



CTCOG REGIONAL SOLID WASTE MANAGEMENT PLAN (RSWMP)

Central Texas Regional Solid Waste Management Plan Volume I

Prepared for the Central Texas Council of Governments by
Arredondo, Zepeda & Brunz

This plan was funded from a solid waste management grant provided by TCEQ through CTCOG. This funding does not necessarily indicate endorsement of the study's findings or recommendations.

2-7-2022

Regional Solid Waste Management Plan Volume I

Regional Solid Waste Management Plans are required by Texas Health and Safety Code (THSC), §363.062, relating to Regional Solid Waste Management Plan (RSWMP). Contents of the RSWMP are described in THSC §363.064 and in 30 Texas Administrative Code (TAC), Chapter 330, Subchapter O.

Regional Solid Waste Management Plan Volume I

Regional Organization Information

Table 1. Organization Information

Name of Council of Government	Central Texas Council of Governments
Mailing Address	2180 North Main Street Belton, Texas 76513
Website	https://ctcog.org/regional-planning/solid-waste/
Phone Number	254 770 2200
Email Address	info@ctcog.org

Section I. Geographic Scope

Table I.I. Geographic Scope

Names of Member Counties in the Entire Planning Region	Bell, Coryell, Hamilton, Lampasas, Milam, Mills and San Saba
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Section II. Plan Content

II.A. Regional Goals and Objectives

Table II.A. Regional Goals and Objectives

<p>Goal 1: Provide effective solutions for the management of scrap or used tires in the CTCOG through efficient collection, recycling, and proper disposal.</p>	<p>Objective 1A: Establish region-wide collection of scrap or used tires through collection centers and periodic collection throughout the region.</p> <p>Objective 1B: Adopt ordinances requiring proper collection and disposal by tire retailers and auto stores.</p> <p>Objective 1C: Negotiate inter-local agreements for processing scrap or used tires</p> <p>Objective 1D: Establish a central processing facility for scrap or used tires in the region</p> <p>Objective 1E: Align State of Texas and TCEQ mitigation efforts with regional activities</p>
<p>Goal 2: Reduce the amount of litter and illegal dumping taking place in the region and provide for the efficient clean-up of roadsides, waterways and existing illegal dumping sites. Continue to develop strategies through education and enforcement of efforts to reduce litter and illegal dumping through the region. Evaluate opportunities to work cooperatively to achieve the following objectives.</p>	<p>Objective 2A: Make enforcement of illegal dumping ordinances within cities and counties a high priority for code enforcement and take actionable steps to consistently prosecute violators.</p> <p>Objective 2B: Evaluate the feasibility of developing a network of manned citizen convenience stations throughout the region to provide more accessible options for properly disposing municipal solid waste and certain types of problematic household hazardous wastes.</p> <p>Objective 2C: Fund periodic clean-up days for the collection and proper disposal of bulky items.</p> <p>Objective 2D: Evaluate and develop specific strategies for local governments to resolve issues related to the collection and proper disposal of mattresses.</p> <p>Objective 2E: Address the special needs of household hazardous wastes and provide funding to assist communities properly collect, process and dispose of this waste stream.</p>

<p>Goal 3: Reduce the amounts of waste generated and encourage greater recycling by residential and commercial sectors This will require greater efforts to educate the public, provide more opportunities to reduce waste generation and materials recycling opportunities. A focus of the program is the commercial, industrial and institutional (CII) sector which accounts for over 2/3 of the waste generated in the region. The program will also encourage the development of markets through cooperative efforts with local and regional economic development agencies.</p>	<p>Objective 3A: Establish a coordinating committee to address public policy designed to increase CII waste reduction/reuse/recycling.</p> <p>Objective 3B: Work with economic development agencies and organizations in the region to develop specific strategies for encouraging the location of businesses that can process and market recyclable materials.</p> <p>Objective 3C: Increase reduction and reuse activities through targeted economic development incentives and business management assistance.</p> <p>Objective 3D: Conduct research and technical studies periodically on waste stream analysis and fund waste management innovation projects (maybe go so far as a “Call for Projects”).</p> <p>Objective 3E: Reduce the amounts of waste generated by educating the public through a school’s program targeting school children and various media to focus on residents and business opportunities.</p> <p>Objective 3F: Assist local governments establish recycling collection options to residents through technical assistance and funding.</p> <p>Objective 3G: Increase the marketability of materials by educating the public on what materials are acceptable for recycling versus non-recyclable materials that result in contamination of recyclables.</p> <p>Objective 3H: Work with Keep Texas Recycling to develop rural recycling programs.</p>
<p>Goal 4: Assure long-term disposal capacity.</p>	<p>Objective 4A: Monitor capacity at area landfills and landfills located outside the region that are used by public and private sectors. Evaluate TCEQ reports and present annually to SWAC to determine if there a need for additional landfill capacity to meet needs.</p> <p>Objective 4B: Evaluate the feasibility or need for additional transfer station capacity in the region. Local governments need to work collaboratively to provide efficient transportation of waste and disposal options.</p>

<p>Goal 5: Reduce the amounts of organics and biosolids being disposed in the region.</p>	<p>Objective 5A: Conduct a periodic assessment of brush and compost capacity by feedstocks in the region.</p> <p>Objective 5B: Evaluate the potential of public / private partnerships for delivering biosolids to compost facilities.</p> <p>Objective 5C: Utilize compost in public transportation and parks projects to help build a market for locally produced renewable resource.</p> <p>Objective 5D: Evaluate the potential for utilizing existing facilities such as the Brazos River Authority (Temple-Belton Regional Sewerage System Facility).</p> <p>Objective 5E: Evaluate and construct a regional facility focusing on biosolids and commercial organic waste streams.</p>
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II.B. Efforts to Minimize, Reuse, and Recycle Waste

Table II.B. Waste Minimization, Reuse, and Recycling

Subject	Description
<p>Current Efforts to Minimize Municipal Solid Waste and to Reuse or Recycle Waste</p>	<p>There are a number of programs sponsored throughout the region that are designed to encourage waste minimization and recycling. Some of the key programs are listed below.</p> <ol style="list-style-type: none"> 1) Public education programs designed to encourage waste minimization and recycling. This public education video teaches why it is important to reduce, reuse and recycle and how to do it. 2) Larger cities in the region provide curbside recycling services to their residents. There are also citizen drop-off centers in the region to provide residents who don't have curbside collection an alternative to recycle their waste. 3) Businesses and industries in the region have in-house recycling programs. These programs are sponsored either to cut disposal costs or to meet corporate sustainability goals. 4) Private sector resource recovery operations including material recycling and compost facilities.

<p>Recycling Rate Goal for the Region</p>	<p>Based on the 2015 TCEQ’s Study on the Economic Impacts of Recycling, it was estimated that the recycling rate for the state is 22.7%. It is assumed that the CTCOG’s recycling rate is approximately the same as the overall state’s recycling rate. A 22.7% rate includes residential recycling, commercial and industrial recycling and recovery through mulch and compost operations, and recycling of construction / demolition waste. With efforts to increase residential recycling and promote greater recycling by businesses and institutions, the recycling rate is estimated to increase by 5% in five years (28% in 2025) to 30% by 2042.</p> <p>The recycling goal for the CTCOG region is 30% by the year 2042.</p>
<p>Recommendations for Encouraging and Achieving a Greater Degree of Waste Minimization and Waste Reuse or Recycling</p>	<ol style="list-style-type: none"> 1) Continue to promote public education / public information programs. 2) Focus new efforts to encourage greater recycling by the private sector by facilitating cooperative efforts between waste generators and potential markets. 3) Encourage development of new markets for recoverable materials through collaboration with local economic development agencies. 4) Encouraging more citizen convenience stations and drop-off centers in order to reduce illegal dumping and to offer recycling opportunities to those who do not have curbside collection of recyclable materials. Encourage the continued operation of the Fort Hood drop-off HHW collection center for Department of Defense (“DoD”) affiliated persons. 5) Assist local governments in-house recycling programs through inter-local cooperation and opportunities through Keep Texas Recycling. 6) Encourage greater composting of wood/brush, biosolids and certain food wastes. 7) Encourage local governments and businesses to evaluate their procurement policies and adopt standards that favor recyclable and recycled products. 8) Encourage the development of scrap tire recovery projects similar to planned efforts to utilize scrap or used tires for land reclamation.
<p>Existing or Proposed Community Programs for the Collection of Household Hazardous Waste</p>	<p>The CTCOG assists in the sponsorship of periodic HHW collection events through its solid waste grant program. Several community clean-ups, HHW collection events and waste tire collection events have been sponsored by the CTCOG over the past several years.</p>

	<p>Examples of programs sponsored in the CTCOG region include the following.</p> <ul style="list-style-type: none"> • The City of Belton has an agreement with its solid waste collection firm to provide curbside collection of HHW. • Cities including Temple, Gatesville, Killeen, and others sponsor periodic HHW collection events – often with the assistance of TCEQ/CTCOG grants funds. • The City of Lampasas operates a citizen convenience station that collects batteries and tires in addition to municipal solid waste. • Fort Hood maintains a citizen drop-off center for HHW collection. • Some of the region’s cities and the CTCOG provide information on their web sites related to proper management of HHW and the dates and location of periodic collection events.
<p>Composting Programs for Yard Waste</p>	<p>The recommended composting programs for yard waste and related organic wastes may include:</p> <ul style="list-style-type: none"> (I) <input checked="" type="checkbox"/> creation and use of community composting centers; (II) <input checked="" type="checkbox"/> adoption of the "Don't Bag It" program for lawn clippings developed by the Texas Agricultural Extension Service; and (III) <input checked="" type="checkbox"/> development and promotion of education programs on home composting, community composting, and the separation of yard waste for use as mulch. <p>Other organic efforts of the Plan will include the following.</p> <ul style="list-style-type: none"> <i>(IV) increasing awareness of TCEQ composting incentives related to landfill fees and compost operating costs.</i> <i>(V) continue to support brush and wood waste mulching in order to keep these materials from being landfilled.</i> <i>(VI) increasing the awareness of the benefits of compost in commercial and agricultural applications to encourage greater production.</i>
<p>Public Education/Outreach</p>	<p>The public education program for the Plan focuses on the following major focus areas.</p> <ol style="list-style-type: none"> 1) A school’s program that teaches school children the benefits of waste reduction, reuse and recycling. 2) Public education / information to the general public regarding waste reduction, reuse, and proper recycling.

	<ul style="list-style-type: none"> 3) Increase the marketability of materials by educating the public what materials are acceptable for recycling versus non-recyclable materials that result in contamination of recyclables 4) Outreach and collaborative efforts to the private sector to encourage greater recycling. 5) Training for local government staff / elected officials regarding recycling opportunities from in-house operations and inter-local agreements to improve cost-effectiveness of programs. 6) Training for elected officials and law enforcement related to illegal dumping ordinances and effective programs to reduce illegal dumping.
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II.C. Commitment Regarding the Management of MSW Facilities

By checking the boxes below, the Council of Government makes a commitment to the following, regarding the management of MSW facilities:

- x (i) encouraging cooperative efforts between local governments in the siting of landfills for the disposal of solid waste;
- x (ii) assessing the need for new waste disposal capacity;
- x (iii) considering the need to transport waste between municipalities, from a municipality to an area in the jurisdiction of a county, or between counties, particularly if a technically suitable site for a landfill does not exist in a particular area;
- x(iv) allowing a local government to justify the need for a landfill in its jurisdiction to dispose of the solid waste generated in the jurisdiction of another local government that does not have a technically suitable site for a landfill in its jurisdiction;
- x(v) completing and maintaining an inventory of MSW landfill units in accordance with Texas Health and Safety Code, §363.064. One copy of the inventory shall be provided to the commission and to the chief planning official of each municipality and county in which a unit is located; and
- x (vi) developing a guidance document to review MSW registration and permit applications to determine conformance with the goals and objectives outlined in *Volume II: Regional Solid Waste Management Plan Implementation Guidelines* as referenced in 30 TAC §330.643.

Section III. Required Approvals

Table III.I. Required Approvals

Solid Waste Advisory Committee	October 15, 2021
Public Meeting Dates	October 5, 2021
Executive Committee	October 28, 2021

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List of Acronyms

C&D	construction and demolition
CESQG	conditionally exempt small quantity generator
CTCOG	Central Texas Council of Governments
HHW	household hazardous waste
MSW	municipal solid waste
PCD	pounds per capita per day
RACM	regulated asbestos containing material
RENEW	Resource Exchange Network for Eliminating Waste
SWAC	Solid Waste Advisory Committee
TCEQ	Texas Commission on Environmental Quality
TPD	tons per day
TPY	tons per year

Regional Solid Waste Management Implementation Plan Volume II

Regional Organization Information

Table 1. Organization Information

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Phone Number	254 770 2200
Email Address	info@ctcog.org

Section I. Geographic Scope

Table I.I. Geographic Scope

I.A. Names of Member Counties in the Entire Planning Region	Bell, Coryell, Hamilton, Lampasas, Milam, Mills and San Saba
I.B. Geographic Planning Units Used in the Regional Implementation Plan	<input type="checkbox"/> Small geographic areas such as census tracts or city boundaries for the most detailed data collection and manipulation; <input type="checkbox"/> Planning areas to be used for the assessment of concerns and the evaluation of alternatives. These planning areas shall be aggregations of small geographic areas; <input type="checkbox"/> County boundaries for the summarization and presentation of key information; or <input checked="" type="checkbox"/> The entire planning region

Section II. Planning Periods

Table II.I. Planning Periods

<p>II.A.1. Current and Historical Information</p>	<p>The CTCOG is currently operating under its 2002-2022 Regional Solid Waste Management Plan (“2002-2022 Plan”). The goals and objectives for the 2002-2022 Plan are presented in Attachment II-A-1.</p> <p>Current CTCOG activities include the following.</p> <ol style="list-style-type: none"> 1) Prepare and implement the Central Texas Regional Solid Waste Management Plan. 2) Maintain a solid waste advisory committee (“SWAC”). 3) Provide technical assistance and informational programs pertaining to municipal solid waste (“MSW”) management. 4) Serve as a central point of contact for solid waste management outreach, education, and training programs. 5) Review permit and registration applications for municipal solid waste facilities to assure conformance with the adopted regional solid waste management plan. 6) The CTCOG administers TCEQ pass-through funding for local and regional solid waste management projects. A summary of grant projects and programs sponsored by the CTCOG using these grant funds is included in Attachment II-A-2.
<p>II.A.2. Short-range Planning Period</p>	<p>2022-2027</p> <ol style="list-style-type: none"> 1) As funds are available, assist local governments establish regional tire collection centers and facilitate inter-local agreements and private sector participation specifically related to scrap tire management. Provide training related to code enforcement. Evaluate regional scrap tire facility applications submitted to the TCEQ. Coordinate with TCEQ regarding clean-up of major tire dumps. 2) Continue to fund clean-up days. Identify options for properly managing waste mattresses.

	<p>3) Assist in funding and sponsoring public education programs focused on household hazardous waste (HHW) and fund periodic HHW collection events.</p> <p>4) Establish a Solid Waste Advisory Committee subcommittee focused on recycling opportunities in the commercial / industrial and institutional sectors.</p> <p>5) Develop a resource document for economic development focused on material markets. Identify specific policies related to market incentives.</p> <p>6) Identify school recycling program opportunities using the resources of groups such as Keep Texas Beautiful, TCEQ and EPA.</p> <p>7) Establish a region-wide public education program that encourages source reduction, recycling, and composting, including don't bag it programs.</p> <p>8) Monitor regional landfill capacity and evaluate permit applications for conformance with the regional solid waste management plan.</p> <p>9) Survey local governments to identify wood and brush waste that might be resources for composting programs. Facilitate meeting with Brazos Valley River Authority to identify potential for cooperative composting projects.</p>
<p>II.A.3. Intermediate Planning Period</p>	<p>2022-2032</p> <p>As funds are available, assist local governments establish regional tire collection centers and facilitate inter-local agreements and private sector participation specifically related to scrap tire management. Provide training related to code enforcement. Evaluate regional scrap tire facility applications submitted to TCEQ. Coordinate with TCEQ regarding clean-up of major tire dumps.</p> <p>2) Continue to fund clean-up days. Identify options for properly managing waste mattresses.</p> <p>3) Assist in funding and sponsoring public education programs focused on household hazardous waste (HHW) and fund periodic HHW collection events.</p> <p>4) Facilitate meeting with private sector to identify barriers and opportunities for more recycling by the private sector.</p>

	<p>5) Encourage material markets through economic development policies and other incentives.</p> <p>6) Fund research and technical studies that identify specific waste streams in order to encourage greater recycling and market development.</p> <p>7) Research regional school recycling efforts and utilize technology transfer to encourage adoption by other institutions.</p> <p>8) Fund research and technical studies to encourage increased recycling.</p> <p>9) Establish and maintain an ongoing public information/education program related to source reduction, recycling, and composting.</p> <p>10) Monitor landfill capacity and review landfill permit applications.</p> <p>11) Evaluate the need for additional transfer station capacity in the region.</p> <p>12) Survey local governments to identify wood and brush waste that might be resources for composting programs. Facilitate meeting with Brazos Valley River Authority to identify potential for cooperative composting projects.</p>
<p>II.A.4. Long-range Planning Period</p>	<p>2022-2042</p> <p>1) Continue efforts to reduce illegal dumping and public information programs identified in short-term and mid-term actions.</p> <p>2) Continue to sponsor research and technical studies designed to reduce the amounts of waste generated.</p> <p>3) Monitor landfill capacity and evaluate solid waste facility permit applications.</p> <p>4) Continue to examine the need for additional transfer station capacity in the region.</p> <p>5) Continue efforts to increase the amounts of wood, brush and biosolids composted.</p>
<p><input checked="" type="checkbox"/> Check box if additional details provided in <i>Attachment II.A.</i></p>	

Section III. Plan Content

III.A. Demographic Information

Table III.A.I. Residential Waste Generation

Year	Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)
Current		523,472	197,369	2.07	9,868	5%	207,238
2022	1.01%	528,462	197,369	2.07	9,868	5%	207,238
2027	1.01%	553,476	206,711	2.07	10,336	5%	217,047
2032	1.01%	577,832	215,808	1.96	21,581	10%	237,388
2037	1.01%	601,905	224,798	1.86	33,720	15%	258,518
2042	1.01%	625,353	233,555	1.76	46,711	20%	280,266

Refer to Attachment III-A.I

Table III.A.II Commercial Waste Generation

Year	Description of significant commercial activities affecting waste generation and disposal in the area.	Expected increase or decrease to Commercial Waste Generation
Current	<p>The commercial sector accounts for 72% of total employment in the region. The waste generation rate is projected to be 7.90 pounds per employee per day.</p> <p>One of the key factors that distinguishes the CTCOG from other Council of Governments is the location of Fort Hood. Fort Hood generates both residential and commercial / institutional wastes. Fort Hood has its own landfill.</p> <p>Other major businesses and industries in the CTCOG Region include:</p> <p>Bell County: manufacturing includes computers, plastic goods, furniture, clothing; agribusiness; distribution center; tourism.</p> <p>Coryell: prisons, agribusiness and manufacturing.</p> <p>Hamilton: Varied manufacturing, agribusiness, hunting leases, tourism.</p> <p>Lampasas: Many employed at Fort Hood, several industrial plants, agribusinesses, tourism.</p> <p>Milam: Agribusiness, manufacturing.</p> <p>Mills: Agribusiness, hunting leases.</p> <p>San Saba: Pecan processing plants, tourism, hunting leases</p>	<p>An estimated 330,600 tons of commercial waste is the estimated base year waste generation from commercial sector.</p>
2022	<p>Employment is anticipated to increase at 1.0% per year. No major changes in economic activity are known at this time. It is anticipated that commercial waste generation will keep pace with increases in population and employment.</p>	<p>The estimated commercial waste generation in 2022 is 333,800 tons.</p>
2027	<p>Employment is anticipated to increase at a rate of 1.0 % per year. No major changes in economic activity are known at this time. It is anticipated that commercial waste generation will keep pace with increases in population and employment.</p>	<p>The estimated commercial waste generation is 349,500 tons; cumulative for the period 2022-2027 is 2.05 million tons.</p>
2032	<p>Employment is anticipated to increase at a rate of 1.0%. No major changes in economic activity are known at this time. It is anticipated</p>	<p>The estimated commercial waste generation is 349,500 tons; cumulative for period</p>

	commercial waste generation will keep pace with increases in population and employment.	2022-2032 is 3.84 million tons.
2037	Employment is anticipated to increase at a rate of 1.0%. No major changes in economic activity are known at this time. It is anticipated commercial waste generation will keep pace with increases in population and employment.	The estimated commercial waste generation is 380,100 tons; cumulative for the period 2022-2037 is 5.71 million tons.
2042	Employment is anticipated to increase at a rate of 1.0%. No major changes in economic activity are known at this time. It is anticipated commercial waste generation will keep pace with increases in population and employment.	Estimated commercial waste generation is 394,900 tons; cumulative for the period 2022-2042 is 7.65 tons.

