



South Plains Association of Governments

Regional Solid Waste Management Plan

Volume I

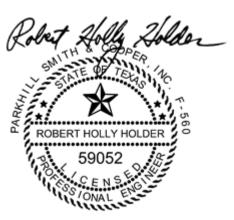
2022 - 2042 PLANNING PERIOD

DECEMBER 2021 | PARKHILL PROJECT #01801820

BAILEY	LAMB	HALE	FLOYD	MOTLEY	
COCHRAN	HOCKLEY	LUBBOCK	CROSBY	DICKENS	KING
YOAKUM	TERRY	LYNN	GARZA		



South Plains Association of Governments



12/14/2021

Regional Solid Waste Management Plan

Volume I

2022 - 2042 PLANNING PERIOD

DECEMBER 2021 | PARKHILL PROJECT #01801820



ADOPTION RESOLUTION

Regional Solid Waste Management Plan Volume I

Regional Organization Information

Table 1. Organization Information

Name of Council of Government	South Plains Association
Mailing Address	P.O. Box 3730 Freedom Station Lubbock, TX 79452
Website	www.spag.org
Phone Number	(806) 762-8721
Email Address	regional@spag.org

Section I. Geographic Scope

Table I.I. Geographic Scope

Names of Member Counties in the Entire Planning Region	Bailey, Cochran, Crosby, Dickens, Floyd, Garza. Hale, Hockley, King, Lamb, Lubbock, Lynn, Motley, Terry, Yoakum
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Section II. Plan Content

II.A. Regional Goals and Objectives

Table II.A. Regional Goals and Objectives

	Objective 1.A. Increase diversion rate at landfills and look for local partners and ways to reuse or process waste locally.
Goal #1 Achieve a 5% reduction of solid waste entering landfills by 2027 and a reduction to 10% by 2032.	Objective 1.B. Incentivize and coordinate with contractors and new development within the region to push for construction and demolition (C&D) waste reduction, increased material reuse, or use of salvaged material.
	Objective 1.C Encourage composting, chipping, and/or grinding of yard waste for reuse as mulch and fertilizer.
	Objective 2.A. Partner municipalities with local commercial electronic vendors to develop joint regional E-Waste disposal and recycling plan.
Goal #2 Develop a regional plan to properly dispose of E-Waste from households and private businesses.	Objective 2.B. Educate citizens on the hazards of disposing of electronics in their local dumpsters or collection stations.
	Objective 2.C Provide permanent containers designated for E-Waste collection within cities or increase number of community collection days in the region that accept E-Waste.
Goal #3 Encourage proper disposal of household hazardous waste (HHW) and other hazardous waste.	Objective 3.A. Educate citizens on the potential hazards of disposing household hazardous waste and prescription drugs in their local dumpsters or collection stations. Spread awareness on what HHW is and where citizens can properly dispose.
	Objective 3.B. Provide permanent containers designated for HHW collection within cities or increase number of community collection days in the region that accept HHW.
	Objective 3.C. Hold annual collection days or community clean-up events in regional communities.

Goal #4 Decrease illegal dumping to include improperly disposed tires within the region.	Objective 4.A. Develop scrap tire ordinances for municipalities or region to aid in incentivizing proper scrap tire disposal.
	Objective 4.B. Develop additional scrap tire processing facilities in the region capable of recycling for material reuse. Region currently has only one processing facility.
	Objective 4.C Educate citizens on the proper collection areas within or near local municipalities.
	Objective 4.D. Partner with local law enforcement and encourage enforcement for illegal dumping.
Goal #5 Assist joint education efforts on waste reduction and reuse, and	Objective 5.A. Encourage citizens to prioritize reuse and reduce.
proper disposal methods.	Objective 5.B. Coordinate with municipalities to provide literature, informational webinars, and brochures/inserts to directly reach citizens for recycling education.
	Objective 5.C Partner with local ISDs to perform educational projects within K-12 schools, utilize higher education facilities to attract speakers, utilize student volunteers for clean-up efforts or educating the community, and bring awareness to methods of waste reduction.

II.B. Efforts to Minimize, Reuse, and Recycle Waste

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

Subject	Description
Current Efforts to Minimize Municipal Solid Waste and to Reuse or Recycle Waste	Based on surveyed municipalities and private haulers very few methods for waste reduction and recycling were indicated. There has been no organized effort to reduce waste and sludge or increase recycling within the SPAG region in recent years. Economically, the region does not have the means to collect and transport recycled materials rather than dispose of at local landfills. There are no private or public facilities to implement full scale recycling.
Recycling Rate Goal for the Region	The region established a goal to increase recycling by 5% by year 2027 and a goal to 10% by year 2032. The goal was established based on previous plan goals and a review on current recycling operations. Current recycling rate is only 4.5%.
Recommendations for Encouraging and Achieving a Greater Degree of Waste Minimization and Waste Reuse or Recycling	Municipalities to partner with local education systems to increase awareness and further education on reuse and recycling. Provide additional drop off facilities and/or increase drop off days to collect material. Develop a region wide materials recovery facility. Develop additional tire processing facilities within the region. Seek partnerships or new ventures for waste energy plants to develop within the region.
Existing or Proposed Community Programs for the Collection of Household Hazardous Waste	Surveyed municipalities and institutions within the region did not indicate ongoing programs for household hazardous waste (HHW). Periodically cities operate special collection/drop off days for residents and some larger municipalities will accept HHW at permanent drop off facilities. The region plans to increase collection days for HHW pickup and increase the availability for the region's landfills to accept and process HHW. The region plans to develop additional permanent HHW collection facilities through the long-range period.

Composting Programs for Yard Waste	The recommended composting programs for yard waste and related organic wastes may include:
	oxtimes (I) creation and use of community composting centers;
	⊠ (II) adoption of the "Don't Bag It" program for lawn clippings developed by the Texas Agricultural Extension Service; and
	⊠ (III) development and promotion of education programs on home composting, community composting, and the separation of yard waste for use as mulch.
	The region intends to increase composting amounts during the short-range planning period and continue the efforts through the long-range planning period. The region plans to accomplish this with educational items and informational material sent to residents to promote home composting, don't bag it lawn care procedures, and increase mulching and chipping at landfills.
Public Education/Outreach	Provide educational flyers in utility bills and add information to city websites promoting waste reduction, reuse, and recycling during the short-term planning period. Print, web, radio, or TV advertisement to educate on proper disposal efforts for common HHW and E-Waste during the intermediate planning period. Partner with green organizations to bring public speakers to public school systems in the intermediate planning period.

II.C. Commitment Regarding the Management of MSW Facilities

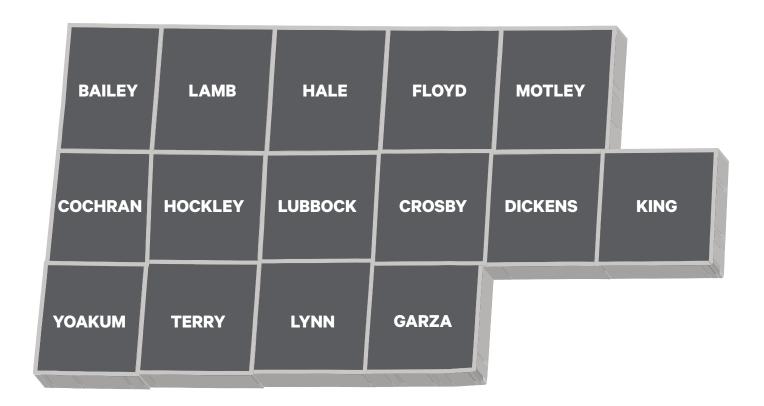
By checking the boxes below, the Council of Government makes a commitment to the following, regarding the management of MSW facilities:

- \boxtimes (i) encouraging cooperative efforts between local governments in the siting of landfills for the disposal of solid waste;
- \boxtimes (ii) assessing the need for new waste disposal capacity;
- ⊠ (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;
- \boxtimes (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;
- \boxtimes (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
- ⊠ (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	7/15/2021
Public Meeting Dates	3/25/2021, 8/9/2021, 11/8/2021
Executive Committee	11/09/2021





South Plains Association of Governments

Regional Solid Waste Management Plan

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ADOPTION RESOLUTION

SOUTH PLAINS ASSOCIATION OF GOVERNMENTS

RESOLUTION

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE SOUTH PLAINS ASSOCIATION OF GOVERNMENTS (SPAG), AUTHORIZING THE SUBMISSION OF A REGIONAL SOLID WASTE PLAN UPDATE TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ); AND AUTHORIZING THE SPAG EXECUTIVE DIRECTOR TO ACT AS SPAG'S EXECUTIVE OFFICER AND AUTHORIZED REPRESENTATIVE IN ALL MATTERS PERTAINING TO THIS RESOLUTION

WHEREAS, the Board of Directors of the South Plains Association of Governments desires to develop a viable Solid Waste Management Plan to guide solid waste activities within the SPAG region; and

WHEREAS, an amendment to the Regional Solid Waste Management Plan has been approved; and

WHEREAS, It is necessary and in the best interests of SPAG to submit the updated Regional Solid Waste Management Plan;

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE SOUTH PLAINS ASSOCIATION OF GOVERNMENTS:

- 1. That the Regional Solid Waste Management Plan and updated information is hereby authorized to be submitted on behalf of SPAG with the Texas Commission on Environmental Quality.
- 2. That the SPAG Board of Directors directs and designates the SPAG Executive Director as the SPAG Board of Directors Chief Executive Officer and Authorized Representative to act in all matters in connection with this submission and SPAG's participation in the Regional Solid Waste Management Plan.

Passed and approved this 9th day of November , 2021.

ohn Baker, President

Attest:

Tim Pierce

Executive Director



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TRANSCRIPT



EXECUTIVE SUMMARY

In accordance with Texas Health and Safety Code 363, Subchapter D and Texas Administrative Code Chapter 330, Subchapter O, the enclosed report serves as the South Plains Association of Governments' (SPAG) Regional Solid Waste Management Plan. The original plan, adopted by the SPAG Board of Directors in August 1992, has been updated and amended periodically since its inception. This plan is an update to the previously approved plan from July 2003.

This plan update details the region's current and planned municipal solid waste (MSW) management procedures, objectives and goals, recommendations, and strategies for achieving goals through the planning period of years 2022 to 2042. The plan update follows TCEQ guidance using the Regional Solid Waste Management Plan Volume I and Volume II forms, revised September 22, 2020, and the plan is divided into four sections;

Geographic Scope,
Planning Periods,
Plan Content,
and Required Approvals.

To aid in gaining accurate and current data for use in this plan, an MSW survey was prepared and submitted to all public and private solid waste generators, collection organizations, and landfills within the SPAG region. The survey aimed to gather MSW operations and practices, waste hauler and landfill information, and recycling and scrap operations data. Additional plan data and information were obtained through various sources, which included TCEQ's Municipal Solid Waste in Texas: A Year in Review 2019, Data Summary and Analysis, and recent TCEQ annual solid waste reports.

Following the receipt of MSW surveys and data collection, a SPAG Solid Waste Advisory Committee (SWAC) was formed to discuss the region's results, review plan drafts and revisions, and approve plan for distribution. The dates of SWAC Meetings during plan development were: December 2, 2019, October 5, 2020, February 11, 2021, February 25, 2021, April 7, 2021, June 10, 2021 and July 15, 2021. Notices for public hearings were sent out on March 11, 2021, and October 18, 2021. Three public hearings were conducted on March 25, 2021, August 9, 2021, and November 8, 2021, to present the plan to the general public and solicit any comments for inclusion in the report. The plan was formally adopted by the SPAG Board of Directors on November 9, 2021.

Through plan development and review, the SWAC and the SPAG board developed a series of regional goals and objectives to present within the plan. Regional goals and objectives will be periodically evaluated for effectiveness and suitability over the planning periods. The following statements are the regions objectives for the full planning period between years 2022 and 2042.

Achieve a 5% reduction of solid waste entering landfills by 2027 and a 10% reduction by 2032.
Develop a regional plan to properly dispose of E-Waste from households and private businesses.
Encourage proper disposal of household hazardous waste (HHW) and other hazardous waste.
Decrease illegal dumping to include improperly disposed tires within the region.
Assist joint education efforts on waste reduction and reuse, and proper disposal methods.

Volume I Section I outlines the geographic scope of the region, Section II details the regions goals, waste minimization and recycling efforts, and the commitment to the management of MSW facilities, and Section III demonstrates the plan's approval. Volume II Sections I and II of the plan outline the geographic scope of the region and establish the short, intermediate, and long-range planning period for the full plan between 2022 to 2042. Section III outlines various subsections detailing the status and adequacy of waste management activities as well as recommendations, incentives, and barriers to achieving waste minimization, and reuse, recycling, and resource recovery. Section IV demonstrates the plan's approval by the general public, SWAC, and the executive SPAG board.



ACKNOWLEDGEMENTS

This Regional Solid Waste Management Plan was funded through grant money provided by the Texas Commission on Environmental Quality (TCEQ), from distribution through the South Plains Association of Governments (SPAG).

Parkhill was chosen to develop this plan on behalf of the SPAG. Parkhill would like to acknowledge and thank all participating parties involved in the planning and development of this regional solid waste management plan. The following is a list of key organizations and participants involved in the development of this plan.

South Plains Association of Governments

Tim C. Pierce, Executive Director Kelly Davila, Director of Regional Service Chelsey Baldivia, Solid Waste Coordinator

Parkhill

Robert H. (Holly) Holder, PE Tyler S. Krueger, PE Nash Crawley, EIT

Solid Waste Advisory Council

Ramon Sanchez, Chairman, City of Muleshoe Joe Cavazos, Vice Chairman, City of Levelland Keeley Adams, City of Olton Steve Butcher, City of Sudan Ricky Caballero, City of Lubbock Johnny Contreras, City of Brownfield Tim Crosswhite, City of Plainview Stan David, City of Denver City Brenda Haney, PE, City of Lubbock Crystal Hunt, TCEQ Region 2 Mack LaDuke, South Plains Waste Service Brocke Lively, City of Plainview (Member in 2020) Patti Lowrance, City of Floydada Lance Parker, City of Littlefield Retha Pittman, City of Tahoka Richard Salazar, City of Sudan (Member in 2020) Aunie Sellers, City of Ralls Sam Stewart, Jarvis Metals Todd Stiggins, PE, Parkhill Trey Tow, Waste Connections

Solid Waste Advisory Council Subcommittee

10.1.2019 – 10.1.2020
Joe Cavazos, City of Levelland
Brocke Lively, City of Plainview
Brenda Haney, PE, City of Lubbock
Mack LaDuke, South Plains Waste Service
Patti Lowrance, City of Floydada

10.1.2020 – 10.1.2021
Joe Cavazos, City of Levelland
Brenda Haney, PE, City of Lubbock
Patti Lowrance, City of Floydada
Tim Crosswhite, City of Plainview
Richard Salazar, City of Sudan



VOLUME II

Regional Solid Waste Management Implementation Plan Volume II

Regional Organization Information

Table 1. Organization Information

Name of Council of Government	South Plains Association of Governments
Mailing Address	P.O. Box 3730 Freedom Station Lubbock, TX 79452
Website	www.spag.org
Phone Number	(806) 762-8721
Email Address	regional@spag.org

Section I. Geographic Scope

Table I.I. Geographic Scope

I.A. Names of Member Counties in the Entire Planning Region	Bailey, Cochran, Crosby, Dickens, Floyd, Garza. Hale, Hockley, King, Lamb, Lubbock, Lynn, Motley, Terry, Yoakum
I.B. Geographic Planning Units Used in the Regional Implementation Plan	 □ Small geographic areas such as census tracts or city boundaries for the most detailed data collection and manipulation; □ 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; □ County boundaries for the summarization and presentation of key information; or ☑ The entire planning region

Section II. Planning Periods

Table II.I. Planning Periods

II.A.1. Current and Historical Information	2020	
II.A.2. Short-range Planning Period	2022-2027 Provide educational outreach to citizens and communities of the SPAG region on waste reduction, proper disposal of electronic wastes (E-waste), household hazardous wastes (HHW), and tires. Survey potential partners to develop new waste management or recycling facilities within the region to handle increased recycling and proper disposal of E-waste, HHW, and tires.	
II.A.3. Intermediate Planning Period	2027-2032 Increase the number of community clean up days and/or collection events for HHW, E-waste, and tires while locating potential permanent facilities for end use recycling or disposal. Work with municipalities and local school districts to provide educational opportunities, field trips, print or TV advertisement on methods of waste reduction and proper disposal of material.	
II.A.4. Long-range Planning Period	2032-2042 Work with interested municipalities and commercial partners to develop permanent facilities for proper disposal and recycling methods for E-waste, HHW, tires, and construction materials. Develop permanent dumpsters or drop-off locations in cities for E-waste and HHW.	
☐ Check box if additional details provided in <i>Attachment II.A</i> .		

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	0.91%	452,277	599,987	7.27	28,776	0.35	571,211
2022	0.91%	460,524	611,491	7.28	29,319	0.35	576,664
2027	0.91%	481,859	641,280	7.29	30,724	0.35	610,555
2032	0.78%	502,928	671,016	7.31	32,124	0.35	638,892
2037	0.78%	522,945	699,759	7.33	33,471	0.35	666,288
2042	0.72%	543,144	729,118	7.36	34,838	0.35	694,279

☑ Check box if additional details provided in *Attachment III.A*.

