

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

Rural & Underserved Area Disposal Needs Study

AUGUST 2003



This study was funded through a solid waste management grant provided by the Texas Commission on Environmental Quality through the North Central Texas Council of Governments. This funding does not necessarily indicate endorsement or support of the study's findings and recommendations.



RURAL AND UNDERSERVED AREA DISPOSAL NEEDS STUDY

KAUFMAN COUNTY EDITION

AUGUST 2003

PREPARED FOR:

**NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**

PREPARED BY:



**REED, STOWE & YANKE, A DIVISION OF R.W. BECK, INC.
5806 MESA DRIVE, SUITE 310
AUSTIN, TEXAS; 78731
(512) 450-0991**

AND



**CHIANG, PATEL & YERBY, INC.
1820 REGAL ROW, SUITE 200
DALLAS, TEXAS; 75235
(214) 638-0500**

TABLE OF CONTENTS

1. Executive Summary	4
1.1 Background	4
1.2 Project Purpose	4
1.3 Key Findings	5
1.3.1 Areas Lacking Collection and Disposal Services	5
1.3.2 Reasons for a Lack of Collection and Disposal Services	6
1.3.3 Need for Organized Collection Services	6
1.3.4 Need for Citizens' Collection Stations and Transfer Stations	6
1.4 Study Format	6
1.5 How to Use this Study	7
2. EVALUATION OF AREAS IN NEED OF DISPOSAL FACILITIES AND COLLECTION SERVICES	9
2.1 Analysis of Existing Solid Waste Disposal and Collection Activities	10
2.1.1 Kaufman County	11
2.2 Collection and Disposal Key Findings	12
2.2.1 Areas Lacking Collection and Disposal Services	12
2.2.2 Reasons for a Lack of Collection and Disposal Services	13
2.2.3 Need for Organized Collection Services	14
2.2.4 Need for Citizens' Collection Stations and Transfer Stations	14
2.2.5 Over Dependence on Community Clean-ups	14
3. SITING CRITERIA FOR CITIZENS' COLLECTION STATIONS AND TRANSFER STATIONS	17
.1 Siting Criteria: Citizens' Collection Stations	17
3.1.1 Functionality Issues	17
3.1.2 Planning and Regulatory Issues	18
3.2 Siting Criteria: Transfer Stations	20
3.2.1 Functionality Issues	20
3.2.2 Planning and Regulatory Issues	22
4. CONSTRUCTION AND OPERATIONAL NEEDS AND COSTS FOR CITIZENS' COLLECTION STATIONS	24
4.1 Construction and Operational Needs and Costs	24
4.1.1 Construction Needs and Costs	24
4.1.2 Operational Needs and Costs	28



4.2 Case Studies: Existing Citizens’ Collection Stations in the North Central Texas Region.	30
4.2.1 Kaufman County	30
4.2.2 Wise County.....	32
4.2.3 City of Waxahachie.....	33
4.2.4 City of Grand Prairie.....	34

5. OPTIONS FOR PROVIDING ORGANIZED COLLECTION SERVICES AND LONG-TERM FINANCIAL ALTERNATIVES..... 36

5.1 Summary of Texas Laws Concerning Counties and Solid Waste Services	36
5.1.1 General Provisions for Counties Concerning Solid Waste.....	37
5.1.2 Funding Mechanisms	37
5.1.3 Collection and Transportation Requirements.....	38
5.1.4 Exemptions for Certain Waste Haulers.....	38
5.1.5 Just Compensation Laws.....	39
5.2 Overview of an Organized Collection System.....	40
5.2.1 Advantages of an Organized Collection Program.....	41
5.2.2 Disadvantages of an Organized Collection Program	43
5.3 Licensing of Private Haulers	43
5.4 Funding Methods for Collection Services.....	44
5.4.1 Charge via Utility Bills	44
5.4.2 Charge via Special Assessment.....	46
5.4.3 Individual Haulers Collect Bills.....	46
5.4.4 Direct User Fees.....	47
5.5 Funding Sources Available to Develop Facilities	47
5.5.1 Texas Water Development Board – Clean Water State Revolving Fund.....	47
5.5.2 United States Department of Agriculture (USDA) – Water and Waste Disposal Loan/Grant Program.....	47
5.5.3 Community Development Block Grants (CDBG) - Non-entitlement Communities.....	48
5.5.4 Gifts, Grants, Donations and Bequests to a County	48

6. OPTIONS FOR LONG-TERM STRATEGIC RELATIONSHIPS AND SUB-REGIONAL AUTHORITIES..... 50

6.1 Interlocal Agreements for Joint Ownership and Operation	50
6.2 Contracted County Operation	50
6.3 Establishment of Special Solid Waste Authorities or Districts as a Non-profit Corporation	51
6.4 Existing River Authorities or Water Districts with Solid Waste Authority	51
6.5 Establishment of Solid Waste Cooperatives (Kaufman County)	52
6.6 Single Community Ownership and Operation through Interlocal Agreements	53



TABLES

- Table 4-1: Citizens' Collection Station Construction Costs
Table 4-2: Kaufman County CCS Annual Operating Costs
Table 4-3: Wise County Citizens' Collection Station User Fees
Table 4-4: City of Waxahachie Citizens' Collection Station Construction Costs

FIGURES

- Figure 2-1: Analysis of Solid Waste Collection Service Needs in the North Central Texas COG
Figure 4-1: Citizens' Collection Station Layout

APPENDICES

- Appendix A: List of Private Haulers Operating in Selected Cities in Kaufman County
Appendix B: Kaufman County Maps
Appendix C: Compilation of Solid Waste Laws and Regulations
Appendix D: Trinity County Ordinance

1. Executive Summary

1.1 Background

Rural counties throughout the State of Texas, including several in the North Central Texas region, are facing serious issues regarding the collection and disposal of their solid waste. In many cases, rural counties are facing scenarios where their landfill has closed, and local residents and/or businesses do not have access to convenient and/or affordable solid waste collection or disposal services. As a result, many counties have experienced a combination of higher disposal costs and increases in illegal dumping. For example, the *Targeted Illegal Dumper Study*, which was developed by the North Central Texas Council of Governments (NCTCOG) in 2001, concluded that illegal dumping in rural areas represents one of the most significant sources of illegal dumping in the North Central Texas region.

In *SEE Less Trash Regional Solid Waste Management Plan (Plan)*, which is the regional solid waste management plan for the NCTCOG, the NCTCOG developed a specific objective and related recommendations to address disposal and collection problems in rural areas of the North Central Texas region. The *Plan* identified the need for more collection and disposal options to help control the amount of solid waste illegally dumped throughout the region. The *Plan* also stated that illegal dumping can be “reduced through initiatives such as the development of additional transfer and citizen collections’ stations for more convenient disposal options.”

To address these issues, NCTCOG applied for and received a grant from the Resource Conservation Council (RCC) of NCTCOG to conduct a “Rural and Underserved Area Disposal Needs Study.” NCTCOG retained the services of Reed, Stowe & Yanke, a division of R.W. Beck, Inc., (RS&Y) to conduct the study. The RS&Y project team was composed of staff from RS&Y and Chiang, Patel & Yerby, Inc. NCTCOG staff and members of the RCC’s Assuring Capacity for Trash Project Oversight Subcommittee provided supervision and guidance in the conduct of the study.

The Rural and Underserved Area Disposal Needs Study is intended to complement both NCTCOG’s *SEE Less Trash Regional Solid Waste Management Plan* and TCEQ’s *Solid Waste Management in Texas: Strategic Plan 2001-2015*. In addition, this study complies with all of the TCEQ’s requirements for the development of a technical study, as described in 30 Texas Administrative Code, Chapter 330, Subchapter O.

This edition of the Rural and Underserved Area Disposal Needs Study contains data specific to Kaufman County. General recommendations and additional information applicable to all counties in the region has also been included in this edition.

1.2 Project Purpose

This study has two fundamental purposes. The first, purpose was to evaluate the current and future needs for solid waste disposal and collection services in the rural and



underserved areas of the North Central Texas region. This evaluation was to include a county by county analysis of the adequacy of existing collection services and disposal facilities, which include landfills, transfer stations and citizens' collection stations to serve the needs of residents and businesses in rural counties. For each county, the RS&Y project team would analyze issues affecting the availability of long-term collection and disposal options for rural and underserved areas. The purpose of this analysis was to develop a better understanding of the reasons why collection and disposal services are lacking within the North Central Texas region. This edition of the study includes an evaluation analysis pertinent to Kaufman County.

The second purpose of the study was to develop information that local communities could use as a resource to address their collection and disposal needs. In other words, sections of this study would serve as a resource guide for local governments in the North Central Texas region to address issues such as providing and/or facilitating the availability of collection and disposal services, as well as identifying strategies for funding these programs and developing partnerships.

1.3 Key Findings

Based on extensive research, which included detailed interviews and surveys to evaluate collection and disposal practices in each of the 16 counties in the North Central Texas region, the RS&Y project team developed a set of key findings. The following represents a summary of these key findings for the entire region.

1.3.1 Areas Lacking Collection and Disposal Services

In conducting this study, the RS&Y project team sought to identify areas within the North Central Texas region that lack needed collection and disposal services. Several of these types of areas were identified. In several cases, county representatives identified specific areas within their counties that are in need of additional services. Figure 2-1 provides a regional map of specific areas of each county that are in need of collection and disposal services. Counties that identified specific areas in need of services include the following:

- Collin
- Dallas
- Erath
- Hood
- Hunt
- Kaufman
- Navarro
- Palo Pinto
- Rockwall
- Wise

Some counties, Ellis and Parker, stated that they have a need for additional disposal and collection services. However, they were unable to identify specific geographic areas in need of services.

1.3.2 Reasons for a Lack of Collection and Disposal Services

A key objective of this study was to better understand the reasons why collection and disposal services are lacking within the North Central Texas region. The RS&Y project team identified the following reasons based on interviews and other research conducted for this study:

- current options are too expensive
- current options are inconvenient
- residents do not consider dumping/burning to be a problem
- residents not aware of current options
- residents are willing to take risks
- reluctance to use existing facilities

1.3.3 Need for Organized Collection Services

Multiple counties reported problems with the illegal dumping of household garbage and bulky items such as furniture and appliances. In several cases these problems occur in cases when residents do not have any type of solid waste collection services, or where not all residents subscribe to solid waste collection services. There are several opportunities to address this issue. For example, many counties in the North Central Texas region could benefit by developing an organized solid waste collection system for residents in unincorporated areas. Section 5 of the study further addresses this issue.

1.3.4 Need for Citizens' Collection Stations and Transfer Stations

Some counties in the North Central Texas region may have a need to develop citizens' collection stations and transfer stations to provide disposal options to their residents. Several sections of this report focus on providing information to assist counties in the development of these facilities. Sections 3 and 4 of the study further address this issue.

1.4 Study Format

RS&Y developed this study through a progression of logical steps. RS&Y has described the evaluations and analyses completed for this study in the following sections of the report:

Section 2: Describes detailed analysis of disposal and collection practices for Kaufman County. This section also includes the key findings that the RS&Y project team developed based on the county evaluations.

Section 3: To assist communities that may have an interest in developing either citizens' collection stations or transfer stations, the RS&Y project team has developed information to describe the planning process for each of

these types of facilities. Specifically, this section focuses on the functionality and standard siting criteria for these types of facilities.

- Section 4: This section provides an understanding of the costs of developing and managing citizens' collection stations. The RS&Y project team has provided specific information on the costs associated with constructing and operating citizens' collection stations. This section also includes a description of several citizens' collection stations that are operated in the North Central Texas region.
- Section 5: The purpose of this section is to provide counties with a better understanding of the legal mechanisms counties can implement to address solid waste management issues. Specifically, the RS&Y project team has summarized applicable laws, developed an overview of an organized collection system, described the process for implementing an organized collection system and evaluated funding methods.
- Section 6: This section describes long-term strategic relationships that other Texas communities have developed to better coordinate solid waste management efforts between communities. The options are presented through a series of case studies, outlining both positive and negative experiences of multiple communities' solid waste management system operations.
- Appendix A: This appendix includes a listing of the solid waste haulers providing collection services in Kaufman County. This list was originally developed by the NCTCOG and included in the *Plan*. The RS&Y project team has added information to this list to (1) document the current landfills being used by haulers to dispose of collected solid waste (2) calculate the distance traveled from each community to these landfills.
- Appendix B: Includes maps for Kaufman County to portray factors that can affect the provision of solid waste collection and disposal services in rural and underserved areas. For Kaufman County, the RS&Y project team developed maps for long-term disposal options, population density and median household income.
- Appendix C: Compilation of State of Texas solid waste laws and regulations affecting counties.
- Appendix D: Ordinance and Application for County Waste Hauler Permit for Trinity County, Texas.

1.5 How to Use this Study

The RS&Y project team developed this study with the intention that it would serve as an on-going in-depth reference and planning guide for governmental entities in the North



Central Texas region. Kaufman County should review the analyses in Section 2 and related maps in Appendix B. In addition, Kaufman County should review the recommendations that the RS&Y project team included for Kaufman County within Section 2.

Depending on the recommendations, counties can refer to later sections of this study that the RS&Y project team developed to serve as a resource guide to assist with the development of needed solid waste collection services and disposal facilities.

1.6 Acknowledgements

The RS&Y project team would like to express its appreciation to the many people throughout the North Central Texas region who contributed to the development of this study. To conduct this study, the project team conducted interviews with representatives from each county, as well as staff from multiple private solid waste management companies. The RS&Y project team appreciates the time and effort taken by these individuals to provide valuable information. The RS&Y project team would also like to thank staff at NCTCOG who provided significant input, data and coordination efforts for the project. In addition, the project oversight committee contributed key ideas and valuable direction for the project.

This project was funded through the regional solid waste grants program, which is administered by the Texas Commission on Environmental Quality (TCEQ).



2. Evaluation of Areas in Need of Disposal Facilities and Collection Services

The RS&Y project team evaluated the current and future needs for solid waste disposal and collection services in the rural and underserved areas of the North Central Texas region. Specifically, the RS&Y project team evaluated the adequacy of existing collection services and disposal facilities, which include landfills, transfer stations and citizens' collection stations to serve the needs of residents and businesses in rural counties.

The RS&Y project team completed this evaluation through the following types of research and analyses:

- Review of *SEE Less Trash Regional Solid Waste Management Plan*.
- Review any reports, studies, and local solid waste plans completed at the local level concerning solid waste issues during the past ten years.
- Review regulatory reports provided by transfer stations, citizens' collection stations¹ and landfills to the TCEQ.
- Several days of field work to tour existing solid waste systems (including transfer stations, landfills and collection stations) in rural areas of the NCTCOG.
- Interviews/surveys with the appropriate personnel (private operators, city officials, County officials, special utility districts and TCEQ staff) regarding the adequacy of disposal facilities in rural areas.
- Interviews with the NCTCOG staff and members of the ACT Subcommittee concerning additional background information.

The RS&Y project team conducted a detailed analysis of disposal and collection practices for Kaufman County. The RS&Y project team also updated a list for Kaufman County that identifies the solid waste haulers providing collection services to each community in the County. This list was originally developed by the NCTCOG, and included in the *Plan*. The RS&Y project team has added information to this list to (1) document the current landfills being used by haulers to dispose of collected solid waste (2) calculate the distance traveled from each community to these landfills. This information has been included in Appendix A for Kaufman County. Section 2.1 provides detailed analysis and recommendations for Kaufman County. Section 2.2 provides summaries of the key findings of the analysis.

¹ TCEQ does not required citizens' collection stations to be registered or permitted, but does request information regarding their existence and status.

2.1 Analysis of Existing Solid Waste Disposal and Collection Activities

The purpose of this section of the report is to identify areas of the NCTCOG planning region that have a need for disposal facilities and collection services. The RS&Y project team has evaluated the extent to which collection and disposal services are needed for Kaufman County. The following criteria were employed to guide the analysis:

- **Geographic Constraints:** Identifies any physical barriers that make collection and disposal services more challenging.
- **Existing Infrastructure:** Provides a description of existing disposal facilities in the county (e.g. citizens' collection stations, transfer stations and landfills).
- **Long-term Disposal Options:** Evaluates current and future disposal options. The RS&Y project team also developed estimates of remaining disposal capacity for individual communities.² County maps depicting the availability of future landfill capacity in Kaufman County are included in Appendix B. Landfill capacity data presented in these maps was obtained from 2002 Municipal Solid Waste Annual Reports submitted to the TCEQ.
- **Density:** Describes the concentration of residents in unincorporated areas, which can assist in evaluating the feasibility of collection services. The density of an unincorporated area from a solid waste collection perspective can also be influenced by other factors such as whether a private hauler is providing services in another nearby area (e.g. a city contract) and the distance from the community to disposal facilities. Appendix B includes population density maps for Kaufman County. Data presented in these maps was obtained from the 2000 U.S. Census.
- **Existing Private Haulers:** Provides an indication of the interest of private haulers to provide collection services in the county.
- **Median Household Income:** Assists in the analysis of residents' ability to pay for various levels of solid waste services. The key findings are primarily based on maps in Appendix B. Data presented in these maps was obtained from the 2000 U.S. Census.
- **Policy Issues:** Describes key issues that may affect future decisions concerning collection and disposal practices, including estimates of the percentage of residents illegally disposing of waste in the county.³

² To the extent that base GIS files were available, the project team included all of the cities listed in Appendix B on these maps. However, in some cases, these files did not include some of these cities.

³ Based on the scope of the project, the project team was unable to conduct a detailed analysis of illegal disposal activities in the region. Therefore, estimates of illegal disposal presented in this report are based on rough estimates obtained from individual county representatives rather than scientific estimates. These estimates are provided for planning purposes only. RS&Y would recommend that county officials conduct more detailed analyses of illegal disposal activities prior to developing additional solid waste facilities in their county. For example, RS&Y recently quantified the extent of illegal disposal activity in Walker County based on a county-wide survey of all solid waste haulers.

The RS&Y project team has developed a set of key findings and recommendations concerning opportunities to improve solid waste collection and disposal services in unincorporated areas for Kaufman County. To the extent practicable, the RS&Y project team has also recommended scenarios to determine opportunities where it would be advantageous for multiple communities or counties to coordinate disposal activities.

2.1.1 Kaufman County

Geographic Constraints

There are no significant geographic constraints within Kaufman County.

