

**Technical Summary
of the
Proposed City of Waco Landfill
Municipal Solid Waste Permit
Application No. 2400**

**Type I Municipal Solid Waste Facility
McLennan and Limestone Counties, Texas**

**Applicant:
City of Waco**

Date Prepared: October 1, 2021

By the
Municipal Solid Waste (MSW) Permits Section
Office of Waste, Waste Permits Division
Texas Commission on Environmental Quality

This summary was prepared in accordance with 30 Texas Administrative Code Section 281.21(c). The information contained in this summary is based upon the permit application and has not been independently verified.

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Attachment 1—Municipal Solid Waste Site Assessment Form

Name of Applicant: City of Waco
501 Schroeder Drive
Waco, TX 76710

Name of Facility: City of Waco Landfill

Contact Person: Mr. Charles Dowdell, Director of Solid Waste
501 Schroeder Drive
Waco, TX 76710
254-750-1601

Consulting Engineer: Mr. Ryan Kuntz, Vice President
SCS Engineers
1901 Central Drive, Suite 550
Bedford, TX 76021
817-358-6117

1. General

1.1 Purpose

The applicant has submitted this application requesting authorization to construct and operate a new Type I MSW landfill in McLennan and Limestone Counties, Texas. The total permitted facility will include approximately 502.5 acres of which approximately 173.8 acres will be used for waste disposal, divided into two areas (~62 acres in the West Disposal Area and ~112 acres in the East Disposal Area). The final elevation of the waste fill and final cover material will be 697.7 feet above mean sea level (msl).

1.2 Wastes to be Accepted

Solid waste to be disposed of will consist of household waste, yard waste, commercial waste, construction-demolition waste, special waste, Class 2 non-hazardous industrial wastes, and Class 3 non-hazardous industrial wastes which includes rock, brick, glass, dirt, and certain plastics and rubber, and other waste as approved by the executive director. The proposed landfill will not be authorized to accept waste streams that are expressly prohibited by Title 30 Texas Administrative Code (30 TAC) Chapter 330 or wastes other than the wastes mentioned above.

1.3 Waste Acceptance Rate and Site Life

Authorized wastes are expected to be accepted at an initial rate of approximately 1,070 tons per day and to increase to a maximum of approximately 1,590 tons per day. The estimated site life is approximately 32 years.

2. Technical Review

The application has been technically reviewed by the Municipal Solid Waste Permits Section to determine its compliance with the applicable requirements in 30 TAC Chapters 305 and 330. Chapter 330 contains the minimum regulatory criteria for municipal solid waste facilities. A site assessment pursuant to 30 TAC 330.73(c) was conducted on 8/24/2018. The results of the assessment are documented in Attachment 1 to this Technical Summary.

It has been determined that the information in the permit application, along with the draft permit, demonstrates compliance with these regulatory requirements. A draft permit has been prepared, the application has been declared technically complete.

3. Location and Size

3.1 Location

The City of Waco Landfill is located in McLennan and Limestone Counties, Texas at approximately 0.4 miles south of the intersection of TK Parkway and State Highway 31 near Axtell, TX.

3.2 Elevation and Coordinates of Permanent Benchmark

Latitude: N 31° 41' 54.23"

Longitude: W 96° 55' 43.89"

Elevation: 541.15 feet above mean sea level

3.3 Size

The total area within the permit boundary under the proposed permit is approximately 502.5 acres.

4. Facility Design, Construction, and Operation

4.1 Facilities Authorized

The permit will authorize the operation of a Type I municipal solid waste landfill with a total net disposal volume (waste and daily cover) of approximately 25 million cubic yards in addition to support structures and facilities as described in the permit application and subject to the limitations contained in the permit and commission rules.

The facility consists of a site entrance with security fencing, a gatehouse, scales, a paved entrance road to the site, all-weather access roads, soil stockpiles, landfill gas (LFG) monitoring system, leachate collection system, groundwater

monitoring system, citizen collection station, and the solid waste disposal area. Structures for surface drainage and stormwater run-on/runoff control include a perimeter drainage system to convey stormwater runoff around the site, berms, ditches, detention ponds and associated drainage structures.

