

**REGIONAL SOLID WASTE MANAGEMENT PLAN UPDATE
FORM**

Council of Governments: Texoma Council of Governments

Date of plan update February 28, 1999

EXECUTIVE SUMMARY

The Texoma Region continues to make slow but steady progress in the implementation of the Texoma Regional Solid Waste Management Plan. Recycling levels in the region are well below those targeted in the Plan. Factors involved in the lower-than-planned recycling rates include the continued low market prices obtaining in Dallas for most recyclables, the absence of organized local collection processes, and the continued low cost of landfilling. One landfill continues to be permitted for operation in the region, the Waste Management facility located in Grayson County near Luella. Most of the waste flowing to this facility in 1997 and 1998 was transferred to a sister facility in Lewisville (Denton County), although management reports that a new cell is to be opened soon for local deposit of waste. Estimates of the remaining life of this landfill vary.

Several regional communities, including the cities of Denison, Gainesville, and Sherman, with the assistance of the Greater Texoma Utility Authority, have undertaken a process which may eventually result in the opening of a publically owned landfill in western Grayson County. A site has been selected and approximately 750 acres have been purchased. Pre-permitting activities are underway and local opposition to the project has been voiced. Entities in favor and organizations opposed to this project are undertaking campaigns of public education.

Local enforcement of the Texas Litter Abatement Act, and related criminal environmental laws, continues to spread in the region. Since the last Plan Update, additional anti-dumping programs have begun in Fannin and Cooke counties and the level of local prosecution of cases has risen dramatically.

The Solid Waste Advisory Committee has been reorganized into the 24-member Natural Resources Advisory Committee to more closely reflect the requirements of 30 TAC 565(a).

REGIONAL PLAN UPDATE

I. ADVISORY COMMITTEE INFORMATION.

A. Current Regional Solid Waste Advisory Committee Membership Information (List of Names and Representatives; Basic Committee Functions Regarding Regional Plan Implementations)

Natural Resources Advisory Committee As Of February 1999	
Public Officials and Staff	
Jerry Chapman General Manager Greater Texoma Utility Authority	Jeffrey Miller Public Works Department City of Sherman
Bill Goodson Mayor City of Whitewright	Pat Hilliard County Commissioner Fannin County
Jim Gray Director of Public Works City of Gainesville	Phil Young County Commissioner Cooke County
Jerry White Director of Public Works City of Denison	Jim White Environmental Enforcement Officer Grayson County
Private Industry / Waste Management Operators	
Shirley Renshaw World of Recycled Products Denison	Don Powell Waste Management, Inc. Luella
John Gustafson Regional Manager, I.E.S.I. McKinney	
Environmental Professionals	
Rodney Nicely Whitewright High School Whitewright	Peter Schulze Biology Department, Austin College Sherman
Mike Smithson (non-voting) TNRCC - Region 4 Arlington	Ken Zimmerman Environmental Officer, Texas Instruments Sherman

Jim Williams Refuge Manager Hagerman National Wildlife Refuge	
Citizen Groups	
Marilyn Franks Keep Denison Beautiful Denison	Sara Anderson, President Keep Denison Beautiful Denison
Gerry Shehan, President Keep Sherman Beautiful Sherman	
Interested Individuals	
Richard G. West Pottsboro	Cynthia Underwood Collinsville
Dana Bennett Sherman	Guanita Reiter Gainesville
George Rowland Sherman	

All members were elected in Fall 1998 for a three year term. New Bylaws, when adopted, will stagger these terms.

The Natural Resources Advisory Committee is responsible for developing recommendations regarding the implementation of the Texoma Regional Solid Waste Management Plan in the tri-county area. This committee is also responsible, under the Interlocal Contract between TNRCC and TCOG, for providing input to TCOG in its review of solid waste facility permit applications, for implementing certain recommended items in the Texoma Regional Solid Waste Management Plan and for reviewing and selecting annual grant applications from eligible entities.

In forming the Natural Resource Advisory Committee, all members of the former Solid Waste Advisory Committee were invited to apply for participation as were all members of the then existing Environmental Advisory Committee. Newspaper articles appeared in Bonham, Gainesville and Sherman advertising the availability of membership applications. Additionally, calls were made soliciting membership applications. At the end of this process, with the exception of one applicant from the Grayson county area, all applications were approved.

II. REGULATORY OVERVIEW.

A. Impact of Federal and State Regulatory Changes on Regional

Solid Waste Management

No new Federal or State regulatory changes have had a major impact on regional solid waste management since the last Plan Update. Local enforcement activities have been enhanced by the actions of the State Legislature in consolidating most environmental crimes in Subchapter E, Chapter 7 of the Texas Water Code. It is likely that the implementation of Texas Health and Safety Code Chapter 363.064 (whereby COGs are required to inventory closed and abandoned landfill and dump sites and provide notice to landowners and county recording offices) will generate additional public attention to solid waste management throughout Texas and in the Texoma region.

B. Update of Local Plans, Policies, Ordinances, or Agreements Affecting Solid Waste Management

Participants in this process comment that:

The City of Gainesville:

"The Cities of Gainesville, Sherman, and Denison have entered into an Interlocal Agreement for the purpose of obtaining a Texas Natural Resource Conservation Commission ("TNRCC") permit to operate a Type 1 municipal solid waste ("MSW") landfill. The Texoma Area Solid Waste Agency Interim Agreement ("TASWA") was entered into by the three cities in the week of April 20, 1999.

The interlocal agreement follows an interlocal agreement dated April 27, 1997 to plan and site a location for a Type 1 MSW landfill. This has now been accomplished with the site located 3 miles east of Whitesboro on SH 56.

The Cities will now begin preparations to obtain a Type 1 MSW permit.

TASWA will be directed by the Administrative Board of Trustees which are the Mayors of the three cities as well as the County Judges from Cooke and Grayson Counties."