Existing Infrastructure

Existing citizen's collection stations are located in the northern part of the County, near Terrell and in the central part of the County, near Kaufman. There are no collection facilities in the southern portion of the County. Approximately three percent of rural County residents use the citizens' collection stations located in the cities of Terrell and Kaufman. A resource recovery facility is also located in the north central part of the County.

Existing Private Haulers

While there are several private haulers operating in Kaufman County, one private hauler appears to provide collection services to the majority of cities and residents in unincorporated areas that subscribe to services. Approximately 50 – 65 percent of rural residents subscribe to collection services.

Long-term Disposal Options

Without any landfills or transfer stations in Kaufman County, the County relies on facilities located in other counties. The primary landfills used by Kaufman County are located in Ellis and Dallas Counties and include the ECD, WMI Skyline, and McCommas Bluff landfills. Based on current disposal rates, all three of these landfills have more than 10 years of disposal capacity remaining.

Density

There is sufficient population density to allow virtually all residents to be provided with reasonably priced collection services.

Median Household Income

Households in the rural areas in need of services have median incomes ranging from \$40,000 – \$60,000 annually. This income level indicates a need for cost-effective collection services. However, residents should have an ability to pay for basic collection services.

Policy Issues

County representatives estimated that approximately 35 to 50 percent of the population in unincorporated areas of Kaufman County may be illegally disposing of their trash and/or

burning it. As identified in Figure 2-1, illegal dumping is primarily a problem in the southern half of Kaufman County and in specific pockets of northern Kaufman County. To address this problem, County representatives have expressed a preliminary interest in the County either developing additional citizens' collection stations or considering implementation of an organized residential solid waste collection program. County staff and representatives from the Solid Waste Management Cooperative expressed support for examining the feasibility of developing an organized collection system in the County.

No landfills are currently located in Kaufman County, and County representatives expressed doubt that the local community would ever support developing a landfill within Kaufman County. As a result, communities within Kaufman County will continue to depend on landfills located outside of the County. However, recognizing that the cost to transfer waste to these landfills can be expensive, Kaufman County representatives did indicate that there could be an interest in developing a transfer station in the future.

Recommendations

1. Consider options to implement an organized residential collection system within the unincorporated areas of the Kaufman County.
2. If the County can not develop an organized collection system, a secondary alternative would be to develop a citizens' collection station to serve residents in the southern portion of Kaufman County.
3. County representatives may consider the development of a transfer station. They could also consider developing a transfer station so that it would be operated by a private solid waste company as a part of a public-private partnership.

2.2 Collection and Disposal Key Findings

Based on the research conducted for this study, the RS&Y project team developed several key findings related to collection and disposal issues within the rural and underserved areas of the North Central Texas region.

2.2.1 Areas Lacking Collection and Disposal Services

In conducting this study, the RS&Y project team sought to identify areas within the North Central Texas region that lack needed collection and disposal services. Several of these types of areas were identified. In several cases, county representatives identified specific areas within their counties that are in need of additional services. Figure 2-1 provides a regional summary of specific areas of each county that are in need of

collection and disposal services. Counties that identified specific areas in need of services include the following:

- Collin
- Dallas
- Erath
- Hood
- Hunt
- Kaufman
- Navarro
- Palo Pinto
- Rockwall
- Wise

Some counties, Ellis and Parker, stated that they have a need for additional disposal and collection services. However, they were unable to identify specific geographic areas in need of services.

2.2.2 Reasons for a Lack of Collection and Disposal Services

A key objective of this study was to better understand the reasons why collection and disposal services are lacking within the North Central Texas region. The RS&Y project team identified the following reasons based on interviews and other research conducted for this study:

- **Current Options are Too Expensive:** Collection services are available throughout each county in the North Central Texas region. However, in several cases, the cost for these services is considered to be relatively expensive. Private haulers may find it difficult to provide collection services in a cost-effective manner due to issues such as inefficient routes, duplication of services, and unpredictable billing methods. One way to reduce costs on a per household basis would be to take a more coordinated approach to residential collection services in unincorporated areas. This issue is further addressed in Section 6.
- **Current Options are Inconvenient:** While multiple disposal facilities, including citizens' collection and transfer stations and landfills, are available in the North Central Texas region, there are cases where these facilities may be located too far of a distance from where residents are located. To address this concern, there may be a need to develop additional disposal facilities in the North Central Texas region.
- **Residents Do Not Consider Dumping/Burning to be a Problem:** Unfortunately illegal dumping and burning of solid waste may have been the preferred disposal method for many years for a number of residents. In some cases, these residents may be unaware that illegal dumping and burning is not only illegal, but could also pose an environmental and safety threat.
- **Residents not Aware of Current Options:** In some cases, residents may have access to convenient and affordable collection or disposal services, but may not be aware of their availability. This infers that some communities may have a

need to better promote the availability of existing services, which can include disposal facilities (e.g. citizens' collection stations, transfer stations and landfills) and collection via private haulers.

- **Residents are Willing to take Risks:** Other residents may be aware that dumping is illegal, but are willing to risk illegal dumping because the chance of being caught is relatively low. While there are many active and effective environmental enforcement programs in the North Central Texas region, it is still difficult to catch illegal dumpers.
- **Reluctance to Use Existing Facilities:** In other cases, residents may be aware of the availability of services, but choose not to use them for the following reasons:
 - Paying for solid waste collection/disposal services is not a high priority
 - Residents lack a suitable vehicle to haul solid waste to a disposal facility
 - Driving to a disposal facility would require too much time

2.2.3 Need for Organized Collection Services

Multiple counties reported problems with the illegal dumping of household garbage and bulky items such as furniture and appliances. In several cases these problems occur in cases where residents do not have any type of solid waste collection services, or where not all residents subscribe to solid waste collection services. There are several opportunities to address this issue. For example, many counties in the North Central Texas region could benefit by developing an organized solid waste collection system for residents in unincorporated areas. To assist counties that have an interest in developing an organized collection system, Section 5 focuses on this issue.

2.2.4 Need for Citizens' Collection Stations and Transfer Stations

Some counties in the North Central Texas region may have a need to develop citizens' collection stations and transfer stations to provide disposal options to their residents. Several sections of this report focus on providing information to assist counties in the development of these facilities. These sections include the following:

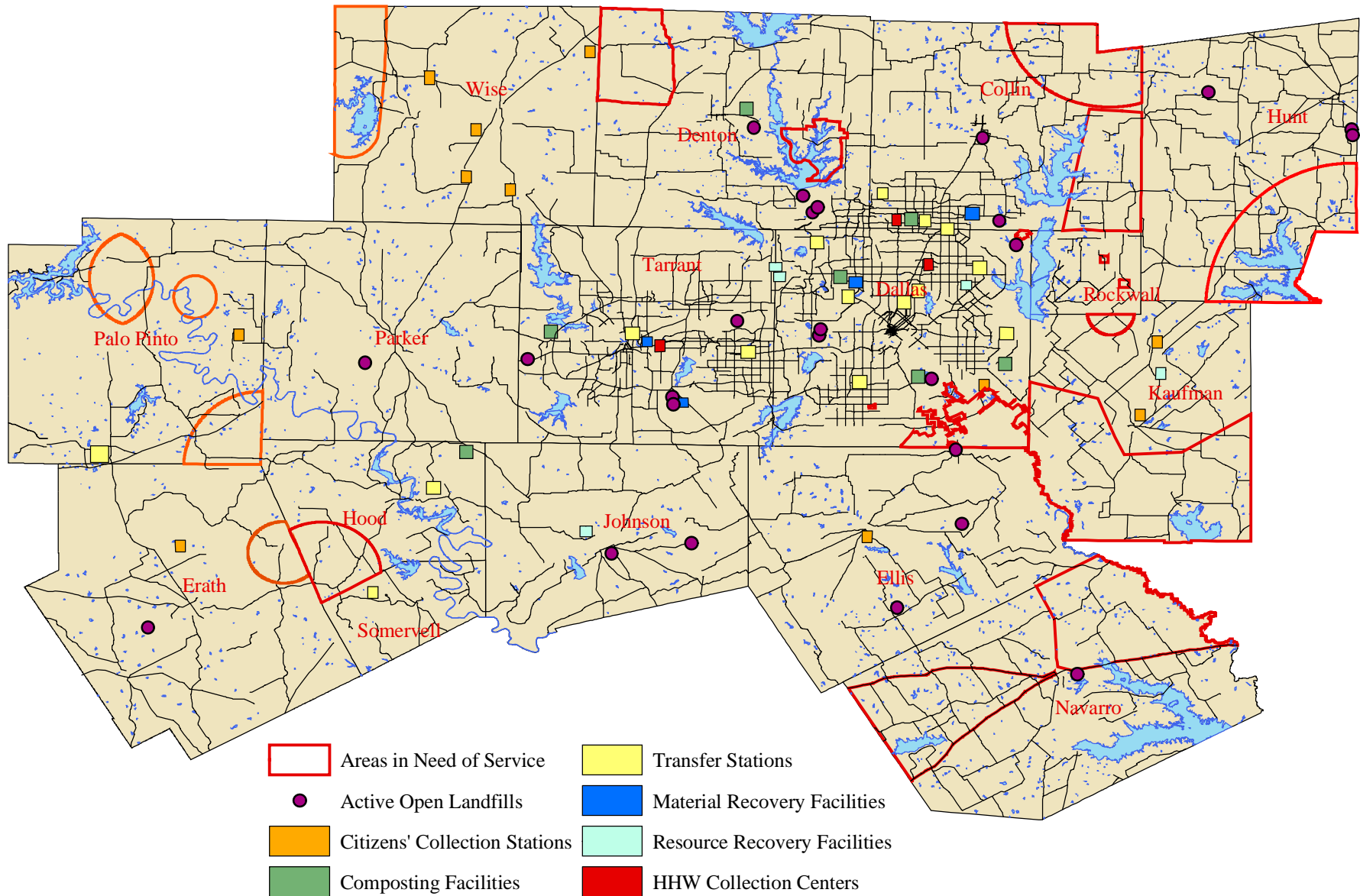
- Section 3. Siting Criteria for Citizens' Collection Stations and Transfer Stations
- Section 4. Construction and Operational Needs and Costs for Citizens' Collection Stations

2.2.5 Over Dependence on Community Clean-ups

Several counties in the North Central Texas region reported conducting annual clean-ups as a method to provide disposal services to their residents. While these events can serve as an effective method to prevent illegal dumping, The RS&Y project team is concerned that, in some cases, residents are relying on these clean-ups as their primary means for disposal. This can create scenarios where a county has to pay significant collection and

disposal costs for events that may only benefit residents that do not have regular collection and/or disposal services. This is of concern because of the potential impact that these events can place on counties' budgets. If counties face scenarios in the future where they can no longer fund these events, residents that have depended upon them may look to other disposal means such as illegal dumping. To reduce the dependence on community clean-up events, the RS&Y project team would recommend that counties consider collection facilities or services that would be provided on a more frequent basis. These options would include citizens' collection stations or regular solid waste collection services.

Figure 2-1: Analysis of Solid Waste Collection Service Needs in the North Central Texas COG



Note: The transfer station located in central Tarrant County also functions as a Materials Recovery Facility

3. Siting Criteria for Citizens' Collection Stations and Transfer Stations

To assist communities that may have an interest in developing either citizens' collection stations or transfer stations, the RS&Y project team has developed information to describe the planning process for each of these types of facilities. Specifically, these sections focus on the functionality and standard siting criteria for these types of facilities.

3.1 Siting Criteria: Citizens' Collection Stations

To assist communities that have an interest in developing citizens' collection stations, the RS&Y project team has described siting issues that could affect the planning and construction of these facilities. Section 3.1.1 provides a discussion of the importance for the functionality of a facility (e.g. convenient to citizens, ease of access, use of public land, etc.). Section 3.1.2 addresses issues specific to standard siting criteria for a citizens' collection station (e.g. land use, input from the local community, etc.). This section also addressed the regulatory component of the decision-making process.

3.1.1 Functionality Issues

The following criteria have been described in order to provide convenient and affordable disposal options for citizens. The goal is to stop illegal dumping of waste by the citizens which has become a significant problem in the last ten years due to closure of many rural landfills.

A key factor to success is educating the public, and communicating the goals for the intended facility. An open, public process is critical for the successful implementation of a municipal solid waste program. Residents must feel that the proposed waste collection service will be of value to the community (through education), and that it provides a truly affordable and convenient alternative to the current waste collection approach.

A key element in selecting a location for a CCS is to ensure that the facility will be convenient to the citizens that it is intended to serve. The following are general guidelines that will assist in placing a CCS in a convenient location:

- Try to site the CCS in locations having a high concentration of the population to be served.
- Determine the maximum distance (based on the overall size of the service area) citizens will be required to drive to dispose of their waste. This maximum distance should ideally be no more than 10 miles.

- Locate the CCS adjacent to a road that is commonly traveled by the citizens to be served. This placement should allow residents to dispose of their solid waste as they travel.

Once the basic area to be served has been determined, the land size requirements need to be established. Typically, a fixed CCS can be constructed on less than an acre of land. However, the size may vary depending on what the CCS is going to offer its citizens. For instance, the fixed station may accept solid waste only or it may offer additional collection options. These options may include recycling collection, used oil collection, tires, household hazardous waste collection and composting. These options are important to consider because offering a variety of collection options requires additional land, but it also makes the CCS more flexible. If possible, existing public land should be considered for use in order to eliminate the cost of land.

To assist in locating the CCS, other concerns must be considered. As stated previously, the site should be near populated areas, but not immediately adjacent to neighborhoods. Citizen perception of odor and noise issues may concern those living nearby.

Once the site has been chosen, the facility will need to be designed and constructed. Section 4 provides a description of the typical construction needs and costs for a CCS.

3.1.2 Planning and Regulatory Issues

During the site selection process, zoning restrictions must be considered. If the parcels of land are not zoned correctly, a rezoning procedure may need to be followed. Likewise, the area chosen should be compatible with this type of facility. If not, the project may not be accepted by the local community. Acceptance by the local community is essential for success of the facility, as they must utilize the facility.

State of Texas regulations, as defined in Section 330 of the Texas Administrative Code, set forth several requirements for citizens' collection stations. While a CCS is not required to obtain a permit or registration from the Texas Commission on Environmental Quality (TCEQ), the operator of a CCS must provide the TCEQ with information about the facility at least 90 days prior to opening the facility.

Section 330.24 of the TAC does provide operating requirements for a CCS. These rules require that a CCS must:

- Be equipped with the type and quantity of containers compatible with the collection options available at the site.
- Post rules governing the use of the facility; these rules should include who may use the facility, when the facility is in operation and what will, and will not, be accepted.

- Provide for the collection of deposited waste to an appropriate facility on a scheduled basis.
- Be maintained in a sanitary condition.

While not included in the specific regulations concerning CCS, the RS&Y project team would recommend that facilities account for the following issues in accordance with other TCEQ regulations pertaining to municipal solid waste facilities in general:

- Must control (be aware of) potential leachate runoff
- Do not allow the burning of solid waste
- Cannot dispose of lead-acid storage battery unless in a specified container/location at the CCS
- Cannot dispose of do-it-yourself used motor vehicle oil unless in a specified container/location at the CCS
- Cannot dispose of used oil filters from combustion engines unless in a specified container/location at the CCS
- Cannot dispose of used or scrap tires unless in a specified container/location at the CCS
- Regulated hazardous waste as defined in Section 330.2 of the Texas Administrative Code is not to be accepted at the facility
- Solid waste deposited at the site is to be stored until the next transport so that the waste does not constitute a fire, safety, or health hazard. In addition, the waste should be kept covered so that it does not provide food or harborage for animals and insects. It is the responsibility of the owner/operator to ensure that the containers available are the correct size and strength to contain the waste between collection schedules.
- The site should not be in a 100-year floodplain, which would reduce the chance that a washout of the area might cause a hazard to human health and the environment.
- The site should not be located in a wetland, which might cause impacts to fish, wildlife, and other aquatic resources and the habitat.
- The site should not be placed in Seismic Impact Zones.
- The unloading or storage of solid waste is not to occur in any easement, buffer zone, or right-of-way that crosses the site. The buffer zone is the 50 feet width from the boundaries of the site.
- Scavenging at the site shall not be allowed.

3.2 Siting Criteria: Transfer Stations

To assist communities that have an interest in developing transfer stations, the RS&Y project team has described siting issues that could affect the planning and construction of these facilities. Section 3.2.1 provides a discussion of the importance for the functionality of a facility (e.g. convenience, ease of access, use of public land, etc.). Section 3.2.2 addresses issues specific to standard siting criteria for a transfer station (e.g. land use, input from the local community, etc.). This section also addressed the regulatory components of the decision-making process.

3.2.1 Functionality Issues

The following criteria have been established in order to site transfer stations in a manner that maximizes the collection, transportation and disposal of solid waste and minimizes the cost of these activities. The goal is to choose the optimum location and transfer station facility type that will best benefit the chosen solid waste entity. Due to the closure of many landfills in 1993 and other existing landfills that may soon reach capacity, new disposal facilities are being permitted and developed. The new landfills are typically in excess of 20 miles from populated areas, causing lengthy haul distances for the individual collection vehicles. The construction and optimum siting of one or more transfer stations, the intermediate step in this process, can allow the solid waste collection and transportation system to run more efficiently and operate at a lower cost to the citizens.

The first step in the process of locating a transfer station is to determine the service area that is being considered. Once a service area has been established, identify the common roads that the collection trucks will utilize. It would be advantageous for the station to be located adjacent to one of the common routes. The transfer station must be central to the populated areas being serviced. However, consideration must be given to the EPA's recommendation that the station location not be adjacent to residential areas, schools or non-industrial businesses. Several reasons support this recommendation including the potential for excess noise, odors and negative air emissions associated with the implementation of a waste transfer station. An enclosed transfer station building can help minimize the potential for these concerns. A transfer station that may negatively impact a neighborhood or school will probably not be supported by local citizens.

Once the basic area has been determined, the land size requirements need to be established. The most common types of transfer stations constructed are the direct dumping (collection trucks drop the waste directly into a transfer trailer or into a modular storage push-pit) or the tipping floor or pit dumping station (the collection trucks drop the waste onto the tipping floor or into a pit for storage, and it is loaded into a transfer trailer by a front loader or other piece of equipment). The type of transfer station constructed will depend on the quantity of waste anticipated passing through the site each day on average and at peak times. Since there are a wide variety of layouts, land requirements vary from as small as two acres to as large as seven to eight acres. It is important that the site is large enough to minimize safety issues pertaining to truck movements within the

site. The size may also vary if private citizens are allowed to utilize the facility. Depending on the amount of traffic, it may be necessary to provide separate roads within the site for collection vehicles and private citizens.