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
2022	No individual significant commercial activity was indicated through survey responses from municipalities and private institutions within the region. The City of Lubbock's response indicated a recent increase in commercial waste growth by 5-7% annually, with an average of 60% of total tonnage from commercial sources. As population growth and the growth of smaller commercial ventures within the region continues, anticipated annual growth in commercial waste generation is expected.	1.5-2.5% Annually
2027	No individual significant commercial activity was indicated through survey responses from municipalities and private institutions for the short-range planning period. As population growth continues in the region, an anticipated annual growth in commercial waste generation is expected.	1.5-2.5% Annually
2032	No individual significant commercial activity was indicated through survey responses from municipalities and private institutions for the intermediate planning period. As population growth continues in the region, an anticipated annual growth in commercial waste generation is expected.	1.5-2.5% Annually
2037	No individual significant commercial activity was indicated through survey responses from municipalities and private institutions for the intermediate planning period. As population growth continues in the region, an anticipated annual growth in commercial waste generation is expected.	1.5-2.5% Annually
2042	No individual significant commercial activity was indicated through survey responses from municipalities and private institutions for the long-range planning period. As population growth continues in the region, an anticipated annual growth in commercial waste generation is expected.	1.5-2.5% Annually

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
2022	No individual significant industrial activity was indicated through survey responses from municipalities and private institutions. As economic growth continues in the region, an anticipated annual growth in industrial waste generation is expected.	1%
2027	No individual significant industrial activity was indicated through survey responses from municipalities and private institutions for the short-range planning period. As economic growth continues in the region, an anticipated annual growth in industrial waste generation is expected.	1%
2032	No individual significant industrial activity was indicated through survey responses from municipalities and private institutions for the intermediate planning period. As economic growth continues in the region, an anticipated annual growth in industrial waste generation is expected.	1%
2037	No individual significant industrial activity was indicated through survey responses from municipalities and private institutions for the intermediate planning period. As economic growth continues in the region, an anticipated annual growth in industrial waste generation is expected.	1%
2042	No individual significant industrial activity was indicated through survey responses from municipalities and private institutions for the long-range planning period. As economic growth continues in the region, an anticipated annual growth in industrial waste generation is expected.	1%

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	15	61.02%	366,142	383,111	400,866	416,830	433,430
Brush	2	0.03%	201	211	220	229	238
Construction or Demolition	16	32.74%	196,453	205,557	215,084	223,649	232,556
Litter	2	0.01%	64	67	70	73	76
Class 1 Non- hazardous	0	0%	0	0	0	0	0
Classes 2 and 3 Non- hazardous	1	0.88%	5,257	5,501	5,756	5,985	6,224
Incinerator Ash	0	0%	0	0	0	0	0
Treated Medical Waste	0	0%	0	0	0	0	0
Municipal Hazardous Waste from CESQGs	0	0%	0	0	0	0	0
Regulated Asbestos- containing Material (RACM)	0	0%	0	0	0	0	0
Non-RACM	0	0%	0	0	0	0	0
Dead Animals	5	0.02%	133	139	146	152	158
Sludge	3	2.80%	16,799	17,577	18,392	19,124	19,886
Grease Trap Waste	0	0%	0	0	0	0	0
Septage	0	0%	0	0	0	0	0

TCEQ-20880b (rev. 09-22-2020) Form developed by the TCEQ in coordination with the Texas Association of Regional Councils Page II-6 of II-25 REV 2 - 10.13.2022

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)
Contaminated soil	0	0%	0	0	0	0	0
Tires (split, quartered, shredded)	4	0.40%	2,394	2,505	2,621	2,726	2,834
Pesticides	0	0%	0	0	0	0	0
Used Oil Filter	0	0%	0	0	0	0	0
Other (identify other types reported as <i>Attachment III.B.</i>)	1	2.09%	12,544	13,125	13,733	14,280	14,849
Total	49	100%	599,987	627,794	656,889	683,049	710,251

☑ Check box if additional details provided in *Attachment III.B.*

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
Generation	Municipal solid waste (MSW) is managed within the region by individual cities and/or counties through local ordinances and guidelines. Waste is generated at the source, which is predominately municipal, based on region surveys, TCEQ Fiscal Year 2020 Annual Solid Waste reports, and the Municipal Solid Waste in Texas: A Year in Review 2019 Data Summary and Analysis. MSW makes up approximately 61% of the generated waste type in the region followed by construction and demolition waste at approximately 33%. The remaining waste types generated in the region individually account for 2% or less.
Source Separation	City-wide or county-wide source separation does not currently exist, and surveyed municipalities and private institutions within the region did not indicate any programs or ordinances in place to develop large-scale source separation. Municipalities that operate recycling and/or material diversion programs rely on individual residential and/or commercial volunteer source separation and disposal at proper locations within the city and/or county. The City of Lubbock operates a collection service for source-separated recyclable materials at select locations within the city equipped with individual waste-specific dumpsters. The City of Plainview allows commercial vendors to request recycle carts for volunteer source separation which will be collected by city staff. Additionally, the City of Plainview operates drop-off areas around the city for volunteer residential source separation of paper, plastic, aluminum cans, and cardboard.
Collection	MSW is managed within the region by individual cities and/or counties through local ordinances and guidelines. Collection of waste predominately begins at residential or commercial collection containers ranging in sizes from standard dumpsters to roll-off trailers. Surveyed municipalities and private institutions indicated various frequencies for collection depending on waste unit type and container size. The majority of survey responses indicated single-family homes and apartments and/or living communities have waste collected from containers weekly. Collection of commercial, industrial, construction, and bulky wastes depended more on the source and container size, and surveys indicated collection rates anywhere from weekly, bi-weekly, or more as needed. In many of the cities within the region, both city and private collection activities operate concurrently.

TCEQ-20880b (rev. 09-22-2020) Form developed by the TCEQ in coordination with the Texas Association of Regional Councils

Activity	Description
Collection (cont.)	Generally, smaller municipalities have elected to cancel solid waste collection and disposal operations, and have contracted with one of several private collection companies operating within the region. Cities and private companies generally work on multi-year contracts for waste collection on an agreed renewal frequency. Private collection companies collect and dispose MSW in the nearest permitted facility. Cities that operate their own MSW facility generally pick up their respective city's MSW. Surveyed response from the region suggested the majority of collection from private haulers is handled by Republic services, but other private haulers utilized in the region were South Plains Waste Service, Waste Connections, SOS Waste, and Triple C Waste.
Handling	Surveyed municipalities and private institutions within the region did not indicate any MSW handling facilities.
Storage	Surveyed municipalities and private institutions within the region did not indicate any MSW storage facilities.
Transportation	Two transfer stations operate in the region, the Caliche Canyon Transfer Station (Registration No. 40176) and the City of Levelland Transfer Station (Registration No. 40051). Waste is transferred to the City of Lubbock's West Texas Region Disposal Facility or City of Levelland landfill for disposal. The facilities operate at low tonnage and serve to assist disposal efforts and lower traffic at the nearest permitted landfills. The SPAG region is predominately made up of sparsely populated regions and communities. Smaller municipalities that do not operate a landfill, or only operate type IV landfills, will transfer the waste outside the city to the nearest permitted facility. Collection and transport from smaller municipalities is carried out mostly by private haulers, but city staff may operate transport in other cases. A couple of smaller municipalities indicated in the region survey that their MSW waste is transferred outside of the source city to the nearest permitted landfill. Additional information on waste transport is contained in Attachment III.C
Processing	The region has five processing facilities. The two transfer stations that were mentioned previously. One medical waste transfer station, Stericycle Lubbock Medical Waste Transfer Station (Registration No. 40279), one liquid waste processing facility, Southwaste Disposal South Plains Liquid Waste Processing Facility (Registration No. 2231), and one scrap tire processing facility, State Rubber and Environmental Solutions (Registration No. 6200195).

Activity	Description
Processing (cont.)	Stericycle specializes in the collection of biohazardous medical waste, pharmaceutical wastes, and sharps for syringes and needles. Medical waste collected is stored at the facility but ultimately is transferred out of the region for further processing and treatment of materials. Southwaste Disposal specializes in liquid-solid separation for grease trap and grit trap wastes. The facility can also handle chemical toilets, non-hazardous industrial wash water, and domestic sewage. The facility dewaters and separates entering wastes, and the resulting solids or sludge is transferred to West Texas Region Disposal Facility (MSW Permit No. 2252) for disposal while the resulting liquid is transferred outside of the region for further processing and treatment. State Rubber is a complete tire recycling facility that accepts tires of all sizes for processing. Used and scrap tires are processed on-site by grounding tires into fine mesh crumb rubber while removing the steel and fiber. The facility ships out steel and fiber for further processing or re-use in other industries. The various sizes of mesh crumb rubber are sold for re-use in asphalt modification, molded rubber products, athletic surfacing, playground surfacing, landscaping, and for use in the oil and gas industry.
Treatment	Surveyed municipalities and private institutions within the region did not indicate any solid or liquid waste treatment operations.
Resource Recovery	Surveyed municipalities and private institutions within the region did not indicate any resource recovery operations. Current recycling operations collect material and transfer recyclable material outside of the region for resource recovery.
Disposal of Solid Waste	MSW is managed within the region by individual cities and/or counties through local ordinances and guidelines. Collection of waste predominately begins at residential or commercial collection containers. In many of the cities within the region, both city and private collection activities operate concurrently. Municipalities that operate their own landfill generally collect the majority of the waste in the city and dispose of waste within the city's landfill. Private haulers operate on contracts with the municipalities and will collect and dispose of waste in the nearest permitted facility. The region has 20 available landfills for disposal that range in size from the West Texas Region Disposal Facility, largest in the region, to the City of Amherst landfill, smallest in the region.

Activity	Description
Disposal of Solid Waste (cont.)	The region's waste disposal amounts are controlled heavily by City of Lubbock, the most heavily populated municipality within the region. From the surveyed municipalities, a majority of landfills within the region indicated 20 years or more of remaining life. Two landfills indicated less than ten years of remaining life, the Caliche Canyon Landfill (MSW Permit No. 69) with seven years remaining, and the City of Post landfill (MSW Permit No. 2227) with four years remaining. The overall region has adequate disposal storage through the long-term planning period. Additional information on individual municipality annual tonnage and remaining landfill life is contained in Attachment III.C.

Table III.C.II. Planned Solid Waste Management Activities in the Region

Activity	Description	
Generation	Based on responses from municipalities and private institutions surveyed in the region, no significant change is expected in waste generation.	
Source Separation	Based on responses from municipalities and private institutions surveyed in the region, no significant change is expected in current source separation methods. Volunteer source separation and recycling may increase at the residential level, but no planned region or city source separation method is expected. There has been discussion about a possible materials recovery facility (MRF), but no plans are in place.	
Collection	Based on responses from municipalities and private institutions surveyed in the region, no significant change to waste collection is expected. Private hauler contracts may expire for individual municipalities within the region and minor changes in the waste collection could be expected.	
Handling	Based on responses from municipalities and private institutions surveyed in the region, waste handling is not expected to begin for any municipality or landfill within the region during the planning periods.	
Storage	Based on responses from municipalities and private institutions surveyed in the region, waste storage is not expected to begin for any municipality or landfill within the region during the planning periods.	
Transportation	Based on responses from municipalities and private institutions surveyed in the region, an additional MSW transfer station is expected to be permitted and constructed during the planning periods. The City of Lubbock currently has plans to contract out work to design and permit a new transfer station inside Lubbock County. Expected start and completion date of facility is not available.	
Processing	Based on responses from municipalities and private institutions surveyed in the region, no significant change is expected in waste processing. There has been discussion to develop a MRF to aid in processing recyclable material within the region, but no plans are in place.	
Treatment	Based on responses from municipalities and private institutions surveyed in the region, waste treatment is not expected to begin for any municipality or landfill within the region during the planning periods.	

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Activity	Description
Resource Recovery	Based on responses from municipalities and private institutions surveyed in the region, no significant change is expected in waste processing. The City of Lubbock would like to develop a MRF, but no plans are in place.
Disposal of Solid Waste	Based on responses from municipalities and private institutions surveyed in the region, MSW disposal will continue similar to current methods. A few municipalities expressed interest in expanding operations or developing new institutions. From the survey, the City of Matador expressed interest in purchasing additional land for disposal and recycling operations. The City of Plainview expressed the need to line a new cell in the short-term planning period and the desire to expand recycling operations. The City of Post has permitted an additional MSW landfill (MSW Permit No. 2397) adjacent to the currently active landfill. The facility has an estimated life of 11 years and will go into use once current landfill approaches capacity. The City of Meadow and City of Olton expressed desire in survey responses to expand current facilities, but no timeframe or additional capacity was indicated.
☑ Check box if additional as <i>Attachment III.C.</i>	information of solid waste management activities is provided

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
	□ Yes	□ Yes
Resource Recovery	☑ No, description of facility inadequacy provided in Attachment III. D.	☑ No, description of practice inadequacy provided in <i>Attachment III. D.</i>
Storage	⊠ Yes	⊠ Yes
	□ No, description of facility inadequacy provided in <i>Attachment III. D.</i>	□ No, description of practice inadequacy provided in <i>Attachment III. D.</i>
Transportation	⊠ Yes	⊠ Yes
	□ No, description of facility inadequacy provided in <i>Attachment III. D.</i>	□ No, description of practice inadequacy provided in <i>Attachment III. D.</i>
Treatment	⊠ Yes	⊠ Yes
	□ No, description of facility inadequacy provided in <i>Attachment III. D.</i>	□ No, description of practice inadequacy provided in <i>Attachment III. D.</i>
	⊠ Yes	⊠ Yes
Disposal	□ No, description of facility inadequacy provided in <i>Attachment III. D.</i>	□ No, description of practice inadequacy provided in <i>Attachment III. D.</i>
Household	□ Yes	□ Yes
Hazardous Waste Collection	No, description of facility inadequacy provided in Attachment III. D.	
Household Hazardous Waste Disposal	□ Yes	□ Yes
	☑ No, description of facility inadequacy provided in <i>Attachment III. D.</i>	☑ No, description of practice inadequacy provided in <i>Attachment III. D.</i>

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		
Waste Diversion / Recycling	Waste Diversion – Construct New Lubbock Transfer Station	Provide additional collection facility for Lubbock residents to dispose of common diverted goods. Increase amount of diverted waste to make transportation more feasible.		
Waste minimization / Material Reuse	C&D Waste reduction	Incentivize and/or coordinate with construction contractors within region to push LEED certification and reduce C&D waste coming into landfills and encourage material reuse or use of salvaged materials when possible.		
Waste Minimization / Reuse / Recycle	Reduce, process, and reuse yard waste	Encourage citizens and aid municipalities to compost and chip/grind yard waste into reusable mulch or fertilizer.		
Reuse / Recycle	Increase diversion of E- Waste	Partner with commercial vendors to develop regional E-Waste collection, transportation, and disposal plan.		
☐ 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>				

minimization, reuse and recycling of waste is provided in Attachment III. F.

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

- 1. Municipalities to partner with local ISDs and higher education facilities to increase awareness, provide further education on reuse and recycling, and develop shared recycling methods or material collection and storage.
- 2. Provide additional drop off facilities and/or containers throughout the region and provide operation costs to collect materials.
- 3. Develop a region-wide materials recovery facility (MRF) to aid in collection, separation, and processing for transfer to end-users for resource recovery.
- 4. Develop additional tire processing facilities within the region that can process tires material reuse and waste reduction. Increase number of municipality clients to accept tires and avoid improper disposal.
- 5. Seek partnerships or new ventures for waste energy plants to develop facility within 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

Solid Waste Management Concern	Priorities to Address the Concern		
Lack of regional and city level plan to properly dispose and/or recycle E- Waste.	Provide more region-wide education to residents and commercial operations on the hazards and dangers of improperly disposing E-Waste. Municipalities to partner and aid in commercial vendors E-Waste recycling and disposal methods. Provide drop off locations and/or specialized containers accepting E-Waste to aid in residents properly disposing of electronics.		
Continued improper disposal of tires in the region.	Provide added facilities to handle scrap tire processing. Develop facilities to process and recycle material from tires. Provide funding to assist cities in collecting and transporting illegally dumped tires around the city and surrounding countryside.		
Continued improper disposal of household hazardous waste.	Provide more region-wide education to residents and commercial operations on the hazards and dangers of improperly disposing HHW. Provide more facilities with the capabilities to store, process, or transfer HHW and offer more clean-up days or community days to drop off materials.		
Increase diversion of recyclable material.	Work with municipalities and schools to provide literature, informational webinars, brochures/inserts to reach a broader range of citizens.		
☑ Check box if additional details are provided in <i>Attachment III.I</i>			

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)
Lack of recycling within the region.	Based on annual distribution of funds from TCEQ, assist funding for cities to provide PSAs, mail information, TV commercials, etc. to educate on the need to recycle and advertise locations of easy drop-off. SPAG to provide grants for cities to add recycling facilities, additional drop-off locations. Possible funding in the long-term to develop a region wide MRF. SPAG will survey potential interested municipalities, commercial vendors, or industrial sectors to partner with on constructing additional capable recycling facilities or joining financial efforts to combine recyclable goods to transport to nearest facility.
Continued improper disposal of tires in the region.	Based on annual distribution of funds from TCEQ, assist funding for additional facilities to accept and process disposal of tires. Cities and counties to provide education and awareness on the proper disposal of tires and offer incentives to avoid illegal dumping.
Continued improper disposal of household hazardous waste.	Based on annual distribution of funds from TCEQ, assist funding for cities to provide PSAs, mail information, TV commercials, etc. to educate on the dangers of improper disposal of HHW. SPAG to provide funds for cities to introduce additional community clean up days or provide standing facilities for easy HHW drop off.