III. REVISED DATA

A. Population Projections and Source

The following estimates of population growth are supplied by the Texas State Data Center, Texas Agricultural Experiment Station, Texas A & M University System. The

estimates used are from the Center's Scenario 1990-96, which attempts to reflect recent immigration into the region. The total population increase in the 15 planning years in these estimates is 9.25%, which should be compared with the Center's growth estimates for Collin County of 92% (from 439,302 in 2000 to 839,488 in 2015), Denton County of 62% (392,798 to 634,936) and Hunt County of 18% (72,779 to 85,798). Given the experienced and anticipated population growth in the three counties immediately South of the TCOG region and the increasingly efficient highway networks linking the TCOG region to the Dallas/Fort Worth Metroplex, it seems highly unlikely that the 15-year population increase in the TCOG region will be limited to 9.25%.

**Population Projections for TCOG Service Area
(Cooke, Fannin, and Grayson Counties)**

Planning Year	Population Projection
2000	163,508
2005	168,834
2010	173,882
2015	178,640

B. Economic Activity

Economic activity in the Region continues to expand according to the patterns that have existed for the past several years. Housing development, especially in southern Grayson County, continues to be strong. Jobs lost from selected factory closings have been offset essentially by expanded business activities of existing entities. Figures from the Texas Comptroller of Public Accounts show increasing gross sales region-wide produced by an essentially flat number of sales points (all industries). The Texas Workforce Commission reports unemployment conditions in most of the region as of February 1999 to be slightly higher than national figures. Cooke County, however, is experiencing an unemployment rate of about 60% that of the rest of the region. For comparison, the national unemployment rate as of this writing is 4.4%.

Unemployment rates for TCOG Service Area

County	Labor Force	Unemployed
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Cooke	16,755	2.9%
Fannin	12,809	5.7%
Grayson	51,327	5.0%

Annual sales tax data collected by the Texas Comptroller of Public Accounts (for all industries) shows steadily growing economic activity (measured as gross sales changes) over the past three years in Cooke and Grayson Counties and a decline in Fannin County in 1998 over 1997 (see note on extrapolation method used to determine 1998 annual results from three quarters of data).

Gross Business Sales (All Industries) TCOG Service Area			
County	Gross Sales (\$000)		
	1996	1997	1998
Cooke	667,289	703,825	748,201*
Fannin	526,595	538,115	521,053*
Grayson	2,192,285	2,297,283	2,367,587*

* Annual figures for 1998 extrapolated from 3 quarters of data at a rate equal to 1997 reported gross sales for each county.

C. Waste Disposal Rates

Today, virtually all MSW generated in the region is disposed of outside of the region. Of the four active landfills at the time of the original Texoma Regional Solid Waste Management Plan, two were closed owing to planned capacity having been met (Greater Texoma Utility Authority [#00648] and City of Gainesville [#00302]), one became voluntarily inactive, although a permit is still in effect (City of Bonham [#01303]), and the remaining one (operated by Waste Management in Grayson County [#00523]) continues as an active site, although currently transferring most solid waste to facilities outside the region for final disposal. The transfer station at the Waste Management facility is equipped with scales, as is the receiving landfill being used by the City of Gainesville in Farmers Branch, Texas. The MSW receiving point in Lamar County for most Fannin County waste is not currently equipped with scales.

According to the Regional Solid Waste Management Plan (Page II - 23), approximately 98% of the region's waste was disposed of in landfills located within the region during 1991. The total reversal of these figures, to the point that today virtually no solid waste is disposed of in the region, is the biggest shift in solid waste practices in the last eight years in our area.

Current Regional Waste Disposal Rates	
Landfill	Tons Received (1997)
#00523 (Waste Management)	1,091
Total	1,091 (Rest transferred out)

Although most of the waste coming through this facility is transferred to the Lewisville area for disposal, the Grayson County facility remains fully permitted and able to process waste locally.

Projected Regional Waste Disposal Rates

Year	Population	Disposal (tons)	Per Capita Disposal Rate (tons/person/year)	% Reduction over 1990 Disposal Rate	% Reduction Goal	Per Capita Rate Adjusted for Reduction Goal	Disposal Adjusted for Reduction Goal
1991	150,602	174,942	1.16	-	-	1.16	174,942
1995	157,999	189,583	1.20	0	10%	1.08	170,638
2000	163,508	195,836	1.20	0	17.5%	0.99	161,873
2005	168,834	202,244	1.20	0	25%	0.90	151,951
2010	173,882	208,344	1.20	0	32.5%	0.81	140,844
2015	178,640	217,080	1.22	0	40%	0.73	130,407

Population estimates are from the Texas State Data Center;
 Disposal (tons) are from page II-68 of the Regional Solid Waste Management Plan;
 Reduction Goals are from Page III-12 of the Regional Solid Waste Management Plan;
 smoothed to show 17.5% and 32.5% levels rather than jumps from 10% to 25% to 40%

D. Current Disposal Capacity

1. Region

There is no functioning landfill in the region, although the Waste Management facility in Grayson County could resume local landfilling at any time a business decision would warrant and additional cells were prepared. The estimated life of currently permitted areas concurs with the estimates in the Texoma Regional Solid Waste Management Plan.

Regional Disposal Capacity		
Regional Facilities	Capacity Available	
	Tons	Years
Waste Management facility, Grayson County, Texas [#00523]	2,182,390	Estimates vary
Total		Estimates vary

The above data is from the Annual Reporting Program for Permitted MSW Facilities (TNRCC November 1998).

2. Sub-regions

At this time there are no "sub-regional" facilities.

Sub-regional Capacity

Sub-region One:

Sub-regional Facilities	Capacity Available	
	Tons	Years
Not applicable		
Total		

E. Waste Flow

1. Total Amount Imported From Other Regions

Essentially no waste is legally imported into the Texoma Region from other regions. Over the past three years limited recycling imports from outside the region flowed to the World of Recycled Products facility (recently closed) in Denison. Small flows of MSW also continue to occur from north Hunt County into the Waste Management facility in Grayson County and from Wise and Montague Counties into the transfer station in Gainesville.