In addition to the transfer of waste, the sites could be designed to accommodate other options such as recycling collection, used oil collection, tire collection, household hazardous waste collection and composting. If the operating hours are advantageous to the average citizen and the location is centralized, offering a variety of disposal options may make the acceptance and use of the transfer station more viable. Since land costs must be considered in the overall capital cost estimate, the use of existing public lands should be considered in order to eliminate this cost.

Once the site has been chosen, a well-designed layout (including approach and through roadways, the transfer station building, other collection facilities and potential separate citizen drop-off points) will help to minimize the required area. All weather surfaces should be used for the roads since there will be heavy truck traffic, and to ensure that the site is available for use year round. The roadways should be designed to handle the heavy traffic and to minimize the interaction between the collection trucks, the transfer trucks/trailers and the private citizen vehicles. It is important that the roadways be designed utilizing established design criteria related to minimum turning radius and maximum roadway slope for truck traffic.

Clearly visible signage should be used within the site to help eliminate any safety issues pertaining to high traffic volumes in, out and within the site. Typically, roadways within the site are constructed as “one-way” direction. This provides better driver visibility and minimizes the potential conflicts of vehicle crossover at intersections. Chosen routes to and from the transfer station must also be examined for acceptable weight limits, height restrictions, and speed limits. An office can be located within the transfer station so a separate building may not be required for the on-site personnel.

Depending on the services available at, or adjacent to, the site, the layout may be designed to include other activities or facilities such as: banned or bulky waste areas, recyclable areas, a scale and scale house, fueling facilities for the haul trucks, vehicle maintenance facilities and washout areas and administrative offices and parking.

The site should have a perimeter fence for security reasons and to trap possible wind blown materials from the station. If the site is visible from the street, landscaping along the fence should be considered to screen the view of the site. A sign should be at the entrance of the facility stating the hours of operation and the collection services that are available.

During the design of the transfer station, future growth of the service area should be considered. Land should be available for expansion and addition of other options and facilities.

3.2.2 Planning and Regulatory Issues

During the process of choosing a site, zoning restrictions must be considered. A transfer station is generally considered a light industrial facility and therefore must be located in an appropriately zoned area. If a considered parcel of land is not zoned for light industrial, but meets all other criteria for siting a transfer station, rezoning of the site may be required. However, it is essential that the areas surrounding the facility be compatible with this type of activity. If not, the local community may not support the project. Acceptance by the local community is essential since they will be utilizing the facility, either directly or indirectly and they will determine if it is compatible with local land use. The TCEQ will rely on the local zoning entity to determine if the site meets the permitting criteria concerning surrounding land use compatibility. The facility may be deemed more acceptable to the local community if its design includes such items as upgrading the exterior of the building, landscape screening, increased setbacks and dust and odor control measures.

Since the transfer station acts as both a waste transfer facility and a temporary waste storage site, certain regulatory procedures should be followed. All solid waste transfer stations will require a permit from the TCEQ. Depending on the population served, the quantity of the waste handled, and the quantity of waste recycled, the facility may be exempt from the permit requirements and only require a Registration from the TCEQ.

According to §330.4(d) of the Texas Administrative Code (TAC), a permit is not required for a municipal solid waste transfer station facility that is used in the transfer of municipal solid waste to a solid waste processing or disposal facility from:

1. a municipality with a population of less than 50,000;
2. a county with a population of less than 85,000;
3. a facility used in the transfer of municipal solid waste that transfers or will transfer 125 tons per day or less; or
4. a transfer station located within the permitted boundaries of a municipal solid waste Type I, Type II, Type III, or Type IV facility as specified in §330.41 of this title (relating to Types of Municipal Solid Waste Facilities).

In addition other transfer station facilities are exempt from the permit requirements as outlined in §330.4 (q) of the TAC as follows:

In addition to permit exemptions established in subsection (d) of this section, a permit is not required for any new municipal solid waste Type V transfer station that includes a material recovery operation that meets all of the requirements established by this subsection. Owners and operators of Type V transfer facilities meeting the requirements of this subsection are allowed to register their operations in lieu of permitting them. Owners and operators of transfer stations that meet the permit exemption requirements and wish to

exercise the exemption option must register their operation in accordance with §330.65 of this title (relating to Registration for Solid Waste Management Facilities).

1. Materials recovery. The transfer facility must recover 10 percent or more by weight or weight equivalent of the total incoming waste stream for reuse or recycling. The applicant must demonstrate in the registration application the method that will be used to assure the 10 percent requirement is achieved. The effective date of this subsection is February 2, 1995.
2. Distance to a landfill. The transfer facility must demonstrate in the registration application that it will transfer the remaining nonrecyclable waste to a landfill not more than 50 miles from the facility.
3. Exempt facilities. Transfer facilities exempted from a permit under this subsection shall register with the executive director in accordance with §330.65 of this title and meet the additional design criteria of §330.65(f) of this title.

Rules governing the use of the facility need to be posted. These rules should include who may use the facility, when the facility is in operation and what will and will not be accepted. The facility operator must also ensure that the site remains in a sanitary condition and that the waste is transported to an appropriate facility on a scheduled basis.

The TCEQ has established the Application Technical Requirements and operational criteria for both a Permit and a Registration. Each of these processes provides the opportunity for public input into the Application review process.

The General Prohibitions and Guidelines previously presented in the CCS Section apply likewise to transfer stations. In addition the TCEQ regulations establish Operational Standards for Solid Waste Processing Facilities (including transfer stations) in Subchapter G of Chapter 330. This includes Sections 330.150 through 330.171. These Sections also reference other specific applicable Sections including 330.111 through 330.137.

4. Construction and Operational Needs and Costs for Citizens' Collection Stations

The purpose of this section is to provide a better understanding of the costs of developing and managing citizens' collection stations. The RS&Y project team has provided specific information on the costs associated with constructing and operating citizens' collection stations. This analysis is based on the project team's experience in assisting other communities with the development and operation of citizens' collection stations. This section also includes a description of several citizens' collection stations that are operated in the North Central Texas region. These case studies can serve as examples of how other communities are providing solid waste services using citizens' collection stations. This section concludes with a list of other reference documents that can provide assistance concerning the development and operation of citizens' collection stations.

4.1 Construction and Operational Needs and Costs

This section provides a general description of the construction and operational requirements associated with the development and operation of a typical citizens' collection station.

4.1.1 Construction Needs and Costs

The following represents a description of the basic construction needs and costs that would be associated with the development of a CCS. Table 4-1 provides information concerning a general cost estimate for each item. In order to develop a capital cost estimate for the facility, certain assumptions were made. Variations for each of the construction items are available, and the estimate provided in Table 4-1 is based upon a general facility layout. Figure 4-1 is a schematic of a general facility layout. The assumptions made for the construction items in the estimate and potential options are described below.

Land Acquisition. The first capital cost to consider is the acquisition of the necessary property. Many public entities utilize locations where land and other capital improvement costs can be minimized (e.g., existing publicly owned land or along existing highway right-of-way). However, if this option is not available, property must be purchased. Land cost will vary depending on the locale and therefore it is difficult to develop a general estimate for land. Therefore, for this cost estimate, it was assumed that existing public land was used.

The quantity of land necessary for the facility will be dependent upon the layout chosen. Therefore, the determination for the layout of the drop-off area is an important first step after the land location is determined and the site examined for restrictions. Several typical configurations are available. Layout considerations

should be based on the anticipated traffic through the site and the existing topography of the land parcel.

- **Site Layout.** A general layout will have an approach ramp, a drop-off area designed to service a specified number of vehicles, a retaining wall (on one or both sides of the drop-off area) to accommodate the collection box (or boxes), and an exit ramp. For this cost estimate, a one-sided drop-off area with two collection boxes was assumed. This will allow more than one vehicle to utilize the station at the same time. This configuration will also help to minimize the number of vehicles that will have to wait to use the collection boxes. This design is simple and can be used for pass thru traffic that does not back up to the collection containers. Additional vehicles can be accommodated if the maneuver space is sufficient to allow the vehicles to back up to the containers rather than driving through.

The design for two containers requires a longer retaining wall, and the required fill quantity will depend upon the existing topography of the site. Other layouts that allow for additional collection boxes and differing drop-off configurations are also available. A concrete retaining wall was the basis for this estimate, but some municipalities have used other materials for retaining walls such as timbers, steel beams and steel plates, old roll-off containers filled with earth, etc. The roadways on the site were estimated using an asphalt binder course and topping. The use of permanent paving material for the roadways and drop-off location is important in order to allow the site to be used during all weather conditions.

- **Attendant Building.** The estimate also included an attendant building. This is important to protect the attendant from weather conditions if the site is manned during normal business hours. The building should be approximately 10' x 10' in size and have the necessary utilities (water, sanitary sewer, electric and phone).
- **Fencing.** The site should be fenced for security, and to help control any windblown materials. The fence considered for this estimate was a 6' high chained linked. Fencing of different materials and heights can be used, which will alter the cost estimate.
- **Signs.** Some type of notification signage is required at the approach gate to the facility. Posting signs to the entrance of the facility can help notify people concerning the hours of operation and materials accepted. Signs can also be used to notify people that if they illegally dispose of material outside of the facility, they can be prosecuted. Signage within the facility is optional.
- **Utilities.** Utilities, which would ideally include electricity, water, sanitary sewer and telephone, are important for lighting, site maintenance and attendant needs. In cases where water services cannot be provided, providing water via other methods is an option.

Table 4-1: Citizens' Collection Station Construction Costs

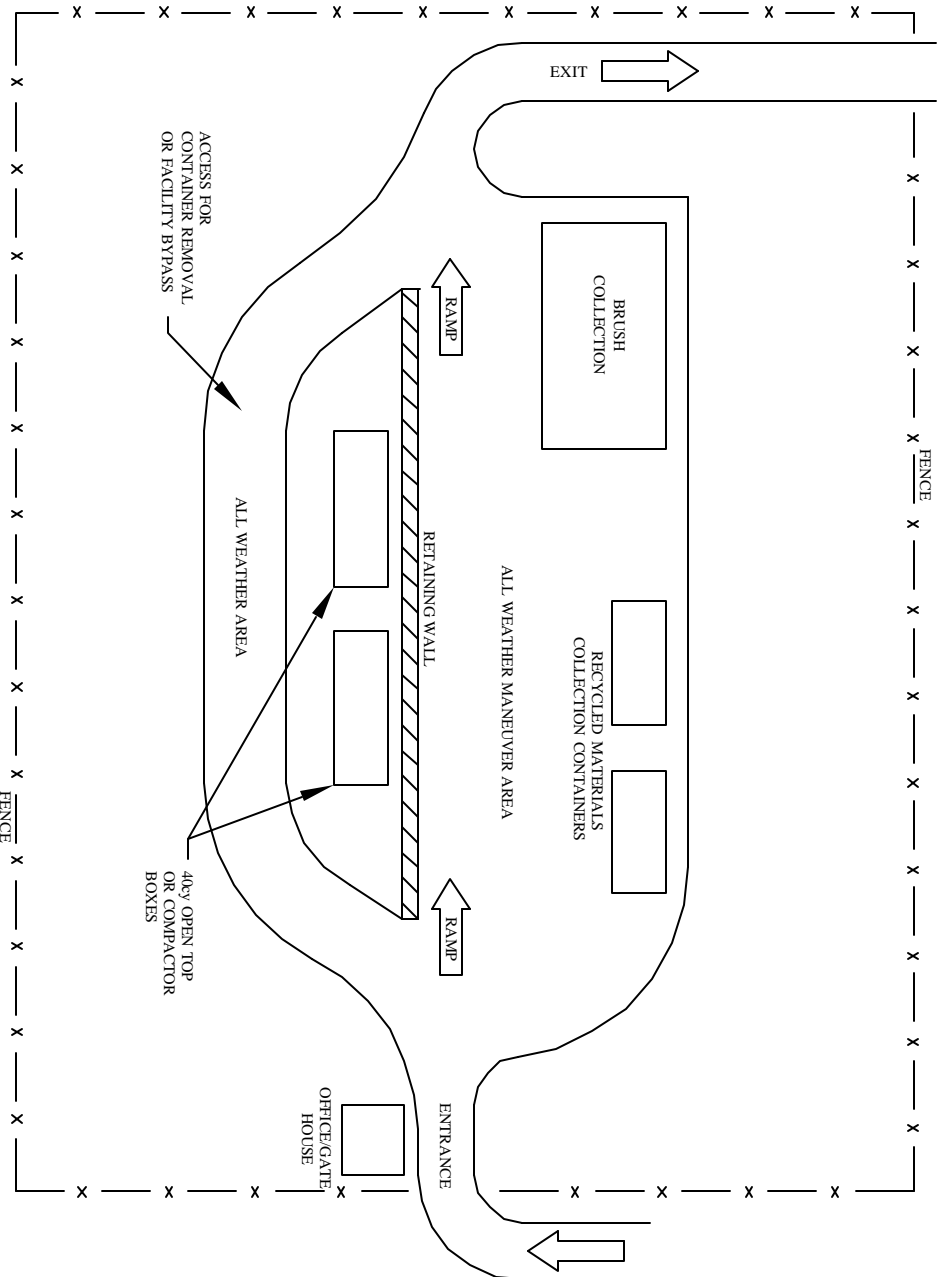
Construction Items	Quantity	Unit	Unit Cost	Cost
Land ¹	1	LS	\$0.00	\$0.00
Ramp and Pad:				
Fill	1825	CY	\$8.00	\$14,600.00
Concrete pads for open top containers (8" thickness, reinforced)	70	SY	\$35.00	\$2,450.00
Retaining Wall	120	SY	\$100.00	\$12,000.00
Attendant Building	100	SF	\$35.00	\$3,500.00
Fencing	600	LF	\$10.00	\$6,000.00
Landscaping (Grass, trees, shrubs)	1	LS	\$600.00	\$600.00
Roadway (2" binder course, 4" topping):				
Approach	240	SY	\$9.00	\$2,160.00
Along Ramp	500	SY	\$9.00	\$4,500.00
Signs	1	LS	\$150.00	\$150.00
Utilities (water, sanitary sewer, electric and phone to attendant building)	1	LS	\$3,000.00	\$3,000.00
Total Construction Costs				\$48,960.00

¹ No cost is shown assuming the use of existing public lands (city or county). If this is not possible costs will need to be added for the purchase of land.

LS: Lump Sum
 CY: Cubic Yard
 SY: Square Yard
 LF: Linear Foot



Figure 4-1: Citizens' Collection Station Layout



4.1.2 Operational Needs and Costs

Operational needs and costs for a citizen's collection stations can be divided into five major categories. A description of each category is provided below.

- **Labor.** The only labor required to operate a citizen's collection station is an attendant during the hours the facility is open. The attendant monitors the waste entering the facility to ensure that no commercial or other prohibited waste is being deposited for collection. The collection station must be open during hours that are convenient to residents in the area, but not to the extent that increased labor costs reduce the affordability of this disposal alternative. For purposes of this analysis, labor costs include both salary and benefits. Although an attendant will work less than 40 hours at the citizen's collection station, they may be a full-time employee with additional responsibilities separate from collection station duty. Since benefits are provided to all full-time employees, benefit costs were included in this analysis. Based on other citizen's collection facility rate studies the RS&Y project team has conducted, an attendant salary was estimated to be \$8 - 10 per hour and benefits were calculated at 30 percent of salary costs.

Labor costs are directly impacted by the number of hours the citizen's collection station will be open. To strike a balance between convenience to residents and labor costs, the RS&Y project team would recommend that a citizen's collection station be open a minimum of three days per week, four hours each day. Annual salary costs were calculated by multiplying the hourly rate for an attendant (\$8 - 10) by the number of hours the facility will be open each year.

- **Transfer Costs.** Transfer costs are defined as the costs required to transport waste received at the citizen's collection station to the landfill. Transfer costs will vary based on several factors such as the distance to a landfill, the quantity of material disposed and method of transferring the waste. Transfer costs can typically be minimized based on the collection method at the CCS. For example, collecting household garbage in compacting roll-off containers will typically reduce transfer costs. In many cases the additional costs for a compactor will be offset by the savings in transfer costs. In cases where a compactor is used for household garbage, there is still a need to use open-top roll-off container for bulky items.

Another issue to consider is whether the local government should provide the transportation services or whether it would be preferred to contract with a private solid waste hauler to provide this service. When developing a citizens' collection station, local governments should conduct their own cost comparison to determine which option would be more cost-effective. When conducting this analysis, the local government would need to know approximately how much waste would be generated annually. By knowing this information, the local government would be able to calculate annual costs.

The RS&Y project team would recommend that the following categories be included in a cost analysis:

- Labor: Salary and benefits for roll-off truck driver
 - Insurance: To cover truck operations
 - Fuel and Maintenance: For the roll-off truck
 - Roll-off Truck: Determine an annual cost by dividing the purchase price by the expected useful life.
 - Roll-off Containers: Determine an annual cost by dividing the purchase price by the expected useful life.
- **Disposal Costs.** Disposal costs are the expenditures required to dispose of the waste received at the citizen's collection station in a landfill. Disposal costs are based on the quantity of waste expected to be received at the collection station. Within the North Central Texas region, disposal costs at landfills range from approximately \$15 to 32 per ton.
 - **Utility Costs.** The major utility expense required to operate a citizen's collection station is electricity, which is used to provide lighting at the facility and to operate a waste compactor. Based on experience conducting other rate studies for citizen's collection stations, the RS&Y project team would typically estimate utility costs at \$100 each month.
 - **Administrative Costs.** Administrative costs include any miscellaneous office products that may be required at the citizen's collection station to track activity. Based on experience conducting other rate studies for citizen's collection stations, the RS&Y project team would typically estimate administrative costs at \$100 each month.
 - **Roll-off Containers/Compactors.** If roll-off containers are not provided by a private hauler that would service the citizens' collection station, there would be a need to purchase roll-off containers and/or compactors. The cost for an open-top roll-off container is approximately \$3,000. The cost for a compactor will depend on several factors such as size, compaction ratio and durability (e.g. steel thickness). In addition, there is a need to have the receiving unit (roll-off container). Some manufacturers would also recommend the purchase of a hopper. Based on these factors the cost for a complete compactor can range from \$7,000 to \$45,000.