Table III.A.III. Industrial Waste Generation

Year	Description of significant industrial waste activities affecting waste generation and disposal in the area.	Expected increase or decrease to Industrial Waste Generation
Current	The industrial sector accounts for approximately 28% of total employment in the region. The waste generation rate is projected to be 6.7 pounds per employee per day.	The estimated industrial waste generation in 2022 is 44,300 tons.
2022	Employment is anticipated to increase at a rate of 1%. No major changes in economic activity are known at this time. It is anticipated that industrial waste generation will keep pace with increases in population and employment.	The estimated industrial waste generation is 44,700 tons.
2027	Employment is anticipated to increase at a rate of 1.0%. No major changes in economic activity are known at this time.	The estimated industrial waste generation is 46,800 tons; cumulative for period 2022-2027 is 274,900 million tons.
2032	Employment is anticipated to increase at a rate of 1%. No major changes in economic activity are known at this time.	The estimated industrial waste generation is 448,900 tons; cumulative for the period 2022-2032 is 515,000.
2037	Employment is anticipated to increase at a rate of 1%. No major changes in economic activity are known at this time. .	Estimated industrial waste generation is 50,900 tons; cumulative for the period 2022-2037 is 765,700 tons.
2042	Employment is anticipated to increase at a rate of 1%. No major changes in economic activity are known at this time.	Estimated industrial waste generation is 52,900 tons; cumulative for the 2022-2042 planning period is 1,026,400 tons.

III.B. Estimates of Current and Future Solid Waste Amounts by Type

Table III.B.1. Current and Future Solid Waste Amounts by Type

Waste Type	Number of Landfills Accepting Waste Type	Percent of Total Tons Disposed	Current Year	5-year Projection (tons)	10-year Projection (tons)	15-year Projection (tons)	20-year Projection (tons)
Municipal Solid Waste (MSW)	2	66.81%	343,621	346,280	2,118,287	3,964,953	5,890,269
Brush	0	0					
Construction / Demolition (C&D)	1	21.0%	107,113	655,242	1,226,464	1,822,015	2,441,404
Litter			-	-	-	-	-
Class 1 Non-hazardous			-	-	-	-	-
Class 2 & 3	2	9.0%	47,898	293,004	548,436	814,748	1,091,719
Incinerator Ash							
Medical waste	1	0.32%	1649	1,727	1,803	1,799	1,873
CESQG							
Regulated Asbestos Containing Material (RACM)	2	0.02%	114	119	125	124	130
Non RACM	1	0.32%	1670	1,749	1,826	1,822	1,897
Dead animals	2		12	13	13	13	14
Sludge	1	2.61%	13439	14,075	14,694	14,661	15,267
Grit Trap							
Septage	0		.				
Contaminated Soil	1	0.00%	16	17	17	17	18
Tires							
Pesticides			-	-	-	-	-
Used Oil Filter			-	-	-	-	-
Other							
Total		100.00%	514,342	518,322	3,170,714	5,934,858	8,816,727

III.C. Description of Current and Planned Solid Waste Management Activities

Table III.C.I. Current Solid Waste Management Activities in the Region

Activity	Description
<p>Generation</p>	<p>The CTCOG region is projected to generate 577,300 tons of MSW in 2022. As stated in the earlier tables, a majority of this waste is generated by commercial and industrial sectors. It is anticipated that in 2042, the region will generate a total of 689,600 tons. For the period 2022-2042, a total of 13.3 million tons is projected to be generated if the current generation rates remain constant and population increases at projected levels.</p> <p>Waste is both exported out of the region and imported into the region. The City of Temple Landfill accepts waste from Falls and McLennan Counties which are outside the CTCOG boundaries.</p> <p>The following list provides the names of landfills that accept waste from the CTCOG region. The list also indicates the location by county of these landfills and their projected capacity in years. The list also includes the CTCOG counties that are accepted at these landfills.</p> <p>City of Waco Landfill (McLennan County / 5 years): Bell, Coryell, Lampasas, Milam and Hamilton Lacy-Lakeview (McLennan County / 5 years): Bell, Coryell and Hamilton Turkey Creek Landfill (Johnson County / 7 years): Bell</p> <p>It should be noted that these landfills have between 5 and 7 years of remaining capacity. The City of Waco is in the process of selecting a site for its new landfill that is located on the border of McLennan and Limestone Counties. The Turkey Creek Landfill has an amendment to extend its capacity by approximately 7 years, however, it is also anticipated that it will likely be increasing throughput in future years to manage waste from the soon to be closed Weatherford Landfill. There is no information currently available on the future of the Lacy-Lakeview Landfill. Closure of these landfills in the relative short-term is likely to result in an increased flow of waste to the City of Temple Landfill.</p> <p>Table IIIB.1 provides a distribution of waste type for the two operating Type 1 landfills in the CTCOG region. These percentages are similar to state-wide averages.</p> <p>Major waste streams include: MSW - 66.8% - (Texas -64%) Construction / demolition waste - 21% (Texas -21%) Biosolids / Sludge - 2.6% (Texas - 2.84%)</p>

	<p>Contaminated soil - 2.0% (Texas 2.1%) Class 2-3 waste - 9% (Texas 6.0%)</p> <p>Source: TCEQ MSW Annual Reports for 2020.</p> <p>The majority of the waste generated in the region is from Bell County (77%). Waste generated from Fort Hood is disposed at the Fort Hood Landfill. The Fort Hood Landfill accepted 20,300 tons in 2020. This represents approximately 4% of the waste generated in the CTCOG region.</p> <p>Sources of Waste by County - % of total generation</p> <table border="1"> <thead> <tr> <th>County</th> <th>% of Region Total</th> <th>Tons (2021)</th> </tr> </thead> <tbody> <tr> <td>Bell</td> <td>77%</td> <td>448,270</td> </tr> <tr> <td>Coryell</td> <td>11%</td> <td>61700</td> </tr> <tr> <td>Hamilton</td> <td>2%</td> <td>10,700</td> </tr> <tr> <td>Lampasas</td> <td>3%</td> <td>20,000</td> </tr> <tr> <td>Milam</td> <td>4%</td> <td>24,500</td> </tr> <tr> <td>Mills</td> <td>1%</td> <td>5,600</td> </tr> <tr> <td>San Saba</td> <td>1%</td> <td>6,900</td> </tr> </tbody> </table>	County	% of Region Total	Tons (2021)	Bell	77%	448,270	Coryell	11%	61700	Hamilton	2%	10,700	Lampasas	3%	20,000	Milam	4%	24,500	Mills	1%	5,600	San Saba	1%	6,900
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<p>Source Separation</p>	<p>A review of local government programs was conducted as part of the planning process. This review included a survey of local governments, local government interviews, input from the SWAC members, input from Fort Hood officials and review of local government web sites.</p> <p>Source separation activities in the CTCOG region are focused on the following programs.</p> <ol style="list-style-type: none"> 1) Local government public information programs. 2) Local government sponsored recycling programs. 3) Fort Hood recycling program. 4) Private sector recycling programs. 5) Private sector entrepreneurs who collect scrap materials for future recycling. <p>1) Local Government Public information programs.</p> <p>Several local governments in the CTCOG Region, including Fort Hood, have public information programs designed to encourage homeowners to reduce the amounts of waste generated and how to recycle.</p> <p>2) Local government sponsored recycling programs.</p> <p>The following cities provide residential recycling services at the</p>																								

	<p>curb.</p> <p>Belton Copperas Cove Rockdale Temple</p> <p>The following cities provide residential recycling services through recycling centers.</p> <p>Copperas Cove Gatesville Hamilton Harker Heights Killeen Lampasas Nolanville Rockdale San Saba Temple</p> <p>3) Fort Hood Recycling Program Based on reports from Fort Hood, a total of 31,000 tons of materials were recycled in FY 2021. The recycling program includes a variety of materials, including steel (66% of material recovered), other metals, electronics, cardboard, plastics, construction / demolition materials, plastics, tires and other materials. A copy of their report is included in Attachment III-C.</p> <p>4) Private sector recycling programs Several businesses in the region recycle materials as part of their normal operations and to meet corporate or company sustainability goals. It is estimated that the state-wide recycling rate is approximately 27%. The majority of this recycling is the result of private sector efforts. There are examples of commercial / institutional recycling throughout the CTCOG region.</p> <p>5) Private sector entrepreneurs who collect scrap materials for future recycling.</p> <p>Recyclables are collected by a number of scrap dealers in the region. These recycling companies collect paper, metals and other recyclables. Some examples of private sector recycling include Walmart, HEB, Tractor Supply and other major companies in the region. A listing of recycling firms is provided in Attachment III-D.</p>
Collection	<p>Cities in the CTCOG Region comply with state regulations related to solid waste collection. These regulations require that MSW be collected at least once per week. RULE §330.103 Collection and Transportation Requirements. This can be accomplished either</p>

	<p>through the City providing direct service to residents or businesses, or by adoption of local ordinances regarding solid waste management.</p> <p>The cities of Copperas Cove, Killeen, Temple, San Saba, and Lampasas provide solid waste collection services using City owned and operated collection vehicles. The majority of cities in the CTCOG provide solid waste collection services through contracts with private vendors.</p> <p>The following is a list of cities in the CTCOG region with convenience stations and/or drop-off centers.</p> <ul style="list-style-type: none"> Belton Copperas Cove Gatesville Hamilton Harker Heights Killeen Lampasas Nolanville Rockdale San Saba Temple
Handling	<p>MSW handling is occurring at various processing facilities that are located in the region. These facilities include material recovery facilities, scrap dealers, compost facilities and resource recovery facilities. There are no material recovery facilities located in the region.</p>
Storage	<p>The only storage of solid waste occurs at the Lampasas Citizen Convenience Station and city drop-off locations.</p> <p>There may be limited storage of waste at material processing, transfer stations, composting facilities and landfills. TCEQ regulations dictate the length of time waste can be stored at these facilities.</p>
Transportation	<p>The majority of recyclables or waste that is collected in the CTCOG Region is hauled directly to a processing facility or a municipal solid waste landfill. A total of 145,083 tons of waste were processed at one of the region's five transfer stations. This represents 26% of the total waste generated in the region.</p> <p>The City of Temple Landfill is located in Bell County and is the location where most of the waste generated in the CTCOG region is disposed. Fort Hood's Landfill is used for waste generated within the boundaries of Fort Hood. As stated earlier, waste is also being hauled out of the region. Table III-D-7 in Attachment III-D provides a summary of the distances from various communities in the CTCOG region to area landfills.</p>

	<p>Transfer Stations located in the CTCOG Region include the following.</p> <table border="0"> <thead> <tr> <th>Transfer Station</th> <th>County</th> <th>Tons / Year</th> </tr> </thead> <tbody> <tr> <td>Killeen TS</td> <td>Bell</td> <td>113,980</td> </tr> <tr> <td>Copperas Cove TS</td> <td>Bell</td> <td>26,854</td> </tr> <tr> <td>Fort Hood Biotreatment TS</td> <td>Coryell</td> <td>368</td> </tr> <tr> <td>Hilo TS</td> <td>Hamilton</td> <td>134</td> </tr> <tr> <td>San Saba TS</td> <td>San Saba</td> <td>3,747</td> </tr> <tr> <td>Total</td> <td></td> <td>145,083</td> </tr> </tbody> </table> <p>Source: TCEQ Annual MSW Reports</p>	Transfer Station	County	Tons / Year	Killeen TS	Bell	113,980	Copperas Cove TS	Bell	26,854	Fort Hood Biotreatment TS	Coryell	368	Hilo TS	Hamilton	134	San Saba TS	San Saba	3,747	Total		145,083			
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Processing	<p>There are six mulch / compost facilities located in the CTCOG region. Four of these facilities are required to report tons of material processed each year. Based on the data presented below, a total of 14,854 tons of material were processed at these facilities in 2020.</p> <table border="0"> <thead> <tr> <th>Facility</th> <th>County</th> <th>2020 Tons</th> </tr> </thead> <tbody> <tr> <td>BCWCID 1 Regional Compost Facility</td> <td>Bell</td> <td>10,619</td> </tr> <tr> <td>Resource Recycling Facility</td> <td>Bell</td> <td>NA</td> </tr> <tr> <td>City of Copperas Cove Compost Facility</td> <td>Coryell</td> <td>1,485</td> </tr> <tr> <td>Compost WE R Composting</td> <td>Milam</td> <td>NA</td> </tr> <tr> <td>Fort Hood Compost Operation</td> <td>Coryell</td> <td>1,984</td> </tr> <tr> <td>Temple Landfill Chipping & Grinding</td> <td>Bell</td> <td>766</td> </tr> <tr> <td>Total Mulch & Compost</td> <td></td> <td>14,854</td> </tr> </tbody> </table>	Facility	County	2020 Tons	BCWCID 1 Regional Compost Facility	Bell	10,619	Resource Recycling Facility	Bell	NA	City of Copperas Cove Compost Facility	Coryell	1,485	Compost WE R Composting	Milam	NA	Fort Hood Compost Operation	Coryell	1,984	Temple Landfill Chipping & Grinding	Bell	766	Total Mulch & Compost		14,854
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Treatment	<p>There are two kinds of treatment facilities in the region, grease and grit trap waste treatment facilities and medical waste treatment facilities.</p> <p>Grease & Grit Trap Facilities There is one permitted grease and grit trap facility: S&M Vacuum & Waste LWP located in Bell County. In 2020, this facility processed 3918 tons of material.</p> <p>Medical Waste Facilities The Temple Transfer Station in Bell County is also permitted as a medical waste transfer facility. In 2020, it managed a total of 596 tons of medical wastes.</p>																								
Resource Recovery	<p>There are no resource recovery facilities in the region.</p>																								
Disposal of Solid Waste	<p>The majority of municipal solid waste generated in the CTCOG region is disposed of at the Temple Landfill. This landfill has a capacity of 27,752,850 tons. This is equivalent to 56 years of</p>																								

	<p>capacity at current rates of disposal (494,000 tons per year).</p> <p>The only other permitted Type 1 landfill in the CTCOG region is the Fort Hood Landfill. This landfill has a total capacity of 1,352,885. At current rates of disposal (20,500 tons per year), the landfill has 35 years of remaining capacity.</p> <p>There are no construction / demolition landfills located in the CTCOG region.</p> <p>As stated earlier, some waste is disposed of at landfills located outside the region. Landfills where waste is exported to include the City of Waco's landfill; the Lacy-Lakeview Landfill and the Turkey Creek Landfill.</p>
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Table III.C.II. Planned Solid Waste Management Activities in the Region

Activity	Description																		
<p>Generation</p>	<p>Projected waste generation for the CTCOG region is shown below. The estimates presented below assume an unchanged waste generation rate increasing at the rate of population growth. These are conservative estimates. A conservative approach is deemed appropriate when evaluating future solid waste management needs and to properly plan disposal needs.</p> <p>It is anticipated that source reduction and recycling efforts will reduce future solid waste management needs. The region’s stated goal of a 30% recycling rate will significantly reduce waste disposal needs; however, it will take years to reach this rate.</p> <table border="1" data-bbox="570 793 1416 1031"> <thead> <tr> <th data-bbox="570 793 797 825">Year</th> <th data-bbox="797 793 1122 825">Annual Tons</th> <th data-bbox="1122 793 1416 825">Cumulative Tons</th> </tr> </thead> <tbody> <tr> <td data-bbox="570 856 797 888">2022</td> <td data-bbox="797 856 1122 888">577,700</td> <td data-bbox="1122 856 1416 888">577,700</td> </tr> <tr> <td data-bbox="570 888 797 919">2027</td> <td data-bbox="797 888 1122 919">606,300</td> <td data-bbox="1122 888 1416 919">3,552,300</td> </tr> <tr> <td data-bbox="570 919 797 951">2032</td> <td data-bbox="797 919 1122 951">634,300</td> <td data-bbox="1122 919 1416 951">6,668,300</td> </tr> <tr> <td data-bbox="570 951 797 982">2037</td> <td data-bbox="797 951 1122 982">662,200</td> <td data-bbox="1122 951 1416 982">9,923,700</td> </tr> <tr> <td data-bbox="570 982 797 1014">2042</td> <td data-bbox="797 982 1122 1014">689,600</td> <td data-bbox="1122 982 1416 1014">13,317,600</td> </tr> </tbody> </table> <p>Waste generation is anticipated to increase with population. For this Plan, data from the Texas Demographic Center (TDC) were used to determine future population increases. It should be noted that these estimates have been revised to reflect actual US Census data for the year 2020. For the base case presented in this Plan, the anticipated annual percentage increases for each County using TDC data. However, it is noted by members of the SWAC that actual population trends may be increasing at a faster rate than projected by TDC.</p> <p>A sensitivity analysis was undertaken to determine the impacts of greater population increases in the region. For the base case scenario, TDC assumes an annual increase of 1%. If population increases at a rate of 2% per year, the 2042 population is projected to be 939,200 compared to the base case projection of 625,300. The 2% growth rate will result in annual regional tonnage in 2042 of 875,650 tons and the cumulative waste generation of 15,193,700 tons compared to 13,317,600 tons (base case).</p>	Year	Annual Tons	Cumulative Tons	2022	577,700	577,700	2027	606,300	3,552,300	2032	634,300	6,668,300	2037	662,200	9,923,700	2042	689,600	13,317,600
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2037	662,200	9,923,700																	
2042	689,600	13,317,600																	
<p>Source Separation</p>	<p>There are recommendations in the plan for additional public information programs, however, there are no specific plans to implement new public information programs focused on source reduction at this time.</p>																		

