Texas Commission on Environmental Quality

Waste Permits Division Correspondence Cover Sheet

Date: 3-7-25
Facility Name: TASWA DRF
Permit or Registration No.: 2290A

Nature of Correspondence:
☒ Initial/New
☐ Response/Revision to TCEQ Tracking No.: _____ (from subject line of TCEQ letter regarding initial submission)

Affix this cover sheet to the front of your submission to the Waste Permits Division. Check appropriate box for type of correspondence. Contact WPD at (512) 239-2335 if you have questions regarding this form.

Table 1 - Municipal Solid Waste Correspondence

Applications	Reports and Notifications
☐ New Notice of Intent	☐ Alternative Daily Cover Report
☐ Notice of Intent Revision	☐ Closure Report
☐ New Permit (including Subchapter T)	☐ Compost Report
☐ New Registration (including Subchapter T)	☐ Groundwater Alternate Source Demonstration
☒ Major Amendment	☐ Groundwater Corrective Action
☐ Minor Amendment	☐ Groundwater Monitoring Report
☐ Limited Scope Major Amendment	☐ Groundwater Background Evaluation
☐ Notice Modification	☐ Landfill Gas Corrective Action
☐ Non-Notice Modification	☐ Landfill Gas Monitoring
☐ Transfer/Name Change Modification	☐ Liner Evaluation Report
☐ Temporary Authorization	☐ Soil Boring Plan
☐ Voluntary Revocation	☐ Special Waste Request
☐ Subchapter T Disturbance Non-Enclosed Structure	☐ Other:
☐ Other:	

Table 2 - Industrial & Hazardous Waste Correspondence

Applications	Reports and Responses
☐ New	☐ Annual/Biennial Site Activity Report
☐ Renewal	☐ CPT Plan/Result
☐ Post-Closure Order	☐ Closure Certification/Report
☐ Major Amendment	☐ Construction Certification/Report
☐ Minor Amendment	☐ CPT Plan/Result
☐ CCR Registration	☐ Extension Request
☐ CCR Registration Major Amendment	☐ Groundwater Monitoring Report
☐ CCR Registration Minor Amendment	☐ Interim Status Change
☐ Class 3 Modification	☐ Interim Status Closure Plan
☐ Class 2 Modification	☐ Soil Core Monitoring Report
☐ Class 1 ED Modification	☐ Treatability Study
☐ Class 1 Modification	☐ Trial Burn Plan/Result
☐ Endorsement	☐ Unsaturated Zone Monitoring Report
☐ Temporary Authorization	☐ Waste Minimization Report
☐ Voluntary Revocation	☐ Other:
☐ 335.6 Notification	
☐ Other:	

BIGGS & MATHEWS ENVIRONMENTAL, INC
TBPE No. F-256 TBPG No. 50222

March 7, 2025

Kelly Keel, Executive Director
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Attn: Ms. Megan Henson
MSW Permits Section - MC-124

Re: Texoma Area Solid Waste Authority
TASWA Disposal and Recycling Facility
TCEQ Permit No. MSW 2290A
Grayson County, Texas
Permit Amendment Application

Dear Ms. Keel:

On behalf of Texoma Area Solid Waste Authority (TASWA), Biggs and Mathews Environmental is submitting a permit amendment application for the referenced Type I municipal solid waste facility. Included are four copies (one signed original and three copies) of the application for your review and approval as well as a USB flash drive with digital copies of the Land Owners list, the MSW Checklist, and a PDF of the permit amendment application. Parts I through IV of the application are included as required by the municipal solid waste regulations of the TCEQ (30 TAC Chapter 330).

TASWA is fully committed to operating this landfill site consistent with applicable TCEQ regulations to protect human health and the environment while providing needed additional landfill capacity for the communities and businesses in and around Grayson County, Texas.

We appreciate your prompt review of this permit amendment application. If you or your staff have any questions, please do not hesitate to call me.

Sincerely,

BIGGS & MATHEWS ENVIRONMENTAL

David Clark, P.E.
Principal

cc: Mr. John O'Steen, Executive Director, TASWA

O:\TASWA\P\Cover Ltr.docx

TASWA DISPOSAL AND RECYCLING FACILITY
GRAYSON COUNTY, TEXAS
TCEQ PERMIT NO. MSW 2290A

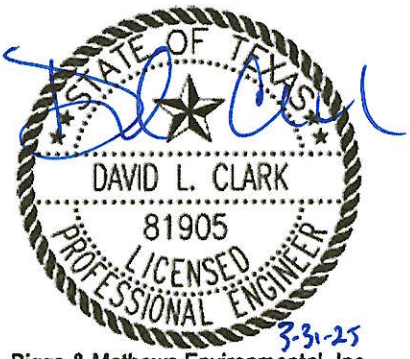
PERMIT AMENDMENT APPLICATION

VOLUME 1 OF 4

Prepared for

TEXOMA AREA SOLID WASTE AUTHORITY, INC.

February 2025
Revised March 2025



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

Prepared by

BIGGS & MATHEWS ENVIRONMENTAL
1700 Robert Road, Suite 100 ◆ Mansfield, Texas 76063 ◆ 817-563-1144

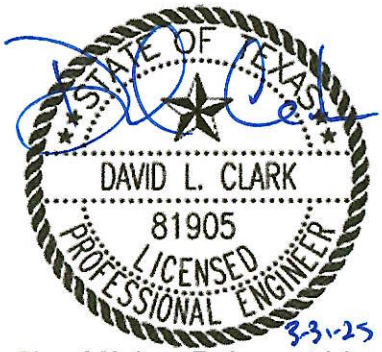
TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

TASWA DISPOSAL AND RECYCLING FACILITY
GRAYSON COUNTY, TEXAS
TCEQ PERMIT NO. MSW 2290A

PERMIT AMENDMENT APPLICATION
VOLUME 1 OF 4

CONTENTS



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

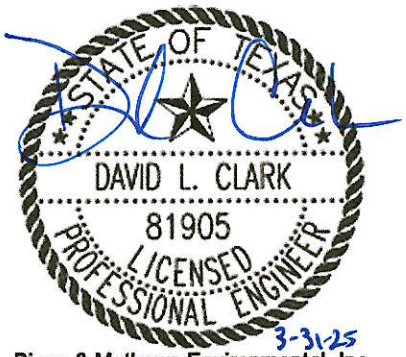
TASWA DISPOSAL AND RECYCLING FACILITY
GRAYSON COUNTY, TEXAS
TCEQ PERMIT NO. MSW 2290A

PERMIT AMENDMENT APPLICATION

Prepared for

TEXOMA AREA SOLID WASTE AUTHORITY, INC.

February 2025
Revised March 2025



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

Prepared by

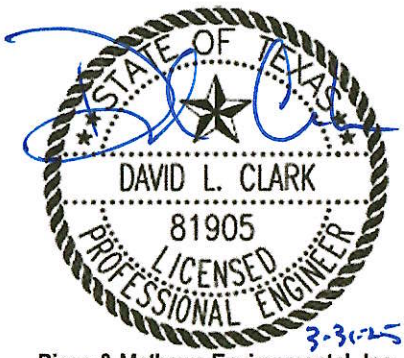
BIGGS & MATHEWS ENVIRONMENTAL
1700 Robert Road, Suite 100 ◆ Mansfield, Texas 76063 ◆ 817-563-1144

TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

TASWA DISPOSAL AND RECYCLING FACILITY
GRAYSON COUNTY, TEXAS
TCEQ PERMIT NO. MSW 2290A

PERMIT AMENDMENT APPLICATION



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

TCEQ Use Only

TCEQ Core Data Form

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission *(If other is checked please describe in space provided.)*

☐ New Permit, Registration or Authorization *(Core Data Form should be submitted with the program application.)*

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☒ Other **Permit Amendment Application**

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 600339428		RN 100629922

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy)

☐ New Customer ☒ Update to Customer Information ☐ Change in Regulated Entity Ownership

☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* *If new Customer, enter previous Customer below:*

Texoma Area Solid Waste Authority

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
0158689701	17528939717	75-2893971	

11. Type of Customer: ☒ Corporation ☐ Individual Partnership: ☐ General ☐ Limited

Government: ☐ City ☐ County ☐ Federal ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☐ 0-20 ☒ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ Yes ☐ No

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☒ Owner ☐ Operator ☐ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address:

25090 State Highway 56

City	State	ZIP	ZIP + 4
Whitesboro	TX	76273	4993

16. Country Mailing Information *(if outside USA)*

17. E-Mail Address *(if applicable)*

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(903) 564-4749		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected below this form should be accompanied by a permit application)*

☐ New Regulated Entity ☐ Update to Regulated Entity Name ☒ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

TASWA Disposal and Recycling Facility

23. Street Address of the Regulated Entity: *(No PO Boxes)*	25090 State Highway 56							
	City	Whitesboro	State	TX	ZIP	76273	ZIP + 4	4993
24. County	Grayson							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:					
26. Nearest City			State	Nearest ZIP Code	
Whitesoro			TX	76273	
27. Latitude (N) In Decimal:	33.63713861		28. Longitude (W) In Decimal:	-96.83292941	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
33	38	13.69990	96	49	58.54587

29. Primary SIC Code (4 digits)	30. Secondary SIC Code (4 digits)	31. Primary NAICS Code (5 or 6 digits)	32. Secondary NAICS Code (5 or 6 digits)
4953		562212	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Type I Solid Waste Landfill

34. Mailing Address:	25090 State Highway 56							
	City	Whitesboro	State	TX	ZIP	76273	ZIP + 4	4993
35. E-Mail Address:	[redacted]							

36. Telephone Number	37. Extension or Code	38. Fax Number *(if applicable)*
(903) 564-4749		( ) -

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☒ Emissions Inventory Air	☐ Industrial Hazardous Waste
			GI0132Q	
☒ Municipal Solid Waste	☒ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
MSW 2290A	GI0132Q			
☐ Sludge	☒ Storm Water	☒ Title V Air	☐ Tires	☒ Used Oil
	TXR05AG82	2672		C89061
☐ Voluntary Cleanup	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	David Clark	41. Title:	Engineer

42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(817) 563-1144		( ) -	[redacted]

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Texoma Area Solid Waste Authority	Job Title:	Executive Director
Name *(In Print)*:	John O'Steen	Phone:	(903) 564- 4749
Signature:	John O'Steen	Date:	3-31-25

Texas Commission on Environmental Quality

Public Involvement Plan Form for Permit and Registration Applications

The Public Involvement Plan is intended to provide applicants and the agency with information about how public outreach will be accomplished for certain types of applications in certain geographical areas of the state. It is intended to apply to new activities; major changes at existing plants, facilities, and processes; and to activities which are likely to have significant interest from the public. This preliminary screening is designed to identify applications that will benefit from an initial assessment of the need for enhanced public outreach.

All applicable sections of this form should be completed and submitted with the permit or registration application. For instructions on how to complete this form, see TCEQ-20960-inst.

Section 1. Preliminary Screening

☐ New Permit or Registration Application

☒ New Activity – modification, registration, amendment, facility, etc. (see instructions)

If neither of the above boxes are checked, completion of the form is not required and does not need to be submitted.

Section 2. Secondary Screening

☒ Requires public notice,

☒ Considered to have significant public interest, **and**

☐ Located within any of the following geographical locations:

- Austin
- Dallas
- Fort Worth
- Houston
- San Antonio
- West Texas
- Texas Panhandle
- Along the Texas/Mexico Border
- Other geographical locations should be decided on a case-by-case basis

If all the above boxes are not checked, a Public Involvement Plan is not necessary. Stop after Section 2 and submit the form.

☐ Public Involvement Plan not applicable to this application. Provide **brief** explanation.

Section 3. Application Information

Type of Application (check all that apply):

Air ☐ Initial ☐ Federal ☐ Amendment ☐ Standard Permit ☐ Title V

Waste ☒ Municipal Solid Waste ☐ Industrial and Hazardous Waste ☐ Scrap Tire
☐ Radioactive Material Licensing ☐ Underground Injection Control

Water Quality

☐ Texas Pollutant Discharge Elimination System (TPDES)

- ☐ Texas Land Application Permit (TLAP)
- ☐ State Only Concentrated Animal Feeding Operation (CAFO)
- ☐ Water Treatment Plant Residuals Disposal Permit

☐ Class B Biosolids Land Application Permit

☐ Domestic Septage Land Application Registration

Water Rights New Permit

☐ New Appropriation of Water

☐ New or existing reservoir

Amendment to an Existing Water Right

☐ Add a New Appropriation of Water

☐ Add a New or Existing Reservoir

☐ Major Amendment that could affect other water rights or the environment

Section 4. Plain Language Summary

Provide a brief description of planned activities.

Disposal of household waste, yard waste, commercial waste, Class 2 and Class 3 nonhazardous industrial waste, construction-demolition waste, and some special wastes.

Section 5. Community and Demographic Information

Community information can be found using EPA's EJ Screen, U.S. Census Bureau information, or generally available demographic tools.

Information gathered in this section can assist with the determination of whether alternative language notice is necessary. Please provide the following information.

Whitesboro, Texas

(City)

Grayson County, Texas

(County)

48181001300

(Census Tract)

Please indicate which of these three is the level used for gathering the following information.

☐ City ☐ County ☒ Census Tract

(a) Percent of people over 25 years of age who at least graduated from high school

96.42%

(b) Per capita income for population near the specified location

$56,074

(c) Percent of minority population and percent of population by race within the specified location

Hispanic 14.4%, Asian 5.2%, Black 6.3%

(d) Percent of Linguistically Isolated Households by language within the specified location

Given that 98.4% of residents are U.S. citizens and the predominant language is English, it is likely that the percentage of linguistically isolated households is low.

(e) Languages commonly spoken in area by percentage

English 90.8%, Spanish 5.7%

(f) Community and/or Stakeholder Groups

Local government, educational institutions, civic organizations and local businesses, environmental and community advocacy groups

(g) Historic public interest or involvement

TASWA supports the local volunteer fire department by donating revenue received from their metal recycling program.

Section 6. Planned Public Outreach Activities

(a) Is this application subject to the public participation requirements of Title 30 Texas Administrative Code (30 TAC) Chapter 39?

☒ Yes ☐ No

(b) If yes, do you intend at this time to provide public outreach other than what is required by rule?

☐ Yes ☒ No

If Yes, please describe.

If you answered "yes" that this application is subject to 30 TAC Chapter 39, answering the remaining questions in Section 6 is not required.

(c) Will you provide notice of this application in alternative languages?

☐ Yes ☒ No

Please refer to Section 5. If more than 5% of the population potentially affected by your application is Limited English Proficient, then you are required to provide notice in the alternative language.

If yes, how will you provide notice in alternative languages?

☐ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

(d) Is there an opportunity for some type of public meeting, including after notice?

☒ Yes ☐ No

(e) If a public meeting is held, will a translator be provided if requested?

☐ Yes ☒ No

(f) Hard copies of the application will be available at the following (check all that apply):

☐ TCEQ Regional Office ☐ TCEQ Central Office

☑ Public Place (specify) Whitesboro Public Library

Section 7. Voluntary Submittal

For applicants voluntarily providing this Public Involvement Plan, who are not subject to formal public participation requirements.

Will you provide notice of this application, including notice in alternative languages?

☐ Yes ☐ No

What types of notice will be provided?

☐ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

Texas Commission on Environmental Quality

Plain Language Summary of Municipal Solid Waste Permit or Permit Amendment Application

Applicants are required by public notice rules in Title 30 Texas Administrative Code, Chapter 39, Section 39.405(k)[1] to provide this summary of an application.

A. Purpose of the Proposed Facility

The Texoma Area Solid Waste Authority proposes to expand the existing TASWA Disposal and Recycling Facility to increase municipal solid waste disposal capacity and increase the site life of the facility.

B. Information About the Applicant

Name: Texoma Area Solid Waste Authority (TASWA)

Applicant Type: Type I Municipal Solid Waste Permit Amendment

Facility Name: TASWA Disposal and Recycling Facility

Permit Application Number: 2290A

Customer Number (CN): 600339428

Regulated Entity Reference Number (RN): 100629922

C. Location of the Proposed Facility

Facility Address (or description of site location if no address):

25090 State Highway 56. The facility is located approximately 3 tenths of a mile west of the intersection of SH 56 and Old Sanborn Road.

Link to Map of Facility Location (TCEQ Location Mapper[2]): https://arcg.is/KvLjT

D. Information about Facility Operation

What types of waste would be received?

Household waste, yard waste, commercial waste, Class 2 and Class 3 nonhazardous industrial waste, construction-demolition waste, and some special wastes.

What geographical area would the wastes come from?

Cooke and Grayson counties, and the cities of Denton, Gainesville, Sherman, and surrounding areas.

[1] www.tceq.texas.gov/goto/view-30tac
[2] www.tceq.texas.gov/gis/hb-610-viewer

What days and hours would the facility operate?

Waste acceptance: Monday through Friday: 24 hours per day Saturday: 12:00 a.m through 5:00 p.m. Waste Operations: 7 days a week, 24 hours a day.

At what rate would wastes be accepted?

TASWA receives 270,000 tons of waste annually, approximately 865 tons per day.

How would wastes be managed?

Waste enters the facility via the site entrance, through the scalehouse. Acceptable wastes will be directed to the active working face for disposal. Waste will be unloaded within the active working face, spread in layers, and thoroughly compacted. Daily cover of waste will be applied.

E. Pollution Control Methods

What methods would the facility use for containing wastes and odors, and monitoring for releases?

Wastes are contained with a liner system, leachate collection system, and final cover system meeting all applicable Subtitle D requirements and TCEQ rules and guidelines. Daily cover of waste will be applied. Daily cover will be inspected daily, intermediate cover will be inspected weekly, and final cover will be inspected weekly and following a rainfall event in excess of 0.5 inches. Odors will be controlled through detailed operating procedures included in the Site Operating Plan. Leachate will be managed consistent with the Leachate and Contaminated Water Plan. A comprehensive groundwater monitoring system and landfill gas management system will also monitor the facility.

What methods would the facility use or require for preventing litter or spills, and for cleanup of litter and spills?

The working face will be maintained and operated to minimize windblown solid waste. Waste transportation vehicles will be required to use adequate covers to secure the loads. Windblown waste and litter along the entrance road, scalehouse area, and within the permit boundary will be collected once per day. Clean up of waste spilled materials along the regular delivery routes within 2 miles of the entrance road will be cleaned up daily during days of facility operation.

Texas Commission on Environmental Quality

Part I Application Form for New Permit, Permit Amendment, or Registration for a Municipal Solid Waste Facility

Instructions for completing this Part I Application Form are provided in TCEQ 00650-instr[1]. Include a Core Data Form (TCEQ 10400)[2] with the application for the facility owner, and Core Data Forms for the operator and property owner if different from the facility owner. If you have questions, contact the Municipal Solid Waste (MSW) Permits Section by email to mswper@tceq.texas.gov, or by phone at 512-239-2335. Rules cited on this form are in Title 30 Texas Administrative Code (30 TAC) and may be viewed online at www.tceq.texas.gov/goto/view-30tac.

Application Tracking Information

Facility Regulated Entity Name[3]:
TASWA Disposal and Recycling Facility

Site Operator (Permittee or Registrant Name)[4]:
Texoma Area Solid Waste Authority

MSW Authorization Number: 2290A

Initial Submission Date: 2/3/2025

Revision Date: _____

Application Data

1. Submission Type

☒ Initial Submission ☐ Notice of Deficiency (NOD) Response

2. Authorization Type

☒ Permit ☐ Registration

3. Application Type

☐ New Permit

☒ Permit Major Amendment ☐ Permit Limited Scope Major Amendment

☐ New Registration

[1] www.tceq.texas.gov/downloads/permitting/waste-permits/msw/forms/00650-instr.pdf
[2] www.tceq.texas.gov/goto/coredata
[3] Facility Regulated Entity Name must match the Regulated Entity Name indicated on the TCEQ Core Data Form.
[4] Site Operator is defined in 30 TAC 330.3(148) as the holder of, or the applicant for, an authorization (or license) for a municipal solid waste facility.

PAGE REVISION DATE: _____

4. Application Fee

Amount

☒ $2,050—New Landfill Permits, and Landfill Permit Major Amendments Described in 30 TAC 305.62(j)(1)

☐ $150—Other Permits, Permit Amendments, Limited Scope Major Amendments, and all Registrations

Payment Method

☒ Online through ePay portal www3.tceq.texas.gov/epay/

Enter ePay Trace Number: [redacted]

☐ Check (send to TCEQ Financial Administration Division)

Payor Name: _____ Check Number: _____

5. Electronic Versions of Application

TCEQ will publish electronic versions of the application online. Applicants must provide a clean copy of the administratively complete application and technically complete application. TCEQ will also publish electronic versions of NOD responses online.

6. Party Responsible for Publishing Notice

Indicate who will be responsible for publishing notice:

☐ Applicant ☐ Agent in Service ☒ Consultant

Contact Name: David Clark, PE

Title: Engineer

Email Address: [redacted]

7. Alternative Language Notice

Use the Alternative Language Checklist on Public Notice Verification Form TCEQ-20244-Waste-NORI, TCEQ-20244-Waste-NAPD, or TCEQ-20244-Waste-NAORPM available at www.tceq.texas.gov/permitting/waste_permits/msw_permits/msw_notice.html to determine if an alternative language notice is required.

Is an alternative language notice required for this application?

☐ Yes ☒ No

Indicate the alternative language: _____

PAGE REVISION DATE: 3-28-25

8. Public Place for Copy of Application

Name of the Public Place: Whitesboro Public Library

Physical Address: 308 W. Main St

City: Whitesboro County: Grayson State: TX Zip Code: 76273

Phone Number: (903) 564-5432

9. Consolidated Permit Processing

Is this submittal part of a consolidated permit processing request, in accordance with 30 TAC Chapter 33?

☐ Yes ■ No

If "Yes", indicate the other TCEQ program authorizations requested:

10. Confidential Documents

Does the application contain confidential documents?

☐ Yes ■ No

If "Yes", reference the confidential documents in the application, but submit the confidential documents as an attachment in a separate binder marked "CONFIDENTIAL."

11. Permits and Construction Approvals

Mark the following table to indicate status of other permits or approvals.

Table 1. Permits and Construction Approvals.

Permit or Approval	Received	Pending	Not Applicable
Hazardous Waste Management Program under Texas Solid Waste Disposal Act			X
Underground Injection Control Program under Texas Injection Well Act			X
National Pollutant Discharge Elimination System Program under Clean Water Act; Waste Discharge Program under Texas Water Code, Chapter 26	X		
Prevention of Significant Deterioration Program under Federal Clean Air Act (FCAA); Nonattainment Program under the FCAA			X
National Emission Standards for Hazardous Air Pollutants Preconstruction Approval under the FCAA			X
Ocean Dumping Permits under Marine Protection Research and Sanctuaries Act			X
Dredge or Fill Permits under Clean Water Act	X		
Licenses under the Texas Radiation Control Act			X
Other (describe):			
Other (describe):			

PAGE REVISION DATE: _____

12. General Information About the Facility

Facility Regulated Entity Name:
TASWA Disposal and Recycling Facility

Contact Name: John O'Steen Title: Executive Director

MSW Authorization Number (if existing): 2290A

Regulated Entity Reference Number: **RN** 100629922

Physical or Street Address (if available): 25090 State Highway 56

City: Whitesboro County: Grayson State: TX Zip Code: 76273

Phone Number: (903) 564-4749

Latitude (decimal degrees, six decimal places): 33.637139

Longitude (decimal degrees, six decimal places): -96.832929

Elevation (above mean sea level): 756.78 feet (benchmark elevation for landfills)

Description of facility location with respect to known or easily identifiable landmarks:

Entrance located on the south side of State Highway 56 approximately 3 tenth of a mile west of the intersection of State Highway 56 and Old Sanborn Road.

Access routes from the nearest United States or state highway to the facility:

Entrance located on the south side of State Highway 56.

Coastal Management Program

Is the facility within the Coastal Management Program boundary?

☐ Yes ☒ No

13. Facility Types

Facility types are described in 30 TAC 330.5(a).

Indicate facility type (select all that apply):

☒ Type I ☐ Type IV ☐ Type V

☐ Type IAE ☐ Type IVAE ☐ Type VI

14. Activities Conducted at the Facility

☐ Storage ☐ Processing ☒ Disposal

PAGE REVISION DATE: _____

15. Facility Waste Management Units

Check the box for each type of waste management unit proposed.

- ☒ Landfill Unit(s)
- ☐ Incinerator(s)
- ☐ Class 1 Landfill Unit(s)
- ☐ Process Tank(s)
- ☐ Storage Tank(s)
- ☐ Tipping Floor
- ☐ Storage Area
- ☐ Other (specify):
- ☐ Container(s)
- ☐ Roll-off Boxes
- ☐ Surface Impoundment
- ☐ Autoclave(s)
- ☐ Refrigeration Unit(s)
- ☐ Mobile Processing Unit(s)
- ☐ Compost Pile(s) or Vessel(s)

16. Description of Proposed Facility or Changes to Existing Facility

Provide a brief description of the proposed activities if application is for a new facility, or the proposed changes to an existing facility or permit conditions if the application is for an amendment.

Horizontal and vertical expansion of the existing TASWA facility.

PAGE REVISION DATE: _____

17. Facility Contact Information

Site Operator (Permittee or Registrant)

Name: Texoma Area Solid Waste Authority

Customer Reference Number: **CN** 600339428

Contact Name: John O'Steen Title: Executive Director

Mailing Address: 25090 State Highway 56

City: Whitesboro County: Grayson State: TX Zip Code: 76273

Phone Number: (903) 564-4749

Email Address: [redacted]

Operator (if different from *Site Operator*)

Name: _____

Customer Reference Number: **CN** _____

Contact Name: _____ Title: _____

Mailing Address: _____

City: _____ County: _____ State: ____ Zip Code: _____

Phone Number: _____

Email Address: _____

Consultant (if applicable)

Firm Name: Biggs and Mathews Environmental, Inc.

Consultant Name: David Clark, P.E.

Texas Board of Professional Engineers Firm Registration Number: F-256

Contact Name: David Clark Title: Engineer

Mailing Address: 1700 Robert Road, Ste 100

City: Mansfield County: Tarrant State: TX Zip Code: 76063

Phone Number: (817) 563-1144

Email Address: [redacted]

Agent in Service (required for out-of-state applicants)

Name: _____

Mailing Address: _____

City: _____ County: _____ State: TX Zip Code: _____

Phone Number: _____

Email Address: _____

PAGE REVISION DATE: _____

18. Facility Supervisor License

Indicate the level of Municipal Solid Waste Facility Supervisor license, as defined in 30 TAC Chapter 30, Occupational Licenses and Registrations, Subchapter F that the individual who supervises or manages the operations will obtain prior to commencing operations.

☒ Class A Supervisor License ☐ Class B Supervisor License

19. Facility Ownership

Facility Owner

Does the Site Operator (Permittee or Registrant) own all the facility units and all the facility property?

☒ Yes ☐ No

If "No", provide the following information for the other owner, and include a Core Data Form for the other owner. Attach supplemental sheet if more than one other owner.

Other Owner Name: _____

What is Owned: ☐ Facility Units ☐ Property

☐ Other (describe): _____

Mailing Address: _____

City: _____ County: _____ State: ____ Zip Code: _____

Phone Number: _____

Email Address: _____

20. Other Government Entities Information

Texas Department of Transportation

District: Paris

District Engineer's Name: Noel Paramanantham, P.E.

Mailing Address: 1365 North Main Street

City: Paris County: Lamar State: TX Zip Code: 75460

Phone Number: (903) 737-9300

Email Address: _____

Local Government Authority Responsible for Road Maintenance (if applicable)

Government or Agency Name: N/A

Contact Person's Name: _____

Mailing Address: _____

City: _____ County: _____ State: TX Zip Code: _____

Phone Number: _____

Email Address: _____

City Mayor Information

City Mayor's Name: N/A

Mailing Address: _____

City: _____ County: _____ State: TX Zip Code: _____

Phone Number: _____

Email Address: _____

City Health Authority

Authority Name: N/A

Contact Person's Name: _____

Contact Person's Title: _____

Mailing Address: _____

City: _____ County: _____ State: TX Zip Code: _____

Phone Number: _____

Email Address: _____

County Judge Information

County Judge's Name: Bruce Dawsey

Mailing Address: 100 W. Houston

City: Sherman County: Grayson State: TX Zip Code: 75090

Phone Number: (903) 813-4228

Email Address: [redacted]

County Health Authority

Agency Name: Grayson County Health Department

Contact Person's Name: Dr. Jerry Bennett, MD

Contact Person's Title: Local Health Authority

Mailing Address: 915 N. Walnut

City: Sherman County: Grayson State: TX Zip Code: 75090

Phone Number: (903) 893-0131

Email Address: [redacted]

State Representative Information

House District Number: 62

State Representative's Name: Shelley Luther

District Office Mailing Address: P. O. Box 2910

City: Austin County: Travis State: TX Zip Code: 78768

Phone Number: (512) 463-0297

Email Address: [redacted]

State Senator Information

District Number: 30

State Senator's Name: Brent Hagenbuch

District Office Mailing Address: P. O. Box 12068

City: Austin County: Travis State: TX Zip Code: 78711

Phone Number: (512) 463-0130

Email Address: [redacted]

Council of Governments (COG)

COG Name: Texoma Council of Governments

COG Representative's Name: Eric Bridges

COG Representative's Title: Executive Director

Mailing Address: 1117 Gallagher Drive, Ste 470

City: Sherman County: Grayson State: TX Zip Code: 75090

Phone Number: (903) 893-2161

Email Address: [redacted]

River Basin Authority

Authority Name: Red River Authority

Contact Person's Name: Jerry Bob Daniel

Watershed Sub-Basin Name: _____

Mailing Address: P.O. Box 240

City: Wichita Falls County: Wichita State: TX Zip Code: 76307

Phone Number: (940) 723-8697

Email Address: [redacted]

Local Drainage or Flood Management Authority

Authority Name: N/A

Contact Person's Name: _____

Mailing Address: _____

City: _____ County: _____ State: TX Zip Code: _____

Phone Number: _____

Email Address: _____

U.S. Army Corps of Engineers District

Indicate the U.S. Army Corps of Engineers district in which the facility is located:

☐ Albuquerque, NM ☐ Galveston, TX

☐ Fort Worth, TX ■ Tulsa, OK

Local Government Jurisdiction

Within City Limits of: N/A

Within Extraterritorial Jurisdiction of: N/A

Is the facility located in an area in which the governing body of the municipality or county has prohibited the storage, processing, or disposal of municipal or industrial solid waste?

☐ Yes ■ No

If "Yes", provide a copy of the ordinance as an attachment.

Applicant Signature Page

Site Operator (Permittee or Registrant Name) or Authorized Signatory

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: John O'Steen Title: Executive Director

Email Address [redacted]

Signature: _____ Date: 6-30-25

Authorization by Facility Owner for Operator to Submit Application

To be completed by the facility owner if the application is submitted by an operator who is not the facility owner.

I am the owner of the facility that is the subject of this application, and authorize the operator, N/A to submit this application pursuant to 30 TAC 305.43(c).

Name: _____ Title: _____

Email Address: _____

Signature: _____ Date: _____

Notary

SUBSCRIBED AND SWORN to before me by the said John O'Steen

On this 30th day of June, 2025

My commission expires on the 6th day of September, 2028

JOANNE HIXSON
Notary Public, State of Texas
Comm. Expires 09-06-2028
Notary ID 1524951

Jo Anne Hixson

Notary Public in and for

Grayson County, Texas (notary's jurisdiction, including county and state)

Note: Application Must Bear Signature & Seal of Notary Public

PAGE REVISION DATE: _____

Property Owner Affidavit

Property Owner Affidavit for Landfill Facility

I acknowledge in accordance with 30 TAC 330.59(d)(2) that the State of Texas may hold me either jointly or severally responsible for the operation, maintenance, and closure and post-closure care of the facility. For a facility where waste will remain after closure, I acknowledge that I have a responsibility to file with the county deed records an affidavit to the public advising that the land will be used for a solid waste facility prior to the time that the facility actually begins operating as a municipal solid waste landfill facility, and to file a final recording upon completion of disposal operations and closure of the landfill units according to 30 TAC 330.19 (relating to Deed Recordation). I further acknowledge that the facility owner or operator and the State of Texas shall have access to the property during the active life and post-closure care period for the purpose of inspection and maintenance.

Name: Texoma Area Solid Waste Authority

Email Address: [redacted]

Signature: _____ Date: 3-7-25

Property Owner Affidavit for Processing Facility

I acknowledge in accordance with 30 TAC 330.59(d)(2) that the State of Texas may hold me either jointly or severally responsible for the operation, maintenance, and closure of the facility. I further acknowledge that the facility owner or operator and the State of Texas shall have access to the property during the active life and post-closure care period for the purpose of inspection and maintenance.

Name: N/A

Email Address: _____

Signature: _____ Date: _____

Notary

SUBSCRIBED AND SWORN to before me by the said John L. O'Steen

On this 7th day of March, 2025

My commission expires on the 6th day of September 2028

Jo Anne Hixson

Notary Public in and for

State of Texas Grayson County (notary's jurisdiction, including county and state)

Note: Application Must Bear Signature & Seal of Notary Public

JOANNE HIXSON
Notary Public, State of Texas
Comm. Expires 09-06-2028
Notary ID 1524951

PAGE REVISION DATE: _____

Part I Attachments

Refer to instruction document TCEQ 00650-instr[5] for professional engineer seal requirements.

Attachments Table 1. Required attachments.

Required Attachments	Attachment Number
Supplementary Technical Report [30 TAC 305.45(a)(8)]	Attachment 1
Property Legal Description [30 TAC 330.59(d)(1)]	Appendix IC
Property Metes and Bounds Description [30 TAC 330.59(d)(1)]	Appendix IC
Facility Legal Description [30 TAC 330.59(d)(1)]	Appendix IC
Facility Metes and Bounds Description [30 TAC 330.59(d)(1)]	Appendix IC
Metes and Bounds Drawings [30 TAC 330.59(d)(1)]	Appendix IC
On-Site Easements Drawing [30 TAC 330.61(c)(10)]	Appendix IC
Land Ownership Map [30 TAC 330.59(c)(3)]	Appendix IB
Landowners List [30 TAC 330.59(c)(3)]	Appendix IB
Mailing Labels (in electronic file, in Avery 5160 format; see instructions) [30 TAC 281.5(7)]	CD
General Location Maps [30 TAC 330.59(c)(2)]	Appendix IA
Texas Department of Transportation (TxDOT) County Map [30 TAC 330.59(c)(2)]	Appendix IA
General Topographic Maps [30 TAC 330.61(e)]	Appendix IA
Verification of Legal Status / Legal Authority (certificate of incorporation) [30 TAC 281.5 and 330.59(e)]	Appendix IE
Evidence of Competency [30 TAC 330.59(f)]	Appendix IF
Signatory Authority Documentation [30 TAC 305.44 and 330.59(g)]	Appendix IG
TCEQ Core Data Form(s) TCEQ-10400[6] [30 TAC 281.5(7)]	TCEQ-10400

[5] www.tceq.texas.gov/downloads/permitting/waste-permits/msw/forms/00650-instr.pdf
[6] www.tceq.texas.gov/permitting/central_registry/guidance.html

PAGE REVISION DATE: _____

Attachments Table 2. Additional attachments as applicable.

Additional Attachments (select all that apply and add others as needed)	**Attachment Number**
☐ Plain Language Summary Form TCEQ-20947[7] [30 TAC 39.405(k)]	
☐ Public Involvement Plan Form TCEQ-20960[8]	
☐ Fee Payment Receipt	
☐ Confidential Documents	
☐ Waste Storage, Processing and Disposal Ordinances [Texas Health and Safety Code, Section 363.112[9]]	
☐ Final Plat Record of Property Description [30 TAC 330.59(d)(1)(B)]	
Other (describe):	
Other (describe):	
Other (describe):	

[7] www.tceq.texas.gov/downloads/permitting/waste-permits/msw/forms/20947-instr.pdf
[8] www.tceq.texas.gov/downloads/agency/decisions/hearings/environmental-equity/pip-form-tceq-20960.pdf www.tceq.texas.gov/downloads/agency/decisions/hearings/environmental-equity/instructions-for-pip-form-tceq-20960.pdf
[9] statutes.capitol.texas.gov/Docs/HS/htm/HS.363.htm#363.112

TASWA DISPOSAL AND RECYCLING FACILITY
GRAYSON COUNTY, TEXAS
TCEQ PERMIT NO. MSW 2290A

PERMIT AMENDMENT APPLICATION

PART I
SITE AND APPLICANT INFORMATION
SUPPLEMENTARY TECHNICAL REPORT

Prepared for

TEXOMA AREA SOLID WASTE AUTHORITY

February 2025

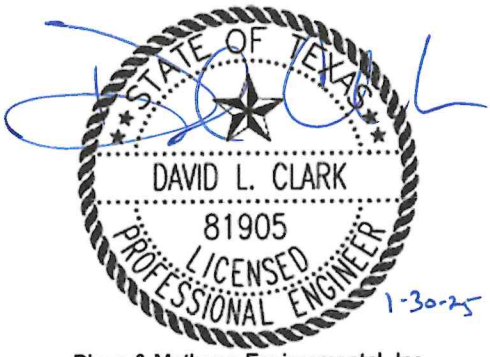
Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

Prepared by

BIGGS & MATHEWS ENVIRONMENTAL
1700 Robert Road, Suite 100 • Mansfield, Texas 76063 • 817-563-1144

TEXAS BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
FIRM REGISTRATION NO. F-256 AND NO. 10194895

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

CONTENTS

1 GENERAL

30 TAC §330.59(a)(1)

The TASWA Disposal and Recycling Facility (TASWA DRF) is an existing Type I Municipal Solid Waste Disposal Facility (Permit No. MSW 2290) owned and operated by Texoma Area Solid Waste Authority (TASWA). The TASWA DRF is located in Grayson County, Texas, as shown in Appendix IA, Drawing IA.1 and Drawing IA.2, and provides waste disposal capacity for residences and businesses in Cooke and Grayson counties, and, at a minimum, the cities of Denison, Gainesville, and Sherman. TASWA proposes to increase the permitted disposal capacity of this facility via horizontal and vertical expansion.