4.2 Case Studies: Existing Citizens' Collection Stations in the North Central Texas Region

There are several examples of citizens' collection stations (CCS) within the NCTCOG planning region that are currently owned and operated by municipal or county governments. For this study, the RS&Y project team developed several case studies to provide a better understanding of how these facilities function and their costs. For each case study, the project team has provided a description of the facility, construction costs and annual operating costs.⁴

4.2.1 Kaufman County

Description of the Facility: This facility is located in the City of Kaufman and was partially funded by grant funds from the TCEQ through NCTCOG. This is a simple station with ramp areas for unloading into both compacted and open-top roll-off containers. The retaining walls adjacent to the containers were constructed of steel beams with steel plates between the beams. The facility was constructed by City and County forces, and includes concrete pads for the containers, the retaining walls, a small office building, signage, and roadways. The site is adjacent to a closed landfill and utilizes the former landfill entrance road, office building and fencing. The CCS is open each week Wednesday through Saturday, 9am -5pm.

The facility is divided into two separate areas, each with a retaining wall adjacent to compacted and open-top containers. One of the areas is for the use of City of Kaufman residents and the other area for non-city Kaufman County residents. Adjacent to these retaining wall areas are containers for the recycling of metals, aluminum, glass, plastic, cardboard, and newspaper. There is no fee for delivery of recycled materials, but there is a fee of \$5.00 per cubic yard for the delivery of waste materials. This fee is waived for a week long period during the Spring Clean-up Program each year.

Construction Costs: The County did not prepare a layout of the facility, but simply "decided what they wanted, talked it through, and just built it". As there were no bids for the construction, and most of the work was provided by the City and County forces, there are no defined construction costs available. It has been estimated by County personnel that total construction costs exceed \$100,000.

Annual Operating Cost: During the period October 2001 through September 2002, there were 399 City resident loads and 467 County resident loads delivered to the facility (not including the Spring Clean-up Program). To service the waste quantities delivered, a total of 44 loads of compacted and open-top containers was hauled from the facility by IESI to final disposal at the WMI Skyline Landfill. The costs for the City and County operations during this period including labor, maintenance, utilities, container hauling,

⁴ The project team would like to note that the data provided by each community concerning its construction and operating costs varied. In some cases, the community did not have this information available.

and waste disposal was \$37,890. The cost of each of these activities is included in Table 4-2.

Table 4-2. Kaufman County CCS Annual Operating Costs

Category	Cost
Labor	\$ 12,753
Utilities	\$ 1,744
Container Rental	\$ 6,074
Container Haul & Disposal	\$ 17,319
Total	\$ 37,890

This cost was divided between the City and County based upon the usage percentage. During this same period there were a total of 43.3 tons of newspaper, commingled paper and cardboard recovered for recycling at the facility.



The pictures above illustrate a citizens' collection station located in Kaufman County. The photos are taken from the vantage point of a resident dropping off a load of MSW (left) and illustrating the position of a roll-off box that is to be hauled away by a roll-off truck (right).

During the 2001-2002 Spring Clean-up Program, when the facility use fees were waived, there were 325 loads delivered by City of Kaufman residents and 503 loads delivered by County residents. A total of 20 containers were transported from the facility for disposal. While no fees were collected, the additional costs during this period for County labor at the facility were \$3,822, and the additional transportation and disposal cost was \$7,388.

4.2.2 Wise County

Description of Facility: Wise County owns and operates five CCS's within the County. These are located at Chico, Decatur, Cottdale, Boyd, and Slidell and receive approximately 40-50 percent of the waste from the unincorporated areas of the County. These locations are identified in the NCTCOG regional map as Figure 2-1. During FY 2002 (October 1, 2001 through September 30, 2002), these stations received a total of 4,130 tons of materials for disposal and approximately 297 tons of material (paper, cardboard and metals) for recycling.

Each of these sites has ramp areas for unloading into both compacted and open-top roll-off containers. The retaining walls for these ramps and the pads for the containers are constructed of concrete at each of the sites. Some of the sites include additional containers for recycled materials. All of the facilities are serviced by equipment owned and operated by the County. There are two full-time drivers utilizing a total of three trucks. All of the collected waste is transported by the County to the IESI Transfer Station in Bowie County.

The Slidell Station is operated on Mondays, Thursdays and Saturdays. The remaining Stations are operated four days per week (Wednesdays through Saturdays). All of the stations are open from 7:30am through 5:30pm on their days of operation. The operation of the facilities is supported from the General Fund of the County and from user fees received at the facilities. User fees are identified in Table 4-3.

Table 4-3. Wise County Citizens' Collection Station User Fees

Quantity	Fee
30 gallon plastic bag	\$1.00
Compactable Waste	\$9.25/cubic yard
Non-compactable Waste	\$9.50/cubic yard
Shingles	\$17.50/cubic yard
Brush	\$12.00/cubic yard
Appliances	\$5.00 each
Tires	\$2.00-\$10.00 each (dependent on size)

Construction Costs: There are no layouts or detailed construction cost information available from the County for any of these facilities.

Annual Operating Cost: There is no information available from the County concerning annual operating costs of these facilities. However, tipping fees of approximately

\$150,000 to \$160,000 per year are paid to IESI for transfer of the waste from their Bowie Transfer Station and for ultimate disposal.

4.2.3 City of Waxahachie

Description of Facility: This facility is owned and operated by the City of Waxahachie. Transportation of the waste is provided by IESI with disposal at the Republic-CSC Avalon Landfill. The facility includes a ramp with a concrete retaining wall and a concrete pad for a compactor with container and two open-top roll-off containers. The City encourages the citizens to use the compactor/container when possible to maximize the payload of the containers for transportation. Other facilities on site include a 30' x 50' metal building which houses an office, a cardboard baler and provides storage space for materials, and appropriate roadways.

The City operates the facility five days per week (Tuesday through Saturday, 8:00am to 4:15pm) and maintains two employees on site most of the time. The facility is funded by a \$2.50 per month fee for each residence in the City, as a part of their monthly water bill. This fee is in addition to the monthly fee for waste collection from their residence. In addition, other fees are assessed at the CCS for unusually large quantities of waste from City residents at a rate of \$5.00 per cubic yard. Non-City residents and commercial service companies may also use the facility, but must pay a fee at the rate of \$15.00 per cubic yard. Fees are also assessed for special wastes (appliances-\$5.00 for City residents and \$15.00 for non-City residents, and tires-\$1.00 to \$20.00 depending on size).

The City provides its citizens with a residential waste collection system as well as curbside recyclable collection. However, they accept residential waste, aluminum, glass, and brush at the CCS as well. The brush is stored at the CCS, mulched on-site and returned to the citizens for their use.

Construction Cost: The initial construction costs reported by the City are included in Table 4-4.

Annual Operating Cost: No detailed annual operating cost information is available. However, IESI charges approximately \$228 to service the 42 cubic yard compactors and approximately \$194 to service the 40 CY open-top containers. This includes costs for transfer and disposal.

Table 4-4. City of Waxahachie Citizens' Collection Station Construction Costs

Category	Cost	Description
Retaining walls	\$75,000	Concrete, space for 5-6 vehicles to dump at one time
Metal building	\$27,000	50' x 30' Metal Building which houses office, equipment and material storage
Baler	\$8,000	Used for baling recycled cardboard
Office	\$5,000	Approximately 12' x 12' with restroom facilities. Located within Metal building
Compactor	\$45,000	42 CY capacity used for the disposal of household waste

4.2.4 City of Grand Prairie

Description of the Facility: The City operates a CCS as a separate facility as a part of their existing sanitary landfill. Therefore, they utilize infrastructure from the landfill to support operation of the CCS. This infrastructure includes the roadways and gatehouse/office building. The primary purpose of this CCS is to keep citizens' loads coming to the landfill separated from the active fill face of the landfill. This allows for a safer operation and provides quicker unloading times for collection vehicles due to decreased traffic.

The CCS area contains two ramps and simple retaining walls for waste materials deposition into open-top containers resting on concrete pads. The waste material placed in these containers is then transported to the open fill face of the landfill utilizing a City owned and operated roll-off truck. The retaining walls in this area are constructed from old open-top containers that have been filled with earthen material.

In addition, there are other areas within this separately fenced area of the landfill where various sized containers, without retaining walls, are placed for recyclables such as metals, tires, glass and paper. This fenced area also includes designated places for brush, wood pallets and concrete that may be delivered to the landfill by commercial as well as residential customers. The wooden materials are processed through a grinder to use for mulch and the concrete is crushed for reuse. The entire fenced area has an all weather surface that consists of crushed concrete or other materials delivered to the landfill.

Construction Cost: The facility was constructed using City staff. No materials were purchased to construct the all-weather surfaces. The retaining walls were constructed using old open-top containers. Consequently, the initial construction costs were minimal. The only construction costs identified were approximately \$1,000 for the retaining wall and \$8,000 for the plastic fence around the area.

Annual Operating Cost: There were no separate operating costs identified and normal landfill fees are charged to the citizens using the facility for waste disposal.⁵



The photos above show the fenced area of the collection station where various sized containers are placed for recyclables (left) and a ramp for depositing waste materials (right).

4.3 Reference Resources for Collection Station Development

In addition to the material discussed in this study, there is further guidance readily available from many other sources. Recent documents prepared in Texas include the following:

- “Guidance Document: Rural Solid Waste Management.” Texas Commission on Environmental Quality. (Draft)
- “Guide to Developing Community Solid Waste Facilities: Citizen Collection Stations & Small Transfer Stations.” Houston-Galveston Area Council (H-GAC). 1999.

⁵ RS&Y completed a cost of service study for the City of Grand Prairie in 2002. However, all costs for the operation of the CCS were included in the costs for the operation of the landfill.

5. Options for Providing Organized Collection Services and Long-term Financial Alternatives

Many Texas counties have historically been reluctant to have a significant role in the management of solid waste in the unincorporated areas of their counties. In many cases, Texas counties have viewed the management of solid waste to be an issue for either cities or individual residents to address. In recent years, however, several changes have occurred that present additional reasons and benefits for counties to be more involved in solid waste management. Over the past 10 years, the number of disposal facilities, especially in rural areas, has decreased due to more stringent federal regulations. At the same time, there has been population increases in many unincorporated areas.

On a positive note, several counties have recognized the need for greater involvement and have recently evaluated the feasibility of implementing organized collection services in their unincorporated areas. In addition, recent changes in Texas law provide further opportunities for counties to bill residents for solid waste services through other existing utilities (e. g. water, electric, gas, etc.). As a result counties have significant opportunities to provide solid waste collection services to their residents.

The purpose of this section is to provide counties with a better understanding of how counties can address solid waste management issues. Specifically, the RS&Y project team has summarized applicable laws, developed an overview of an organized collection system, described how to implement an organized collection system and evaluated funding methods.

5.1 Summary of Texas Laws Concerning Counties and Solid Waste Services

As stated in the introduction to this section, many counties have been reluctant to play a significant role in the management of solid waste. One possible reason for this reluctance may be that counties do not have a complete understanding of what authority counties have concerning solid waste management. To provide a better understanding of a county's powers and capabilities, the RS&Y project team has summarized several related state laws and regulations.

This section includes summaries of various laws and regulations. The RS&Y project team would emphasize that individual counties should seek specific legal counsel if they have any questions directly related to how these laws and regulations would directly impact potential future activities in their county. Appendix C presents a compilation of these solid waste laws and regulations, including the following:

- Health and Safety Code - Chapter 364. County Solid Waste: Confers the power of solid waste regulation to counties, giving them authority to operate as necessary for the collection and disposal of solid waste.
- Texas Administrative Code Title 30 - Rule §330.32: Outlines Collection and Transportation Requirements. This rule states that haulers must be responsible for ensuring all solid waste is properly disposed of at an authorized facility, must maintain documentation for at least three years that describes the nature of the waste disposed of, and describes the transporter special route permit process that is necessary to operate a collection vehicle.
- Health and Safety Code - Chapter 368. County Regulation of Transportation of Waste: Defines counties' authority to license and regulate waste haulers operating in their jurisdiction.

The RS&Y project team has identified several key sections of laws and regulations noted above that could specifically impact a county's efforts to develop an organized solid waste collection system. A discussion of these laws and regulations follow.

5.1.1 General Provisions for Counties Concerning Solid Waste

Regulations at the state and local level dictate how private haulers operate their collection services in the State of Texas. Chapter 364 of the Health and Safety Code confers the power of solid waste regulation to counties. This law gives counties the authority to operate as necessary for the collection and disposal of solid waste within unincorporated areas. In doing so, per §364.013, counties can exercise the option to contract with private companies to provide for the collection and disposal of solid waste. Subchapter C, §364.031 specifically allows a public agency (e.g. county) to contract with another public agency or a private contractor to provide solid waste disposal and collection services.

5.1.2 Funding Mechanisms

A county may fund solid waste collection through the use of tax funds, through the issuance of bonds dedicated to instituting solid waste collection services, or the collection of fees prescribed to entities receiving the benefits of collection services. These provisions are outlined in Chapter 364 of the Health and Safety Code, §364.033 and §364.034. These sections include the changes that were included as a part of Senate Bill 352, which was adopted in 2001. Per §364.034, counties can require the use of solid waste services and charge a fee for the service. This fee can be collected by any of the following entities:

1. the county;
2. a private or public entity that contracts with the county to provide the service; or
3. another private or public entity that contracts with the county to collect the fees.

In addition, a county may contract with a public or private utility to collect a fee for a service provided under this section. The contract may:

1. require the billing of the fee within the bill for other utility services;
2. allow a fee to be paid to the utility for billing and collecting the fee;
3. require a system of accounting for fees collected by an entity other than the county; and
4. contain other terms as agreed to by the parties.

To aid enforcement of fee collection for the solid waste service:

1. a county or the public or private entity that has contracted with the county to provide the service may suspend service to a person who is delinquent in payment of solid waste disposal service fees until the delinquent claim is fully paid; and
2. a public or private utility that bills and collects solid waste disposal service fees under this section may suspend service of that utility, in addition to the suspension of solid waste disposal service, to a person who is delinquent in the payment of the solid waste disposal service fee until the delinquent claim is fully paid.
3. This section does not apply to a person who provides the public or private entity, public agency, or county with written documentation that the person is receiving solid waste disposal services from another entity.

Section 5.4.1 provides further discussion concerning options for counties to contract with existing utilities to provide for billing and collection services for solid waste collection services.

5.1.3 Collection and Transportation Requirements

Along with each county's specific set of regulations or agreements, haulers must also operate within the limits of the Texas Administrative Code Title 30. Rule §330.32 outlines the collection and transportation requirements of a private solid waste hauler. This section states that haulers must be responsible for ensuring all solid waste is properly disposed of at an authorized facility, must maintain documentation for at least three years that describes the nature of the waste disposed of, and describes the transporter special route permit process that is necessary to operate a collection vehicle.

5.1.4 Exemptions for Certain Waste Haulers

Section 368.013 of the Health and Safety code outlines the exemptions and conditions that apply to waste haulers that operate in a county. The provisions of the code express

that haulers that are transporting waste on behalf of a municipality or other governmental entity or operating regularly in more than three (3) counties are not required to hold a waste hauler license required by a county.⁶

In addition, the county has the right to require waste haulers who transport waste to have a waste hauler license if the hauler deposits any part of that waste in a county other than the county in which all or part of the governmental entity is located.

5.1.5 Just Compensation Laws

A number of states within the United States have just compensation laws, which allow private solid waste haulers to be compensated in cases where a governmental entity changes the collection system. While the State of Texas does not have a specific just compensation law for counties, Section 364.034(e) of the Health and Safety Code allows an exemption for any individual that is receiving solid waste disposal services from another entity in cases where a county develops an organized collection system.⁷

While state law permits Texas counties to develop an organized collection service, the law includes provisions to protect the interests of existing private haulers. The law states that any individual that is currently receiving solid waste services that does not want to receive services from the county's solid waste provider must provide written documentation that the individual already is receiving solid waste services.

However, state law is unclear regarding the timing of when individuals would need to provide notification to a county that they wish to keep their current provider. The RS&Y project team would recommend that a county consult with its District Attorney to obtain clarification regarding interpretation of this legislation. The RS&Y project team did research whether any state agency, including the Texas Commission on Environmental Quality and the Public Utility Commission, has developed any rules regarding the implementation of this legislation. No agency has or plans to develop any rules related to this legislation.

The RS&Y project team would also recommend that any county interested in developing an organized collection system advise any individual who wants to retain his current solid waste provider that the solid waste provider must be in compliance with existing state laws. The RS&Y project team would also expect that some county residents may initially elect to remain with their current hauler, but may later change their mind if the county's fee is less expensive than the current price they are paying.

⁶ The RS&Y project team would like to note that several counties have mentioned that this legislation has prevented them from licensing private haulers in their county. It is accurate that private haulers operating in more than three counties are exempt from obtaining a license. However, based on conversations with multiple private haulers, they are generally willing to comply with these licensing requirements as long as they are required from all haulers. This issue is further addressed in Section 5.3.

⁷ Section 43.056 of the Local Government Code, Municipal Annexation, does address this issue with regard to municipalities. In cases where a city annexes an area, the City must wait two years before it can change the manner in which solid waste collection services are provided if services are being provided by a privately owned solid waste management service provider.

5.2 Overview of an Organized Collection System

Counties in Texas have traditionally had an “open system” for the selection of solid waste providers. This has allowed residents and businesses to select the services of any solid waste collection provider in the county. While this type of system may be consistent with the concept of free enterprise, it is not consistent with how solid waste services are provided in many communities in Texas and across the United States. In place of an “open system,” many communities have developed organized collection systems that allow for efficient and cost-effective approaches to solid waste collection by either public and/or private sector collection providers.

An overview of the concept of an organized solid waste collection system follows to illustrate how the system could potentially function in any of the counties in the North Central Texas region. In order to assist counties in initiating the process of establishing an organized collection system, the RS&Y project team has developed general guidelines for counties to consider during program development.

The process originates with a county deciding who will be the service provider. Local governments typically have two primary options of how to provide solid waste collection services. A number of local governments will provide this service in-house, while many other local governments will contract this service to a private company or companies to provide collection services to specific areas. In other rural areas of the U.S., it is more typical for county governments to rely on private haulers to provide collection services. Contracting for solid waste services generally serves a community well in cases where the local government is relatively small and/or does not have the resources to operate its own solid waste collection service. Based on input received from county governments in the North Central Texas region, it appears that there is a general interest by the counties to rely on private haulers to provide this service in the future. Thus, the focus of this section is on how to retain private haulers in a systematic manner to provide this service for counties.