	<p>Several cities are planning to enhance their recycling programs in the next five years according to the local government survey. These communities include the following.</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Planning to modify recycling program</p> <p>San Saba Copperas Cove Nolanville Hico Gatesville Goldthwaite Temple Coryell County Harker Heights Killeen</p> </td> <td style="width: 50%; vertical-align: top;"> <p>Possibly modifying recycling program</p> <p>Morgan’s Point Resort Troy Harker Heights Academy Lampasas</p> </td> </tr> </table> <p>Goldthwaite, Temple, Harker Heights and Copperas Cove have indicated they plan to add recycling centers to their recycling program. Cities considering recycling centers include Morgan's Point Resort, Little River-Academy and Lampasas; Coryell County is also considering a recycling center.</p>	<p>Planning to modify recycling program</p> <p>San Saba Copperas Cove Nolanville Hico Gatesville Goldthwaite Temple Coryell County Harker Heights Killeen</p>	<p>Possibly modifying recycling program</p> <p>Morgan’s Point Resort Troy Harker Heights Academy Lampasas</p>
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Collection	<p>A local government survey was conducted as part of the regional solid waste management plan. The survey identified that the cities of Temple, Gatesville, Harker Heights, Killeen and Copperas Cove and Coryell County are planning changes to their collection program.</p> <p>The cities of Morgan's Point Resort, Troy, Little River-Academy, San Saba, Nolanville, and Goldthwaite are considering possible changes to their collection programs. Hamilton County is also considering changes in solid waste collection.</p> <p>The Cities of Goldthwaite, Copperas Cove and Harker Heights are planning to add drop-off centers. The cities of Little River-Academy, Morgan's Point Resort and Hamilton County and Coryell County are considering future drop-off centers.</p>		
Handling	<p>Little River Academy and Goldthwaite are considering the construction of a household hazardous waste facility.</p>		
Storage	<p>No known waste storage facilities are planned for the region. As stated above, there are cities considering drop-off centers in their communities. Depending on the size and scope, some of these drop-off centers may qualify as citizen convenience stations.</p>		

Transportation	Temple is planning future transfer stations. Goldthwaite and Little River-Academy are considering transfer stations in the future.
Processing	The communities of Little River-Academy, Goldthwaite, Nolanville, Copperas Cove and Coryell County are considering a material recovery facility. Goldthwaite, Temple and Little River Academy are considering compost facilities in their future solid waste management plans.
Treatment	No planned projects related to waste treatment were identified.
Resource Recovery	No planned projects related to resource recovery were identified.
Disposal of Solid Waste	The cities of Goldthwaite and Little River-Academy indicated they might build a landfill, however no specific were provided.
<input checked="" type="checkbox"/> Check box if additional information of solid waste management activities is provided as <i>Attachment III.C.</i>	

III.D. Description and Assessment of the Adequacy of Existing Solid Waste Management Facilities & Practices, and Household Hazardous Waste Programs

Table III.D.I. Adequacy of Existing Facilities and Practices

Program	Facility Adequacy	Practices Adequacy
Resource Recovery	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No, description of facility inadequacy provided in <i>Attachment III. D.</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No, description of practice inadequacy provided in <i>Attachment III. D.</i>
Storage	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No, description of facility inadequacy provided in <i>Attachment III. D.</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No, description of practice inadequacy provided in <i>Attachment III. D.</i>
Transportation	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No, description of facility inadequacy provided in <i>Attachment III. D.</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, description of practice inadequacy provided in <i>Attachment III. D.</i>
Treatment	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, description of facility inadequacy provided in <i>Attachment III. D.</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, description of practice inadequacy provided in <i>Attachment III. D.</i>
Disposal	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, description of facility inadequacy provided in <i>Attachment III. D.</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, description of practice inadequacy provided in <i>Attachment III. D.</i>

<p>Household Hazardous Waste Collection</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No, description of facility inadequacy provided in <i>Attachment III. D.</i></p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No, description of practice inadequacy provided in <i>Attachment III. D.</i></p>
<p>Household Hazardous Waste Disposal</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, description of facility inadequacy provided in <i>Attachment III. D.</i></p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, description of practice inadequacy provided in <i>Attachment III. D.</i></p>

III.E. Assessment of Current Source Reduction and Waste Minimization Efforts, Including Sludge, and Efforts to Reuse or Recycle Waste

Assessment of current source reduction and minimization efforts, including activities to reduce sludge, and efforts to reuse or recycle waste is provided as *Attachment III.E.*

III.F. Identification of Additional Opportunities for Source Reduction and Waste Minimization, and Reuse or Recycling of Waste

Table III.F.I Additional Opportunities for Source Reduction and Waste Minimization, Reuse and Recycling of Waste

Category of Activity (Source Reduction and Waste Minimization, Reuse or Recycling of Waste)	Opportunity Name	Brief Description
Source Reduction	Enhanced public information programs	The CTCOG has funded various public information programs in the past, but there continues to be a need to expand public education / public information programs.
Recycling	Encourage greater waste exchanges within the private sector	Businesses and institutions generate waste materials that can often be resources to other businesses. TCEQ maintains a waste exchange program to connect generators and markets. CTCOG can promote greater use of this program. The program is called RENEW - Resource Exchange Network for Eliminating Waste and the link to the program is: https://www.tceq.texas.gov/p2/recycle/renew .
Source Reduction & Recycling	Commercial & Institutional Program	CTCOG can facilitate increased commercial & institutional waste reduction and recycling through collaborative efforts with businesses, local institutions, material markets and local governments.
Recycling	Cooperative tire collection & recycling	Illegally dumped tires are a major concern for local governments in the region. CTCOG can facilitate cooperative efforts for local governments to work together to collect and recycle tires.
Source Reduction & Recycling	Local government program	Local governments in Texas are required to implement in-house recycling programs. CTCOG can assist with these programs

		through training and assisting in the development of cooperative efforts between local governments and local material markets.
Recycling	Increase access to recycling	Currently access to recycling markets in rural parts of the region is limited. Creating more opportunities through recycling centers and residential collection programs can increase recycling. An integral aspect of efforts to increase recycling is to ensure the issue of contamination is addressed.
Recycling / Composting	Increase composting of biosolids and other organics such as commercial food waste	Encourage greater separation of brush and tree waste for mulching / composting. Assist in facilitating increased biosolids composting by connecting generators with processors.
Recycling	Expand market development	One of the major constraints to recycling in the region is the availability of markets for recovered materials. CTCOG can inform the public and commercial sectors of existing markets for materials. Secondly, the CTCOG can assist in facilitating efforts by local economic development agencies to help create new businesses involved in material marketing.
Recycling	Increased access to collect and recycle HHW	CTCOG has in the past provided grant funds to sponsor HHW collection events. Additional funding for additional programs should be identified. The CTCOG can also help coordinate efforts so that HHW collection opportunities are available throughout the region.
Source Reduction & Recycling	Increase funding for programs that target source reduction and recycling	CTCOG, cities and counties can work together to identify additional funding sources for regional source reduction and recycling programs. Sources may include additional grants from foundations, private industry or state and federal agencies.
<input type="checkbox"/> Check box if additional information of opportunities and source reduction and waste minimization, reuse and recycling of waste is provided in <i>Attachment III. F.</i>		

III.G. Recommendations for Encouraging and Achieving a Greater Degree of Source Reduction and Waste Minimization, and Reuse or Recycling of Waste

Table III.G.I. Recommendations for Greater Source Reduction and Waste Minimization, and Reuse or Recycling of Waste

Public education
The CTCOG should utilize its tools of public outreach and grant funding as well as its role as a regional facilitator to close the loop on the circular economy by: (i) encouraging thoughtful management of waste by residents and businesses; (ii) assisting in implementing more efficient collection of recyclables and organics for recovery; and (iii) helping to create new markets for recoverable materials and the creation of markets.
Implement an ongoing education program focused on schools related to waste minimization, reuse, and recycling.
Implement an ongoing education program focused on the residential sector related to waste minimization, reuse and recycling.
Training
Provide training to law enforcement and elected officials related to the reduction of illegal dumping and enforcement of solid waste collection and disposal regulations.
Provide training to elected officials and procurement staff related to Texas requirements for local governments to implement local in-house recycling and procurement policies.
Provide funding assistance for the establishment of increased recycled material collection opportunities for residents.
Regional Facilitator
Facilitate commercial / institutional program to encourage greater solid waste management awareness and opportunities for waste minimization, reuse and recycling.
Facilitate efforts to encourage participation by local economic development agencies to assist in the development of local businesses that create markets for recovered materials.
Facilitate local government efforts to establish inter-local agreements to either build new facilities or adopt cooperative programs to reduce waste and increase recycling.
Market Development
Encourage the development of new markets for recycled materials within the region.
Collection and Processing
Promote inter-local cooperation between cities and counties that leads to efficiency improvements in collection of waste and recyclables and recycled material processing.
Illegal Dumping Enforcement Support

Support efforts by local governments to enforce ordinances to reduce the amount of illegal dumping - while not necessarily reducing the total generation of waste, such efforts will increase the proper disposal of waste in the region.

Check box if additional details are provided in *Attachment III.G.*

III.H. Identification of Public and Private Management Agencies and Responsibilities

- ☒ A list of public and private solid waste management agencies and their responsibilities that affect and impact solid waste management in the planning region is provided as ***Attachment III.H.***

III.I. Identification of Solid Waste Management Concerns and Establishment of Priorities for Addressing Those Concerns

Table III.I.I Solid Waste Management Concerns and Priorities

Waste Management Concern	SWAC Priorities
Reduce Waste	<p>The SWAC has prioritized the reduction of waste going to landfills as its primary goal for the solid waste management plan. In some respects, this priority takes into consideration other priorities including increasing recycling and composting.</p> <p>It is recognized that over two-thirds of the region’s waste stream is generated by businesses and institutions. The CTCOG is developing a commercial program that focuses on waste management opportunities for businesses and institutions.</p> <p>Another priority area for addressing this concern is an intensive public education program – largely focused on the schools.</p>
Reduce illegal tire dumps	<p>Illegally dumped tires present a region-wide problem. These illegal tire dump sites create nuisances and health issues. Each city and county spends a considerable amount of funds collecting scrap tires and properly disposing them.</p> <p>There are five identified major tire dump sites in the region with approximately 31,000 scrap tires stored. These tire dump sites create a significant fire hazard.</p> <p>Options for addressing this issue include continuing to collect scrap tires using city and county crews and/or increasing enforcement of individuals illegally dumping scrap tires through a more aggressive enforcement campaign.</p> <p>A new processor is in the process of securing a TCEQ permit in Moody, Texas. The CTCOG and local governments should work with this processor to accept tires collected by local governments. It is recommended that cities and counties work together to negotiate for cooperative contracts for collection and transport of tires.</p>

<p>Reduce Illegal Dumping</p>	<p>Illegal dumping throughout the region was identified by all SWAC members as a high priority area for the region. This issue affects both urban and rural areas.</p> <p>Greater enforcement of solid waste ordinances was identified as the most significant means of addressing this issue. To achieve this, the SWAC believed that training of local law enforcement and elected officials was a priority for addressing illegal dumping.</p> <p>Another priority for addressing this issue is increasing the availability of legal dumping options, especially in rural areas. This can be accomplished either through an increase in the number of citizen convenience stations or County provided collection services (either using County crews or contracting with the private sector).</p>
<p>Create Markets for Recyclables</p>	<p>One of the key constraining factors for increasing the amounts of materials recycled (including composting) is the availability of markets for materials.</p> <p>The SWAC’s priorities for addressing this issue are focused on connecting waste generators with potential markets for materials – creating waste exchange opportunities; working through local and regional economic development agencies to focus on building new capacity; and adopting local government recycling markets to create a supply of materials.</p>
<p>Increase recycling</p>	<p>The SWAC’s fourth priority is to encourage greater recycling. Again, the focus is on the commercial / institutional programs and public information programs. As markets develop, cities can expand their residential recycling programs.</p>
<p>Assure Disposal Capacity</p>	<p>While there is regional capacity, there is only one landfill serving an area that includes seven counties. A priority of the SWAC is to assure not just available capacity, but also to provide cost-effective disposal as well.</p> <p>The CTCOG has the responsibility to evaluate any future disposal facilities to assure conformance with the regional plan. The CTCOG will continue to undertake reviews of future facilities.</p>
<p>Evaluate & Build Transfer Stations</p>	<p>The Temple Landfill is located in the southern part of the region. Transporting waste from northern and western counties will require long distance hauls, thereby adding to the cost of managing waste. Longer hauls can also result in increased illegal dumping.</p>

	<p>Another transportation issue is the anticipated closure of some of the landfills that are outside the region that accept waste from CTCOG counties. As these facilities reach capacity, waste may have to be transported longer distances.</p>
<p>Increase composting of organics</p>	<p>A significant amount of waste is already being processed for mulch or compost. Composting offers an option to reduce the amounts of waste being disposed - especially biosolids. There are short-term opportunities to increase the amounts of biosolids composted in the CTCOG Region.</p> <p>The CTCOG can assist by encouraging more public / private partnerships and private / private partnerships to increase capacity in the region. Market development of mulch and compost are also priorities. This can be accelerated through public information programs and procurement policies.</p>
<p><input checked="" type="checkbox"/> Check box if additional details are provided in <i>Attachment III.I</i></p>	

III.J. Planning Areas and Agencies with Common Solid Waste Management Concerns that Could be Addressed Through Joint Action

Table III.J.I Planning Areas and Agencies with Common Solid Waste Management Concerns

Solid Waste Management Concern	Names of Planning Areas and Agencies that Could Address the Concern via Joint Action(s)
Reduce Waste	<p>CTCOG can work with cities and counties to develop and implement regional public information programs.</p> <p>CTCOG can provide training to cities and counties regarding in-house waste reduction methods.</p> <p>CTCOG in conjunction with cities and counties can provide public information programs to encourage greater private sector source reduction.</p>
Reduce Illegal Dumping	<p>Cities and counties can work together to provide greater access to citizen convenience stations and drop-off centers through inter-local agreements.</p> <p>Cities and counties can coordinate enforcement policies related to illegal dumping.</p> <p>Cities and counties can establish collective agreements for the collection and disposal of illegally dumped scrap tires.</p>
Increase recycling	<p>CTCOG can work with cities and counties to provide public information programs designed to encourage greater recycling and to reduce contamination levels.</p> <p>Cities and counties can work together to provide greater access to recycling through manned recycling centers.</p> <p>CTCOG, cities and counties can work with the various Keep Texas Beautiful affiliates to utilize CTCOG and cities can utilize KTB resources to encourage greater recycling.</p> <p>CTCOG and area economic development agencies can work together to encourage greater recycling by the commercial and institutional sectors.</p> <p>CTCOG, cities and counties can work with TCEQ to utilize TCEQ resources to promote greater recycling in the region.</p>

<p>Create markets for recyclables</p>	<p>CTCOG, cities and counties can work with economic development agencies to encourage the development of markets for recyclable materials and organic composting.</p> <p>CTCOG, cities and counties can work together to promote greater use of recycled products to create greater markets for recyclable materials.</p> <p>CTCOG, cities and counties can develop model procurement ordinance to encourage the purchase of recycled products.</p>
<p>Assure disposal capacity</p>	<p>CTCOG, cities and counties should continue to monitor TCEQ annual reports on landfill capacity.</p> <p>CTCOG should continue to work with local governments to evaluate any new proposed facilities that can enhance disposal capacity in the region.</p>
<p>Evaluate and build transfer stations</p>	<p>Cities and counties should continue to explore the potential need for future disposal capacity. Cities and counties should work with private solid waste firms to evaluate the potential for public / private partnerships.</p>
<p>Increase composting organics</p>	<p>CTCOG, cities and counties should continue to provide public information for residents and businesses related to organics and composting opportunities and the benefits of using compost.</p> <p>CTCOG, cities and counties should work with local economic development (including local chambers of commerce) agencies to assist in market development of compost and mulch. This effort should also include identifying opportunities to compost commercial food waste and other commercial organics.</p> <p>The Brazos River Authority should continue to provide biosolids composting services to local communities and examines opportunities to expand.</p> <p>Local wastewater treatment agencies should evaluate the opportunities for composting biosolids through public / private partnerships.</p>

III.K. Identification of Incentives and Barriers for Source Reduction and Waste Minimization, and Resource Recovery, Including Identification of Potential Markets

Table III.K.I Incentives and Barriers for Source Reduction and Waste Minimization, and Resource Recovery

Source Reduction and Waste Minimization	
Identify incentives for source reduction and waste minimization.	<p>Resident and business concern for the environment.</p> <p>Reduce disposal costs.</p> <p>Reduce packaging and shipping costs by making products with less waste.</p> <p>Corporate sustainability goals and objectives.</p> <p>Lower collection and disposal costs paid by local governments</p>
Identify barriers to source reduction and waste minimization.	<p>Understanding of how to reduce waste effectively by both residents and businesses.</p> <p>Relatively low tipping fees in the region.</p> <p>Fewer “low-waste” alternatives in rural areas where shopping options are limited.</p>
Resource Recovery	
Identify incentives for resource recovery.	<p>Resident and business concerns for the environment.</p> <p>Sale of recovered materials or energy.</p> <p>Corporate sustainability goals and objectives.</p> <p>Benefits to agriculture and the environment related to the use of compost.</p> <p>Potential financial incentives available for resource recovery projects including the compost rebate program and investment tax incentives for green energy projects are examples.</p> <p>Texas regulations requiring local governments and institutions to adopt in-house recycling practices.</p> <p>Expanding landfill capacity.</p> <p>Corporate sustainability goals and objectives that require in-house recycling programs.</p>
Identify barriers to resource recovery.	<p>Understanding options available for resource recovery as well as the proper way to recycle.</p> <p>Cost of material recovery and low market prices for certain recovered materials. Limited markets in general for certain materials.</p> <p>Lower disposal options for sludge compared to the cost of</p>