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 W	Vaste Minimization
Spare Tire Ordinance	State, region, or city-wide spare tire ordinance to mitigate illegal disposal and provide governing body the ability to seek financial compensation for illegal dumping to aid in cleanup or provide future funds for additional processing facilities.
Financial incentive for waste minimization and reuse for contractors	Region and municipalities partner to provide financial incentive to winning contractors on city owned projects through verifiable material reuse, use of salvaged construction material, or increased recycling. Increase disposal charge for C&D waste to promote better waste minimization, material reuse, and more efficient material use.
Identify barriers to source reduction and waste minimization	There are no incentives for citizens, commercial businesses, and industrial businesses to reduce their waste. Without economically viable recycling in the region, waste reduction is up to the generator and diverting material from the landfill can be more costly and not attainable.
Resource Recovery	
Provide funding aid for a material recovery facility (MRF)	Funding is needed to aid in construction of a region wide MRF. Lack of recycling in area is attributed to required diversion and transportation of recyclable material. Facility would increase recycling and provide opportunity for resource recovery that does not exist.
Identify barriers to resource recovery.	No downstream market exists for resource recovery. The region does not have a MRF. The lack of a facility in proximity to municipalities recycling creates additional transportation costs that lead to higher disposal rates of material in landfills rather than ship recyclable material to MRF or downstream processing facility.
Potential Markets	
Tire processing and recycling facilities to move to region	Potential to attract tire processing companies and new ventures to the region. Large quantity of tire generators and improper disposal makes area a prime target for additional processing companies to benefit while decreasing spare tire waste and providing recyclable material.
Material recovery facility	Potential to attract new business ventures to area or region to provide operation. Potential to increase region recycling numbers while increasing chance for profitable recycling in the region.

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

	Objective 1.A. Increase diversion rate at landfills and look for local partners and ways to reuse or process waste locally.
Goal #1 Achieve a 5% reduction of solid waste entering landfills by 2027 and a reduction to 10% by 2032.	Objective 1.B. Incentivize and coordinate with contractors and new development within the region to push for construction and demolition (C&D) waste reduction, increased material reuse, or use of salvaged material.
	Objective 1.C Encourage composting, chipping, and/or grinding of yard waste for reuse as mulch and fertilizer.
	Objective 2.A. Partner municipalities with local commercial electronic vendors to develop joint regional E-Waste disposal and recycling plan.
Goal #2 Develop a regional plan to properly dispose of E-Waste from households and private businesses.	Objective 2.B. Educate citizens on the hazards of disposing of electronics in their local dumpsters or collection stations.
	Objective 2.C Provide permanent containers designated for E-Waste collection within cities or increase number of community collection days in the region that accept E-Waste.
Coal #2 Engayrage proper disposel of	Objective 3.A. Educate citizens on the potential hazards of disposing household hazardous waste and prescription drugs in their local dumpsters or collection stations. Spread awareness on what HHW is and where citizens can properly dispose.
Goal #3 Encourage proper disposal of household hazardous waste (HHW) and other hazardous waste.	Objective 3.B. Provide permanent containers designated for HHW collection within cities or increase number of community collection days in the region that accept HHW.
	Objective 3.C. Hold annual collection days or community clean-up events in regional communities.

	Objective 4.A. Develop scrap tire ordinances for municipalities or region to aid in incentivizing proper scrap tire disposal.					
Goal #4 Decrease illegal dumping to include improperly disposed tires within the region.	Objective 4.B. Develop additional scrap tire processing facilities in the region capable of recycling for material reuse. Region currently has only one processing facility.					
	Objective 4.C Educate citizens on the proper collection areas within or near local municipalities.					
	Objective 4.D. Partner with local law enforcement and encourage enforcement for illegal dumping.					
	Objective 5.A. Encourage citizens to prioritize reuse and reduce.					
Goal #5 Assist joint education efforts	Objective 5.B. Coordinate with municipalities to provide literature, informational webinars, and brochures/inserts to directly reach citizens for recycling education.					
on waste reduction and reuse, and proper disposal methods.	Objective 5.C Partner with local ISDs to perform educational projects within K-12 schools, utilize higher education facilities to attract speakers, utilize student volunteers for clean-up efforts or educating the community, and bring awareness to methods of waste reduction.					
☐ Check box if additional details are provided in <i>Attachment III.L.</i>						

III.M. Advantages and Disadvantages of Alternative Actions

Are alternative actions being	☐ Yes. Provide details in <i>Attachment III.M</i> .
considered in this plan for the regional area?	☑ No. No further action required.

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/Objective	Plan of Action	Milestone Dates
Waste Reduction	Reduce waste landfilled by 5% by the end of the short-range planning period. Further reduction of waste to 10% by the end of the intermediate planning period. Increase landfill diversion amounts, decrease C&D waste, educate municipalities on reducing waste footprint.	5% by 2027 10% by 2032
Composting Programs for Yard Wastes and Related Organic Wastes	Increase composting amounts in region's landfills during the short-range planning period and continue throughout planning period. Promote educational items to residents to increase desire to home compost and avoid placing yard waste in dumpsters.	Long-range planning period. (11-20 years)
Household Hazardous Waste Collection and Disposal Programs	Increase city collection days for HHW pickup during the short-term planning period. Increase availability for region's landfills to accept and process HHW by the intermediate planning period. Develop permanent HHW collection bins throughout municipalities by the long-term planning period.	Intermediate planning period. (6-10 years)

Decrease Illegal Dumping to Include Improperly Disposed Tires	Provide educational flyers in utility bills and add information to city websites advertising all proper disposal and processing facilities nearest to citizens. SPAG to work with municipalities and private entities to develop scrap tire ordinances within the region to incentivize and enforce illegal tire dumping. SPAG to partner with municipalities local law enforcement to aid in providing fines or other enforcement strategies on illegal dumping. Attract or develop within the region additional scrap tire processing facilities for recycling and material reuse.	Short-term planning period. (Immediate, 1-5 years) On-going through long-term planning period. (20 years and longer)
Develop a Regional Plan to Properly Dispose of E-Waste	Provide educational flyers in utility bills, promote tv and/or print advertising, and add information to SPAG and city website promoting the dangers of improperly disposing electronics and batteries. Assist municipalities partnering with commercial electronic vendors or regional E-waste processing facilities to create a disposal and waste transfer plan. Municipalities to develop permanent E-waste containers for collection and increase community collection days in smaller cities or regions.	Long-range planning period. (11-20 years)
Public Education Programs	Provide educational flyers in utility bills and add information to city websites promoting waste reduction, reuse, and recycling during the short-term planning period. Print, web, radio, or TV advertisement to educate on proper disposal efforts for common HHW and E-Waste during the intermediate planning period. Partner with green organizations to bring public speakers to public school systems in the intermediate planning period.	Short-term planning period. (Immediate, 1-5 years) On-going through long-term planning period. (20 years and longer)
The Need for New or Expanded Facilities and Practices	Municipalities to become more active in SPAG related events and communication to understand the regions and municipality's needs. Expand current facilities or seek new development through the long-term planning period as needed. tional details are provided in Attachment III.N	As needed, based on updated landfill life projections.
_ check box ii dddi	aona actuio are provided in Attachment III.	**

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	7/15/2021
Public Meeting Dates	3/25/2021, 8/9/2021, 11/8/2021
Executive Committee	11/09/2021

- ☐ 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**.



APPENDIX III.A: DEMOGRAPHIC INFORMATION



DEMOGRAPHIC INFORMATION

Table III.A.I

Current population and projections were sourced from the Texas Water Development Board's (TWDB) 2021 Regional and 2022 State Water Plan Projections Data. County projections for each county making up the South Plains Association of Governments (SPAG) were used. The summation of individual counties' populations in the years 2020, 2030, 2040, and 2050 were used to develop the region's population growth rate. The growth rate was calculated using the Law of Growth equation, P(t)=P(o)*exp(r*t). The population at time t is equal to the initial population multiplied by the product of the growth rate and time between initial and final population years.

The base year landfill tonnage and recycling data were determined from surveyed municipality responses and totals listed on the TCEQ's fiscal year 2020 annual report. Waste disposal and recycling amounts were assumed to follow similar population growth rates for the SPAG area. Table III.A.I contains the cumulative SPAG region population, waste, and recycling projections based on the sum of individual county projections for the planning years 2021, 2022, 2027, 2032, 2037, and 2042. Individual county tables were created displaying projected population, projected waste tonnage, and projected recycling amounts using each county's specific growth rate based on TWDB projections.

Table III.A.II

Region population and waste projections remain identical to calculated values in Table III.A.I. The region's waste reduction goals are to achieve a 5% reduction in waste by year 2027 and an increase by 10% in year 2032. An increase of similar percent is intended for recycling in years 2027 and 2032. The waste reduction and the recycling increase percentage was compared to the projected tons based on population growth (i.e., Projected tonnage for 2027 is 641,280 tons and a 5% reduction is 609,216 tons). A separate waste reduction rate and a recycling increase rate were calculated between the two goal periods, 2020-2027 and 2027-2032. The percent rate calculated between the 2027-2032 period was extrapolated out to the end of the long-term planning period ending in year 2042. The per person disposal and recycling rate were adjusted to reflect the goal values for comparison.

	Table III.A.I										
Year	Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Landfill Disposal (lbs.)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling (lbs.)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)		
2020		452,277	599,987	1,199,974,000	7.27	28,776	57,551,400	0.35	571,211		
2021		456,380	605,710	1,211,419,841	7.27	29,046	58,091,710	0.35	576,664		
2022		460,524	611,491	1,222,981,047	7.28	29,319	58,637,423	0.35	582,172		
2023		464,708	617,329	1,234,658,812	7.28	29,594	59,188,594	0.35	587,735		
2024		468,933	623,227	1,246,454,341	7.28	29,873	59,745,279	0.35	593,355		
2025	0.00906	473,200	629,184	1,258,368,852	7.29	30,154	60,307,535	0.35	599,031		
2026		477,508	635,202	1,270,403,575	7.29	30,438	60,875,420	0.35	604,764		
2027		481,859	641,280	1,282,559,755	7.29	30,724	61,448,990	0.35	610,555		
2028		486,253	647,419	1,294,838,648	7.30	31,014	62,028,306	0.35	616,405		
2029		490,690	653,621	1,307,241,525	7.30	31,307	62,613,425	0.35	622,314		
2030		495,170	659,885	1,319,769,668	7.30	31,602	63,204,409	0.35	628,283		
2031		499,032	665,425	1,330,849,925	7.31	31,862	63,723,758	0.35	633,563		
2032		502,928	671,016	1,342,032,704	7.31	32,124	64,247,910	0.35	638,892		
2033		506,860	676,659	1,353,318,974	7.32	32,388	64,776,910	0.35	644,271		
2034		510,827	682,355	1,364,709,713	7.32	32,655	65,310,806	0.35	649,699		
2035	0.00784	514,830	688,103	1,376,205,909	7.32	32,925	65,849,642	0.35	655,178		
2036	0.00781	518,869	693,904	1,387,808,560	7.33	33,197	66,393,466	0.35	660,708		
2037		522,945	699,759	1,399,518,671	7.33	33,471	66,942,325	0.35	666,288		
2038		527,058	705,669	1,411,337,258	7.34	33,748	67,496,268	0.35	671,920		
2039		531,208	711,633	1,423,265,348	7.34	34,028	68,055,341	0.35	677,605		
2040		535,395	717,652	1,435,303,975	7.34	34,310	68,619,595	0.35	683,342		
2041	0.00724	539,252	723,359	1,446,717,323	7.35	34,573	69,145,742	0.35	688,786		
2042	0.00724	543,144	729,118	1,458,235,634	7.36	34,838	69,676,825	0.35	694,279		

Note: The growth rate per year was calculated using the law of growth equation, based on cumulative population projections for all counties that make up the SPAG region from TWDB 10-year population projections. Waste Tonnage and recycling data is the summation of county by county projections. Tonnage amounts rounded to the nearest whole number.

	Table III.A.II - Goal Waste Reduction and Recycling Increase										
Year	Population Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Goal, Landfill Disposal (Tons)	Disposal Rate (lbs./Person/Day)	Goal, Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Goal, Recycling (Tons)	Recycling Rate (lbs./Person/Day)	Goal, Recycling Rate (lbs./Person/Day)	
2020		452,277	599,987	599,987	7.27	7.27	28,776	28,776	0.35	0.35	
2021		456,380	605,710	601,305	7.27	7.22	29,046	29,278	0.35	0.35	
2022		460,524	611,491	602,627	7.28	7.17	29,319	29,789	0.35	0.35	
2023		464,708	617,329	603,951	7.28	7.12	29,594	30,309	0.35	0.36	
2024		468,933	623,227	605,278	7.28	7.07	29,873	30,838	0.35	0.36	
2025	0.00906	473,200	629,184	606,608	7.29	7.02	30,154	31,376	0.35	0.36	
2026		477,508	635,202	607,941	7.29	6.98	30,438	31,923	0.35	0.37	
2027		481,859	641,280	609,216	7.29	6.93	30,724	32,261	0.35	0.37	
2028		486,253	647,419	608,156	7.30	6.85	31,014	32,876	0.35	0.37	
2029		490,690	653,621	607,097	7.30	6.78	31,307	33,503	0.35	0.37	
2030		495,170	659,885	606,041	7.30	6.71	31,602	34,142	0.35	0.38	
2031		499,032	665,425	604,986	7.31	6.64	31,862	34,792	0.35	0.38	
2032		502,928	671,016	603,915	7.31	6.58	32,124	35,336	0.35	0.38	
2033		506,860	676,659	602,864	7.32	6.52	32,388	36,010	0.35	0.39	
2034		510,827	682,355	601,815	7.32	6.46	32,655	36,697	0.35	0.39	
2035	0.00781	514,830	688,103	600,767	7.32	6.39	32,925	37,396	0.35	0.40	
2036	0.00781	518,869	693,904	599,722	7.33	6.33	33,197	38,109	0.35	0.40	
2037		522,945	699,759	598,678	7.33	6.27	33,471	38,836	0.35	0.41	
2038		527,058	705,669	597,636	7.34	6.21	33,748	39,577	0.35	0.41	
2039		531,208	711,633	596,596	7.34	6.15	34,028	40,331	0.35	0.42	
2040		535,395	717,652	595,558	7.34	6.10	34,310	41,100	0.35	0.42	
2041	0.00724	539,252	723,359	594,521	7.35	6.04	34,573	41,884	0.35	0.43	
2042	0.00724	543,144	729,118	593,487	7.36	5.99	34,838	42,683	0.35	0.43	

Note: The population growth rate per year was calculated using the law of growth equation, based on cumulative population projections for all counties in SPAG region from TWDB 10-year population projections. Landfill tonnage and recycling amounts were projected out assuming similar growth trend as population. The region's waste reduction goals are to acheive 5% reduction by 2027 and 10% reduction by 2032 with increasing in recycling by similar percents. Waste reduction and recycling increase rates were calculated for the periods 2020-2027 and 2027-2032. Rate at year 2032 was extrapolated out for remainder of planning period. Blue cells indicate goal years.