Some small illegal flows from northern Denton County have been identified by the Environmental Officer in southern Cooke County. Of interest is the fact that an illegal landfill operation was identified by a locally organized fly-over of the county by the Environmental Officer. A search warrant was executed against this illegal commercial dump by local officers with the assistance of TNRCC Special Investigations and the TNRCC Region 4 office (Arlington) in early 1999, working under the direction of local officials. Misdemeanor and felony charges are pending in Cooke County against several individuals in this case. It is interesting that this illegal flow of waste into Cooke County originated from new home construction in northern Denton County and, as such, is typical of the sort of illegal dumping related to increasing economic activity in and adjacent to the region. Prosecutors in Cooke and Fannin Counties have quickly passed the efforts of Grayson County prosecutors to address illegal dumping cases.

2. Total Amount Exported To Other Regions

Estimated (Page II-69, Texoma Regional Solid Waste Management Plan) annual waste exports to other regions:

1. From Cooke County to Denton County, primarily via collections from the City of Gainesville Transfer Station: 37,541 tons;
2. From Grayson County to Denton County, primarily via the Waste Management transfer station: 137,263 tons;
3. From Fannin County to Lamar County, primarily via collections from the City of Bonham: 21,032 tons; and,
4. From Grayson, Cooke, and Fannin Counties via other routes: negligible.

A project is underway to attempt to confirm these estimated figures working with observed weights in Cooke and Grayson Counties.

3. Amount To/From Other States, Origination or Destination Points

To our knowledge, no MSW is legally transferred from/to other states and the Texoma Region. Grayson and Fannin County Criminal Environmental Officers have identified an occasional flow of construction and demolition debris from the region to illegal dumps in Oklahoma. Cases have been prosecuted in Fannin County on these illegal flows.

4. Amount To/From Mexico

No flows are being conducted between Mexico and the Texoma Region at this time, with the exception of small flows of cardboard possibly reaching Mexican mills through Dallas brokers.

Regional Waste Flow

	Region To/From Region	Tons To/From Other States			Tons To/From MX	Total Tons
		State:	State:	State:		
Imports	0	0	0	0	0	0
Exports	195,836	0	0	0	0	195,836

NOTE: Estimates of waste exported to other regions are from estimated MSW generated in 2000 per the Texoma Regional Solid Waste Management Plan.

F. Solid Waste Management and Waste Reduction Programs and Services

Waste reduction programs have been slow to begin in the region, with a few exceptions. The City of Gainesville, a member of Clean Cities 2000, operates an aggressive recycling program based on the use of citizen drop-off centers located at several sites in the city. Additional recyclables are obtained by Gainesville from approximately 100 area businesses. The City of Gainesville adds, "Gainesville sends less than 2% of all brush and grass clippings to a landfill. These materials are ground for mulch, zoodoo, and compost. The City diverts 20,000 cubic yards annually from the landfill as part of our integrated solid waste management process."

The City of Sherman has continued to subsidize a small citizen drop-off collection center in that city operated by WDF Recycling and Disposal. This organization reported recycling 351 tons of paper, 25 tons of clear glass, and 2 tons of aluminum (378 tons total in 1998). Most use of this facility is by Sherman residents, with some small deposits being made by persons residing outside the city. However, assuming that this center is used only by the 34,500 residents of Sherman and further assuming that these residents generate waste at the regional per-person average of 1.2 tons annually, this center would have processed just under 1% of the city's MSW in 1998. To this figure should be added backyard composting and small flows of items taken by residents to other centers. The City of Sherman has been awarded a grant to study the feasibility of operating a curbside collection recycling program in that community.

The City of Pottsboro has operated a drop-off citizen collection center for several years, now with the assistance of I.E.S.I., a regional waste hauler.

Most of the communities in the region have been highly supportive of programs aimed at increasing backyard composting. For several years TCOG has participated with local cities and groups and with the TNRCC in providing compost bins, supplies and instructions to area citizens. However, although many compostables are produced by citizens and industry alike in the region, no large-scale composting project has been undertaken locally. The City of Gainesville operates an active mulching program which uses the product in city parks and other facilities.

Continued low market prices for many recyclables have certainly done their part to suppress the development of local recycling programs. More analysis needs to be done to identify those specific elements of the regional waste stream (other than compostables) that can be recycled at a fully-loaded cost equal-to or less-than landfilling.

No regional communities are operating 'smart buying' or other organized waste minimization training programs for citizens. Regional businesses, however, appear to continue making positive strides toward waste minimization through better purchasing practices and process recovery of internally generated waste.

Several major industries in Sherman comprise the Sherman Industrial Solid Waste Reduction Team sponsored by the Sherman Plant Managers Forum. Member companies have combined to reduce industrially generated MSW sent to landfills by approximately 60%. Programs instituted by members include recycling, reuse, worker education, purchasing recycled products, and community awareness.

A traditional regional recycling sector, those companies handling scrap metals, have been particularly hard hit in the past year as local prices (and Dallas buying prices) reflect sharply declining national and international scrap prices. For example, one scrap metal processor in the region reports that 100 pounds of scrap tin delivered in Dallas will gross \$1 and 100 pounds of scrap iron materials will generate about \$1.50. These prices are about one-half of their levels from one-year ago. Non-ferrous metals fared somewhat better locally during 1998.

TCOG (through the TNRCC), the City of Sherman, Grayson

County and Cooke County have funded and held two Household Hazardous Waste Collection Days at a local mall. Approximately 500 cars brought HHW from over 700 families to each of these events in October 1997 and 1998. A third such event is planned for October 1999. Although many individuals and companies provide assistance with these events, two entities need to be singled out for special recognition: Austin College has provided a pool of volunteers (including students, professors, and the President of the college) without whom the project couldn't happen. Additionally, Texas Instruments has provided project planning and event-day management support that has been superb.

In summary, while the City of Gainesville and major industry have made great advances in the management of MSW, and other communities have growing recycling programs, the situation that was identified in the Texoma Regional Solid Waste Management Plan continues to generally describe the overall recycling situation in the region:

"The state's solid waste management hierarchy is not currently reflected in the region's solid waste management systems. The region's recycling level is currently minimal, despite the various municipal, civic, and private collection efforts. Furthermore, other requirements in state legislation such as those requiring local governments, school districts and other governmental agencies to start recycling programs and give preference in purchasing products made of recycled materials, will need to be implemented."

Texoma Regional Solid Waste Management Plan, (page II-50).