	<p>composting.</p> <p>Relatively low MSW tipping fees in the region.</p> <p>Technological maturity - opportunities to adopt new technologies for resource recovery are being developed, but not yet ready for full adoption or are too capital intensive to be cost-effective (examples include MSW anaerobic digestion).</p> <p>Public education programs designed to encourage purchase of recycled or recyclable products.</p> <p>Economic incentives from local economic development agencies.</p> <p>Guarantees for a supply of materials or specific waste streams to a material processor.</p> <p>Procurement policies adopted by local governments and businesses that encourage or mandate the use of recycled products such as office paper and other materials.</p> <p>Locally available permitted capacity to process biosolids to compost.</p>
<p>Potential Markets</p>	
<p>Enter the name of the potential market.</p>	<p>There are limited local markets in the region that can be utilized to market recoverable metals and paper. There are limited markets available for glass and plastics in the region.</p>
<p>Enter the name of the potential market.</p>	<p>Refer to Attachment III-D</p>

III.L. Regional Goals and Objectives, Including Waste Reduction Goals

Table III.L.I Regional Goals and Objectives

<p>Goal 1: Provide effective solutions for the management of scrap or used tires in the CTCOG region through efficient collection, recycling, and proper disposal.</p>	<p>Objective 1A: Establish region-wide collection of scrap or used tires through collection centers and periodic collection throughout the region.</p> <p>Objective 1B: Adopt ordinances requiring proper collection and disposal by tire retailers and auto stores.</p> <p>Objective 1C: Negotiate inter-local agreements for processing scrap or used tires</p> <p>Objective 1D: Establish a central processing facility for scrap or used tires in the region</p> <p>Objective 1E: Align State of Texas and TCEQ mitigation efforts with regional activities</p>
<p>Goal 2: Reduce the amount of litter and illegal dumping taking place in the region and provide for the efficient clean-up of roadsides, waterways and existing illegal dumping sites. Continue to develop strategies through education and enforcement of efforts to reduce litter and illegal dumping through the region. Evaluate opportunities to work cooperatively to achieve the following objectives.</p>	<p>Objective 2A: Make enforcement of illegal dumping ordinances within cities and counties a high priority for code enforcement and take actionable steps to consistently prosecute violators.</p> <p>Objective 2B: Evaluate the feasibility of developing a network of manned citizen convenience stations throughout the region to provide more accessible options for properly disposing municipal solid waste and certain types of problematic household hazardous wastes.</p> <p>Objective 2C: Fund periodic clean-up days for the collection and proper disposal of bulky items.</p> <p>Objective 2D: Evaluate and develop specific strategies for local governments to resolve issues related to the collection and proper disposal of mattresses.</p> <p>Objective 2E: Address the special needs of household hazardous wastes and provide funding to help communities properly collect, process and dispose of this waste stream.</p>

<p>Goal 3: Reduce the amounts of waste generated and encourage greater recycling by residential and commercial sectors This will require greater efforts to educate the public, provide more opportunities to reduce waste generation and materials recycling opportunities. A focus of the program is the private sector which accounts for over 2/3 of the waste generated in the region. The program will also encourage the development of markets through cooperative efforts with local and regional economic development agencies.</p>	<p>Objective 3A: Establish a coordinating committee to address public policy designed to increase commercial/institutional waste reduction/reuse/recycling.</p> <p>Objective 3B: Work with economic development agencies and organizations in the region to develop specific strategies for encouraging the location of businesses that can process and market recyclable materials. Include local institutions of higher learning to assist in identifying market conditions and opportunities for market expansion.</p> <p>Objective 3C: Increase reduction and reuse activities through targeted economic development incentives and business management assistance.</p> <p>Objective 3D: Conduct research and technical studies periodically on waste stream analysis and fund waste management innovation projects (maybe go so far as a “Call for Projects”).</p> <p>Objective 3E: Reduce the amounts of waste generated by educating the public through a schools program targeting school children and various media to focus on residents and business opportunities.</p> <p>Objective 3F: Help local governments establish recycling collection options to residents through technical assistance and funding.</p> <p>Objective 3G: Increase the marketability of materials by educating the public on what materials are acceptable for recycling versus non-recyclable materials that result in contamination of recyclables.</p> <p>Objective 3H: Work with Keep Texas Recycling to develop rural recycling programs.</p>
<p>Goal 4: Assure long-term disposal capacity.</p>	<p>Objective 4A: Monitor capacity at area landfills and landfills located outside the region that are used by public and private sectors. Evaluate TCEQ reports and present annually to SWAC to determine if there is a need for additional landfill capacity to meet needs.</p> <p>Objective 4B: Evaluate the feasibility or need for additional transfer station capacity in the region. Local governments need to work collaboratively to provide efficient transportation of waste and disposal options.</p>

<p>Goal 5: Reduce the amounts of organics and biosolids being disposed in the region.</p>	<p>Objective 5A: Conduct a periodic assessment of brush and compost capacity by feedstocks in the region.</p> <p>Objective 5B: Evaluate the potential of public / private partnerships for delivering biosolids to compost facilities.</p> <p>Objective 5C: Utilize compost in public transportation and parks projects to help build a market for locally produced renewable resource.</p> <p>Objective 5D: Evaluate the potential for utilizing existing facilities such as the Brazos River Authority (Temple-Belton Regional Sewage System Facility).</p> <p>Objective 5E: Evaluate and construct a regional facility focusing on biosolids and commercial organic waste streams.</p>
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III.M. Advantages and Disadvantages of Alternative Actions

<p>Are alternative actions being considered in this plan for the regional area?</p>	<p><input type="checkbox"/> Yes. Provide details in <i>Attachment III.M.</i></p> <p><input checked="" type="checkbox"/> No. No further action required.</p>
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III.N. Recommended Plan of Action and Associated Timetable for Achieving Specific Goals and Objectives

Table III.N.I Plan of Action and Timetable for Achieving Specific Goals and Objectives

Goal 1: Provide effective solutions for the management of scrap or used tires in the CTCOG through efficient collection, recycling, and proper disposal.		
Objective 1A: Establish region-wide collection of scrap or used tires through collection centers and periodic collection throughout the region.	As funds are available, assist in the establishment of regional tire collection centers through grants and other funding mechanisms.	Short / Mid-term
	With participation from cities seek private sector participation in collection centers.	Short / Mid-term
Objective 1B: Adopt ordinances requiring proper collection and disposal by tire retailers and auto stores.	Train public officials and code enforcement regarding existing TCEQ regulations for scrap tire collection, storage, processing and disposal.	Short / Mid-term
	Prepare model local ordinances for cities and counties to adopt related to scrap tire collection, storage, processing and disposal.	Mid-term
Objective 1C: Negotiate inter-local agreements for collection and processing scrap or used tires.	Facilitate a program to establish cooperative programs among local governments for the collection, storage and processing of scrap tires.	Short-term
	Draft model agreements for inter-local agreements between cities and counties that allow for cooperative action.	Short to Mid-term
Objective 1D: Establish a central processing facility for scrap or used tires in the region.	Evaluate the currently planned scrap tire processing facility to be located in Moody, Texas as one potential solution to scrap tire markets in the region. Facilitate a meeting between local governments and Roadrunner Express at a SWAC meeting.	Short-term
	Evaluate the potential of developing regional collection centers for scrap tires.	Mid-term
Objective 1E: Align State of Texas and TCEQ mitigation efforts with regional activities.	Coordinate with TCEQ on prioritizing the clean-up of the major scrap tire dumps in the region. Provide periodic reports to local governments on the progress of clean-up efforts.	Short-term

<p>Goal 2: Reduce the amount of litter and illegal dumping taking place in the region and provide for the efficient clean-up of roadsides, waterways and existing illegal dumping sites. Continue to develop strategies through education and enforcement of efforts to reduce litter and illegal dumping through the region. Evaluate opportunities to work cooperatively to achieve the following objectives.</p>		
<p>Objective 2A: Make enforcement of illegal dumping ordinances within cities and counties a high priority for code enforcement and take actionable steps to consistently prosecute violators.</p>	<p>Provide illegal dumping enforcement training to local code enforcement, law enforcement and elected officials.</p>	<p>Short-term / Mid-term</p>
	<p>Develop public education materials that encourage individuals to report illegal dumps to their local officials.</p>	<p>Short-term / Mid-term</p>
<p>Objective 2B: Evaluate the feasibility of developing a network of manned citizen convenience stations throughout the region to provide more accessible options for properly disposing municipal solid waste and certain types of problematic household hazardous wastes.</p>	<p>Fund feasibility studies and the actual construction of citizen convenience stations through TCEQ grants and other available funding. Local governments will be responsible for maintaining these sites, including hauling and disposing collected waste.</p>	<p>Mid-term</p>
<p>Objective 2C: Fund periodic clean-up days for the collection and proper disposal of bulky items.</p>	<p>Continue to fund periodic clean-up days throughout the region. Encourage bulk waste collection service be part of local government collection contracts.</p>	<p>Short-term / Mid-term</p>
<p>Objective 2D: Evaluate and develop specific strategies for local governments to resolve issues related to the collection and proper disposal of mattresses.</p>	<p>Establish a working group of the SWAC to evaluate specific options for properly collecting, recycling and disposing waste mattresses. Coordinate efforts with other Council of Governments to identify specific actions to resolve this issue.</p>	<p>Short-term</p>
	<p>Assist in the establishment of central collection points for the collection of waste mattresses through feasibility studies and grants.</p>	<p>Short-term / Mid-term</p>

<p>Objective 2E: Address the special needs of household hazardous wastes and provide funding to assist communities properly collect, process and dispose of this waste stream.</p>	<p>Develop regional public information programs to encourage the use of alternatives to HHW materials. Develop a media program for outreach.</p> <p>Fund periodic HHW collection events throughout the region. Facilitate cooperation efforts among local governments to increase accessibility. Expand public outreach efforts in order to expand participation.</p>	<p>Short-term</p> <p>Short-term / Long-term</p>
<p>Goal 3: Reduce the amounts of waste generated and encourage greater recycling by residential and commercial sectors.</p> <p>This will require greater efforts to educate the public, provide more opportunities to reduce waste generation and materials recycling opportunities. A focus of the program is the private sector which accounts for over 2/3 of the waste generated in the region. The program will also encourage the development of markets through cooperative efforts with local and regional economic development agencies.</p>		
<p>Objective 3A: Establish a coordinating committee to address public policy designed to increase commercial / institutional waste reduction / reuse / recycling.</p>	<p>Establish a SWAC committee to assist in gaining cooperation for potential programs and policies that are specifically targeted at the commercial / institutional sector. Fort Hood will be a key stakeholder in this committee.</p> <p>Facilitate a meeting of private sector representatives in the region to discuss opportunities and barriers to recycling in the CTCOG region.</p>	<p>Short-term</p> <p>Short-term / Mid-term</p>
<p>Objective 3B: Work with economic development agencies and organizations in the region to develop specific strategies for encouraging the location of businesses that can process and market recyclable materials.</p>	<p>Facilitate meetings with local economic development agencies to focus on the development of local recycling markets in the region.</p> <p>Develop a resource document for economic development agencies that describes recyclable resources in the CTCOG region. This document would identify specific materials that could be processed in the region.</p>	<p>Mid-term</p> <p>Short-term / Mid-term</p>
<p>Objective 3C: Increase reduction and reuse activities through targeted economic development incentives and business management assistance.</p>	<p>Identify specific policies in other communities that provide economic development incentives for recycling markets. Distribute this information to local economic development agencies and elected officials.</p>	<p>Short-term / Mid-term</p>

<p>Objective 3D: Conduct research periodically on waste stream analysis and fund waste management innovation projects (maybe go so far as a “Call for Projects”).</p>	<p>Fund research that identifies specific waste streams that are unique to the CTCOG region. This would be an item that would be part of the economic development strategy. The information can also be helpful in developing regional approaches to collecting specific streams that would be recycled more cost-effectively through cooperative programs.</p>	<p>Mid-term</p>
<p>Objective 3E: Reduce the amounts of waste generated by educating the public through a schools program targeting school children and various media to focus on residents and business opportunities.</p>	<p>Research existing schools recycling programs already available from group such as Keep Texas Beautiful, TCEQ, EPA and others. Distribute information to schools.</p> <p>Develop a CTCOG specific public education program. Prepare a marketing plan for the materials distribution.</p>	<p>Short-term / Mid-term</p> <p>Mid-term</p>
<p>Objective 3F: Assist local governments establish recycling collection options to residents through technical assistance and funding.</p>	<p>Fund, through TCEQ grants and other sources technical assistance related to recycling in the region.</p> <p>Seek partnerships with environmental groups and the private sector to assist in funding programs.</p>	<p>Mid-term</p> <p>Short-term</p>
<p>Objective 3G: Increase the marketability of materials by educating the public on what materials are acceptable for recycling versus non-recyclable materials that result in contamination of recyclables.</p>	<p>Research existing public information resources and adapt these materials to the CTCOG.</p> <p>Establish a region-wide public information page on the CTCOG web site. This can be linked to local government solid waste program web sites.</p>	<p>Short-term / Mid-term</p> <p>Short-term / Mid-term</p>
<p>Objective 3H: Work with Keep Texas Recycling to develop rural recycling programs.</p>	<p>Coordinate efforts with Keep Texas Recycling, a division of Keep Texas Beautiful. Facilitate meetings with KTR and representatives of rural areas of the CTCOG region to discuss options for enhancing local recycling.</p>	<p>Short-term - Long-term</p>
<p>Goal 4: Assure long-term disposal capacity.</p>		
<p>Objective 4A: Monitor capacity at area landfills and landfills located outside the region that are used</p>	<p>CTCOG will monitor annual landfill capacity reports published by TCEQ to evaluate the current status of capacity.</p>	<p>Short-term - Long-term</p>

<p>by public and private sectors. Evaluate TCEQ reports and present annually to SWAC to determine if there a need for additional landfill capacity to meet needs.</p>	<p>CTCOG will evaluate any permit for a solid waste facility in the region to assure conformance with the regional solid waste management plan.</p>	<p>Short-term - Long-term</p>
<p>Objective 4B: Evaluate the feasibility or need for additional transfer station capacity in the region. Local governments need to work collaboratively to provide efficient transportation of waste and disposal options.</p>	<p>Fund studies to determine if additional transfer stations will be required in the future.</p>	<p>Mid-term / Long-term</p>
<p>Goal 5: Reduce the amounts of organics and biosolids being disposed in the region.</p>		
<p>Objective 5A: Conduct a periodic assessment of brush and compost capacity by feedstocks in the region.</p>	<p>Annually survey local governments in the CTCOG region to identify quantities of wood waste and brush. Distribute this information to regional compost facilities.</p>	<p>Short-term / Mid-term</p>
<p>Objective 5B: Evaluate the potential of public / private partnerships for delivering biosolids to compost facilities.</p>	<p>Facilitate meetings with Brazos Valley River Authority and local to determine feasibility of composting biosolids instead of landfilling the material.</p> <p>Identify compost operations outside the CTCOG region that are authorized to compost biosolids. Facilitate meetings with these operators.</p>	<p>Short-term</p> <p>Short-term / Mid-term</p>
<p>Objective 5C: Utilize compost in public transportation and parks projects to help build a market for locally produced renewable resource.</p>	<p>Encourage the use of compost in public transportation and parks projects as a way of enhancing the markets for compost.</p>	<p>Short-term</p>
<p>Objective 5D: Evaluate the potential for utilizing existing facilities such as the Brazos River Authority facility.</p>	<p>Facilitate meeting with BRA with local governments to determine feasibility of utilizing their facility for biosolids management.</p>	<p>Short-term</p>

<p>Objective 5E: Evaluate and construct a regional facility focusing on biosolids and commercial organic waste streams.</p>	<p>Fund a study that evaluates the potential for composting commercial organic streams in addition to biosolids. Evaluate the potential of collection programs that target food waste generated by agribusinesses and restaurants.</p>	<p>Mid-term</p>

III.O. Identification of the Process that Will be Used to Evaluate Whether a Proposed Municipal Solid Waste Facility Application Will be in Conformance with the Regional Plan

- The process that will be used to evaluate whether a proposed municipal solid waste facility application will be in conformance with the regional plan is identified in ***Attachment III.O.***

Section IV. Required Approvals

Table IV.I Required Approvals

Solid Waste Advisory Committee	October 15, 2021
Public Meeting Dates	October 5, 2021
Executive Committee	October 28, 2021

- Check box if local government and jurisdiction resolutions, and letters of support are included in **Attachment IV.A.**
- Public notice, agenda, public comments, and the transcript of the required public meeting are included as **Attachment IV.B.**

Attachment II-A

Attachment II-A-1

2002-2022 CTCOG Plan Goals & Objectives

Regional Solid Waste Management Plan Priorities

In order to meet the most pressing concerns of the CTCOG region, the Regional Plan Committee has prioritized the goals and objectives listed on page 40. This section outlines those goal and objectives in priority order. Future solid waste grant funding allocations will take into account the goals with the greatest priority.

Priority #1—Goal 1: Promote the proper and safe disposal of household hazardous waste and scrap tires.

Objectives:

1. Encourage the establishment of a permanent regional HHW collection facility
2. Develop and implement on-going public education programs about the importance of properly disposing of HHW and scrap tires
3. Encourage the development of local and/or regional HHW and tire collection events
4. Encourage the establishment of a HHW collection unit with mobile capability within the region

Priority #2—Goal 3: Increase awareness of the harmful effects of illegal dumping and promote proper waste disposal.

Objectives:

1. Establish a long-term public educational campaign about the importance of the proper disposal of waste and scrap tires
2. Support the establishment of citizens' collection stations for rural residents
3. Encourage the use of litter abatement officers to manage illegal dumping
4. Encourage the training and education of peace officers, judges, and prosecutors

Priority #3—Goal 2: Promote recycling and composting programs as viable ways to reduce the waste stream and increase landfill longevity.