COUNTY SPECIFIC POPULATION AND WASTE PROJECTION

	Year	Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Landfill Disposal (lbs.)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling (lbs.)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)
	2020		8,012	9,094	18,188,000	6.22	-	-	-	9,094
	2021		8,102	9,196	18,392,948	6.22	-	-	-	9,196
	2022		8,194	9,300	18,600,206	6.22	-	-	-	9,300
	2023		8,286	9,405	18,809,799	6.22	-	-	-	9,405
	2024		8,379	9,511	19,021,753	6.22	-	-	-	9,511
	2025	0.01121	8,474	9,618	19,236,096	6.22	-	-	-	9,618
	2026		8,569	9,726	19,452,855	6.22	-	-	-	9,726
	2027		8,666	9,836	19,672,056	6.22	-	-	-	9,836
	2028		8,763	9,947	19,893,727	6.22	-	-	-	9,947
Bailey	2029	-	8,862	10,059	20,117,895	6.22	-	-	-	10,059
Ba	2030		8,962	10,172	20,344,590	6.22	-	-	-	10,172
	2031	-	9,052	10,275	20,549,359	6.22	-	-	-	10,275
	2032	-	9,143	10,378	20,756,189	6.22	=	-	-	10,378
	2033	-	9,235	10,483	20,965,101	6.22	-	-	-	10,483
	2034		9,328	10,588	21,176,116	6.22	-	-	-	10,588
	2035	0.01001	9,422	10,695	21,389,254	6.22	-	-	-	10,695
	2036	0.01001	9,517	10,802	21,604,538	6.22	=	-	-	10,802
	2037	-	9,613	10,911	21,821,988	6.22	-	-	-	10,911
	2038		9,710	11,021	22,041,627	6.22	-	-	-	11,021
	2039		9,807	11,132	22,263,477	6.22	-	-	-	11,132
	2040		9,906	11,244	22,487,560	6.22	-	-	-	11,244
	2041	0.00938	9,999	11,350	22,699,453	6.22	-	-	-	11,350
	2042	0.00558	10,094	11,457	22,913,342	6.22	=	-	-	11,457

	Year	Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Landfill Disposal (lbs.)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling (lbs.)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)
	2020		3,491	41	82,000	0.06	=	-	-	41
	2021		3,510	41	82,449	0.06	-	-	-	41
	2022		3,529	41	82,901	0.06	-	-	-	41
	2023		3,549	42	83,355	0.06	-	-	-	42
	2024		3,568	42	83,811	0.06	-	-	-	42
	2025	0.00546	3,588	42	84,270	0.06	-	-	-	42
	2026		3,607	42	84,732	0.06	-	-	-	42
	2027		3,627	43	85,196	0.06	-	-	-	43
_	2028		3,647	43	85,663	0.06	-	-	-	43
Cochran	2029		3,667	43	86,132	0.06	-	-	-	43
Š	2030		3,687	43	86,604	0.06	-	-	-	43
	2031		3,690	43	86,674	0.06	-	-	-	43
	2032		3,693	43	86,744	0.06	-	-	-	43
	2033		3,696	43	86,815	0.06	-	-	-	43
	2034		3,699	43	86,885	0.06	-	-	-	43
	2035	0.0008104	3,702	43	86,955	0.06	-	-	-	43
	2036	0.0008104	3,705	44	87,026	0.06	-	-	-	44
	2037		3,708	44	87,097	0.06	-	-	-	44
	2038		3,711	44	87,167	0.06	-	-	-	44
	2039		3,714	44	87,238	0.06	-	-	-	44
	2040		3,717	44	87,309	0.06	-	-	-	44
	2041	-0.001354	3,712	44	87,190	0.06	-	-	-	44
	2042	-0.001334	3,707	44	87,072	0.06	-	-	-	44

	Year	Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Landfill Disposal (lbs.)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling (lbs.)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)
	2020		6,526	-	-	-	-	-	-	-
	2021		6,574	-	-	-	-	-	-	-
	2022		6,623	-	-	-	-	-	-	-
	2023		6,671	-	-	-	-	-	-	-
	2024		6,720	-	-	-	-	-	-	-
	2025	0.0073396	6,770	-	-	-	-	-	-	-
	2026		6,820	-	-	-	-	-	-	-
	2027		6,870	-	-	-	-	-	-	-
	2028		6,921	-	-	-	-	-	-	-
Crosby	2029		6,972	-	-	-	-	-	-	-
C _r	2030		7,023	-	-	-	-	-	-	-
	2031		7,063	-	-	-	-	-	-	-
	2032		7,103	=	-	-	=	-	-	-
	2033		7,144	=	-	-	=	-	-	-
	2034		7,184	-	-	-	-	-	-	-
	2035	0.00567	7,225	=	-	-	-	-	-	-
	2036	0.00307	7,266	=	-	-	-	-	-	-
	2037		7,308	=	-	-	-	-	-	-
	2038		7,349	=	-	-	-	-	-	-
	2039		7,391	-	-	-	-	-	-	-
	2040		7,433	=	-	-	-	-	-	-
	2041	0.00546	7,474	-	-	-	-	-	-	-
	2042		7,515	=	-	-	- TWDD 40	-	-	-

Note: Growth rate calculated using law of growth equation, based on county specific projections from TWDB 10-year population projections. Population projected out using law of growth, but no landfill tonnage available in Crosby County.

	Year	Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Landfill Disposal (lbs.)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling (lbs.)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)
	2020		2,164	=	-	-	-	-	-	-
	2021		2,164	=	-	-	-	-	-	-
	2022		2,164	-	-	-	-	-	-	-
	2023		2,164	=	-	-	-	-	-	-
	2024		2,164	-	-	-	-	-	-	-
	2025	0	2,164	-	-	-	-	-	-	-
	2026		2,164	-	-	-	-	-	-	-
	2027		2,164	-	-	-	-	-	-	-
	2028		2,164	-	-	-	-	-	-	-
Dickens	2029		2,164	-	-	-	-	-	-	-
Dick	2030		2,164	-	-	-	-	-	-	-
	2031		2,164	-	-	-	-	-	-	-
	2032		2,164	-	-	-	-	-	-	-
	2033		2,164	-	-	-	-	-	-	-
	2034		2,164	-	-	-	-	-	-	-
	2035	0	2,164	-	-	-	-	-	-	-
	2036		2,164	-	-	-	-	-	-	-
	2037		2,164	-	-	-	-	-	-	-
	2038		2,164	-	-	-	-	-	-	-
	2039		2,164	-	-	-	-	-	-	-
	2040		2,164	-	-	-	-	-	-	-
	2041	0	2,164	-	-	-	-	-	-	-
	2042		2,164	-	-	-	- TIMBR 40	-		-

Note: Growth rate calculated using law of growth equation, based on county specific projections from TWDB 10-year population projections. Population projected out using law of growth, but no landfill tonnage available in Dickens County.

	Year	Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Landfill Disposal (lbs.)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling (lbs.)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)
	2020		6,869	5,806	11,612,000	4.63	18	36,000	0.01	5,788
	2021		6,910	5,841	11,681,921	4.63	18	36,217	0.01	5,823
	2022		6,952	5,876	11,752,262	4.63	18	36,435	0.01	5,858
	2023		6,994	5,912	11,823,028	4.63	18	36,654	0.01	5,893
	2024		7,036	5,947	11,894,219	4.63	18	36,875	0.01	5,929
	2025	0.00600	7,078	5,983	11,965,839	4.63	19	37,097	0.01	5,964
	2026		7,121	6,019	12,037,890	4.63	19	37,320	0.01	6,000
	2027		7,164	6,055	12,110,375	4.63	19	37,545	0.01	6,036
	2028		7,207	6,092	12,183,297	4.63	19	37,771	0.01	6,073
Floyd	2029		7,250	6,128	12,256,657	4.63	19	37,999	0.01	6,109
윤	2030		7,294	6,165	12,330,460	4.63	19	38,227	0.01	6,146
	2031		7,320	6,188	12,375,197	4.63	19	38,366	0.01	6,168
	2032		7,347	6,210	12,420,096	4.63	19	38,505	0.01	6,191
	2033		7,374	6,233	12,465,158	4.63	19	38,645	0.01	6,213
	2034		7,400	6,255	12,510,383	4.63	19	38,785	0.01	6,236
	2035	0.00362	7,427	6,278	12,555,773	4.63	19	38,926	0.01	6,258
	2036	0.00302	7,454	6,301	12,601,327	4.63	20	39,067	0.01	6,281
	2037		7,481	6,324	12,647,046	4.63	20	39,209	0.01	6,304
	2038		7,508	6,346	12,692,932	4.63	20	39,351	0.01	6,327
	2039		7,536	6,369	12,738,984	4.63	20	39,494	0.01	6,350
	2040		7,563	6,393	12,785,203	4.63	20	39,637	0.01	6,373
	2041	0.00378	7,592	6,417	12,833,564	4.63	20	39,787	0.01	6,397
	2042	0.00378	7,620	6,441	12,882,109	4.63	20	39,938	0.01	6,421

	Year	Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Landfill Disposal (lbs.)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling (lbs.)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)
	2020		7,077	3,602	7,204,000	2.79	7	14,200	0.01	3,595
	2021		7,119	3,623	7,246,909	2.79	7	14,285	0.01	3,616
	2022		7,162	3,645	7,290,073	2.79	7	14,370	0.01	3,638
	2023		7,204	3,667	7,333,494	2.79	7	14,455	0.01	3,660
	2024		7,247	3,689	7,377,174	2.79	7	14,541	0.01	3,681
	2025	0.00594	7,290	3,711	7,421,114	2.79	7	14,628	0.01	3,703
	2026		7,334	3,733	7,465,315	2.79	7	14,715	0.01	3,725
	2027		7,377	3,755	7,509,780	2.79	7	14,803	0.01	3,747
	2028		7,421	3,777	7,554,510	2.79	7	14,891	0.01	3,770
Garza	2029		7,466	3,800	7,599,506	2.79	7	14,980	0.01	3,792
ဇီ	2030		7,510	3,822	7,644,770	2.79	8	15,069	0.01	3,815
	2031		7,548	3,842	7,683,475	2.79	8	15,145	0.01	3,834
	2032		7,586	3,861	7,722,375	2.79	8	15,222	0.01	3,854
	2033		7,625	3,881	7,761,472	2.79	8	15,299	0.01	3,873
	2034		7,663	3,900	7,800,767	2.79	8	15,376	0.01	3,893
	2035	0.0050501	7,702	3,920	7,840,261	2.79	8	15,454	0.01	3,912
	2036	0.0030301	7,741	3,940	7,879,955	2.79	8	15,532	0.01	3,932
	2037		7,780	3,960	7,919,850	2.79	8	15,611	0.01	3,952
	2038		7,820	3,980	7,959,947	2.79	8	15,690	0.01	3,972
	2039		7,859	4,000	8,000,247	2.79	8	15,770	0.01	3,992
	2040		7,899	4,020	8,040,751	2.79	8	15,849	0.01	4,012
	2041	0.00332	7,925	4,034	8,067,526	2.79	8	15,902	0.01	4,026
	2042	3.00332	7,952	4,047	8,094,389	2.79	8	15,955	0.01	4,039

	Year	Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Landfill Disposal (lbs.)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling (lbs.)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)
	2020		38,314	32,507	65,014,000	4.65	3,920	7,840,200	0.56	28,587
	2021		38,476	32,644	65,288,865	4.65	3,937	7,873,347	0.56	28,708
	2022		38,639	32,782	65,564,892	4.65	3,953	7,906,633	0.56	28,829
	2023		38,802	32,921	65,842,086	4.65	3,970	7,940,061	0.56	28,951
	2024		38,966	33,060	66,120,452	4.65	3,987	7,973,630	0.56	29,073
	2025	0.00422	39,131	33,200	66,399,995	4.65	4,004	8,007,341	0.56	29,196
	2026		39,296	33,340	66,680,720	4.65	4,021	8,041,194	0.56	29,320
	2027		39,462	33,481	66,962,632	4.65	4,038	8,075,190	0.56	29,444
	2028		39,629	33,623	67,245,735	4.65	4,055	8,109,330	0.56	29,568
Hale	2029		39,797	33,765	67,530,035	4.65	4,072	8,143,615	0.56	29,693
Ξ̈́	2030		39,965	33,908	67,815,538	4.65	4,089	8,178,044	0.56	29,819
	2031		40,033	33,965	67,930,385	4.65	4,096	8,191,894	0.56	29,869
	2032		40,100	34,023	68,045,427	4.65	4,103	8,205,767	0.56	29,920
	2033		40,168	34,080	68,160,664	4.65	4,110	8,219,664	0.56	29,971
	2034		40,236	34,138	68,276,096	4.65	4,117	8,233,584	0.56	30,021
	2035	0.00169	40,305	34,196	68,391,724	4.65	4,124	8,247,528	0.56	30,072
	2036	0.00103	40,373	34,254	68,507,547	4.65	4,131	8,261,496	0.56	30,123
	2037		40,441	34,312	68,623,567	4.65	4,138	8,275,487	0.56	30,174
	2038		40,510	34,370	68,739,782	4.65	4,145	8,289,501	0.56	30,225
	2039		40,578	34,428	68,856,195	4.65	4,152	8,303,540	0.56	30,276
	2040		40,647	34,486	68,972,805	4.65	4,159	8,317,602	0.56	30,328
	2041	-0.00084	40,613	34,457	68,914,893	4.65	4,155	8,310,618	0.56	30,302
	2042	5.55531	40,579	34,429	68,857,030	4.65	4,152	8,303,641	0.56	30,277

	Year	Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Landfill Disposal (lbs.)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling (lbs.)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)
	2020		25,130	11,129	22,258,000	2.43	529	1,057,000	0.12	10,601
	2021		25,286	11,198	22,396,146	2.43	532	1,063,560	0.12	10,666
	2022		25,443	11,268	22,535,149	2.43	535	1,070,161	0.12	10,732
	2023		25,601	11,338	22,675,015	2.43	538	1,076,803	0.12	10,799
	2024		25,760	11,408	22,815,748	2.43	542	1,083,487	0.12	10,866
	2025	0.00619	25,920	11,479	22,957,356	2.43	545	1,090,211	0.12	10,934
	2026		26,080	11,550	23,099,842	2.43	548	1,096,978	0.12	11,001
	2027		26,242	11,622	23,243,213	2.43	552	1,103,786	0.12	11,070
	2028		26,405	11,694	23,387,473	2.43	555	1,110,637	0.12	11,138
Hockley	2029		26,569	11,766	23,532,629	2.43	559	1,117,530	0.12	11,208
원	2030		26,734	11,839	23,678,686	2.43	562	1,124,466	0.12	11,277
	2031		26,830	11,882	23,763,486	2.43	564	1,128,493	0.12	11,317
	2032		26,926	11,924	23,848,590	2.43	566	1,132,535	0.12	11,358
	2033		27,022	11,967	23,933,999	2.43	568	1,136,591	0.12	11,399
	2034		27,119	12,010	24,019,713	2.43	570	1,140,661	0.12	11,440
	2035	0.00357	27,216	12,053	24,105,735	2.43	572	1,144,746	0.12	11,480
	2036	0.00337	27,314	12,096	24,192,064	2.43	574	1,148,846	0.12	11,522
	2037		27,411	12,139	24,278,703	2.43	576	1,152,960	0.12	11,563
	2038		27,510	12,183	24,365,652	2.43	579	1,157,089	0.12	11,604
	2039		27,608	12,226	24,452,913	2.43	581	1,161,233	0.12	11,646
	2040		27,707	12,270	24,540,486	2.43	583	1,165,392	0.12	11,688
	2041	0.00065	27,725	12,278	24,556,470	2.43	583	1,166,151	0.12	11,695
	2042	3,0000	27,743	12,286	24,572,465	2.43	583	1,166,911	0.12	11,703

	Year	Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Landfill Disposal (lbs.)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling (lbs.)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)
	2020		300	-	-	-	-	-	-	-
	2021		302	-	-	-	-	-	-	-
	2022		303	-	-	-	-	-	-	-
	2023		305	-	-	-	-	-	-	-
	2024		306	-	-	-	-	-	-	-
	2025	0.00520	308	-	-	-	-	-	-	-
	2026		310	-	-	-	-	-	-	-
	2027		311	-	-	-	-	-	-	-
	2028		313	-	-	-	-	-	-	-
King	2029		314	=	-	-	=	-	-	-
Ξ	2030		316	-	-	-	-	-	-	-
	2031		316	-	-	-	-	-	-	-
	2032		316	=	-	-	-	-	-	-
	2033		316	=	-	-	-	-	-	-
	2034		316	=	-	-	=	-	-	-
	2035	0	316	=	-	-	-	-	-	-
	2036	ŭ	316	=	-	-	-	-	-	-
	2037		316	-	-	-	-	-	-	-
	2038		316	-	-	-	-	-	-	-
	2039		316	-	-	-	-	-	-	-
	2040		316	-	-	-	-	-	-	-
	2041	0	316	=	-	-	-	-	-	-
	2042		316	-	-	-	- TWDD 40	-		-

Note: Growth rate calculated using law of growth equation, based on county specific projections from TWDB 10-year population projections. Population projected out using law of growth, but no landfill tonnage available in King County.