Regional Recycling Markets Available

Industry Name	Types of Materials	Address
City of Sherman Drop-Off Recycling Center (WDF Recycling)	aluminum, newsprint, cardboard, clear glass	Highway 75 (Albertson's) Sherman

City of Potttsboro	aluminum, newsprint	Pioneer's Park Highway 120 Potttsboro
City of Gainesville	aluminum, newsprint, cardboard	Several sites in City of Gainesville
Fulton Supply & Recycling	selected metals, mostly non-ferrous	616 East Scott Gainesville
Long Recycling	bulk metals by special arrangements	Highway 82 Ector
McKee's	Most metals	814 North Houston Denison
World of Recycled Products	facility closed in early 1999	700 Coffin Street Denison
Hillside Landfill	cardboard, newsprint, paper, aluminum	WMI Landfill Luella, Texas

G. Solid Waste Facilities in the Region

1. New

None in region since last update.

2. Expanded

No expansions since last update.

3. Closed

The World of Recycled Products facility in Denison closed in early 1999. The Waste Management facility in Grayson County conducts day-to-day operations as a transfer station while retaining an active Type I landfill permit.

4. Planned

An as yet unnamed Type I landfill is currently being planned by several regional cities to be located 3 miles east of Whitesboro (western Grayson County). I.E.S.I. reports negotiations being underway to acquire property to build an MSW transfer station in western Grayson County.

New Facilities:

Facility	Type	County	Service Area	Capacity
None				

Expanded Facilities:

Facility	Type	County	Additional Service Area	Additional Capacity
None				

Closed Facilities:

Facility	Type	County	Service Area Affected	Capacity Lost
W.O.R.P.	general recycling	Grayson	Texoma COG	Undetermined

Planned Facilities:

Facility	Type	County	Service Area	Capacity
Unnamed	Type 1	Grayson	Grayson; Cooke	Undetermined
I.E.S.I.	Type 5 MSW Transfer Station	Grayson	Region	Under 125 tons/day

IV. Assessment of Need for Formal Amendments.

A. Status of Regional Plan Implementation

(Separate document follows)

Texoma Regional Solid Waste Management Plan

As Of February 28, 1999

The following is a summary of the activities undertaken to implement the *Texoma Regional Solid Waste Management Plan* through the above date. "Goals," "Recommendations," "Lead Entity," and "Funding" categories are as printed in the *Texoma Plan*. There are a total of 55 recommendations in the *Texoma Plan*, divided into four functional areas.

Activities undertaken are summarized in the block following each recommendation. Activities preceded by an identifying number (i.e., "95-22-G01") are projects funded by formal grants awarded under the Solid Waste Management Plan Implementation process. Only those projects funded in and after 1995 [the year of formal approval of the *Texoma Plan*] are included in this report

With its formal approval by the TNRCC on October 25, 1995, the *Texoma Plan* became incorporated by reference into State law and regulations:

Texas Health and Safety Code, Chapter 363.066:

363.066 Conformity With Regional or Local Solid Waste Management Plan: (a) On the adoption of a regional or local solid waste management plan by commission rule, public and private solid waste management activities and State regulatory activities must conform to that plan.

TNRCC Municipal Solid Waste Disposal Rule, 30 TAC 330.568(c)(3):

It shall be the responsibility of affected local governments to implement the policies and recommended actions of an adopted regional plan and to maintain policies and activities that do not conflict with provisions in State and regional plans.

A primary mission of the Natural Resources Advisory Committee is to encourage the implementation of the *Texoma Regional Solid Waste Management Plan* throughout the region. All Solid Waste Implementation grant applications approved by the NRAC and TCOG Governing Body, therefore, should further the implementation of the *Texoma Plan*. Funding for implementation derives from the Solid Waste Disposal Fee collected as part of normal tipping fees at landfills [\$1.50/ton or \$0.40/cubic yard] and redistributed by TNRCC to the COGs. In 1997, total fees collected regionally were \$94,017 and total receipts from TNRCC were \$150,000 [because of its size and demographics, the TCOG region is heavily subsidized by urban areas elsewhere in the State]. Inquiries, corrections and suggestions should be directed to John Ockels, Ph.D., Regional Environmental Planner, TCOG, 903/813-3530.

Goal 1: REGIONALLY, ASSURE ADEQUATE LEVELS OF TRANSPORTATION AND DISPOSAL CAPABILITIES.

Short-Term Recommendations (1-5 years):

1.1 The following disposal strategies should be cooperatively assessed by local governments in each county [Note: the *Texoma Plan* identifies three strategies for the provision of landfill space].

Lead Entity: Regional MSW Coordinator
Funding: TBD by Local Governments

Six strategies to be reviewed for regional waste disposal are contained in the body of the Regional Plan (pages II-105 and following). Three strategies for regional landfill capacity planning are included in the Recommendations Section of the *Texoma Plan*:

- a. Open three publicly-owned facilities [one in each county] and supplement them with the continued operation of a privately owned facility;
- b. Open a publicly-owned facility in the region and supplement this with the continued operation of a privately owned facility; and,
- c. Assure the continued operation of a privately owned facility in Grayson County.

Under the Interlocal Agreement between TCOG and the TNRCC for FY 1996 (Contract Number 6106220068), TCOG was charged with the following activity:

“The FUNDS RECIPIENT shall conduct two Region-wide workshops for elected officials and staff designed to explore all options for primary trash disposal beyond transfer station operation within the FUND RECIPIENT’S region. The workshops shall be completed by August 31, 1996. The FUNDS RECIPIENT shall maintain records of training and attendance, and shall provide that information to the FUNDING AGENCY with the regular semi-annual program progress report.”

The first of these workshops was held on November 16, 1995 at the TCOG offices in Sherman from 11:00 am until 1:30 pm. Invitees included all regional mayors, county judges, and members of the Solid Waste Advisory Committee. Attendance was low and the following individuals were present: Judge Horace Groff (Grayson County Judge); Judge Jimmy Doyle (Fannin County Judge); Mayor Julie Starr (City of Sherman); Mr. Jim Andrews (City of Sherman City Manager); Mr. Jim Gray (City of Gainesville Director of Public Works); Mr. Jim Stiff (City of Bonham City Manager); Mr. David Gaddis (City of Sherman Director of Public Works); and Frances Pelley, Kevin Farley and John Ockels of TCOG. A second workshop was not held.