Objectives:

1. Develop and implement on-going public education programs about the importance of recycling and composting
2. Develop and implement on-going public education programs about the proper ways to recycle and compost

3. Encourage the expansion of existing recycling and composting facilities
4. Encourage the establishment of new recycling and composting facilities
5. Encourage the expansion and development of curbside recycling

Priority #4—Goal 4: Promote the development of local solid waste management plans.

Objectives:

1. Encourage CTCOG member entities to develop their own local solid waste management plans based on their more immediate local needs.
2. Encourage the use of the CTCOG Solid Waste Regional Plan as a model for the format and content of local solid waste management plans.
3. Encourage member entities to update their local plans on a regular basis. It is suggested that local plans be updated on a schedule similar to the Regional Plan updates.

Attachment II-A2

List of Solid Waste Events Sponsored by CTCOG

FY2018

- City of Gatesville HHW event
- City of Killeen HHW event
- City of Temple HHW event
- Milam County HHW event

FY2019

- City of Gatesville HHW event
- City of Killeen HHW event
- City of Temple HHW event
- City of Copperas Cove HHW event
- City Hamilton HHW event

FY2020

- City of Killeen HHW event
- City of Temple HHW event

FY2021

- City of Gatesville HHW event
- City of Killeen HHW event
- City of Temple HHW event
- Milam County Tire Event
- Bell County Tire Event

Attachment II-A-C

Planned activities for short-term, mid-term and long-term

Attachment II-C

Short-term, Mid-term and Long-term Activities

Short-term Activities

1. As funds are available, assist in the establishment of regional tire collection centers through grants and other funding mechanisms.
2. With participation from cities seek private sector participation in collection centers.
3. Train public officials and code enforcement regarding existing TCEQ regulations for scrap tire collection, storage, processing and disposal.
4. Facilitate a program to establish cooperative programs among local governments for the collection, storage and processing of scrap tires.
5. Draft model agreements for inter-local agreements between cities and counties that allow for cooperative action.
6. Evaluate the currently planned scrap tire processing facility to be located in Moody, Texas as one potential solution to scrap tire markets in the region. Facilitate a meeting between local governments and Roadrunner Express at a SWAC meeting.
7. Coordinate with TCEQ on prioritizing the clean-up of the major scrap tire dumps in the region. Provide periodic reports to local governments on the progress of clean-up efforts.
8. Provide illegal dumping enforcement training to local code enforcement, law enforcement and elected officials.
9. Develop public education materials that encourage individuals to report illegal dumps to their local officials.
10. Continue to fund periodic clean-up days throughout the region. Encourage bulk waste collection service be part of local government collection contracts.
11. Establish a working group of the SWAC to evaluate specific options for properly collecting, recycling and disposing waste mattresses. Coordinate efforts with other Council of Governments to identify specific actions to resolve this issue.
12. Assist in the establishment of central collection points for the collection of waste mattresses through feasibility studies and grants.
13. Develop regional public information programs to encourage the use of alternatives to HHW materials. Develop a media program for outreach.
14. Fund periodic HHW collection events throughout the region. Facilitate cooperation efforts among local governments to increase accessibility. Expand public outreach efforts in order to expand participation.
15. Establish a SWAC committee to assist in gaining cooperation for potential programs and policies that are specifically targeted at the commercial / institutional sector. Fort Hood will be a key stakeholder in this committee.
16. Facilitate a meeting of private sector representatives in the region to discuss opportunities and barriers to recycling in the CTCOG region.
17. Develop a resource document for economic development agencies that describes recyclable resources in the CTCOG region. This document would identify specific materials that could be processed in the region.
18. Continue to fund periodic clean-up days throughout the region. Encourage bulk waste collection service be part of local government collection contracts.

19. Establish a working group of the SWAC to evaluate specific options for properly collecting, recycling and disposing waste mattresses. Coordinate efforts with other Council of Governments to identify specific actions to resolve this issue.
20. Assist in the establishment of central collection points for the collection of waste mattresses through feasibility studies and grants.
21. Develop regional public information programs to encourage the use of alternatives to HHW materials. Develop a media program for outreach.
22. Fund periodic HHW collection events throughout the region. Facilitate cooperation efforts among local governments to increase accessibility. Expand public outreach efforts in order to expand participation.
23. Establish a SWAC committee to assist in gaining cooperation for potential programs and policies that are specifically targeted at the commercial / institutional sector. Fort Hood will be a key stakeholder in this committee.
24. Facilitate a meeting of private sector representatives in the region to discuss opportunities and barriers to recycling in the CTCOG region.
25. Develop a resource document for economic development agencies that describes recyclable resources in the CTCOG region. This document would identify specific materials that could be processed in the region.
26. Identify specific policies in other communities that provide economic development incentives for recycling markets. Distribute this information to local economic development agencies and elected officials.
27. Research existing schools recycling programs already available from groups such as Keep Texas Beautiful, TCEQ, EPA and others. Distribute information to schools.
28. Seek partnerships with environmental groups and the private sector to assist in funding programs.
29. Research existing public information resources and adapt these materials to the CTCOG.
30. Establish a region-wide public information page on the CTCOG web site. This can be linked to local government solid waste program web sites.
31. Coordinate efforts with Keep Texas Recycling, a division of Keep Texas Beautiful. Facilitate meetings with KTR and representatives of rural areas of the CTCOG region to discuss options for enhancing local recycling.
32. CTCOG will monitor annual landfill capacity reports published by TCEQ to evaluate the current status of capacity.
33. CTCOG will evaluate any permit for a solid waste facility in the region to assure conformance with the regional solid waste management plan.
34. Annually survey local governments in the CTCOG region to identify quantities of wood waste and brush. Distribute this information to regional compost facilities.
35. Facilitate meetings with Brazos Valley River Authority and local to determine feasibility of composting biosolids instead of landfilling the material.
36. Encourage the use of compost in public transportation and parks projects as a way of enhancing the markets for compost.
37. Facilitate meeting with BRA with local governments to determine feasibility of utilizing their facility for biosolids management.

Mid-term Activities

1. As funds are available, assist in the establishment of regional tire collection centers through grants and other funding mechanisms.
2. With participation from cities seek private sector participation in collection centers.
3. Train public officials and code enforcement regarding existing TCEQ regulations for scrap tire collection, storage, processing and disposal.
4. Prepare model local ordinances for cities and counties to adopt related to scrap tire collection, storage, processing and disposal.

5. Draft model agreements for inter-local agreements between cities and counties that allow for cooperative action.
6. Evaluate the potential of developing regional collection centers for scrap tires.
7. Provide illegal dumping enforcement training to local code enforcement, law enforcement and elected officials.
8. Develop public education materials that encourage individuals to report illegal dumps to their local officials.
9. Fund feasibility studies and the actual construction of citizen convenience stations through TCEQ grants and other available funding. Local governments will be responsible for maintaining these sites, including hauling and disposing collected waste.
10. Continue to fund periodic clean-up days throughout the region. Encourage bulk waste collection service be part of local government collection contracts.
11. Assist in the establishment of central collection points for the collection of waste mattresses through feasibility studies and grants.
12. Fund periodic HHW collection events throughout the region. Facilitate cooperation efforts among local governments to increase accessibility. Expand public outreach efforts in order to expand participation.
13. Facilitate a meeting of private sector representatives in the region to discuss opportunities and barriers to recycling in the CTCOG region.
14. Facilitate meetings with local economic development agencies to focus on the development of local recycling markets in the region.
15. Develop a resource document for economic development agencies that describes recyclable resources in the CTCOG region. This document would identify specific materials that could be processed in the region.
16. Identify specific policies in other communities that provide economic development incentives for recycling markets. Distribute this information to local economic development agencies and elected officials.
17. Fund research and technical studies that identifies specific waste streams that are unique to the CTCOG region. This would be an item that would be part of the economic development strategy. The information can also be helpful in developing regional approaches to collecting specific streams that would be recycled more cost-effectively through cooperative programs.
18. Research existing schools recycling programs already available from group such as Keep Texas Beautiful, TCEQ, EPA and others. Distribute information to schools.
19. Develop a CTCOG specific public education program. Prepare a marketing plan for the materials distribution.
20. Fund, through TCEQ grants and other sources technical assistance related to recycling in the region.
21. Research existing public information resources and adapt these materials to the CTCOG.
22. Establish a region-wide public information page on the CTCOG web site. This can be linked to local government solid waste program web sites.
23. Coordinate efforts with Keep Texas Recycling, a division of Keep Texas Beautiful. Facilitate meetings with KTR and representatives of rural areas of the CTCOG region to discuss options for enhancing local recycling.
24. CTCOG will monitor annual landfill capacity reports published by TCEQ to evaluate the current status of capacity.
25. CTCOG will evaluate any permit for a solid waste facility in the region to assure conformance with the regional solid waste management plan.
26. Fund studies to determine if additional transfer stations will be required in the future.

27. Annually survey local governments in the CTCOG region to identify quantities of wood waste and brush. Distribute this information to regional compost facilities.
28. Identify compost operations outside the CTCOG region that are authorized to compost biosolids. Facilitate meetings with these operators.
29. Fund a study that evaluates the potential for composting commercial organic streams in addition to biosolids. Evaluate the potential of collection programs that target food waste generated by agribusinesses and restaurants.

Long-term activities

1. Coordinate efforts with Keep Texas Recycling, a division of Keep Texas Beautiful. Facilitate meetings with KTR and representatives of rural areas of the CTCOG region to discuss options for enhancing local recycling.
2. CTCOG will monitor annual landfill capacity reports published by TCEQ to evaluate the current status of capacity.
3. CTCOG will evaluate any permit for a solid waste facility in the region to assure conformance with the regional solid waste management plan.
4. Fund studies to determine if additional transfer stations will be required in the future.

Attachment III-A.I.

Background Data and Waste Generation Forecast

Residential Waste Generation Assumptions and Tables

Table III-A-1 Population Forecast

Year	Bell	Coryell	Hamilton	Lampasas	Milam	Mills	San Saba	Total
2020	370,647	83,093	8,222	21,627	24,754	4,456	5,730	518,529
2021	375,077	83,503	8,212	21,787	24,753	4,450	5,713	523,472
2022	379,563	83,932	8,202	21,929	24,746	4,435	5,703	528,462
2027	402,310	86,038	8,170	22,589	24,556	4,383	5,609	553,476
2032	424,963	88,002	8,134	23,062	24,178	4,300	5,515	577,832
2037	448,176	89,638	8,123	23,285	23,699	4,163	5,306	601,905
2042	471,419	90,859	8,120	23,322	23,132	4,056	5,087	625,353

Tables III-A-2, III-A-3 and III-A-4 present annual waste generation forecasts for residential, commercial & industrial and total waste generation in the region. Table III-A-5 presents cumulative waste generation for the residential, commercial & industrial sectors as well as total cumulative waste generation.

Table III-A-2								
Annual Residential Waste Generation 2021-2042								
Year	Bell	Coryell	Hamilton	Lampasas	Milam	Mills	San Saba	Total
2021	139,220	27,378	4,537	9,236	11,128	2,587	3,044	195,505
2022	140,885	27,519	4,531	9,297	11,125	2,578	3,039	197,369
2023	142,567	27,661	4,531	9,356	11,108	2,576	3,031	199,245
2024	144,253	27,792	4,529	9,415	11,094	2,570	3,021	201,109
2025	145,949	27,929	4,524	9,470	11,078	2,567	3,013	202,986
2026	147,627	28,070	4,523	9,525	11,061	2,558	3,004	204,849
2027	149,328	28,209	4,514	9,576	11,039	2,548	2,989	206,711
2028	151,023	28,343	4,509	9,630	11,007	2,541	2,981	208,566
2029	152,700	28,476	4,506	9,675	10,985	2,531	2,973	210,403
2030	154,364	28,594	4,500	9,715	10,954	2,523	2,967	212,197
2031	156,051	28,726	4,498	9,742	10,914	2,512	2,956	214,007
2032	157,737	28,853	4,494	9,777	10,869	2,499	2,939	215,808
2033	159,441	28,971	4,495	9,796	10,823	2,483	2,920	217,601
2034	161,163	29,087	4,494	9,827	10,783	2,468	2,897	219,421
2035	162,894	29,193	4,489	9,848	10,741	2,453	2,875	221,226
2036	164,628	29,297	4,484	9,861	10,696	2,438	2,846	223,018
2037	166,353	29,389	4,488	9,871	10,654	2,420	2,827	224,798
2038	168,090	29,478	4,486	9,886	10,608	2,407	2,806	226,586
2039	169,822	29,568	4,484	9,894	10,561	2,394	2,787	228,364
2040	171,554	29,640	4,485	9,889	10,507	2,382	2,766	230,106
2041	173,266	29,722	4,484	9,889	10,458	2,367	2,742	231,843
2042	174,980	29,790	4,486	9,887	10,399	2,358	2,711	233,555

Table III-A-3								
Annual Commercial / Industrial Waste Generation 2021-2042								
Year	Bell	Coryell	Hamilton	Lampasas	Milam	Mills	San Saba	Total
2,021	303,751	34,041	6,215	10,610	13,377	3,031	3,884	374,898
2,022	307,384	34,217	6,207	10,679	13,373	3,021	3,877	378,472
2,023	311,053	34,393	6,207	10,747	13,353	3,019	3,867	382,069
2,024	314,731	34,556	6,204	10,815	13,336	3,012	3,853	385,643
2,025	318,431	34,727	6,197	10,878	13,317	3,008	3,843	389,244
2,026	322,093	34,903	6,196	10,942	13,297	2,997	3,833	392,816
2,027	325,805	35,075	6,183	11,001	13,271	2,986	3,813	396,386
2,028	329,502	35,242	6,176	11,062	13,231	2,978	3,802	399,943
2,029	333,162	35,407	6,173	11,114	13,205	2,966	3,793	403,466
2,030	336,792	35,553	6,164	11,160	13,168	2,957	3,785	406,905
2,031	340,473	35,718	6,161	11,191	13,120	2,943	3,771	410,378
2,032	344,150	35,876	6,156	11,231	13,066	2,929	3,749	413,830
2,033	347,869	36,023	6,157	11,254	13,011	2,909	3,725	417,268
2,034	351,625	36,167	6,156	11,289	12,963	2,893	3,696	420,758
2,035	355,403	36,298	6,150	11,313	12,912	2,875	3,668	424,220
2,036	359,186	36,428	6,142	11,328	12,858	2,857	3,631	427,657
2,037	362,949	36,543	6,148	11,340	12,807	2,836	3,607	431,070
2,038	366,739	36,653	6,145	11,356	12,753	2,820	3,580	434,498
2,039	370,518	36,765	6,143	11,366	12,695	2,805	3,555	437,908
2,040	374,296	36,854	6,144	11,360	12,631	2,791	3,528	441,247
2,041	378,031	36,957	6,143	11,360	12,572	2,774	3,498	444,578
2,042	381,772	37,041	6,145	11,358	12,501	2,763	3,458	447,863

Table III-A-4								
Total Annual Waste Generation 2021-2042								
Year	Bell	Coryell	Hamilton	Lampasas	Milam	Mills	San Saba	Total
2021	442,972	61,419	10,752	19,847	24,505	5,618	6,928	570,404
2022	448,270	61,735	10,739	19,976	24,498	5,599	6,915	575,841
2023	453,620	62,054	10,739	20,103	24,460	5,594	6,898	581,313
2024	458,983	62,348	10,733	20,230	24,430	5,582	6,874	586,752
2025	464,380	62,655	10,722	20,348	24,395	5,575	6,856	592,230
2026	469,720	62,973	10,719	20,468	24,359	5,555	6,837	597,666
2027	475,133	63,284	10,697	20,577	24,310	5,533	6,802	603,098
2028	480,525	63,586	10,685	20,692	24,238	5,519	6,783	608,509
2029	485,862	63,884	10,680	20,790	24,190	5,497	6,766	613,869
2030	491,156	64,147	10,664	20,875	24,123	5,480	6,752	619,102
2031	496,525	64,445	10,659	20,933	24,033	5,455	6,726	624,385
2032	501,887	64,729	10,649	21,008	23,936	5,428	6,688	629,637
2033	507,310	64,994	10,652	21,050	23,834	5,392	6,644	634,869
2034	512,787	65,254	10,649	21,116	23,746	5,361	6,592	640,179
2035	518,297	65,491	10,639	21,160	23,652	5,328	6,543	645,446
2036	523,814	65,725	10,626	21,190	23,555	5,295	6,478	650,675
2037	529,302	65,932	10,635	21,211	23,461	5,256	6,434	655,868
2038	534,829	66,131	10,631	21,242	23,361	5,227	6,387	661,084
2039	540,341	66,333	10,627	21,260	23,255	5,199	6,342	666,273
2040	545,850	66,493	10,629	21,249	23,138	5,173	6,294	671,353
2041	551,297	66,679	10,627	21,249	23,030	5,140	6,240	676,421

Table III-A-5			
Cumulative Waste Generation			
Year	Residential	Commercial & Industrial	Total
2,022	197,369	378,472	575,841
2,023	396,614	760,541	1,157,154
2,024	597,722	1,146,184	1,743,906
2,025	800,709	1,535,428	2,336,137
2,026	1,005,558	1,928,244	2,933,802
2,027	1,212,269	2,324,631	3,536,900
2,028	1,420,835	2,724,574	4,145,409
2,029	1,631,238	3,128,040	4,759,278
2,030	1,843,435	3,534,946	5,378,381
2,031	2,057,442	3,945,323	6,002,766
2,032	2,273,250	4,359,153	6,632,403
2,033	2,490,851	4,776,421	7,267,272
2,034	2,710,271	5,197,179	7,907,451
2,035	2,931,497	5,621,399	8,552,897
2,036	3,154,516	6,049,056	9,203,572
2,037	3,379,314	6,480,126	9,859,440
2,038	3,605,900	6,914,624	10,520,525
2,039	3,834,264	7,352,533	11,186,797
2,040	4,064,370	7,793,780	11,858,150
2,041	4,296,213	8,238,358	12,534,571
2,042	4,529,768	8,686,221	13,215,989

Figure III-A1
Sources of Waste by County (2022)