	Year	Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Landfill Disposal (lbs.)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling (lbs.)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)
	2020		14,615	17,616	35,232,000	6.60	568	1,136,200	0.21	17,048
	2021		14,670	17,682	35,364,725	6.60	570	1,140,480	0.21	17,112
	2022	-	14,725	17,749	35,497,950	6.60	572	1,144,777	0.21	17,177
	2023		14,781	17,816	35,631,677	6.60	575	1,149,089	0.21	17,241
	2024		14,836	17,883	35,765,908	6.60	577	1,153,418	0.21	17,306
	2025	0.0037601	14,892	17,950	35,900,644	6.60	579	1,157,763	0.21	17,371
	2026		14,948	18,018	36,035,888	6.60	581	1,162,125	0.21	17,437
	2027		15,005	18,086	36,171,641	6.60	583	1,166,503	0.21	17,503
	2028		15,061	18,154	36,307,906	6.60	585	1,170,897	0.21	17,569
Lamb	2029		15,118	18,222	36,444,684	6.60	588	1,175,308	0.21	17,635
	2030		15,175	18,291	36,581,977	6.60	590	1,179,736	0.21	17,701
	2031		15,201	18,322	36,644,889	6.60	591	1,181,764	0.21	17,732
	2032		15,227	18,354	36,707,909	6.60	592	1,183,797	0.21	17,762
	2033	-	15,253	18,386	36,771,037	6.60	593	1,185,833	0.21	17,793
	2034	-	15,280	18,417	36,834,274	6.60	594	1,187,872	0.21	17,823
	2035	0.00172	15,306	18,449	36,897,619	6.60	595	1,189,915	0.21	17,854
	2036	0.00172	15,332	18,481	36,961,074	6.60	596	1,191,961	0.21	17,885
	2037	-	15,359	18,512	37,024,637	6.60	597	1,194,011	0.21	17,915
	2038		15,385	18,544	37,088,310	6.60	598	1,196,064	0.21	17,946
	2039		15,411	18,576	37,152,093	6.60	599	1,198,121	0.21	17,977
	2040		15,438	18,608	37,215,985	6.60	600	1,200,182	0.21	18,008
	2041	-0.000123	15,436	18,606	37,211,402	6.60	600	1,200,034	0.21	18,006
	2042	3.000123	15,434	18,603	37,206,820	6.60	600	1,199,886	0.21	18,003

	Year	Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Landfill Disposal (lbs.)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling (lbs.)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)
	2020		309,769	470,016	940,032,000	8.31	23,345	46,689,600	0.41	446,671
	2021		313,031	474,965	949,930,393	8.31	23,591	47,181,234	0.41	451,375
	2022		316,327	479,967	959,933,014	8.31	23,839	47,678,045	0.41	456,127
	2023		319,658	485,020	970,040,961	8.31	24,090	48,180,088	0.41	460,930
	2024		323,024	490,128	980,255,343	8.31	24,344	48,687,417	0.41	465,784
	2025	0.01047	326,425	495,289	990,577,281	8.31	24,600	49,200,088	0.41	470,689
	2026		329,862	500,504	1,001,007,908	8.31	24,859	49,718,157	0.41	475,645
	2027		333,336	505,774	1,011,548,367	8.31	25,121	50,241,682	0.41	480,653
	2028		336,846	511,100	1,022,199,816	8.31	25,385	50,770,719	0.41	485,715
Lubbock	2029		340,393	516,482	1,032,963,423	8.31	25,653	51,305,327	0.41	490,829
Lub	2030		343,977	521,920	1,043,840,369	8.31	25,923	51,845,564	0.41	495,997
	2031		347,266	526,911	1,053,821,557	8.31	26,171	52,341,311	0.41	500,740
	2032		350,587	531,949	1,063,898,185	8.31	26,421	52,841,798	0.41	505,528
	2033		353,939	537,036	1,074,071,165	8.31	26,674	53,347,070	0.41	510,362
	2034		357,323	542,171	1,084,341,419	8.31	26,929	53,857,174	0.41	515,242
	2035	0.00952	360,740	547,355	1,094,709,878	8.31	27,186	54,372,156	0.41	520,169
	2036	0.00332	364,189	552,589	1,105,177,479	8.31	27,446	54,892,062	0.41	525,143
	2037		367,672	557,873	1,115,745,172	8.31	27,708	55,416,939	0.41	530,164
	2038		371,187	563,207	1,126,413,912	8.31	27,973	55,946,835	0.41	535,234
	2039		374,737	568,592	1,137,184,667	8.31	28,241	56,481,798	0.41	540,351
	2040		378,320	574,029	1,148,058,412	8.31	28,511	57,021,876	0.41	545,518
	2041	0.00924	381,831	579,357	1,158,714,324	8.31	28,776	57,551,135	0.41	550,582
	2042		385,375	584,735	1,169,469,142	8.31	29,043	58,085,306	0.41	555,692

	Year	Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Landfill Disposal (lbs.)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling (lbs.)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)
	2020		6,279	11,809	23,618,000	10.31	96	192,400	0.08	11,713
	2021		6,311	11,869	23,737,848	10.31	97	193,376	0.08	11,772
	2022		6,343	11,929	23,858,305	10.31	97	194,358	0.08	11,832
	2023		6,375	11,990	23,979,373	10.31	98	195,344	0.08	11,892
	2024		6,407	12,051	24,101,055	10.31	98	196,335	0.08	11,952
	2025	0.00506	6,440	12,112	24,223,355	10.31	99	197,331	0.08	12,013
	2026		6,473	12,173	24,346,275	10.31	99	198,333	0.08	12,074
	2027		6,505	12,235	24,469,819	10.31	100	199,339	0.08	12,135
	2028		6,538	12,297	24,593,990	10.31	100	200,351	0.08	12,197
Lynn	2029		6,572	12,359	24,718,791	10.31	101	201,367	0.08	12,259
	2030		6,605	12,422	24,844,225	10.31	101	202,389	0.08	12,321
	2031		6,607	12,426	24,851,363	10.31	101	202,447	0.08	12,324
	2032		6,609	12,429	24,858,502	10.31	101	202,506	0.08	12,328
	2033		6,611	12,433	24,865,644	10.31	101	202,564	0.08	12,332
	2034		6,613	12,436	24,872,787	10.31	101	202,622	0.08	12,335
	2035	0.00029	6,614	12,440	24,879,933	10.31	101	202,680	0.08	12,339
	2036	0.00023	6,616	12,444	24,887,081	10.31	101	202,738	0.08	12,342
	2037		6,618	12,447	24,894,231	10.31	101	202,797	0.08	12,346
	2038		6,620	12,451	24,901,382	10.31	101	202,855	0.08	12,349
	2039		6,622	12,454	24,908,536	10.31	101	202,913	0.08	12,353
	2040		6,624	12,458	24,915,692	10.31	101	202,971	0.08	12,356
	2041	-0.000454	6,621	12,452	24,904,385	10.31	101	202,879	0.08	12,351
	2042	3.000.31	6,618	12,447	24,893,083	10.31	101	202,787	0.08	12,345

	Year	Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Landfill Disposal (lbs.)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling (lbs.)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)
	2020		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2021		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2022		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2023		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2024		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2025	0	1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2026		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2027		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2028		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
Motley	2029		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
Š	2030		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2031		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2032		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2033		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2034		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2035	0	1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2036	U	1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2037		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2038		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2039		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2040		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2041	0	1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693
	2042		1,212	2,714	5,428,000	12.27	21	42,200	0.10	2,693

	Year	Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Landfill Disposal (lbs.)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling (lbs.)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)
	2020		13,599	25,577	51,154,000	10.31	266	531,600	0.11	25,311
	2021		13,682	25,734	51,467,932	10.31	267	534,862	0.11	25,467
	2022		13,766	25,892	51,783,791	10.31	269	538,145	0.11	25,623
	2023		13,851	26,051	52,101,588	10.31	271	541,447	0.11	25,780
	2024		13,936	26,211	52,421,336	10.31	272	544,770	0.11	25,938
	2025	0.00612	14,021	26,372	52,743,045	10.31	274	548,114	0.11	26,097
	2026		14,107	26,533	53,066,730	10.31	276	551,477	0.11	26,258
	2027		14,194	26,696	53,392,400	10.31	277	554,862	0.11	26,419
	2028		14,281	26,860	53,720,069	10.31	279	558,267	0.11	26,581
Terry	2029		14,369	27,025	54,049,750	10.31	281	561,693	0.11	26,744
Te	2030		14,457	27,191	54,381,453	10.31	283	565,140	0.11	26,908
	2031		14,541	27,349	54,698,032	10.31	284	568,430	0.11	27,065
	2032		14,626	27,508	55,016,454	10.31	286	571,739	0.11	27,222
	2033		14,711	27,668	55,336,729	10.31	288	575,068	0.11	27,381
	2034		14,797	27,829	55,658,869	10.31	289	578,415	0.11	27,540
	2035	0.00580	14,883	27,991	55,982,885	10.31	291	581,782	0.11	27,701
	2036	0.00300	14,969	28,154	56,308,786	10.31	293	585,169	0.11	27,862
	2037		15,057	28,318	56,636,585	10.31	294	588,576	0.11	28,024
	2038		15,144	28,483	56,966,292	10.31	296	592,002	0.11	28,187
	2039		15,232	28,649	57,297,918	10.31	298	595,449	0.11	28,351
	2040		15,321	28,816	57,631,475	10.31	299	598,915	0.11	28,516
	2041	0.00501	15,398	28,960	57,920,885	10.31	301	601,922	0.11	28,659
	2042	3.00301	15,475	29,106	58,211,748	10.31	302	604,945	0.11	28,803

	Year	Growth Rate per Year	Current Population / Population Projection	Landfill Disposal (Tons)	Landfill Disposal (lbs.)	Disposal Rate (lbs./Person/Day)	Recycling (Tons)	Recycling (lbs.)	Recycling Rate (lbs./Person/Day)	Residential Waste Generation (Tons)
	2020		8,920	10,076	20,152,000	6.19	6	12,000	0.004	10,070
	2021		9,031	10,201	20,401,706	6.19	6	12,149	0.004	10,195
	2022		9,142	10,327	20,654,506	6.19	6	12,299	0.004	10,321
	2023		9,256	10,455	20,910,438	6.19	6	12,452	0.004	10,449
	2024		9,370	10,585	21,169,542	6.19	6	12,606	0.004	10,578
	2025	0.01231	9,487	10,716	21,431,856	6.19	6	12,762	0.004	10,710
	2026		9,604	10,849	21,697,421	6.19	6	12,920	0.004	10,842
	2027		9,723	10,983	21,966,276	6.19	7	13,080	0.004	10,977
	2028		9,844	11,119	22,238,463	6.19	7	13,242	0.004	11,113
Yoakum	2029		9,966	11,257	22,514,022	6.19	7	13,407	0.004	11,250
Yoa	2030		10,089	11,396	22,792,996	6.19	7	13,573	0.004	11,390
	2031		10,188	11,509	23,017,509	6.19	7	13,706	0.004	11,502
	2032		10,289	11,622	23,244,233	6.19	7	13,841	0.004	11,615
	2033		10,390	11,737	23,473,190	6.19	7	13,978	0.004	11,730
	2034		10,492	11,852	23,704,403	6.19	7	14,115	0.004	11,845
	2035	0.00980	10,596	11,969	23,937,893	6.19	7	14,254	0.004	11,962
	2036	0.00380	10,700	12,087	24,173,683	6.19	7	14,395	0.004	12,080
	2037		10,806	12,206	24,411,795	6.19	7	14,537	0.004	12,199
	2038		10,912	12,326	24,652,253	6.19	7	14,680	0.004	12,319
	2039		11,019	12,448	24,895,080	6.19	7	14,824	0.004	12,440
	2040		11,128	12,570	25,140,298	6.19	7	14,970	0.004	12,563
	2041	0.00946	11,234	12,690	25,379,231	6.19	8	15,113	0.004	12,682
	2042	3.00540	11,341	12,810	25,620,434	6.19	8	15,256	0.004	12,803

Bailey County				
Year	2020	2030	2040	2050
Population	8,012	8,962	9,906	10,880

Population		
Growth Rate		
Period	Rate/yr	%/yr
2020 to 2030	0.011205	1.12053
2030 to 2040	0.010015	1.001472
2040 to 2050	0.009379	0.937856

Cochran County				
Year	2020	2030	2040	2050
Population	3,491	3,687	3,717	3,667

Population		
Growth Rate		
Period	Rate/yr	%/yr
2020 to 2030	0.005462	0.546249
2030 to 2040	0.00081	0.081038
2040 to 2050	-0.00135	-0.13543

Crosby County				
Year	2020	2030	2040	2050
Population	6,526	7,023	7,433	7,850

Population		
Growth Rate		
Period	Rate/yr	%/yr
2020 to 2030	0.00734	0.733963
2030 to 2040	0.005674	0.567391
2040 to 2050	0.005458	0.54584

Dickens County				
Year	2020	2030	2040	2050
Population	2,164	2,164	2,164	2,164

Population		
Growth Rate		
Period	Rate/yr	%/yr
2020 to 2030	0	0
2030 to 2040	0	0
2040 to 2050	0	0

Floyd County				
Year	2020	2030	2040	2050
Population	6,869	7,294	7,563	7,854

Population		
Growth Rate		
Period	Rate/yr	%/yr
Period 2020 to 2030	Rate/yr 0.006003	%/yr 0.600336

Garza County				
Year	2020	2030	2040	2050
Population	7,077	7,510	7,899	8,166

Population		
Growth Rate		
Period	Rate/yr	%/yr
2020 to 2030	0.005939	0.593854
2030 to 2040	0.00505	0.505007
2040 to 2050	0.003324	0.33243

Hale County				
Year	2020	2030	2040	2050
Population	38,314	39,965	40,647	40,307

Population		
Growth Rate		
Period	Rate/yr	%/yr
2020 to 2030	0.004219	0.421887
2030 to 2040	0.001692	0.16921
2040 to 2050	-0.00084	-0.084

Hockley County				
Year	2020	2030	2040	2050
Population	25,130	26,734	27,707	27,888

Population		
Growth Rate		
Period	Rate/yr	%/yr
2020 to 2030	0.006187	0.618738
2030 to 2040	0.003575	0.357489
2040 to 2050	0.000651	0.065114

King County				
Year	2020	2030	2040	2050
Population	300	316	316	316

Population		
Growth Rate		
Period	Rate/yr	%/yr
Period 2020 to 2030	Rate/yr 0.005196	

Lamb County				
Year	2020	2030	2040	2050
Population	14,615	15,175	15,438	15,419

Population		
Growth Rate		
Period	Rate/yr	%/yr
2020 to 2030	0.00376	0.376009
2030 to 2040	0.001718	0.171827
2040 to 2050	-0.00012	-0.01231

Lubbock County	/			
Year	2020	2030	2040	2050
Population	309,769	343,977	378,320	414,938

Population		
Growth Rate		
Period	Rate/yr	%/yr
2020 to 2030	0.010475	1.047479
2030 to 2040	0.009517	0.951656
2040 to 2050	0.009239	0.923887

Lynn County				
Year	2020	2030	2040	2050
Population	6,279	6,605	6,624	6,594

Population		
Growth Rate		
Period	Rate/yr	%/yr
2020 to 2030	0.005062	0.506162
2030 to 2040	0.000287	0.028725
2040 to 2050	-0.00045	-0.04539

Motley County				
Year	2020	2030	2040	2050
Population	1,212	1,212	1,212	1,212

Population		
Growth Rate		
Period	Rate/yr	%/yr
Period 2020 to 2030	Rate/yr 0	%/yr 0
	Rate/yr 0	%/yr 0 0

Terry County				
Year	2020	2030	2040	2050
Population	13,599	14,457	15,321	16,108

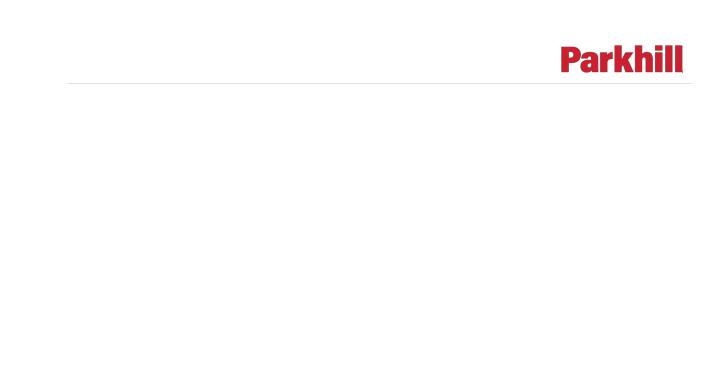
Population		
Growth Rate		
Period	Rate/yr	%/yr
2020 to 2030	0.006118	0.611825
2030 to 2040	0.005805	0.580457
2040 to 2050	0.005009	0.500916

Yoakum County

· carrain coame,				
Year	2020	2030	2040	2050
Population	8,920	10,089	11,128	12,232

Population
Growth Rate

Period	Rate/yr	%/yr
2020 to 2030	0.012315	1.231498
2030 to 2040	0.009802	0.980187
2040 to 2050	0.009459	0.94591



APPENDIX III.B: CURRENT AND FUTURE SOLID WASTE AMOUNTS BY TYPE



ESTIMATES OF CURRENT AND FUTURE SOLIID WASTE AMOUNTS BY TYPE

Table III.B.I

The number of landfills accepting individual waste types was determined from surveyed municipality responses and totals listed on the TCEQ's fiscal year 2020 annual report. Current tons disposed was calculated from the summation of each landfill tonnage within the region accepting the corresponding waste. The base year or current year is designated 2020 based on the availability of data and projected out in five-year increments (i.e., 5-Year Projection is 2025, 10-Year Projection is 2030, etc.). If no data was found for a corresponding waste the value of zero was selected for the table and calculations.