This application has been prepared consistent with 30 TAC Chapter 330 Municipal Solid Waste Management Regulations (MSWMR) adopted by the Texas Commission on Environmental Quality (TCEQ), effective the date of this application.

Part I of this permit amendment application contains information about the site and the applicant as required in 30 TAC §§281.5, 305.45, and 330.59. Part II of the permit amendment application describes the existing conditions and character of the facility and surrounding area as required in §330.61.

Part III of the permit amendment application presents engineering information, detailed investigative reports, the schematic designs of the facility, and the plans as required in §330.63. Part IV of the permit amendment application contains the Site Operating Plan, which includes specific information regarding the daily operations of the site, as required in §330.65.

1.1 Permit History

The TASWA DRF was permitted by the Texas Commission on Environmental Quality (TCEQ) under Permit No. MSW 2290 on October 31, 2003.

Landfill operations began in April 2005 under Permit No. 2290. The TASWA DRF is operating under Permit No. MSW 2290 and subsequent modifications or authorizations.

Consistent with §305.45(a)(7), the permits and approvals received for the facility are listed as follows:

Approved	Texas Commission on Environmental Quality Texas Pollutant Discharge Elimination System Storm Water Multi-Sector General Permit, Permit No. TXR05AH82
Approved	Texas Commission on Environmental Quality Texas Used Oil Registration, Registration No. C89061
Approved	Texas Commission on Environmental Quality Texas Air Operating Permit, Account No. GI0132Q
Approved	Texas Commission on Environmental Quality Texas Air Operating Permit, Permit No. 2672
Approved	USACE Individual Permit Permit No. TXR2010175
Pending	Updated Compensatory Mitigation Plan Project No. SWT-0-10175

1.2 Facility Information

This permit amendment application provides a permit boundary of 689.7 acres, a maximum final contour elevation of 1106.7 feet mean sea level (msl), an elevation of deepest excavation of 663.9 feet msl, and a landfill footprint of 475.3 acres.

Located between waste disposal areas and the permit boundary are entrance facilities, access roads, surface water drainage facilities, and a citizen's convenience center. On-site material staging areas which may be located within the landfill footprint include a large item staging area, reusable materials staging area, and woodwaste/brush mulching area. There are no drainage, pipeline, or utility easements that will affect solid waste unloading, storage, disposal, or processing operations.

In accordance with §330.141(a) and §330.543, solid waste unloading, storage, disposal, and processing operations will not occur within any easement, buffer zone, or right-of-way that crosses the site. The distance from the permit boundary to all solid waste unloading, storage, disposal, and processing operations meet the minimum buffer zone distance of 50 feet.

The landfill expansion will result in a total waste disposal capacity of approximately 183,500,000 cubic yards of waste and daily cover. Based on the FY 2024 Annual Report, there was approximately 7,000,000 cy of waste and daily cover in place as of September 2024.

TASWA DRF receives approximately 270,000 tons annually (approximately 865 tons per day). The waste acceptance rate will vary over the life of the facility depending on the market conditions. TASWA anticipates the maximum rate of waste disposal to be approximately 1,350,000 tons per year (approximately 4,330 tons per day). Based on

the anticipated waste acceptance rate, the facility will have an approximate site life of 92 years, as presented in Part III, Attachment D4.

The major classifications of solid waste to be accepted for disposal at TASWA DRF include household waste, yard waste, commercial waste, Class 2 and Class 3 nonhazardous industrial waste, construction-demolition waste, and some special wastes.

TASWA DRF will not accept Class 1 industrial wastes. The waste classifications are defined in §330.3.

Consistent with §330.15, the facility will not accept for disposal lead acid storage batteries; used motor vehicle oil; used oil filters; whole used or scrap tires; refrigerators, freezers, air conditioners, or other items containing chlorinated fluorocarbon (CFC); bulk or noncontainerized liquid waste from non-household sources; regulated hazardous waste; polychlorinated biphenyls (PCB) waste; radioactive materials or other wastes prohibited by TCEQ regulations.

2 FACILITY LOCATION

30 TAC §330.59(b)(1)-(3)

2.1 Location Description

TASWA DRF is an existing Type I municipal solid waste disposal facility located in Grayson County, Texas. TASWA DRF is located at 25090 State Highway 56. The site entrance is about 3.75 miles east of the intersection of U.S. Rte. 377 and State Highway 56.

2.2 Access Routes

Access to the facility will continue to be provided by State Highway 56 (SH56). The facility is located approximately 3.75 miles east of the intersection of SH56 and U.S. Rte. 377 (US377), at the existing facility entrance. From the intersection of SH56 and US377 proceed east on SH56 approximately 3.75 miles to the facility entrance, on the south side of SH56.

Refer to Appendix IA, Drawing IA.1 for the location of the facility in relation to the surrounding roads.

2.3 Geographic Coordinates

The latitudinal and longitudinal geographic coordinates of the site benchmark shown on Appendix IA, Drawing IA.6 are:

Latitude: N 33° 38' 13.69990"
Longitude: W 96° 49' 58.54587"

The Texas State Plane North Central Zone (NAD 83) coordinates of the site benchmark are:

N 7,282,587.42
E 2,475,866.89

The site benchmark elevation is referenced to NAVD 88, GEOID12B.

Elevation (above msl): 756.78 ft. msl.

3 MAPS

30 TAC §330.59(c)(1)-(3)

3.1 General Location Maps

The following maps, collectively as a group, comply with the rule requirements of §330.59(c)(1)-(2) and §305.45. Drawing IA.4 depicts the information required by 30 TAC §305.45(a)(6)(A). The base map used for each of the general location maps is the most current version available from each respective source as noted on each general location map. These general location maps are included in Appendix IA:

- IA.1 General Highway Map
- IA.2 Detailed Highway Map
- IA.3 General Topographic Map
- IA.4 Wells, Springs, and Water Bodies Location Map
- IA.5 Aerial Photograph
- IA.6 Permit Boundary and Landfill Footprint

3.2 Land Ownership Map and Land Owners List

The Land Ownership Maps and Land Owners List are included in Appendix IB and reflect property ownership as of February 2025 within 1/4-mile of the facility boundary as shown in the records of the Grayson County Appraisal District. No mineral interest ownership information was available within the Grayson County Appraisal District records for the facility property. The map and list meet the requirements of 30 TAC §305.45(a), §330.59(c)(3), and §281.5. The list is also provided in electronic format on the enclosed CD per the requirements of 30 TAC §330.59(c)(3)(B).

4 PROPERTY OWNER INFORMATION

30 TAC §330.59(d)(1)-(2)

4.1 Legal Description

Refer to Appendix IC, for drawings and metes and bounds descriptions of the property and permit boundaries.

4.2 Drainage, Pipeline, and Utility Easements

Existing drainage, pipeline, and utility easement locations were identified and are provided in Appendix IC on the permit boundary drawing as required by §330.61(c)(10).

4.3 Property Owner Affidavit

The property owner affidavit for this permit amendment application, located in the Part I Application Form for New Permit, Permit Amendment, or Registration for a Municipal Solid Waste Facility (TCEQ-00650), meets the requirements of §330.59(d)(2) and §305.43(c).

5 LEGAL AUTHORITY

30 TAC §330.59(e)

Texoma Area Solid Waste Authority (TASWA), the applicant, owns and operates TASWA Disposal and Recycling Facility.

Verification of the legal authority and status of TASWA as required by §330.59(e) and §281.5, is included in Appendix ID. No other person or entity has over a 20 percent ownership of the facility.

6 EVIDENCE OF COMPENTENCY

30 TAC §330.59(f)(1)-(6)

The evidence of competency for this permit amendment applicant follows and meets the requirements of §330.59(f).

6.1 Solid Waste Sites

Texoma Area Solid Waste Authority (TASWA), a local government corporation, is authorized to do business in Texas and owns and operates the permitted TASWA Disposal and Recycling Facility (TASWA DRF) municipal solid waste landfill facility. TASWA has operated municipal solid waste facilities in Texas since 2003. TASWA does not own or operate other facilities in Texas and does not have any financial interests in a solid waste site outside of Texas.

6.1.1 Texas Facilities

Below is a list of Texas solid waste sites that TASWA has owned/operated within the past ten years.

Site Name	Type	Registration/ Permit Number	County	Dates of Operation
TASWA Disposal and Recycling Facility	Type I	2290	Grayson	2003 to present

6.2 Management and Personnel

John O'Steen: Executive Director. Mr. O'Steen has been executive director of TASWA since 2019 and has over 20 years of experience in the solid waste industry. Mr. Osteen is responsible for all TASWA DRF operations.

Landfill Operations Manager: The Landfill Operations Manager will maintain a MSW Facility Class A license as a municipal solid waste facility supervisor and will have experience in landfill operations and earthmoving operations.

As of September 2022, 6 employees of TASWA hold Class A Municipal Solid Waste Facility Supervisor certificates. Certificate holders include both scale house attendants who provide the first level of waste screening and acceptance as well as operations employees who perform additional waste screening and inspection as the waste is unloaded at the active area.

6.3 Equipment Dedicated to the TASWA DRF

Sufficient equipment will be provided to conduct site operations in accordance with the landfill design and permit conditions. The equipment requirements for this facility are

based on anticipated solid waste volume and field conditions consistent with §330.127(2). A list of equipment dedicated to the TASWA DRF is included in Part IV.

7 APPOINTMENTS

30 TAC §330.59(g)

The appointments prepared for this permit amendment application meet the requirements of §330.59(g) and §305.44.

The certification of authorization to execute documents on behalf of TASWA DRF and the engineer's appointment are provided in Appendix IE.

8 APPLICATION FEES

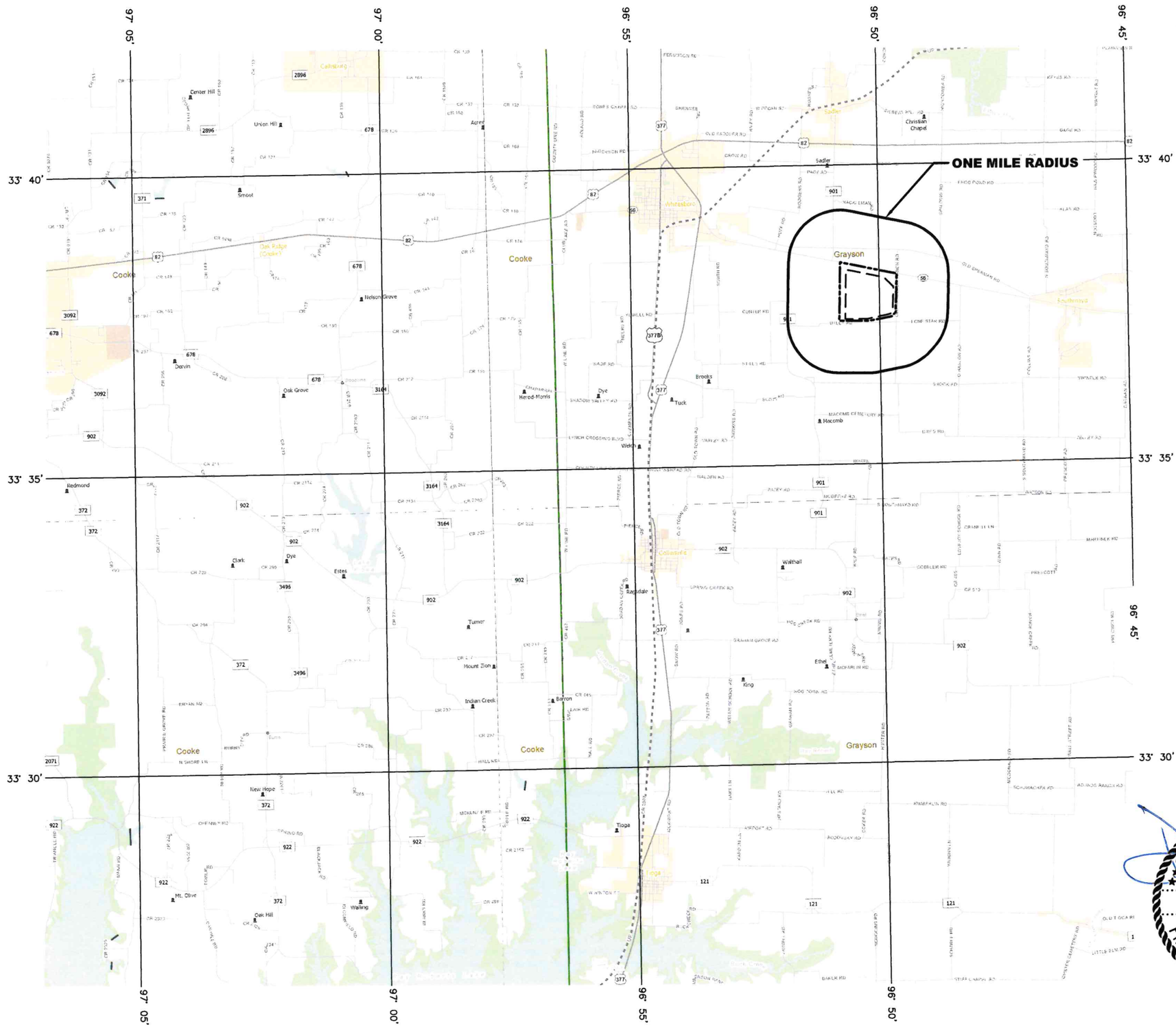
30 TAC §330.59(h)(1)-(2)

On behalf of TASWA, Biggs and Mathews Environmental, Inc. has made payment of the $2,050 permit amendment application fee in accordance with §330.59(h). This fee was paid online using TCEQ e-pay at *https://www3.tceq.texas.gov/epay/*.

The e-pay confirmation number is noted on page 1 of the Part I Form.

TASWA DISPOSAL AND RECYCLING FACILITY

APPENDIX IA
GENERAL LOCATION MAPS



LEGEND

- 2290A PERMIT BOUNDARY
- 2290A LANDFILL FOOTPRINT
- Unincorporated Community
- County Seat
- Border Crossing
- Cemetery
- Cemetery (Inside City)
- Deep Draft Port
- Shallow Draft Port
- Railroad
- Dam
- River or Stream
- TXDOT District
- Lakes
- Education
- Military
- Airport Runway
- Airport
- Prison
- Parks and Other Public Land

NOTE:

1. GRAYSON AND COOKE COUNTY HIGHWAY MAPS DOWNLOADED FROM TxDOT WEBSITE ON FEBRUARY 10, 2022.

STATE OF TEXAS
DAVID L. CLARK
81905
LICENSED
PROFESSIONAL ENGINEER
1-30-25

ISSUED FOR PERMITTING PURPOSES ONLY

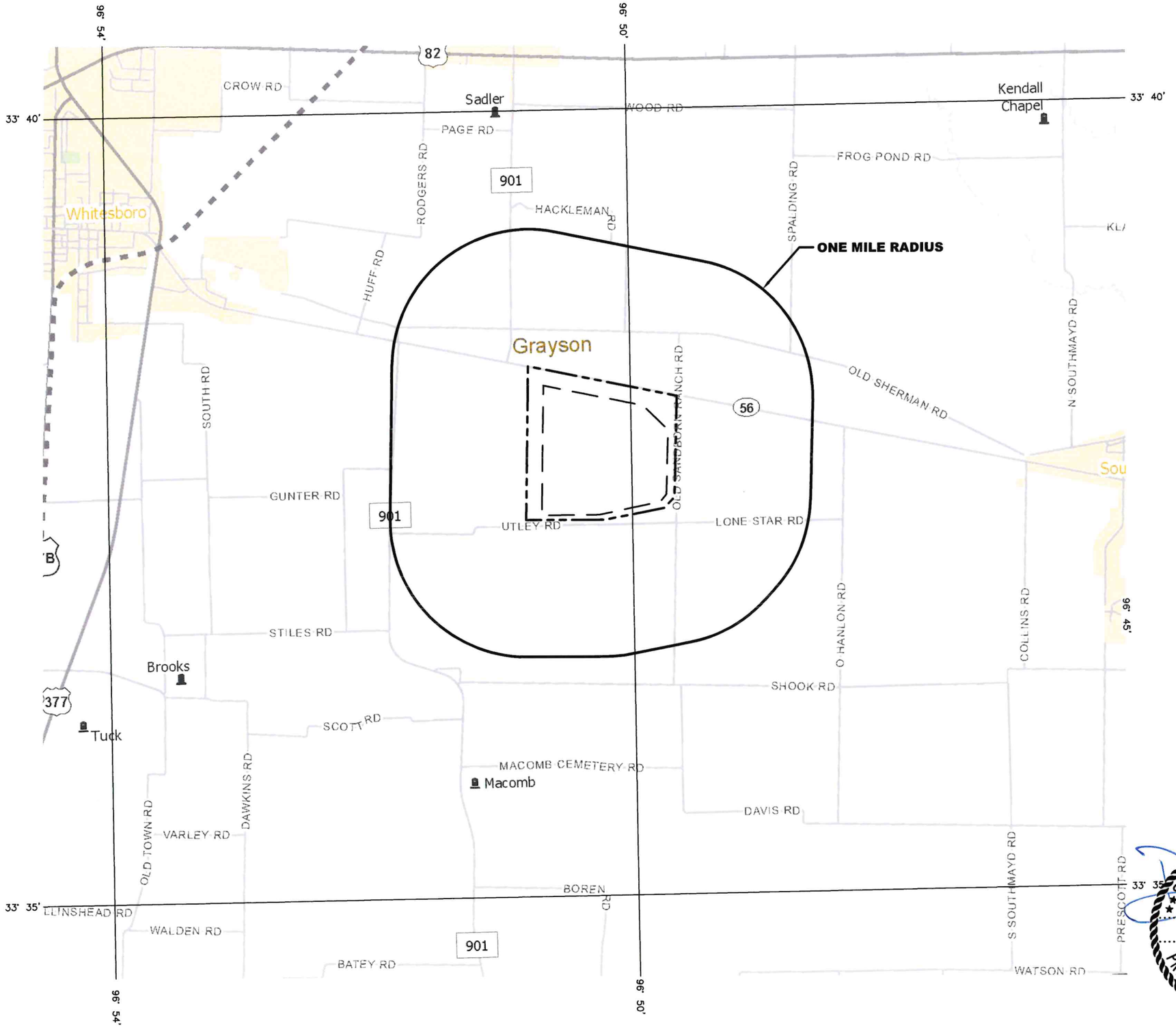
GENERAL HIGHWAY MAP

TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DRF
PERMIT AMENDMENT

BME
BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144
TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DRAWING
IA.1

O:\TASWA\P\Drawings\PART I\IA.1-GenHighwayMap.dwg Layout: Layout1 User: bboles



LEGEND

- 2290A PERMIT BOUNDARY
- 2290A LANDFILL FOOTPRINT
- Unincorporated Community
- County Seat
- Border Crossing
- Cemetery
- Cemetery (Inside City)
- Deep Draft Port
- Shallow Draft Port
- Railroad
- Dam
- River or Stream
- TXDOT District
- Lakes
- Education
- Military
- Airport Runway
- Airport
- Prison
- Parks and Other Public Land

NOTE:

1. GRAYSON AND COOKE COUNTY HIGHWAY MAPS DOWNLOADED FROM TxDOT WEBSITE ON FEBRUARY 10, 2022.

STATE OF TEXAS
DAVID L. CLARK
81905
LICENSED
PROFESSIONAL ENGINEER
1-30-25

ISSUED FOR PERMITTING PURPOSES ONLY

DETAILED HIGHWAY MAP

TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DRF
PERMIT AMENDMENT

BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DRAWING
IA.2

96° 52'

96° 50'

33° 39'

33° 37'

ONE MILE RADIUS

FM 901

HUFF RD

OLD SHERMAN RD

UTLEY RD

LONE STAR RD

STANFIELD CHURCH RD

OLD SANBORN RANCH RD

O'HANLON RD

STILES RD

SHARK RD

Mustang Cr.

Spring Cr.

56

700

750

800

0 1000 2000

SCALE IN FEET

LEGEND

- 2290A PERMIT BOUNDARY
- 2290A LANDFILL FOOTPRINT
- 700 EXISTING 10' GROUND CONTOUR
- SURFACE WATER BODY OR OTHER WATER

SADLER, TEX 2019

ETHEL, TEX 2019

ROAD CLASSIFICATION

Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

NOTES:

1. 7.5 MINUTE TOPOGRAPHIC BASE MAPS SADLER, TEX AND ETHEL, TEX DOWNLOADED FROM USGS WEBSITE ON FEBRUARY 10, 2022.
2. REFER TO PART II, APPENDIX B–LAND USE ANALYSIS FOR DETAILED LAND USE INFORMATION AND LAND USE MAP.
3. THERE ARE 130 RESIDENCES AND 5 INDUSTRIAL/COMMERCIAL ESTABLISHMENTS WITHIN ONE MILE OF THE PERMIT BOUNDARY.
4. THERE ARE NO CHURCHES, DAY CARE CENTERS, CEMETERIES, OR SCHOOLS WITHIN ONE MILE OF THE PERMIT BOUNDARY.
5. THERE IS 1 TEXAS STATE HISTORICAL COMMISSION HISTORIC MARKER WITHIN ONE MILE OF THE PERMIT BOUNDARY.
6. THERE ARE NO ARCHAEOLOGICAL SITES AND NO SITES HAVING EXCEPTIONAL AESTHETIC QUALITY WITHIN ONE MILE OF THE PERMIT BOUNDARY.
7. THERE ARE NO INTAKE/DISCHARGE STRUCTURES LOCATED WITHIN OR ASSOCIATED WITH THE FACILITY.
8. THERE ARE NO WASTE DISPOSAL ACTIVITIES WITHIN THE PERMIT BOUNDARY THAT ARE NOT INCLUDED IN THIS PERMIT AMENDMENT APPLICATION.
9. REFER TO DRAWING IA.5–AERIAL PHOTOGRAPH FOR GENERAL CHARACTER OF AREAS ADJACENT TO THE FACILITY.

STATE OF TEXAS
DAVID L. CLARK
81905
LICENSED
PROFESSIONAL ENGINEER
1-30-25

ISSUED FOR PERMITTING PURPOSES ONLY

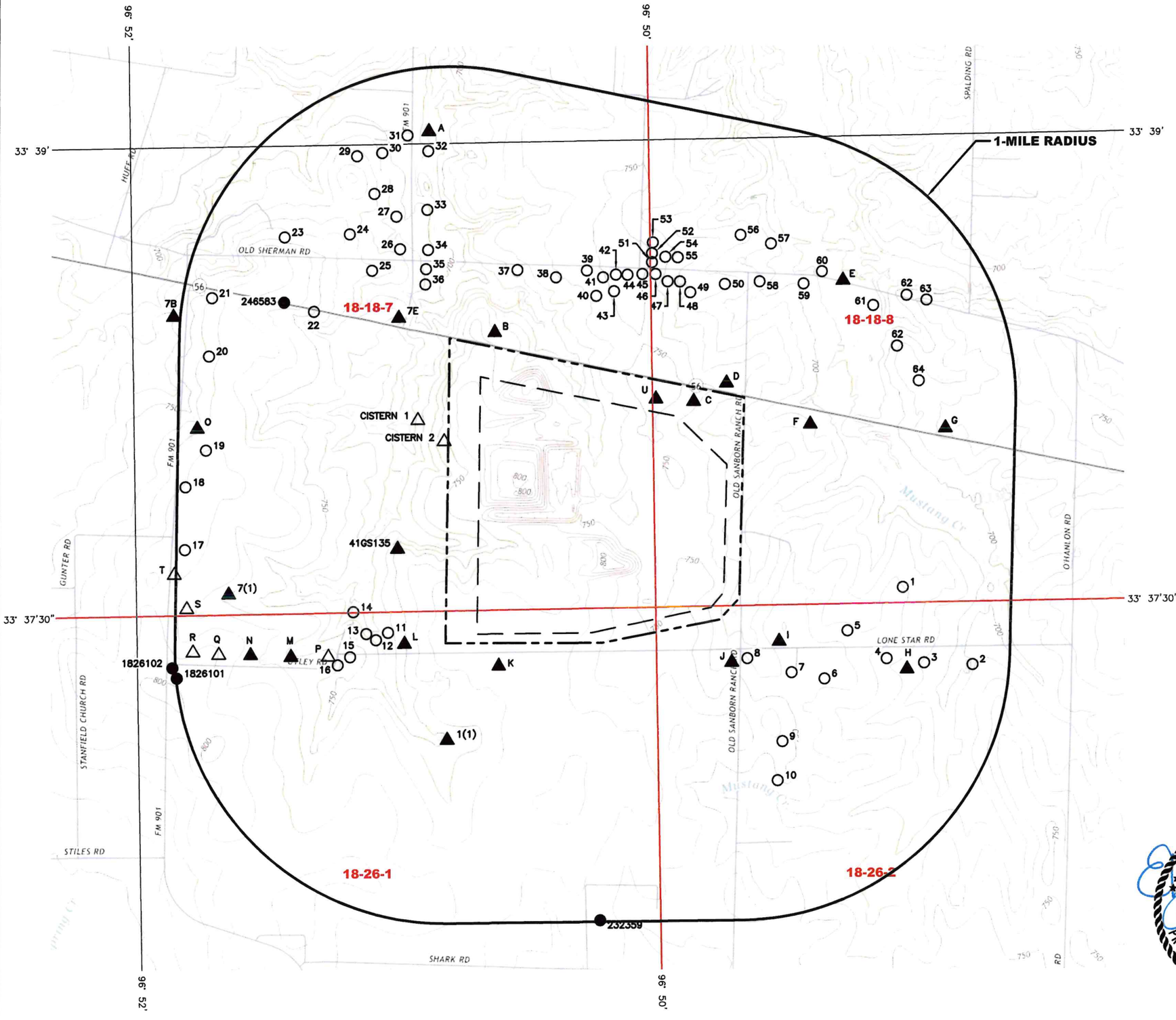
GENERAL TOPOGRAPHIC MAP

TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DRF
PERMIT AMENDMENT

BME
BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817–563–1144

TBPE FIRM NO. F–256
TBPG FIRM NO. 50222

DRAWING
IA.3



0 1000 2000
SCALE IN FEET

LEGEND

- 2290A PERMIT BOUNDARY
- 2290A LANDFILL FOOTPRINT
- 700 EXISTING 10' GROUND CONTOUR
- SURFACE WATER BODY OR OTHER WATER
- WATER WELL ID GRID
- 18-18-7 WATER WELL GRID NUMBER
- ▲ HISTORICAL WATER WELL
- △ HISTORICAL POSSIBLE WATER WELL
- ● 2024 WATER WELL
- ○ 2024 POSSIBLE WATER WELL

SADLER, TEX 2022 ETHEL, TEX 2022

ROAD CLASSIFICATION

Expressway	Local Connector
Secondary Hwy	Local Road
Ramp	4WD
Interstate Route	US Route / State Route

NOTES:

1. 7.5 MINUTE TOPOGRAPHIC BASE MAPS SADLER, TEX AND ETHEL, TEX DOWNLOADED FROM USGS WEBSITE ON MARCH 25, 2024.
2. WATER WELLS IDENTIFIED FROM ONLINE STATE RECORDS. REFER TO PART III ATTACHMENT E FOR WATER WELL INFORMATION.
3. THERE ARE NO SPRINGS LOCATED WITHIN 1 MILE OF 2290A PERMIT BOUNDARY.

STATE OF TEXAS
Elizabeth Floyd
GEOLOGY
2045
LICENSED
PROFESSIONAL GEOSCIENTIST

1/30/2025

ISSUED FOR PERMITTING PURPOSES ONLY

WELLS, SPRINGS, AND WATER BODIES LOCATION MAP

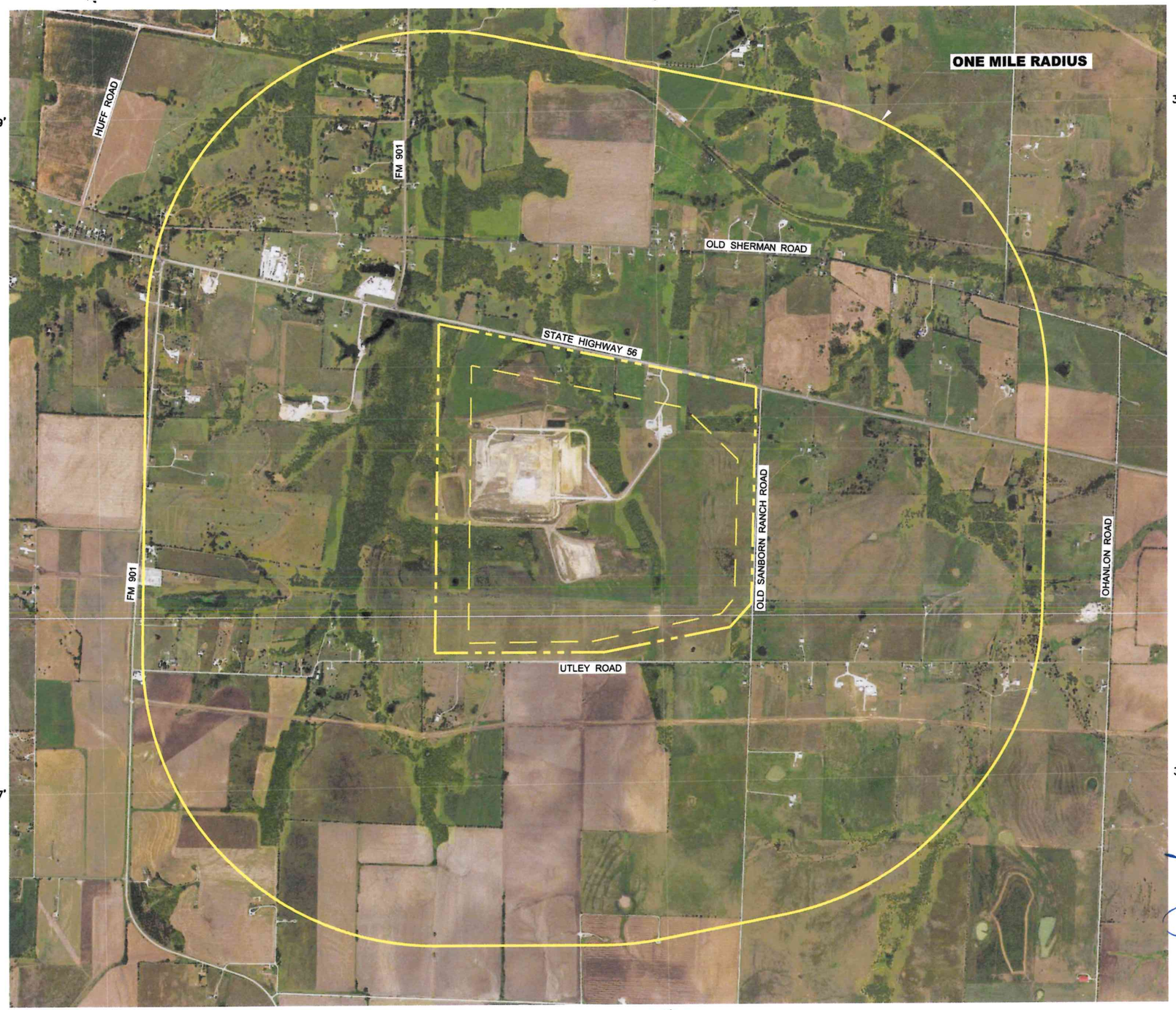
TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DISPOSAL AND RECYCLING FACILITY
PERMIT AMENDMENT

BME
BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DRAWING
IA.4

O:\TASWA\P\Drawings\PART I\IA.4-WaterWells.dwg Layout: Layout1 User: bboles



0 1000 2000
SCALE IN FEET

LEGEND

2290A PERMIT BOUNDARY

2290A LANDFILL FOOTPRINT

NOTES:

1. AERIAL PHOTOGRAPH TAKEN FROM 7.5 MINUTE QUADRANGLE SADLER, TEX AND ETHEL, TEX. DOWNLOADED ON FEBRUARY 10, 2022.
2. REFER TO PART II, APPENDIX IIB–LAND USE ANALYSIS FOR DETAILED LAND USE INFORMATION, LAND USE MAP, AND GENERAL CHARACTER OF AREAS ADJACENT TO THE FACILITY AS PREPARED BY INTEGRATED ENVIRONMENTAL SOLUTIONS.
3. GENERAL CHARACTER OF AREAS WITHIN ONE MILE OF THE PERMIT BOUNDARY PROVIDED BY INTEGRATED ENVIRONMENTAL SOLUTIONS.

GENERAL CHARACTER		
LAND USE	ACRES	PERCENTAGE
OPEN, AGRICULTURAL, VACANT, FLOODPLAIN	4,827	95.5
WATER BODIES	75	1.5
RESIDENTIAL	130	2.5
COMMERCIAL	27	0.5
TOTAL	5,059	100

STATE OF TEXAS
DAVID L. CLARK
81905
LICENSED
PROFESSIONAL ENGINEER
1-30-25

ISSUED FOR PERMITTING PURPOSES ONLY

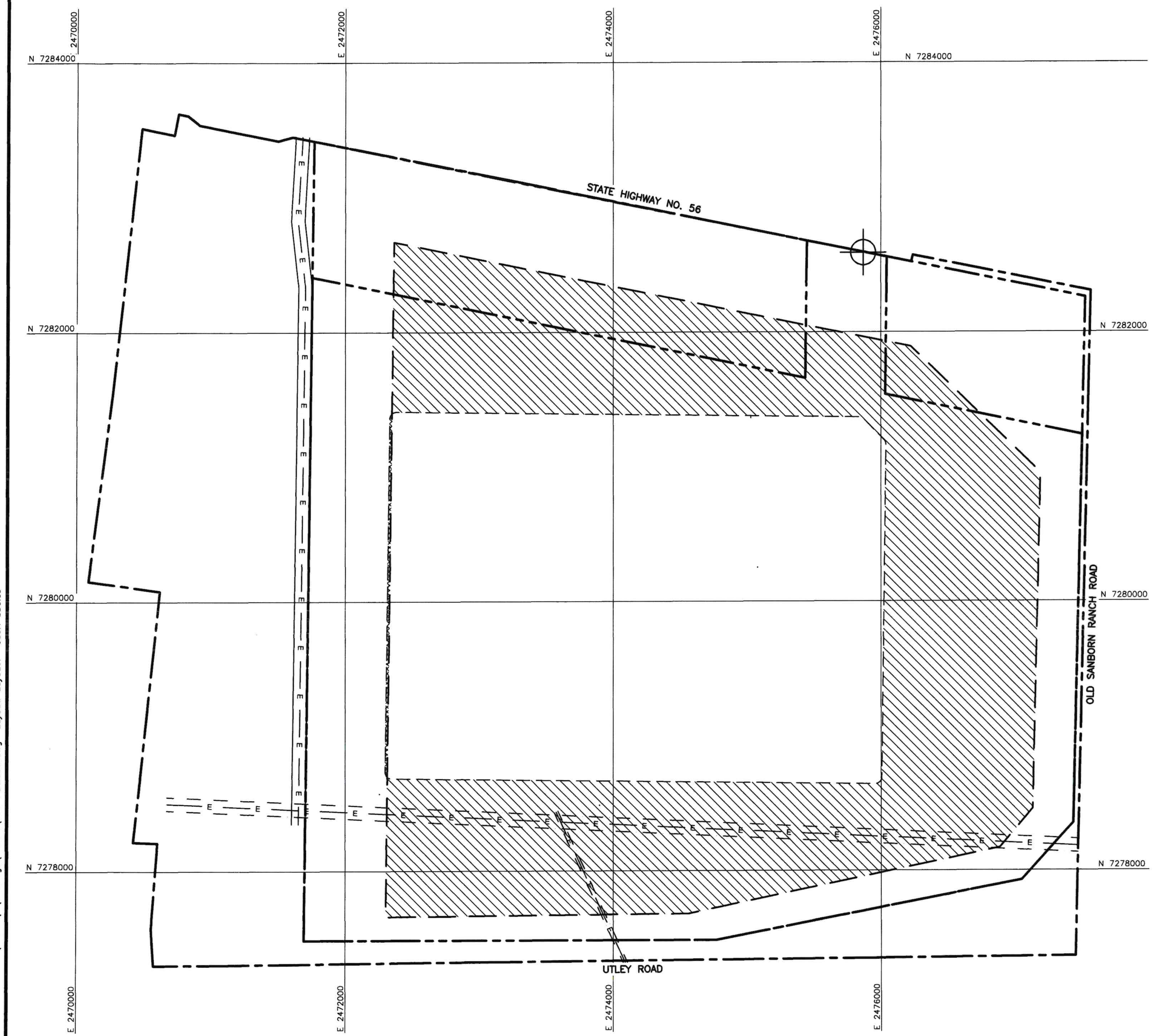
AERIAL PHOTOGRAPH

TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DRF
PERMIT AMENDMENT

BME
BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144
TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DRAWING
IA.5

O:\TASWA\P\Drawings\PART I\IA.6-PB&LOW.dwg Layout: Layout1 User: bboles



0 400 800
SCALE IN FEET

LEGEND

PROPERTY BOUNDARY

2290A PERMIT BOUNDARY

2290 PERMIT BOUNDARY

2290A LANDFILL FOOTPRINT

2290 LANDFILL FOOTPRINT

ELECTRIC LINE AND EASEMENT

N 7279000 STATE PLANE COORDINATES

WASTE FOOTPRINT ADDED (244.85 ACRES)

WASTE FOOTPRINT REMOVED (1.02 ACRES)

SITE BENCHMARK N 7,282,587.42 E 2,475,866.89 EL 756.78

LANDFILL FOOTPRINT	
2290 FOOTPRINT	231.51 Ac.
FOOTPRINT REMOVED	-1.70 Ac.
FOOTPRINT ADDED	+155.53 Ac.
2290A FOOTPRINT	385.34 Ac.