1.2 Management methods for grease/grit trap and other liquids prohibited from landfill disposal under Subtitle D shall be assessed by SWAC.

Lead Entity: SWAC and landfill owners
Funding: None required

No activity to date on this recommendation.

- 1.3 Each city government should ensure that convenient MSW collection service is provided, at least weekly, in its jurisdiction.

Lead Entity: Local governments
Funding: TBD by Local Governments

Each city government in the region is currently complying with this recommendation.

- 1.4 Each county government should ensure that convenient MSW collection service is provided in its jurisdiction on at least a weekly basis.

Lead Entity: County governments
Funding: TBD by Local Governments

This recommendation is being followed in Cooke and Grayson Counties and, as best as can be determined, in Fannin County as well. Health & Safety 363.113 contains the following provision: "Each county with a population of more than 30,000 and each municipality shall review the provision of solid waste management services in its jurisdiction and shall assure that those services are provided to all persons in its jurisdiction by a public agency or private person." Grayson and Cooke Counties have 1990 Census populations in excess of 30,000 persons and have, accordingly, complied with this regulation.

- 1.5 Transfer stations should be operated in counties without any State-permitted disposal facilities to the extent needed to support a disposal alternative.

Lead Entity: Cities permitting facilities
Funding: TBD by Cities

Transfer stations have been built in Cooke [publicly owned by City of Gainesville] and Grayson [privately owned by WMI] Counties. No transfer station has been built in Fannin County. The City of Sherman transfer station continues to operate.

- 1.6 At least one publicly owned permitted MSW receiving facility should be operated in each county that is accessible to the general public and other private haulers that live or operate within the county.

Lead Entity: SWAC, Local Governments
Funding: State planning grants to facilitate local planning. If new facility is planned, Water Development Board may be source of new monies.

MSW receiving locations exist at the transfer stations in Cooke and Grayson Counties. No public-access MSW receiving point exists in Fannin County.

Medium-Term Recommendations (6-10 years)

- 1.7 Assess the need for additional publicly permitted disposal capacity within the region.

Lead Entity: SWAC, Local Governments
Funding: State planning grants

Such needs assessment for Grayson and Cooke County areas has been undertaken in connection with the feasibility study for a new publically owned landfill in western Grayson County.

- 1.8 Local governments in rural areas should cooperatively work toward standardization of MSW collection and transportation services.

Lead Entity: Regional MSW Coordinator and Local Governments
Funding: TBD by Regional Coordinator and County Governments

No activity to date on this recommendation.

Long-Term Recommendations (11-25 years)

- 1.9 Need for additional disposal capacity should be monitored in the region.

Lead Entity: Regional Solid Waste Coordinator
Funding: TBD, TCOG should monitor available grant funding at State level.

No activity to date on this recommendation.

- 1.10 Waste-to-energy and mixed waste composting should be given preference to land filling to the extent technically and economically feasible.

Lead Entity: Regional MSW Coordinator and SWAC
Funding: TBD by Regional MSW Coordinator and SWAC

No activity to date on this recommendation.

The City of Gainesville adds, "Economic concerns and air quality issues appear to make Waste-to-Energy not a feasible landfill alternative at this time."

Goal 2: DEVELOP LOCAL SOURCE REDUCTION, WASTE MINIMIZATION, REUSE, RECYCLING AND COMPOSTING PROGRAMS TO CONSERVE DISPOSAL CAPACITY AND RESOURCES

Short-Term Recommendations (1-5 years):

- 2.1 A study should be performed to evaluate regional collection, transportation, processing and marketing options including options for residential, commercial and institutional recycling.

Lead Entity: TCOG, SWAC
Funding: TCOG should apply for State funding for this endeavor

Ongoing information collection and dissemination in each of these areas is routinely undertaken; however, no formal study has been made to date. A related study in large-scale composting options was completed in July 1997 (Texoma Council of Governments Regional Centralized Composting Project 96-22-I03).

- 2.2 Develop a regional material recovery facility within the region to receive and consolidate recyclable material.

Lead Entity: SWAC, Local Governments
Funding: TBD by Local Governments. facility could be funded by private enterprise.

With the closing of the World of Recycled Products, the region lost access to a *de facto* MRF.

- 2.3 At a minimum, drop-off collection centers for recyclables should be provided to each incorporated city of 1,000 or greater population and at each county collection center.

Lead Entity: Local governments
Funding: TBD by Local Governments. One source for facility development could be CDBG grants.

96-22-G13 City of Gainesville [\$5,840]; Construction of citizen drop-off center in NW Gainesville;
96-22-G15 City of Pottsboro [[6,100]; Construction of citizen drop-off center in city.

A limited-service drop off center is operated in Sherman by WDF Recycling and Disposal, with the cooperation and support of the City of Sherman. The Cities of Gainesville and Pottsboro currently operate citizen drop off centers, including the projects named above. No known citizen recycling drop off centers operate in Fannin County. In each of the three counties, several churches operate recycling programs and resale barns. Grayson County Precinct 3 operates an on-going white-good recycling operation and several Grayson County Precincts cooperate with local KTB groups in annual clean-up programs.

- 2.4 At a minimum, one yard-waste composting site should be provided in each county at existing landfill sites.

Lead Entity: Local Governments, MSW facility operators
Funding: TBD by owners of facilities

96-22-103 TCOG [\$2,200]; Regional study of compostable source materials (Texoma Council of Governments Regional Centralized Composting Project).

At present, no such facility exists in any of the three counties.

- 2.5 Technical assistance should be provided to local governments, businesses and institutions in identifying and implementing source reduction, waste minimization, reuse and recycling strategies.

Lead Entity: Regional MSW Coordinator
Funding: State funding for MSW Coordinators

96-22-I01	TCOG/City of Gainesville [\$15,168]; Increased concentration of recycling efforts in NW Gainesville
99-22-G04	City of Sherman [\$13,060.80]; Curbside recycling study

2.6 Local Governments and school districts should adopt internal source reduction, reuse, recycling and recycled content procurement policies and programs.