Table III.B.I							
Waste Type	Number of Landfills Accepting Waste Type	Percent of Total Tons Disposed	Current Year Disposed Tons (2020)	5-Year Projection	10-Year Projection	15-Year Projection	20-Year Projection
Municipal	15	61.02%	366,142	383,111	400,866	416,830	433,430
Brush	2	0.03%	201	211	220	229	238
C&D	16	32.74%	196,453	205,557	215,084	223,649	232,556
Litter	2	0.01%	64	67	70	73	76
Class 1 (Non-Hazardous Class 2 and 3	0	0.00%	0	0	0	0	0
(Non-Hazardous)	1	0.88%	5,257	5,501	5,756	5,985	6,224
Incinerator Ash	0	0.00%	0	0	0	0	0
Treated Medical Waste	0	0.00%	0	0	0	0	0
Municipal Hazardous Waste from CESQGs	0	0.00%	0	0	0	0	0
RACM	0	0.00%	0	0	0	0	0
Non-RACM	0	0.00%	0	0	0	0	0
Dead Animals	5	0.02%	133	139	146	152	158
Sludge	3	2.80%	16,799	17,577	18,392	19,124	19,886
Grease Trap Waste	0	0.00%	0	0	0	0	0
Septage	0	0.00%	0	0	0	0	0
Contaminated Soil	0	0.00%	0	0	0	0	0
Tires (split, quartered, shred)	4	0.40%	2,394	2,505	2,621	2,726	2,834
Pesticides	0	0.00%	0	0	0	0	0
Used Oil Filters	0	0.00%	0	0	0	0	0
Other (identify type reported as Attachment III.B)	1	2.09%	12,544	13,125	13,733	14,280	14,849
Total	49	100.00%	599,987	627,794	656,889	683,049	710,251
			•		•		

Note: Survey responses and TCEQ 2020 annual report were used to determine tonnage information for each corresponding waste type. Waste disposal projected out in five-year increments using the law of growth equation with region cumulative growth rate as used in Table III.A.I.

2021 Texas Water Development Board Population Combination of all counties within SPAG

Note: Each individual county TWDB population projections that makes up SPAG region were used to determine estimate for entire SPAG region growth rate for use in Table III.A.I and Table III.B.I.

County	2020	2030	2040	2050
BAILEY Total	8,012	8,962	9,906	10,880
COCHRAN Total	3,491	3,687	3,717	3,667
CROSBY Total	6,526	7,023	7,433	7,850
DICKENS Total	2,164	2,164	2,164	2,164
FLOYD Total	6,869	7,294	7,563	7,854
GARZA Total	7,077	7,510	7,899	8,166
HALE Total	38,314	39,965	40,647	40,307
HOCKLEY Total	25,130	26,734	27,707	27,888
KING Total	300	316	316	316
LAMB Total	14,615	15,175	15,438	15,419
LUBBOCK Total	309,769	343,977	378,320	414,938
LYNN Total	6,279	6,605	6,624	6,594
MOTLEY Total	1,212	1,212	1,212	1,212
TERRY Total	13,599	14,457	15,321	16,108
YOAKUM Total	8,920	10,089	11,128	12,232
	452,277	495,170	535,395	575,595
Population				

Population Growth Rate

Period	Rate/yr	%/yr
2020 to 2030	0.00906	0.906063
2030 to 2040	0.00781	0.781037
2040 to 2050	0.00724	0.723995



APPENDIX III.C: DESCRIPTION OF CURRENT AND PLANNED SOLID WASTE MANAGEMENT ACTIVITIES



IDENTIFICATION PLAN CONTENT: DESCRIPTION OF CURRENT AND PLANNED SOLID WASTE MANAGEMENT ACTIVITIES IN THE REGION

Table III.C.I

Transportation

Based on the large open area and sparsely populated region, transportation of waste is required to dispose of MSW into permitted landfills. Many small municipalities within the region do not operate their own solid waste collection and disposal, or only operate a type IV landfill or citizen collection / drop-off site. Surveyed municipalities in the region did indicate instances of waste transport outside of the city to the nearest permitted landfill. The following table lists a few transport operations within the region, but due to the lack of survey responses may not cover all waste transport operations.

Table III.C.I (a)			
Generation Source (Municipality)	Disposal Location (Landfill Location)		
City of Amherst	City of Littlefield Landfill		
City of Denver City	Yoakum County Landfill		
City of Hale Center	West Texas Region Disposal Facility City of Plainview Landfill City of Olton Landfill		
City of Lockney	City of Floydada Landfill City of Plainview Landfill		
City of New Home	City of Tahoka Landfill		
City of Plains	Yoakum County Landfill		
City of Sundown	City of Meadow Landfill		
City of Wellman	City of Meadow Landfill		

Disposal of Solid Waste

Surveyed municipalities and private haulers within the region provided landfill waste and tonnage information. The provided data coupled with the most recent fiscal year 2020 TCEQ Annual Report data, was used to construct the following tables. Table III.C.I demonstrates the annual tonnage at each MSW landfill within the region. Tonnage information was obtained from municipality surveys and verified by TCEQ Annual Reports. Table III.C.II demonstrates the remaining life at each MSW landfill within the region. West Texas Region Disposal Facility is the largest facility in the region and aside from the low tonnage facility in the City of Amherst, is the facility with the longest remaining life.

Table III.C.I (b)			
Municipality / Facility Name	Annual Tonnage (tons)		
WTRDF	303,453		
Plainview	32,507		
Caliche Canyon	18,281		
Brownfield	15,930		
Meadow	11,016		
Levelland	10,860		
Olton	9,847		
Yoakum County	8,925		
Littlefield	8,076		
Muleshoe	7,254		
Floydada	5,806		
Post	3,602		
Matador	2,714		
Sundown	310		
Morton	41		
Amherst	24		

Table III.C.I (c)			
Municipality / Facility Name	Remaining Life (Years)		
Amherst	408		
WTRDF	222		
Plainview	177		
Sundown	141		
Muleshoe	125		
Levelland	108		
Brownfield	104		
Morton	91		
Littlefield	74		
Yoakum County	72		
Matador	69		
Floydada	66		
Olton	29		
Meadow	20		
Caliche Canyon	7		
Post	4		



APPENDIX III.D: DESCRIPTION AND ASSESSMENT OF THE ADEQUACY OF EXISTING SOLID WASTE MANAGEMENT FACILITIES AND PRACTICES



IDENTIFICATION PLAN CONTENT: DESCRIPTION AND ASSESSMENT OF THE ADEQUACY OF EXISTING SOLID WASTE MANAGEMENT FACILITIES & PRACTICES, AND HOUSEHOLD HAZARDOUS WASTE PROGRAMS

Table III.D.I

Resource Recovery

Surveyed municipalities and private haulers within the region did not indicate any resource recovery operations. Current recycling operations collect material and transfer recyclable material outside of the region for resource recovery. Recycling operations in the region lag behind anticipated goals without a resource recovery facility in the region. Many municipalities operate some form of recycling operations, but predominately act to collect, sort, and transfer the material outside of the region. With transportation costs, most recycling operations in the region operate in a deficit situation. Municipalities would push for additional recycling if a resource recovery facility existed within the region to lower transportation costs and aid in creating a profitable recycling operation. The lack of a resource recovery facility is an inadequacy for both facility and practice. The City of Lubbock would like to develop a materials recovery facility, but no plans during the long-term planning period are expected.

Storage

Surveyed municipalities and private institutions within the region did not indicate any solid waste (MSW) storage procedures. Current waste generation, collection, and disposal methods employed in the region does not lead to the need for MSW storage. MSW storage is not employed in the region but is not considered an inadequacy.

Transportation

Waste transportation outside of collection and disposal exists in the regions active transfer stations, Caliche Canyon Transfer Station (Registration No. 40176) and City of Levelland Transfer Station (Registration No. 40051), the regions medical waste transfer station, Stericycle Lubbock Medical Waste Transfer Station (Registration No. 40279), and the region's liquid waste processing facility, Southwaste Disposal South Plains Liquid Waste Processing Facility (Registration No. 2231). The City of Lubbock has plans in the short-range planning period to permit and construct an additional transfer station within Lubbock County.

Treatment

Surveyed municipalities and private institutions within the region did not indicate any MSW treatment procedures. Current waste generation, collection, and disposal methods employed in the region does not lead to the need for MSW treatment. MSW treatment is not employed in the region but is not considered an inadequacy.

Disposal

Surveyed municipalities and private institutions within the region did not indicate any inadequacy for disposal operations. Current remaining tonnage and life for the region's landfills are adequate well past the long-range planning period. Based on surveys and TCEQ annual reports, only four landfills indicated remaining life less than 50 years. The following table from Attachment III.C, indicates the remaining life for landfills within the region.

Table III.C.I (c)			
Municipality / Facility Name	Remaining Life (Years)		
Amherst	408		
WTRDF	222		
Plainview	177		
Sundown	141		
Muleshoe	125		
Levelland	108		
Brownfield	104		
Morton	91		
Littlefield	74		
Yoakum County	72		
Matador	69		
Floydada	66		
Olton	29		
Meadow	20		
Caliche Canyon	7		
Post	4		

The City of Post has a permitted facility (MSW Permit No. 2397) adjacent to current landfill, which plans to open as current facility reaches capacity. Additional municipalities that expressed desire to expand facilities were the City of Meadow and the City of Olton, but a timeframe was not indicated. Based on the adequate landfill storage available the region has no inadequate facilities and current practices are adequate.

Household Hazardous Waste Collection

Surveyed municipalities and private institutions within the region did not indicate any ongoing collection program for household hazardous waste (HHW) or electronic waste (E-waste). Periodically cities may conduct special collection days to allow residents to drop off HHW. The lack of accessible long-term drop-off locations throughout the region and the inability to collect HHW at the source poses a risk to increased improper disposal of HHW. The region does not have an adequate number of facilities and/or practices for handling HHW collection. The region requires long-term drop-off facilities, designated permanent HHW collection containers, or an increase of private haulers to collect HHW to address the inadequacy.

Household Hazardous Waste Disposal

Surveyed municipalities and private institutions within the region indicated only two landfills accepting household hazardous waste, City of Lubbock's West Texas Region Disposal Facility (MSW Permit No. 2252) and City of Plainview (MSW Permit No. 2157). Few smaller municipalities indicated accepting vehicle oil at city drop off locations or designated HHW pick up events during the year, but the lack of permanent disposal or processing available in the region increases the rate of disposal within landfills. To address the inadequacy the region requires additional disposal and/or processing facilities within the region to aid in transportation cost required to divert HHW away from landfill operations. Additional facilities capable of processing HHW materials for reuse would be beneficial for the region.



APPENDIX 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 WASTE MINIMIZATION EFFORTS, INCLUDING SLUDGE, AND EFFORTS TO REUSE OR RECYCLE WASTE

Waste reduction is an important goal of this solid waste management plan as current reduction and recycling within the region is limited or non-existent. Based on surveys of region municipalities and private haulers, very few methods for waste reduction and recycling were indicated. Currently the region has no organized effort to reduce waste and sludge or increase recycling within the SPAG region in recent years. Economically, the region does not have the means to collect and transport recycled materials rather than dispose of at local landfills. There are no private or public full scale recycling facilities in the region, and transportation costs for pickup and delivery to recyclers limit the amount of recycling opportunities for local municipalities. There are no current incentives in the region for waste reduction or sludge reduction therefore these materials continue to be landfilled. This solid waste management plan has developed goals to increase both waste reduction and recycling throughout the long-range planning sector.



APPENDIX III.H: IDENTIFICATION OF PUBLIC AND PRIVATE MANAGEMENT AGENCIES AND RESPONSIBILITIES



IDENTIFICATION OF PUBLIC AND PRIVATE MANAGEMENT AGENCIES AND RESPONSIBILITIES

Waste Collection and Disposal

The region utilizes a combination of city-owned solid waste crews and private entities for MSW collection and disposal. In many instances, cities and private entities operate concurrently without interruptions. Due to the large land area and sparsely populated region, smaller municipalities' MSW operations are predominately controlled by private haulers. Based on the surveyed municipalities and private MSW entities within the region, the following table indicates MSW collection and disposal responsibilities for municipalities within the region.

	Table III.D.I (a)				
Management Agency	Collection / Disposal Entities	Responsibility	Management Agency	Collection / Disposal Entities	Responsibility
City of Amherst	City of Amherst	Waste collection and disposal for city limits and surrounding areas.	City of Matador	City of Turkey; City of Quitque; SOS Waste; Republic Services	Waste collection and disposal for city limits and surrounding areas.
City of Anton	Triple C Waste	Waste collection and disposal for city limits and surrounding areas.	City of Meadow	A&L Disposal; Llano Waste; Republic Services; Waste Connections of Texas	Waste collection and disposal for city limits and surrounding areas.
City of Brownfield	City of Brownfield; J'S Disposal; Lake Alan Henry Disposal; Llano Waste; Republic Services; SOS Disposal; Texas Roll Off; Tomahawk Disposal	Waste collection and disposal for city limits and surrounding areas.	City of Morton	South Plains Waste	Waste collection and disposal for city limits and surrounding areas.
City of Denver City	City of Denver City	Waste collection and disposal for city limits and surrounding areas.	City of Muleshoe	South Plains Waste	Waste collection and disposal for city limits and surrounding areas.

City of Floydada	City of Crosbyton; City of Floydada; City of Lockney; South Plains Waste; Triple C Waste; Waste Connections of Texas	Waste collection and disposal for city limits and surrounding areas.	City of New Deal	South Plains Waste	Waste collection and disposal for city limits and surrounding areas.
City of Idalou	Republic Services	Waste collection and disposal for city limits and surrounding areas.	City of New Home	Republic Services	Waste collection and disposal for city limits and surrounding areas.
City of Hale Center	Triple C Waste	Waste collection and disposal for city limits and surrounding areas.	City of O'Donnell	Republic Services	Waste collection and disposal for city limits and surrounding areas.
City of Levelland	Republic Services	Waste collection and disposal for city limits and surrounding areas.	City of Olton	City of Amherst; South Plains Waste; Thoshanowasti	Waste collection and disposal for city limits and surrounding areas.
City of Littlefield	City of Amherst; City of Littlefield; Llano Waste; Republic Services; Waste Removers	Waste collection and disposal for city limits and surrounding areas.	City of Plains	City of Plains	Waste collection and disposal for city limits and surrounding areas.
City of Lockney	City of Plainview	Waste collection and disposal for city limits and surrounding areas.	City of Plainview	City of Lockney; City of Plainview; Llano Waste; South Plains Waste; SOS Waste; Republic Services; Waste Connections of Texas	Waste collection and disposal for city limits and surrounding areas.
City of Lorenzo	Triple C Waste	Waste collection and disposal for city limits and surrounding areas.	City of Post	Lake Allen Henry; Republic Services	Waste collection and disposal for city limits and surrounding areas.

City of Lubbock	City of Lubbock; Republic Services; SOS Waste; South Plains Waste; Waste Connections of Texas	Waste collection and disposal for city limits and surrounding areas.	City of Ralls	Triple C Waste	Waste collection and disposal for city limits and surrounding areas.
City of Ransom Canyon	Waste Connections of Texas	Waste collection and disposal for city limits and surrounding areas.	City of Wellman	Republic Services	Waste collection and disposal for city limits and surrounding areas.
City of Ropesville	Republic Services	Waste collection and disposal for city limits and surrounding areas.	City of Whiteface	Republic Services	Waste collection and disposal for city limits and surrounding areas.
City of Spur	SOS Waste	Waste collection and disposal for city limits and surrounding areas.	Yoakum County	City of Denver City; City of Plains	Waste collection and disposal for city limits and surrounding areas.
City of Sundown	Republic Services	Waste collection and disposal for city limits and surrounding areas.			

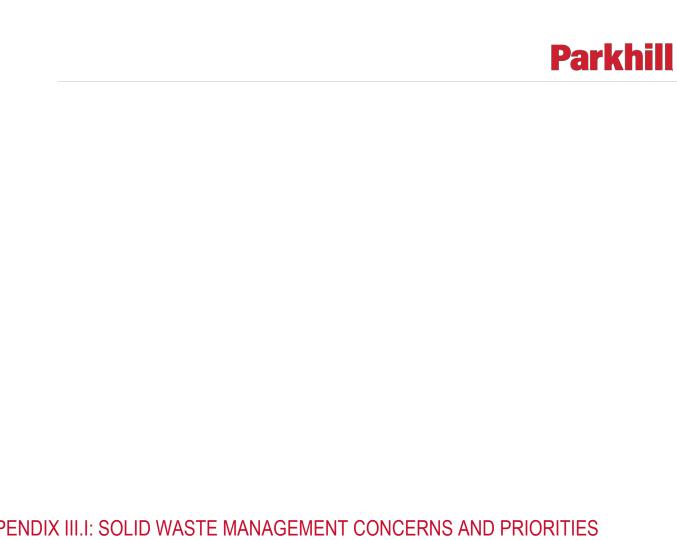
Recycling Summary
Based on the surveyed municipalities, the following table lists the municipalities sponsoring recycling operations within the city.

Table III.D.I (b)			
Municipality	Scope of Activities		
City of Amherst	Promote to public, Collect Material from households or business.		
City of Brownfield	Promote to public, Collect Material from households or businesses, Operate drop-off center.		
City of Hale Center	Promote to public, Collect material from households or businesses, Operate drop-off center.		
City of Levelland	Promote to public, Collect material from households or businesses, Operate drop-off center.		
City of Lubbock	Promote to public, Collect material from households or businesses, Operate drop-off center.		
City of Matador	Promote to public, Operate drop-off center.		
City of Meadow	Promote to general public, Collect material from households or businesses, Operate drop-off center.		
City of New Deal	Promote to public, Collect material from households or businesses, Operate drop-off center.		
City of Plainview	Promote to public, Collect material from households or businesses, Operate drop-off center.		
City of Post	Collect material from households or businesses.		
Dickens County	Operate drop-off center.		
Town of Ransom Canyon	Operate drop-off center.		