PERMIT BOUNDARY	
2290 BOUNDARY	392.71 Ac.
BOUNDARY ADDED	216.22 Ac.
2290A BOUNDARY	608.93 Ac.

NOTES:

1. FENCING IS PROVIDED AT PROPERTY BOUNDARY.
2. ELECTRICAL EASEMENTS WITHIN THE WASTE FOOTPRINT TO BE RELOCATED PRIOR TO DEVELOPMENT.

STATE OF TEXAS
DAVID L. CLARK
81905
LICENSED
PROFESSIONAL ENGINEER
1-30-25

ISSUED FOR PERMITTING PURPOSES ONLY

GENERAL SITE PLAN

TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DRF
PERMIT AMENDMENT

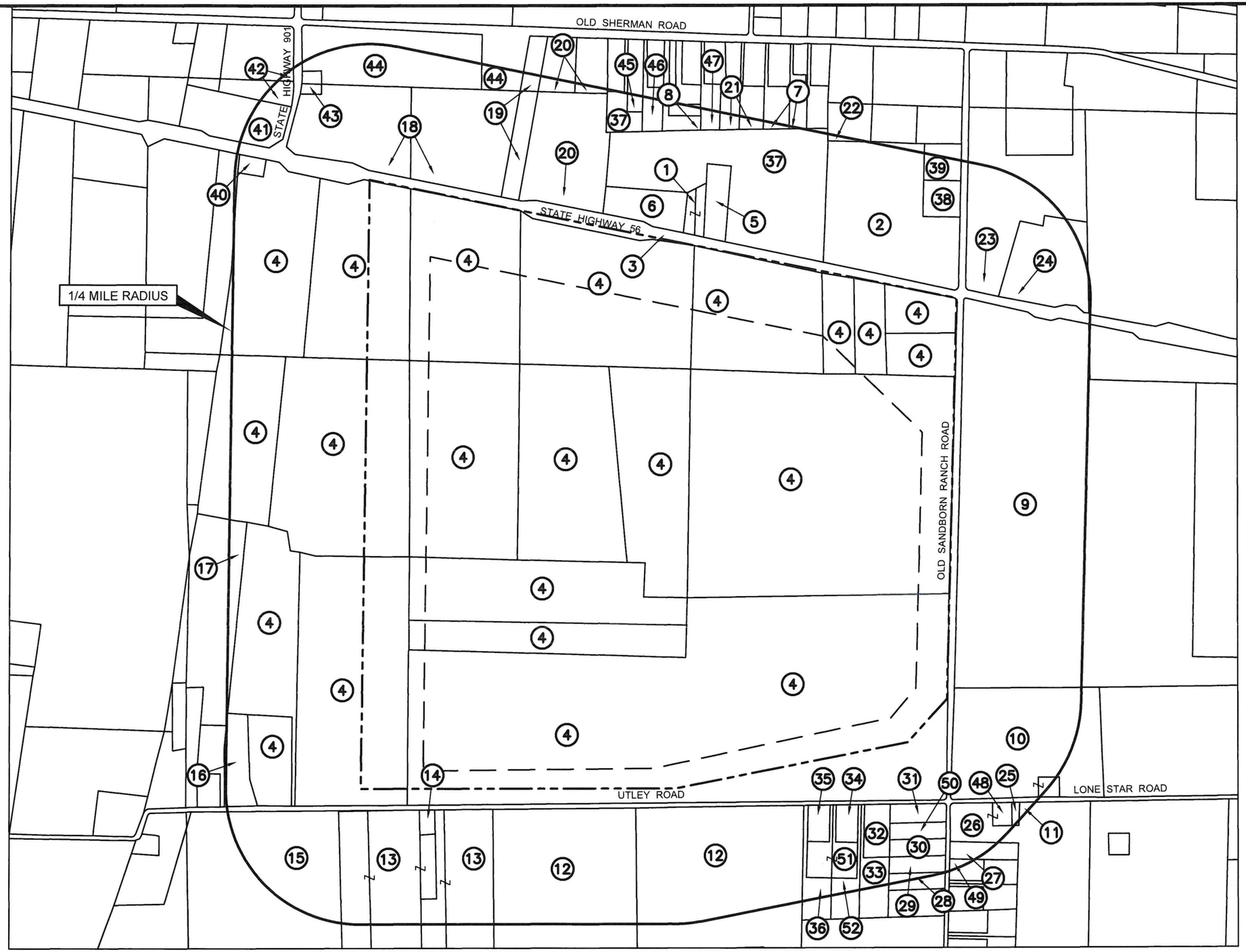
BME
BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DRAWING
IA.6

TASWA DISPOSAL AND RECYCLING FACILITY

APPENDIX IB
LAND OWNERSHIP MAP AND LAND OWNERS LIST



NOTE:

ADJACENT PROPERTY OWNER INFORMATION COMPILED FROM GRAYSON COUNTY APPRAISAL DISTRICT GIS DATABASE ON JANUARY 29, 2025.

STATE OF TEXAS
DAVID L. CLARK
81905
LICENSED
PROFESSIONAL ENGINEER
1-30-25

LAND OWNERSHIP MAP

TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DRF
PERMIT AMENDMENT

BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DRAWING
IB.1

ISSUED FOR PERMITTING PURPOSES ONLY

O:\TASWA\P\Drawings\PART I\AdjacentOwners.dwg Layout: Layout1 User: bboles

Land Ownership List
(Based on Grayson County Appraisal District Records – January 29, 2025)

1 DOLEZALEK KENNETH
DANNY BOWLING
25205 HWY 56
WHITESBORO, TX 76273-8000

2 WHITESBORO COMMONS LLC
11876 GONZALES DR
FRISCO, TX 75035-8839

3 TEXAS DEPARTMENT OF TRANSPORTATION
ATTN: AREA ENGINEER
SHERMAN, TX 75090

4 TEXOMA AREA SOLID WASTE AUTHORITY
ATTN: EXECUTIVE DIRECTOR
25090 STATE HWY 56
WHITESBORO, TX 76273-4993

5 WOLFE SAMUEL D III ETUX FELISA C
1414 LOTUS CIR
SHERMAN, TX 75092-5220

6 BOWLING DANNY ETUX GWENDOLYN
25221 STATE HIGHWAY 56
WHITESBORO, TX 76273-8000

7 TURNER WESLEY D ETUX PATRICIA A
3090 OLD SHERMAN RD
WHITESBORO, TX 76273-8002

8 WEISS DEBRA
1677 SPEEDWAY AVE
WICHITA FALLS, TX 76301-6134

9 APPROACH PARTNERS LLC
431 SOUTHRIDGE WAY
IRVING, TX 75063-4298

10 COLLINS FAMILY LIVING TRUST
4251 ARBOR CREEK DR
CARROLLTON, TX 75010-4146

11 WHITNEY WILLIAM SCOTT ETUX DEBORAH JO
214 LONESTAR RD
WHITESBORO, TX 76273-5576

12 DAVIS JERRY
P O BOX 650
COLLINSVILLE, TX 76233-0650

13 LONGTIN ANNETTE & LAGRAY ANNETTE
1160 UTLEY RD
WHITESBORO, TX 76273-5599

14 BLOUNT JOSHUA
1274 UTLEY RD
WHITESBORO, TX 76273-5547

15 ROBERT P. CUMMINS
P. O. BOX 450
SADLER, TX 76264-0450

16 NORSEWORTHY HAROLD D AND MARY E
789 UTLEY RD
WHITESBORO, TX 76273-5551

17 GREISEN SCOTT ETUX TAMMY
729 UTLEY ROAD
WHITESBORO, TX 76273

18 GRAVETTE MARY FRANCES ESTATE
110 BOSTON ST
WHITESBORO, TX 76273-2402

19 BARRY LOVETT
1105 W. WETTACK
NOWATA, OK 74048

20 MIKE GRAVETTE
3470 OLD SHERMAN ROAD
WHITESBORO, TX 76273

21 THE RAZIEL INVESTORS GROUP LLC
3000 CUSTER BLDG 270-351
PLANO, TX 75075

22 CLARK ELIZABETH DANNETTE AND EUGENE
P CLARK JR
PO BOX 784
WHITESBORO, TX 76273-0784

23 STEVENS ALENE MARIE REVO TR
STEVENS ALENE MARIE TRUSTEE
12 OLD SANBORN RANCH RD
WHITESBORO, TX 76273-7949

24 DAVID STEVENS
24533 STATE HIGHWAY 56
WHITESBORO, TX 76273

25 WALSTON STEVEY J
130 LONE STAR RD
WHITESBORO, TX 76273-5582

26 WALSTON MICHELLE HOOD
3416 MOSER ST APT 2322
FT WORTH, TX 76177

Land Ownership List
(Based on Grayson County Appraisal District Records – January 29, 2025)

27 ZURITA JORGE LUIS ARENAS
11674 MUSTANG RD LOT 29
PILOT POINT, TX 76258-7718

28 JOSE ANTONIO & LORENZA MARTINEZ
2426 S TYLER ST
DALLAS, TX 75224

29 MARTINEZ ANGELA ISABEL AND MARCOS EMMANUEL MARTINEZ
4713 LAWLER RD
GARLAND, TX 75042-4506

30 MANCERA JOSE SALVADOR LUNA
929 MIDDLE COVE DR
PLANO, TX 75023

31 DE LA CRUZ JACQUELINE
404 MEADOW CREEK DR
MANSFIELD, TX 76063-5921

32 CARDENAS ANNABELLE TREVINO
511 N BRANCH
SHERMAN, TX 75090

33 MELCHOR AGUSTIN AQUINO AND PEREZ SILVIA VERTIZ AND GONZALEZ MARGARITO
820 FOXWOOD PL
LEWISVILLE, TX 75067

34 BARRIGA ALAN RAFAEL PEDRAZA DIAZ AND NAYELI PEREZ PEREZ
1800 PRESTON ON THE LAKE 379
LITTLE ELM, TX 75068-5732

35 AGUILAR RURI
1946 UTLEY RD
WHITESBORO, TX 76273

36 JOSE JAIRO LOPEZ RODRIGUEZ
417 HETTIE ST
DENTON, TX 76209

37 SHEN XIAOQIN & GU STACY & CHEN XIAOHONG & CHEN WEN & QIAN HONG SHANGGUAN XIN & WANG TIMOTHY
4420 CASA GRANDE LANE
MCKINNEY, TX 75070-7368

38 COLIN-FLORES CECILIO AND MUNIZ VERONICA
277 OLD SANDBORN RANCH RD
WHITESBORO, TX 76273-7907

39 MEDINA RODOLFO
118 HILLSIDE DR
LEWISVILLE, TX 75057-3175

40 ONCOR ELECTRIC DELIVERY COMPANY
STATE & LOCAL TAX DEPT
PO BOX 139100
DALLAS, TX 75313-9100

41 KW UTILITY CONSTRUCTION INC
PO BOX 32
WHITESBORO, TX 76273

42 WILLIAMS KEARY S & JULIE
PO BOX 32
WHITESBORO, TX 76273-0032

43 KELLER PENELOPE G
6960 N FM 901
WHITESBORO, TX 76273-7930

44 GRAVETTE MARY FRANCES ESTATE
110 BOSTON ST
WHITESBORO, TX 76273-2402

45 RAZIEL INVESTORS GROUP LLC
300 CUSTER RD BLDG 270 351
PLANO, TX 75075

46 HARRIS STEPHANIE
3344 OLD SHERMAN RD
WHITESBORO, TX 76273-8029

47 TAMAYO MARTIN ELIZONDO ETUX MARIA ELENA RIOS AGUILAR
514 E LINDA DR
GARLAND, TX 75041-2021

48 TYLER LINDA J
720 COUNTY ROAD 175
WHITESBORO, TX 76273

49 MENDEZ DAVID GEOVIANI CHIN AND CHIN DAFNI GABRIELA
540 ROCKINGHAM DR APT 133-1
RICHARDSON, TX 75080-4350

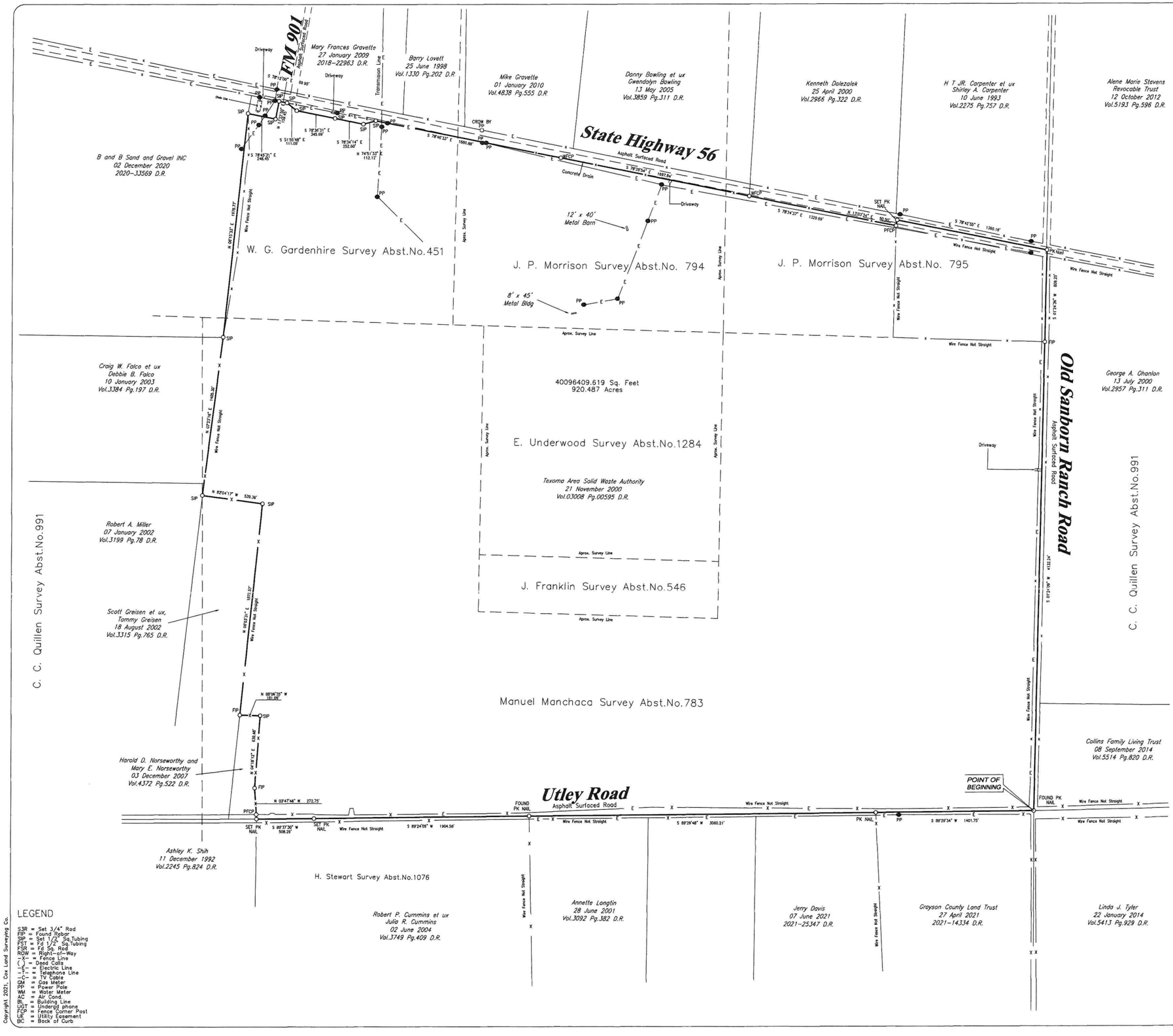
50 MMXXI TEXAS INCOME TRUST
99 WALL STREET STE 1917
NEW YORK, NY 10005

51 MELCHOR GERARDO MELCHOR AND ROMERO
GABRIELA INIESTRA
1958 UTLEY RD
WHITESBORO, TX 76273-5649

52 MMXXI TEXAS INCOME TRUST
ROBERT MARTIN TRUSTEE FOR GRAYSON CO
LAND TRUST
PO BOX 2750
ROWLETT, TX 75030-2750

TASWA DISPOSAL AND RECYCLING FACILITY

APPENDIX IC
LEGAL DESCRIPTION AND BOUNDARY MAPS



LEGEND

SJR = Set 3/4" Rod
FIP = Found Rebar
SSP = Set 1/2" Sq.Tubing
FST = Fd 1/2" Sq.Tubing
FSR = Fd Sq. Rod
ROW = Right-of-Way
-X- = Fence Line
( ) = Deed Calls
-E- = Electric Line
-T- = Telephone Line
-C- = TV Cable
GM = Gas Meter
PP = Power Pole
WM = Water Meter
AC = Air Cond.
BL = Building Line
UGT = Underged phone
FCP = Fence Corner Post
UE = Utility Easement
BC = Back of Curb

* * PROPERTY DESCRIPTION * *

All that certain tract or parcel of land situated in the Manuel Manchaca Survey, Abstract Number 783, the J. Franklin Survey Abstract Number 546, the E. Underwood Survey Abstract Number 1284, the W. G. Gardenhire Survey Abstract Number 451, the J. P. Morrison Survey Abstract Number 794, the J. P. Morrison Survey Abstract Number 795, County of Grayson, State of Texas, said tract being all of a tract as described in Deed to Texoma Area Solid Waste Authority, filed 21 November 2000, and Recorded in Volume 3008 Page 595 of the Deed Records of the County of Grayson, State of Texas, and being more fully described as follows:

Beginning for the southeast corner of the tract being described herein at a found PK Nail, said nail being the southeast corner of said Waste Authority tract, said nail also being at the Intersection of Old Sanborn Ranch Road (asphalt surfaced) and Utley Road;

Thence: South 89 degrees 29 minutes 34 seconds West, with the south line of said Waste Authority tract, and in said Utley Road, a distance of 1401.75 feet to a found PK Nail for a corner of said Waste Authority tract;

Thence: South 89 degrees 29 minutes 48 seconds West, with the south line of said Waste Authority tract, and in said Utley Road, a distance of 3060.21 feet to a found PK Nail for a corner of said Waste Authority tract;

Thence: South 89 degrees 24 minutes 09 seconds West, with the south line of said Waste Authority tract, and in said Utley Road, a distance of 1904.58 feet to a set PK Nail for a corner of said Waste Authority tract;

Thence: South 89 degrees 37 minutes 30 seconds West, with the south line of said Waste Authority tract, and in said Utley Road, a distance of 508.29 feet to a set PK Nail for the southwest corner of said Waste Authority tract, and the southeast corner of a tract as described in deed to Robert A. Miller et ux, Mary Miller, filed 16 December 1994, and Recorded in Volume 2372 Page 407 of said Deed Records;

Thence: North 03 degrees 47 minutes 46 seconds West, passing a pipe fence corner post on the north side of said Utley Road and continuing with the west line of said Waste Authority tract, and the east line of said Miller tract 407 for a total distance of 272.75 feet to a found ½ inch Steel Rebar for a corner of said Waste Authority tract;

Thence: North 04 degrees 18 minutes 12 seconds East, with the west line of said Waste Authority tract, and the east line of said Miller tract 2372/407, a distance of 639.48 feet to a set ½ inch Steel Square Tubing for a corner of said Waste Authority tract, and the northeast corner of said Miller tract 407;

Thence: North 88 degrees 06 minutes 35 seconds West, with the north line of said Miller tract 2372/407, a distance of 181.09 feet to a found ½ inch Steel Rebar for a corner of said Waste Authority tract, and on the east line of a tract as described in deed to Scott Greisen et ux, Tammy Greisen, filed 18 August 2002, and Recorded in Volume 3315 Page 765 of said Deed Records;

Thence: North 06 degrees 03 minutes 31 seconds East, with the west line of said Waste Authority tract, and the east line of said Greisen tract, a distance of 1872.57 feet to a set ½ inch Steel Square Tubing for a corner of said Waste Authority tract, and the northeast corner of said Greisen;

Thence: North 82 degrees 04 minutes 17 seconds West, with the north line of said Greisen tract, a distance of 539.36 feet to a set ½ inch Steel Square Tubing for a corner of said Waste Authority tract, and the northwest corner of said Greisen tract, and on the east line of a tract as described in deed to Robert A. Miller, filed 07 January 2002, and Recorded in Volume 3199 Page 78 of said Deed Records;

Thence: North 07 degrees 23 minutes 16 seconds East, with the west line of said Waste Authority tract, a distance of 1405.30 feet to a set ½ inch Steel Square Tubing for a corner of said Waste Authority tract, and the northeast of a tract as described in deed to Craig W. Falco et ux, Debbie B. Falco, filed 10 January 2003, and Recorded in Volume 3384 Page 197 of said Deed Records, and the southeast of a tract as described in deed to B and B Sand and Gravel INC., filed 02 December 2020, Instrument Number 2020-33569 of said Deed Records;

Thence: North 06 degrees 15 minutes 33 seconds East, with the west line of said Waste Authority tract, a distance of 1978.77 feet to a set ½ inch Steel Square Tubing for a corner of said Waste Authority tract;

Thence: South 78 degrees 45 minutes 31 seconds East, with the north line of said Waste Authority tract, a distance of 248.45 feet to a set ½ inch Steel Square Tubing for a corner of this tract;

Thence: North 11 degrees 22 minutes 50 seconds East, with the north line of said Waste Authority tract, a distance of 159.45 feet to a set ½ inch Steel Square Tubing for a corner of this tract, said tubing also being on the south Right of Way line of State Highway Number 56;

Thence: South 78 degrees 12 minutes 00 seconds East, with the north line of said Waste Authority tract, and the south ROW line of said Highway 56, a distance of 69.95 feet to a set ½ inch Steel Square Tubing for a corner of this tract;

Thence: South 51 degrees 55 minutes 48 seconds East, with the north line of said Waste Authority tract, and the south ROW line of said Highway 56, a distance of 111.09 feet to a set ½ inch Steel Square Tubing for a corner of this tract;

Thence: South 78 degrees 36 minutes 31 seconds East, with the north line of said Waste Authority tract, and the south ROW line of said Highway 56, a distance of 345.69 feet to a set ½ inch Steel Square Tubing for a corner of this tract;

Thence: South 78 degrees 34 minutes 14 seconds East, with the north line of said Waste Authority tract, and the south ROW line of said Highway 56, a distance of 252.60 feet to a set ½ inch Steel Square Tubing for a corner of this tract;

Thence: North 74 degrees 51 minutes 33 seconds East, with the north line of said Waste Authority tract, and the south ROW line of said Highway 56, a distance of 112.12 feet to a set ½ inch Steel Square Tubing for a corner of this tract;

Thence: South 78 degrees 46 minutes 33 seconds East, with the north line of said Waste Authority tract, and the south ROW line of said Highway 56, a distance of 1680.88 feet to a wood fence corner post for a corner of this tract;

Thence: South 78 degrees 28 minutes 54 seconds East, with the north line of said Waste Authority tract, and the south ROW line of said Highway 56, a distance of 1697.84 feet to a wood fence corner post for a corner of this tract;

Thence: South 78 degrees 34 minutes 37 seconds East, with the north line of said Waste Authority tract, and the south ROW line of said Highway 56, a distance of 1329.69 feet to a pipe fence corner post for a corner of this tract;

Thence: North 13 degrees 03 minutes 34 seconds East, with the north line of said Waste Authority tract, a distance of 50.50 feet to a set PK Nail for a corner of this tract, said nail also being in said Highway 56;

Thence: South 78 degrees 42 minutes 55 seconds East, with the north line of said Waste Authority tract, and in said Highway 56, a distance of 1360.16 feet to a set PK Nail for the northeast corner of this tract;

Thence: North 13 degrees 03 minutes 34 seconds East, with the north line of said Waste Authority tract, a distance of 50.50 feet to a set PK Nail for a corner of this tract, said nail also being in said Highway 56;

Thence: South 78 degrees 42 minutes 55 seconds East, with the north line of said Waste Authority tract, and in said Highway 56, a distance of 1360.16 feet to a set PK Nail for the northeast corner of this tract;

Thence: South 01 degrees 24 minutes 36 seconds West, with the east line of said Waste Authority tract, and in said Old Sanborn Ranch Road, a distance of 809.20 feet to a found ½ inch Steel Rebar for a corner of this tract;

Thence: South 01 degrees 24 minutes 09 seconds West, with the east line of said Waste Authority tract, and in said Old Sanborn Ranch Road, a distance of 4132.24 feet to the **POINT OF BEGINNING** and containing 920.487 acres of land.

The undersigned does hereby state to Texoma Area Solid Waste Authority, that a survey was made on the ground, dated 14 August 2021, on the property legally described hereon or in attached field notes and is correct; except as shown on the plat hereon, there are no visible discrepancies, conflicts, shortages in area, boundary line conflicts, overlapping of improvements, easements or right-of-ways, or of which I have been informed; that the quantity of land therein has been accurately calculated, that said property has access to and from a public roadway; and, that the plat hereon is a true, correct and accurate representation of the property described herein above.

This Plat and Description was prepared for the exclusive use of the person or persons named in the above statements. Said statement does not extend to any unnamed person without an express restating by the surveyor naming said person, This survey was prepared for the transaction as dated hereon, this Plat or Map is the Property of Cox Land Surveying Corp., and IS NOT to be used in any other Transactions, and the COPY RIGHTS ARE RESERVED.

28 June 2022

State of Texas Registered Don K. Cox 4577 Professional Land Surveyor

Don K Cox

Don K. Cox, Texas Registered Professional Land Surveyor Number 4577

FLOOD STATEMENT:

I have examined the Federal Emergency Management Agency, National Flood Insurance Program, Flood Insurance Rate Map for the County of Grayson, State of Texas, community Panel Number 48181C effective date of 29 September 2010, and that map indicates that this property is not within Zone "A" (special flood hazard area) as shown on Panel Number 0250F and 0375F of said map.

This flood statement does not imply that the property and/or the structures thereon will be free from flooding or flood damage on rare occasions. Greater floods can and will occur and flood heights may be increased by man-made or natural causes. This flood statement shall not create liability on the part of the surveyor.

SCALE: 1"= 400'

COX LAND SURVEYING CO.
P.O. BOX 597 108 N. MAIN ST. COLLINSVILLE, TEXAS 76233
COLLINSVILLE 903-429-6125 E-mail: CLSC108@aol.com
Gainesville 940-612-LAND Denton 940-381-5070 McKinney 469-952-5070

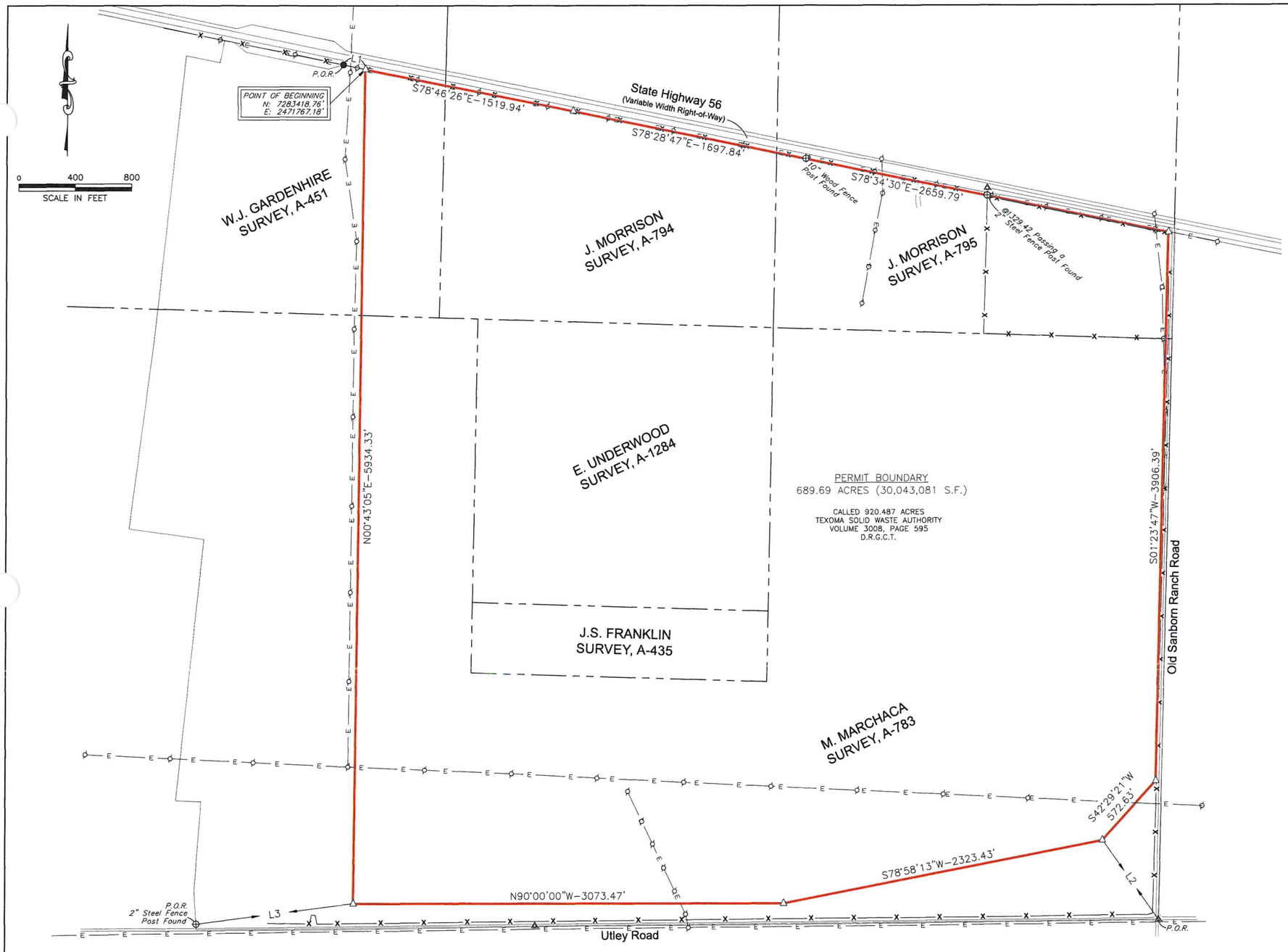
Property Boundary
TASWA Recycling and Disposal Facility
920.642 Acres in the
County of Grayson
State of Texas

DRAWING 1C.1

Drawn by: JCA
Check by: DKC

Job No. 21-13771
Firm # 10005500

Date: 12 October 2021



LEGAL DESCRIPTION:

BEING A 689.69 ACRE TRACT OF LAND LOCATED IN THE M. MARCHACA SURVEY, ABSTRACT NO. 783, W.J. GARDENHIRE SURVEY, ABSTRACT NO. 451, J. MORRISON SURVEY, ABSTRACT NO. 794, J. MORRISON SURVEY, ABSTRACT NO. 795, E. UNDERWOOD SURVEY, ABSTRACT NO. 1284 AND THE J.S. FRANKLIN SURVEY, ABSTRACT NO. 435, GRAYSON COUNTY, TEXAS, AND BEING A PORTION OF A CALLED 920.487 ACRE TRACT OF LAND AS DESCRIBED IN A DEED TO TEXOMA SOLID WASTE AUTHORITY, RECORDED IN VOLUME 3008, PAGE 595, DEED RECORDS, GRAYSON COUNTY, TEXAS (D.R.G.C.T.), SAID 689.69 ACRE TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE SOUTH RIGHT-OF-WAY LINE OF STATE HIGHWAY 56 (VARIABLE WIDTH RIGHT-OF-WAY), FROM WHICH A 1/2-INCH IRON ROD FOUND IN SAID SOUTH RIGHT-OF-WAY LINE BEARS NORTH 78 DEGREES 46 MINUTES 26 SECONDS WEST, A DISTANCE OF 160.94 FEET, SAID POINT OF BEGINNING HAVING GRID COORDINATES OF N: 7283418.76, E: 2471767.18;

THENCE WITH SAID SOUTH RIGHT-OF-WAY LINE THE FOLLOWING THREE (3) COURSES AND DISTANCES:

1. SOUTH 78 DEGREES 46 MINUTES 26 SECONDS EAST, A DISTANCE OF 1,519.94 FEET TO A POINT FOR CORNER;
2. SOUTH 78 DEGREES 28 MINUTES 47 SECONDS EAST, A DISTANCE OF 1,697.84 FEET TO A 10-INCH WOOD FENCE POST FOUND;
3. SOUTH 78 DEGREES 34 MINUTES 30 SECONDS EAST, PASSING A 2-INCH STEEL FENCE POST FOUND AT 1,329.42 FEET, AND CONTINUING FOR A TOTAL DISTANCE OF 2,659.79 FEET TO A POINT FOR CORNER WITHIN SAID 920.487 ACRE TRACT;

THENCE ACROSS SAID 920.487 ACRE TRACT THE FOLLOWING FIVE (5) COURSES AND DISTANCES:

1. SOUTH 01 DEGREES 23 MINUTES 47 SECONDS WEST, A DISTANCE OF 3,906.39 FEET TO A POINT FOR CORNER;
2. SOUTH 42 DEGREES 29 MINUTES 21 SECONDS WEST, A DISTANCE OF 572.63 FEET TO A POINT FOR CORNER, FROM WHICH A MAG NAIL FOUND AT THE SOUTHEAST CORNER OF SAID 920.487 ACRE TRACT BEARS SOUTH 35 DEGREES 24 MINUTES 45 SECONDS EAST, A DISTANCE OF 694.78 FEET;
3. SOUTH 78 DEGREES 58 MINUTES 13 SECONDS WEST, A DISTANCE OF 2,323.43 FEET TO A POINT FOR CORNER;
4. NORTH 90 DEGREES 00 MINUTES 00 SECONDS WEST, A DISTANCE OF 3,073.47 FEET TO A POINT FOR CORNER, FROM WHICH A 2-INCH STEEL FENCE POST FOUND IN THE WEST LINE OF SAID 920.487 ACRE TRACT BEARS SOUTH 82 DEGREES 36 MINUTES 34 SECONDS WEST, A DISTANCE OF 1,129.89 FEET;
5. NORTH 00 DEGREES 43 MINUTES 05 SECONDS EAST, A DISTANCE OF 5,934.33 FEET TO THE POINT OF BEGINNING AND CONTAINING 689.69 ACRES OF LAND, MORE OR LESS.

LINE	BEARING	DISTANCE
L1	N 78°46'26" W	160.94'
L2	S 35°24'45" E	694.78'
L3	S 82°36'34" W	1129.89'

LEGEND:

D.R.G.C.T.	DEED RECORDS GRAYSON COUNTY, TEXAS
P.O.B.	POINT OF BEGINNING
P.O.R.	POINT OF REFERENCE
●	1/2" IRON ROD FOUND
△	MAG NAIL FOUND
⊕	FENCE POST FOUND (AS NOTED)
△	CALCULATED POINT
———	SUBJECT TRACT BOUNDARY LINE
———	ADJOINER TRACT BOUNDARY LINE
———	INTERIOR TRACT/LOT LINE
—·—·—	ABSTRACT LINE

SURVEY NOTES:

1. ALL BEARINGS, DISTANCES, COORDINATES AND ELEVATIONS SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH CENTRAL ZONE, NAD 83 (2011), GEOID 18. DISTANCES SHOWN HEREON ARE GRID.
2. NO ATTEMPT WAS MADE BY BIGGS AND MATHEWS ENVIRONMENTAL (BME) TO LOCATE UNDERGROUND PIPELINES OR UTILITIES. ALL UTILITIES SHOWN HEREON ARE BASED UPON AN ON THE GROUND SURVEY OF MARKED AND/OR VISIBLE UTILITIES.
3. THE PURPOSES OF THIS SURVEY IS FOR PERMITTING PURPOSES ONLY
4. SHEET SIZE: 22" X 34" AT 1 INCH = 400 FEET SCALE

I, RYAN J. MAXFIELD, REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, NUMBER 6763, DO HEREBY CERTIFY THAT THIS SURVEY WAS PERFORMED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH THE STANDARDS OF PRACTICE AS SET FORTH BY THE TEXAS BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS.

GIVEN UNDER MY HAND & SEAL, THIS THE 17th DAY OF SEPTEMBER, 2024.