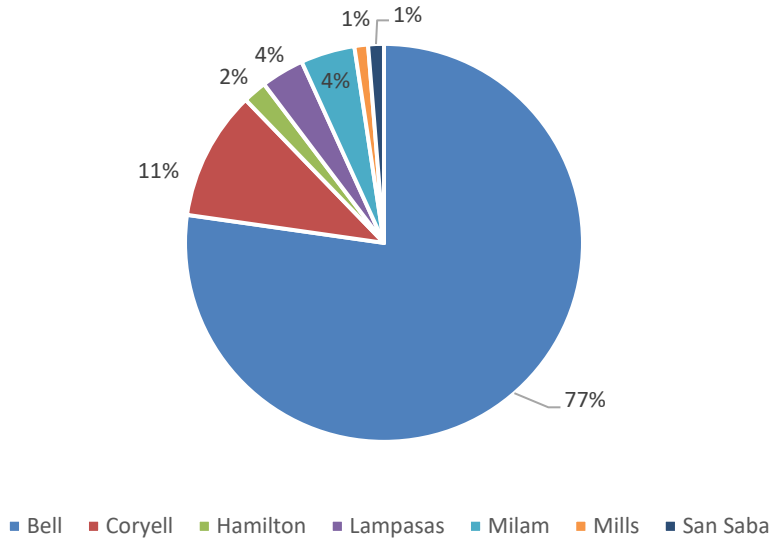
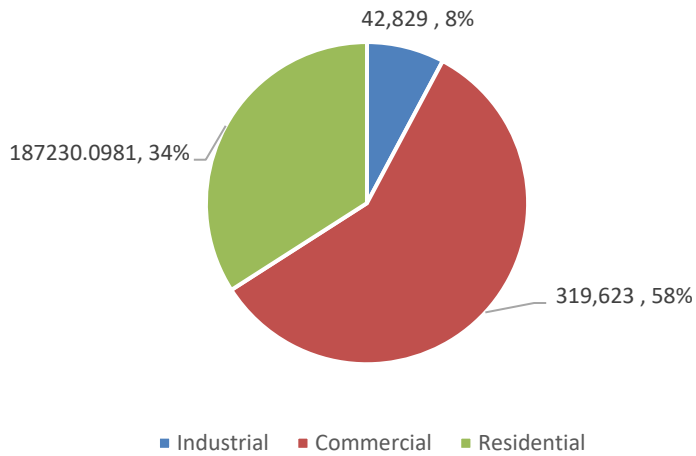
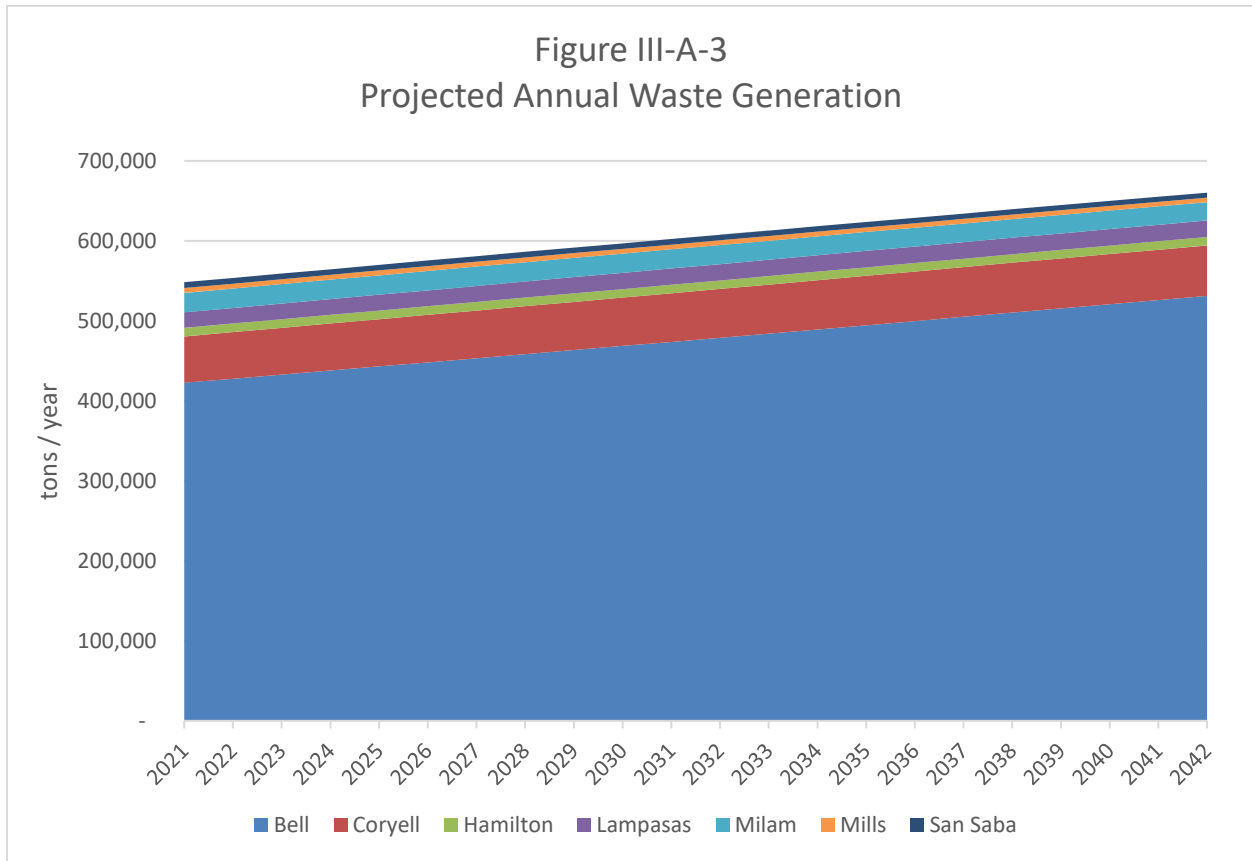


Figure III-A-2
Distribution of Waste by Source in 2022
(Residential, Commercial and Industrial)





Attachment III-C

Planned Activities in the CTCOG Region

As part of the planning process, a survey of communities in the region was undertaken to identify current and planned programs. Table III-C-1 presents some of the results of this survey, specifically what cities and counties plan on doing in the future. For each of the programs, such as modifying collection program and enhancing recycling efforts, cities were asked if they plan to undertake the action in the near-term (0-5 years). A “yes” response indicated that there are definite plans to undertake these projects, while a “maybe” answer indicated an interest, but no definite plans to implement at this time.

Table III-C-1

City/Town/County	Modify collection program	Enhance recycling efforts	Add drop-off centers for MSW	Add recycling centers	Build a transfer station	Build a compost facility	Build a household hazardous waste facility	Build or expand a landfill	Build a material recovery facility
Belton	No	No	No	No	No	No	No	No	No
Copperas Cove	Yes	Yes	Yes	Yes	No	No	No	No	Maybe
Gatesville	No	Yes	No	No	No	No	No	No	No
Coryell County	Yes	Yes	Maybe	Maybe	No	No	No	No	Maybe
Goldthwaite	No	Yes	No	Yes	No	No	No	No	No
Goldthwaite, Tx	Maybe	Yes	Yes	Maybe	Maybe	Maybe	Maybe	Maybe	Maybe
Granger	Maybe	Yes	No	Yes	No	No	No	No	Maybe
Hamilton	Maybe	No	Maybe	No	No	No	No	No	No
Hamilton County	No	No	No	No	No	No	No	No	No
Harker Heights	Maybe	Maybe	No	No	No	No	No	No	No
Harker Heights	Yes	Yes	Yes	Yes	No	No	No	No	No
Hico	No	Maybe	No	No	No	No	No	No	No
Killeen	Yes	Yes	No	No	No	No	No	No	No
Lampasas	No	Maybe	No	Maybe	No	No	No	No	No
Little River-Academy	Maybe	Maybe	Maybe	Maybe	Maybe	Maybe	Maybe	Maybe	Maybe
Morgan's Point Resort	Maybe	Maybe	Maybe	Maybe	No	No	No	No	No
Nolanville	Maybe	Yes	No	No	No	Yes	No	No	Maybe
Oglesby	No	No	No	No	No	No	No	No	No
San Saba	Maybe	Yes	No	No	No	No	No	No	No
Temple	Yes	Yes	No	Yes	Yes	Maybe	No	No	No
Troy	Maybe	Maybe	No	No	No	No	No	No	No

Source: Local Government Survey for CTCOG Regional Solid Waste Management Plan

The military base at Fort Hood represents a major presence in the region. Fort Hood solid waste programs have a significant impact on the amounts of waste that must be collected and disposed. Fort Hood does maintain an active sustainability program, that includes intensive recycling efforts. Table III-C-2 presents the amounts of material recovered through its recycling program in 2020.

Table III-C-2 Fort Hood Recycling Quantities

Solid Waste Category	Solid Waste Type	Tons Recovered
C&D Debris	ABC-Brick	16.25
Metals	Aluminum Cans	10.74
Metals	Brass	92.05
Paper	Cardboard	964.84
Other (non-food)	E-waste: DOL	1,430.89
Bulky Items	Electronics	1,084.02
Textiles	Fabric/Textiles/Rags	0.51
Plastic	HDPE #2	21.70
Other (non-food)	Mixed Recyclables	1,394.97
Metals	Other (metals)	2,288.38
Plastic	Other (plastics)	483.82
Textiles	Other (textiles)	816.19
Plastic	PET #1	20.06
C&D Debris	Recycled C&D	132.34
Metals	Steel	22,207.00
Other (non-food)	Tires	38.07
Total		31,001.83

Source: Fort Hood Comprehensive Report (10/1/2020-9/30/2021)

Attachment III-D

Facility Assessment

III-D.1 Overall Assessment of Facilities

The CTCOG Region has facilities that are permitted to store, process and dispose of municipal solid waste. Facilities in the region include scrap dealers, compost / mulch operations, medical waste transfer station, grease and grit trap waste facility and two landfills. The region has a definite need for recycling facilities such as material recovery facilities to process recovered materials. Figure III-D-1 and Table III-D-1 lists the facilities in the region that are registered with the TCEQ.

Figure III-D-1 Registered and Permitted Solid Waste Facilities

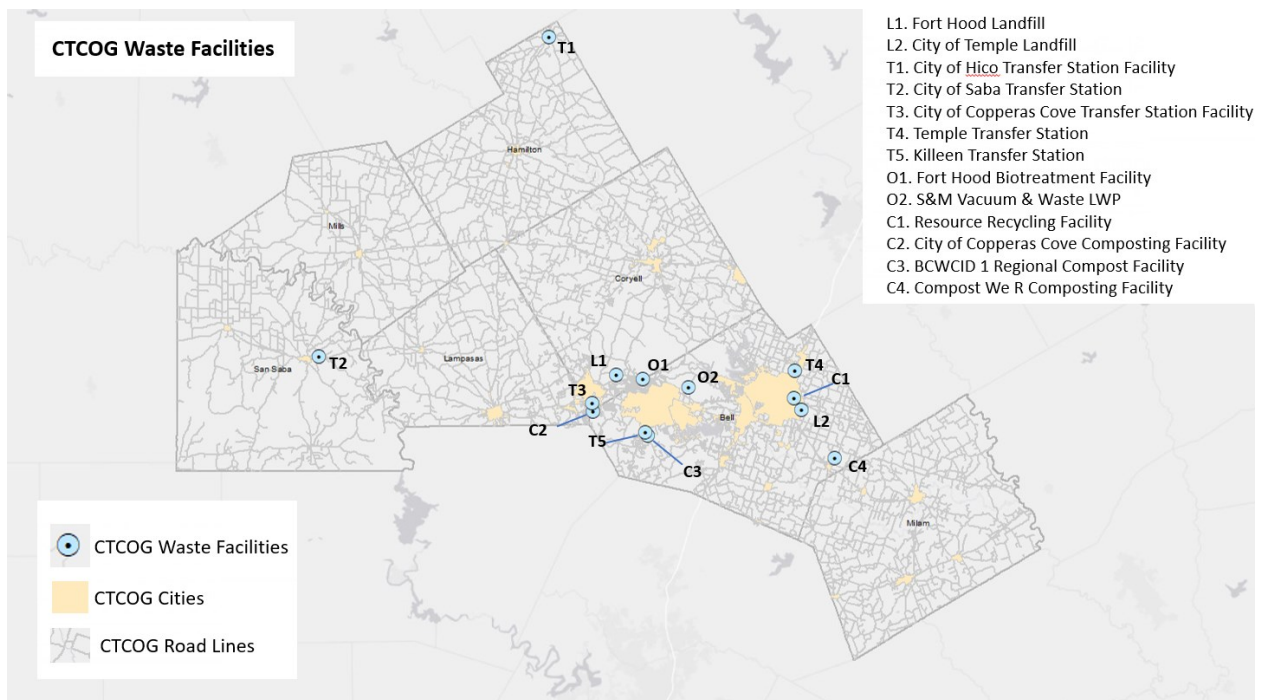


Table III-D-1 Registered and Permitted MSW Facilities in CTCOG Region

Site Name	Facility Type	County	2019 Tons	2020 Tons
City of Temple Landfill	MSW Landfill	Bell	459202	493996
Fort Hood Landfill	MSW Landfill	Coryell	23079	20517
Total Landfill			482281	514513
City of Lampasas Public Works Facility	Citizen Convenience	Lampasas	NA	NA
S&M Vacuum & Waste LWP	Grease & Grit Trap	Bell	4108	3918
Temple Transfer Station	Medical Waste Transfer	Bell	633	596
BCWCID 1 Regional Compost Facility	Mulch / Compost	Bell	7778	10619
Resource Recycling Facility	Mulch / Compost	Bell		
City of Copperas Cove Compost Facility	Mulch / Compost	Coryell	1160	1485
Compost WE R Composting	Mulch / Compost	Milam		
Fort Hood Landfill Compost Operation	Mulch / Compost	Coryell	2383	1984
Temple Landfill Chipping & Grinding	Mulch / Compost	Bell	6176	4466
Total Compost			17497	18554
Killeen Transfer Station	Transfer Station	Bell	113780	113678
City of Copperas Cove Transfer Station	Transfer Station	Coryell	26854	29526
Fort Hood Biotreatment Facility Transfer Station	Transfer Station	Coryell	555	306
City of Hico Transfer Station	Transfer Station	Hamilton	134	73
City of San Saba Transfer Station	Transfer Station	San Saba	3747	3972
Total Transfer Station			145070	147555
Source: TCEQ MSW Facilities (8/27/2021)				

The following section provides a detailed description of facility adequacy in the CTCOG Region. The section highlights available facilities for resource recovery, storage, transportation, treatment, disposal and household hazardous waste (HHW) collection and disposal. This assessment provides the basis for the determinations of facility and practice adequacy defined in Section III.D. The following present brief summary comments for each the facilities identified in Section III.D.

Resource Recovery: Facility Adequacy (no) / Practice Adequacy (no). There are no material recovery facilities in the region and only a few communities have residential recovery programs in place.

Storage: Facility Adequacy (no) / Practice Adequacy (no). There are citizen collection stations and drop-off centers located in cities in the region, however, there is a lack of citizen collection stations in areas where they are needed, specifically rural areas of the region.

Transportation: Facility Adequacy (no) / Practice (yes). There are five transfer stations operating in the region. In urban areas where a majority of the waste is generated, haul distances are manageable. However, for some of the counties outside of major metropolitan areas, waste has to be hauled very long distances.

Treatment: Facility Adequacy (yes) / Practice (yes). There are several composting, medical waste and tire collection facilities located throughout the region. Additional tire markets will help reduce the amount of illegally dumped tires.

Disposal: Facility Adequacy (yes) / Practice (yes). The City of Temple Landfill has over 56 years of capacity and the Fort Hood Landfill has 36 years of remaining capacity at anticipated waste generation rates.

HHW collection: Facility Adequacy (no) / Practices (no). There is a continuous need for HHW collection events in the region. Even with annual grants for HHW events, the demand for these events is greater than funds available.

HHW disposal: Facility Adequacy (yes) / Program Adequacy (yes). Local governments are able to contract for management of HHW once collected.

III-D.2 Material Processing and Recycling Facilities

The region currently has minimal material processing capacity for recyclable materials. Members of the Solid Waste Advisory Committee (SWAC) have identified a lack of markets as a major constraint to increased recycling in the CTCOG Region. The limited number of recycling facilities limits access for local governments and businesses wishing to recycle. This limited number also means that for local governments in the region, materials have to be transported long distances, thereby increasing the cost of recycling.

Company	Materials	City
EcoATM	Electronics	Temple, Belton, Killeen, Harker Heights
A+ Pallet Company	Pallets & Skids	Temple
First Shred	Paper	Temple
R&R Recycling	Metals	Temple
Holland Scrap & Recycling	Metals	Little River Academy, Holland
DC Metal Recycling	Metals	Killeen
Centroplex Recycling Center	Metals	Killeen
CenTex Scrap & Metal	Metals	Killeen
Shred Nation	Paper	Killeen

The lack of markets presents a “chicken and egg” situation in the Region. Greater demand for recycling services would encourage investments in facilities to process materials. The availability of accessible markets would make it more cost-effective for local governments and businesses to adopt recycling programs. As mentioned earlier, there are a number of cities and counties in the region that are anticipating changes to their recycling program in future years. Any program modification should take into account available markets for materials collected.

In addition to recycling facilities that are required to register with the TCEQ, there are private businesses that offer recycling opportunities, including scrap paper, electronics, and metals. Table III-D-3 presents a list of companies offering recycling services. This list was derived through an on-line search of business involved in recycling. No follow-up contacts were made with these firms to identify quantities or specific types of materials accepted. There are no businesses registered with TCEQ to provide recycling services in the CTCOG region - specifically material recovery facilities.

Table III-D-2 Recycling Companies

III-D.3 Composting

There are six registered compost / mulch facilities located in the CTCOG region. Four of these facilities are required to report tonnages to the TCEQ and in 2020, they reported a total of 18,554 tons of material processed. Only the BCWCID1 Regional Compost Facility processes biosolids.

A review of landfill data illustrates that these operations are having an impact on disposal quantities. These facilities are having an impact on the quantities of brush and wood waste landfilled. For 2020, neither the Temple or Fort Hood Landfills reported disposal of any brush or wood waste. These materials are processed at both landfills as is shown in the table below.

However, approximately 13,400 tons of biosolids are being disposed at the Temple Landfill. There are opportunities to process this material at the existing BCWICD facility, or for existing compost facilities to expand their operations to include this material.

Table III-D-3 Registered or Permitted Compost Facilities

Facility	County	2020 Tons
BCWCID 1 Regional Compost Facility	Bell	10,619
Resource Recycling Facility	Bell	
City of Copperas Cove Compost Facility	Coryell	1,485
Compost WE R Composting	Milam	
Fort Hood Compost Operation	Coryell	1,984
Temple Landfill Chipping & Grinding	Bell	4,466
Total Compost		18,554

III.D.4 Citizen Convenience Stations

The primary means of waste storage in the region is the use of citizen convenience stations. These facilities are designed to allow for collection of waste and temporary storage in areas that do not have access to regular curbside collection of waste. These facilities cannot accept waste from commercial businesses or institutions.