If a county decides that it will rely on the private sector for collection services, there will be a need to decide the number and size of collection zones or districts. Factors such as geography, political boundaries and the number of existing private haulers may need to be accounted for in making this decision. For example, some counties may want to have districts that are based on county precincts, while other counties may create enough districts to allow a number of existing private haulers to remain in business. In some cases, counties may want to create different sized districts in order to interest both small and large private haulers.

Under this process, local governments will generally conduct a formal bid (request for proposal (RFP)) process and select a private hauler or haulers to provide solid waste collection services to residents. The bidding process encourages competitive pricing from private haulers. In addition, counties may evaluate whether there are any cities within or adjacent to the county that provide solid waste collection services that may have an interest in providing services in the county. There is an incentive to submit the best

bid if there is other viable competition because the entity that is awarded the contract with the government would be the sole provider of the service for each zone or district.

Counties should use the RFP process to define the operational and financial requirements and performance standards that will be required of any contractor that has an interest in providing collection services. For example, these requirements can include but not be limited to the following:

- General service requirements: operating requirements for contractors such as maintaining legal disposal records, reporting requirements, insurance, etc.
- Level of service to be provided: collection frequency, types of material collected, method of setout, collection point, etc.
- Specific geographic areas to be bid: map of the area(s) to be provided with services.
- Number of customers per geographic area: number of residential customers that will receive services.
- Length of contract and basis for cost increases: number of years the contract will be in place and the basis for private haulers to receive rate increases (e.g. Consumer Price Index).
- Basis for payments to contractors: details how contractors will be paid for services provided.

Once a county has determined those public and/or private haulers that meet the requirements in the evaluation process, the county would then contract with one or more of the entities to provide solid waste collection service for a specified period of time.

Residents being provided with organized collection services would be required to pay the county through some type of funding option (i.e. utility billing, special assessments, user fees, etc.) that is set up to collect fees in order to operate the program. In turn, the county would then pay each contracted hauler based on a predetermined payment allocation method (i.e. tonnage, customer counts, etc.) with fees collected from residents. The county could include a charge as a part of the base fee paid by residents to cover its costs for administering the collection program.

5.2.1 Advantages of an Organized Collection Program

There are many reasons why a county and its residents would benefit from an organized collection system. These reasons include the following:

- Improve the quality and cost-effectiveness of solid waste collection services received by residents in a county's unincorporated areas.
- Reduce the duplication of collection services.
- Provide the opportunity to offer bulky item and yard waste collection service across a county in order to minimize illegal dumping and litter problems.

- Opportunity to recover costs associated with wear and tear on county roads through a franchise fee.
- A decline in illegal dumpsites associated with chronic illegal dumpers.
- A decline in some of the financial costs on local government budgets from clean-up activities associated with illegal dumpsites.
- An increase in compliance by contracted collection providers in obtaining required permits and following codes.
- Improved working relationships between contracted collection providers and counties.

The establishment of an organized collection system would offer waste haulers the chance to operate more efficiently. Currently, with open collection systems, any private hauler can provide collection services throughout a county.⁸ While this type of system may be consistent with “free enterprise” concepts, it often does not lead to cost-effective service, which tends to result in higher costs for residents. For example, a county may have multiple private haulers providing services, which can result in the following:

- Inefficiencies from multiple haulers serving the same areas
- Added wear and tear to county roads from multiple garbage trucks traveling the same roads

Through an organized collection system, there should be a decrease in the cost of providing solid waste collection service on a per household basis. This should be achieved by the following:

- more efficient routing (i.e. fewer collection vehicles operating in neighborhoods and on rural roads)
- more efficient billing systems and increases in revenues from added customers.

Having an organized collection system also provides a mechanism to ensure that all private haulers are operating in compliance with existing state laws concerning proper garbage collection and disposal requirements. This could potentially reduce the number of haulers that may be hauling loads in an unsafe manner and/or illegally disposing of collected solid waste.⁹ For example, as part of the organized collection system agreement, counties could require participating haulers to provide proof that they are using legal disposal facilities (transfer stations, landfills, etc.), as well as copies of the necessary licenses to operate in the County and annual sales tax receipts.

Another benefit of developing an organized solid waste collection program is transferring the burden of funding some solid waste activities from a county's general fund to residents and businesses in the form of solid waste collection fees. For example, many cities in the North Central Texas region fund environmental enforcement and illegal

⁸ Refer to Appendix A for a listing of the private haulers that are currently operating in Kaufman County.

⁹ One county in the NCTCOG region has experienced illegal dumping that they believe is coming from a private hauler that is not disposing of collected garbage in a permitted transfer station or landfill.

dumping clean-up programs through their general fund. With an organized collection program, a county should realize a decrease in illegal dumping, and related enforcement and cleanup costs. Also, counties would have less of a need to fund annual community clean-up events, which can be expensive.

5.2.2 Disadvantages of an Organized Collection Program

The RS&Y project team identified some of the potential disadvantages that counties could face with the implementation of an organized collection program. These are discussed below.

Based on interviews conducted with private haulers operating in the North Central Texas region, there is concern that implementing an organized collection program could result in some existing private haulers going out-of-business. Displacement of small business private haulers is of particular concern because of the lack of adequate “just compensation” provisions in Texas law that would allow these businesses to be compensated if they go out of business due to implementation of an organized collection program. While no approach will guarantee that small businesses will not be displaced from the implementation of an organized collection program, options do exist through the procurement process that can provide opportunities for existing businesses, including small businesses, to effectively compete for county contracts. Local private haulers may provide certain advantages over larger national firms based on their experience and knowledge of the local area. Therefore, including local experience as a part of the procurement selection criteria may be a fair method to provide opportunities to existing private haulers. Another option would be to divide the county into multiple service zones, of which several could be sized small enough to appeal to local hauling businesses.

Counties would also be required to have a more active role in the provision of solid waste services if an organized collection program would be implemented. With an organized collection system, counties would have the added responsibility to monitor waste haulers compliance with established contract guidelines as well as oversee the collection and disbursement of collected solid waste fees. However, the County would be able to generate fees associated with solid waste services to pay for the County's cost of administration. In addition, counties would incur more risk if they implement an organized collection program, particularly if the county-selected provider does not perform satisfactorily and the county is locked into a long-term contract with that entity.

5.3 Licensing of Private Haulers

While the RS&Y project team believes that counties would be better served by implementing an organized countywide collection program, another alternative would be to consider licensing or permitting private haulers. Counties can require all private solid waste haulers operating within their county to obtain an annual license. These annual licenses can serve as a mechanism to encourage private waste haulers to comply with existing State of Texas laws and regulations concerning the transportation and disposal of

solid waste. This can also provide an opportunity for counties to maintain a list of current haulers, which could be provided to residents that would like to subscribe for collection services. This would allow counties to address multiple health and safety issues.

Trinity County (located in East Texas) is an example of a county that has implemented a pro-active permitting program. Trinity County adopted an ordinance to regulate and license commercial trash haulers. A copy of their ordinance and related information is included in Appendix D. Trinity County requires each hauler to submit an annual permit application, which sets forth multiple financial and operational requirements. In addition, the County has established a process to suspend or revoke a hauler's license, as allowed through Section 368.012.

As mentioned in Section 6.1.4, Section 368.013 of the Health and Safety Code states that haulers transporting waste on behalf of a municipality or other governmental entity or operating regularly in more than three (3) counties are not required to hold a waste hauler license required by a county. However, the RS&Y project team has found that generally only private haulers not operating in compliance with existing state laws are typically opposed to these licensing requirements.

If a county finds that it is difficult to implement a licensing program, a similar alternative such as an open franchise could be required. Under this scenario, a county could still monitor who is providing solid waste collection services by requiring all haulers to pay a franchise fee based on the gross revenue they generate. This type of fee is consistent with fees that many cities charge to allow private haulers the opportunity to provide service in their community. Collected fees are typically used to maintain roads, which receive significant wear from garbage trucks.

5.4 Funding Methods for Collection Services

There is a tremendous need to address how counties can secure a dedicated revenue stream to pay for costs associated with providing residential collection services in areas in need of services. In this section, the RS&Y project team describes various options available to counties to recover costs associated with the operation of a collection system.

5.4.1 Charge via Utility Bills

Senate Bill 352, which was passed into law by the 77th Legislature in 2001, provides more options for counties to require residents to receive collection services. Prior to 2001, Texas law provided counties the authority to offer and require solid waste services, and permitted them to collect fees for the service, but did not provide an effective enforcement mechanism to compel payment. Senate Bill 352 now allows a county to contract with a private or public entity, including a public utility, to collect solid waste fees.

In Texas, assessing a monthly utility fee for the provision of solid waste services is the most popular funding approach. This funding method provides the opportunity to secure a stable funding source that charges the direct users of the service. When solid waste fees are included as a part of a monthly utility bill along with charges for water and/or electricity, customers are much more likely to pay for the services than in cases where only solid waste fees are charged.

Charging solid waste services through utility bills can allow a county to recover fees that it may otherwise have a difficult time collecting. For example, if a county can have another utility (e.g. electric cooperative) bill for solid waste services provided by the county, the county should expect that it will recover a high percentage of fees because residents do not want to risk having their utility service suspended due to non payment. It is important to point out that while another utility would likely charge a fee to the County for billing services, this fee would likely be less expensive than it would be for the County to develop and administer its own billing system for solid waste services.

One way in which counties could encourage utilities to provide the billing and collection services would be to negotiate a fee for this service based on the amount other entities are paying to outside parties for billing services. The RS&Y project team would assert that a reasonable fee for a county to pay for this service is between \$0.25 and \$0.50 per customer per month. For example, many cities in Texas have retained contractors to provide billing services for their solid waste and water/wastewater bills. One contractor provided information to the RS&Y project team that it will typically charge approximately \$0.20 per customer per month plus the cost of postage for billing services.

The RS&Y project team would expect that the primary types of utility providers that counties would want to have provide billing services would include water, electric and gas. Because utility services are provided at a local level, individual counties would need to evaluate the feasibility of using an existing utility to provide billing services. The RS&Y project team would like to offer the following experiences in helping other Texas communities address this issue:

- In general water utilities represent the best opportunity to contract with concerning billing issues. However, due to the reliance on groundwater in many areas of the state, counties may face scenarios where a certain percentage of residents would not be covered.
- Several water districts in El Paso County have successfully provided solid waste collection services to their residents for a number of years, and have included the fees for these services as a part of their water bills.
- While electric utilities could be a viable type of utility to provide billing services, recent changes in the Texas electric industry due to deregulation may make it more difficult to rely on electric utilities. However, electric cooperatives, which are not subject to deregulation, can serve as an effective type of utility to provide

this service. In addition, electric cooperatives are very prevalent in the unincorporated areas of Texas.

- If possible, the RS&Y project team would encourage counties to identify a single entity that could serve as the billing entity. However, if a single entity cannot provide this service across all areas of the county in need of service, counties should look to multiple utilities that could serve this function.

5.4.2 Charge via Special Assessment

Special assessments, which are typically collected as a part of annual property taxes, could be used as an instrument to provide billing services for individual property owners. Special assessments represent a commonly utilized method for the billing of solid waste services. Including a special assessment on the property tax bill provides an opportunity to bill for solid waste services via the property tax bill without increasing the effective tax rate.

This billing scenario would be appropriate if counties fund solid waste collection services through a special assessment. This fee would be included on the yearly property tax bill as a line item and identified as a special assessment. The assessment amount would be equal to the cost of providing solid waste services on an annual basis. This would allow a county to charge for solid waste services based on the cost of the service, instead of based on property valuations. A county would need to ensure that the assessment is only charged to residents in the unincorporated areas of the county.

If a county would employ this funding method, the RS&Y project team would recommend that the county charge for the service in advance. This would allow the county to pay service providers on a periodic basis throughout the year.

5.4.3 Individual Haulers Collect Bills

Another option for counties to obtain payments is to require the private hauler contracted to provide collection services to collect the payments. While this approach can be effective, it can also result in a limited number of customers using available services because participation is voluntary. Voluntary services can lead to some residents not using the services provided, possibly resulting in increases in illegal dumping.

Another potential problem with having individual haulers collect the bills is that the only meaningful action that can be taken when a customer does not pay his solid waste bill is to suspend service. There is no meaningful mechanism to require the customer to continue paying for solid waste services. Private haulers may experience relatively high “bad debt” costs in areas where they are responsible for billing and collection for solid waste fees. Increases in bad debt expenses likely result in the need for private haulers to increase their standard cost of service for solid waste collection. The RS&Y project team has found that private haulers are typically willing to provide waste collection services less expensively if they are not be required to send out individual bills to customers, and

can rely on a guaranteed revenue stream for a set number of years from a county or other governmental entity.

5.4.4 Direct User Fees

Charging customers based on the level of service provided can be an equitable way to fund solid waste programs, especially when the service is provided via citizens' collection stations. Through this approach, customers will generally pay the service provider directly. Depending on how services are provided, this can occur in a number of ways. For a curbside collection program, customers may pay the service provider directly. For citizens' collection stations, customers may purchase individual garbage bags that they can use for disposal. While this approach can be effective, it can also result in a limited number of customers using available services because participation is voluntary. Voluntary services can lead to some residents not using the services provided, possibly resulting in increases in illegal dumping.

5.5 Funding Sources Available to Develop Facilities

There are many grant and loan programs available that can assist counties in the development of solid waste disposal facilities. The project team has identified six grant and loan programs and information database resources that can be used in this manner.

5.5.1 Texas Water Development Board – Clean Water State Revolving Fund

Communities seeking assistance for the development of a transfer station or citizens' collection station may apply for loans to develop these facilities through the Clean Water State Revolving Fund. This fund is administered by the Texas Water Development Board annually for those communities seeking assistance for the development of public works and solid waste projects. While this fund has been historically used to fund water projects, solid waste projects are also eligible for funding. For more information on this funding, please contact the TWDB or visit the TWDB's website: <http://www.tdwb.state.tx.us>

5.5.2 United States Department of Agriculture (USDA) – Water and Waste Disposal Loan/Grant Program

Loans and grants are available through the USDA's Water and Waste Disposal Loan/Grant Program for rural communities (e.g. cities, towns, counties, water districts and non-profit corporations) with populations under 10,000. These grants can be applied to the construction, enlargement, extension or otherwise improvement of a water or waste disposal facility. Grants and/or loans can be used for the following purposes:

- Pay reasonable fees necessary for the project development such as legal and engineering.
- Cost of acquiring land, rights-of-way, permits, etc.

- Purchase or lease of necessary equipment to install, operate, maintain, extend or protect facilities.

Only loan funds may be used for:

- Initial operating expenses.
- The purchase of existing facilities.
- Interest incurred during construction.

More information on these grants and loans can be found at the USDA's Rural Development website: <http://www.rurdev.usda.gov/wa/wwdlg.htm>

5.5.3 Community Development Block Grants (CDBG) - Non-entitlement Communities

CDBG funds for non-entitlement communities are reserved for those communities who have large rural populations.¹⁰ CDBG funds can be used for public works projects in low- and moderate- income areas including the development of a citizens' collection stations, as well as sanitary and water system improvements. Based on interviews with Office of Rural Community Affairs (ORCA) staff, under the guidelines of the grant program, the applicant must show that an imminent threat to the public health is occurring in those areas.¹¹ For more information on how to apply for this grant through ORCA, please visit their website at: <http://www.orca.state.tx.us>.

5.5.4 Gifts, Grants, Donations and Bequests to a County

A county can create an environmental account for accepting gifts, donations, grants and bequests for funding their local solid waste programs as well as using this as a mechanism for funding a portion of the development of a transfer station or citizens' collection station.

Pursuant to the Texas Government Code Section 41.108, the commissioners' court of a county or counties composing a district may accept gifts and grants from any foundation or association for the purpose of financing adequate and effective prosecution programs in the county or district.

Local Government Code Section 81.032 provides for the commissioners' court to accept a gift, grant, donation, bequest, or devise of money or other property on behalf of the

¹⁰ Non-entitlement communities are those with cities with populations less than 50,000, cities that are not designated as a central city of a Metropolitan Statistical Area, cities that are not participating in urban county programs, counties that generally have fewer than 200,000 persons in the non-entitlement cities and unincorporated areas located in the county.

¹¹ Imminent threat to public health was defined by ORCA staff as any situation that can be considered immediately detrimental to the health and safety of residents. For example, if an area is lacking water connections it can be considered immediately detrimental to the public health.

county for the purpose of performing a function conferred by law on the county or a county officer.

5.5.5 Texas Rural Partners¹²

Texas Rural Partners informs rural areas of the wide range of programs offered by federal and state agencies, non-profits, and the private sector designed to help rural communities. This information is collected in one central database, which is available to local communities via printed copies, and on the Texas Rural Partners Website. In addition, the Texas Rural Partners website has grant writing assistance information or “tool boxes” that provide strategies to those communities considering applying for grants. For more information on the services available through the Texas Rural Partners, please visit their website at: <http://www.trdc.org/resourceguide.htm>.

5.5.6 Rural Policy Research Institute (RUPRI) – Rural Assistance Center (RAC)

The RAC is a national resource on rural health and human services information. The RAC offers many information and research opportunities to rural communities seeking funding. The RAC has information specialists that are available to provide customized assistance, such as web and database searches on rural topics and funding resources, linking users to organizations, and furnishing relevant publications from the RAC resource library. More information on the RAC please visit the RAC’s website: <http://www.raconline.org>.

¹² Formerly the Texas Rural Development Council.

6. Options for Long-term Strategic Relationships and Sub-Regional Authorities

This section describes long-term strategic relationships that other Texas communities have developed to better coordinate solid waste management efforts between communities. The options are presented through a series of case studies, outlining both positive and negative experiences of multiple communities' solid waste management system operations.

6.1 Interlocal Agreements for Joint Ownership and Operation

The Cities of College Station and Bryan, Texas established the Brazos Valley Solid Waste Management Agency (BVSWMA) as a joint use/ownership administrative agency. BVSWMA was established through an interlocal agreement between the two cities to share disposal facilities. This agreement did not require any special legislative authorization. Each of the cities remains responsible for its own collection services. The two cities jointly utilize the sanitary landfill previously owned by the City of College Station, and are in the process of permitting a new long term facility. BVSWMA in turn currently contracts with the City of College Station for disposal operations.

BVSWMA was originally established with a governing board with representatives from both College Station and Bryan, and the Chairman of the Board rotated annually between the two cities. One of the drawbacks of this organizational structure is their own defined requirement for the ratification of the Board actions (i.e. budgets, agreements with others, contracts, etc.) by both City Councils.