09/17/2024

RYAN J. MAXFIELD DATE
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 6763, STATE OF TEXAS
TEXAS FIRM REGISTRATION NO. 10194895

STATE OF TEXAS
REGISTERED
RYAN J. MAXFIELD
6763
PROFESSIONAL
LAND SURVEYOR

DRAWING IC.2

PROJECT NAME:	TASWA PERMIT BOUNDARY
DATE:	SEPTEMBER 17, 2024
DRAWN BY:	B. BERRYMAN
DRAWING SCALE:	1"=400'
SHEET:	01 OF 01

PERMIT BOUNDARY
M. MARCHACA SURVEY, A-783, W.J. GARDENHIRE SURVEY, A- 451, J. MORRISON SURVEY, A-794, J. MORRISON SURVEY, A-795, E. UNDERWOOD SURVEY, A-1284 AND THE J.S. FRANKLIN SURVEY, A-435 GRAYSON COUNTY, TEXAS

BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144
TBPELS FIRM NO. 10194895

APPENDIX ID
LEGAL AUTHORITY

Corporations Section
P.O.Box 13697
Austin, Texas 78711-3697

Jane Nelson
Secretary of State

Office of the Secretary of State

Certificate of Fact

The undersigned, as Secretary of State of Texas, does hereby certify that the document, Articles Of Incorporation for TEXOMA AREA SOLID WASTE AUTHORITY (file number 158689701), a Domestic Nonprofit Corporation, was filed in this office on June 19, 2000.

It is further certified that the entity status in Texas is in existence.

In testimony whereof, I have hereunto signed my name officially and caused to be impressed hereon the Seal of State at my office in Austin, Texas on September 23, 2024.

Jane Nelson
Secretary of State

The State of Texas

SECRETARY OF STATE

CERTIFICATE OF INCORPORATION
OF

TEXOMA AREA SOLID WASTE AUTHORITY
FILE NUMBER 1586897-01

The undersigned, as Secretary of State of Texas, hereby certifies that Articles of Incorporation for the above corporation, pursuant to the provisions of the Texas Transportation Corporation Act, have been received in this office and are found to conform to law.

ACCORDINGLY the undersigned, as Secretary of State, and by virtue of the authority vested in the Secretary by law, hereby issues this Certificate of Incorporation and attaches hereto a copy of the Articles of Incorporation.

Dated: June 19, 2000

THE STATE OF TEXAS

Elton Bomer
LSG
Elton Bomer
Secretary of State

APPENDIX IE
APPOINTMENTS

CERTIFICATE OF AUTHORIZATION
Authorization to Execute Documents

Kelly Keel
Executive Director
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Re: Texoma Area Solid Waste Authority
Permit Amendment Application

I am the Executive Director of the Texoma Area Solid Waste Authority. I am authorized to act as an officer of Texoma Area Solid Waste Authority in the execution of the TASWA Disposal and Recycling Facility permit amendment application and to conduct other business in connection with such application, submitted as TCEQ Permit Application No. MSW 2290A.

TEXOMA AREA SOLID WASTE AUTHORITY

John O'Steen, Executive Director

STATE OF TEXAS §

COUNTY OF GRAYSON §

SWORN TO AND SUBSCRIBED BEFORE ME by John O'Steen on this 31st day JANUARY of 2025, which witness my hand and seal of office.

JOANNE HIXSON
Notary Public, State of Texas
Comm. Expires 09-06-2028
Notary ID 1524951

Notary Public in and for the State of Texas

JoAnne Hixson
Printed Name

My Commission Expires: Sept 6, 2028

NOTICE OF APPOINTMENT
Engineer's Appointment

Kelly Keel
Executive Director
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

This is to advise you that officials at Texoma Area Solid Waste Authority have duly appointed Biggs & Mathews Environmental, Inc., as consulting and designing engineers for the purpose of submitting engineering reports and planning material for a permit application for the TASWA DISPOSAL and Recycling Facility. Biggs & Mathews Environmental, Inc. is an engineering firm employing professional engineers in good standing in accordance with State statutes and the firm has experience in the design and construction of similar facilities. Mr. David L. Clark, P.E., Principal Engineer with Biggs & Mathews Environmental, Inc., is the Engineer of Record for this permit application. Mr. Clark is registered in the State of Texas and has more than 30 years' experience in engineering.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

We herewith authorize you to review and comment on such reports, planning material, and data on this proposed project as Biggs & Mathews Environmental, Inc., may submit to you.

ATTEST:

TEXOMA AREA SOLID WASTE AUTHORITY

John O'Steen, Executive Director

SWORN TO AND SUBSCRIBED BEFORE ME by John O'Steen on this 31st day of January, 2025, which witness my hand and seal of office.

JOANNE HIXSON
Notary Public, State of Texas
Comm. Expires 09-06-2028
Notary ID 1524951

Notary Public in and for the State of Texas

JoAnne Hixson
Printed Name

My Commission Expires: Sept 6, 2028

TASWA DISPOSAL AND RECYCLING FACILITY
GRAYSON COUNTY, TEXAS
TCEQ PERMIT NO. MSW 2290A

PERMIT AMENDMENT APPLICATION

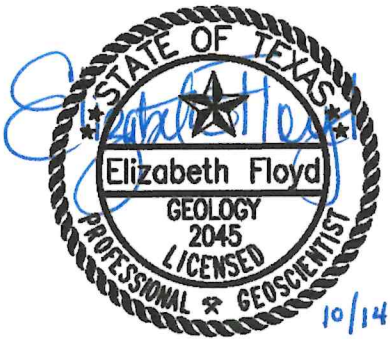
PART II
EXISTING CONDITIONS AND
CHARACTER OF THE FACILITY AND SURROUNDING AREA

PART II NARRATIVE

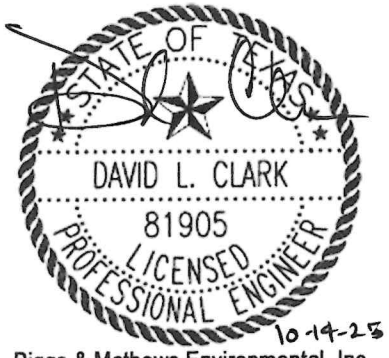
Prepared for

TEXOMA AREA SOLID WASTE AUTHORITY

February 2025
Revised June 2025
Revised August 2025
Revised October 2025



Biggs & Mathews Environmental, Inc.
Firm Registration No. 50222
For Sections 8.1, 10.1, 10.2, 10.3, 10.4, 11.1, 12.1 and 12.2



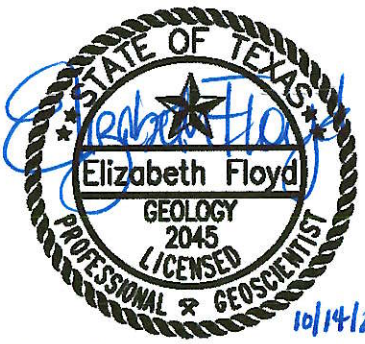
Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

Prepared by

BIGGS & MATHEWS ENVIRONMENTAL
1700 Robert Road, Suite 100 • Mansfield, Texas 76063 • 817-563-1144

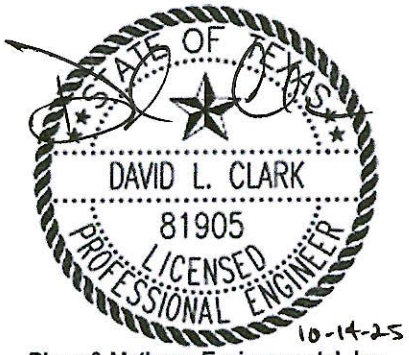
TEXAS BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
FIRM REGISTRATION NO. F-256 AND NO. 10194895

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222



10/14/2025

Biggs & Mathews Environmental, Inc.
Firm Registration No. 50222

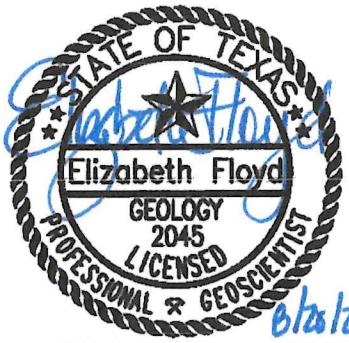


10-14-25

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

CONTENTS

For Sections 8.1, 10.1, 10.2, 10.3, 10.4, 11.1, 12.1 and 12.2



8/28/2025

Biggs & Mathews Environmental, Inc.
Firm Registration No. 50222

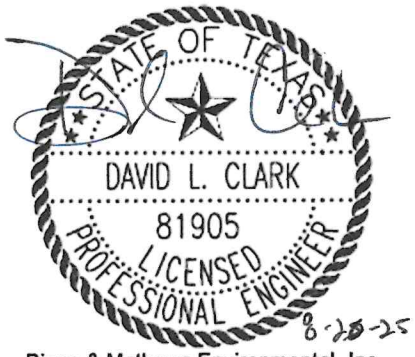
8-20-25

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

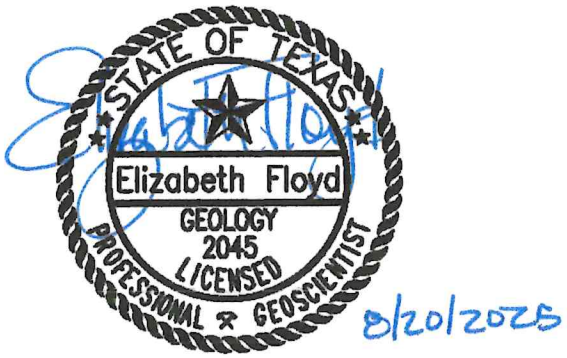
CONTENTS (Continued)

For Sections 8.1, 10.1, 10.2, 10.3, 10.4, 11.1, 12.1 and 12.2

CONTENTS (Continued)



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256



Biggs & Mathews Environmental, Inc.
Firm Registration No. 50222

For Sections 8.1, 10. 1, 10.2, 10.3, 10.4, 11.1, 12.1, and 12.2

1 EXISTING CONDITIONS SUMMARY

30 TAC §330.61(a)

The TASWA Disposal and Recycling Facility (TASWA DRF) is an existing Type I Municipal Solid Waste Disposal Facility operating under TCEQ Permit MSW 2290. The TASWA DRF is located approximately 3 miles east of Whitesboro, 2 miles southeast of Sadler, and 3 miles west of the City of Southmayd on State Highway 56 in Grayson County, Texas. An aerial photo of the site is included in Part I.

TASWA owns approximately 920 acres south of SH 56, west of Old Sanborn Ranch Road, and north of Utley Road. The existing permit area is approximately 393 acres. The existing waste disposal footprint is approximately 228 acres.

The surface topography generally slopes from southwest to northeast with natural surface elevations ranging from about 765 feet mean sea level (msl) to about 725 feet msl. The site lies south of Mustang Creek and is located outside of the FEMA 100-year floodplain.

The existing landfill footprint consists of Sectors 1-16, of which Sectors 1-6 have been constructed and in which waste has been placed. Excavation of Sector 7 is in progress and development of the Sector 7 liner system is scheduled for 2025. Sector 6 is currently the active waste disposal area. Sectors 7-16 have not been developed.

Areas outside the waste disposal footprint are used for buffer and for landfill facilities, including the scale house, entrance road, landfill access road, Citizen's Convenience Center, maintenance shop, office, and surface water drainage structures. As part of the overall development, perimeter drainage facilities, including two perimeter ponds, have been constructed. All surface water from Sectors 1-6 is routed through these two detention ponds prior to exiting the site.

Refer to Appendix IIA for drawings illustrating existing conditions within the existing permit area and expansion area.

Sections 8 through 15 include detailed discussion of site-specific conditions that potentially require special design considerations as set forth in §330.61(a), including impact on the surrounding area, transportation, geology, soils, groundwater, surface water, abandoned oil and water wells, floodplains, wetlands, endangered or threatened species, and the Texas Historical Commission review.

2 WASTE ACCEPTANCE PLAN

30 TAC §330.61(b)

2.1 Properties and Characteristics of Waste

The major classifications of solid waste to be accepted for disposal at TASWA DRF include residential, commercial, grease and grit trap, soluble sludge and septage, Class 2 and Class 3 nonhazardous industrial, construction-demolition, and some special wastes.

The TASWA DRF will not accept Class 1 industrial wastes. The waste classifications are defined in §330.3.

Consistent with §330.15, the facility will not accept for disposal untreated medical waste, lead acid storage batteries; used motor vehicle oil; used oil filters; whole used or scrap tires; refrigerators, freezers, air conditioners, or other items containing chlorinated fluorocarbon (CFC); bulk or noncontainerized liquid waste from nonhousehold sources; regulated hazardous waste; polychlorinated biphenyls (PCB) waste; radioactive materials or other wastes prohibited by TCEQ regulations. The facility has not in the past accepted, and will not accept, Class 1 industrial solid waste.

2.2 Volume and Rate of Disposal

The TASWA DRF serves individuals, businesses, and communities in Grayson County, and surrounding Texas counties. TASWA anticipates that in first year of operation under the MSW 2290A permit (Year 1), the landfill will receive approximately 270,000 tons of incoming waste. The waste acceptance rate will vary over the life of the facility depending on market conditions.

The estimated maximum annual waste acceptance rate for the TASWA DRF projected for the first five years of operation under the MSW 2290A permit is as follows:

Year	Estimated Annual Waste Acceptance Rate
1	270,000 tons
2	275,400 tons
3	280,900 tons
4	286,500 tons
5	292,300 tons

As population and economic conditions and available landfill disposal capacity change within the region, the volume of incoming waste could vary. TASWA will maintain records to document the annual waste acceptance rate for the facility. If the rate exceeds the estimated rate and is not due to a temporary occurrence, TASWA will file a permit modification application consistent with §330.125(h). The modification would propose any needed changes in the site operating plan to properly manage the

increased waste acceptance rate, if any. As provided by §330.125(h), the estimated waste acceptance rate is not a limiting parameter of the permit.

Once expanded, the landfill will provide a total disposal capacity of 183,500,000 cubic yards. The total disposal capacity calculations are provided in Part III, Attachment H, Appendix H3. The remaining disposal capacity calculations are provided Part III, Attachment D4.

The estimate of the population or population equivalent served by the facility has been determined based on the population forecast (approximately 1.45% annual growth) included in the Texoma Council of Governments (TCOG) Community and Economic Development Program (CED). The TASWA DRF generally serves an area that includes Grayson and Cooke County and surrounding areas. Based on this general service area included in the CED that are consistent with the service area, the approximate estimate of population equivalent are as follows:

Population Equivalent:	2020	2070
	212,983 persons	579,087 persons

2.3 Waste Acceptance Plan Form

Refer to Appendix IIJ for the completed form.

3 GENERAL LOCATION MAPS

30 TAC §330.61(c)

Consistent with §330.61(c), the general location maps are provided in Appendix IIA. These general location maps are provided in addition to those maps provided in Part I, Appendix IA. These maps, collectively as a group, accurately show the proximity of the facility to surrounding features and specifically show the items identified in §330.61(c)(1)-(12).

4 FACILITY LAYOUT MAPS

30 TAC §330.61(d)

Consistent with §330.61(d), the facility layout maps are provided in Appendix IIA. These facility layout maps, collectively as a group, specifically show the items identified in §330.61(d)(1)-(9).

5 GENERAL TOPOGRAPHIC MAP

30 TAC §330.61(e)

The United States Geological Survey (USGS) General Topographic Map is included in Appendix IIA. Drawing IIA.2, the topographic map consists of the 7-1/2 minute quadrangle sheets for Ethel and Sadler, Texas. Drawing IIA.2 is at a scale of one inch equals 2,000 feet as required by §330.61(e).

6 AERIAL PHOTOGRAPH

30 TAC §330.61(f)

Consistent with §330.61(f), the aerial photograph of the site and surrounding area is presented in Appendix IIA as Drawing IIA.7. This aerial photograph represents conditions as downloaded from Google Map Pro on February 10, 2022. The aerial photograph shows the area within at least a one-mile radius of the permit boundary. In addition, the permit boundary and limits of waste are shown.

7 LAND USE MAP

30 TAC §330.61(g)

Consistent with §330.61(g) a land use map is included in Appendix IIB as Figure 2. This land use map has been prepared based on the land use analysis conducted by Integrated Environmental Solutions, LLC. The land use features identified and depicted on this drawing, as required by §330.61(g), include the facility permit boundary, uses within the permit boundary, and existing uses such as agricultural, industrial, and residential uses within one mile of the permit boundary. Locations of residences, commercial establishments, schools, licensed day care facilities, churches, cemeteries, ponds or lakes, and recreational areas within one mile of the permit boundary are shown. Refer to the facility layout maps, Drawing IIA.3, for drainage, pipeline, and utility easements within the permit boundary.

8 IMPACT ON SURROUNDING AREA

30 TAC §330.61(h)

Consistent with §330.61(h), an evaluation of the impact on the area surrounding the facility was conducted. Refer to Appendix IIB for a detailed land use analysis. The land use analysis addresses zoning within two miles of the facility, character of surrounding land uses within one mile of the facility, growth trends within five miles of the facility, proximity to residences and other uses within one mile of the facility.

8.1 Wells Within 500 Feet

Consistent with §330.61(h)(5), a description of known wells within 500 feet of the facility has been prepared.

A water well and oil and gas well search was conducted to identify known wells in the vicinity of the proposed facility boundary. A discussion of the well search is included in Part III Attachment E, Section 3.4. The water well search details and the state well numbering system identification number cross reference table may be found with additional information about each of the wells in Part III, Attachment E. Consistent with §330.61(c)(2), the water wells located within 500 feet of the proposed permit boundary are shown on Drawing IIA.4. There are a total of 4 water well locations within 500 feet of the proposed permit boundary. There are currently 16 existing monitoring wells and 14 piezometer locations within the TASWA DRF permit boundary. There are no known abandoned water wells within the permit boundary. If any unknown abandoned water wells are located during facility development, they will be managed as described in Section 12.1. Well locations, use and status are shown on Drawing IIA.4.

An oil and gas well search of state records was conducted to identify any oil and gas wells on the site and in the vicinity of the permit boundary. The search included a review of records and maps on file at the Texas Railroad Commission (RRC). As shown on Drawing IIA.5, a total of eight oil well locations were observed with a 500-foot radius of the site. Three dry holes are located within the waste footprint and have been properly plugged prior to construction of waste cells. Three additional dry holes are identified on the property outside of the waste permit but within the boundary. One permitted well location is shown on the property within the limit of waste; the well was never drilled, and the permit expired in 2002. One oil well was identified outside the permit boundary but within a 500-foot radius of the site. A Public Information Request was submitted to the RRC in an effort to gain information about the oil well identified as 181. Despite an exhaustive search performed by the RRC, no records or data pertaining to oil well 181 were located. The RRC was able to locate records for the two most adjacent wells with respect to oil well 181; both adjacent wells are considered dry and were plugged in 1966. Due to the lack of records for oil well 181 and the exclusive presence of documented dry holes within the permit boundary, oil well 181 should not be considered an active crude oil or natural gas production well or a well associated with mineral recovery.

Information is discussed in Part III, Attachment E. No other oil or gas wells or tests (dry holes) have been drilled within 500 feet of the permit boundary. If any unknown

abandoned crude oil or natural gas wells or other wells associated with mineral recovery are located during facility development, they will be managed as described in Part III, Attachment E.

9 TRANSPORTATION

30 TAC §330.61(i)

Consistent with §330.61(i)(1)-(4), a transportation study is included as Appendix IIC. The transportation study provides information on the availability and adequacy of access roads, provides data on the existing and expected vehicular traffic on access roads within one mile of the facility during the expected site life of the facility, and projects the volume of traffic expected to be generated by the facility on the access roads within one mile of the facility. Documentation of coordination with the Texas Department of Transportation (TxDOT), is also included in Appendix IIC. Information in the Transportation Study shows that access roads to the site are available and adequate.

9.1 Airport Impact

Consistent with §330.61(i)(5), an evaluation of the facility impact on surrounding airports was conducted in accordance with §330.545. Refer to Drawing IIA.6 for the location of the facility in relationship to area airports. The map provides the facility boundary, a 5,000-foot radius, a 10,000-foot radius, and a six-mile radius overlain on the May 19, 2022, Dallas-Ft. Worth FAA Sectional Aeronautical Chart.

The Federal Aviation Administration conducted an aeronautical study for the vertical and lateral expansion of the TAWSA Facility and has issued a "Determination of No Hazard to Air Navigation". Further, notification has been provided to the two general aviation airports within 6 miles of the facility boundary of the proposed landfill expansion. Refer to Appendix IIH for documentation of coordination with FAA and the airports regarding location of the facility in relation to airports in the designated areas as required by §330.61(i) and §330.545.

The TASWA DRF meets the Airport Safety location restriction in §330.545.

10 GENERAL GEOLOGY AND SOILS STATEMENT

30 TAC §330.61(j)

Consistent with §330.61(j)(1)-(4), a general discussion of the geology and soils of the site has been prepared. Detailed discussion of the geology of the site can be found in Part III, Attachment E of this application. The geology and hydrogeology characteristics for this limited expansion are consistent with the previously approved Geology Report prepared by Biggs and Mathews Environmental, Inc. as part of the previous permit application for Permit No. MSW 2290, issued on October 31, 2003.

10.1 General Geology

The gently north sloping topography of the site is interrupted by gentle north-northwest trending topographic high areas on the western and eastern portions of the site. The low areas between the topographic highs form a north trending drainage feature in the central portion of the site and an east trending drainage feature in the southwest corner of the site. Surface water run-on drains from the south of the site onto the site through culverts beneath Utley Road. The topographic high area on the east side of the site directs runoff to the east. Surface elevations on the site range from about 765 feet above mean sea level (AMSL) on the topographic highs to about 725 feet AMSL in the lowest intermittent stream channels.

The TASWA site lies on the western edge of the northern extent of the physiographic province known as the Blackland Prairie. The Blackland Prairie consists of weathered outcrops of Cretaceous shale, marl, and chalk formations including the Eagle Ford Shale, the Austin Chalk, and the Taylor and Navarro Marls. Blackland Prairie terrain typically has undulating surfaces and fertile soils that have been cleared of most natural vegetation and cultivated for farm crops. Immediately west of the northern part of the Blackland Prairie is the Grand Prairie. The Grand Prairie in this area has low, undulating hills formed on the sandy soils of the Woodbine Formation outcrop. The sandy soils west of the site typically support tree growth better than the Blackland Prairie soils that are on the project site (Wermund, 1996).

The site is located near the upper reaches of the Red River Basin watershed. In the site vicinity the surface slopes gently to the north and is bisected by shallow intermittent features that convey surface water runoff to the north and west into tributaries of Mustang Creek. These tributaries are the nearest surface water bodies to the site when they contain water. Mustang Creek is a large intermittent stream that flows north to join Big Mineral Creek before it flows into Lake Texoma about 4½ miles north-northeast of the site. Lake Texoma resulted from the impoundment of the Red River. Local impoundments of some small intermittent streams form small stock tanks north and west of the site. A regional drainage divide separating the Trinity River Watershed from the Red River Watershed occurs about ¼ mile south of the site. North of that divide surface water drains generally north to the Red River. South of the divide surface water drains generally south to the Trinity River. The maximum elevation on the site is approximately 810 feet AMSL near the center of the site. The minimum elevation is approximately 725 on the north central portion of the site. The site slopes generally to the north at

approximately 100 feet per mile (approximately 1.9 percent). Natural internal relief on the site displays slopes with gradients ranging from 1.5 percent to 5 percent.

10.2 General Stratigraphy

Regional stratigraphic units that outcrop in the Texoma area include formations of the Lower Cretaceous Comanche Series west of the site and those of the Upper Cretaceous Gulf Series at and east of the site. The stratigraphic relationships of these formations are shown in the table below.

A regional cross-section across the Texoma area (Nordstrom, 1982) is shown in Figure IIA.9. The geologic units of the Cretaceous System are an east-southeastward dipping wedge of sediments that thicken toward the Gulf of Mexico. Outcrops of the Cretaceous formations in southern Grayson and Cooke Counties generally trend north-south. In the northeastern part of Grayson County and northern Fannin County the northern flank of the East Texas Embayment is bounded by the Ouachita Uplift causing the Cretaceous outcrops to have a more east-west trend that reflects dip of those formations southward into the Gulf of Mexico.

Stratigraphy of The Cretaceous of North Texas
(Modified from Barnes, 1991)

System	Series	Group, Formation			Member
Cretaceous	Gulf	Navarro			
		Taylor (Ozan Formation)			
		Austin			
		Eagle Ford			
		Woodbine			Templeton
					Lewisville
					Red Branch
					Dexter
	Comanche	Washita			
		Fredericksburg			
		Trinity	Paluxy	Antlers	
			Glen Rose		
			Twin Mountains		

Outcrop at TASWA site.

Refer to Part III, Attachment E for more detailed information.

10.2.1 Site Stratigraphy

The site is on the outcrop of the Eagle Ford Shale. The Eagle Ford is typically gray to dark gray and brown shale with sandy shale and sand interbeds. Near the surface, the Eagle Ford weathers to gray to brown clay, shaly clay, and sandy clay. The Templeton

Shale member of the Woodbine crops out west of the site and underlies the Eagle ford Shale. The shallowest Woodbine sandstone is found beneath the site ranging in depth from about 70 on the western parts of the site to about 100 feet on the eastern portion of the site. The sandstone is locally interbedded with thin shale or clayey shale. The Woodbine sandstone is typically gray to dark gray, hard, carbonaceous, and glauconitic with calcareous cement.

Six geologic units have been identified in the subsurface beneath the site. They are described in detail in Part III, Attachment E. Part III, Appendix E3 contains geologic cross sections of the site which illustrate generalized subsurface conditions and interpreted correlations of the geologic and hydrogeologic unit at the site. The cross-sections are based on lithologic and stratigraphic data from the logs of borings provided in Part III, Appendix E2.

10.2.2 Layer I - Clay and Shaly Clay

Layer I is a weathered surficial unit generally consisting of clay overlying shaly clay. This layer also has some sandy shale interbeds. Layer I soils were encountered from the surface to a maximum depth of 47 feet. Average thickness of this layer is 23 feet. This layer is the near-surface weathered portion of the Layer II shale layer.

10.2.3 Layer II - Shaly Sandstone and Shale

Layer II is hard and consists of thin, flaggy beds of calcareous, shaly sandstone and shale. There is a minor, thin flaggy limestone within this layer. Layer II is correlatable across the site except for a few locations where it was not identified in borings (borings EB-6, P-10, YY-25, BME-3, 4, 5, 6, 7, 9, 11, 14, 15, 17, 18, 19, 20). Layer II was encountered from 3 to 82 feet deep except for one location (boring F-40 on the northwest corner of the site), where the overlaying clay is absent, and Layer II is found at the surface. This layer, where present, is 1 to 24 feet thick and averages about 5 feet thick.

10.2.4 Layer III – Shale with Sand

Layer III consists of gray to dark gray shale with sand. The shale is glauconitic, carbonaceous, and in places is calcareously cemented and fractured with near-vertical to diagonal fractures. The shale is typically gradational with slightly more sand near the top grading downward to 100 percent shale near the contact with the underlying Layer IV shale. A few thin mudstone and sand seams occur in Layer III. The unit is correlatable across the site. Layer III ranges from 10 to 53 feet thick and is an average of 40 feet thick. The top of Layer III averages 27 feet below ground surface.

10.2.5 Layer IV - Shale

Layer IV is dark gray, massive shale, carbonaceous with some mudstone seams. The top of the unit was encountered at an average depth of about 63 feet and ranged from 3 to 79 feet thick, averaging 36 feet. The unit contained mudstone seams and traces of glauconitic sand. Near vertical and diagonal fractures occur scattered throughout the unit. The unit is correlatable across the site.

10.2.6 Layer V – Sandstone and Shaly Sand

Layer V is a tan to dark gray glauconitic, carbonaceous, variably cemented sandstone interbedded with shaly sandstones. It contains minor shale and mudstone interbeds as well as fossil shell fragments. Layer V ranges from 2 feet to 26 feet thick and averages 10 feet thick across the site. The unit is correlatable across the site.

10.2.7 Layer VI – Shale and Shale with Sand

Layer VI is dark gray, glauconitic, carbonaceous shale with sandy seams. The unit typically grades from more sand near the base of Layer V sandstones to all shale deeper into the layer. A maximum of 43 feet of this shale unit and an average of about 14 feet was penetrated by drilling during exploration. There is a deeper sand below Layer VI that was observed in borings BME-1, BME-8, and BME-13. The maximum thickness is not known because it was not fully penetrated in all borings. The unit is correlatable across the site.

10.3 Fault Areas

Consistent with §330.61(j)(2) and §330.555, fault areas documentation was prepared and included in Part III, Attachment E to demonstrate that the TASWA DRF meets the location restriction for fault areas.

A review of published literature found no oil and gas accumulations on the property.

The facility is in compliance with the Fault Area location restriction as defined by §330.555.

10.4 Seismic Impact Zones

A seismic impact zone, as referenced in §330.61(j)(3) and defined by §330.557, is an area with a 10 percent or greater probability that the maximum horizontal acceleration in lithified earthen material, expressed as a percentage of the earth's gravitational pull, will exceed 0.10g in 250 years.

Based on the USGS 2014 National Seismic Hazard Map, the TASWA DRF lies in an area where the peak horizontal acceleration, with a 2% probability of being exceeded in 50 years (functionally equivalent to a 10% probability of exceedance in 250 years), is less than 10% of gravity (less than 0.1g). Appendix IIA shows the site location on the USGS 2014 National Seismic Hazard Map.

The facility is in compliance with the Seismic Impact Zone location restriction as defined by §330.557.

10.5 Unstable Areas

Consistent with §330.61(j)(4) and §330.559, unstable areas documentation was prepared as part of this application to demonstrate that the TASWA DRF meets the location restriction for unstable areas.

An unstable area is defined by the TCEQ as a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill's structural components responsible for preventing releases from a landfill. An unstable area can exhibit poor foundation conditions, areas susceptible to mass movement, and karst terrains.

The determination of potential unstable areas at the landfill site is based on site observations and a review of existing documentation for the site by a licensed professional engineer. Based on this review, the foundation conditions and the local geologic formations are stable. In addition, there is no evidence to suspect mass movement of natural formations of earthen material on or in the vicinity of this site. The proposed landfill components were evaluated with respect to settlement, heave, and slope stability. The detailed analysis is included in Part III, Attachment D5. The proposed landfill components were evaluated with respect to differential settlement, heave, and slope stability.

Based on site observations, a review of existing geological data, and geotechnical analysis of the structural components of the landfill development, the site is not located in an unstable area and the integrity of the landfill is not expected to become impaired by natural, surface, or subsurface human-made features or events.

The facility is in compliance with the Unstable Areas location restriction as defined by §330.559.

11 GROUNDWATER AND SURFACE WATER

30 TAC §330.61(k)

11.1 Groundwater

Consistent with §330.61(k)(1) and 330.549, a discussion of groundwater conditions at or near the facility has been prepared and is included in Part III, Attachment E. The groundwater monitoring system proposed for the site is discussed in Part III, Attachment F. The facility is not located within the recharge zone of the Edwards Aquifer, as identified in 30 TAC Chapter 213.

Groundwater conditions at the site were determined using data from a combination of piezometers and monitoring wells that are a part of the approved site Subtitle D groundwater monitoring system. Details and logs of the borings, monitoring wells, and piezometers are provided in Part III, Appendix E2.

The facility is in compliance with the Groundwater location restriction as defined by §330.549.

11.1.1 Hydrogeologic Units

11.1.1.1 Layer II/III Shaly Sandstone and Shale with Sand

Groundwater is contained in the Layer II shaly sandstone and the Layer III shale with sand. Groundwater enters Layer II at its outcrop on the western part of the TASWA property and flows to the northeast. In addition to the recharge to Layer II and III from infiltration on their surface outcrops, infiltration from the surface may penetrate Layer I in localized areas where Layer I does not contain lower permeability material. Hydrographs of water levels in site piezometers, plotting water levels versus precipitation, do not suggest that the groundwater levels respond to precipitation events. Layer III contains shale with sand. Layer III generally contains more sand near the top of the layer. The amount of sand grades generally downward toward its base as it transitions into the Layer IV shale. Groundwater found in the upper parts of Layer III is apparently in direct communication with groundwater in Layer II and acts as one hydrogeologic unit. Groundwater would move preferentially in a lateral direction in the Layer II material since it is significantly more permeable than Layer III. Groundwater flow in Layer II is estimated to be about 25 feet per year.

11.1.1.2 Layer IV Shale

Layer IV consists of dark gray, dense shale, and ranges from 3 to 79 feet thick across the site. The lithologic and hydrogeologic characteristics of this unit indicate that it serves as the lower confining unit to the groundwater in Layers II/III and the upper confining unit to the underlying sandstone aquifer in Layer V.

11.1.1.3 Layer V Sandstone

Groundwater enters the Layer V sandstone at its outcrop west of the site. The groundwater moves downdip, generally to the east. Groundwater is confined in Layer V by the overlying Layer IV shale and the underlying Layer VI shale. Slug tests discussed in Section 5.7 of Attachment E were conducted in the piezometers, which were screened in Layer V. The geometric mean of hydraulic conductivity values (K) calculated from the Layer V slug tests is 1.22×10^{-4} cm/sec. The estimated groundwater flow velocity in Layer V is about 15 feet/year.

11.1.1.4 Layer VI Shale and Shale with Sand

Layer VI consists of a dark gray, dense shale similar to Layer IV. The shale in Layer VI contains thins seams of sand near the top and grades to a dense shale with depth. An average of about 14 feet and a maximum of 43 feet of this shale was penetrated by site borings. This shale serves as the aquiclude unit to the Layer V aquifer sand.

11.2 Regional Aquifers

The Woodbine Formation and Trinity Group aquifers are the only defined regional aquifers.

11.2.1 Woodbine Aquifer

The Woodbine Aquifer is classified by the State of Texas as a minor aquifer. The outcrop of the Templeton Shale Member of the Woodbine Formation lies immediately west of the existing permit boundary of the TASWA DRF. The recharge zone of the sandy portions of the Woodbine aquifer trends generally from north to south in a band that stretches from about five miles east of Gainesville in Cook County to about ½ mile west of the site. Depth to the Woodbine sandstone beneath the site ranges from about 70 feet below the ground surface on the western portions of the site to as deep as 130 feet on the eastern portions of the site. The thickness of the Woodbine varies from about 50 feet in the western parts of the recharge zone to more than 400 feet in the eastern parts of the region.

The Woodbine aquifer consists of sandstone, siltstone, and shaly sand interbedded with non-aquifer-quality shale and sandy clay. The Woodbine generally dips to the east at about 60 feet per mile. The Woodbine aquifer is confined by the overlying Eagle Ford Shale in western Grayson County and the Eagle Ford Shale and Austin Chalk in the eastern parts of Grayson County.

The primary recharge to the woodbine is by rainfall on the outcrop area and from infiltration from lakes and streams on the outcrop. Woodbine groundwater occurs in unconfined, water-table conditions near the outcrop and becomes confined downdip. Groundwater within the Woodbine moves east-southeast from the recharge zones on the outcrop. Based on published, regional data, the average rate of groundwater movement in the Woodbine in the Texoma Area is estimated to be about 10 to 20 feet per year depending on the local gradient and permeability. Water quality of the Woodbine near the outcrop typically has high iron concentrations but is otherwise fresh and of good quality. As the Woodbine groundwater migrates downgradient, the water quality deteriorates with increases in sodium, chloride, and bicarbonate. Total dissolved

solids typically range from 250 to 1500 milligrams per liter in groundwater withdrawn from Woodbine wells in the area.

11.2.2 Washita Group

The Woodbine Formation is separated from the deeper Trinity aquifer by sediments of the Washita Group. The Washita Group consists of, from oldest to youngest, Kiamichi Limestone, Fort Worth Limestone and Duck Creek Marl, Denton Clay, Weno Limestone, Paw Sandstone and Clay, Main Street and Bennington Limestones, and the Grayson Marl (Main Street and Grayson are largely undivided in Texas). The Washita Group consists mostly of limestone, dense marl, clay, and some sand. The sediments of the Washita Group are not considered aquifer quality, though will yield small quantities of water in shallow wells near their outcrop.

11.2.3 Trinity Aquifer

The Trinity aquifer is classified as a major aquifer by the State of Texas. Regionally, the Trinity consists of, from oldest to youngest, the Twin Mountains, the Glen Rose, and the Paluxy. In the Texoma area, the Trinity aquifer is collectively known as the Antlers Formation, (Nordstrom, 1982; and Barnes, 1991). The Antlers crops out in western Cooke County and consists of sandstone, sand, and clay. The thickness of the Antlers in Cooke and Grayson counties ranges from 400 to 800 feet and deepens from the outcrop area to more than 1400 feet deep in eastern Grayson County (Figure E1-2).

The potentiometric surface of confined groundwater in the Antlers is about 450 feet below mean sea level in the general area of the site. A regional potentiometric surface map of the Trinity Antlers aquifer is on Figure E1-4. Nordstrom (1982) estimates a groundwater velocity for the Antlers of 1 to 2 feet per year. Groundwater moves slowly to the east-southeast in the Antlers.

Hydraulic properties of the sand units that comprise the Trinity aquifer are given in Nordstrom, (1982) and Langley, (1999), and are summarized in Table E-2. Transmissivities range from 5,000 to 10,000 gallons per day per foot. Hydraulic conductivity ranges from 25 to 53 gallons per day per square foot.

Recharge to the Trinity Antlers is by precipitation on the outcrop as well as seepage from the lakes and streams on the outcrop. Groundwater in the Antlers near the outcrop I unconfined and under water table conditions. Downdip from the outcrop, the groundwater is confined by the lower permeability rocks above and below the Antlers. The nearest outcrop for the Trinity is more than 25 miles west of the site.