4.2 Waste Placement

The maximum elevation of waste placement will be approximately 694 feet above msl. The minimum elevation of waste placement will be approximately 507 feet above msl. The deepest excavation elevation for the liner and sumps is approximately 505 feet above msl.

4.3 Liner

A liner system meeting the requirements of 30 TAC Chapter 330 Subchapter H will be constructed. It will consist of the following components (listed in order from top to bottom):

- Geocomposite leachate collection layer
- 60 mil HDPE geomembrane
- 24 inches compacted clay (permeability $\leq 1 \times 10^{-7}$ cm/s)

The liner system will be overlaid by 2 feet of protective cover.

4.4 Final Cover System

The final cover system is designed to meet the requirements of 30 TAC Chapter 330 Subchapter K and will be placed on the above-grade waste. Each cell or phase will be covered with a composite final cover consisting of the following components (listed in order from top to bottom):

- Vegetation
- 24 inches of erosion layer with the top 6 inch layer capable of sustaining native plant growth
- Geocomposite drainage layer
- 60 mil HDPE or 40 mil LLDPE geomembrane
- 18-inch infiltration layer (permeability $\leq 1 \times 10^{-5}$ cm/s)

4.5 Leachate Collection System

The leachate collection system consists of a leachate collection layer (geocomposite drainage layer), leachate collection trenches, pipes, sumps, risers, and pumps. Leachate and/or gas condensate will be either recirculated back into the landfill or transported off-site to a local wastewater treatment plant for treatment and disposal. The leachate collection system is designed to meet the requirements of 30 TAC §330.333 and will be placed on top of the liner system.

5. Land Use

Land use in the vicinity of the site was evaluated in accordance with 30 TAC §330.61(h).

5.1 Zoning

The proposed facility will be located outside of the incorporated limits of any city and is not subject to any known zoning ordinances.

5.2 Surrounding Land Uses

The application indicates that 95.3% of the surrounding land use is classified as open, agricultural, or vacant. The remaining land is 4.1% water bodies, 0.5% residential and <0.1% commercial in the surrounding area. One cemetery is located adjacent to the site.

5.3 Residences and Businesses

There are 23 residences and one commercial business located within one mile of the permit boundary. The one historical cemetery, the TK Cemetery, is located on the western border of the site. One reservoir, a US Soil Conservation Reservoir is located partially on the site, to the south, however it is shown to be outside of the waste disposal footprint. The nearest residence is approximately 265 feet southwest of the site.

5.4 Schools, Churches, and Historical Sites

There are no known schools, churches, day-care facilities, hospitals, archeologically significant sites, other historic sites, or locations of exceptional aesthetic quality within one mile of the permit boundary other than TK Cemetery.

5.5 Growth Trends

The application indicates that recent growth trends within five miles of the site ranged between 1 to 2% between 2012 and 2017.

6. Location Restrictions

Location restrictions for municipal solid waste landfills are set forth in 30 TAC Chapter 330 Subchapter M.

6.1 Airport Safety

The landfill is not located within 10,000 feet of any airport runway end used by turbojet aircraft or within 5,000 feet of any airport runway end used by only piston-type aircraft. The facility is considered to be in compliance with 30 TAC §330.545.

6.2 Floodplains

Floodplain limits were obtained from Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) and are shown on several permit figures, that also show the proposed landfill facility boundary, which are included in the application. The figures show that a portion of the proposed permitted facility property is located within a 100-year floodplain, but that the proposed landfill waste disposal areas are located outside of the floodplain and waste disposal operations will not occur within the 100-year floodplain. The facility is considered to be in compliance with 30 TAC §330.547.