Lead Entity: Regional MSW Coordinator and Local Governments
Funding: TBD by Local Governments

95-22-G01	City of Gainesville [\$7,716]; Annual payment on lease/purchase of baler;
95-22-G02	City of Denison [\$1,800]; Freon recovery unit;
95-22-G03	Era ISD [\$750]; Internal recycling program development and operation;
96-22-G02	City of Gainesville [\$7,704]; Annual payment on lease/purchase of baler;
96-22-G11	Era ISD [\$3,300]; Internal recycling program operation;
97-22-G07	Era ISD [\$770]; Internal recycling program operations;
97-22-G08	Howe ISD [\$1,500]; Middle school recycling project

Several departments of the City of Denison recycle [primarily paper]; several Grayson County departments recycle paper; the City of Howe does limited recycling as does several other smaller communities. TCOG recycles cans. The City of Sherman operated a comprehensive office paper/newsprint recycling program when the World of Recycled Products was in business. However, at this time, owing primarily to lack of regional markets, no city government in the region operates a comprehensive internal recycling program.

2.7 Education/awareness programs targeting proper methods or preparing recyclables, identifying collection locations for recyclables in the region and encouraging consumers to “precycle” and “buy recycled” should be implemented.

Lead Entity: Regional MSW Coordinator and TCOG
Funding: Included in duties associated with Regional MSW Coordinators funded by State Grants

95-22-I03	TCOG [\$650]; Production of a recycling educational video for elementary schools;
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2.8 Education/awareness programs targeting preferred options for yard waste reduction/management should be implemented.

[Note: Composting offers the most significant opportunity to reduce waste going to the landfill in the region. No other recycling/waste

reduction opportunity even comes close to the waste minimization opportunities offered by on-site composting by regional residents.

Waste composition analysis contained in the *Texoma Plan* indicates that approximately 35% of all MSW generated by residents in Texoma can be composted on site at the citizen's home. Assuming an average family size of 2.66 persons and a conservative estimation of each person's annual MSW generation being 1,022 pounds [2.8 pounds per citizen daily from residential MSW generation], an average Texoma family can compost up to 950 pounds of waste annually at home [358 pounds per person].

If all 163,508 citizens in Texoma composted, a total of 58,535,864 pounds [29,268 tons] of yard waste, kitchen scraps and similar feed stocks would be diverted from the waste stream. This equates to 17% of the estimated 174,942 tons of MSW annually generated that could be diverted daily from landfills. The enormous opportunity to reduce MSW being hauled to landfills simply through on site composting by residents has not been lost on regional governments, who have made compost education for citizens the most popular grant request in the region. Centrally managed composting facilities in the region would help assure these results].

Lead Entity: Regional MSW Coordinator and TCOG
Funding: Included in activities of regional MSW Coordinators funded by State Grants

95-22-G05	Whitesboro ISD [\$1,192]; Construction of a Compost/Recyclables Demonstration Site;
95-22-I01	TCOG [\$8,940]; Distribution of 300 compost bins and training in region;
95-22-I04	TCOG [\$8,905]; Distribution of 100 additional compost bins and training in region; Improvements to demonstration sites in Pottsboro, Era and Whitesboro; additional school education;
95-22-I05	TCOG [\$3,500]; Construction of Composting Demonstration/Outdoor Learning Center at Golden Rule Elementary School, Denison;
96-22-G01	City of Denison [\$2,055]; Distribution of 100 compost bins and training in city;
96-22-G03	City of Gainesville [\$5,137.50]; Distribution of 250 compost bins and training in city;
96-22-G04	City of Gainesville [\$2,675]; Construction of a Compost/Recyclables Demonstration Site at Edison School;
96-22-G05	City of Howe [\$2,055]; Distribution of 100 compost bins and training in city;
96-22-G06	City of Leonard [\$3,082.50]; Distribution of 150 compost bins and training in city;
96-22-G07	City of Muenster [\$2,055]; Distribution of 100 compost bins and training in city;
96-22-G08	City of Sherman [\$6,165]; Distribution of 300 compost bins and training in city;
96-22-G09	City of Trenton [\$1,077.50]; Distribution of 50 compost bins and training in city;
96-22-G10	City of Whitesboro [\$4,110]; Distribution of 200 compost bins and training in city;
96-22-G12	City of Whitewright [\$1,077.50]; Distribution of 50 compost bins and training in city;
96-22-G14	City of Tom Bean [\$1,350]; Distribution of 50 compost bins and training in city;
96-22-G16	City of Sherman [\$5,202]; Construction of Compost Demonstration/Outdoor Learning Center and program;
96-22-I04	TCOG [\$1,655]; Improvement to Denison ISD learning Center; 100 additional compost bins and training materials for rural citizens not attending city sponsored courses;
97-22-G01	City of Van Alstyne [\$3,900]; Distribution of 150 compost bins and training in city;
97-22-G04	Fannindell ISD [\$2,000]; Construction of Compost Demonstration/Outdoor Learning Center;
97-22-I02	TCOG [\$16,238]; 1997 regional distribution of 750 compost bins and training;
97-22-I03	TCOG [\$2,500]; Large-scale composting demonstration project at TDC facility in Fannin County;
99-22-G01	Bonham ISD [\$2,000] Construction of Compost Demonstration/Outdoor Learning Center;
99-22-I02	TCOG [\$3,260]; Regional compost education project and bin distribution to 200 families.

2.9 Assistance in marketing recyclables and compost/mulch products and developing such markets should be provided.

Lead Entity: Regional MSW Coordinator and State
Funding: State funding

No activity to date on this recommendation other than the assembly of State information in the Regional SW Library

2.10 Assistance in procuring products with recycled content should be provided.

Lead Entity: TCOG, the State, Local Governments and special districts
Funding: State assistance

No activity to date on this recommendation

2.11 The amount of MSW diverted from disposal through source reduction, waste minimization, reuse and recycling programs in the Texoma region should be estimated on an annual basis and publicized.