11.3 Surface Water

Consistent with §330.61(k)(2), a discussion of surface water at or near the site has been prepared.

The proposed TASWA DRF is located in west central Grayson County in the Red River drainage basin. The site is near the upper limits of the drainage divide between the Red River and Trinity River drainage basins. Stormwater runoff from the TASWA DRF property generally runs off from south to north into unnamed tributaries of Mustang

Creek. Mustang Creek flows into Big Mineral Creek, which empties into Lake Texoma about 7 miles north of the site.

Runoff from the west half of the TASWA DRF contributes to the existing tributary just west of the permit boundary. The central part of the site contributes to a tributary that flows through the middle of the site. The east part of the site runs off into a series of smaller tributaries that flow under Old Sanborn Ranch Road and eventually into a tributary of Mustang Creek east of the site. The existing streams or creeks running through or adjacent to the site are intermittent streams. The proposed TASWA DRF permit boundary is not located within the 100-year floodplain as defined by the Federal Emergency Management Agency (FEMA).

11.4 Stormwater Permitting

The facility has been designed to prevent the discharge of pollutants into waters of the state of Texas or waters of the United States, as defined by the Texas Water Code and the Federal Clean Water Act, respectively. TASWA DRF submitted a notice of intent (NOI) to comply with TPDES General Permit No. TXR050000 relating to stormwater discharge associated with industrial activity (Multi-Sector General Permit) and received Permit No. TXR05AH82. A copy of the permit is included in Appendix IIG.

12 ABANDONED OIL AND WATER WELLS

30 TAC §330.61(l)

12.1 Water Wells

Consistent with §330.61(h)(5), there are no known abandoned water wells within the permit boundary. There are currently 16 existing monitoring well locations within the current permit boundary.

Should any unknown abandoned water wells be discovered during facility development, TASWA DRF will provide notification to the TCEQ executive director of their location. The well will be plugged in accordance with applicable rules and regulations of the TCEQ or other state agency and written certification to that effect will be submitted to the executive director within 30 days after discovery.

12.2 Oil and Gas Wells

As discussed in Section 8.1 there are six plugged dry wells located within the permit boundary and one well location with an expired permit that was never drilled. An additional oil well location was observed outside the permitted boundary but within a 500-foot radius of the site. A Public Information Request was submitted to the RRC in an effort to gain information about the oil well identified as 181. Despite an exhaustive search performed by the RRC, no records or data pertaining to oil well 181 were located. The RRC was able to locate records for the two most adjacent wells with respect to oil well 181; both adjacent wells are considered dry and were plugged in 1966. Due to the lack of records for oil well 181 and the exclusive presence of documented dry holes within the permit boundary, oil well 181 should not be considered an active crude oil or natural gas production well or a well associated with mineral recovery. There are no other known existing or abandoned crude oil or natural gas wells or other wells associated with mineral recovery within the TASWA DRF permit boundary.

If any abandoned crude oil or natural gas wells or other wells associated with mineral recovery are discovered during site development, written notification of each well's location will be provided to the executive director within 30 days after such discovery. Within 30 days after plugging any such well, the executive director will be provided with written certification that the well has been properly capped, plugged, and closed in accordance with all applicable rules and regulations of the Railroad Commission of Texas. A copy of the well plugging report to be submitted to the appropriate state agency will also be submitted to the executive director of the TCEQ within 30 days after the well has been plugged. Any producing crude oil or natural gas well that does not affect or hamper landfill operations may be installed or remain in its current state if identified in the permit for the landfill or in a written notification to the executive director.

13 FLOODPLAINS AND WETLANDS

30 TAC §330.61(m)

13.1 Floodplains

Consistent with §330.61(m)(1) and §330.547, an evaluation of the 100-year floodplain has been prepared for TASWA DRF.

FEMA has defined the limits of the 100-year floodplain (1% annual chance) in the vicinity of the landfill and published the Flood Insurance Rate Map (FIRM) for the area as the FIRM Community Panel Numbers 48181C0250F and 48181C0375F with an effective date of September 29, 2010. The FIRM identifies areas within the facility permit boundary as Zone X - areas determined to be outside the 0.2% annual chance floodplain. A copy of the FIRM is included in Appendix IIA.

In accordance with §330.547(a), the TASWA DRF's waste disposal operations will not be located in the 100-year floodway. In accordance with §330.547(b), the TASWA DRF's new and existing municipal solid waste disposal units are not located in the 100-year floodplain, will not restrict the flow of the 100-year flood, will not reduce the temporary water storage capacity of the floodplain, and will not result in the washout of solid waste. Further, in accordance with §330.547(c), the TASWA DRF's processing and/or storage units are not located within the 100-year floodplain.

The facility is in compliance with the Floodplains location restriction as defined by §330.547.

13.2 Wetlands

Consistent with §330.61(m)(2) and (3), a wetlands determination under applicable federal, state, and local laws has been prepared and is included in Appendix IID. The wetlands determination was conducted to evaluate areas subject to jurisdiction under §404 of the federal Clean Water Act and areas meeting the State's definition of "wetland" per 30 TAC §330.3(184) and 30 TAC §307.3(85). The use of the term "wetland" throughout this Section 13.2 refers to features that have soil, hydrology, and vegetation characteristics consistent with either the federal or the state "wetland" definition, or with both definitions. No feature was excluded from classification as a wetland per the exclusions provided in the State's definition. There are no applicable local laws related to wetland areas.

TASWA has submitted a wetland delineation and received concurrence from the Tulsa District of the US Army Corps of Engineers (COE) for total credit demand and have submitted a draft Permittee Responsible Mitigation Plan (PRMP) and nationwide permit pre-construction notification (PCN) to provide mitigation for development of all impacted wetland/jurisdictional waters within the TASWA facility boundary. Copies of correspondence demonstrating coordination with the COE are included in Appendix IID.

The facility is in compliance with the Wetlands location restriction as defined by §330.553.

14 ENDANGERED OR THREATENED SPECIES

30 TAC §330.61(n)

Consistent with §330.61(n) and §330.551, an evaluation of endangered or threatened species at the site has been prepared and is included in Appendix IIE.

Based on site visits conducted by qualified biologists, there are no threatened or endangered species or critical habitat found on the site.

Based on evaluation conducted by qualified biologists, and coordination with the U.S. Fish and Wildlife Service and the Texas Parks and Wildlife Department, in accordance with §330.551(a), the facility and the operation of the facility will not result in the destruction or adverse modification of the critical habitat of endangered or threatened species, or cause or contribute to the taking of any endangered or threatened species.

Coordination with the United States Fish and Wildlife Service and the Texas Parks and Wildlife Department regarding the locations and specific data relating to endangered and threatened species in Texas is provided in Appendix IIE.

The facility is in compliance with the Endangered or Threatened Species location restriction as defined by §330.551.

15 TEXAS HISTORICAL COMMISSION REVIEW

30 TAC §330.61(o)

Consistent with §330.61(o), a review letter was submitted to the Texas Historical Commission documenting compliance with the Natural Resources Code, Chapter 191, Texas Antiquities Code. The state Historic Preservation Officer determined that no historic properties are present or affected by the project. Documentation of the coordination with the Texas Historical Commission is provided in Appendix IIF.

16 COUNCIL OF GOVERNMENTS AND LOCAL GOVERNMENT REVIEW REQUEST

30 TAC §330.61(p)

Consistent with §330.61(p), Parts I and II of the application were submitted for review by the Texoma Council of Governments for compliance with the regional solid waste plan. Because the TASWA DRF is not located within the city limits of any city, there is not an applicable local government solid waste plan and review process. Documentation of the coordination with the Texoma Council of Governments is provided in Appendix III.

17 EASEMENTS AND BUFFER ZONE

No solid waste unloading, storage, disposal, or processing operations will occur within any easement, buffer zone, or right-of-way that crosses the site. The existing TASWA DRF and proposed expansion are consistent with the provisions of §330.543.

No solid waste disposal shall occur within 25 feet of the center line of any utility line or pipeline easement, but no closer than the easement, unless otherwise authorized by the executive director. All pipeline and utility easements shall be clearly marked with posts that extend at least 6 feet above ground level, spaced at intervals no greater than 300 feet. Utilities or pipelines within the 2290A permit boundary will be relocated or abandoned prior to development within or adjacent to their easements.

The buffer zone distances between the permit boundary and waste disposal area meets or exceeds the minimum buffer zone distance of 125 feet, as shown on Drawing IIA.3.

The buffer zone distance for waste storage or processing operational activities equals or exceeds the minimum distance of 125 feet. Buffer zone distances vary to each storage or processing facility. The buffer distances from the facility boundary to these facilities are shown on Drawing IIA.3.

The facility is in compliance with the Easements and Buffer Zone location restriction as defined by §330.543.

18 COASTAL AREAS

The facility is consistent with the provision of §330.561; it is not located within a coastal area or within 5,000 feet of an area subject to active coastal shoreline erosion as defined in 30 TAC §335.584(b)(3) or (4).

The facility is an existing Type I landfill, that has not in the past accepted, and will not accept, Class I industrial waste. There are no existing or proposed Class I cells or disposal areas at the facility. Therefore, the facility satisfies the provisions of §330.561; and the facility is not located on a barrier island or peninsula as defined in §335.584(b)(3); nor is the facility located within a coastal area as defined in §335.584(b)(4).

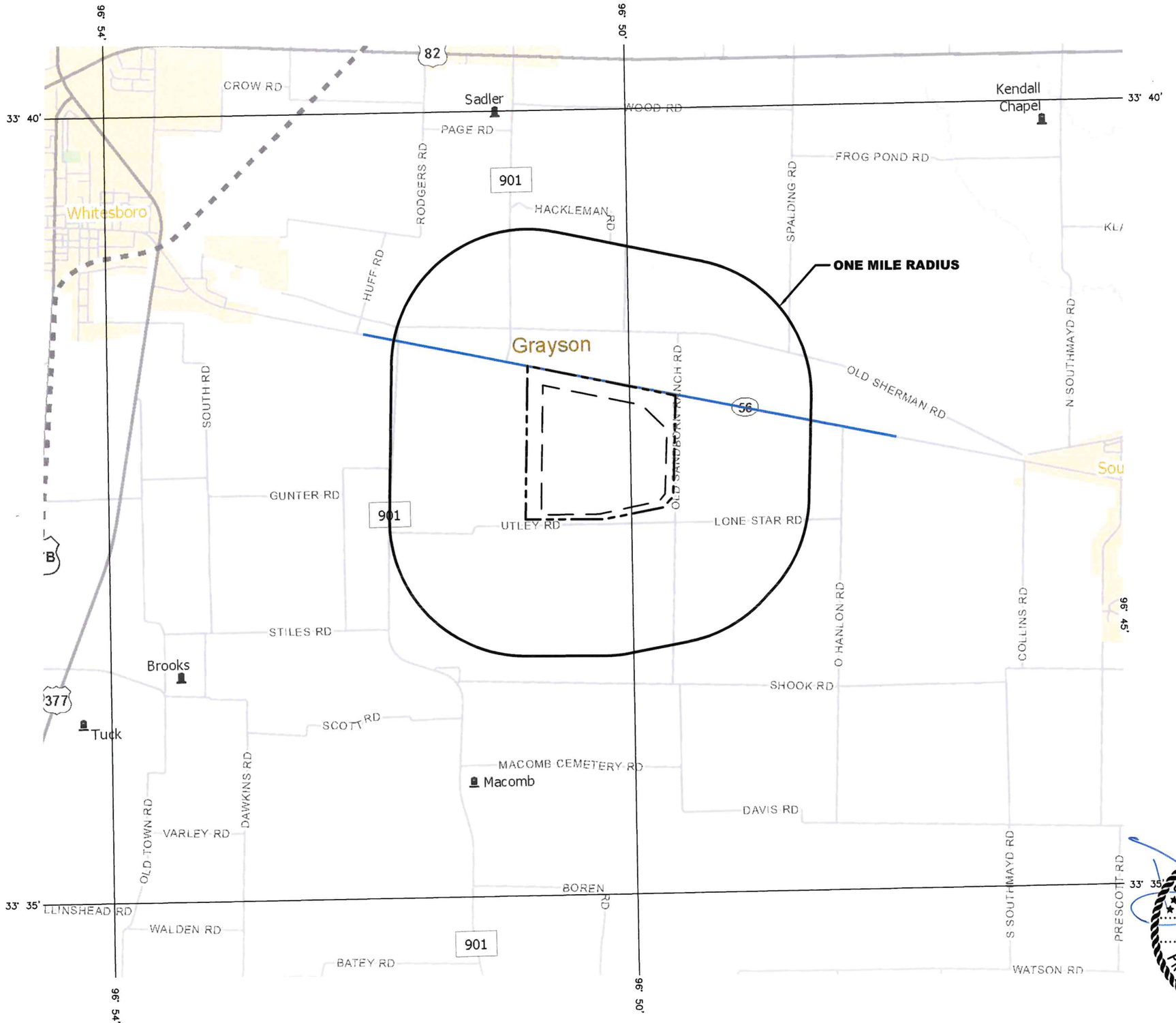
The facility is in compliance with the Coastal Areas location restriction as defined by §330.561.

19 LANDFILL PERMIT PROHIBITION

The facility is consistent with the provisions of §330.563; this permit amendment application is not subject to the prohibitions in Texas Health Safety Code §361.122 because the site is not Type IV nor does it meet the description in §361.123(d).

The TASWA DRF meets the Type I and Type IV Landfill Permit Issuance Prohibited location restriction in §330.563.

APPENDIX IIA
MAPS AND DRAWINGS



0 2000 4000
SCALE IN FEET

LEGEND

- 2290A PERMIT BOUNDARY
- 2290A LANDFILL FOOTPRINT
- REGULAR DELIVERY ROUTES WITHIN 2 MILES OF SITE ENTRANCE

- Unincorporated Community
- County Seat
- Border Crossing
- Cemetery
- Cemetery (Inside City)
- Deep Draft Port
- Shallow Draft Port
- Railroad
- Dam
- River or Stream
- TXDOT District
- Lakes
- Education
- Military
- Airport Runway
- Airport
- Prison
- Parks and Other Public Land

NOTES:

1. GRAYSON AND COOKE COUNTY HIGHWAY MAPS DOWNLOADED FROM TxDOT WEBSITE ON FEBRUARY 10, 2022.
2. PRIMARY ACCESS ROAD WITHIN ONE MILE OF THE FACILITY USED TO ACCESS THE FACILITY IS STATE HIGHWAY 56. THIS ROAD IS HARD SURFACED PAVED ROADS OF ASPHALT OR CONCRETE.

STATE OF TEXAS
DAVID L. CLARK
81905
LICENSED
PROFESSIONAL ENGINEER
1-30-25

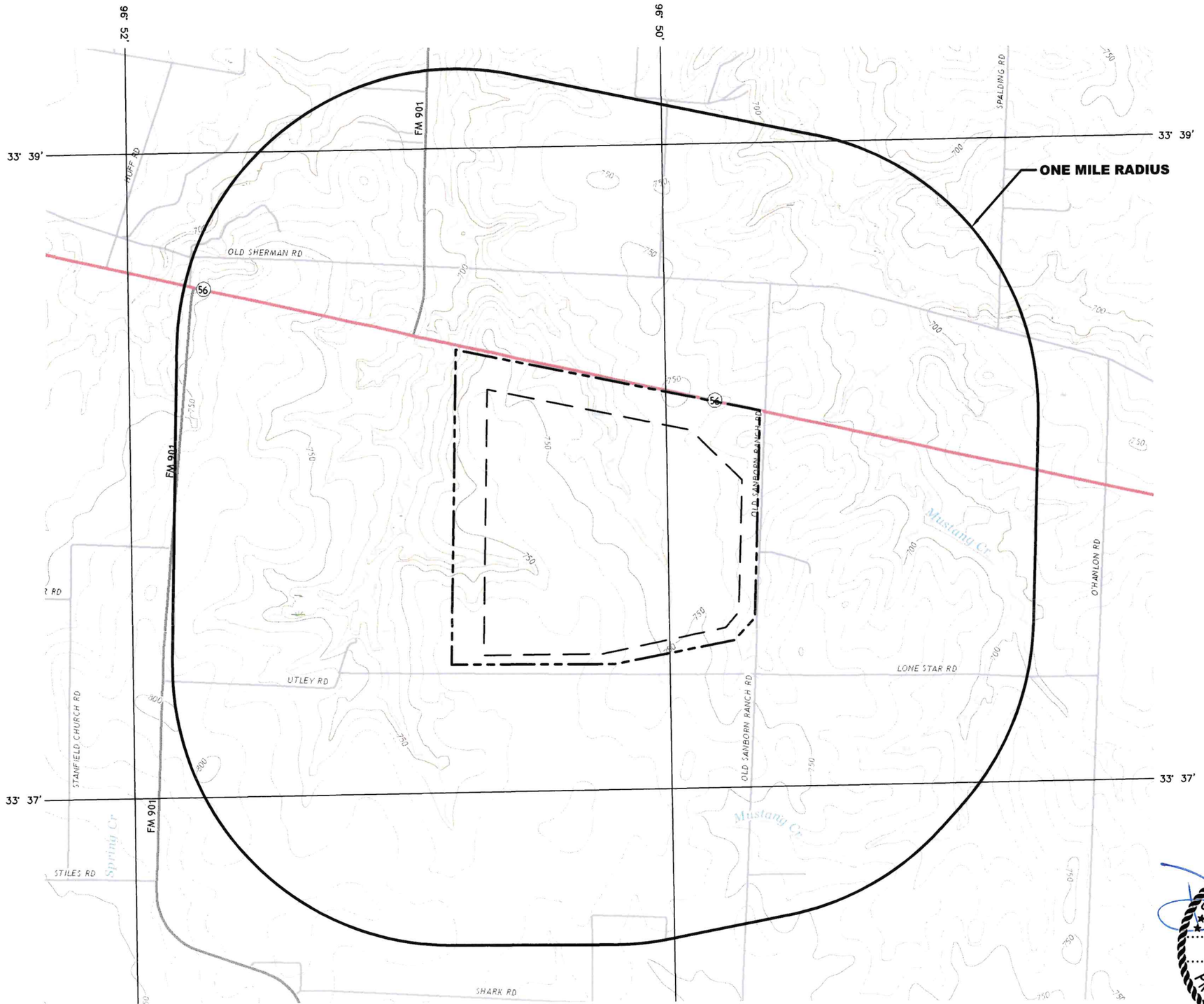
ISSUED FOR PERMITTING PURPOSES ONLY

DETAILED HIGHWAY MAP GRAYSON COUNTY

TEXOMA AREA SOLID WASTE AUTHORITY TASWA DRF PERMIT AMENDMENT

BME
BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144
TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DRAWING
IIA.1



0 1000 2000
SCALE IN FEET

LEGEND

- 2290A PERMIT BOUNDARY
- 2290A LANDFILL FOOTPRINT
- 700 EXISTING 10' GROUND CONTOUR
- SURFACE WATER BODY OR OTHER WATER

SADLER, TEX 2019

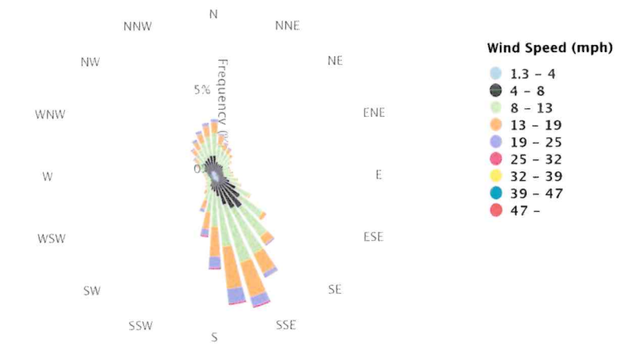
ETHEL, TEX 2019

ROAD CLASSIFICATION

Expressway, Secondary Hwy, Ramp, Local Connector, Local Road, 4WD, Interstate Route, US Route, State Route

DENTON MUNI AP (TX) Wind Rose

July 1, 1996 - Feb. 14, 2022
Sub-Interval: Jan. 1 - Dec. 31, 0 - 23



WIND ROSE
SOURCE: MIDWEST REGIONAL CLIMATE CENTER

NOTE:

1. 7.5 MINUTE TOPOGRAPHIC BASE MAPS SADLER, TEX AND ETHEL, TEX DOWNLOADED FROM USGS WEBSITE ON FEBRUARY 10, 2022.

STATE OF TEXAS
DAVID L. CLARK
81905
LICENSED
PROFESSIONAL ENGINEER
1-30-25

ISSUED FOR PERMITTING PURPOSES ONLY

GENERAL TOPOGRAPHIC MAP

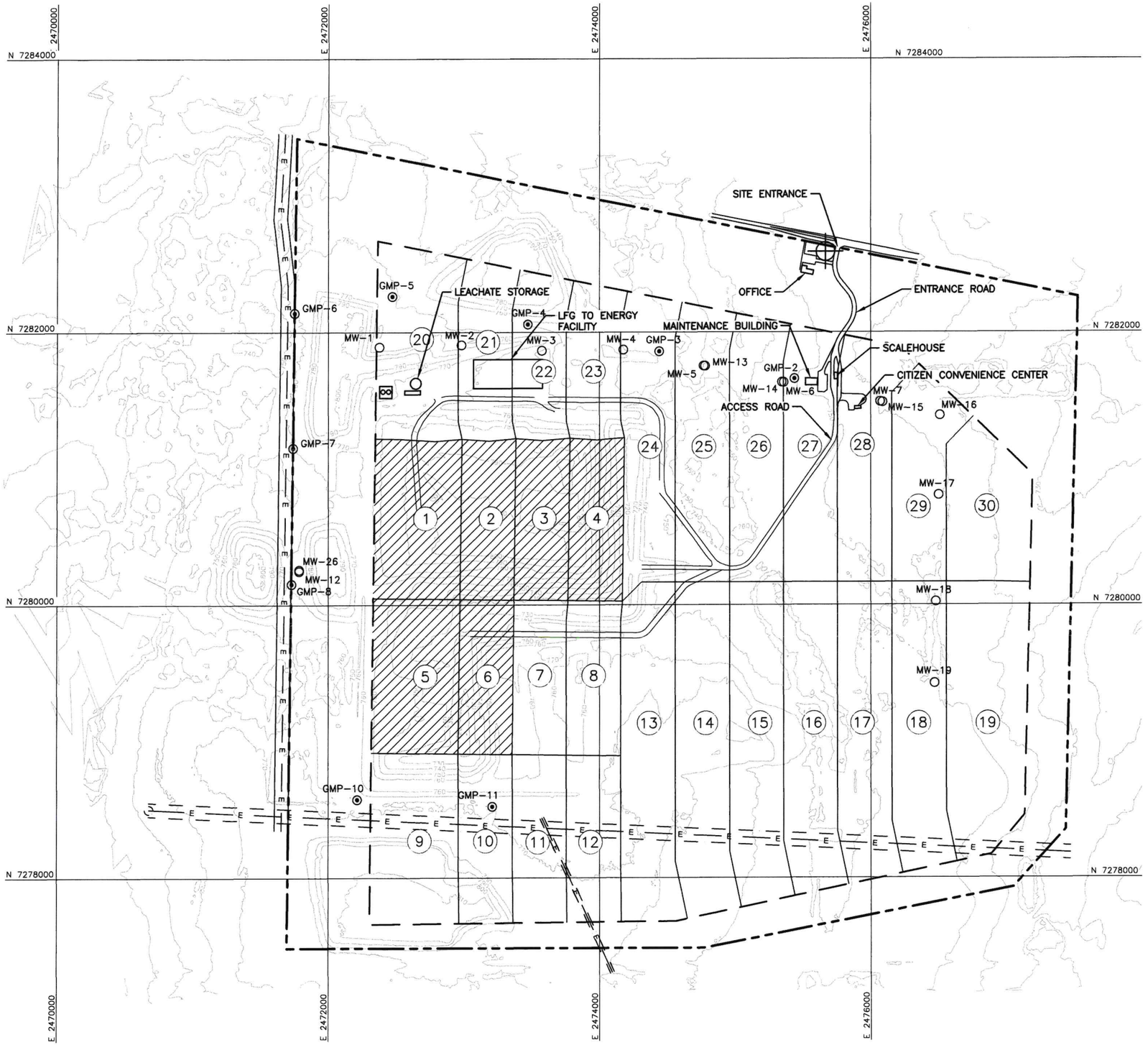
TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DRF
PERMIT AMENDMENT

BME
BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DRAWING
IIA.2

O:\TASWA\P\Drawings\PART II\IIA.2-GenTopoMap.dwg Layout: Layout1 User: bboles



0 400 800

SCALE IN FEET

LEGEND

- 2290A PERMIT BOUNDARY
- 2290A LANDFILL FOOTPRINT
- EXISTING CONTOUR
- E — E — ELECTRIC LINE AND EASEMENT
- N 7279000 — STATE PLANE COORDINATES
- (25) SECTOR NUMBER
- MW-7 — EXISTING GROUNDWATER MONITORING WELL
- GP-3 — EXISTING LANDFILL GAS MONITORING PROBE
- SITE BENCHMARK — N 7,282,587.42, E 2,475,866.89, EL 756.78
- LINED AREA

NOTES:

1. REFER TO PART II APPENDIX B – LAND USE ANALYSIS FOR DETAILED LAND USE INFORMATION AND LAND USE MAP.
2. PERMIT BOUNDARY INFORMATION PROVIDED BY BIGGS AND MATHEWS ENVIRONMENTAL.
3. DEVELOPMENT OF LANDFILL UNIT WILL PROCEED IN GENERAL SEQUENCE OF SECTOR NUMBERING.
4. FENCING IS PROVIDED AT PROPERTY BOUNDARY.

STATE OF TEXAS
DAVID L. CLARK
81905
PROFESSIONAL ENGINEER
1-30-25

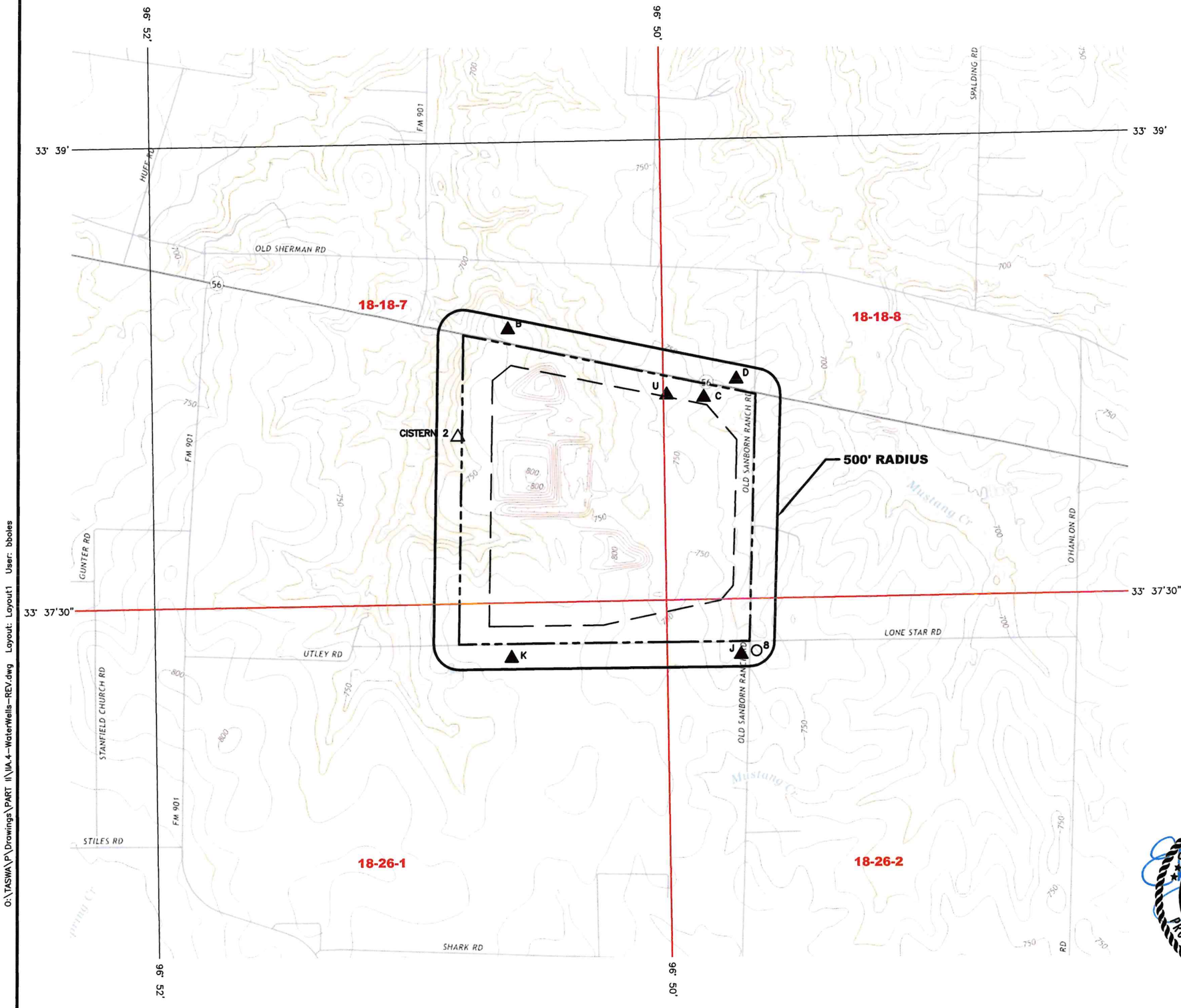
ISSUED FOR PERMITTING PURPOSES ONLY

FACILITY LAYOUT PLAN

TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DRF
PERMIT AMENDMENT

BME
BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144
TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DRAWING
IIA.3



0 1000 2000
SCALE IN FEET

LEGEND

- 2290A PERMIT BOUNDARY
- 2290A LANDFILL FOOTPRINT
- 700 EXISTING 10' GROUND CONTOUR
- SURFACE WATER BODY OR OTHER WATER
- WATER WELL ID GRID
- 18-18-7 WATER WELL GRID NUMBER
- ▲ HISTORICAL WATER WELL
- △ HISTORICAL POSSIBLE WATER WELL
- ● 2024 WATER WELL
- ○ 2024 POSSIBLE WATER WELL

SADLER, TEX 2022 ETHEL, TEX 2022

ROAD CLASSIFICATION

Expressway	Local Connector
Secondary Hwy	Local Road
Ramp	4WD
Interstate Route	US Route / State Route

NOTES:

1. 7.5 MINUTE TOPOGRAPHIC BASE MAPS SADLER, TEX AND ETHEL, TEX DOWNLOADED FROM USGS WEBSITE ON MARCH 25, 2024.
2. WATER WELLS IDENTIFIED FROM ONLINE STATE RECORDS.
3. THERE ARE NO STRUCTURES OR INHABITABLE BUILDINGS WITH 500 FEET OF THE PROPOSED FACILITY.

STATE OF TEXAS
Elizabeth Floyd
GEOLOGY
2045
LICENSED
PROFESSIONAL GEOSCIENTIST

1/30/2025

ISSUED FOR PERMITTING PURPOSES ONLY

WATER WELL LOCATION MAP

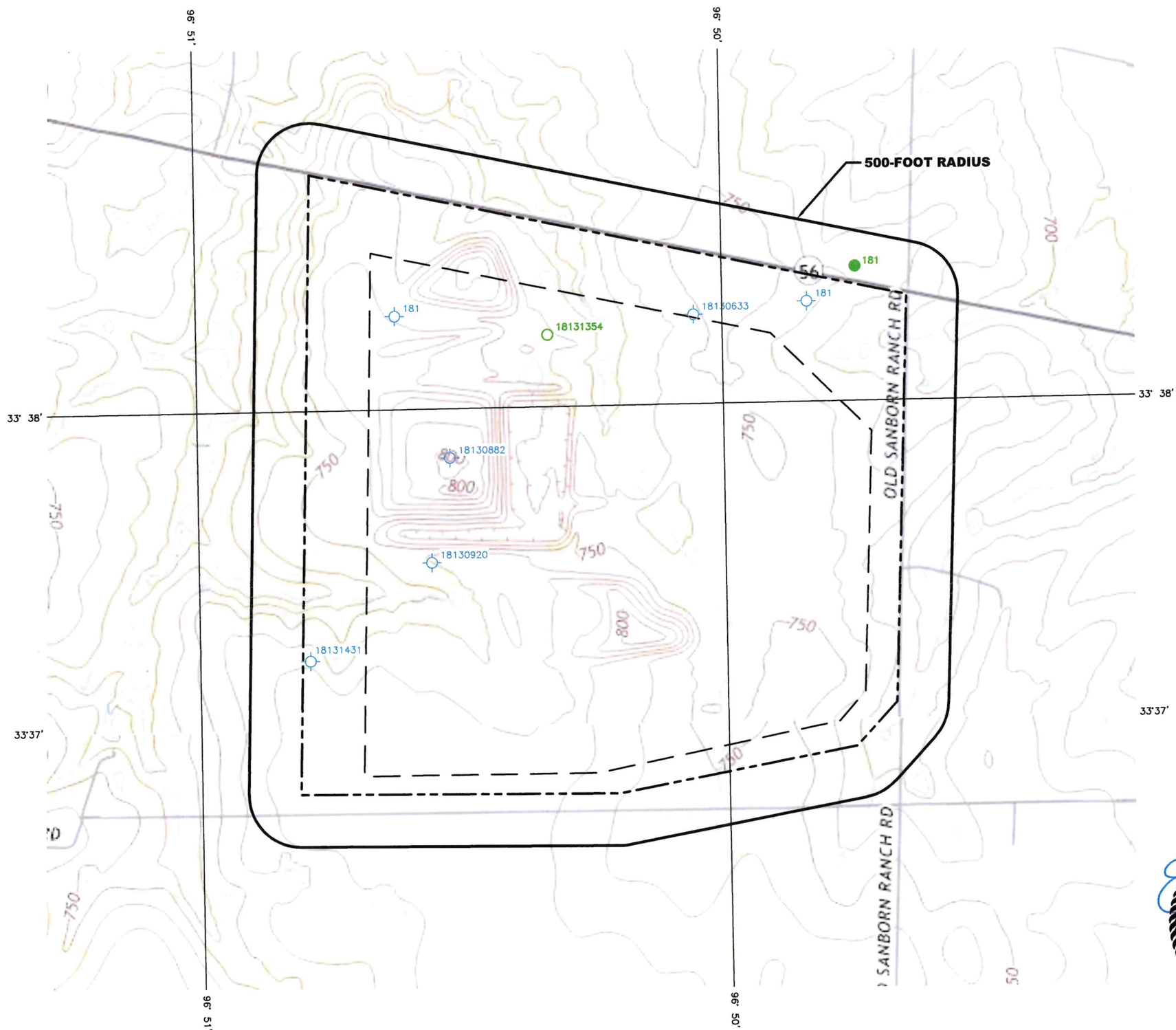
TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DRF
PERMIT AMENDMENT

BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DRAWING
IIA.4

O:\TASWA\P\Drawings\PART II\IIA.4-WaterWells-REV.dwg Layout: Layout1 User: bboles



0 500 1000
SCALE IN FEET

LEGEND

- 2290A PERMIT BOUNDARY
- 2290A LANDFILL FOOTPRINT
- 700 EXISTING 10' GROUND CONTOUR
- OIL WELL LOCATION
- PERMITTED WELL LOCATION – PERMIT EXPIRED, WELL NEVER DRILLED
- DRY HOLE

SADLER, TEX 2022

ETHEL, TEX 2022

ROAD CLASSIFICATION

Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

NOTES:

1. 7.5 MINUTE TOPOGRAPHIC BASE MAPS SADLER, TEX AND ETHEL, TEX DOWNLOADED FROM USGS WEBSITE ON MARCH 25, 2024.
2. OIL AND GAS WELL LOCATIONS DOWNLOADED FROM RAILROAD COMMISSION OF TEXAS IN MARCH 2024.
3. THERE ARE NO PRODUCING WELLS WITHIN 500 FEET OF THE PERMIT BOUNDARY.
4. REFER TO PART III, ATTACHMENT E FOR OIL AND GAS WELL INFORMATION.