6.3 Wetlands

There are two ephemeral tributaries to Horse Creek and an on-channel stock pond, which are not considered waters of the United States, within the proposed landfill footprint. Horse Creek, an intermittent stream, is considered a jurisdictional water of the United States. The application indicates that no jurisdictional wetland areas would be impacted by the landfill. The applicant coordinated with the U.S. Army Corps of Engineers (USACE) and received Approved Jurisdictional Determinations (AJDs) under Section 404 of the Clean Water Act from the USACE, and coverage under nationwide permit # 39 to fill portions of Horse Creek for an internal landfill road crossing, with the conditions specified below.

The applicant will implement the approved mitigation plan prior to commencing any ground-disturbing activity within waters of the United States, and will submit to USACE and TCEQ the permit compliance certification that the work, including any proposed mitigation, was completed in compliance with the nationwide permit within 30 days of the completion of work. Following completion of this certification, it will be placed and maintained in the Site Operating Record of the landfill. The applicant will complete the mitigation bank transaction required under nationwide permit # 39 and provide documentation to the USACOE that the transaction has occurred prior to commencing any ground-disturbing activity within waters of the United States, as specified in USACE's letter dated April 13, 2021. This transaction documentation will also be submitted by the applicant to TCEQ prior to TCEQ's authorizing waste acceptance at the landfill.

6.4 Fault Areas and Seismic Impact Zones

There are no known faults within 200 feet of the site in accordance with 30 TAC §330.555. The facility is not located within a seismic impact zone as defined in 30 TAC §330.557. Therefore, the facility is considered to be in compliance with 30 TAC §330.555 and §330.557.

6.5 Unstable Areas

No known unstable areas as defined in 30 TAC §330.559 were found at the site. The facility is considered to be in compliance with 30 TAC §330.559.

6.6 Protection of Endangered Species

Correspondence with the United States Fish and Wildlife Service and the Texas Parks and Wildlife Department indicates that no adverse impacts to threatened or endangered plant or animal species are expected from the proposed operation of this facility.

7. Transportation and Access

Direct access to the facility will be from an all-weather surfaced private road on property owned by the applicant off of TK Parkway.

Preliminary information provided in the application indicates that traffic on TK Parkway is currently 576 vehicles per day (vpd) between the proposed site and SH-31 based on the traffic count collected in 2018 as part of the traffic impact analysis. The application proposes an initial increase of 442 vpd (884 vehicle trips per day, including employee vehicle trips) with a proposed increase to an expected 679 vpd (1,358 vehicle trips per day, including employee vehicle trips) over the life of the landfill.

The application contains letters documenting the applicant's coordination with the Texas Department of Transportation (TXDOT) for traffic and location restrictions including a Traffic Impact Analysis (TIA) conducted by the applicant. Responses from the TXDOT indicate that the consultant coordinated with TXDOT on the traffic volumes, the design of site entrance/roadway improvements, and approval of the TIA conclusions.

8. Surface Water Protection

As defined in 30 TAC §330.3, contaminated water is water which has come into contact with waste, leachate, or gas condensate. Stormwater which comes into contact with solid waste will be considered contaminated water. Temporary berms will be constructed to minimize the amount of surface water that comes into contact with waste. Contaminated stormwater at the working face will be contained by run-on/run-off berms. Contaminated surface water will either be transported by tanker truck to a wastewater treatment plant or will be recirculated back into the landfill. Contaminated groundwater will not be placed in or on the landfill, but will be transported to an authorized facility for treatment and disposal.

9. Groundwater Protection

9.1 Groundwater Protection

The liner system and leachate collection system will provide protection of groundwater from contamination.

9.2 Monitoring Wells

The groundwater monitoring system which will provide for detection of potential releases from the facility will consist of 34 monitoring locations, with a shallow and deep well at each monitoring location for a total of 68 monitoring wells. The groundwater monitoring network will be sampled, analyzed, and monitored in accordance with the procedures in the Groundwater Sampling and Analysis Plan (Part III, Attachment 7 of the Permit Amendment Application), which is part of the facility permit.