Private Entities

Based on the survey results, the following table contains the list of private entities and their main responsibility within the region.

Table III.D.I (c)				
Private Entities	Responsibility			
Henderson Scrap Metal	Scrap metal recycling services.			
Jarvis Metal	Scrap metal recycling services. Scrap paper and cardboard recycling services.			
J'S Disposal	Residential waste collection.			
Lake Alan Henry Disposal	Waste collection and management for Lake property.			
Llano Waste	Commercial waste collection. Commercial roll-off management.			
Republic Services	Residential and commercial waste collection. Commercial roll-off management. Recycling services and collection.			
SOS Disposal	Residential and commercial waste collection. Commercial roll-off management.			
South Plains Waste	Residential and commercial waste collection.			
State Rubber	Scrap tire recycling services.			
Texas Roll Off	Commercial waste collection. Commercial roll-off management.			
Texas Tech University	Residential and commercial waste collection. Operate recycling center for drop-off and processing.			
Tomahawk Disposal	Residential waste collection.			
Triple C Waste	Residential waste collection.			
Waste Connections of Texas (Caprock Waste)	Residential and commercial waste collection. Commercial roll-off management. Old corrugated cardboard recycling.			



APPENDIX III.I: SOLID WASTE MANAGEMENT CONCERNS AND PRIORITIES



IDENTIFICATION OF SOLID WASTE MANAGEMENT CONCERNS AND ESTABLISHMENT OF PRIORITIES FOR ADDRESSING THOSE CONCERNS

The region has lagged in recycling and waste reduction programs, and the goals within this solid waste management plan are aimed to address those deficiencies. Recycling has been difficult to achieve in the region due to the lack of facilities to properly recycle materials. The region desires to increase recycling efforts but has identified the need for waste reduction at the source as a first step in decreasing recyclable material from being disposed. As new materials enter the waste stream the region intends to decrease improper disposal of electronic wastes (E-waste), household hazardous waste (HHW), and tires, as outlined in the following goals.

Goal 1 The region will reduce solid waste entering landfills by 5% by 2027 and a further reduction to 10% by 2032.		
Short Range:		
 The reduction in waste will start at an educational level. SPAG will participate in educational outreach with municipalities and city officials to increase awareness and the need for waste reduction SPAG will work with municipalities on developing annual goals of waste reduction at local landfills. Educate citizens on how to create home composting or advertise where citizens can drop off compostable material. 		
Intermediate:		
 SPAG and interested municipalities will partner to develop additional composting facilities at local landfills. Increase the number of collection days or community clean-up events for collecting recyclable material, E-waste, or HHW. 		
Long Range:		
SPAG will work with interested municipalities to locate partners within the construction industry to provide incentives for building material reuse and recycling of building material waste.		
Goal 2 The region intends to develop a regional plan to properly dispose of E-Waste from households and private businesses.		
Short Range:		

- □ SPAG will participate in educational outreach with municipalities to inform citizens of the hazards of disposing electronics in local dumpsters.
- □ SPAG will contact commercial electronic vendors within the region to determine corporate E-waste programs to partner with and/or locate facilities within or near the region that could actively recycle or reuse E-waste.



Intermediate:
 SPAG will partner with municipalities and commercial electronic vendors to develop a regional plan for proper E-waste disposal. Develop temporary or permanent locations for E-waste disposal and/or transport of collected material to specialized facilities able to recycle or reuse the waste. Provide incentives for citizens to use E-waste drop-offs.
Long Range:
 Develop permanent E-waste dumpsters or drop-off locations that will regularly be collected and transported to a facility capable of recycling or reuse.
Goal 3 The region will encourage the proper disposal of HHW and other hazardous wastes.
Short Range:
 SPAG will participate in educational outreach with municipalities to inform citizens about what HHW is and the hazards of improper disposal. Educate citizens about the nearest facility or disposal location for HHW in the region. Increase the number of collection days or community clean-up events for collecting HHW from SPAG citizens.
Intermediate:
 SPAG will locate facilities within the region or near the region that are capable of recycling or reuse of HHW. Provide incentives for citizens to use collection days, community clean-up events, or disposal to proper locations.
Long Range:
 SPAG will work with interested municipalities in developing permanent HHW dumpsters or drop-off locations that will regularly be collected and transported to a facility capable of recycling or reuse.
Goal 4 The region will decrease illegal dumping, including improperly disposed tires within the region.
Short Range:
SPAG will participate in educational outreach with municipalities on the importance of properly disposing of tires at designated locations. Educate citizens about the peacest facility or disposal location accepting tires in the region.



Interme	ediate:		
	SPAG will work with interested municipalities in developing city ordinances and incentives for proper disposal of tires at the landfill or nearest scrap tire facility. Educate local law enforcement no importance of enforcing ordinances for illegal dumping. Clean up areas within the region of illegally dumped tires.		
Long R	Long Range:		
	SPAG will locate potential partners to develop additional scrap tire facilities within the region.		
continu importa recyclir	gion will provide educational efforts to reduce waste and engage in proper disposal methods. SPAG will ally assist in providing educational outreach to municipalities and citizens within the region on the ince of waste reduction and proper disposal of E-waste, HHW, and tires. The region has not had attainable ag facilities within the region, and waste reduction at the source is the first step in achieving waste on at the landfills.		
Short Range:			
	SPAG will participate in educational outreach with municipalities on methods to prioritize reusing material and/or wastes and how to reduce waste at the source by using less material or better material. Provide free informational webinars, mailing informational brochures to homes, and developing print and/or TV advertisement on increasing waste reduction and recycling.		
Intermediate:			
	SPAG will locate partners with local K-12 school districts to operate education projects, provide field trips to waste facilities and deliver presentations on waste reduction and recycling.		
Long R	ange:		
	Partner with higher education facilities to develop education projects for the local community. Create community organizations revolving around waste reduction and recycling to continue spreading awareness and educational outreach throughout the SPAG region.		



APPENDIX 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



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

Information presented in this attachment will outline the process through which SPAG will review MSW permits for conformance with the Regional Solid Waste Management Plan. Permittees are required to submit MSW Permit applications, Part I and Part II, to the regional council of governments. SPAG will review applications to determine conformance with the Regional Solid Waste Management Plan. SPAG will not approve or deny any MSW permit and will not determine if the application meets TCEQ regulations. All final issuance of MSW permits will be determined by TCEQ. Applicants requesting a letter from SPAG indicating their permit complies with the Regional Plan must submit the following information with the request:

Current population growth and waste generation rate for the local region or municipality proposing the permitted facility.
The total population and waste disposal for the local region or municipality proposing the permitted
facility.
Where the applicant is currently disposing of solid waste and the current distance to the nearest MSW
facility.
What is the current monthly disposal fee, and what is the anticipated fee for the proposed permitted
facility?
What is the anticipated tipping fee of the proposed permitted facility?
Describe the financial burden of the applicant and how there is no practicable waste management
alternative available.
Will the applicant be operating the proposed facility with owned or leased equipment?
Does the applicant currently have this equipment available?
What are the applicant's current source reduction programs and goals?

The listed items are not part of a conformance review but will provide helpful information to the COG. Following an MSW permit review that provides requested information and conforms to the practices indicated in the Regional Plan, SPAG will provide the applicant a letter indicating support for the proposed permitted facility.



APPENDIX IV.B: PUBLIC NOTICE, AGENDA, PUBLIC COMMETNS, AND PUBLIC MEETING TRANSCRIPT

SOUTH PLAINS ASSOCIATION OF GOVERNMENTS

RESOLUTION

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE SOUTH PLAINS ASSOCIATION OF GOVERNMENTS (SPAG), AUTHORIZING THE SUBMISSION OF A REGIONAL SOLID WASTE PLAN UPDATE TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ); AND AUTHORIZING THE SPAG EXECUTIVE DIRECTOR TO ACT AS SPAG'S EXECUTIVE OFFICER AND AUTHORIZED REPRESENTATIVE IN ALL MATTERS PERTAINING TO THIS RESOLUTION

WHEREAS, the Board of Directors of the South Plains Association of Governments desires to develop a viable Solid Waste Management Plan to guide solid waste activities within the SPAG region; and

WHEREAS, an amendment to the Regional Solid Waste Management Plan has been approved; and

WHEREAS, It is necessary and in the best interests of SPAG to submit the updated Regional Solid Waste Management Plan;

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE SOUTH PLAINS ASSOCIATION OF GOVERNMENTS:

- 1. That the Regional Solid Waste Management Plan and updated information is hereby authorized to be submitted on behalf of SPAG with the Texas Commission on Environmental Quality.
- 2. That the SPAG Board of Directors directs and designates the SPAG Executive Director as the SPAG Board of Directors Chief Executive Officer and Authorized Representative to act in all matters in connection with this submission and SPAG's participation in the Regional Solid Waste Management Plan.

Passed and approved this 9th day of November , 2021.

ohn Baker, President

Attest:

Tim Pierce

Executive Director

South Plains Association of Governments

Solid Waste Advisory Committee (SWAC) Subcommittee

Monday, December 2, 2019

10:00 A.M.

Agenda

- I. Discuss and determine changes to Regional Solid Waste Management Plan goals and objectives
- II. Discuss and determine survey to be used for Regional Solid Waste Management Plan update
- III. Discuss and determine Regional Solid Waste Management Plan update scope of engineering services and timeline
- IV. Schedule Next Subcommittee Meeting (February 2020)
- V. Other Business

South Plains Association of Governments Solid Waste Advisory Committee (SWAC) Ad Hoc Subcommittee Monday, December 2, 2019 Minutes

Members Present: SPAG Staff Present:

Chelsey Baldivia, SW Planner

Joe Cavazos Brenda Haney Patti Lowrance Richard Salazar

Members Absent: Visitors Present:

Brocke Lively

Holly Holder-PSC

Tyler Krueger- PSC

Meeting Began: 9:11 a.m.

I. Discuss and determine changes to Regional Solid Waste Management Plan goals and objectives

It was decided that the SWAC Subcommittee members will review the goals and objectives for the SWAC region and return any recommendations to Chelsey. Then, these recommendations will be taken to the SWAC in January 2020 for final input and approval. The proposed changes will be sent to Parkhill, Smith and Cooper Engineering before the end of January 2020 to be integrated into the Reginal Solid Waste Plan.

II. Discuss and determine survey to be used for Regional Solid Waste Management Plan update

It was decided that the SWAC Subcommittee members will submit any changes or recommendations they have to the previous survey used for the last update to Chelsey by December 13th, 2019 to be sent to Parkhill, Smith and Cooper. PSC will update the survey and return it to SPAG (Chelsey) by the first week of January 2020 to be sent out to the region via email. Survey results will be due by the end of January 2020. SPAG (Chelsey) will help facilitate responses to the surveys by phone calls with the Cities/Counties of the region and the Solid Waste Haulers.

III. Discuss and determine Regional Solid Waste Management Plan update scope of engineering services and timeline

It was decided that PSC will return a complete contract with scope of services and pricing to SPAG (Chelsey) by December 13th. Chelsey will then submit this to TCEQ for approval before execution by Tim Pierce, Executive Director of SPAG. The same

timeline, as presented previously to the SWAC at the November 20th meeting, will remain the same. See below:

- Regional Solid Waste Management Plan
- September 2019- Procure Engineering Firm
- November2019/Early December 2019- Subcommittee Meeting to review scope of work
- November 2019- February 2020- Engineering Firm at Work
- February 2020- Subcommittee Meeting to review draft of plan
- March 2020- Subcommittee Meeting to review draft of completed plan
- April 2020- SWAC Meeting to review and approve completed plan
- May 2020- SPAG Board of Directors approve completed plan
- May 2020- Submit completed plan to TCEQ
- IV. Schedule Next Subcommittee Meeting (February 2020)

The next Subcommittee Meeting was scheduled for February 27th at 10:00a.m.

This meeting ended at 10:00 a.m.

South Plains Association of Governments

Solid Waste Advisory Committee (SWAC) Subcommittee

Monday, October 5, 2020

10:00 A.M.

Agenda

- I. Discuss and determine edits/requirements for survey to be used for Regional Solid Waste Management Plan update
- II. Discuss and determine Regional Solid Waste Management Plan update scope of engineering services and timeline
- III. Other Business
- IV. Schedule Next Subcommittee Meeting

South Plains Association of Governments Solid Waste Advisory Committee (SWAC) Ad Hoc Subcommittee Monday, October 5, 2020 Minutes

Members Present:

SPAG Staff Present:

Chelsey Baldivia, SW Planner

Joe Cavazos Mac LaDuke Tim Crosswhite

Members Absent:

Brenda Haney Patti Lowrance Visitors Present: Holly Holder-PSC

Meeting Began: 10:07a.m.

I. Discuss and determine edits/requirements for survey to be used for Regional Solid Waste Management Plan update

Holly asked the Subcommittee to actively review the current survey provided by Parkhill and see if they see any issues with interpreting/filling out the survey from the perspective of a City receiving the survey by mail or email without having the discussed background information the SWAC members have. He requested that the subcommittee review all of the corresponding TCEQ guidance and current survey by Thursday, October 8th. Holly will review and make sure everything the TCEQ forms contain lines up with the TCEQ questionnaire and return the survey with his edits and any concerns provided by the subcommittee by Friday, October 9th. The subcommittee will need to review the survey again by Monday, October 12th and return any feedback to Holly. Holly will have the survey ready to be sent out by October 15th. SPAG will send the survey out October 19th and allow 6 weeks response time for the survey making it due back by November 30th.

II. Discuss and determine Regional Solid Waste Management Plan update scope of engineering services and timeline

Holly will update the scope of engineering services/timeline based on the timeline we have now set for the survey- this means the update will likely be completed by July 2020. At this time there will be no change to the engineering contract price as originally agreed upon in the spring of 2019.

III. Other Business

Holly mentioned the Municipal Solid Waste Management and Resource Recovery Advisory Council will be meeting next Thursday. Chelsey offered to send out this information.

Joe asked Chelsey to review the reasoning for this survey and the update- Chelsey obliged.

Tim Crosswhite asked that the background information be sent to him. Chelsey offered to send it to the entire group.

IV. Schedule Next Subcommittee Meeting

Next meeting tentatively scheduled for December 9th or 10th to review survey results and the schedule.

This meeting ended at 10:40 a.m.

South Plains Association of Governments

Solid Waste Advisory Committee (SWAC) Subcommittee

Thursday, February 11, 2021

10:00 A.M.

Agenda

- I. Discuss and review survey responses compiled from Parkhill for Regional Solid Waste Management Plan Update
- II. Discuss and review Regional Solid Waste Management Plan timeline- when data should be presented to the SWAC for review/discussion
- III. Other Business
- IV. Schedule Next Subcommittee Meeting

South Plains Association of Governments Solid Waste Advisory Committee (SWAC) Ad Hoc Subcommittee Thursday, February 11, 2021 Minutes

Members Present:

Mac LaDuke Tim Crosswhite Brenda Haney **SPAG Staff Present**:

Chelsey Baldivia, SW Planner

Members Absent:

Joe Cavazos Patti Lowrance **Visitors Present:**

Holly Holder- Parkhill Tyler Krueger- Parkhill Nash Crawley- Parkhill

Meeting Began: 10:03a.m.

I. Discuss and review survey responses compiled from Parkhill for Regional Solid Waste Management Plan Update

Holly Holder provided a brief overview of the data gathered from the survey responses.

II. Discuss and review Regional Solid Waste Management Plan timeline- when data should be presented to SWAC for review/discussion

Holly encouraged another meeting with the entire subcommittee to discuss the data and provide feedback on the goals and objectives both long-term and short-term and then take this information to the SWAC.

III. Other Business

None.

IV. Schedule Next Subcommittee Meeting

The next meeting tentatively scheduled for the end of February. Chelsey Baldivia will follow up with the all of the subcommittee members and stress the importance of a full attendance at the next meeting to decide on goal recommendations to take to the SWAC for final decisions.

This meeting ended at 10:38 pm.

South Plains Association of Governments

Solid Waste Advisory Committee (SWAC) Subcommittee

Thursday, February 25, 2021

9:30 A.M.

Agenda

- I. Discuss and review survey responses compiled from Parkhill for Regional Solid Waste Management Plan Update
- II. Update and Prioritize Goals for Regional Solid Waste Management Plan Update based on survey responses
- III. Discuss and review Regional Solid Waste Management Plan timeline- when data should be presented to the SWAC for review/discussion
- IV. Other Business
- V. Schedule Next Subcommittee Meeting

South Plains Association of Governments Solid Waste Advisory Committee (SWAC) Ad Hoc Subcommittee Thursday, February 25, 2021 Minutes

Members Present:

Mac LaDuke Tim Crosswhite Brenda Haney **SPAG Staff Present**:

Chelsey Baldivia, SW Planner

Members Absent:

Joe Cavazos Patti Lowrance **Visitors Present:**

Holly Holder- Parkhill Tyler Krueger- Parkhill

Meeting Began: 10:006a.m.

I. Discuss and review survey responses compiled from Parkhill for Regional Solid Waste Management Plan Update

Holly reviewed and discussed the results compiled from the survey responses received by Parkhill for the Regional Solid Waste Management Plan Update.