During the process of permitting a new disposal facility, the TCEQ raised several questions about BVSWMA's authority concerning permitting, ownership, financial assurance, and other items. To satisfy the TCEQ's concerns, it was necessary to ratify all BVSWMA Board actions by both City Councils. These requirements have made this type of organization somewhat cumbersome. However, in general, this organization has worked well, as long as both cities continue in a spirit of joint cooperation. The legislative authority to establish a non-profit corporation for solid waste services (see Section 6.3) was not in effect at the time BVSWMA was formed.

6.2 Contracted County Operation

Somervell County (County) has established a county owned and registered solid waste transfer station to serve the needs of its residents. The facility is operated under contract with the County by a private corporation. The County was responsible for all costs of construction and registration with the TCEQ. As a means of some cost recovery, the County receives a royalty payment from the private contractor for all waste received at the facility from outside of the County. The County establishes the tipping fee for

Somervell County residents, but the private contractor can establish the tipping fee for non-county residents at whatever level they want to charge.

6.3 Establishment of Special Solid Waste Authorities or Districts as a Non-profit Corporation

The Texoma Area Solid Waste Authority, Inc. (TASWA) was established as a non-profit corporation by the Cities of Denison, Gainesville, and Sherman and Grayson and Cooke Counties, as authorized by state law. TASWA is responsible for disposal services to these five entities, and is in the process of securing a permit from TCEQ to operate a regional sanitary landfill. TASWA is governed by a Board of Directors made up of a representative of each of the five entities. Initially, these representatives are the mayors of each city, and the county judge of each county.

TASWA was established in accordance with state law that provided certain powers and restrictions. TASWA is considered a tax-exempt governmental entity, and as such, enjoys the same liability protections and restrictions as other governmental entities. However, TASWA has no power of taxation or eminent domain. It does have the ability to acquire and sell real and personal property without the bidding process required of municipal and county governments. In addition TASWA has the ability to utilize other delivery methods such as design/build, and the ability to issue bonds or seek other methods of finance.

The five entities further defined powers and restrictions for TASWA through their interlocal agreements. As an example the Board of Directors cannot authorize any spending greater than \$50,000 without the approval of all three cities, and bylaws cannot be changed without the approval of all five entities.

This is a new authority without an operating history. However, this organizational structure appears to offer potential for success, and as discussed above has advantages over a strictly administrative agency established by interlocal agreements.

6.4 Existing River Authorities or Water Districts with Solid Waste Authority

The North Texas Municipal Water District (NTMWD) was established by the Texas Legislature with the primary purpose of establishing a regional treated water supply system to various member cities, and were authorized certain specific powers similar to many river authorities. Subsequent to its establishment, additional member and customer cities have been added to its service area. The NTMWD was also granted additional authority to provide other services including wastewater treatment and solid waste services. The activities of the NTMWD are financed through user fees from member cities, and they have not levied any taxes to date (although they have the power to do so).

The NTMWD began providing solid waste transportation and disposal services at the specific request of five of their member cities (Plano, Richardson, Allen, McKinney and Frisco). The NTMWD currently operates three transfer stations, provides transportation from the transfer stations to the landfill, and operates a joint-use sanitary landfill. In addition, the NTMWD is currently in the permitting process for a long-term regional disposal facility.

The NTMWD establishes an annual anticipated budget for solid waste services and presents it to the five member cities for their review and comments (not approval). The actual costs for these services are divided annually between the five cities based upon the actual percentage of the total waste handled that is delivered by each city, and its contractors or citizens. The NTMWD bills each of the cities monthly based upon the percentage of the total waste delivered the past year, with any adjustments for actual quantities made the last month of the year.

The NTMWD is responsible for all operations, but activities are coordinated with the member cities through regularly scheduled meetings with operational staff. In the past the NTMWD has operated with the philosophy that they will provide any solid waste service to the member cities that is requested, provided all of the cities want the service, as all pay their proportional share, regardless of the individual city benefits. The organization has worked very well in most cases as the services provided have benefited all of the cities in one way or the other. The cities have no direct control over daily operations, nor do they have the ability to expand any NTMWD programs, if all of the other cities do not wish to be a part of any expanded program.

6.5 Establishment of Solid Waste Cooperatives (Kaufman County)

Kaufman County is predominantly rural and does not currently have a sanitary landfill or other disposal system located within County boundaries. However, the County developed a countywide solid waste plan to serve the County and assist in coordinating the solid waste efforts of multiple jurisdictions within the County. The County government had not previously been involved in solid waste activities, and had little interest in being the lead solid waste agency in the County. The planning efforts considered the establishment of a new solid waste authority, but met with resistance to the legislative establishment of a separate entity with taxing authority. In response to this resistance, a volunteer Solid Waste Management Cooperative (Cooperative), the first of its kind in Texas, was established.

The Cooperative is completely dependent on cooperative efforts between various entities. It has no taxing authority, but receives its funding from membership dues, a line item in the County budget, and grants. Thus, the Cooperative has limited funding, a minimal staff and no statutory authority. However, the Cooperative has been very successful with its education programs, the establishment of joint use citizens' collection stations, and coordinated proposal issuance and receipt for collection services in multiple jurisdictions.

6.6 Single Community Ownership and Operation through Interlocal Agreements

The City of Lubbock is the major city in Lubbock County. In addition Lubbock has approximately 58 percent of the population within the South Plains Association of Governments (SPAG) 15-county area. There are no other major cities (greater than 25,000 people) in the immediate area. Therefore, the City of Lubbock committed to establish a solid waste disposal facility to serve not only its own needs, but the needs of all of its surrounding regional neighbors.

This single entity concept simplified the organizational structure and the City of Lubbock has complete control. However, any time one entity has complete control, others always question whether they are being treated fairly. In an attempt to alleviate some of these questions, the City utilized an advisory committee to assist in the siting and design of a new regional disposal site. This advisory committee consisted not only of representatives of the City of Lubbock, but some representatives of the County and neighboring cities.

The facility is supported financially by tipping fees collected at the gate. Neighboring communities use the facility through interlocal agreements, and are charged the same tipping fee as the City of Lubbock charges itself. In this situation, this single entity control has worked very well.

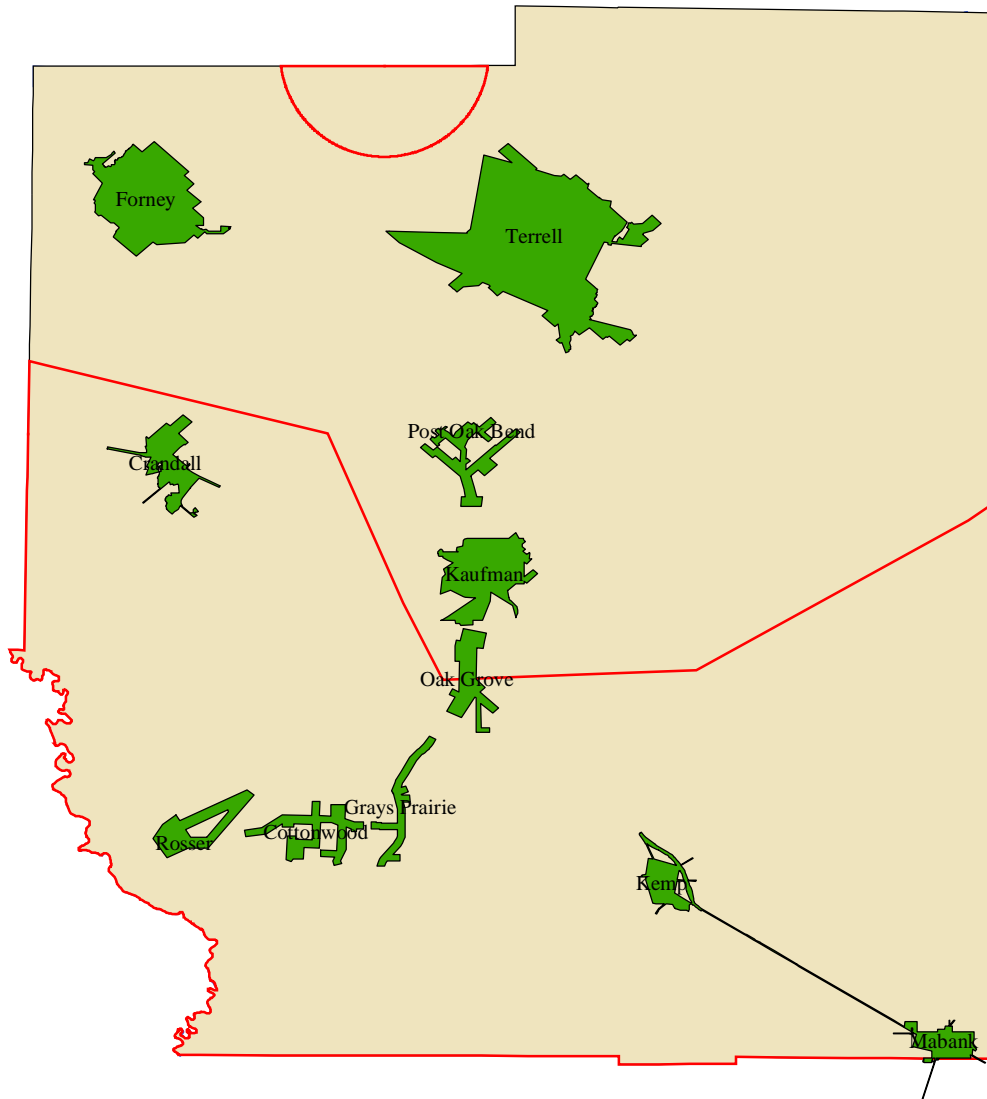
**APPENDIX A: LIST OF PRIVATE HAULERS OPERATING IN SELECTED CITIES
IN KAUFMAN COUNTY**

Appendix A
List of Private Haulers Operating in Kaufman County

<u>City</u>	<u>Hauler</u>	<u>Landfill Name</u>	<u>Years of Remaining Capacity</u>	<u>Distance to Landfill</u>
Cottonwood	Citizen Responsibility	ECD Landfill, Inc.	160.2	18.12
Crandall	IESI	WMI Skyline Landfill	44.7	16.17
Forney	IESI	WMI Skyline Landfill	44.7	27.42
Grays Prairie	Citizen Responsibility	ECD Landfill, Inc.	160.2	19.96
Kaufman	IESI	WMI Skyline Landfill	44.7	25.41
Kemp	IESI	WMI Skyline Landfill	44.7	36.49
Lawrence	Citizen Responsibility	WMI Skyline Landfill	44.7	37.13
Mabank	Olympic Waste Services-Allied Waste Industries	ECD Landfill, Inc.	160.2	36.4
Oak Grove	Citizen Responsibility	McCommas Bluff Landfill	51.0	31.73
Oak Ridge	Citizen Responsibility	McCommas Bluff Landfill	51.0	32.4
Post Oak Bend	Citizen Responsibility	McCommas Bluff Landfill	51.0	29.01
Rosser	Citizen Responsibility	ECD Landfill, Inc.	160.2	15.05
Talty	Citizen Responsibility	Unknown		
Terrell	IESI	WMI Skyline Landfill	44.7	39.29
Windmill Farms	Citizen Responsibility	Unknown		

APPENDIX B: KAUFMAN COUNTY MAPS

Figure B9-1: Kaufman County Number of Years Remaining at Landfills Currently Used by Selected Incorporated Cities



 Areas in Need of Service

Years Remaining at Landfill Used by Each City


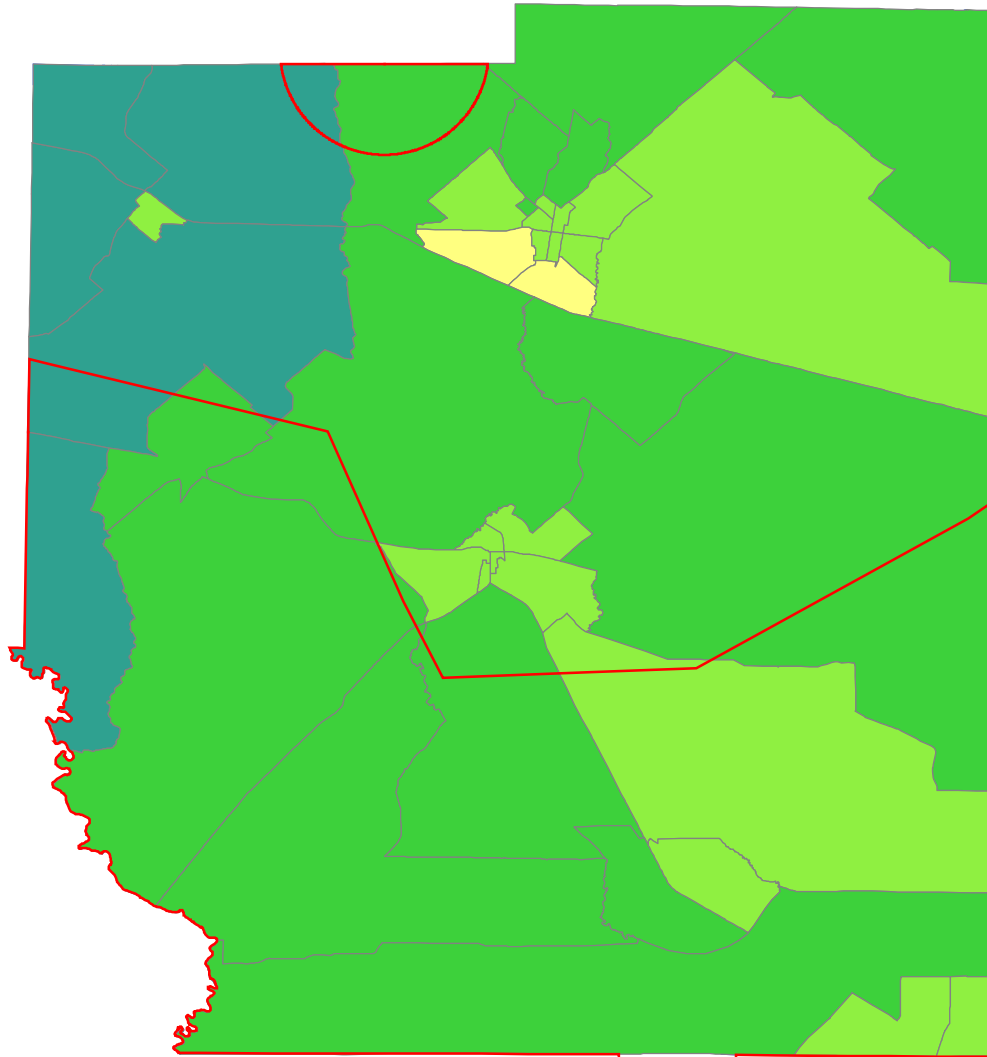
 > 10 years

Figure B9-2: Kaufman County Median Household Income



 Areas in Need of Service

Median Household Income







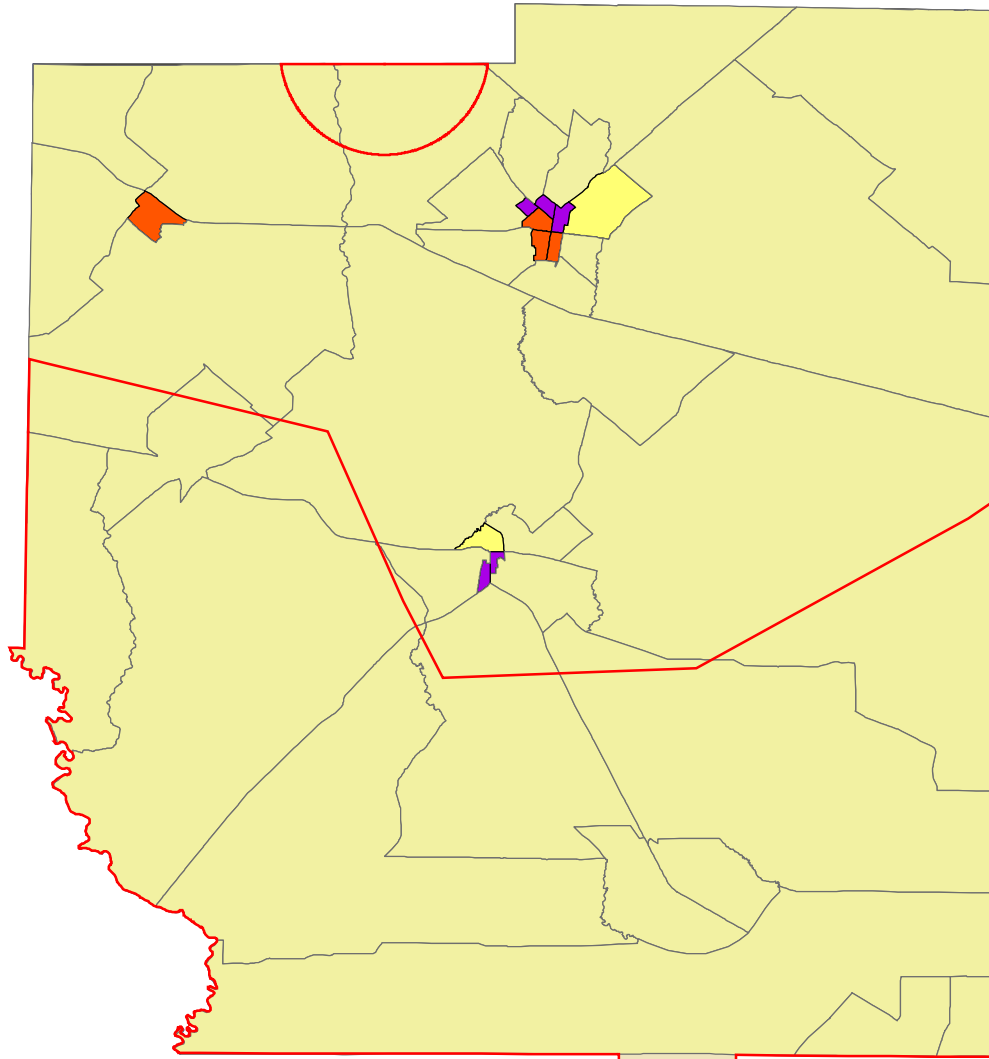




-  \$0 - \$20,000
-  \$20,001 - \$40,000
-  \$40,001 - \$60,000
-  \$60,001 - \$80,000
-  \$80,001 - \$100,000
-  Greater than \$100,000

Figure B9-3: Kaufman County Population Density



 Areas in Need of Service

Average Number of Persons/Square Mile

-  0 - 500
-  501 - 1,500
-  1,501 - 3,000
-  3,001 - 4,453

**APPENDIX C: COMPILATION OF SOLID WASTE LAWS AND
REGULATIONS**

CHAPTER 364. COUNTY SOLID WASTE

SUBCHAPTER A. GENERAL PROVISIONS

§ 364.001. Short Title

This chapter may be cited as the County Solid Waste Control Act.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 364.002. Purpose

The purpose of this chapter is to authorize a cooperative effort by counties, public agencies, and other persons for the safe and economical collection, transportation, and disposal of solid waste to control pollution in this state.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 364.003. Definitions

In this chapter:

- (1) "Composting" has the meaning assigned by Chapter 361 (Solid Waste Disposal Act).
- (2) "District" means a district or authority created under Article XVI, Section 59, or Article III, Section 52, of the Texas Constitution.
- (3) "Public agency" means a district, municipality, regional planning commission created under Chapter 391, Local Government Code, or other political subdivision or state agency authorized to own and operate a solid waste collection, transportation, or disposal facility or system.
- (4) "Sanitary landfill" has the meaning assigned by Chapter 361 (Solid Waste Disposal Act).
- (5) "Solid waste" has the meaning assigned by Chapter 361 (Solid Waste Disposal Act).
- (6) "Solid waste disposal system" means a plant, composting process plant, incinerator, sanitary landfill, or other works and equipment that are acquired, installed, or operated to collect, handle, store, treat, neutralize, stabilize, or dispose of solid waste, and includes the sites.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989. Amended by Acts 1991, 72nd Leg., ch. 14, § 124, eff. Sept. 1, 1991.