One of the primary solid waste management issues confronting the region is illegal dumping. The addition of citizen convenience stations throughout the region could help alleviate this problem.

The City of Lampasas has the only registered citizen convenience station in the region.

Some of the cities in the region do sponsor citizen drop-off centers. These facilities are designed to serve much the same service as citizen convenience stations. Residents can bring waste and certain special wastes to these facilities. The following cities provide residential drop-off centers / recycling services through recycling centers.

- Belton
- Copperas Cove
- Gatesville
- Hamilton

Harker Heights
 Killeen
 Lampasas
 Nolanville
 Rockdale
 San Saba
 Temple

III.D.5 Medical Waste Facilities

According to landfill records, the Temple Landfill accepted 1649 tons of medical waste. The only registered medical waste facility in the region is Stericycle Temple Medical Waste Transfer Station. This medical waste transfer station processed 596 tons of medical waste in 2020.

III.D.6 Scrap Tires

There are six unauthorized tire storage sites located in the region. There are over 31,000 illegally dumped tires at these sites according to TCEQ. The table below identifies the sites and the quantity of tires stored.

Table III-D-4 TCEQ Identified Tire Dumps in CTCOG Region

Site	City	Number of Tires
Jenna Moore	Killeen	550
Rutherford/Bendure	Moody	2,000
Bell County PID	Temple	2,000
18699 SH 36, Dan Smith/ Laura Marrs	Moody	5,000
Bell County PID 124690	Temple	7,500
Deguire Auto Salvage Yard	Temple	14,000
Total		31,050

According to TCEQ records, there are a total of 233 registered tire generators in the region.

A tire generator If you register with the TCEQ as a scrap tire generator, you may store up to:

- 500 used or scrap tires (or weight equivalent tire pieces, or combination of whole tires and pieces) on the ground; or
- 2,000 tires (or weight equivalent tire pieces, or combination of whole tires and pieces) in enclosed and lockable trailers or other containers.

There are no registered scrap tire storage sites in the region.

There are three registered scrap tire transporters in the region. **Transporters collect and transport used or scrap tires or tire pieces for storage, processing, recycling, or energy recovery. All transporters, with a few exceptions, must register with the TCEQ.**

The following requirements apply to transporters of used or scrap tires or tire pieces:

- Obtain a registration from the TCEQ before collecting tires.
- Haul used or scrap tires to an authorized facility such as a permitted landfill or a registered scrap-tire facility.
- Submit an annual report to the TCEQ detailing the number and type of tires collected from each generator and the number delivered to each authorized facility.
- Maintain records using a manifest system and notify the generator of any changes to a manifest.

- Operate your vehicles, including trailers, safely and mark them on both sides and the rear using numbers and letters at least two inches tall, identifying the name and location of the business and the TCEQ registration number.

The Table below lists pending or recently approved applications for tire storage or processing facilities in Texas. Tire processes are required to register with the TCEQ if the scrap tire facility operations include energy recovery, thermal decomposition, recycling or processing. Processing includes activities such as cutting, grinding, shredding, baling, crushing, splitting and recapping or retreading. The Table below lists scrap tire processing registrations that are under review by TCEQ. The Roadrunner Express processing registration is pending as of September 2021.

Table III-D-5- Pending Scrap Tire Processors (September 2021)

Regulated Entity Name	Customer Name	Facility Address	Registration Type	Distance from Temple
EE-TDF Cleveland LLC	EE-TDF Cleveland LLC	1400 S Travis Street Cleveland, TX 77327	Scrap Tire Storage and Scrap Tire Facility	162
Nortex Tire Recyclers	Nortex Tire Recyclers LLC	252 County Road 4774, Boyd, TX 76023-5236	Processor	152
Reed Scrap Metal	Reed Scrap Metal, LLC	6300 Farm Road 1870 Sulphur Springs, TX 75482	Processor	207
Roadmasters IG	Roadmasters IG, LLC	7262 Doniphan Dr. Canutillo, Texas 79835	Storage Facility Renewal	512
Roadrunner Express, LLC	Roadrunner Express, LLC	14650 Dove Rd. Moody, TX 76557	Processor	18
USAR LLC	USAR LLC	6800 IH-45 South Wilmer, TX 75172	Processor	122

Source: TCEQ

III.D.7 Grease and Grit Trap Facilities

There are two grease and grit trap processing facilities in the region. These include two facilities owned and operated by Edwards Construction Company. Some compost facilities are also authorized to process this waste material.

III.D.8 Used Oil

A review of TCEQ records identifies approximately 300 used oil collection and recycling entities in the region.

Table III-D-6 – Used Oil Collection and Recycling Registrations in CTCOG

Regulated Entity Name	County	Location
A&A TRANSMISSION	BELL	801 W VETERANS MEMORIAL BLVD KILLEEN TX 76541 6822
ADVANCE AUTO PARTS 4983	BELL	3915 E STAN SCHLUETER LOOP KILLEEN TX 76542 4656

ADVANCE AUTO PARTS 5562	BELL	3010 S 31ST ST TEMPLE TX 76502 1802
ADVANCE AUTO PARTS 5562	BELL	3817 S 31ST ST TEMPLE TX 76502 3333
ADVANCE AUTO PARTS 5752	BELL	111 S 31ST ST TEMPLE TX 76504 4040
ADVANCE AUTO PARTS 5828	BELL	1600 S FORT HOOD ST KILLEEN TX 76542 1672
ADVANCE AUTO PARTS 6036	BELL	2114 E RANCIER AVE KILLEEN TX 76541 3743
ADVANCE AUTO PARTS 6457	BELL	465 E CENTRAL TEXAS EXPY HARKER HEIGHTS TX 76548 1962
ADVANCE AUTO PARTS KILLEEN 2	BELL	2102 S W S YOUNG DR KILLEEN TX 76543 5364
ALL TUNE & LUBE	BELL	1704 CARROLLTON AVE KILLEEN TX 76541 9052
ALL TUNE AND LUBE	BELL	2326 S 57TH ST TEMPLE TX 76504 6958
AUTOZONE 1306	BELL	1001 S 31ST ST TEMPLE TX 76504 5212
AUTOZONE 1318	BELL	502 E VETERANS MEMORIAL BLVD KILLEEN TX 76541 7206
AUTOZONE 1566	BELL	801 E CENTRAL AVE BELTON TX 76513 3222
AUTOZONE 3064	BELL	725 INDIAN TRL HARKER HEIGHTS TX 76548 2153
AUTOZONE 3964	BELL	4605 LITTLEROCK DR KILLEEN TX 76549 4005
AUTOZONE 5140	BELL	3901 CLEAR CREEK RD KILLEEN TX 76549 5651
AUTOZONE 5760	BELL	103 E RANCIER AVE KILLEEN TX 76541 3422
AUTOZONE 6184	BELL	4524 S W S YOUNG DR KILLEEN TX 76542 5886
AUTOZONE 6851	BELL	6040 W ADAMS AVE TEMPLE TX 76502 6088
BIG CHIEF DISTRIBUTING	BELL	209 N 2ND ST KILLEEN TX 76540
CENTEX WASTE MANAGEMENT MCGREGOR FACILITY	BELL	2201 W AVENUE D TEMPLE TX 76504 3952
CHIEF AUTO PARTS 12449	BELL	1002 N 38TH ST KILLEEN TX 76543 3751
CHIEF AUTO PARTS 23000	BELL	1214 W AVENUE H TEMPLE TX 76504 5343
CHIEF AUTO PARTS 30070	BELL	1001 WILLOW SPRINGS RD STE 2 KILLEEN TX 76549 8043
CITY OF BELTON	BELL	1001 W AVENUE D BELTON TX 76513 3706

CITY OF KILLEEN FLEET SERVICES	BELL	2003 LITTLE NOLAN RD KILLEEN TX 76542 2812
CITY OF KILLEEN TRANSFER STATION	BELL	12200 STATE HWY 195 KILLEEN TX 76542
CITY OF NOLANVILLE	BELL	100 N MAIN ST NOLANVILLE TX 76559 4597
CITY OF TEMPLE GARAGE	BELL	620 S 31ST ST TEMPLE TX 76504 5217
CONVENIENT OIL CHANGE	BELL	4302 TEAL DR KILLEEN TX 76542 3702
EAST ADAMS TIRE	BELL	903 E ADAMS AVE TEMPLE TX 76501 4538
FORT HOOD US ARMY	BELL	BLDG 1348 FT HOOD ARMY BASE FORT HOOD TX 76544 CORRECT MAILING ADDRESS PER MR. GARY TOOKE 4/16/2002 HQ III CORPS FORT HOOD; ATTN AFZF PW ENV; BLDG 1348 37TH ST & NORTH AVE BLDG 1348 FT HOOD ARMY BASE, FORT HOOD, TX, 76544
GUNSMOKE MOTORS LITTLE RIVER	BELL	202 S HIGHWAY 95 LITTLE RIVER ACADEMY TX 76554 2525
INDEPENDENT RECYCLING SERVICE	BELL	1112 W AVENUE G LITTLE RIVER TX 76554
J&B OIL EXCHANGE	BELL	1711 HOLLAND RD BELTON TX 76513 4427
JIFFY LUBE 3418	BELL	524 PAN AMERICAN DR HARKER HEIGHTS TX 76548 1983
JIFFY LUBE 3419	BELL	3801 W STAN SCHLUETER LOOP KILLEEN TX 76549 5396
JIFFY LUBE 3420	BELL	402 N 3RD ST TEMPLE TX 76501 3163
JIFFY LUBE 3421	BELL	4233 S 31ST ST TEMPLE TX 76502 3353
JOHNSON OIL TEMPLE	BELL	2702 E ADAMS AVE TEMPLE TX 76501 4664
KILLEEN MUNICIPAL AIRPORT	BELL	1505 STONETREE DR KILLEEN TX 76543 5524
KILLEEN RECYCLING CENTER	BELL	111 E AVENUE F KILLEEN TX 76541 6158
KWIK KAR AND SVC	BELL	4105 CLEAR CREEK RD KILLEEN TX 76549 4125
KWIK KAR LUBE AND OIL	BELL	2010 E CENTRAL TEXAS EXPY KILLEEN TX 76541 9160
KWIK KAR OIL & LUBE	BELL	3609 S 31ST ST TEMPLE TX 76502 1925
KWIK LUBE AND SERVICES	BELL	3902 E STAN SCHLUETER LOOP BLDG A KILLEEN TX 76542 8402

LACE ENTERPRISES	BELL	5508 S GENERAL BRUCE DR TEMPLE TX 76502 4823
MARKET PLACE SHOPPING CENTER	BELL	3170 S 31ST ST TEMPLE TX 76502 1803
MCLANE SOUTHWEST	BELL	2828 INDUSTRIAL BLVD TEMPLE TX 76504 1000
MINIT MAN OIL CHANGE	BELL	1702 N MAIN ST BELTON TX 76513 1911
OREILLY AUTO PARTS 1911	BELL	1005 N GRAY ST KILLEEN TX 76541 3418
OREILLY AUTO PARTS 1939	BELL	4802 JUDSON AVE KILLEEN TX 76549 4989
OREILLY AUTO PARTS 482	BELL	1720 SW H K DODGEN LOOP TEMPLE TX 76504 7106
OREILLY AUTO PARTS 483	BELL	1703 E CENTRAL TEXAS EXPY KILLEEN TX 76541 9144
OREILLY AUTO PARTS 4900	BELL	204 S 31ST ST TEMPLE TX 76504 4071
OREILLY AUTO PARTS 5572	BELL	525 E KNIGHTS WAY HARKER HEIGHTS TX 76548 5623
OREILLY AUTO PARTS 695	BELL	607 E CENTRAL AVE BELTON TX 76513 3245
OREILLY AUTO PARTS 714	BELL	4500 E VETERANS MEMORIAL BLVD KILLEEN TX 76543 5401
OREILLY AUTO PARTS KILLEEN TX 5	BELL	2200 E STAN SCHLUETER LOOP KILLEEN TX 76542 6650
OREILLY AUTOMOTIVE PARTS 4027	BELL	10108 CHINA SPRING RD WACO TX 76708 6141
PATRIOT FORD & BUICK	BELL	4600 E CENTRAL TEXAS EXPY KILLEEN TX 76543 5290
PENDLETON AGRI SERVICE	BELL	9840 FM 1237 SPUR PENDLETON TX 76564
PEP BOYS 1731	BELL	2002 E CENTRAL EXPY STE D KILLEEN TX 76541
PEP BOYS 1781	BELL	1925 SW H K DODGEN LOOP TEMPLE TX 76502 1814
QUAL-I-TECH	BELL	2532 FALLS RD BURLINGTON TX 76519 3300
RING POWER	BELL	649 N POINT DR TEMPLE TX 76501 6906
ROCKEYS VAN LINES	BELL	2305 S FORT HOOD ST KILLEEN TX 76542 2316
SAMS CLUB 6245	BELL	600 W CENTRAL TEXAS EXPY HARKER HEIGHTS TX 76548 1677
SAMS CLUB 6336	BELL	1414 MARLANDWOOD RD TEMPLE TX 76502 3309
SOUTHSIDE FINA	BELL	1104 S FORT HOOD ST KILLEEN TX 76541 7452

STERICYCLE TEMPLE	BELL	7445 PEGASUS DR TEMPLE TX 76501 6673
STEVEN COOLEY DBA MINIT MAN OIL OF	BELL	3007 E RANCIER AVE KILLEEN TX 76543 7716
TEMPLE FOOD MART	BELL	1304 S 31ST ST TEMPLE TX 76504 6753
TEMPLE FUELING FACILITY	BELL	2100 BAKER BLVD TEMPLE TX 76501 1365
TEMPLE GRINDING	BELL	2408 WILSON PL TEMPLE TX 76504 5131
TEMPLE IRON & METAL	BELL	815 N KATY ST TEMPLE TX 76501 2664
TEMPLE RECYCLING AND DISPOSAL FACILITY	BELL	706 LANDFILL RD TEMPLE TX 76501 8429
TEMPLE RECYCLING CENTER LANDFILL	BELL	3015 MAMA DOG LN TEMPLE TX 76501
THE OIL EXCHANGE	BELL	2207 S 57TH ST TEMPLE TX 76504 6947
THE OIL EXCHANGE	BELL	2212 S 57TH ST TEMPLE TX 76504 6959
TRACTOR SUPPLY 2387	BELL	620 W HWY 190 SERVICE RD BELTON TX 76513
TRACTOR SUPPLY 279	BELL	2320 SE H K DODGEN LOOP TEMPLE TX 76502
TRACTOR SUPPLY 279 TEMPLE	BELL	23208 SE H K DODGEN LOOP TEMPLE TX 76504 8637
TRACTOR SUPPLY 521 KILLEEN	BELL	2002 E CENTRAL TEXAS EXPY KILLEEN TX 76541 9106
TRANUM BUICK	BELL	5620 S GENERAL BRUCE DR TEMPLE TX 76502 5822
WAL-MART 1232	BELL	2180 N MAIN ST BELTON TX 76513 1919
WAL-MART 407	BELL	2202 E CENTRAL TEXAS EXPY KILLEEN TX 76543 5315
WAL-MART STORE 331900	BELL	2020 HEIGHTS DR HARKER HEIGHTS TX 76548 2000
WAL-MART SUPERCENTER 1232	BELL	2604 N MAIN ST BELTON TX 76513 1545
WAL-MART SUPERCENTER 407	BELL	1400 LOWES BLVD KILLEEN TX 76542 5201
WAL-MART SUPERCENTER 746	BELL	3401 S 31ST ST TEMPLE TX 76502 1902
WALMART 6286	BELL	3404 W STAN SCHLUETER LOOP KILLEEN TX 76549 4705
WALMART SUPERCENTER 6929	BELL	6801 W ADAMS AVE TEMPLE TX 76502 0005
ADVANCE AUTO PARTS 6917	CORYELL	102 E BUSINESS 190 COPPERAS COVE TX 76522 2938
AUTOZONE 0574	CORYELL	2106 E MAIN ST GATESVILLE TX 76528 1728

AUTOZONE 1486	CORYELL	101 W BUSINESS 190 COPPERAS COVE TX 76522 2856
CARVER AUTO SUPPLY	CORYELL	502 E LEON ST GATESVILLE TX 76528 2034
DAVIDSON AUTO PARTS	CORYELL	1811 E MAIN ST GATESVILLE TX 76528 1640
ALVAREZ TUNE & LUBE	CORYELL	2010 E MAIN ST GATESVILLE TX 76528 1726
HARRINGTONS TEXACO & GROCERY	CORYELL	695 E US HIGHWAY 84 EVANT TX 76525 6831
KWIK KAR LUBE & TUNE	CORYELL	1214 E BUSINESS 190 COPPERAS COVE TX 76522 2258
OREILLY AUTO PARTS 558	CORYELL	1537 E BUSINESS 190 COPPERAS COVE TX 76522 2343
OREILLY AUTO PARTS 687	CORYELL	2001 E MAIN ST GATESVILLE TX 76528 1725
SOLID WASTE RECYCLING CENTER	CORYELL	2605 S FM 116 COPPERAS COVE TX 76522 4250
TDCJ HILLTOP UNIT	CORYELL	1500 STATE SCHOOL RD GATESVILLE TX 76598 0003
WAL-MART 381	CORYELL	2706 E BUSINESS 190 COPPERAS COVE TX 76522 2562
WAL-MART SUPERCENTER 381	CORYELL	2720 E BUSINESS 190 COPPERAS COVE TX 76522 2584
WAL-MART SUPERCENTER 476	CORYELL	2805 S HIGHWAY 36 GATESVILLE TX 76528 2738
CITY OF HICO	HAMILTON	300 UTILITY ST HICO TX 76457 1401
HAMILTON COUNTY COURTHOUSE	HAMILTON	801 W CREWS ST HAMILTON TX 76531 2040
HAMILTON RECYCLING CENTER	HAMILTON	1108 S RICE ST HAMILTON TX 76531 9600
AGRO TECH SERVICE	LAMPASAS	1752 N US HIGHWAY 281 LAMPASAS TX 76550 1183
AUTOZONE 3534	LAMPASAS	104 CENTRAL TEXAS EXPY LAMPASAS TX 76550
LAMPASAS COUNTY PRECINCT 1	LAMPASAS	11877 HWY 190 E KEMPNER TX 76550
LAMPASAS COUNTY PRECINCT 2	LAMPASAS	Hwy 580 and 53 (Old) 1403 (New)
LAMPASAS COUNTY PRECINCT 3	LAMPASAS	101 W LAMPASAS ST LOMETA TX 76550
LAMPASAS COUNTY PRECINCT 4	LAMPASAS	County Rd 3720 and FM 582
OREILLY AUTO PARTS 1941	LAMPASAS	1306 S KEY AVE LAMPASAS TX 76550 3514
PARTS HAUS	LAMPASAS	509 S KEY AVE LAMPASAS TX 76550 3147
TRACTOR SUPPLY 1467	LAMPASAS	469 CENTRAL TEXAS EXPY LAMPASAS TX 76550 3749

WAL-MART 1073	LAMPASAS	1710 CENTRAL TEXAS EXPY LAMPASAS TX 76550 3786
WAL-MART 1073	LAMPASAS	409 PLUM ST LAMPASAS TX 76550 3361
BARRINGTONS	MILAM	1104 W CAMERON ROCKDALE TX 76567
CAMERON TIRE STORE	MILAM	1407 N TRAVIS AVE CAMERON TX 76520 1645
CITY OF ROCKDALE	MILAM	301 MILL STREET ROCKDALE TX 76567
MILAM COUNTY PRECINCT 2	MILAM	3106 N TRAVIS AVE CAMERON TX 76520 1219
MILANO WATER SUPPLY	MILAM	212 N FM 3242 MILANO TX 76556 2800
OREILLY AUTO PARTS 604	MILAM	1004 W CAMERON AVE ROCKDALE TX 76567 2718
OREILLY AUTO PARTS 607	MILAM	1308 N TRAVIS AVE CAMERON TX 76520 1642
TRACTOR SUPPLY 1977	MILAM	1500 W CAMERON AVE STE C ROCKDALE TX 76567 2675
WAL-MART 280	MILAM	HWY 79 W ROCKDALE TX 76567
BROOKS AUTO PARTS	MILLS	920 FISHER ST GOLDTHWAITE TX 76844 2160
GOLDTHWAITE WIND ENERGY OPERATIONS AND MAINTENANCE FACILITY	MILLS	418 FM 572 E GOLDTHWAITE TX 76844 2167
MOORES SERVICE CENTER	MILLS	HWY 84 W STAR TX 76880
SAN SABA CITY-COUNTY AIPORT	SAN SABA	500 E WALLACE ST SAN SABA TX 76877 3608
SAN SABA COUNTY PRECINCT 3 COUNTY BARN	SAN SABA	S HIGHWAY 501 AND HIGHWAY 16 CHEROKEE TX 76832
TRACTOR SUPPLY 2172	SAN SABA	152 FM 1030 SAN SABA TX 76877 7249

III.D.9 Transfer Stations

Transfer Stations located in the CTCOG Region are presented in Table III-D-7.