STATE OF TEXAS
Elizabeth Floyd
GEOLOGY
2045
LICENSED
PROFESSIONAL GEOSCIENTIST

1/30/2025

ISSUED FOR PERMITTING PURPOSES ONLY

LOCATIONS OF OIL AND GAS WELLS

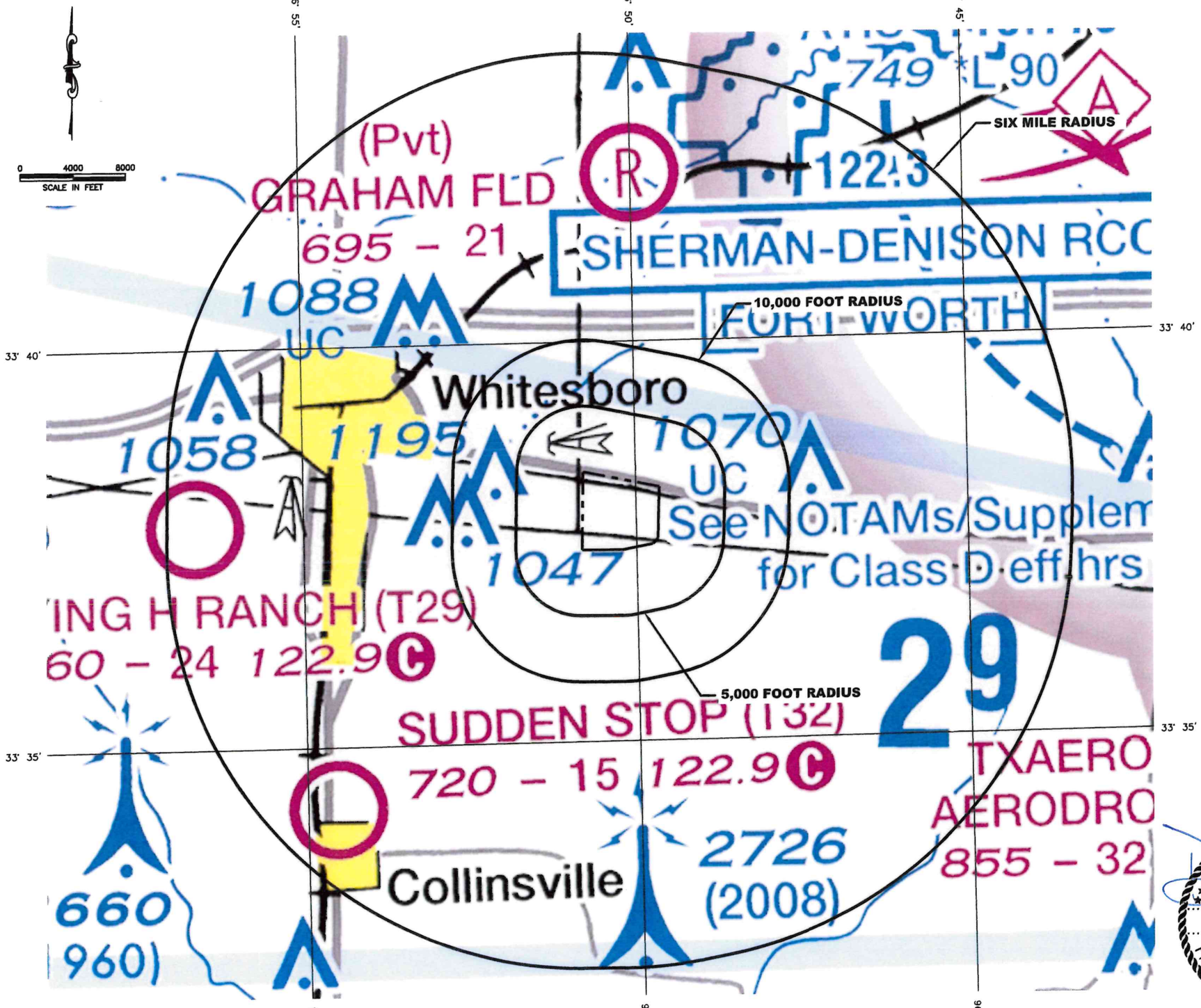
TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DISPOSAL AND RECYCLING FACILITY
PERMIT AMENDMENT

BME
BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DRAWING
IIA.5

O:\TASWA\P\Drawings\PART II\IIA.5-Oil_GasWells.dwg Layout: LAYOUT 1 User: bboles



O:\TASWA\P\Drawings\PART II\IIA.6-AirportMap.dwg Layout: Layout1 User: scundiff

LEGEND

PERMIT BOUNDARY

AIRPORTS

Other than hard-surfaced runways

Seaplane Base

Hard-surfaced runways 1500 ft. to 8069 ft. in length

Hard-surfaced runways greater than 8069 ft. or some multiple runways less than 8069 ft.

Open dot within hard-surfaced runway configuration indicates approximate VOR, VOR-DME, DME or VORTAC location.

All recognizable hard-surfaced runways, including those closed, are shown for visual identification. Airports may be public or private.

AIRPORT DATA

Box indicates FAR 93 Special Air Traffic Rules & Airport Traffic Patterns.

Runways with Right Traffic Patterns (public use)

*RP Special conditions exist - see Supplement.

FSS - Flight Service Station

NO SVFR - Fixed-wing special VFR flight is prohibited.

CT - 118.3 - Control Tower (CT) - primary frequency

★ - Star indicates operation part-time. See tower frequencies tabulation for hours of operation.

Ⓒ - Follows the Common Traffic Advisory Frequency (CTAF)

ATIS 123.8 - Automatic Terminal Information Service

AFIS 135.2 - Automatic Flight Information Service (AK)

ASOS/AWOS 135.42 - Automated Surface Weather Observing Systems (shown where full-time ATIS not available). Some ASOS/AWOS facilities may not be located at airports.

UNICOM - Aeronautical advisory station

VFR Advsy - VFR Advisory Service shown where full-time ATIS not available and frequency is other than primary CT frequency.

285 - Elevation in feet

L - Lighting in operation Sunset to Sunrise

*L - Lighting limitations exist; refer to Supplement.

72 - Length of longest runway in hundreds of feet; usable length may be less.

When information is lacking, the respective character is replaced by a dash. Lighting codes refer to runway edge lights and may not represent the longest runway or full length lighting.

FSS
NO SVFR — FAR 91
NAME (NAM) (PNAM) — Location Identifier / ICAO Location Indicator shown outside contiguous U.S.
CT - 118.3 ★ Ⓒ ATIS 123.8
285 L 72 122.95
RP 23, 34
VFR Advsy 125.0 — UNICOM
WX CAM — Weather Camera (AK)
AOE — Airport of Entry

OBSTRUCTIONS

1000 ft and higher AGL

Above 200 ft & below 1000 ft AGL (above 299 ft AGL in urban area)

Wind Turbine

Group Obstruction

Obstruction with high-intensity lights; may operate part-time

Wind Turbine Farm

2894' UC

Elevation of the top above mean sea level

Height above ground

Under construction or reported; position and elevation unverified

2049
(1149)
UC

NOTICE: Guy wires may extend outward from structures.

NOTE:

1. THERE ARE 2 PUBLIC USE AIRPORTS LOCATED WITHIN SIX MILES OF THE FACILITY.
2. BASE MAP IS FAA SECTIONAL AERONAUTICAL CHART DALLAS–FT. WORTH, EFFECTIVE DATE MAY 19, 2022 TO JULY 14, 2022.

STATE OF TEXAS
DAVID L. CLARK
81905
PROFESSIONAL ENGINEER
1-30-25

ISSUED FOR PERMITTING PURPOSES ONLY

FAA AIRPORT LOCATION MAP

TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DRF
PERMIT AMENDMENT

BME
BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144
TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DRAWING
IIA.6

0 1000 2000
SCALE IN FEET

LEGEND

2290A PERMIT BOUNDARY

2290A LANDFILL FOOTPRINT

NOTE:

1. AERIAL PHOTOGRAPH TAKEN FROM 7.5 MINUTE QUADRANGLE SADLER, TEX AND ETHEL, TEX. DOWNLOADED ON FEBRUARY 10, 2022.

STATE OF TEXAS
DAVID L. CLARK
81905
PROFESSIONAL ENGINEER
1-30-25

ISSUED FOR PERMITTING PURPOSES ONLY

AERIAL PHOTOGRAPH

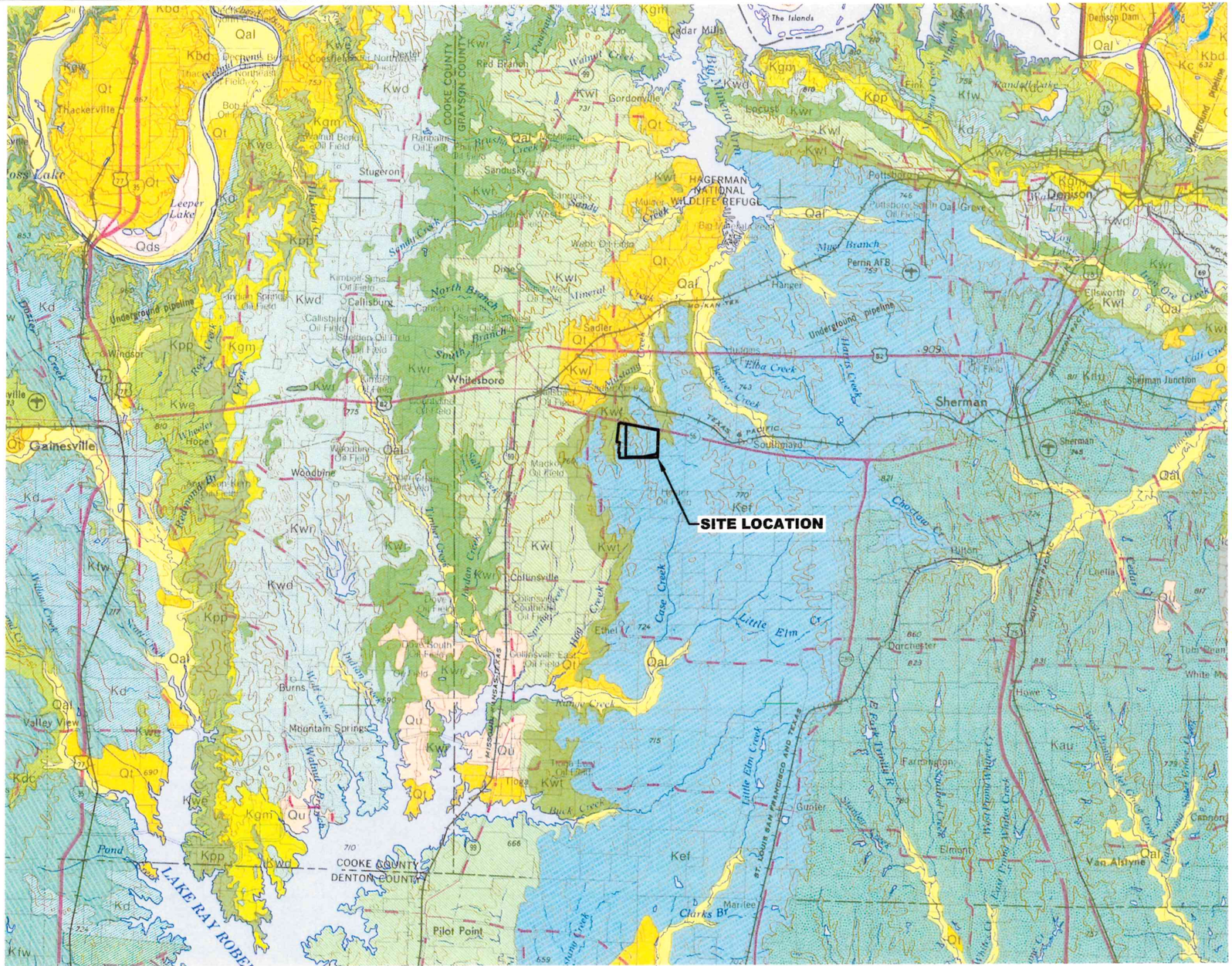
TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DRF
PERMIT AMENDMENT

BME
BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DRAWING
IIA.7

O:\TASWA\P\Drawings\PART II\IIA.7-AerialPhotograph.dwg Layout: Layout1 User: bboles



CONTOUR INTERVAL 50 FEET

TRANSVERSE MERCATOR PROJECTION

1991 MAGNETIC DECLINATION FOR THE CENTER OF THE SHEET IS 5° 59'E. MEAN ANNUAL CHANGE IS 5'48" WESTWARD

GEOLOGIC ATLAS OF TEXAS, SHERMAN SHEET

WALTER SCOTT ADKINS MEMORIAL EDITION

REVISED 1991

QUATERNARY

Pleistocene Holocene

Qal, Qds, Qs, Qu, Qt

Alluvium, Qal, windblown deposits, Qds and Qs, fluviatile terrace deposits, Qt, and surficial deposits undivided, Qu

CRETACEOUS

Upper Cretaceous

Kau, Kgc, Kr, Kbr, Kbl, Kbn, Ker

Austin Group, Kau, Roxton Limestone, Kr, Gober Chalk, Kg, Brownstown Marl, Kbr, Blossom Sand, Kbl, Bonham Marl, Kbn, and Ector Chalk, Ker

Kef

Eagle Ford Formation

Kwl, Kwl, Kwb, Kwr, Kwd

Woodbine Formation, Kwb, and Templeton, Kwt, Lewisville, Kwl, Red Branch, Kwr, and Dexter, Kwd, Members of the Woodbine Formation

Kgm, Kgb, Kb

Grayson Marl and Main Street Limestone, Kgm, Grayson Marl and Bennington Limestone, Kgb, and Bennington Limestone, Kb

Lower Cretaceous

Kbp, Kpp, Kfw, Kwe, Kpd, Kbd, Kd

Pawpaw Formation, Kpp, Weno Limestone, Kwe, and Denton Clay, Kd, each composing members of the Bokchito Formation in Oklahoma, and undivided in Texas, Kpd

Kfd, Ktw, Kc, Kdc

Fort Worth Limestone, Kfw, and Duck Creek Formation, Kdc, composing Caddo Formation, Kc, in Oklahoma

STATE OF TEXAS
Elizabeth Floyd
GEOLOGY
2045
LICENSED
PROFESSIONAL GEOSCIENTIST

1/30/2025

ISSUED FOR PERMITTING PURPOSES ONLY

REGIONAL GEOLOGIC MAP

TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DRF
PERMIT AMENDMENT

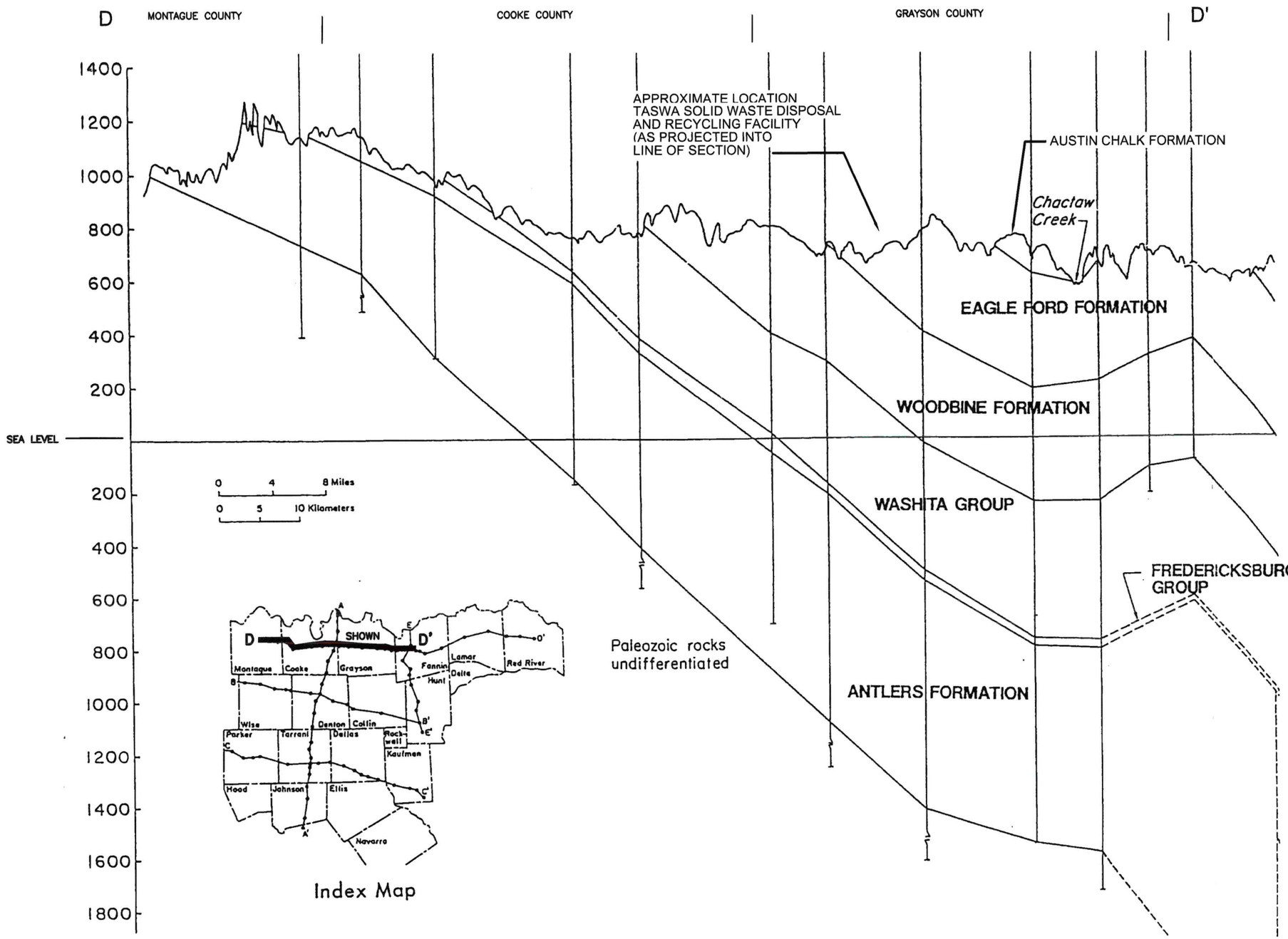
BME

BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

TBPE FIRM NO. F-256

TBPG FIRM NO. 50222

DRAWING
IIA.8



O:\TASWA\P\Drawings\PART II\IIA.9-RegGeoXSec.dwg Layout: Layout1 User: bboles

Elizabeth Floyd
GEOLOGY
2045
LICENSED
PROFESSIONAL GEOSCIENTIST
STATE OF TEXAS

1/30/2025

MODIFIED FROM NORDSTROM, 1982

GENERALIZED REGIONAL GEOLOGIC CROSS SECTION

TEXOMA AREA SOLID WASTE AUTHORITY TASWA DISPOSAL AND RECYCLING FACILITY PERMIT AMENDMENT

BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

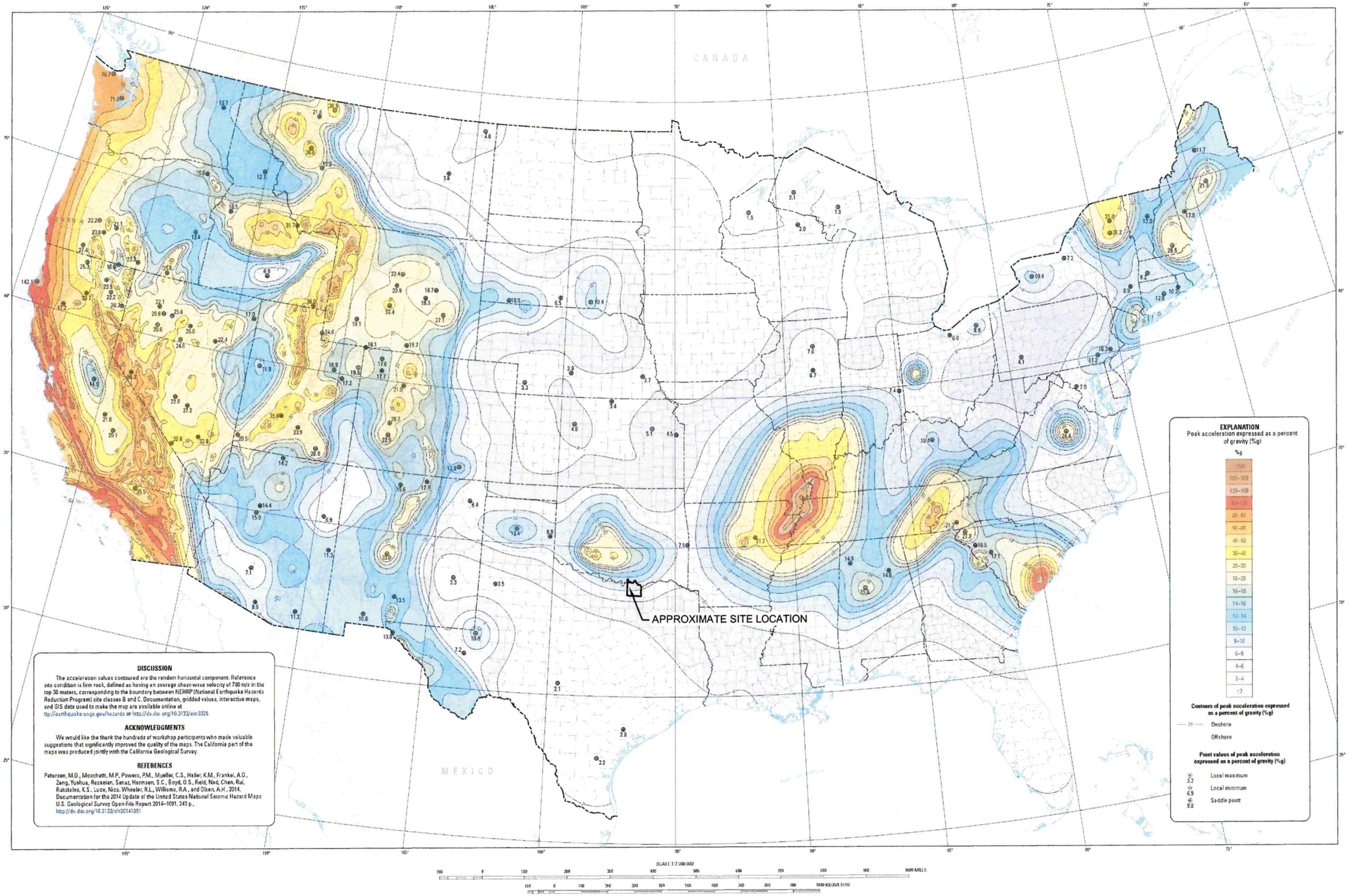
TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DRAWING
IIA.9

ISSUED FOR PERMITTING PURPOSES ONLY

U.S. Department of the Interior
U.S. Geological Survey

Scientific Investigations Map 3325
Sheet 2 of 6



DISCUSSION

The acceleration values contoured are the random horizontal component. Reference site condition is firm rock, defined as having an average shear-wave velocity of 760 m/s in the top 30 meters, corresponding to the boundary between NEHRP (National Earthquake Hazards Reduction Program) site classes B and C. Documentation, gridded values, interactive maps, and GIS data used to make the map are available online at http://earthquake.usgs.gov/hazards or http://dx.doi.org/10.3133/sim3325.

ACKNOWLEDGMENTS

We would like the thank the hundreds of workshop participants who made valuable suggestions that significantly improved the quality of the maps. The California part of the maps was produced jointly with the California Geological Survey.

REFERENCES

Petersen, M.D., Moschetti, M.P., Powers, P.M., Mueller, C.S., Haller, K.M., Frankel, A.D., Zeng, Yuehua, Rezaeian, Sanaz, Harmsen, S.C., Boyd, O.S., Field, Ned, Chen, Rui, Rukstales, K.S., Luco, Nico, Wheeler, R.L., Williams, R.A., and Olsen, A.H., 2014, Documentation for the 2014 Update of the United States National Seismic Hazard Maps: U.S. Geological Survey Open-File Report 2014–1091, 243 p., http://dx.doi.org/10.3133/ofr20141091.

Seismic-Hazard Maps for the Conterminous United States, 2014

Peak Horizontal Acceleration with 2 Percent Probability of Exceedance in 50 Years

By

Mark D. Petersen,[1] Morgan P. Moschetti,[1] Peter M. Powers,[1] Charles S. Mueller,[1] Kathleen M. Haller,[1] Arthur D. Frankel,[1] Yuehua Zeng,[1] Sanaz Rezaeian,[1] Stephen C. Harmsen,[1] Oliver S. Boyd,[1] Edward H. Field,[1] Rui Chen,[2] Nicolas Luco,[1] Russell L. Wheeler,[1] Robert A. Williams,[1] Anna H. Olsen,[1] and Kenneth S. Rukstales[1]

2015

NOTES:

1. THE FACILITY LIES IN AN AREA WHERE THE PGA, WITH A 2% PROBABILITY OF BEING EXCEEDED IN 50 YEARS, IS LESS THAN 10% OF GRAVITY (LESS THAN 0.1g). THIS IS EQUIVALENT TO A 10% PROBABILITY IN 250 YEARS. A PRINTOUT OF THE USGS FAQ RESPONSE CONFIRMING THE EQUIVALENCY IS INCLUDED IN THIS SUBMITTAL ON THE NEXT PAGE.

2. THE MAP PRESENTED HERE IS INTENDED TO ONLY DEPICT THE IMPACT ZONE IN WHICH THE FACILITY LIES. PLEASE REFER TO PETERSON, M.D., ET AL., 2015, SEISMIC HAZARD MAPS FOR THE CONTERMINOUS UNITED STATES, 2014: U.S. GEOLOGICAL SURVEY SCIENTIFIC INVESTIGATION MAP 3325, 6 SHEETS, SCALE 1:7,000,000. HTTPS://PUBS.USGS.GOV/SIM/3325/PDF/SIM3325_SHEET2.PDF FOR A FULLY LEGIBLE VERSION.

STATE OF TEXAS
Elizabeth Floyd
GEOLOGY
2045
LICENSED
PROFESSIONAL GEOSCIENTIST
1/30/2025

ISSUED FOR PERMITTING PURPOSES ONLY

SEISMIC IMPACT ZONE MAP

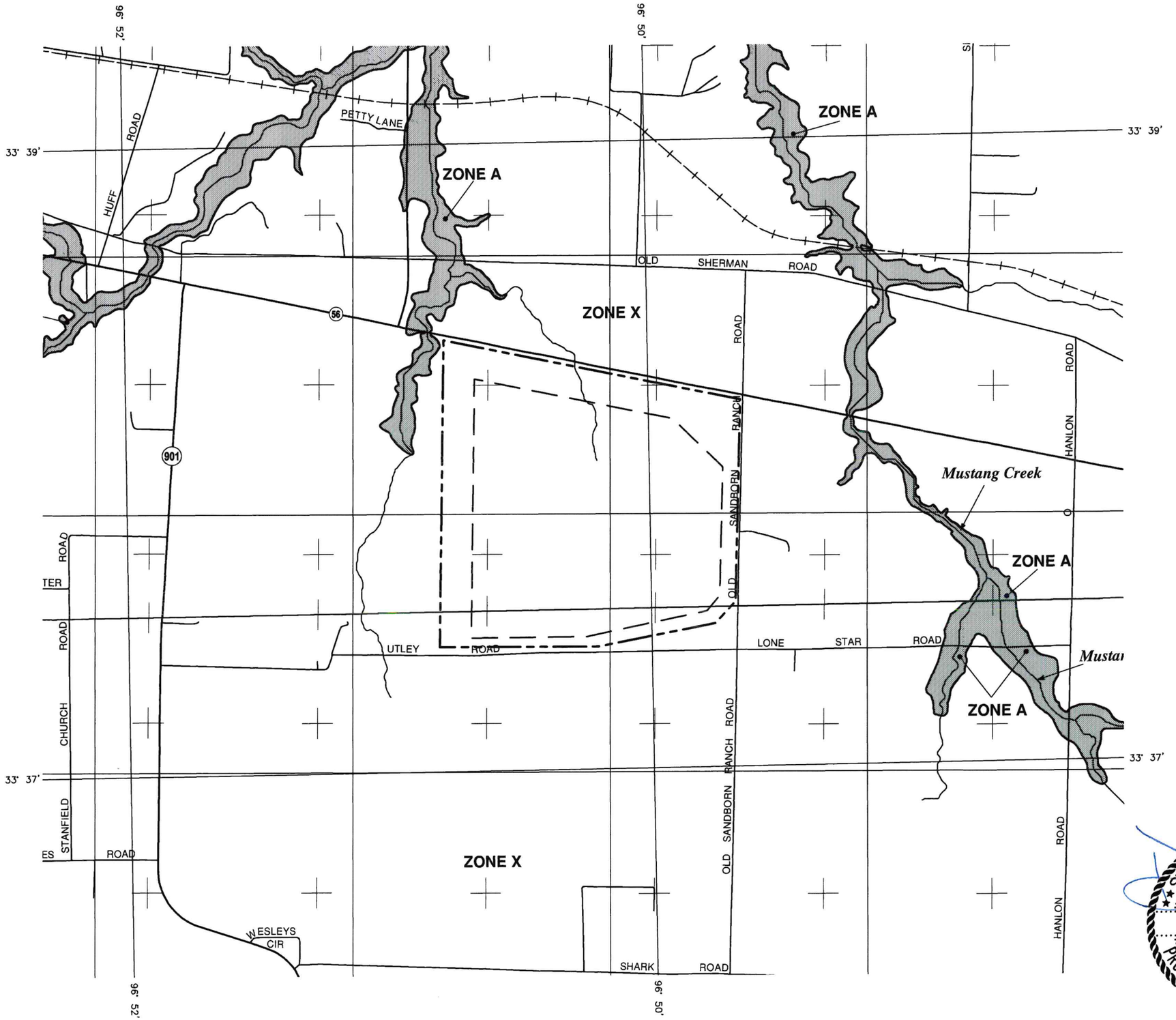
TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DISPOSAL AND RECYCLING FACILITY
PERMIT AMENDMENT

BME
BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817–563–1144

TBPE FIRM NO. F–256
TBPG FIRM NO. 50222

DRAWING
IIA.10

O:\TASWA\P\Drawings\PART II\IIA.10–SeismicImpact.dwg Layout: E4–1 User: bboles



0 1000 2000
SCALE IN FEET

LEGEND

2290A PERMIT BOUNDARY

2290A LANDFILL FOOTPRINT

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

Floodplain boundary

Floodway boundary

97°07'30", 32°22'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)

$^{42}75^{000m}$N 1000-meter Universal Transverse Mercator grid ticks, zone 14

6000000 FT 5000-foot grid values: Texas State Plane coordinate system, north central zone (FIPSZONE 4202), Lambert Conformal Conic

NOTE(S):

1. THIS MAP HAS BEEN COMPILED FROM FEMA FLOOD INSURANCE RATE MAP (FIRM) OF GRAYSON COUNTY, TEXAS AND INCORPORATED AREAS COMMUNITY PANEL NUMBERS 48181C0250F AND 48181C0375F REVISED SEPTEMBER 29, 2010.

STATE OF TEXAS
DAVID L. CLARK
81905
LICENSED
PROFESSIONAL ENGINEER
1-30-25

ISSUED FOR PERMITTING PURPOSES ONLY

FLOOD INSURANCE RATE MAP (FIRM)

TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DRF
PERMIT AMENDMENT

BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DRAWING
IIA.11

APPENDIX IIB
LAND USE ANALYSIS

Land Use Analysis

Texoma Area Solid Waste Authority Landfill

Type 1 Facility

January 27, 2025

Prepared by:

Integrated Environmental Solutions, LLC.

310 W Eldorado Pkwy; Suite 101

McKinney, TX 75069

972-562-7672

INTRODUCTION

The Texoma Area Solid Waste Authority (TASWA) is currently a Type 1 municipal solid waste facility with a proposed on-site expansion. The current facility encompasses 920+ acres in a rural area in Grayson County, approximately 3 miles east of the City of Whitesboro (**Attachment A, Figure 1**). The proposed facility expansion would expand the current landfill footprint to 475 acres, an increase of 247 acres.

The purpose of this land use evaluation is to address land use issues as required by the Texas Commission on Environmental Quality (TCEQ) in support of an application for TCEQ municipal solid waste facility authorization for the TASWA Landfill expansion. Specifically, this evaluation addresses those portions of the TCEQ rules pertaining to land use compatibility. The relevant rule portions, as excerpted from 30 Texas Administrative Code (TAC) § 330.61, are:

> *(g) Land-use map. This is a constructed map of the facility showing the boundary of the facility and any existing zoning on or surrounding the property and actual uses (e.g., agricultural, industrial, residential, etc.) both within the facility and within one mile of the facility. The owner or operator shall make every effort to show the location of residences, commercial establishments, schools, licensed day-care facilities, churches, cemeteries, ponds or lakes, and recreational areas within one mile of the facility boundary...*
>
> *(h) Impact on surrounding area. A primary concern is that the use of any land for a municipal solid waste facility not adversely impact human health or the environment. The owner or operator shall provide information regarding the likely impacts of the facility on cities, communities, groups of property owners, or individuals by analyzing the compatibility of land use, zoning in the vicinity, community growth patterns, and other factors associated with the public interest. To assist the commission in evaluating the impact of the site on the surrounding area, the owner or operator shall provide the following:*
>
> > *(1) if available, a published zoning map for the facility and within two miles of the facility for the county or counties in which the facility is or will be located. If the site requires approval as a nonconforming use or a special permit from the local government having jurisdiction, a copy of such approval shall be submitted;*
> >
> > *(2) information about the character of surrounding land uses within one mile of the proposed facility;*
> >
> > *(3) information about growth trends within five miles of the facility with directions of major development;*
> >
> > *(4) the proximity to residences and other uses (e.g., schools, churches, cemeteries, historic structures and sites, archaeologically significant sites, sites having exceptional aesthetic quality, etc.) within one mile of the facility. The owner or operator shall provide the approximate number of residences and commercial establishments within one mile of the proposed facility including the distances and directions to the nearest residences and commercial establishments. Population density and proximity to residences and other uses described in this paragraph may be considered for assessment of compatibility...*

LIST OF FIGURES

ZONING

Because the site is not in an incorporated area, there is no zoning. Moreover, the site is more than 2 miles from any incorporated city; hence there is no zoning within 2 miles.

The site is not within the extraterritorial jurisdiction of any incorporated city and is therefore not subject to the subdivision regulations of any city. The site does not require approval as a nonconforming use or a special permit from any local government.

CHARACTER OF SURROUNDING LAND USES

The predominant land use within 1 mile of the permit boundary is classified as *Other* (open, agricultural, vacant, floodplain). This land use comprises 94.8 percent of the land area within 1 mile of the facility boundary (**Attachment A, Figure 2**). Nearly all of this open land is agricultural pastureland or wooded floodplains.

Table 1. Land Use within 1 Mile from the TASWA Facilities

Land Use	Acres	Percentage	Remarks
Other	4,395	94.8	Open, agricultural, vacant, floodplain
Water Bodies	77	1.6	2022 surface area
Residential	139	3.0	139 residences
Commercial	27	0.6	5 establishments
Total	4,638	100	Not including permit boundary

Source: 2022 Aerial Photography

There are approximately 77 acres of *Water Bodies* within 1 mile of the permit boundary, representing approximately 1.6 percent within 1 mile. The water bodies consist of impoundments, stock ponds, and ornamental water features. (Water surface area was calculated based on 2022 aerial photographic interpretation).

All the *Residential* land (139 estimated acres) is rural, single-family residential, consisting of 139 residences and representing an estimated 3.0 percent within 1 mile of the permit boundary. (In the case of rural residences, 1 acre is attributed to each residence.)

Commercial land use (five establishments) makes up only 0.6 percent of the land area within 1 mile of the permit boundary.

GROWTH TRENDS

The TASWA site is in western Grayson County, approximately 2 miles southeast of Sadler, the nearest community. The site is approximately 3 miles east of Whitesboro and 3 miles west of Southmayd. Projected growth patterns for the nearest zip codes and counties (Grayson, Cooke) are listed below.

Table 2. Projected Population Growth, by Zip Code and County

	2021 Population	2026 Population Estimate	% Growth 2021-2026
Zip Code			
Gainesville - 76240	29,881	30,795	0.60
Whitesboro - 76273	10,514	11,094	1.08
Sherman - 75092	27,345	29,064	1.23
Sadler - 76264	1,721	1,851	1.47
County			
Cooke County	43,588	45,039	0.66
Grayson County	142,442	151,576	1.25

Source: Esri's U.S. Updated Demographic (2021/2026) Data

Grayson County, where TASWA is located, is the dominant county in terms of population size and growth. For purposes of comparison, the State of Texas is projected to grow 1.54 percent from 2021 through 2026.

Attachment A, Figure 3 depicts growth trends within 5 miles of the site, as well as regional growth trends for the projected period of 2021 through 2026. Within 5 miles of the site, population growth in the census block group immediately north and south of the site is projected to grow by 1.42 and 2.29 percent, respectively from 2021 through 2026. To the far east and north of the site the census blocks are projected to grow by more than 1.4 percent from 2021 through 2026.

Within the region, the highest growth is occurring within the census block groups between the Cities of Whitesboro and Sherman.

PROXIMITY

As of May 2022, there are 139 residences within 1 mile of the facility boundary. The nearest residence to the proposed facility is at 1274 Utley Road, estimated to be approximately 259 feet south of the permit boundary, and approximately 440 feet south of the limit of fill.

There are five business establishments within 1 mile of the permit boundary. The most proximate business establishment is a concrete contractor outside of the western limits of the property boundary, approximately 500 feet west of the facility boundary and 2,600 feet from the limit of fill.

The Texas Historic Sites Atlas of the Texas Historical Commission identified one Texas State Historical marker located on the south side of SH 5 approximately 0.5 mile east of the site entrance. The historical marker denotes the Sanborn Ranch, which was one of the first ranches in Texas to be fenced with barbed wire. There are no additional historic structures or archeologically significant sites within one mile of the facility boundary.

There are no hospitals, churches, licensed day-care facilities, cemeteries, schools, recreational areas, or sites having exceptional aesthetic quality within one mile of the facility boundary.