SUBCHAPTER B. COUNTY SOLID WASTE MANAGEMENT

§ 364.011. County Adoption of Solid Waste Rules

(a) Subject to the limitation provided by Sections 361.151 and 361.152 (Solid Waste Disposal Act), a commissioners court by rule may regulate solid waste collection, handling, storage, and disposal in areas of the county not in a municipality or the extraterritorial jurisdiction of a municipality.

(b) A county, in making any rules, including those under the licensing power granted by Chapter 361 (Solid Waste Disposal Act), may not impose an unreasonable requirement on the disposal of the solid waste in the county not warranted by the circumstances.

(c) A rule adopted under this section may not authorize an activity, method of operation, or procedure that is prohibited by Chapter 361 (Solid Waste Disposal Act) or by rules of the Texas Natural Resource Conservation Commission.

(d) A county may institute legal proceedings to enforce its rules.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989. Amended by Acts 1991, 72nd Leg., 1st C.S., ch. 3, § 1.034, eff. Aug. 12, 1991.

§ 364.012. Prohibiting Solid Waste Disposal in County

(a) The county may prohibit the disposal of municipal or industrial solid waste in the county if the disposal of the municipal or industrial solid waste is a threat to the public health, safety, and welfare.

(b) To prohibit the disposal of municipal or industrial solid waste in a county, the commissioners court must adopt an ordinance in the general form prescribed for municipal ordinances specifically designating the area of the county in which municipal or industrial solid waste disposal is not prohibited.

(c) An ordinance required by Subsection (b) may be passed on first reading, but the proposed ordinance must be published in a newspaper of general circulation in the county for two consecutive weeks before the commissioners court considers the proposed ordinance. The publication must contain:

(1) a statement of the time, place, and date that the commissioners court will consider the proposed ordinance; and

(2) notice that an interested citizen of the county may testify at the hearing.

(d) A public hearing must be held on a proposed ordinance before it is considered by the commissioners court, and any interested citizen of the county shall be allowed to testify.

(e) The commissioners court of a county may not prohibit the processing or disposal of municipal or industrial solid waste in an area of that county for which:

(1) an application for a permit or other authorization under Chapter 361 has been filed with and is pending before the commission; or

(2) a permit or other authorization under Chapter 361 has been issued by the commission.

(f) The commission may not grant an application for a permit to process or dispose of municipal or industrial solid waste in an area in which the processing or disposal of municipal or industrial solid waste is prohibited by an ordinance, unless the county violated Subsection (e) in passing the ordinance. The commission by rule may specify the procedures for determining whether an application is for the processing or disposal of municipal or industrial solid waste in an area for which that processing or disposal is prohibited by an ordinance.

(g) The powers specified by this section may not be exercised by a county with respect to areas to which Section 361.090 applies.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989. Amended by Acts 1991, 72nd Leg., 1st C.S., ch. 3, § 1.035, eff. Aug. 12, 1991; Acts 1999, 76th Leg., ch. 570, § 5, eff. Sept. 1, 1999.

§ 364.013. County Authority

A county may:

(1) acquire, construct, improve, enlarge, repair, operate, and maintain all or part of one or more solid waste disposal systems;

(2) contract with a person to collect, transport, handle, store, or dispose of solid waste for that person;

(3) contract with a person to purchase or sell, by installments for a term considered desirable, all or part of a solid waste disposal system;

(4) enter into an operating agreement with a person, for the terms and on the conditions considered desirable, for the operation of all or part of a solid waste disposal system by that person or by the county; and

(5) lease to or from a person, for the term and on the conditions considered desirable, all or part of a solid waste disposal system.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 364.014. Acquisition of Property

(a) A county may acquire by purchase, lease, gift, condemnation, or any other manner and may own, maintain, use, and operate property or an interest in property necessary or convenient to the exercise of the powers and purposes provided by this chapter.

(b) The power of eminent domain is restricted to the county and may be exercised in the manner provided by law.

(c) A county may not exercise the power of eminent domain to acquire real property under this section if that power conflicts with a corporation's power of eminent domain as provided by law.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 364.015. Dumping or Garbage Disposal Grounds

The commissioners court shall determine the consideration to be paid to acquire real property on which to locate dumping or garbage disposal grounds. In determining where to locate dumping or garbage disposal grounds, the commissioners court shall consider:

(1) the convenience of the people to be served; and

(2) the general health of, and the annoyance to, the community to be served by the dumping or garbage disposal grounds.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 364.016. Cost of Certain Required Alterations

The relocation, raising, rerouting, changing of grade, or altering of construction of a highway, railroad, electric transmission line, telegraph or telephone property or facility, or pipeline made necessary by the actions of a county shall be accomplished at the sole expense of the county, which shall pay the cost of the required activity as necessary to provide comparable replacement, minus the net salvage value of any replaced facility.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

SUBCHAPTER C. SOLID WASTE MANAGEMENT SYSTEMS AND SERVICES CONTRACTS

§ 364.031. Public Agency Contracts

(a) A public agency may contract with another public agency or a private contractor for the other public agency or private contractor to:

(1) make all or part of a solid waste disposal system available to a public agency, a group of public agencies, or other persons; and

(2) furnish solid waste collection, transportation, handling, storage, or disposal services through the other public agency's or private contractor's system.

(b) The contract may:

(1) be for the duration agreed on by the parties;

(2) provide that the contract remains in effect until bonds issued or to be issued by either public agency and refunding bonds issued for those original bonds are paid;

(3) contain provisions to assure equitable treatment of parties who contract with the other public agency or private contractor for solid waste collection, transportation, handling, storage, or disposal services from the same solid waste disposal system;

(4) provide for the sale or lease to or use by the other public agency or private contractor of a solid waste disposal system owned or to be acquired by the public agency;

(5) provide that the other public agency or private contractor will operate a solid waste disposal system owned or to be acquired by the public agency;

(6) provide that the public agency is entitled to continued performance of services after the amortization of the other public agency's or private contractor's investment in the disposal system during the useful life of the system on payment of reasonable charges, reduced to take into consideration the amortization; and

(7) contain any other provisions and requirements the other public agency or private contractor and the public agency determine to be appropriate or necessary.

(c) The contract must provide the method to determine the amount the public agency will pay to the other public agency or private contractor.

(d) A municipality may provide in its contract that the other public agency or private contractor has the right to use the streets, alleys, and public ways and places in the municipality during the term of the contract.

(e) This section does not expand the authority granted to a county under Section 364.013.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989. Amended by Acts 1995, 74th Leg., ch. 486, § 1, eff. June 12, 1995.

§ 364.032. Public Agency Payments

(a) Public agency payments to a county for solid waste collection, transportation, handling, storage, or disposal services may be made from income of the public agency's solid waste disposal fund as provided by the contract between the county and the public agency. The payments are an operating expense of the fund, and the revenues of the fund are to be applied toward those payments.

(b) Public agency payments to be made under the contract may be made from revenues of the public agency's water, sewer, electric, or gas system or a combination of utility systems.

(c) Unless the ordinance or resolution authorizing the outstanding bonds of the public agency expressly reserves the right to accord contract payments a position of parity with, or a priority over, the public agency's bond requirements, the payments under a contract are subordinate to amounts required to be paid from the revenues of the utility system for principal of and interest on bonds of the public agency that are:

(1) outstanding at the time the contract is made; and

(2) payable from those revenues.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 364.033. Alternative Payment Procedure Using Tax Funds

(a) A contract between a public agency and a county that is authorized by the public agency's governing body is an obligation against the public agency's taxing power to the extent provided by the contract if:

(1) the public agency holds an election according to applicable procedure provided by Chapter 1251, Government Code, relating to the issuance of bonds by a municipality; and

(2) at the election, it is determined that the public agency's governing body may levy an ad valorem tax to make any payments required of the public agency under the contract.

(b) Except for the levy of a tax under this section, an election is not required for the exercise of a power granted by this chapter.

(c) Only qualified voters of the public agency are entitled to vote at an election held under this section, and except as otherwise provided by this section and by Chapter 1251, Government Code, the Election Code governs an election under this section.

(d) If the alternative procedure for payment provided by this section is followed, payments under the contract may be:

(1) payable from and are solely an obligation against the taxing power of the public agency; or

(2) payable both from taxes and from revenues as provided by the contract.

(e) If the alternative procedure of public agency payment to a county for disposal services provided by this section is not followed, the county or a holder of county bonds is not entitled to demand payment of the public agency's obligation from funds raised or to be raised by taxation.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

Amended by Acts 2001, 77th Leg., ch. 1420, § 8.270, eff. Sept. 1, 2001.

§ 364.034. Solid Waste Disposal Service; Fees

(a) A public agency or a county may:

- (1) offer solid waste disposal service to persons in its territory;
- (2) require the use of the service by those persons;
- (3) charge fees for the service; and
- (4) establish the service as a utility separate from other utilities in its territory.

(b) A fee for a service provided under this section may be collected by:

- (1) the county;
- (2) a private or public entity that contracts with the county to provide the service; or
- (3) another private or public entity that contracts with the county to collect the fees.

(c) A county may contract with a public or private utility to collect a fee for a service provided under this section. The contract may:

- (1) require the billing of the fee within the bill for other utility services;
- (2) allow a fee to be paid to the utility for billing and collecting the fee;
- (3) require a system of accounting for fees collected by an entity other than the county; and
- (4) contain other terms as agreed to by the parties.

(d) To aid enforcement of fee collection for the solid waste disposal service:

(1) a county or the public or private entity that has contracted with the county to provide the service may suspend service to a person who is delinquent in payment of solid waste disposal service fees until the delinquent claim is fully paid; and

(2) a public or private utility that bills and collects solid waste disposal service fees under this section may suspend service of that utility, in addition to the suspension of solid waste disposal service, to a person who is delinquent in the payment of the solid waste disposal service fee until the delinquent claim is fully paid.

(e) This section does not apply to a person who provides the public or private entity, public agency, or county with written documentation that the person is receiving solid waste disposal services from another entity.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

Amended by Acts 2001, 77th Leg., ch. 1238, § 1, eff. Jan. 1, 2002.

§ 364.035. Public Agency Duty to Adjust Rates Charged

(a) A public agency shall establish, maintain, and adjust the rates charged by the public agency for solid waste disposal services if:

(1) the public agency executes a contract with a county under this chapter; and

(2) the payments under the contract are to be made either wholly or partly from the revenues of the public agency's solid waste disposal fund.

(b) The revenues of the public agency's solid waste disposal fund, and any taxes levied in support, must be sufficient to pay:

(1) the expense of operating and maintaining the solid waste disposal service or system; and

(2) the public agency's obligations to the county under the contract and in connection with bonds issued or that may be issued that are secured by revenues of the solid waste disposal service or system.

(c) A contract between a public agency and a county may require the use of consulting engineers and financial experts to advise the public agency whether and at what time rates are to be adjusted under this section.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 364.036. Authority to Provide Disposal Services to More Than One Person

A contract or group of contracts under this chapter may provide that:

(1) a county may render concurrently to more than one person services relating to the construction or operation of all or part of a solid waste disposal system; and

(2) the cost of the services will be allocated among the several persons as determined by the contract or group of contracts.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

SUBCHAPTER D. BONDS

§ 364.051. Authority to Issue Bonds

(a) To acquire, construct, improve, enlarge, and repair all or part of a solid waste disposal system, a county may issue bonds payable:

(1) from and secured by a pledge of all or part of the revenues to accrue under a contract entered into under this chapter; and

(2) from other income pledged by the county.

(b) Pending issuance of definitive bonds, a county may issue negotiable interim bonds or obligations eligible for exchange or substitution by use of the definitive bonds.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 364.052. Terms; Form

(a) Bonds issued under this chapter must be in the form and denomination and bear the rate of interest prescribed by the commissioners court.

(b) The bonds may be:

(1) sold at a public or private sale at a price and on the terms determined by the commissioners court; or

(2) exchanged for property or an interest in property determined by the commissioners court to be necessary or convenient to the purposes authorized by this chapter.

(c) The bonds are investment securities under Chapter 8, Business & Commerce Code.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 364.053. Approval and Registration

(a) A county may submit bonds that have been authorized by the commissioners court and any record relating to their issuance to the attorney general for examination as to their validity. If the

bonds state that they are secured by a pledge of proceeds of a contract between the county and a public agency, the county may submit to the attorney general a copy of the contract and the proceedings of the public agency authorizing the contract.

(b) If the attorney general finds that the bonds have been authorized and any contract has been made in accordance with state law, the attorney general shall approve the bonds and contract and the comptroller shall register the bonds.

(c) Following approval and registration, the bonds and the contract are incontestable.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 364.054. District Bond Validation by Suit

(a) As an alternative for, or in addition to, the procedure provided by Section 364.053, the board of directors of a district may validate its bonds by filing suit under Chapter 1205, Government Code.

(b) The interest rate and sale price of the bonds need not be fixed until after the termination of the validation proceedings or suit.

(c) If the proposed bonds recite that they are secured by the proceeds of a contract made by the district and one or more public agencies, the petition must allege that fact and the notice of the suit must mention that allegation and each public agency's fund or revenues from which the contract is payable.

(d) The suit is a proceeding in rem, and the judgment is res judicata as to the validity of the bonds and any contract and the pledge of revenues.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

Amended by Acts 2001, 77th Leg., ch. 1420, § 8.271, eff. Sept. 1, 2001.

§ 364.055. Investment and Use of Proceeds

(a) The commissioners court may set aside from proceeds of a bond sale:

(1) interest to accrue on the bonds;

(2) administrative expenses to the estimated date when the solid waste disposal system will become revenue producing; and

(3) reserve funds created by the resolution authorizing the bonds.

(b) Proceeds from the sale of bonds may be invested, pending their use, in the securities or time deposits as specified by the resolution authorizing the issuance of the bonds or the trust indenture securing the bonds.

(c) The earnings on the investments may be applied as provided by the resolution or trust indenture.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 364.056. Refunding of Bonds

A county may refund bonds issued under this chapter on terms and conditions and bearing the rate of interest prescribed by the commissioners court.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 364.057. Legal Investments; Security for Deposits

(a) Bonds issued under this chapter are legal and authorized investments for:

(1) a bank;

(2) a savings bank;

(3) a trust company;

(4) a savings and loan association;

(5) an insurance company;

(6) a fiduciary;

(7) a trustee; and

(8) a sinking fund of a municipality, school district, or any other political corporation or subdivision of the state.

(b) The bonds may secure the deposits of public funds of the state or of a political subdivision of the state. The bonds are lawful and sufficient security for those deposits in an amount up to their face value, if accompanied by all appurtenant unmatured coupons.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 364.058. Adjustment of Rates and Changes to Maintain Adequate Revenue

If bonds are outstanding, the commissioners court shall establish, maintain, and collect rates and charges for services furnished or made available by the solid waste disposal system adequate to:

- (1) pay maintenance and operation costs of and expenses allocable to the solid waste disposal system and the principal of and interest on the bonds; and
- (2) provide and maintain funds created by the resolution authorizing the bonds.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

CHAPTER 368. COUNTY REGULATION OF TRANSPORTATION OF WASTE

SUBCHAPTER A. TRANSPORTERS OF GREASE TRAP, SAND TRAP, AND SEPTIC WASTE

§ 368.001. Regulatory Program

The commissioners court of a county may establish a program regulating transporters of grease trap, sand trap, and septic waste.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 368.002. Participation by Municipality in Regulatory Program

The commissioners court may enter into a contract with a municipality that provides the terms and conditions under which the municipality may participate in the regulatory program.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 368.003. Permits

The commissioners court of a county may:

- (1) require a permit for trucks that transport grease trap, sand trap, and septic waste, including trucks serving unincorporated areas of the county;
- (2) by order establish guidelines and procedures for issuing permits to trucks that transport grease trap, sand trap, and septic waste; and
- (3) issue a single permit number that allows a municipality participating in the county regulatory program the option to add to that permit number a suffix unique to the municipality.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 368.004. Inspections

The commissioners court of a county may:

- (1) coordinate with municipalities the inspection of trucks that transport grease trap, sand trap, and septic waste;
- (2) by order establish guidelines and procedures to coordinate truck inspections; and
- (3) assess an inspection fee sufficient to cover the cost to the county of providing the inspection service.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 368.005. Contracts

The commissioners court of a county may contract with a person to provide a service that is part of the regulatory program.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 368.006. Forms

The commissioners court of a county may develop a single manifest form with a uniform manifest registration and numbering system to be used by the county and each participating municipality.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

SUBCHAPTER B. REGULATION AND LICENSING OF WASTE HAULERS

§ 368.011. Definitions

In this subchapter:

(1) "Waste" means:

(A) animal and vegetable waste materials resulting from the handling, preparation, cooking, or consumption of food;

(B) discarded paper, rags, cardboard, wood, rubber, plastics, yard trimmings, fallen leaves, brush materials, and similar combustible items; and

(C) discarded glass, crockery, tin or aluminum cans, metal items, and similar items that are noncombustible at ordinary incinerator temperatures.