Table III-D-7 CTCOG Transfer Stations

Transfer Station	County	Tons/Year 2020
Copperas Cove Transfer Station	Bell	26,854
Fort Hood Biotreatment TS	Coryell	368
Hico Transfer Station	Hamilton	134

Killeen Transfer Station	Bell	113,980
San Saba Transfer Station	San Saba	3,747
Source: TCEQ Annual MSW Report		

The City of Temple Landfill is located in Bell County in the southeastern portion of the CTCOG region. It is the location where most of the waste generated in the CTCOG region is disposed. Fort Hood’s Landfill is used for waste generated within the boundaries of Fort Hood. As stated earlier, waste is also being hauled out of the region. Table III-D-8 in Attachment III-D provides a summary of the distances from various communities in the CTCOG region to area landfills.

The need for additional transfer station capacity in the CTCOG will depend on the following factors.

- Distance to disposal site. Generally, transfer stations are not economically feasible, unless haul distances are approximately 25 miles for urban areas and approximately 30 miles for rural areas. It should be noted that waste is hauled to several other landfills outside the region. In some cases, this is due to the proximity of these facilities in comparison to the four landfills located in the region.
- The amount of waste generated in a specific waste shed. There are definite economies of scale associated with transfer stations. Capital costs on a per ton basis are less for larger facilities.
- The desire to secure flow control over a jurisdictions waste stream. Local jurisdictions can adopt ordinances or franchise fees requiring all waste generated in a jurisdiction be direct to a city-owned facility. This provides a degree of control over the waste stream that may be necessary when evaluating other types of waste facilities.

One of the advantages of a transfer station or citizen convenience station is the ability to provide additional waste management services, such as disposal options for tires, HHW, recyclables and other materials.

Table III-D-8 – One-way distance from City to Landfills (miles)

	Tons/Year	REM years	Counties (mi)					
			Bell	Coryell	Hamilton	Lampasas	Milam	San Saba
Temple Recycling and Disposal	459,202	62	20	51	80	71	38	100
Turkey Creek	589,717	7	120	110	93	120	130	140
CSC Disposal	15	100	110	105	110	135	120	155
Skyline Landfill	1,408,513	24	140	141	135	161	150	185
City of Waco	285,247	5	44	44	70	75	65	105
Lacy Lakeview	89,213	5	56	61	90	100	66	120

III.D.10 Landfills

There are two Type 1 - MSW Landfills located in the region: City of Temple Landfill and Fort Hood Landfill. There are no Type 4 - construction / demolition landfills in the region. The Temple Landfill has 56 years of remaining capacity; the Fort Hood Landfill has 35 years of remaining capacity at current rates of disposal.

In 2020, these facilities disposed of approximately 513,400 tons of MSW.

As mentioned, the region also relies on other landfills outside the CTCOG Region. An evaluation of TCEQ Annual reports identifies that the following landfills have accepted waste originating from counties outside the region. These facilities include: City of Waco Landfill; Lacy-Lakeview Landfill and Turkey Creek Landfill.

Attachment III-E - Assessment of Current Source Reduction and Waste Minimization Efforts, Including Sludge, and Efforts to Reuse or Recycle Waste

Attachment III-C provides a summary of local government programs, including source reduction and recycling efforts. Attachment II-A provides a summary of grants that the CTCOG has provided in past years. These two attachments describe what local governments are currently doing and what the CTCOG has done in the past to encourage greater recycling in the region.

Current Residential Programs

In summary, the larger communities in the CTCOG region do provide residential curbside collection of materials. Cities identified as having curbside collection include:

Based on a review of city programs, it is estimated that approximately 10% of the total residential stream in the CTCOG is recovered. This is equivalent to approximately 35,000 tons per year. This includes materials that are collected from residential curbside programs and brush, wood waste recovered and processed for reuse and materials recycled from recycling drop-off centers, including, Goldthwaite, Temple, Harker Heights and Copperas Cove have indicated they plan to add recycling centers to their recycling program. Cities considering recycling centers include Morgan's Point Resort, Little River-Academy and Lampasas; Coryell County is also considering a recycling center. These recycling centers provide opportunities for residents of multi-family households to participate in recycling. There are also opportunities for recycling at citizen convenience stations.

Three cities in the region have separate brush and wood waste collection programs. The materials collected are ground into mulch or used to produce compost.

Potential Collection Changes

Several cities are planning to enhance their recycling programs in the next five years according to the local government survey. These communities include the following.

Planning to modify recycling program	Possibly modifying recycling program	
San Saba	Morgan's Point Resort	
Granger	Troy	
Nolanville	Harker Heights	Hico
Gatesville	Academy	
Goldthwaite	Lampasas	
Temple		
Gatesville, TX/Coryell County?		
Harker Heights		
Killeen		
Copperas Cove		

Residential Challenges

Factors that are affecting wider participation in residential recycling programs include the following.

- The cost of implementing a residential recycling program in a small community.
- The distance that materials have to be transported to get to market.
- Lower market value for several commodities.
- Lack of broad community support for recycling programs.

Residential Opportunities

Local governments in the region can expand the level of residential recycling programs through the following methods.

- Increase the level of public education regarding opportunities to recycle.
- Expand the number of cities that are participating in residential curbside collection programs. This can be achieved through inter-local agreements that expand service territories for services. Specifically, a city providing residential collection service can provide similar services to a neighboring city for a reasonable fee.
- Identify and implement cooperative recycling efforts between Fort Hood and surrounding communities. This can include cooperative material processing, cooperative brush and mulch composting and management of household hazardous wastes.
- Expand markets for materials, thereby making recycling more cost-effective.
- Increase the number of manned drop-off sites and recycling centers.
- Adopt ordinances regarding the quality of material recycled. High levels of contamination will reduce the value of recycled materials and can reduce the potential to recover materials if recycling loads are rejected due to contamination levels. This should be preceded by an aggressive public education program.
- Increase the number of cities that separate brush and wood waste as part of their collection programs.
- Expand HHW collection opportunities throughout the entire region.

Commercial & Institutional Recycling

There are a number of businesses in the region that have on-going recycling programs. These programs, which include the recovery of OCC (old corrugated containers) have been in existence for a considerable number of years. In recent years, major corporations have adopted sustainability programs that apply to all operations. These sustainability programs include efforts to reduce waste and increase recycling.

Fort Hood has an extensive waste reduction, recycling and composting program. According to their annual report, Fort Hood recovered 31,000 tons of waste in the reporting year 2020/2021.

There are also a number of businesses in the region that are focused on either processing or selling recycled materials. Refer to Attachment III-D for a listing of companies involved in recycling.

Commercial Constraints

Factors that impact the commercial recycling rate include the following.

- Lack of markets for materials.
- Knowledge of potential recycling opportunities in the region.
- Lack of interest in developing waste management programs.

- Cost of implementing and maintaining programs.
- Relatively low landfill disposal tipping fees.

New Opportunities for Commercial Scale Recycling

There are relative unique opportunities for expanding recycling activities in the region. The New Hope Energy facility is one of a very few facilities in the US that are designed to recover plastic material and create recycled oils and gases through pyrolysis. The facility is looking to expand its operations in the near future. Because there is limited market for many of the plastic resins that they can process, there is the potential for significant economic benefits to the region if this business is successful.

Regional compost companies are considering opportunities to expand operations into biosolids and food wastes.

It should be noted that some of the major employers in the region are institutions, including colleges, universities, hospitals, schools and criminal justice facilities. A program focused on demonstrating successful institutional recycling should be included in any commercial / institutional program.

Attachment III-H

Agencies Responsible for Solid Waste Management

The following tables present agencies that are responsible for solid waste management in the CTCOG Region. Management of MSW requires a cooperative effort on the part of local, regional and state agencies. Management of waste also requires partnerships with a number of private entities that have already been defined in this Plan. Table III-H provides a summary of responsibilities for the agencies described below.

Jurisdiction	Responsibilities
Cities and counties	Cities and counties have a responsibility to assure proper collection and disposal of waste in their jurisdictions. This is achieved either through city/county managed collection programs; contracts with private entities; or through local ordinances.
Other Public Entities <ul style="list-style-type: none"> • Fort Hood • Brazos River Authority 	<p>Fort Hood is responsible for managing MSW generated by the base, including residential, commercial and institutional sources. Fort Hood is also responsible for facilities that recovery materials and management of its landfill.</p> <p>Brazos River Authority is responsible for water and wastewater treatment. One of its activities is to compost sludge generated from its operations. The compost facility keeps waste from going to the landfill.</p>
Private Entities <ul style="list-style-type: none"> • Waste Management • Waste Connections • Republic • Other private haulers 	Private entities provide solid waste collection services to residential and commercial customers in the region. The private sector also manages the City of Temple’s landfill.
Keep Texas Beautiful Affiliates	KTB affiliates in the region sponsor programs to educate the public and sponsor various recycling programs.
TCEQ	The TCEQ has the responsibility for managing the planning program. TCEQ is also responsible for inspecting permitted solid waste facilities; assuring local compliance with TCEQ rules and regulations related to solid waste management. TCEQ also manages the state MSW grant program.

Cities and Counties

Region/County/City
CTCOG Region
County
Bell County
Bartlett
Belton
Fort Hood CDP
Harker Heights
Holland
Killeen
Liver River-Academy
Morgan's Point Resort
Nolanville
Rogers
Salado
Temple
Troy
Coryell County
Copperas Cove
Evant
Gatesville
Oglesby
South Mountain
Hamilton County
Hamilton
Hico
Lampasas County
Kempner
Lampasas
Lometa
Milam County
Buckholts
Cameron
Milano
Rockdale
Thorndale
Mills County
Goldthwaite
Mullin
San Saba County
Richland Springs
San Saba
<i>Source: CTCOG</i>

Other Public Entities

- Fort Hood

- Brazos River Authority

Private Entities

- Waste Management
- Waste Connections
- Republic
- Other private haulers

Keep Texas Beautiful Affiliates

San Saba	Lometa
Copperas Cove	Rockdale
Gatesville	Salado
Hamilton	San Saba
Killeen	Temple

State Agency

Texas Commission on Environmental Quality

Attachment III-I

Concerns & Priorities

Results of Local Government Survey - Short-term and Long-term Solid Waste Management Concerns. Survey conducted in April - June 2020. Twenty-one cities/counties responded to the survey. The table below identifies key issues from a range of 1-5, with 5 being the highest level of concern.

Issue	Short-term	Long-term
Cost of service	2.24	3.35
Landfill capacity	3.21	3.38
Storm events	2.62	2.75
Recycling markets	3.14	3.43
Contamination of recycled materials	3.52	2.90
Transportation costs	2.76	3.29
Illegal dumping	2.95	3.77
Open burning / backyard disposal	2.43	2.52
Tires	4.10	NA
Landfill ownership	3.16	2.43

Short-term and long-term concerns

Attachment III-O

Review Process for Evaluation of Solid Waste Facility Compliance with the Regional Plan

The review process for determining if a solid waste management facility is in compliance with the regional plan is described below.

- 1) Prior to submitting an application for a solid waste management facility that requires CTCOG review and approval, the applicant must submit a copy of the application to the CTCOG. The application must be submitted no later than 30 days prior to submittal to the TCEQ.
- 2) The application is forwarded to the members of the CTCOG Solid Waste Advisory Committee for their review. Members that have a potential conflict of interest with respect to the application will recuse themselves from the review process. The SWAC may request an interview with the applicant to address potential questions or raise issues related to the application.
- 3) The SWAC will provide comments on the application and vote to determine if the application is in compliance with the regional plan. CTCOG staff will record the vote and if it determined that the application is in compliance with the regional plan, the CTCOG executive director will provide a letter to the TCEQ Executive Director outlining the SWAC's findings.
- 4) If the SWAC determines that the application is not in compliance with the regional plan, the CTCOG executive director will prepare a letter to the applicant stating the SWAC's findings. The applicant will have an opportunity to address any issues identified by the SWAC as issues of nonconformance. The applicant then may resubmit the application for a second review by the SWAC.
- 5) After a second review, the SWAC may either find the application in conformance or that the application still does not conform to the regional plan. The applicant is then afforded one final opportunity for revisions and review.

Attachment IV-B

Public Meeting Supporting Documentation

See following pages for public meeting documentation including the public notice, sign-in sheet, and public comment sheet.



RESOLUTION APPROVING THE CTCOG REGIONAL SOLID WASTE MANAGEMENT PLAN (RSWMP) FOR SUBMITTAL TO TCEQ

Resolution 10-21-PRS05

WHEREAS, the Governor of Texas has designated the Central Texas Council of Governments areas as State Planning Region #23, and

WHEREAS, the Central Texas Council of Governments is organized in accordance with Section 391 of the Local Government Code and encompasses the region of Bell, Coryell, Hamilton, Lampasas, Milam, Mills, and San Saba counties, and

WHEREAS, the Texas Health and Safety Code (THSC), Chapter 363, Subchapter D of and 30 Texas Administrative Code (TAC) Chapter 330, Subchapter O require that each planning region develop a Regional Solid Waste Management Plan (RSWMP) conforming to the state solid waste management plan, and

WHEREAS, the current 20-year Regional Solid Waste Management Plan was approved in 2002 and is set to expire in 2022, and

WHEREAS, the Central Texas Council of Governments has developed a new 20-year Plan according to the requirements listed in THSC, Chapter 363, Subchapter D, 30 TAC 330 Subchapter O, and CTCOG's solid waste planning contract with the Texas Commission on Environmental Quality (TCEQ), and

WHEREAS, the Solid Waste Advisory Committee approved the RSWMP for submittal to TCEQ at their October 14, 2021 meeting.

NOW, THEREFORE, BE IT RESOLVED that the **CTCOG REGIONAL SOLID WASTE MANAGEMENT PLAN** for calendar years 2022-2042 has been approved by the Executive Committee for submission to TCEQ.

PASSED AND APPROVED this 28th Day of October, 2021 by the Central Texas Council of Governments Executive Committee.

DocuSigned by:

Daren Moore

Commissioner Daren Moore, 1st Vice-President

DocuSigned by:

Jose Segarra

Mayer Jose Segarra, Secretary/Treasurer



CTCOG ● P.O. Box 729 ● Belton, TX 76513

Central Texas Council of Governments
Public Comment Period
Electronic Meeting

Please join my meeting from your computer, tablet or smartphone.
<https://global.gotomeeting.com/join/494584325>

You can also dial in using your phone.
United States: [+1 \(872\) 240-3212](tel:+18722403212)
Access Code: 494-584-325

Regarding:

2022-2042 Regional Solid Waste Management Plan

Public Comment Period October 5 – October 12, 2021

Public Hearing
Tuesday, October 5, 2021

12:00 pm
CTCOG Offices
2180 N. Main Street
Belton, TX 76513

For online access information, visit
<https://ctcog.org/regional-planning/solid-waste/>

Name	Organization	E-mail or Telephone
1. Judge Ed Smith	Mills County	
2. Bill Parry	City of Fratesville	
3. Michael Carlton	AEB	
4. Kendra Conful	CTCOG	
5. Hope Geiger	CTCOG	
6. James McGill	CTCOG	
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CTCOG RSWMP Public Comments

Date	Name	Means of Public Comment	Public Comment	Jurisdiction
9/30/2021	Marcie Seele	Email	The City of Belton does not have drop off centers for recycling or solid waste. We offer an every other month bulk drop off event that was also worked out with our commercial garbage collection contract like the HHW at your door collection.	Belton
9/30/2021	Johnny Wagner	In Person	Hamilton County does not offer curbside recycling services.	Hamilton County
10/4/2021	Bill Parry	Email	Requested the source for population growth projections, stated that Gatesville does not offer residential curbside recycling services, and made other comments on minor errors.	Fort Hood
10/6/2021	Timi Dutchuk	Email	Recommended using the term "used tires" or "scrap tires" instead of "waste tires" to align with TCEQ verbage. Made other comments regarding minor errors in the draft document.	Fort Hood