Number: 076-020D (SL)  
076-024D (CD)

Dear Mayor Worrall:

This letter serves as a disposal capacity assurance for waste generated by the City of Perry from 2007 to 2017. The stated capacity (10 years) is assurance supporting the ten (10) year Solid Waste Plan. However, Houston County has permitted capacity for the next 30+/- years and land availability for an additional 100+/- years. This assurance is based upon the City of Perry disposing of 5,000 +/- tons of waste at this facility on an annual basis.

We thank the City of Perry for this business partnership and look forward to providing environmentally sound waste disposal options for the foreseeable future.

Sincerely

A handwritten signature in cursive script that reads "Tommy Stalnaker".

Tommy Stalnaker  
Director of Operations

HOUSTON COUNTY PUBLIC WORKS DEPARTMENT

2018 Kings Chapel Road  
Perry, Georgia 31069  
(478) 987-4280 • Fax (478) 988-8007



October 18, 2006

Mayor Donald Walker  
City of Warner Robins  
P. O. Box 1488  
Warner Robins, GA 31099-1488

Solid Waste Permit Number: 076-020D (SL)  
076-024D (CD)

Dear Mayor Walker:

This letter serves as a disposal capacity assurance for waste generated by the City of Warner Robins from 2007 to 2017. The stated capacity (10 years) is assurance supporting the ten (10) year Solid Waste Plan. However, Houston County has permitted capacity for the next 30+/- years and land availability for an additional 100+/- years. This assurance is based upon the City of Warner Robins disposing of 17,000 +/- tons of waste at this facility on an annual basis.

We thank the City of Warner Robins for this business partnership and look forward to providing environmentally sound waste disposal options for the foreseeable future.

Sincerely

Tommy Stalnaker  
Director of Operations