ATTACHMENT A

Figures

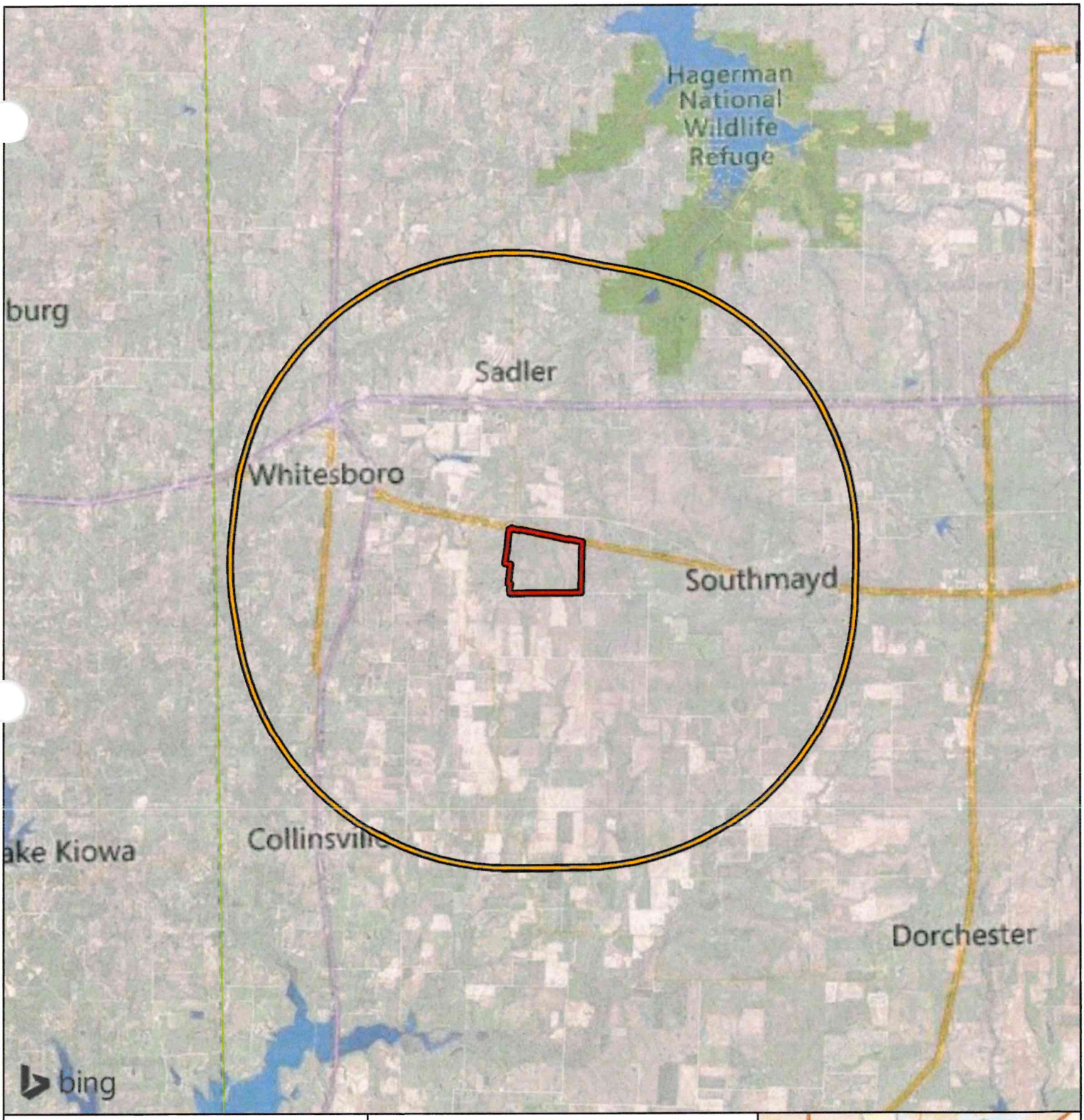


Figure 1.
General Location Map

TASWA
City of Whitesboro
Grayson County, Texas

Survey Area
5 Mile Buffer

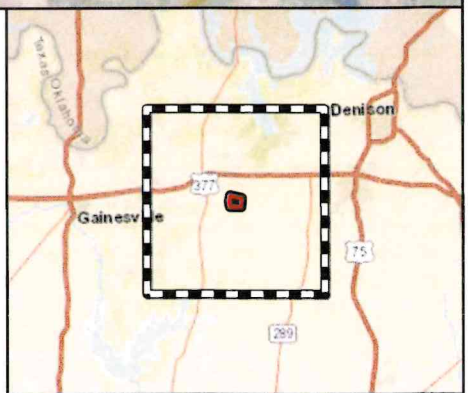
1 in = 12,500 feet

Feet
0 12,500

N
W E
S

File Ref. 04.240.095
Date: 5/20/2022

IIB.6



Area of Detail Scale: 1 inch equals 20 miles

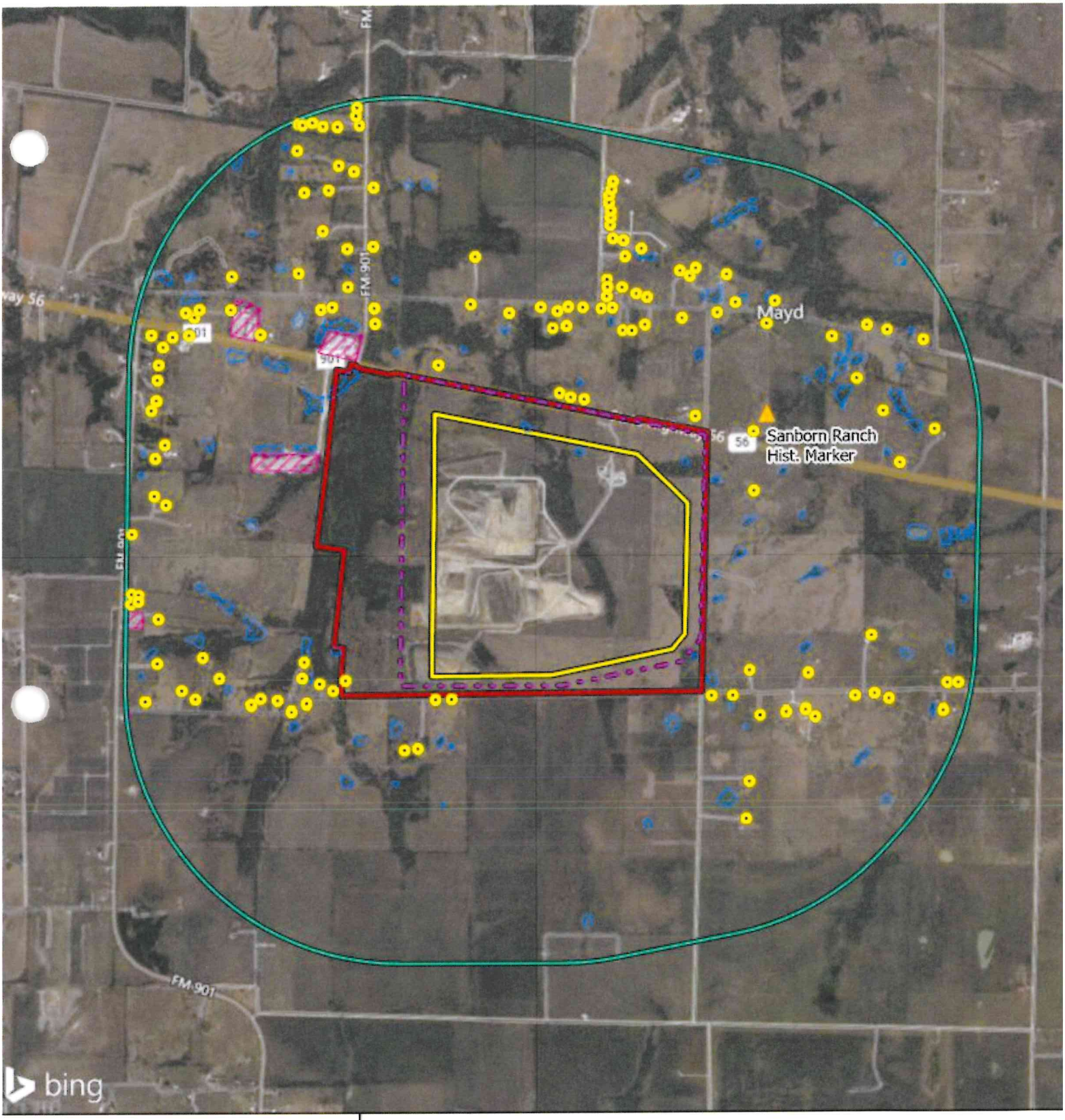


Figure 2.
Land Use Within 1 Mile of Permit Boundary

TASWA
City of Whitesboro
Grayson County, Texas

1 in = 2,500 ft
Feet
0
2,500

File Ref: 04.240.095
Date: 1/27/2025

N
W E
S

- Property Boundary
- Permit Boundary
- Waste Footprint (Limit of Fill)
- Permit Boundary 1 Mile Radius

Land Use

- Residential (139 units)
- Commercial (5 units)
- Open Water
- Other: Open, Agricultural, Vacant, Floodplai
- Historical Marker

- No hospitals, churches, licensed day-care facilities, cemeteries, schools, recreational areas, archaeologically significant sites, or sites having exceptional aesthetic quality within one mile of the facility boundary.

- Reference survey for drainage, pipeline and utility easements.

Figure 3. Growth Trends - 5 Miles
Change in Population Projection 2021-2026 - By Census Block Group

County: Grayson
State: Texas
Date map created: January / 27 / 2025
Source: (c) 2009 Microsoft Corporation
and its data suppliers; ESRI 10.6
Exported at 24in by 36in

TASWA Landfill Site
5 Mile Landfill Radius

Block Group
-2.8 to -1.9%
-1.9% to -1.25%
-1.25% to 0%
0% to 1.25%
1.25% to 1.9%
1.9 - 195.0 %

N
W E
S

1 inch = 6,250 feet

0 6,250 12,500 Feet

Data Source: Esri's U.S. Updated Demographic (2021/2026) Data - http://maps.arcgis.com/home/webmap/viewer.html

1,682+128 = 1,810
1.48% Growth

2,859+211 = 3,070
1.43% Growth

1,650+133 = 57
0.68% Growth

1,808+133 = 1,941
1.43% Growth

1,355+25 = 1,380
0.37% Growth

1,942+155 = 2,097
1.55% Growth

3,080+225 = 3,305
1.42% Growth

5,407+649 = 6,056
2.29% Growth

2,016+209 = 2,225
1.11% Growth

APPENDIX IIC
TRANSPORTATION STUDY

David Clark

From: Aaron Bloom [redacted]
Sent: Tuesday, July 12, 2022 1:32 PM
To: David Clark
Subject: RE: Transportation Analysis Coordination - TASWA Disposal and Recycling Facility

David,

I have reviewed the transportation analysis for the future development of the TASWA site on SH 56 and I agree with your report that the access roads in the vicinity of the TASWA facility are adequate now and into the future based of the estimated development of the site.

Thanks,

Aaron R. Bloom, P.E.
Area Engineer
Sherman Area Office
3904 US 75 South
Sherman, TX 75090
Office: 903-892-6529
Email: [redacted]

From: David Clark [redacted]
Sent: Tuesday, July 5, 2022 12:12 PM
To: Aaron Bloom [redacted]
Subject: Transportation Analysis Coordination - TASWA Disposal and Recycling Facility

Mr. Bloom,
On behalf of the Texoma Solid Waste Authority (TASWA), Biggs & Mathews Environmental, Inc. (BME) is preparing a permit amendment application to expand the existing TASWA Disposal and Recycling Facility (TCEQ Permit MSW 2290) located in Grayson County, Texas. The amendment application will request a vertical and horizontal expansion of the existing waste disposal boundary. The purpose of this email/correspondence is to document coordination with the Texas Department of Transportation consistent with the requirements of the municipal solid waste regulations, 30 Texas Administrative Code Chapter 330 (30 TAC §330.61(i)) for traffic and location restrictions relative to access roads within 1 mile of the entrance to the facility.
I have attached a cover letter and the transportation analysis to be included in the TCEQ permit application. Please review at your earliest convenience and let me know if you have any questions or need any additional information. If your review concurs that the access roads in the vicinity of the TASWA facility are adequate and will continue to be adequate based on the estimated future development of the site, an email response indicating concurrence will satisfy the TCEQ requirement for coordination with the local TxDOT district/area.
We appreciate your assistance.
Clark

David Clark
Biggs and Mathews Env.
1700 Robert Road, Ste 100
Mansfield, TX 76063
O: (817) 563-1144
C: (817) 223-5784
[redacted]

A Texas Department of Transportation message

Texas Commission on Environmental Quality

Transportation Data and Coordination Report Form for Municipal Solid Waste Type I Landfills

This form is for use by applicants or site operators of Municipal Solid Waste (MSW) Type I landfills to provide data and information to address the availability and adequacy of access roads to a landfill site, the volume of vehicular traffic on and generated by the facility on area roadways, and to provide coordination information as required under 30 TAC §330.61(i). Roadways that provide primary access to a landfill facility must be adequate and possess appropriate design capacity to safely accommodate the additional volumes and weights of traffic generated or expected to be generated by this landfill facility during its active life. Data provided in this form should correspond with data contained in the coordination documents submitted to the Texas Department of Transportation or other agency that has jurisdiction over affected area roads.

If you need assistance in completing this form, please contact the Municipal Solid Waste Permits Section of the Waste Permits Division at (512) 239-2335.

I. General Information

Facility Name: TASWA Disposal and Recycling Facility

MSW Permit No.: 2290A

Site Operator/Permittee Name and Mailing Address: Texoma Area Solid Waste Authority 25090 State Highway 56, Whitesboro, TX 76273

II. Documentation of Coordination with the Texas Department of Transportation (TXDOT) for Traffic and Location Restrictions

1. A traffic study document and cover letter was submitted to TXDOT as Coordination for traffic and location restrictions for the subject facility and a copy of the documents submitted to TXDOT is attached herein: ☒ Yes ☐ No

   If you checked "No" , provide explanation:

2. Date of submission of the coordination documents to TXDOT: July 5, 2022

3. TXDOT's response received? ☒ Yes ☐ No

4. If "No" is checked in response to Item I.3 above, complete Items I.4 and I.5 below only after TxDOT's response is received.

5. Did TxDOT's response include recommendation of improvements to any of the roadways or intersections that lead to the site? ☐ Yes ☒ No

6. If you checked "Yes" in Item I.5 above, proceed to Section III., TxDOT's Recommended Roadway or Intersection Improvements (as applicable).

7. If you checked "No" in Item I.5 above, provide TxDOT's response to the traffic and location restrictions compliance coordination for the subject site: *(Enter TxDOT's response to coordination correspondence)* Attached.

III. TxDOT Recommended Roadway or Intersection Improvements (as applicable)

Enter TxDOT's recommendations for improvement of roadways or intersections that lead to the site:

1. N/A

2.

3.

IV. Documentation of Coordination of Improvement Designs of Public Roadways (turning lanes, storage lanes, acceleration/deceleration lanes, etc.) at and Near the Site Entrances with Agencies that Exercise Maintenance Responsibility

1. Complete Table 1 with information regarding documentation of coordination of improvement designs for existing and proposed roads.

Table 1: Public Roadway Improvements Coordination

Existing and Proposed Roads Associated with the Site Entrance(s)	Agency Exercising Maintenance Responsibility	Date of Coordination Correspondence from the Applicant or Site Operator to the Agency Responsible	Date of the Coordination Response Letter from the Agency Responsible	Did the Agency Responsible Require Improvements to the Roadway(s) Associated with the Site Entrance(s) (check Yes or No as applicable)
SH 56	TxDOT	July 5, 2022	July 12, 2022	☐Yes ☒No
FM 901	TxDOT	July 5, 2022	July 12, 2022	☐Yes ☒No
				☐Yes ☐No
				☐Yes ☐No

2. If you checked "Yes" in the last column of Table 1, indicating that improvements are required, address the following:

   (a) Briefly describe the improvements proposed for the public roadway(s) associated with the site entrance(s): N/A

   (b) A copy of the proposed improvement design submitted to the agency exercising maintenance responsibility over the roadway is attached herein: ☐Yes ☐No. If you checked "No" please explain:

   (c) A copy of the response letter from the agency exercising maintenance responsibility over the roadway(s) associated with the site entrance(s) approving the improvement design is attached herein: ☐Yes ☐No. If you checked "No" please explain:

V. Facility Location and Operation Information Used in Estimating Transportation Data

1. Facility Location Information

   Facility located on south side of SH 56 ~1 mile West of the SH 56 and FM 901 intersection.

2. Waste Acceptance Rates

   (a) Initial Waste Acceptance Rate: ~865 tons per day

   (b) Estimated Maximum Waste Acceptance Rate at any Time During Facility Life: ~4,330 tons per day

3. Hours of Operation and Site Life

   (a) a. Operating Hours: 24 hours per day, 7 days per week

   (b) b. Waste Acceptance Hours: Monday 12:01 AM through Saturday 5:00 PM

   (c) c. Estimated Site Life: ~90 years

4. Other Information Used or Assumed in Estimating Transportation Data: Average Annual Daily Traffic (AADT) counts from the TxDOT Traffic Count Database System (TCDS) for stations 92U104 (SH 56 East of TASWA Entrance), 92H94 (SH 56 West of TASWA Entrance), and 92H95 (FM 901 North of SH 56)

VI. Facility Daily Traffic Volume Data

1. Complete Table 2 with estimated existing daily volume of traffic generated by the facility.

Table 2: Estimated Existing Daily Volume of Traffic Generated

Vehicle Type	Traffic Volume to Facility (vehicles per day, vpd)	Traffic Volume from Facility (vpd)
Trucks	137	137
Employee Vehicles	25	25
Visitors Vehicles	5	5
Other Vehicles	113	113
Summation of Daily Volume of Traffic to and from the Facility		
Total Daily Volume of Traffic	280	280

(a) Describe the source(s) of or method(s) used to obtain the existing daily volume of traffic generated by the facility: TxDOT TCDS counts from Stations 92U104, 92H94, and 92H95

(b) Location(s) of traffic counts (if applicable): 92U104 (SH 56 East of TASWA Entrance), 92H94 (SH 56 West of TASWA Entrance), and 92H95 (FM 901 North of SH 56)

2. Complete Table 3 with estimated future daily volume of traffic generated by the facility.

Table 3: Estimated Future Daily Volume of Traffic Generated

Vehicle Type	Traffic Volume to Facility (vpd)	Traffic Volume from Facility (vpd)
Trucks	303	303
Employee Vehicles	40	40
Visitors Vehicles	10	10
Other Vehicles	247	247
Summation of Daily Volume of Traffic to and from the Facility		
Total Daily Volume of Traffic	600	600

3. Describe the method(s) used to obtain the estimated future daily volume of traffic generated by the facility, including dates, traffic growth rates, and sources of the growth rates: Land Use Analysis indicates a growth trend for Cooke and Grayson Counties ranging from 0.66 to 1.25 percent. 1 percent annual growth rate was used to estimate future daily volume of traffic.

4. Maps showing the facility boundary and roads within 1 mile of the facility that provide access to the site are attached herein. Yes ☒ No☐. If you checked "No" please explain: Maps provided in part II, Appendix IIA.

VII. Availability and Adequacy of Roads

1. Complete Table 4 with information regarding the primary access roadways.

Table 4: Roadway Characteristics of the Primary Access Roadways

List the roads that the owner or operator will use as primary access to the site	Existing Annual Average Daily Traffic on Roadway (vpd)	Expected Annual Average Daily Traffic on Roadway (vpd)	Existing Roadway Capacity	Expected Roadway Capacity	Max Gross Weight Allowed (lbs)	Max/Min Posted Speed Limit (mph)	Min Vertical Clearance (ft)	Surface Type and No. of Lanes	Level of Service	Existing Traffic Generated by the Facility on Each Roadway	Expected Traffic Generated by the Facility on Each Roadway
SH 56	2464	5462	3200 pc/h	3200 pc/h	80000	55/NA	14	Asph/ 2	A	196 vpd	420 vpd
FM 901	1224	2713	3200 pc/h	3200 pc/h	80000	55/NA	14	Asph/ 2	A	196 vpd	420 vpd

2. Complete Table 5 with information regarding other access roadways within one mile.

Table 5: Roadway Characteristics of Other Access Roadways within One Mile of the Facility Boundary

List other access roadways within 1 mile of the facility	Existing Annual Average Daily Traffic on Roadway	Expected Annual Average Daily Traffic on Roadway	Existing Roadway Capacity	Expected Roadway Capacity	Max Gross Weight Allowed (lbs)	Max/Min Posted Speed Limit (mph)	Min Vertical Clearance (ft)	Surface Type and No. of Lanes	Level of Service	Existing Traffic Generated by the Facility on Each Roadway	Expected Traffic Generated by the Facility on Each Roadway
N/A											

3. Complete Table 6 with information regarding access roadway intersections within one mile.

Table 6: Roadway Intersection Characteristics

Please list major (signalized) roadway intersections for access roads within 1 mile of facility	Existing Capacity	Existing Level of Service
N/A		

Please list major (signalized) roadway intersections for access roads within 1 mile of facility	Existing Capacity	Existing Level of Service

4. (For applicants that conducted traffic counts) Peak period traffic counts were conducted at critical intersections and roadways in the area: ☐ Yes ☒ No

   If "No" is checked, please explain: No signalized intersections within 1 mile.

VIII. Conclusions on the availability and adequacy of roads to be used for accessing the facility

Enter conclusions regarding the availability and adequacy of roads to be used for accessing the facility using information obtained from access roadway data; data on the volume of existing and expected vehicular traffic on the access roads within one mile of the facility; and the projection of the volume of traffic expected to be generated by the facility on the access roads:

Facility traffic is not expected to cause an adverse effect on the access roads in the vicinity of the facility at present or during the anticipated life of the facility.

IX. Highway Beautification

Enter facility distance from interstate or primary highways and screening information as required by 30 TAC 330.23(a).

1. Distance of Facility from Interstate or Primary Highway: N/A

2. Type of Facility Screening Provided, if applicable: N/A

X. Analysis of the Impact of the Facility upon Airports

Enter the Part, Appendix, Attachment, Section, and Page Number of the application where analysis of the impact of the facility upon airports is provided: Part II, Appendix IIH.

XI. Documentation of Coordination with the Federal Aviation Administration for Compliance with Airport Location Restrictions

1. Applicant has submitted written information to FAA describing the facility location, maximum height of waste units, type of waste accepted at the facility, and other facility-relevant data and information as required: ☒ Yes ☐ No

(a) Enter Date of Coordination Letter to FAA: 9/2022

(b) Enter Date of FAA Response: 10/4/2022

2. Indicate FAA Response and Final Action:

☒ FAA Acknowledged No Adverse Impact.

☒ FAA Recommended Safety Improvements. (*Complete Section XII if you check this item.*)

3. A copy of the Documentation of Coordination with FAA for compliance with airport location restrictions is attached herein. ☒Yes ☐No. If you checked "No" please explain:

Determination of No Hazard to Air Navigation correspondence from FAA included in Part II, Appendix IIH.

XII. FAA Recommended Changes or Improvements for Airport Safety, (as applicable)

Enter FAA's recommended changes or improvements to the facility for airport safety or for compliance with airport location restrictions.

The structure (landfill) is to be marked/lighted in accordance with FAA Advisory circular 70/7416-1 M within 5 days after construction reaches its greatest height.

XIII. Attachments

- Maps showing the facility boundary and roads within 1 mile of the facility.
- Documentation of coordination of all designs of proposed public roadway improvements associated with site entrances with the agency exercising maintenance responsibility of the public roadway involved; and the response letter received from the agency, as applicable.
- Documentation of coordination with the Texas Department of Transportation (TxDOT) for traffic and location restrictions, including any traffic study report; and the response letter received from TxDOT.
- Documentation of coordination with the Federal Aviation Administration for compliance with airport location restrictions; and the response letter received from FAA.
- Other documents attached:

APPENDIX IID
WETLANDS DOCUMENTATION

David Clark

From: Carraway, David W CIV USARMY CESWT (USA) [redacted]
Sent: Wednesday, July 3, 2024 10:45 AM
To: Karisa Fenton
Cc: Rudi Reinecke; David Clark [redacted] Parisotto, Edward M CIV USARMY CESWT (USA)
Subject: RE: TASWA Credit Demand Total - SWT-0-10175

Karisa,

As discussed, we've evaluated the total credit demand and find it satisfactory. Please let me know if you have any questions, thanks!

V/r,

David W. Carraway, AWB, PWS
Regulatory Project Manager
Tulsa District, U.S. Army Corps of Engineers
Govt. Cell: (918) 857-8075
2488 E 81st Street
Tulsa, OK 74137-4290

From: Karisa Fenton [redacted]
Sent: Tuesday, July 2, 2024 1:36 PM
To: Carraway, David W CIV USARMY CESWT (USA [redacted]
Subject: [Non-DoD Source] TASWA Credit Demand Total - SWT-0-10175

David,

Good afternoon, the RES team is looking to move forward with planning for the TASWA off-site mitigation and would like to solidify the total credit demand. I have attached a document and series of maps detailing the proposed credit demand for the remaining jurisdictional tributary and the currently constructed mitigation areas. Please let me know if you have any questions or comments on the document, and if you agree with the total credit demand total.

Thank you,

Karisa Fenton
Integrated Environmental Solutions, LLC
301 W Eldorado Parkway, Ste. 101
McKinney, Texas 75069
972-562-7672 (o) 937-725-6307 (m)
[redacted]

26 June 2024

Mr. David Carraway
Regulatory Division – USACE Tulsa District
2488 E 81st Street
Tulsa, Oklahoma 74137

RE: Texoma Area Solid Waste Authority (TASWA) Off-Site Credit Demand Total - SWT-0-10175

Dear Mr. Carraway,

Integrated Environmental Solutions, LLC. (IES), as the environmental consultant for TASWA on this project, is requesting a review of the proposed credit demand for jurisdictional aquatic features and currently constructed mitigation areas within the TASWA property boundary. TAWSA is seeking to permit the largest landfill applicable on the site to prevent any foreseeable modifications to the permit in the future based on capacity needs. This approach will result in increasing the impacts to waters of the United States from what was previously approved under the 09 October 2000 Mitigation Plan as an additional segment of the intermittent drainage oriented north-to-south will be filled within the waste boundary and the two constructed mitigation areas will be impacted. The TASWA board has approved the use of RES to purchase an off-site property to develop a mitigation plan, construct and manage the mitigation area for all unavoidable impacts. Prior to moving forward with the permitting and mitigation plan, IES requests a review of the credit demand generated for each of the currently constructed mitigation areas, the wetland, and the intermittent drainage that has not been impacted to date. The goal of this submittal is to solidify the total off-site credit demand so RES can move forward with mitigation planning.

The following provides a description of each of the **Attachment A** figures in the sequence that was used to generate the total credit demand:

Figure 1 - The proposed waste boundary comprises approximately 504 acres located southeast of the intersection of Texas State Highway 56 and Farm-to-Market Road 901, Grayson County, Texas.

Figure 2 - Under the 09 October 2000 Mitigation Plan submitted to the USACE (Project No. 10175) titled Mitigation Plan for T.A.S.W.A., Grayson County, Texas, impacts to 3,340.6 linear feet (LF) of intermittent tributary and 0.09 acre of forested wetland were approved. Impact 1 (Tributary 2) accounted for 1,547.6 LF of intermittent tributary impact, Impact 2 (Tributary 5) accounted for 1,793.0 LF of intermittent tributary impact, and Impact 3 accounted for 0.09 acre of forested wetland impact.

Figure 3 - Under the 2000 Mitigation Plan, four compensatory mitigation areas were located on-site around the perimeter of the landfill permit boundary. To date, the mitigation areas to the northwest and southwest have been constructed and are functioning while the mitigation areas to the northeast and southeast have not been constructed.

Figure 4 – The landfill is divided into a series of cells that are utilized over a period of time. Therefore, rather than clearing the full site once the 2000 Plan was approved, cells have been excavated accordingly to match the community's needs. To date, Tributary 5 and the wetland at the headwaters of Tributary 5 have been impacted. The northwestern and southwestern mitigation areas have been constructed and evaluated in accordance with the 2000 Mitigation Plan to provide compensatory mitigation for the currently impacted features.

Figure 5 - The remaining drainage (Tributary 2), impacted wetland, and the constructed compensatory mitigation areas were assessed using the Texas Rapid Assessment Methodology (TxRAM Version 2.0) to ensure that the proposed off-site compensatory mitigation balances the functions and values associated with the loss of waters of the United States. As Tributary 5 was impacted previously, the mitigation demand was calculated based on the TxRAM scores and lengths of the existing mitigation areas which were constructed to offset the Tributary 5 impacts. As Tributary 2 has not been impacted to date, a TxRAM score was generated for Tributary 2 rather than the northeastern and southeastern mitigation areas which would have been constructed to satisfy compensatory mitigation requirements under the 2000 Plan. This method directly evaluates Tributary 2 rather than providing speculative TxRAM values based on the two eastern 2000 Plan mitigation areas. Nearby wetlands on site were used to generate a TxRAM score for the wetland at the headwaters of Tributary 5.

The total credit demand for each mitigation area or exiting drainage is as follows:

Table 1. Compensatory Mitigation Demand Using TxRAM

Water Identification		Impacted Length/Area	Existing TxRAM Score	Compensatory Mitigation Demand
Tributary 2 Impact		3,178.0 LF	70.45	2,238.9
NW Mitigation Area		1,055.7 LF	37.26	393.4
SW Mitigation Area – Zone A		909.0 LF	41.32	375.6
SW Mitigation Area – Zone B		2,800.4 LF	39.7	1,111.8
Wetland 2		0.09 AC	64.2	0.06
Totals	Tributary	3,340.6 LF	---	**4,119.7 intermittent stream credits**
	Wetlands	0.09 AC	---	**0.06 wetland credits**

If you have any questions regarding the project or would like any additional information, please do not hesitate to contact me at 972-562-7672 (kfenton@intenvsol.com).

Sincerely,

Integrated Environmental Solutions, LLC

Karisa Fenton

Karisa Fenton
Biologist

CC: David Clark, Biggs and Mathews Env.
John Osteen, TASWA
Mr. Brandon Hall, RES

Enclosure

ATTACHMENT A
Figures

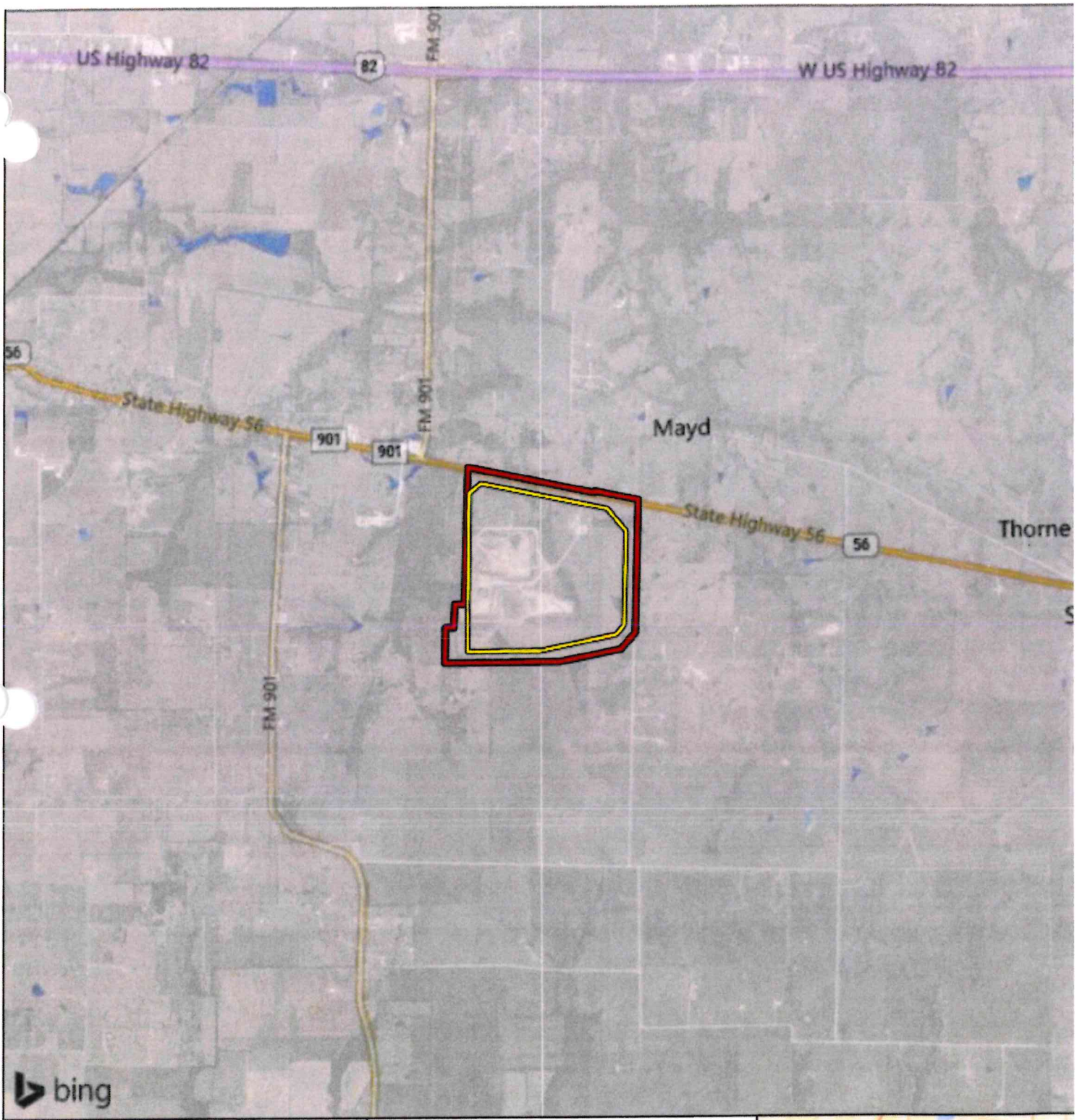
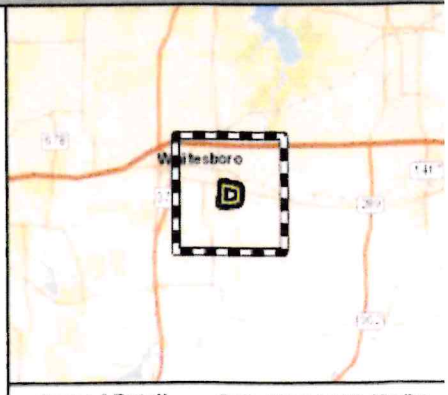


Figure 1.
General Location Map

TASWA Expansion
Grayson County, Texas

Permit Boundary

Waste Boundary (Limits of Disturbance)



1 in = 4,000 ft

Feet
0
4,000

N
W
E
S

File Ref. 04.240.095
Date: 6/20/2024

IID.5

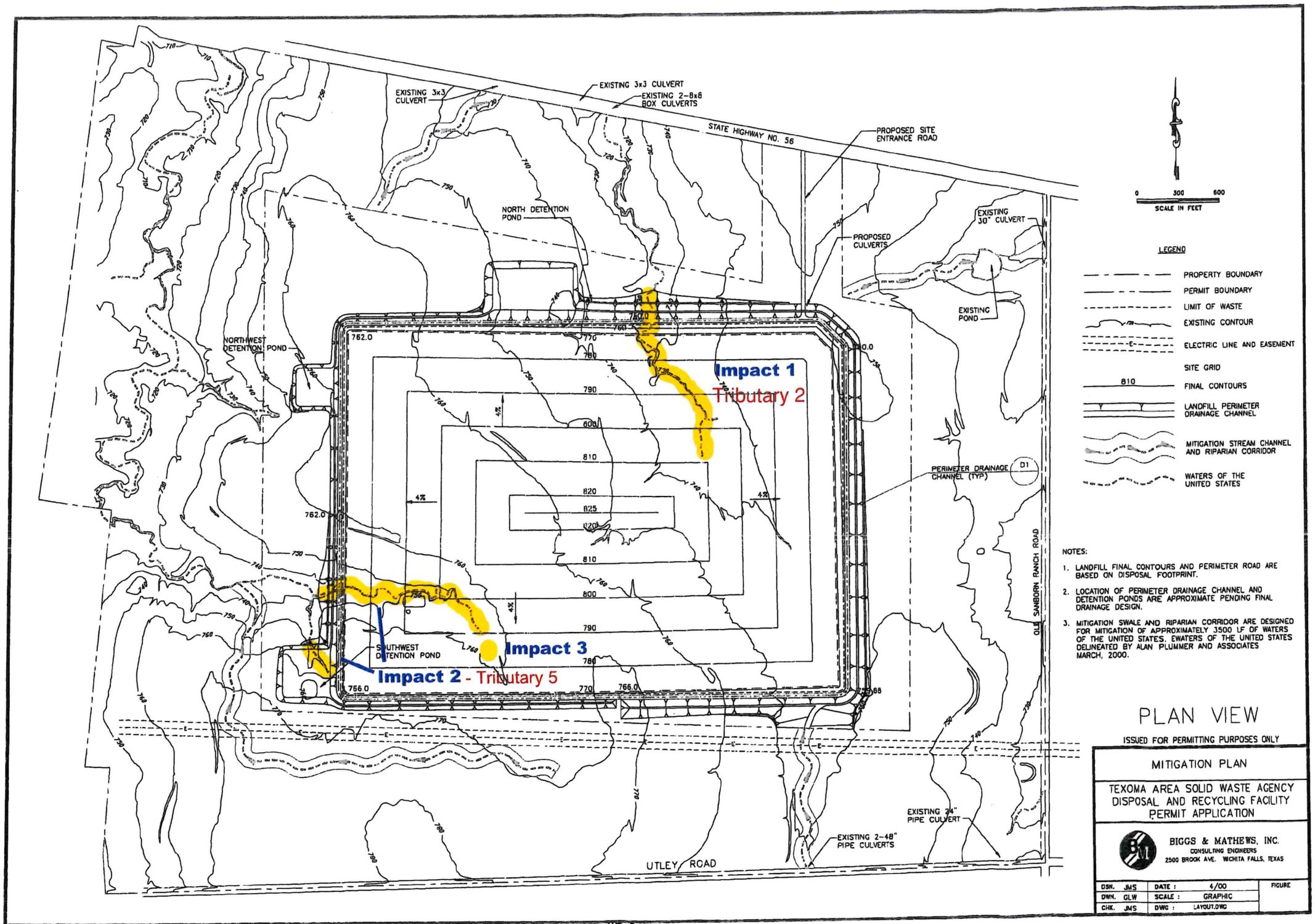


Figure 2. 2000 Plan Impact Areas shown in yellow.