Lead Entity: Regional MSW Coordinator and TCOG
Funding: State Planning Implementation Grants

Estimates will be posted on the TCOG Solid Waste web site.

2.12 The region should support, encourage and benefit from State-level recyclables market development efforts.

Lead Entity: Regional MSW Coordinator, TCOG and Local Governments
Funding: State funded study

No activity to date on this recommendation.

2.13 Recyclables and compost/mulch market development efforts should be coordinated with other economic development efforts.

Lead Entity: TCOG and Local Governments
Funding: TBD by TCOG and Local Governments

No activity to date on this recommendation.

Medium-Term Recommendations (6-10 years)

2.14 More aggressive waste reduction programs should be implemented as needed to meet 25% recycling goals to the extent technically possible and economically feasible.

Lead Entity: Regional MSW Coordinator and SWAC
Funding: TBD by SWAC and Local Governments

No activity to date on this recommendation.

- 2.15 Financial incentives to increase waste reduction should be considered.

Lead Entity: SWAC and Local Governments
Funding: Local Governments

No activity to date on this recommendation.

Long-Term Recommendations (11-25 Years)

- 2.16 More aggressive waste reduction programs should be implemented as needed to meet 40% recycling goals to the extent technically possible and economically feasible.

Lead Entity: Regional MSW Coordinator, SWAC and Local Governments
Funding: TBD

No activity to date on this recommendation.

Goal 3: DEVELOP PROGRAMS TO ASSIST REGIONAL AND LOCAL ENTITIES IN CONTROLLING AND STEMMING ILLEGAL AND IMPROPER DISPOSAL PRACTICES

Short-Term Recommendations (1-5 Years)

- 3.1 Education/awareness programs for citizens discouraging illegal dumping, open burning and other improper disposal practices should be implemented.

Lead Entity: Regional MSW Coordinator and TCOG
Funding: State Planning Grant Funds

Prior to beginning educational programs for regional citizens, TCOG determined that there was a need to educate local police, fire and other criminal enforcement officials on the existing State criminal environmental laws. To that end, TCOG has been funded to create and present four classes to different groups of public employees and citizens. In Fall 1998 a course called "Fundamentals of Criminal Environmental Law Enforcement" was developed and offered to local citizens through TCOG.

96-22-I02 TCOG [\$5,805]; Development of environmental criminal law enforcement courses for police/fire/judges/ prosecutors;
97-22-I01 TCOG [\$5,805]; Development of environmental criminal law enforcement courses for citizens; advanced topic course for police/fire officers; distribution of environmental law information to regional enforcement agencies.

- 3.2 Education/awareness programs should be developed to inform residents about alternatives to hazardous home products and proper disposal methods for household hazardous waste.

Lead Entity: TCOG
Funding: State Planning Grant Funds

Educational components were included in each of the two HHW collection events that have been held in the region (1997,1998).

- 3.3 Education/awareness programs should be developed to inform small quantity generators of hazardous waste and infectious medical waste about proper management practices.

Lead Entity: State, facilitated by TCOG, private haulers and Local Governments
Funding: State Funding

TCOG will develop the first training courses in 1999; TNRCC currently offers no such direct training programs.

- 3.4 Local Governments should develop plans for management of special waste.

Lead Entity: Local Governments
Funding: TBD by Local Governments

To the best knowledge at TCOG, such plans are not currently being developed.

- 3.5 Technical assistance should be provided to Local Governments, businesses and institutions in identifying and implementing proper

management practices for special and problem wastes

Lead Entity: TCOG, State
Funding: State Planning Grant Funds

TNRCC has been contacted about conducting seminars for these generators of special wastes in our region. In a related activity, Local Emergency Planning bodies are in place and functioning as required by the Emergency Planning and Community Right-to-Know Act [addressing the presence of hazardous materials in the region].

3.6 Each county within the region should develop and maintain litter abatement programs to reduce amount of illegal dumping in rural areas.

Lead Entity: TCOG, County Governments
Funding: State Grant Funding, Fines, Other TBD by Counties

97-22-G02	Grayson County [\$19,621]; Partial funding for 1997 illegal dumping control program;
97-22-G03	Grayson County [\$17,346]; Automation of GC Health Department Environmental Section to create county-wide data base to facilitate illegal dumping control;
97-22-G05	Fannin County [\$12,515]; Start-up funding for illegal dumping control program;
97-22-G06	Grayson County [\$478]; Radio for Health Dept vehicle assisting in illegal dumping control;
97-22-G09	Cooke County [\$16,237.50]; Funding for criminal environmental enforcement program;
98-22-G02	Cooke County [\$12,000]; Funding for criminal environmental enforcement program;
98-22-G03	Fannin County [\$15,092.83]; Funding for criminal environmental enforcement program;
98-22-G04	Grayson County [\$655]; Radio upgrade;
99-22-G02	Grayson County [\$17,028]; Funding for criminal environmental enforcement program;
99-22-G03	Cooke County [\$11,180]; Funding for criminal environmental enforcement program;

3.7 A regional “dumpstoppers” hotline and reward system should be used to encourage citizens to anonymously report illegal dumping and other improper disposal practices.

Lead Entity: State Regulatory Agency
Funding: State Funds

This suggestion should be considered by the Texoma Environmental Crime Task Force, following its creation in 1999. A method of filtering and forwarding these calls should be established prior to advertising the number.

- 3.8 Economic incentives should be provided to encourage local businesses to accept used oil and oil filters from do-it-yourself oil changes.

Lead Entity: Local Governments, facilitated by TCOG
Funding: State Assistance

Some economic incentives are already in place at the State level. Several local businesses and Grayson County Precinct 4 currently accept used motor oil for recycling.

- 3.9 Large appliances, furniture, tires and source-separated wood waste should be accepted at all MSW management facilities, collected in every city and county, and recycled or reused to the greatest extent technically and economically feasible.

Lead Entity: MSW Facility Owners, Local Governments
Funding: TBD by Local Governments

No focused regional efforts to collect and recycle these materials is currently underway. Grayson County Precinct 3 operates a citizen drop-off center to accept large appliances [i.e., white-goods].