(2) "Waste hauler" means a person who, for compensation, transports waste by the use of a motor vehicle.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 368.012. County Licensing and Regulation

To protect the public health, safety, or welfare, the commissioners court of a county with a population of less than 375,000 may by ordinance:

(1) require a waste hauler who transports waste in unincorporated areas of the county to be licensed by the county;

- (2) establish requirements for obtaining and renewing a waste hauler license;
- (3) impose a license issuance or renewal fee in an amount that generates annually the approximate amount of revenue needed to fund the licensing program for a year;
- (4) establish standards governing the transportation of waste in unincorporated areas of the county;
- (5) establish grounds for suspending or revoking a waste hauler license; and
- (6) prescribe any other provisions necessary to administer the licensing program.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989. Amended by Acts 1997, 75th Leg., ch. 426, § 1, eff. May 29, 1997.

§ 368.013. Exemptions for Certain Waste Haulers

(a) This subchapter does not apply to an entity that transports:

- (1) material as part of a recycling program; or
- (2) salt water, drilling fluids, or other waste associated with the exploration, development, and production of oil, gas, or geothermal resources.

(b) Except as provided by Subsection (c), a county may not require a waste hauler license to be held by a waste hauler:

- (1) while transporting waste on behalf of a municipality or other governmental entity; or
- (2) operating regularly in more than three counties.

(c) A county may require a waste hauler who transports waste on behalf of a municipality or other governmental entity to have a waste hauler license if the hauler deposits any part of that waste in a county other than the county in which all or part of the municipality or other governmental entity is located.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 368.014. Bond or Other Financial Assurance

(a) An applicant for a waste hauler license must execute a surety bond or provide other financial assurance that is payable for the use and benefit of the county or any other person harmed by the waste hauler's actions.

(b) The bond or other financial assurance must be in an amount the commissioners court considers necessary or desirable according to the risk of harm associated with the operation of the waste hauling business.

(c) A bond executed under this section must comply with the insurance laws of this state.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 368.015. Fees

Fees or other money received by a county under the licensing program shall be deposited to the credit of the general fund of the county.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 368.016. Conflict With Other Regulations

If a requirement or standard established under Section 368.012 conflicts with state law, a rule adopted under state law, or a municipal ordinance or charter, the stricter provision prevails.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 368.017. Injunction

A county is entitled to appropriate injunctive relief to prevent the violation or threatened violation of an ordinance the county adopts under this subchapter.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

§ 368.018. Criminal Penalty

(a) If a county ordinance adopted under this subchapter defines an offense for a violation of the ordinance, the offense is a Class C misdemeanor.

(b) A separate offense occurs on each day on which all the elements of the offense exist.

Acts 1989, 71st Leg., ch. 678, § 1, eff. Sept. 1, 1989.

Chapter 413 – Local Government Code

§ 413.052. Authority to Establish Board

(a) The commissioners court of a county by order adopted at a regular meeting of the court may establish a county utility system board to operate and manage the county's:

- (1) wastewater collection and treatment system;
- (2) water supply and distribution system; or
- (3) solid waste collection and disposal system.

(b) The board is responsible for the operation and management of each utility system that is:

- (1) owned or being acquired by the county; and
- (2) placed under its control under Subsection (a).

Chapter 413 – Local Governmental Code

§ 413.066. Authority to Issue Ad Valorem Tax Obligations

(a) The board may not incur or issue an obligation that is payable, in whole or in part, from ad valorem taxes.

(b) The commissioners court of the county by order may authorize on behalf of the board the issuance of obligations payable in whole or in part from ad valorem taxes to acquire, improve, repair, or extend the county's wastewater collection system, treatment system, water supply and distribution system, or solid waste collection and disposal system.

(c) An order under Subsection (b) must be adopted at a regular meeting of the commissioners court.

(d) If the obligations authorized under this section are payable from ad valorem taxes and revenue, the board must also approve the issuance of the obligations.

Texas Administrative Code

TITLE 30	ENVIRONMENTAL QUALITY
PART 1	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
CHAPTER 330	MUNICIPAL SOLID WASTE
SUBCHAPTER C	MUNICIPAL SOLID WASTE COLLECTION AND TRANSPORTATION
RULE §330.32	Collection and Transportation Requirements

(a) Municipal solid waste containing putrescibles shall be collected a minimum of once weekly to prevent propagation and attraction of vectors and the creation of public health nuisances. Collection should be made more frequently in circumstances where vector breeding or harborage potential is significant.

(b) Transporters of municipal solid waste shall be responsible for ensuring all solid waste they collect is unloaded only at facilities authorized to accept the type of waste being transported. Off-loading at an unauthorized location or at a facility not authorized to accept such waste is a violation of this subchapter. Allowable wastes at a particular solid waste management facility may be determined by reviewing the following regulations as applicable:

(1) §330.41 of this title (relating to Types of Municipal Solid Waste Facilities);

(2) §§330.111-330.134 of this title (relating to Operational Standards for Solid Waste Land Disposal Sites);

(3) §§330.150-330.159 of this title (relating to Operational Standards for Solid Waste Processing and Experimental Sites);

(4) §§312.1-312.101 of this title (relating to Sewage Sludge Use and Disposal); and

(5) §330.5(e) of this title (relating to General Prohibitions).

(c) All transporters of solid waste shall maintain records for at least three years to document that waste was taken to an authorized municipal solid waste facility. Upon request of the executive director or of a local government with jurisdiction, a transporter is responsible for providing adequate documentation regarding the destination of all collected waste including billing documents to prove that the proper disposal procedure is being followed.

(d) Each transporter delivering waste to a solid waste management facility shall provide documentation to the operator that he has so arranged his routes to eliminate nonallowable wastes from the loads he transports to that facility. This documentation shall also state that the transporter will remove any nonallowable wastes disposed of by him immediately after their discharge or that, at the option of the disposal facility operator, he will pay any applicable surcharges to have the disposal facility operator accomplish the required immediate removal for him.

(e) At any time that nonallowable wastes are discovered in a load of waste being discharged at a municipal solid waste facility, the transporter shall immediately take all necessary steps to determine the origin and alter his routes to assure that in the future such wastes are either not collected by him or are taken to a facility approved to accept such wastes.

(f) Each transporter of waste in enclosed containers or enclosed vehicles to a Type IV municipal solid waste landfill facility (MSWLF) facility shall obtain a route special permit for each such route he proposes to take to a Type IV landfill. For the purposes of this subsection, route refers to

those business establishments from which the transporter has contracted to collect waste. The application for a transporter route special permit shall be submitted to the executive director on a form provided by the commission and shall include all information requested thereon and any additional information considered necessary by the applicant or additional information as may be requested by the commission.

(1) The application for a transporter route special permit shall include the following information:

(A) the applicant name, company name, mailing address, street address, city, state, ZIP code, name and title of the contact person, and telephone number for the transporter;

(B) the name, permit number, mailing address, street address, city, state, ZIP code, name and title of a contact person, and telephone number for the receiving MSWLF facility;

(C) information on the hauling vehicle, which shall include as a minimum the license number, vehicle identification number, year model, make, capacity of vehicle in cubic yards, and rated compaction capability in pounds per cubic yard;

(D) route information, which shall include as a minimum the collection frequency, the day of the week the route is to be collected, and the day and time span within which the route is to arrive at the landfill;

(E) business establishment information, which shall be provided for each establishment on a separate form provided by the executive director, or a computer facsimile thereof, and shall include as a minimum: route order, transporter name, collection frequency, the expected day and time of collection, establishment contact person, establishment name, establishment mailing address, establishment street address, city, state, ZIP code, telephone number, a description of activities associated with the establishment with particular emphasis on food handling and products sold or handled that could end up in the waste stream; and

(F) an alternate contingency disposal plan to include alternate trucks to be used or alternate disposal facilities.

(2) The application at the time of submittal must be accompanied by the required \$100 application fee.

(3) A maintenance fee of \$100 for each transporter route special permit will be due every three months following the date of issuance. Failure to submit timely payment of the maintenance fee eliminates the option of disposal of these wastes at a Type IV landfill until the fee is paid.

(4) This subsection does not apply if the waste load is from a single collection point that is a stationary compactor permitted in accordance with §330.25 of this title (relating to Requirements for Stationary Compactors) or municipal vehicles permitted under subsection (g) of this section.

(5) Each transporter delivering waste to a Type IV landfill in accordance with this subsection shall provide to the on-site commission inspector a trip ticket in the typical form provided by the commission prior to discharging his load.

(g) Special residential and municipal collection routes where enclosed containers or enclosed vehicles are used to collect and transport brush or construction-demolition wastes and rubbish to Type IV landfills shall obtain a special permit for each municipal route he proposes to take to the Type IV landfill. Disposal of household waste is prohibited in Type IV facilities. For the purposes of this subsection, route refers to those residences from which the transporter has contracted to collect brush or construction-demolition waste and rubbish. The application for a municipal route special permit shall be submitted to the executive director on a form provided by the commission for each truck or container to be used and shall include all information requested thereon and any additional information considered necessary by the applicant or additional information as may be requested by the executive director.

- (1) The application for a municipal route special permit shall include the following information:
 - (A) the applicant name, title, mailing address, street address, city, state, ZIP code, name and title of a contact person, and telephone number for the transporter;
 - (B) the name, permit number, mailing address, street address, city, state, ZIP code, name and title of a contact person, and telephone number for the receiving MSWLF facility;
 - (C) information on the hauling vehicle, which shall include as a minimum the license number, vehicle identification number, year model, make, capacity of vehicle in cubic yards, and rated compaction capability in pounds per cubic yard;
 - (D) route information, which shall include as a minimum the collection frequency, the day of the week the route is to be collected, and the day and time span within which the route is to arrive at the landfill;
 - (E) a description of the wastes to be transported;
 - (F) a signed and notarized certificate from the city that states: I [name] _____, [title] _____, of the City of _____ in _____ County, certify that the contents of the vehicle described above will not enter a Type IV landfill unless it is free of putrescible, household, hazardous, Class I industrial nonhazardous, infectious, or any other waste not allowable in a Type IV landfill.
- (2) The application at the time of submittal must be accompanied by the required \$50 application fee.
- (3) Each municipal route must be documented by a trip ticket in the typical form provided by the executive director that is provided to the landfill operator prior to discharging the load at the landfill.
- (4) A municipal route special permit shall be issued for one year and must be renewed annually prior to the date of expiration by submitting a renewal fee in the amount of \$50. Failure to submit timely payment of the renewal fee eliminates the option of disposal of these wastes at a Type IV landfill until a new or renewed special permit is issued.
- (h) Change requirements for transporter route or special municipal route special permits are as follows.
 - (1) A change of a transporter route special permit or municipal route special permit must be submitted any time any information within the original application is to be changed, including the list of establishments for a transporter route.
 - (2) An application to change an existing transporter route special permit or municipal route special permit must include all of the same documentation required of an original application.

APPENDIX D: TRINITY COUNTY ORDINANCE

AN ORDINANCE

AN ORDINANCE REGULATING AND LICENSING COMMERCIAL TRASH HAULERS, ESTABLISHING A REVIEW BOARD, AND PROVIDING A PENALTY.

WHEREAS, Section 368.012 of the Texas Health & Safety Code allows the Commissioners Court to regulate and license commercial waste haulers, and the Trinity County Commissioners Court has adopted regulations therefor:

NOW, THEREFORE, BE IT ORDERED by the Commissioners Court of Trinity County, Texas:

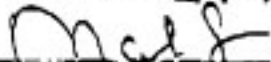
SECTION 1. That all commercial waste haulers not otherwise exempt, who transport waste in unincorporated areas of Trinity County are hereby required to submit an Application in the form promulgated by Trinity County along with a fee of \$50.00 per year; a county map outlining the beginning and termination of the hauler's route; and an executed Surety or Property Bond in the amount of \$500.00.

SECTION 2. Any person who shall violate any of the provisions of this Ordinance as outlined in Exhibit "A", 1 - 10 of the "Application for Trinity County Solid Waste Hauler License" attached hereto as Exhibit "A" and made part of this order or shall fail to comply therewith or with any of the requirements thereof shall be deemed guilty of a Class "C" misdemeanor, and each day of which all the elements of the offense exist shall constitute a separate and distinctive offense.

SECTION 3. A Board of Review shall be established with authority to conduct hearings for suspension or revocation of a waste hauler's license, pursuant to Section 368.012, of the Health & Safety Code of the State of Texas and the "Grounds established for Suspending or Revoking a Waste Hauler License" attached hereto as Exhibit "B" and made a part of this order. The Board of Review will have five (5) members appointed by the Commissioners Court. Board of Review members shall serve at the pleasure of Commissioners Court without remuneration.

SECTION 4. This Ordinance shall become effective on December 31, 2002.

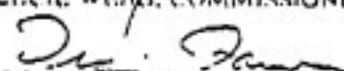
ADOPTED this the 5th day of September, 2002.


MARK EVANS, COUNTY JUDGE


GROVER "TIGER" WORSHAM, COMMISSIONER PCT. 1


BILL BURDETTE, COMMISSIONER PCT. 2


CECIL WEBB, COMMISSIONER PCT. 3


TRAVIS FORCST, COMMISSIONER PCT. 4

GROUND ESTABLISHED FOR SUSPENDING OR REVOKING WASTE HAULER PERMIT
EXHIBIT "B"

1. Three (3) or more convictions for violating any of the provisions of the ordinance or state laws pertaining to litter/solid waste and the Health & Safety Code for a period on one (1) fiscal year.
2. In the event a grievance is filed in a court of law due to the operations of the company.
3. If three (3) times in one (1) fiscal year, stored or held trash or waste on any vehicles(s), trailer(s), property, or any other location in a manner which constitutes or creates a health hazard or public nuisance.
4. Five (5) formal complaints during one (1) fiscal year. Complaints must be formal complaints, signed and dated by the complainant. All complaints must be investigated and verified pursuant to the formal complaint.
5. Vehicle(s) not having insurance and registration, or inspection and drivers not having valid Texas Drivers license during term of permit.
6. If found guilty in a court of proper jurisdiction for disposal of litter/solid waste at a site that is not an state approved solid waste site.

Violations listed above will be submitted, along with any evidence, to the Board of Review for their consideration. Board of Review will make determination for suspension or revocation of permit.

APPLICATION FOR TRINITY COUNTY WASTE HAULER PERMIT

Applicant's Name	Home Telephone
Mailing Address	City, State and Zip
Physical Address (if different)	City, State and Zip
Applicant's Drivers License No. State of Issue	
Business Name	Business Telephone
Business Address (if different)	City, State and Zip

I, _____ of _____
(Applicant's Name) (Title) (Business Name)

do certify by my signature below that the operator (s) of the vehicle (s) described on the drivers information form and the vehicle in-service form will not pick up hazardous, Class I industrial non-hazardous, infectious or any other waste not permitted in a Type I landfill. I further certify that I:

1. Will unload all trash collected on my route only at a state permitted facility;
2. Will maintain all receipts from the landfill(s) I use for a period of one (1) year;
3. Will pick up trash on my route on a regular basis (to be determined by the applicant), but not more than seven (7) days between pickup;
4. Will maintain my equipment in a clean and sanitary manner to prevent loss of liquid or solid waste;
5. The load shall be fully enclosed and at vehicle speeds exceeding 30 miles per hour shall be completely covered and the covering firmly secured so as to prevent spillage or loss of load;
6. Will promptly remove all spillage of waste resulting from my collection operation;
7. Will promptly remove all spillage of waste that may occur along my collection route or during transportation to an approved landfill;
8. Will not store or hold trash or waste on any vehicle(s), trailer(s), property, or any other location in a manner which constitutes or creates a health hazard or public nuisance;
9. Will within twenty-four (24) hours of issuance of permit, affix my company name, telephone number, and waste hauler permit number on both sides and rear of vehicle(s), trailer(s) used to transport commercial solid waste in such a way as to be clearly visible at all times. Letters and numbers shall be clearly legible, not in the manner of graffiti, or a height not less than three inches, and a color sufficiently different from the body of the vehicle so as to be clearly legible from a distance of 100 feet; and
10. Will comply with all applicable state laws.

NOTE: Permits shall be \$50.00 annually. Prior to expiration, license shall be considered for renewal. A completed application must contain: (1) check or money order for permit fee, (2) money map with route information clearly highlighted, (3) \$500 surety property bond or comparable bank letter of credit, and (4) proof of vehicle insurance

 Signature of Applicant Date

TRINITY COUNTY WASTE HAULER DRIVER INFORMATION

Driver 1		
Last Name	First Name	Middle Initial
Address	City	State & Zip
Date of Birth	Operator License #	State

Driver 2		
Last Name	First Name	Middle Initial
Address	City	State & Zip
Date of Birth	Operator License #	State

Driver 3		
Last Name	First Name	Middle Initial
Address	City	State & Zip
Date of Birth	Operator License #	State

Driver 4		
Last Name	First Name	Middle Initial
Address	City	State & Zip
Date of Birth	Operator License #	State

Driver 5		
Last Name	First Name	Middle Initial
Address	City	State & Zip
Date of Birth	Operator License #	State

The County Judge's Office shall be promptly notified, in writing, by the permit holder of any changes in the driving staff, such as new drivers or drivers no longer employed. This record must always be current as well as accurate.

TRINITY COUNTY WASTE HAULER VEHICLE(S)/TRAILER(S) IN-SERVICE FORM

Vehicle 1

Year	Make	Model	Color	License Number
VIN #		Description		
Trailer Manufacturer		License #	Color	Type

Vehicle 2

Year	Make	Model	Color	License Number
VIN #		Description		
Trailer Manufacturer		License #	Color	Type

Vehicle 3

Year	Make	Model	Color	License Number
VIN #		Description		
Trailer Manufacturer		License #	Color	Type

Vehicle 4

Year	Make	Model	Color	License Number
VIN #		Description		
Trailer Manufacturer		License #	Color	Type

Vehicle 5

Year	Make	Model	Color	License Number
VIN #		Description		
Trailer Manufacturer		License #	Color	Type

The County Judge's Office shall be promptly notified, in writing, by the permit holder of any changes in the driving staff, such as new drivers or drivers no longer employed. This record must always be current as well as accurate.

Return all information to the Trinity County Judge's Office, P. O. Box 457, Groveton, Texas 75845 or fax (936) 642-1046