II. Update and Prioritize Goals for Regional Solid Waste Management Plan Update based on survey results

No more changes were recommended to the Goals for the Regional Solid Waste Management Plan Update. It was agreed upon that the feedback provided at the previous subcommittee meeting and that received from the public meeting and SWAC meeting in March should be taken in to account before further changes or updates should be made.

III. Discuss and Review Solid Waste Management Plan timeline- when data should be presented to the SWAC for review/discussion

It was decided that the public meeting and SWAC meeting would occur at the end of March and that a follow up subcommittee meeting would occur in early April to review what feedback was provided.

IV. Other Business

No other business was discussed.

V. Schedule Next Subcommittee Meeting

The next Subcommittee Meeting was decided to be scheduled for early April after the public meeting and upcoming SWAC meeting scheduled for late March.

This meeting ended at 10:25 pm.

South Plains Association of Governments

Solid Waste Advisory Committee (SWAC) Subcommittee

Wednesday, April 7, 2021

10:00 A.M.

Agenda

- I. Discuss and finalize edits to the current Regional Solid Waste Management Plan Goals and Objectives
- II. Other Business
- III. Schedule Next Subcommittee Meeting

South Plains Association of Governments Solid Waste Advisory Committee (SWAC) Ad Hoc Subcommittee Wednesday, April 07, 2021 **Minutes**

Members Present:

SPAG Staff Present: Mac LaDuke Chelsey Baldivia, SW Planner

Tim Crosswhite Brenda Haney

Members Absent:

Visitors Present: Joe Cavazos Holly Holder- Parkhill Patti Lowrance Tyler Krueger- Parkhill

Meeting Began: 10:05a.m.

I. Discuss and finalize edits to the current Regional Solid Waste Management Plan Goals and Objectives

Chelsey provided the Subcommittee with the feedback received from the SWAC and previous subcommittee meetings to review and prioritize. The Subcommittee prioritized the following changes to the current goals and objectives:

- Combine under education utilizing COG in coordination with local municipalities, local ISD, higher education facilities with focus on recycling, diversion, reduction, reuse
- Education on e-waste
- Education organic/goal waste
- o Educate citizens about options for organize/goal waste
- Education on chippers and tube grinders
- Helping purchase or start municipal chipping and tube grinder programs
- o Replace phone book category in Goal and objective NO. 1 with E-waste and connect with electronic dealers like Battery Joe and Best Buy to work on regional e-Waste promotions
- Literature and training with local community leaders with contacts who specialize in HHW to get this started due to the overall expense of HHW removal
- o Update percentages and years in regional diversion rates, may need to be more general before we can pinpoint real targets
- Make a goal addressing tires specifically since it seems to be an ongoing regional issue (a tire processing facility in our region that was not in existence when the last update was completed)

II. Other Business

No other business was discussed.

III. Schedule Next Subcommittee Meeting

The next Subcommittee Meeting was decided to be scheduled upon Parkhill's completion of the changes to the goals and objectives to review the changes made and any additional missing information.

This meeting ended at 10:45 pm.

South Plains Association of Governments

Solid Waste Advisory Committee (SWAC) Subcommittee

Thursday, June 10, 2021

10:00 A.M.

Agenda

- I. Review Regional Solid Waste Management plan draft and any outstanding items before sending to the Solid Waste Advisory Committee for approval
- II. Other Business

South Plains Association of Governments Solid Waste Advisory Committee (SWAC) Ad Hoc Subcommittee Thursday, June 10, 2021 Minutes

Members Present:

Tim Crosswhite Brenda Haney Mack LaDuke

SPAG Staff Present:

Chelsey Baldivia, SW Planner

Visitors Present:
Holly Holder-PSC
Tyler Krueger- PSC
Nash Crawley- PSC

Members Absent:

Joe Cavasoz Patti Lowrance

Meeting Began: 10:08 a.m.

I. Review Regional Solid Waste Management Plan draft and any outstanding items before sending to the Solid Waste Advisory Committee for approval

Holly Holder reviewed the final draft of the updated Regional Solid Waste Management Plan with the subcommittee members and discussed any outstanding items with the subcommittee. Brenda Haney suggested that we allow comments and edits from all SWAC members through June 30th and that the SWAC be presented with the option of allowing the subcommittee to review those edits and make the final approval before sending the updated plan to the SPAG Board of Directors for final approval. All subcommittee members in attendance unanimously agreed that this option should be presented at the next SWAC meeting scheduled for June 23rd.

II. Other Business

No other business was discussed.

This meeting ended at 10:35 a.m.

South Plains Association of Governments

Solid Waste Advisory Committee (SWAC) Subcommittee

Thursday, July 15, 2021

10:00 A.M.

Agenda

- I. Discuss and review finalized copy of the updated Regional Solid Waste Management Plan
- II. Approve plan on behalf of the Solid Waste Advisory Committee to go to the SPAG Board of Directors August Meeting for approval for submission to the Texas Commission on Environmental Quality

South Plains Association of Governments Solid Waste Advisory Committee (SWAC) Ad Hoc Subcommittee **Thursday, July 15, 2021 Minutes**

Members Present:

SPAG Staff Present:

Chelsey Baldivia, SW Planner

Tim Crosswhite Brenda Hanev Patti Lowrance Mack LaDuke

Members Absent:

Visitors Present: Holly Holder-PSC Joe Cavasoz

Tyler Krueger- PSC

Meeting Began: 10:02 a.m.

I. Discuss and review finalized copy of the updated Regional Solid Waste Management Plan

Holly Holder reviewed the finalized draft of the Regional Solid Waste Management Plan with the Subcommittee and reviewed any missing information (specifically categories that were not necessarily applicable to our region). He also let Chelsey Baldivia know he would need any SWAC or subcommittee minutes as well as public meeting documentation for the plan. Chelsey agreed to send this to him.

II. Approve plan on behalf of the Solid Waste Advisory Committee to go to the SPAG Board of Directors August Meeting for approval for submission to the Texas Commission on Environmental Quality

The members of the SWAC Ad Hoc Subcommittee unanimously approved the final draft of the plan on behalf of the Solid Waste Advisory Committee to be presented for approval and adoption at the SPAG Board of Directors August Meeting and then for submission to the Texas Commission on Environmental Quality. Chelsey Baldivia reminded subcommittee members that there would be one final public meeting for review of the final plan before the SPAG Board of Directors Meeting. Holly Holder recommended that some of the SWAC subcommittee members attend the SPAG Board of Directors meeting to show their support of the new plan updates. The committee members present agreed to attend if possible. Upon request, Holly agreed to present the updated plan to the SPAG Board of Directors at the SPAG Board of Directors August 10th meeting.

This meeting ended at 10:30a.m.

SPAG

Memo

To: Tim C. Pierce, Executive Director

From: Kelly Davila, Director of Regional Services & Economic Development

CC:

Date: 11/9/2021

Re: Agenda Items for the November 9, 2021 SPAG Board Meeting

ITEM

Resolution for approval of amended South Plains Association of Governments' Regional Solid Waste Management Plan for the 2022-2042 Planning Period

Over the past two years, the Solid Waste Advisory Committee, Subcommittee and Parkhill have worked together to update the Regional Solid Waste Management Plan, as required by the Texas Commission on Environmental Quality. This plan update details the region's current and planned municipal solid waste (MSW) management procedures, objectives and goals, recommendations, and strategies for achieving goals through the planning period of years 2022 to 2042. It was noted that the goals and objectives required further adjustment after a preliminary unofficial review by TCEQ. The SWAC is requesting approval of the updated Regional Solid Waste Management Plan by the SPAG Board of Directors before being submitted to TCEQ.

These updates include:

- Adding additional clarification to Goal #2 regarding E-Waste
 - Goal #2 Develop a regional plan to properly dispose of E-Waste <u>from</u> <u>households and private businesses</u>
- Addition additional clarification to Goal #3 regarding Household Hazardous Waste (HHW)
 - Goal #3 Encourage proper disposal of household hazardous waste (HHW) <u>and other hazardous waste</u>
- Broadening Goal #4 to include illegal dumping in addition to improperly disposed of tires
 - o Goal #4 Decrease <u>illegal dumping to include</u> improperly disposed tires within the region.

Notice of Public Meeting

The South Plains Association of Governments (SPAG) will hold a virtual public meeting for regional stakeholders on Thursday, March 25, 2021 at 1:30 p.m. in regard to the Regional Solid Waste Management Plan Update and Development of Regional Goals and Objectives. Participants have the option of joining with video and audio capabilities using the following information:

Meeting Link:

https://zoom.us/j/91257257494?pwd=M21CUG4ybEpvTWxTYXZXaVNBcnNJZz09 Meeting Number: 1-346-248-7799 Passcode: 903909 Meeting ID: 912 5725 7494

The purpose of this meeting is to allow citizens and interested parties an opportunity to discuss concerns and/or solutions regarding minimization or reduction of solid waste production/disposal throughout the SPAG region. SPAG encourages interested parties to participate in this process and to make their views known at this public meeting. Citizens unable to attend this meeting may request a copy of the previously completed Regional Solid Waste Management Plan and Goals and Objectives between the hours of 8:30 am and 4:30 pm on normal business days by emailing Chelsey Baldivia at cbaldivia@spag.org or calling 806-762-8721. Persons with disabilities that wish to attend this virtual meeting should contact SPAG at least two days before the meeting so that appropriate arrangements can be made. Individuals who require auxiliary aids or services for this virtual meeting should contact SPAG at least two days before the meeting so that appropriate arrangements can be made.

South Plains Association of Governments 2002-2022 Regional Solid Waste Management Plan Update Public Meeting Thursday, March 25, 2021 1:30 PM Agenda

- 1) Call to Order
- 2) Discussion of the 2002-2022 Regional Solid Waste Management Plan and required update
 - a) The 2002-2022 Regional Solid Waste Management Plan addresses emerging waste streams and evolving goals, while continuing to promote the reduction of waste and illegal dumping, the recycling and reuse of materials whenever possible, and the handling of waste safely at permitted facilities.
 - b) The plan must be updated at minimum every 20 years.
 - c) The update is completed with funding appropriated by the TCEQ.
- 3) Discussion of the process by which interested parties provide concerns and solutions regarding the minimization or reduction of solid waste production/disposal throughout the SPAG Region
 - a) Current Regional Solid Waste Goals and Priorities
 - b) Current trends noted by a recent survey throughout the region
- 4) Public Comments
 - a) Concerns or Solutions regarding minimization or reduction of solid waste production/disposal throughout the SPAG Region
 - b) Other Comments
- 5) Adjournment

South Plains Association of Governments 2002-2022 Regional Solid Waste Management Plan Update Public Meeting Thursday, March 25, 2021 1:30 PM Meeting Minutes

Meeting Attendees:

Chelsey Baldivia-SPAG
Holly Holder- Parkhill
Keeley Adams
Joe Cavazos
Tim Crosswhite
Stand David
Brenda Haney
Mack LaDuke
Pattie Lowrance
Trey Tow
Ramon Sanchez
Aunie Sellers
Sam Stewart
Todd Stiggins

- 1) Call to Order
- 2) Discussion of the 2002-2022 Regional Solid Waste Management Plan and required update
 - a) The 2002-2022 Regional Solid Waste Management Plan addresses emerging waste streams and evolving goals, while continuing to promote the reduction of waste and illegal dumping, the recycling and reuse of materials whenever possible, and the handling of waste safely at permitted facilities.
 - b) The plan must be updated at minimum every 20 years.
 - c) The update is completed with funding appropriated by the TCEQ.

Chelsey explained the requirement of the update to the Regional Solid Waste Management Plan for the SPAG region and how this process was completed.

- 3) Discussion of the process by which interested parties provide concerns and solutions regarding the minimization or reduction of solid waste production/disposal throughout the SPAG Region
 - a) Current Regional Solid Waste Goals and Priorities
 - b) Current trends noted by a recent survey throughout the region

Holly presented slides and information regarding the current regional solid waste goals and priorities and current trends noted by the recent survey results received from Parkhill from the region.

4) Public Comments

a) Concerns or Solutions regarding minimization or reduction of solid waste production/disposal throughout the SPAG Region

Brenda Haney asked that the plan specifically address issues pertinent to the SPAG region such as tires.

Holly Holder commented that there is no state mandated recycling goal but that one for this region should be mentioned.

Brenda Haney agreed and commented that while everyone is trying to recycle there is not a good market for it in this region. She mentioned that establishing a regional market in the South Plains region should be a short-term goal for this plan update.

Holly Holder stated that the state is currently completing a statewide study regarding recycling marketability, current recycling that can be undertaken and what could be brought in to increase those activities. He said the goal of this state study is to be completed by the end of this fiscal year and could be something to consider for the plan depending on the timing of completion. Holly also mentioned that we should include the current existing tire recycling facility in the plans now since it was not present the previous time the regional plan was updated.

Todd Stiggins commented that Lubbock, Texas was mentioned by name at the last WASTECON meeting about having a very low recycling rate. He also mentioned that the EPA has come out and said they are setting a goal of 50% diversion and that if our region is going to get anywhere close to that we need to find a way to process that material locally in an economically feasible manner. Todd agreed with Holly regarding the trickle-down effect of studies and expectations from the EPA and TCEQ. He mentioned that some changes have already been made regarding more enforcement opportunities from TCEQ for municipalities. He stated that local city governments would be held to this standard.

Holly Holder stated that while TCEQ cannot mandate the recycling goals and this is something legislation has to do, he does foresee it coming in the future.

Brenda Haney commented that EPA has a national recycling goal of increasing the national recycling rate to 50% by year 2030.

Trey Tow mentioned that he and others have been contacted regarding volume of waste by a potential waste energy plant out of Colorado that is considering locating to the in West Texas/ Panhandle area.

Brenda Haney commented that waste to energy is not looked at as positive as a way of waste diversion.

Brenda Haney suggested one of the objectives should be to support and encourage recycling solutions in the SPAG region.

b) Other Comments

No further comments were received. Chelsey asked that any further comments regarding the plan update by received in writing by close of business on April 9, 2021.

5) Adjournment

No future comments were received and the public meeting was adjourned at 1:56pm.

Notice of Public Meeting

The South Plains Association of Governments (SPAG) will hold a virtual public meeting for regional stakeholders on Monday, August 9, 2021 at 10:00a.m. in regard to the Regional Solid Waste Management Plan Update. Participants have the option of joining with video and audio capabilities using the following information:

Meeting Link:

https://us06web.zoom.us/j/83326188700?pwd=SU5jSS9wdTBNaDhscVZPZ0tES2Vidz09

Meeting Number: 1-346-248-7799 Passcode: 117610 Meeting ID: 833 2618 8700

The purpose of this meeting is to allow citizens and interested parties an opportunity to review and discuss the final draft of the updated SPAG Regional Solid Waste Management Plan. SPAG encourages interested parties to participate in this process and to make their views known at this public meeting. Citizens unable to attend this meeting may request a copy of the completed draft of the Regional Solid Waste Management Plan between the hours of 8:30 am and 4:30 pm on normal business days by emailing Chelsey Baldivia at cbaldivia@spag.org or calling 806-762-8721. Persons with disabilities that wish to attend this virtual meeting should contact SPAG at least two days before the meeting so that appropriate arrangements can be made. Individuals who require auxiliary aids or services for this virtual meeting should contact SPAG at least two days before the meeting so that appropriate arrangements can be made.

South Plains Association of Governments 2002-2022 Regional Solid Waste Management Plan Update Public Meeting Monday, August 9, 2021 10:00AM Agenda

- 1) Call to Order
- 2) Discussion of the 2002-2022 Regional Solid Waste Management Plan and required update
 - a) The 2002-2022 Regional Solid Waste Management Plan addresses emerging waste streams and evolving goals, while continuing to promote the reduction of waste and illegal dumping, the recycling and reuse of materials whenever possible, and the handling of waste safely at permitted facilities.
 - b) The plan must be updated at minimum every 20 years.
 - c) The update was completed with funding appropriated by the TCEQ.
- 3) Public Comments
 - a) Feedback regarding the final draft of the 2002-2022 Regional Solid Waste Management Plan
 - b) Other Comments
- 4) Adjournment

South Plains Association of Governments 2022-2042 Regional Solid Waste Management Plan Public Hearing November 8, 2021 @ 9:00a.m. SPAG Board Room

Public Hearing Topics:

- Open public hearing at **9:00am**
- Discussion of the 2002-2022 Regional Solid Waste Management Plan and required update
 - The 2002-2022 Regional Solid Waste Management Plan addresses emerging waste streams and evolving goals, while continuing to promote the reduction of waste and illegal dumping, the recycling and reuse of materials whenever possible, and the handling of waste safely at permitted facilities.
 - o The plan must be updated at minimum every 20 years.
 - o The update was completed with funding appropriated by the TCEQ.
 - Changes to the Goals and Objectives were made at the October 26, 2021
 Solid Waste Advisory Committee Meeting and is scheduled be taken to
 SPAG Board of Directors Meeting on November 9, 2021.
- Public Comments regarding the final draft of the 2022-2042 Regional Solid Waste Management Plan
- Additional citizen comments:. None- no attendance.
- Close public hearing at <u>9:15am</u>