10. Landfill Gas Management

Landfill gas migration will be monitored around the perimeter of the facility utilizing permanent landfill gas monitoring probes. Gas monitoring will be conducted quarterly to detect migration of methane gas beyond the facility property boundary and in enclosed structures within the facility property boundary.

11. Site Development Plan and Site Operating Plan

The Site Development Plan (SDP) is Part III of the permit application and sets forth the engineering design and other technical aspects of the facility. The Site Operating Plan (SOP) is Part IV of the permit application. The SOP provides operating procedures for the site management and the site operating personnel for the daily operation of the facility to maintain compliance with the engineering design and applicable regulatory requirements. These documents are part of the permit.

12. Financial Assurance

Authorization to operate this facility is contingent upon the maintenance of financial assurance in accordance with 30 TAC Chapter 330 Subchapter L and Chapter 37 (Financial Assurance) for closure and post-closure care.

13. Public Participation Process

The public can participate in the final decision on the issuance of a permit as follows:

- 13.1 The TCEQ will hold a public meeting. During this meeting the commission accepts formal comments on the application. There is also an informal question and answer period.
- 13.2 Technical review of the application is completed, a final draft permit is prepared, and the application is declared technically complete. Information for the application, the draft permit, the notice, and summaries are sent to the chief clerk's office for processing.
- 13.3 A *Notice of Application and Preliminary Decision* is sent to the applicant and published in a newspaper. This notice provides a 30-day period, from the date of publication, for the public to submit comments about the application or draft permit. The notice also allows the public to request a public meeting for the proposed facility.
- 13.4 After the 30-day comment period has ended, a *Response to Comments* (RTC) is prepared for all comments received through the mail and at a public meeting. The RTC is then sent to all persons who commented on the application. Persons who receive the RTC have a 30-day period after the RTC is mailed in which to request a public hearing.
- 13.5 After the 30-day period to request a hearing is complete, the matter is placed on an agenda meeting for the TCEQ commissioners to make a determination to grant any of the hearing requests and refer the matter to the State Office of Administrative Hearings for a public hearing.
- 13.6 A public hearing is a formal process in front of an Administrative Law Judge (ALJ) who conducts the hearing. The applicant and protestant party(ies) present witnesses and testimony to support or dispute information contained in the application. When all of this is complete, the ALJ will issue a Proposal for Decision (PFD). This PFD is placed on an agenda meeting of the TCEQ commissioners for consideration of issuance or denial of a permit.
- 13.7 After the commission has approved or denied an application, a motion for rehearing may be made by a party that does not agree with the decision. Any motion for rehearing must be filed no later than 25 days after the party or the party's attorney of record is notified of the decision. The matter could be set on another agenda for consideration by the commission, or allowed to expire by operation of law.
- 13.8 Applications for which no one requests a contested case hearing are considered uncontested matters after the 30-day comment period. The application is placed on the executive director's signature docket and a permit is issued. Any motion to overturn the executive director's decision must be filed no later than 23 days after the agency mails notice of the signed permit.

14. Additional Information

For information concerning the regulations covering this application, contact the Municipal Solid Waste Permits Section:

Mr. Eric Clegg, P.G.
Municipal Solid Waste Permits Section, MC 124
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711
(512) 239-1270

For more detailed technical information concerning any aspect of this application or to request a copy of the Site Development Plan, please contact the consulting engineer or the applicant at the address provided at the beginning of this summary.

The application can be viewed on the internet at <http://www.waco-texas.com/landfill-application-process.asp>

For information concerning the legal aspects of the hearing process, agency rules, and submitting public comments, please contact the Texas Commission on Environmental Quality's Office of the Public Interest Counsel at (512) 239-6363.