- 3.10 Local Governments and school districts should insure that lead-acid batteries, waste oil and used oil filters from their fleets are recycled.

Lead Entity: Local Governments
Funding: Local Governments

Most local governments participate in these programs. Government fleet operators need to be notified that illegal disposal of lead-acid batteries is a Class A Misdemeanor in Texas. Illegal discharge of any amount of used motor oil is a Special Felony in Texas, punishable by fines of up to \$50,000 for all entities and imprisonment of up to 5 years.

- 3.11 Success of programs to encourage proper management of special and problem wastes should be monitored.

Lead Entity: Regional MSW Coordinator
Funding: State Planning Grant Funds

Not currently being monitored.

Medium-Term Recommendations (6-10 Years)

- 3.12 Household hazardous waste and small quantity generated waste collection should be available in the region.

Lead Entity: TCOG, State
Funding: TBD

98-22-I01 TCOG [\$49,425.37]; Household Hazardous Waste Collection day, October 18, 1997;
99-22-I01 TCOG [\$30,000]; Household Hazardous Waste Collection day, October 17, 1998

- 3.13 Special and problem wastes should be minimized, reused or recycled to the extent technically and economically feasible.

Lead Entity: TCOG, Local Governments
Funding: TBD

No activity to date on this recommendation.

Goal 4: DEVELOP REGIONAL COST-EFFECTIVE, EFFICIENT AND ENVIRONMENTALLY SUITABLE SOLID WASTE MANAGEMENT SYSTEMS

Short-Term Recommendations (1-5 Years)

- 4.1 Existing regional Solid Waste Advisory Committee (SWAC) should be maintained as a standing TCOG committee.

Lead Entity: TCOG should facilitate meetings
Funding: State Planning Grant Funds

The SWAC (now NRAC) has been maintained as a standing TCOG committee as recommended.

- 4.2 New appointments to the SWAC should be approved by the SWAC and the TCOG Executive Board.

Lead Entity: TCOG
Funding: State Planning Grant Funds

In late 1998 the TCOG Governing Body voted to reform the SWAC by combining it with the Environmental Advisory Committee and staffing it with a balance of members that more closely reflects the requirements of 30 Texas Administrative Code 330.565 (a).

- 4.3 SWAC shall determine the need for establishment of subregional plans.

Lead Entity: SWAC, Local Governments
Funding: State Planning Grant Funds

NRAC has yet to address this recommendation.

- 4.4 MSW management should be coordinated at the regional level and a regional coordinator should be designated.

Lead Entity: TCOG, SWAC
Funding: State Funds

A Regional MSW Coordinator was hired in March 1994.

- 4.5 Implementation of regional plan should be monitored at the regional level.

Lead Entity: Regional MSW Coordinator, SWAC
Funding: State Planning Grant Funds

Monitoring of the Regional Plan implementation has been cursory to this point. Formal quarterly monitoring of implementation progress will begin in the first quarter of 1999 by NRAC.

4.6 Periodic newsletter on solid waste topics should be published in the region.

Lead Entity: TCOG, Regional MSW Coordinator
Funding: State Planning Grant Funds

The TCOG Natural Resources web site will be used to convey this information.

4.7 Local Government officials, facility/service operators and generators should be educated about changes in State MSW laws, regulations and policies.

Lead Entity: TCOG, Regional MSW Coordinator
Funding: State Planning Grant Funds

Included in the Municipal Procedures Workshop on a minor level.

4.8 Regional clearinghouse on State and Federal MSW laws, regulations and policies should be established.

Lead Entity: TCOG, State
Funding: State Funds

TCOG maintains a library of MSW laws, regulations, policies and general reading matter. The availability of resources is regularly advertised to Local Governments and libraries.

4.9 SWAC should provide input to State officials on solid waste management issues important to the region.

Lead Entity: SWAC
Funding: TBD as needed

TCOG Executive Director and Regional MSW Coordinator both participate in formal and informal information exchange with State officials on regional MSW issues.

4.10 Local, State and Federal funding sources should be tracked at the regional level.

Lead Entity: Regional MSW Coordinator and TCOG
Funding: State Planning Grant Funds

Directories of available funding sources are maintained at TCOG; Solid Waste Implementation Grants routinely available regionally.

- 4.11 Assistance to Local Governments in the preparation of applications for MSW management funding sources should be provided at the regional level.

Lead Entity: TCOG
Funding: TBD by TCOG

TCOG Regional MSW Coordinator routinely assists Local Governments in identifying MSW grant opportunities and in grant preparation.

- 4.12 SWAC should review and comment on MSW grant applications to the State.

Lead Entity: SWAC, TCOG
Funding: TBD by TCOG

SWAC routinely reviews and recommends MSW grant applications to TCOG Governing Body and TNRCC, as required by the TCOG/TNRCC Intergovernmental Agreement.

- 4.13 General/MSW/Management education/awareness campaign should be implemented in the region.

Lead Entity: TCOG
Funding: State Planning Grant Funds applied for by TCOG

TCOG web site training will be available from Summer 1999, covering the existence of the *Texoma Plan*, its standing in State law, requirements for Local Governments to follow MSW policies that coincide with the *Texoma Plan*, and the adoption of Resolutions of Support for the implementation of the *Texoma Plan* by Local Governments.

- a. 95-22-I02 TCOG [\$930]; Distribution of compost worm demonstration bins to regional schools;

Medium-Term Recommendations (6-10 Years)

4.14 The regional plan should be updated at least every five years.

Lead Entity: TCOG
Funding: State Funds

Formal Plan review and updating is scheduled for 2000.

- 4.15 Additional education/awareness programs should be developed at the regional level to support MSW management programs in the region and encourage proper management practices.

Lead Entity: TCOG
Funding: State Funds

Citizen education on regional MSW issues is routinely included in composting and illegal dumping sessions.

Long-Term Recommendations (11-25 Years)

- 4.16 Regional plan should continue to be updated.

Lead Entity: TCOG
Funding: State Funds

No activity to date on this recommendation other than following the recommendation to update the Plan every five years.

B. Recommended Changes to the Regional Plan

No changes to the Plan are required.

C. Estimate of Time and Cost of a Formal Amendment

Not applicable