Attachment 1—Municipal Solid Waste Site Assessment Form



Texas Commission on Environmental Quality

Municipal Solid Waste Site Assessment Form

Facility Information

Regulated Entity Name:		RN:
Customer Name:		CN:
Permit Number:	Application Type: <input type="checkbox"/> New Permit <input type="checkbox"/> Amendment	
Facility Type (check all that apply): <input type="checkbox"/> Type I <input type="checkbox"/> Type IV <input type="checkbox"/> Arid Exempt		
Physical Address:		

Facility Representative

Present (check all that apply): <input type="checkbox"/> Applicant <input type="checkbox"/> Consultant <input type="checkbox"/> Other:	
Name:	
Email:	Phone:
Additional Names (if applicable):	

TCEQ Reviewer

Name:	Date of Site Assessment:
Email:	Phone:
Is the location consistent with physical address? <input type="checkbox"/> Yes <input type="checkbox"/> No	
If No, provide location description:	

Consistency with Application

Check **Yes** or **No** if an item is present or has been constructed, and if it is consistent with the application. If an item is not consistent with the application, explain briefly why in the *Comments* column. If an item is not applicable, skip to the *Comments* column and indicate **NA**. Use the Additional Comments section at end of this form for more comment space.

Item	Constructed?	Consistent?	Comments
Application Notice Signs	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Facility Access Controls	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Facility Entrance Roads	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Facility Buildings	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Landfill Gas Monitoring Wells	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Item	Constructed?	Consistent?	Comments
Groundwater Monitoring Wells	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Existing or Abandoned Water Wells	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Existing or Abandoned Oil, Gas, or RRC Wells	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Surface Water Features	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Permanent Benchmark	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Permit Boundary Markers	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Buffer Zone Markers	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Easement Markers	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Floodplain Markers	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Property Boundary	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Easements Within or Adjacent to Permit Boundary	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Existing Structures Within 500 feet of Permit Boundary	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Additional Comments:



Compliance History Report

Compliance History Report for CN600131940, RN110471307, Rating Year 2020 which includes Compliance History (CH) components from September 1, 2015, through August 31, 2020.

Customer, Respondent, or Owner/Operator:	CN600131940, City of Waco	Classification: HIGH	Rating: 0.09
Regulated Entity:	RN110471307, CITY OF WACO LANDFILL	Classification: UNCLASSIFIED	Rating: -----
Complexity Points:	4	Repeat Violator: NO	
CH Group:	11 - Waste Management (Excluding Landfills)		
Location:	SITE ENTRANCE IS APPROX 70 FT E OF THE INTERSECTION OF HAPPY SWANER LN AND TK PKWY FM 939 NORTHERN BOUNDARY IS APPROX 0.4 MI FROM STATE ROUTE 31 W MCLENNAN, TX, MCLENNAN COUNTY		
TCEQ Region:	REGION 09 - WACO		
ID Number(s):	MUNICIPAL SOLID WASTE DISPOSAL PERMIT 2400		
Compliance History Period:	September 01, 2015 to August 31, 2020	Rating Year: 2020	Rating Date: 09/01/2020
Date Compliance History Report Prepared:	July 23, 2021		
Agency Decision Requiring Compliance History:	Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.		
Component Period Selected:	July 23, 2016 to July 23, 2021		
TCEQ Staff Member to Contact for Additional Information Regarding This Compliance History.			
Name:	Mr. Eric Clegg	Phone:	(512) 239-1270

Site and Owner/Operator History:

- 1) Has the site been in existence and/or operation for the full five year compliance period? NO
- 2) Has there been a (known) change in ownership/operator of the site during the compliance period? NO

Components (Multimedia) for the Site Are Listed in Sections A - J

A. Final Orders, court judgments, and consent decrees:

N/A

B. Criminal convictions:

N/A

C. Chronic excessive emissions events:

N/A

D. The approval dates of investigations (CCEDS Inv. Track. No.):

N/A

E. Written notices of violations (NOV) (CCEDS Inv. Track. No.):

A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.

N/A

F. Environmental audits:

N/A

G. Type of environmental management systems (EMSs):

N/A

H. Voluntary on-site compliance assessment dates:

N/A

I. Participation in a voluntary pollution reduction program:

N/A

J. Early compliance:

N/A

Sites Outside of Texas:

N/A