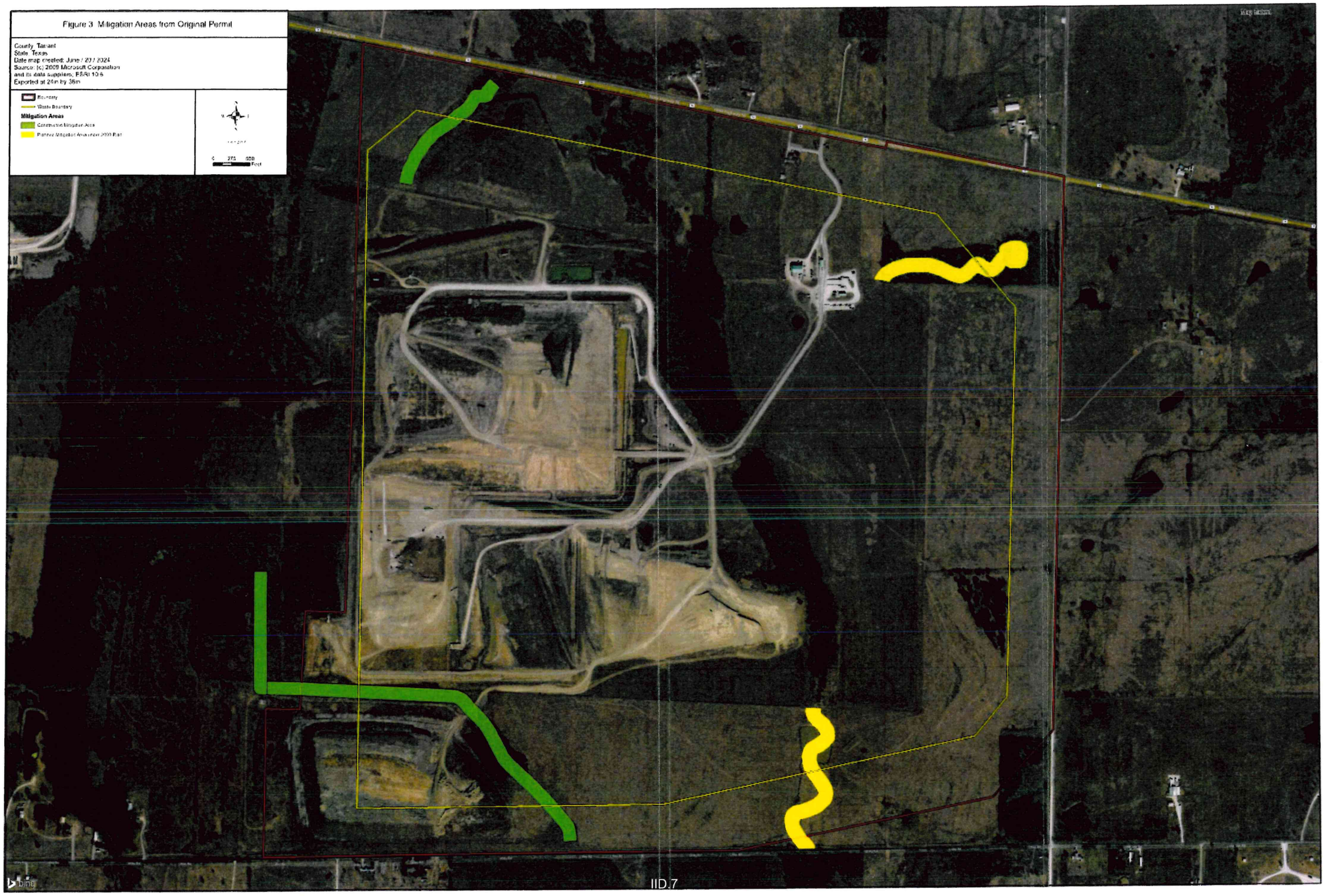


Figure 3 Mitigation Areas from Original Permit
County Tarrant
State Texas
Date map created: June / 20 / 2024
Source: (c) 2009 Microsoft Corporation
and its data suppliers, ESRI 10.6
Exported at 24in by 36in
Boundary
Waste Boundary
Mitigation Areas
Construction Mitigation Area
Planned Mitigation Area under 2009 Plat
0 275 550
Feet
bing

Figure 4. Completed Actions From Original Permit

County: Tarrant
State: Texas
Date map created: June / 20 / 2024
Source: (c) 2009 Microsoft Corporation
and its data suppliers, ESRI 10.6
Exported at 24in by 36in

Figure 5. Off-Site Credit Demand

County: Tarrant
State: Texas
Date map created: June / 19 / 2024
Source: (c) 2009 Microsoft Corporation and its data suppliers, ESRI 10.5
Exported at 24h by 36h

Boundary
Waste Boundary (Limits of Disturbance)
Constructed Mitigation Area
Aquatic Features
RPW Intermittent Tributary

0 250 500 Feet

NW Mitigation Site
TxRAM = 37.26
1,055.7 LF

Constructed to mitigate for Tributary 5 and a portion of Tributary 2

Credit Demand - 393.4

Tributary 2
TxRAM = 70.45
3,476.24 LF

This tributary has not been impacted yet.

Proposed Total Impacts -
0.454 acre
3,178 LF

Original 2000 Mitigation Plan Impact -
1,547.6 LF

Credit Demand - 1,090.3

Additional Impact Under Update-
1,630.4 LF

Credit Demand - 1,148.6

Total Off-Site Mitigation Credit Demand:

4,119.7 stream credits

0.79 acre wetland credit (wetland credit demand from 2000 permit)

SW Mitigation Site
Zone A
TxRAM = 41.32
909 LF

Constructed to mitigate for Tributary 5

Credit Demand - 375.6

SW Mitigation Site
Zone B
TxRAM = 39.7
2,800.4 LF

Constructed to mitigate for Tributary 5

Credit Demand - 1,111.8

State Highway 56

bing

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, TULSA DISTRICT
2488 EAST 81ST STREET
TULSA, OKLAHOMA 74137-4290

May 20, 2024

Regulatory Office

Ms. Karisa Fenton
Integrated Environmental Solutions, LLC
301 W Eldorado Parkway, Ste. 101
McKinney, TX 75069

Dear Ms. Fenton:

Please reference the request for a Delineation Concurrence, referenced May 6, 2024, regarding the Texoma Area Solid Waste Authority's 731 acre site located southeast of the intersection of Texas State Highway 56 and Farm-to-Market Road 901, Grayson County, Texas.

Based on a review of the information submitted, the delineated boundaries depicted on the enclosed map titled, Figure 5. Aquatic Features Identified within the Survey Area, is a reasonable representation of the aquatic resources located onsite.

This information is sufficient for planning and permitting purposes with our office. Unless otherwise requested, no further correspondence will be forthcoming regarding this request.

Your request has been assigned Identification Number SWT-0-10175. Please refer to this number during future correspondence. If further assistance is required, please contact Mr. David Carraway at (918) 857-8075.

Sincerely,

Andrew R. Commer
Chief, Regulatory Office

Enclosure

02 January 2024

Mr. David Carraway
U.S. Army Corps of Engineers – Tulsa District
2488 E. 81st Street
Tulsa, Oklahoma 74137-4290

Re: Texoma Area Solid Waste Authority (TASWA) - Approved Jurisdictional Determination (AJD) Request
Approximately 731 acres located southeast of the intersection of Texas State Highway (SH) 56 and Farm-to-Market Road (FM) 901, Grayson County, Texas.

Dear Mr. Carraway,

Integrated Environmental Solutions, LLC (IES) performed a site survey to identify any aquatic features that meet a definition of a water of the United States on approximately 731 acres located southeast of the intersection of SH 56 and FM 901, Grayson County, Texas (**Attachment A, Figure 1**). This report will ultimately assess and delineate potentially jurisdictional aquatic features to ensure compliance with Clean Water Act (CWA) Sections 401 and 404.

TASWA is a solid waste authority formed by the cities of Sherman, Gainesville, and Denison. TASWA is a publicly operated solid waste facility, located approximately 3 miles east of the City of Whitesboro, that is intended to provide long-term public waste disposal services. The TASWA owns 920+ acres and is looking to expand the footprint of their current landfill to increase the capacity and lifespan to accommodate area growth. Within the 920+ acres, the proposed facility expansion permit boundary will encompass approximately 731 acres. The landfill disposal footprint will cover approximately 504 acres within the facility permit boundary. The full 920+ acre property boundary is not included in this AJD request as landfill expansion to the west is not feasible due to drainage requirements; however, it should be noted that impacts to the western region have been avoided and minimized. The permit and waste boundaries have been included in the report attachments to indicate the limits for the AJD request (Permit Boundary) as well as show the limits where additional impacts will occur for the expansion (Waste Boundary). **As there are aquatic features within the proposed expansion limits, IES is requesting that the USACE review our delineation and provide an Approved Jurisdictional Determination (AJD) to ensure that the project is planned and developed in compliance with the CWA.**

INTRODUCTION

Waters of the United States are protected under guidelines outlined in CWA Sections 401 and 404, in Executive Order (EO) 11990 (Protection of Wetlands), and by the review process of the Texas Commission on Environmental Quality (TCEQ). Agencies that regulate impacts to the nation's water resources within Texas include the U.S. Army Corps of Engineers (USACE), the U.S. Environmental Protection Agency (USEPA), the U.S. Fish and Wildlife Service (USFWS), and the TCEQ. The USACE has the primary regulatory authority for enforcing CWA Section 404 requirements for waters of the United States.

The decision for whether a CWA Section 404 permit is required on a property is determined if there are waters of the United States present and the extent of losses of those features. The USACE and USEPA have gone through rulemaking to define what is a water of the United States, independently and jointly, several times since the initial CWA. The longest standing definitions of waters of the United States were those published in 1986; however, these definitions were challenged in 2001, 2007, and 2023 U.S. Supreme Court (SCOTUS) decisions. In addition to this, the

Obama, Trump, and Biden administrations completed rulemaking to modify the definitions of waters of the United States. The 2023 SCOTUS decision defined a water of the United States as "a relatively permanent body of water connected to traditional interstate navigable waters." The SCOTUS also included wetlands that have a continuous surface connection with that water, in the definition of a water of the United States. This wetland connection was described as the boundary where it was difficult to determine where the 'water' ends, and the 'wetland' begins.

This 2023 SCOTUS decision is consistent with the relatively permanent water (RPW) standard identified in the previous 2007 SCOTUS decision. Until further guidance is published from the USACE or USEPA, the 2007 USACE and EPA guidance defining a "relatively permanent water" will be used. According to this guidance, RPW are non-navigable tributaries of traditional navigable waters (TNW) that flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). In addition to this, the guidance also stipulated regulation over wetlands that directly abut such tributaries.

METHODOLOGY

Prior to conducting fieldwork, the U.S. Geological Survey (USGS) topographic map (**Attachment A, Figures 2A** and **2B**), the *Soil Survey of Grayson County, Texas*, and the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) digital soil databases for Grayson County (**Attachment A, Figure 3**), the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) (**Attachment A, Figure 4**), and recent and historic aerial photographs of the proposed survey area were studied to identify possible aquatic features that could meet the definition of waters of the United States and areas prone to wetland development. Ms. Karisa Fenton of IES conducted the initial delineation in the field in accordance with the USACE procedures on 11, and 15 February 2022, and conducted site revisits to collect additional data 02 May 2022, and 16 November 2023.

Wetland determinations and delineations were performed on location using the methodology outlined in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineer Wetland Delineation Manual: Great Plains Region (Version 2.0). The presence of a wetland is determined by the positive indication of three criteria (i.e., hydrophytic vegetation, hydrology, and hydric soils). Potential jurisdictional boundaries for other water features (i.e., non-wetland) were delineated in the field at the ordinary high-water mark (OHWM). The 33 CFR 328.3 (c)(7) defines OHWM as the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Water feature boundaries were recorded on a Trimble GeoExplorer XT Global Positioning System (GPS) unit capable of sub-meter accuracy. Photographs were also taken at representative points within the survey area (**Attachment B**). Routine wetland determination data forms are provided in **Attachment C**.

RESULTS

Background Review

Topographic Setting

The USGS topographic maps (Sadler 7.5' Quadrangle 1982, revised 1983; and Ethel 7.5' Quadrangle 1982, revised 1983) illustrate four blue line features and five ponds. The first blue line feature is depicted bisecting the site, oriented south-to-north. The second blue line feature is depicted originating in the west and exiting via the western boundary, oriented east-to-west. The third and fourth blue line features are illustrated in the northeastern and southeastern corner, respectively, oriented southwest-to-northeast. Two isolated ponds are depicted west of the first blue line feature and a third pond is shown south of the second blue line feature. A fourth pond is illustrated at the start of the third blue line feature and a fifth pond is shown west of the fourth blue line feature, along the eastern boundary (*see* **Attachment A, Figure 2A**). The 2022 Sadler and Ethel 7.5' Quadrangle maps illustrate the blue line features in similar alignment; however, a relatively large pond is depicted west of the first blue line feature and the southern pond west of the first blue line feature is no longer depicted. Additionally, the fourth blue line feature has been partially channelized and the pond in the southeastern corner is now on-channel. Another isolated pond is depicted near the southern boundary, between the first and fourth blue line features (*see* **Attachment A, Figure 2B**). The overall site topography was illustrated with slopes oriented east-to-west in the west, south-to-north centrally,

and southwest-to-northeast in the east. The maximum site elevation was approximately 800 feet above mean sea level (amsl) with a minimum site elevation of approximately 720 feet amsl.

Soils

The USDA NRCS Web Soil Survey identified nine soil map units within the survey area, Bunyan and Whitesboro soils, frequently flooded; Elbon soils, frequently flooded; Heiden clay, 1 to 3 percent slopes; Heiden clay, 3 to 5 percent slopes; Normangee clay loam, 1 to 3 percent slopes; Normangee clay loam, 4 to 8 percent slopes; Vertel clay, 3 to 5 percent slopes; Vertel clay, 5 to 12 percent slopes; and Wilson silty clay loam, 1 to 3 percent slopes. Elbon soils, frequently flooded, located in depressions, was listed as a hydric soil on the Hydric Soils of Texas list prepared by the National Technical Committee for Hydric Soils (accessed 27 December 2023, Grayson County, Texas) (*see* **Attachment A, Figure 3**). Hydric soils are described as soils that are sufficiently wet in the upper part to develop anaerobic conditions during the growing season.

FEMA FIRM

The FEMA FIRM (Grayson County; Map Panels 48181C0250F and 48181C0375F; effective 29 September 2010) shows the entire survey area is within Zone X (Areas determined to be outside the 0.2 percent annual chance floodplain) (*see* **Attachment A, Figure 4**).

Weather History

The weather history for Wunderground.com JML Enterprises WX weather station (KTXWHITE107) recorded 0.32 inch of precipitation during the 7-day period and a total of 8.30 inches during the 30-day period, prior to the 16 November 2023 site visit. The Antecedent Precipitation Tool (APT) indicated that the conditions on-site at the time of the evaluation were considered hydrologically "normal" based on the 30-year climactic average (33.631703N, -96.841006W).

Field Investigation

The TASWA property was comprised of five vegetation communities including **non-maintained grassland, maintained grassland, disturbed urban matrix,** and **forested riparian corridor** with small regions of **forested upland** scattered across the site.

The **non-maintained grassland** vegetation community was predominantly observed in undeveloped regions that experienced low traffic with little access. These areas were observed in transition between strictly grasslands to savannah or shrubland habitat types. The maintenance regimes for these parcels were either limited or apparently non-existent beyond utility line rights-of-way (ROW) that were observed crossing some parcels. Though species dominance fluctuated, the species composition was relatively consistent. Grass and forbs species observed included Bermudagrass (*Cynodon dactylon*), Johnsongrass (*Sorghum halepense*), little bluestem (*Schizachyrium scoparium*), common sunflower (*Helianthus annuus*), giant ragweed (*Ambrosia trifida*), spreading hedge-parsley (*Torilis arvensis*), prairie broomweed (*Amphiachyris dracunculoides*), prairie threeawn (*Aristida oligantha*), sumpweed (*Iva annua*), white tridens (*Tridens albescens*), and goldenrod (*Solidago gigantea*). The lack of a maintenance regime frequently allows thickets of shrub species to inhabit the grassland habitats. The shrub species observed included eastern redcedar (*Juniperus virginiana*), honey mesquite (*Prosopis glandulosa*), sugarberry (*Celtis laevigata*), and honey locust (*Gleditsia triacanthos*). Trees of the same species were also observed in clusters and along the established forested areas, frequently creating a transitional area between grassland and forestland consisting of sporadic trees and shrubs in a savannah-like habitat.

The **maintained grassland** vegetation community was characterized by the presence of short turf grasses and sporadic forbs frequently maintained by mowing for hay production, landscaping, or active grazing. The dominant vegetation type in these areas was Bermudagrass with various other grasses and forbs, including Johnsongrass, white tridens, common sunflower, and goldenrod scattered throughout. The maintained grasslands were often bisected or bordered by paved/ gravel roads or buildings.

The **disturbed urban matrix** vegetation community was associated with the landfill footprint and was characterized by the presence of paved roads, parking lots, frequently traveled gravel or dirt roads, relocated fill dirt, and dump

sites. While most of the vegetation had been cleared from this area, maintained Bermudagrass was observed surrounding buildings and roads.

The **forested riparian corridor** was predominantly observed along the central, unnamed tributary of Mustang Creek. The forested riparian corridor areas were dominated by sugarberry, cedar elm (*Ulmus crassifolia*), and Osage orange (*Maclura pomifera*). Other tree and shrub species observed included common persimmon (*Diospyros virginiana*), green ash (*Fraxinus pennsylvanica*), American elm (*Ulmus americana*), post oak (*Quercus stellata*), rough leaf dogwood (*Cornus drummondii*), honey locust, and coralberry (*Symphoricarpos orbiculatus*). Ground cover was dominated by inland wood oats (*Chasmanthium latifolium*), eastern woodland sedge (*Carex blanda*), and Virginia wildrye (*Elymus virginicus*).

The **forested upland** vegetation community was observed in relatively small regions near the northern and eastern boundaries. The forested upland areas were dominated by eastern redcedar, sugarberry, and honey locust with an understory of common greenbrier (*Smilax bona-nox*), sedge (*Carex spp.*), and poison-ivy (*Toxicodendron radicans*).

Water from the survey area flows north into an unnamed tributary of Mustang Creek, which flows into Big Mineral Creek. Big Mineral Creek flows in the Red River, a TNW. **Table 1** and the following paragraphs detail the aquatic features identified within the survey area at the time of evaluation (**Attachment A, Figure 5**).

Table 1. Aquatic Features Identified within the Survey Area

Water Identification	Hydrology Characteristics	Area (Acre)	Length (Linear Feet)	Water Classification
Tributary 1	Intermittent	0.57	3,818	RPW
Tributary 2	Ephemeral	0.08	699	Non-RPW
Wetland 1	Seasonally Saturated	0.08	---	No Continuous Surface Connection to a RPW
Wetland 2	Seasonally Saturated	0.09	---	No Continuous Surface Connection to a RPW
Wetland 3	Seasonally Saturated	0.06	---	No Continuous Surface Connection to a RPW
Pond 1	Seasonally Inundated	0.47	---	No Continuous Surface Connection to a RPW
Pond 2	Seasonally Inundated	0.04	---	No Continuous Surface Connection to a RPW
Pond 3	Seasonally Inundated	0.40	---	No Continuous Surface Connection to a RPW
Pond 4	Semi-Permanently Inundated	0.85	---	No Continuous Surface Connection to a RPW
Pond 5	Seasonally Inundated	0.14	---	No Continuous Surface Connection to a RPW
Pond 6	Seasonally Inundated	0.22	---	No Continuous Surface Connection to a RPW
Pond 7	Semi-Permanently Inundated	1.35	---	No Continuous Surface Connection to a RPW
Pond 8	Seasonally Inundated	0.23	---	No Continuous Surface Connection to a RPW
EF 1	Ephemeral	0.04	332	Non-RPW

Tributary 1 was identified meandering through the northern region. Tributary 1 originated centrally, downslope of the southern landfill section, pastureland, and a forested region, and flowed northwest, exiting via a culvert under SH 56. Tributary 1 was identified by OHWM characteristics that included the destruction of terrestrial vegetation, the presence of litter and debris, sediment sorting, a water line, and a bed and bank. The channel's substrate was comprised of silt, sand, clay, gravel, and cobble. Tributary 1 was incised into the landscape 3 to 8 feet with average widths of 5 to 12 feet. Given the tributary's relatively low location in the watershed and the presence of flowing and ponded water at the time of evaluation, it is IES's professional opinion that Tributary 1 would be considered to have at least seasonal, intermittent flow.

Tributary 2 was a relatively small, discontinuous tributary identified in the southeastern corner. Tributary 2 entered via a culvert under Utley Road, oriented southwest-to-northeast. Tributary 2 was identified and delineated by OHWM characteristics that included the destruction of terrestrial vegetation, the presence of litter and debris, and a bed and bank. The channel's substrate was composed of silt and clay sediment. Tributary 2 was incised into the landscape between 1 to 3 feet with average OHWM widths between 2 to 6 feet. Given the tributary's relatively high location in the local watershed, small size, and the absence of flowing water at the time of evaluation, it is IES's professional opinion that Tributary 2 would be considered to have ephemeral flow.

Wetlands 1 through **3** were identified as emergent wetlands located within shallow, depressional regions. The wetlands were dominated by small-fruit spikerush (*Eleocharis microcarpa*), giant ragweed, Raven's foot sedge (*Carex crus-corvi*), and common spikerush (*Eleocharis palustris*). Hydric soil for Wetlands 1 through 3 was indicated by Redox Dark Surface with a matrix of 10YR 3/1 with redoximorphic concentrations in the pore linings and matrix. Hydrologic indicators consisted of saturation, inundation, crayfish burrows, and a positive FAC-neutral test. Given their relatively high location in the watershed and the hydrology observed, these wetlands would be considered seasonally saturated.

Ponds 1 through **8** were identified as isolated, artificially excavated ponds. The ponds were formed by excavating a depression into the landscape and placing an earthen embankment in such a manner to capture direct rainfall and sheet flow. The ponds' limits were identified and delineated by OHWM characteristics that included a natural line impressed in the bank, a wrack line, and a water line. No features with OHWM characteristics were observed entering or exiting the limits of Ponds 1 through 6, or 8 at the time of evaluation. EF 1 was observed entering the limits of Pond 7; however, no features were observed exiting Pond 7. A review of aerial imagery indicates Ponds 4 and 7 have minor water level fluctuations while water levels in the remaining ponds fluctuate seasonally. As such, it is IES's professional opinion that Ponds 4 and 7 would be considered semi-permanently inundated, and Ponds 1 through 3, 5, 6, and 8 would be considered seasonally inundated.

EF 1 was an inconsistent, poorly defined, eroded channel identified within a hillside swale upslope of Pond 7. The feature lacked consistent OHWM characteristics, and a review of aerial imagery indicates that the feature formed over the last decade. EF 1 was predominantly dry at the time of evaluation with sporadic segments of ponded water observed along the feature. Given the lack of flowing water and seasonal hydrology indicators, it is IES's professional opinion that EF 1 would be considered to have ephemeral flow.

To summarize the delineation, 2 tributaries, 3 wetlands, 8 ponds, and an erosion feature were identified and delineated within the survey area. The activities in support of the landfill expansion will impact some of these aquatic features and will require a CWA Section 404 permit. IES is requesting that the USACE review this report and provide an Approved Jurisdictional Determination for the permit boundary project limits.

IES appreciates the opportunity to work with you and the Tulsa Regulatory Branch on this project and look forward to your review. If you have any comments, questions, or concerns, please do not hesitate to contact myself or Rudi Reinecke at 972-562-7672 (kfenton@intenvsol.com or rreinecke@intenvsol.com).

Sincerely,

Integrated Environmental Solutions, LLC.

Karisa Fenton

Ms. Karisa Fenton
Biologist

Attachments

File ref: 04.240.095

ATTACHMENT A
Figures

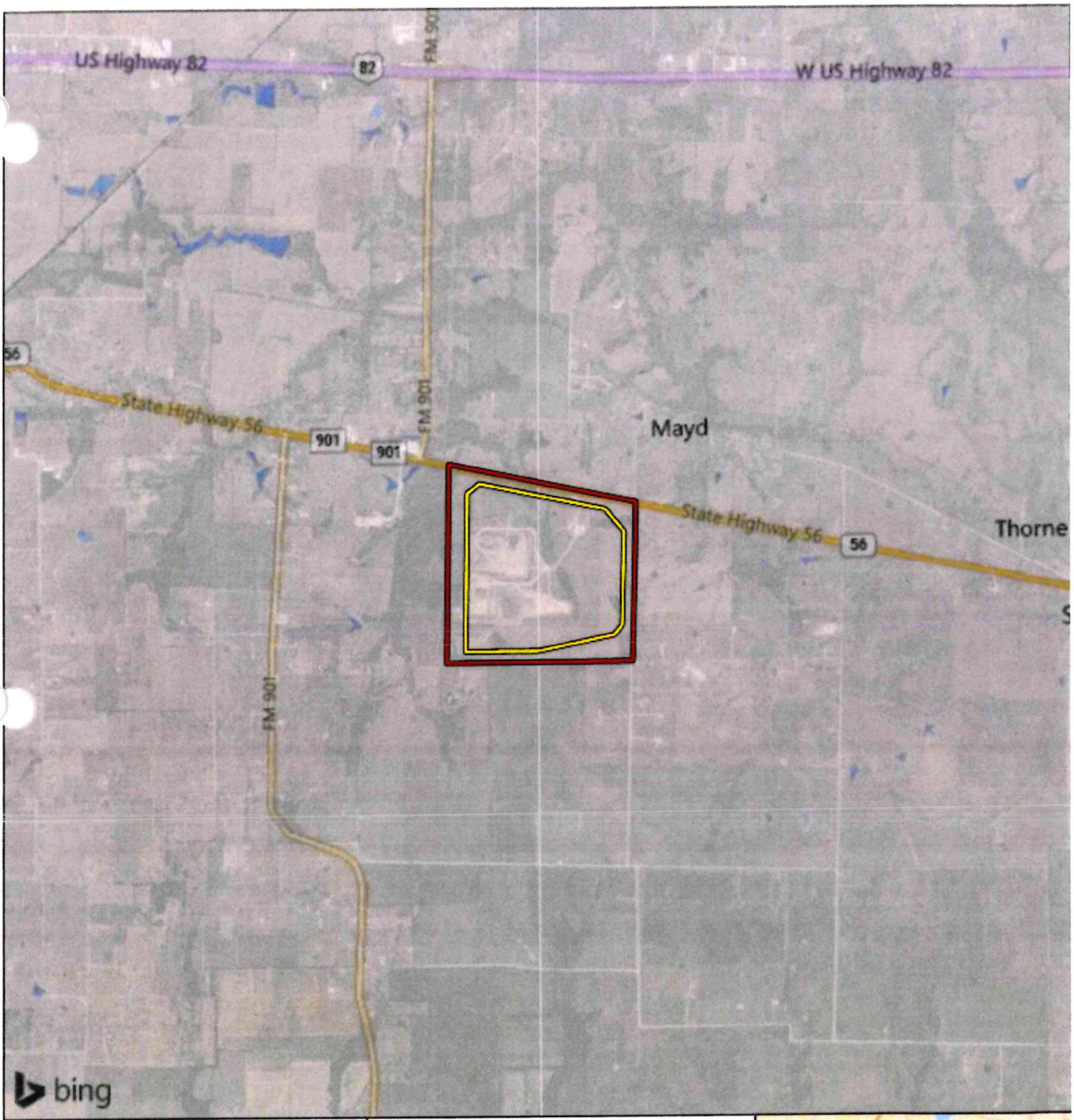


Figure 1.
General Location Map

TASWA Expansion
Grayson County, Texas

Waste Boundary

Permit Boundary

1 in = 4,000 ft

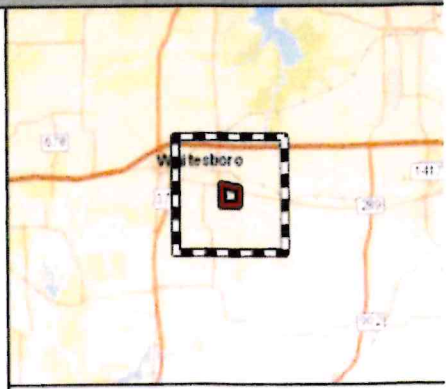
Feet

0 4,000

N
W E
S

File Ref. 04.240.095
Date: 12/27/2023

IID.17



Area of Detail Scale: 1 inch equals 10 miles

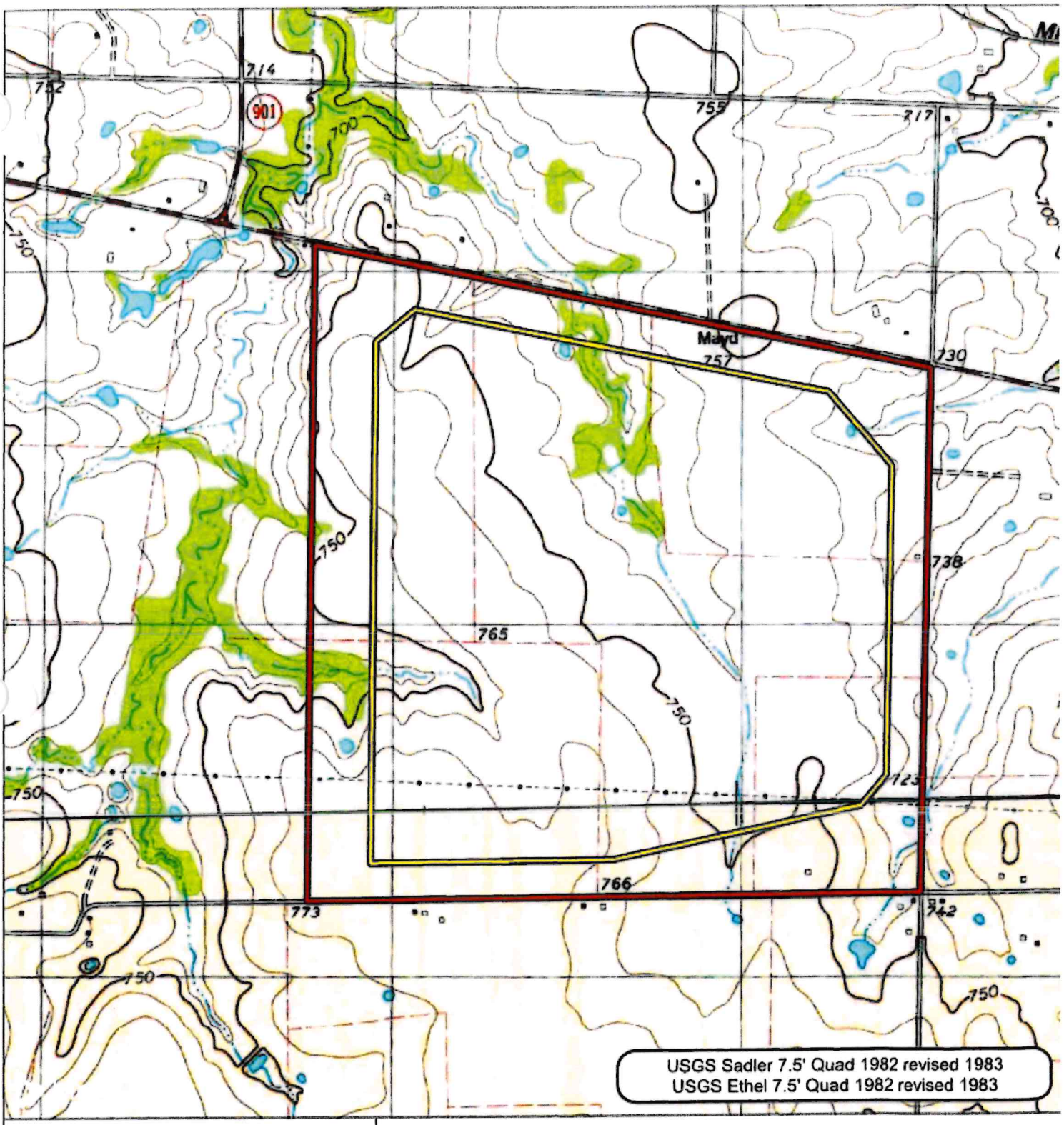


Figure 2A.
Topographic Setting

TASWA Expansion
Grayson County, Texas

Waste Boundary

Permit Boundary

1 in = 1,200 ft

Feet
0 1,200

N
W E
S

File Ref. 04.240.095
Date: 12/27/2023

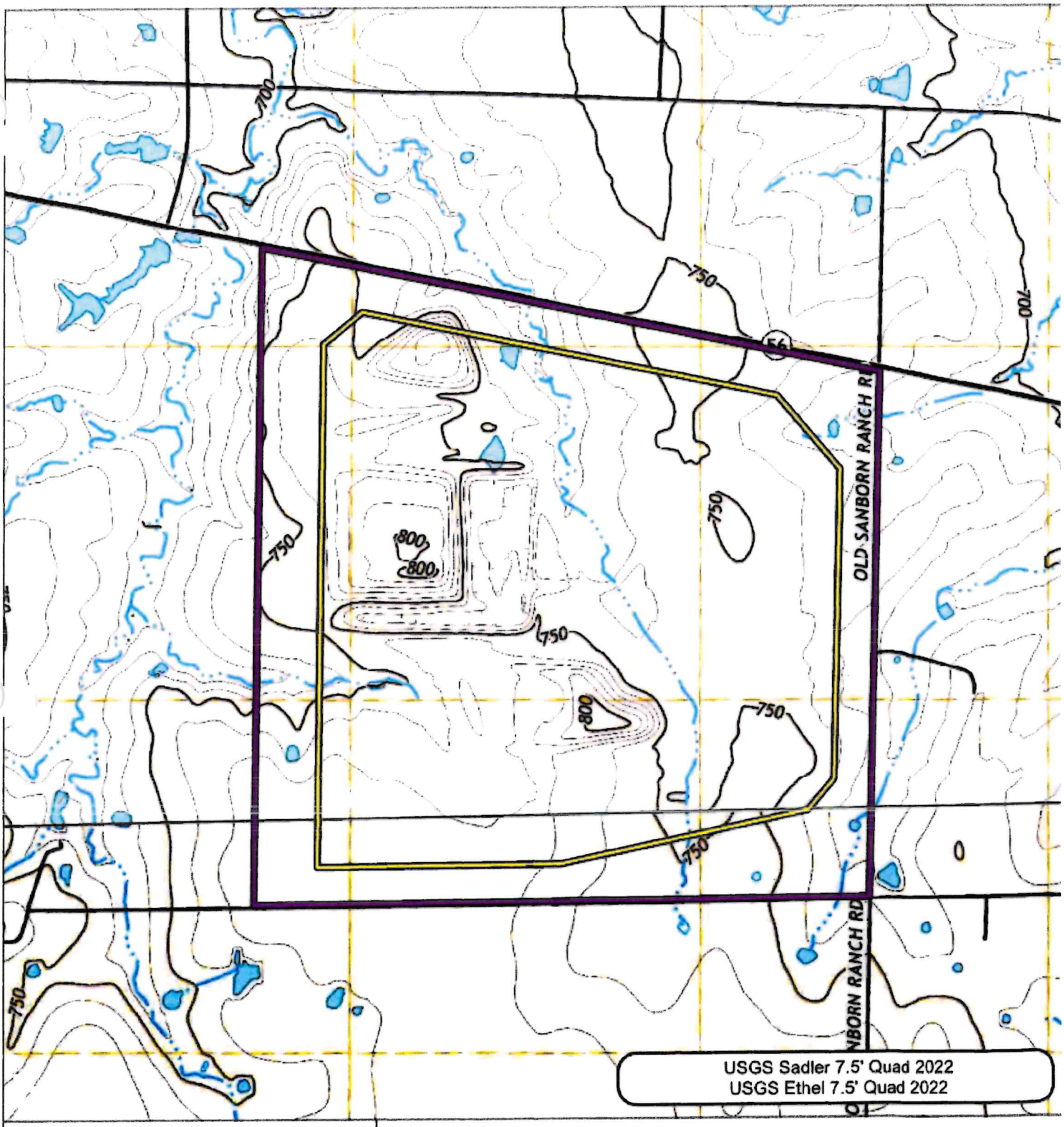


Figure 2B.
Topographic Setting

TASWA Expansion
Grayson County, Texas

1 in = 1,200 ft

Feet
0 1,200

N
W E
S

File Ref. 04.240.095
Date: 12/27/2023

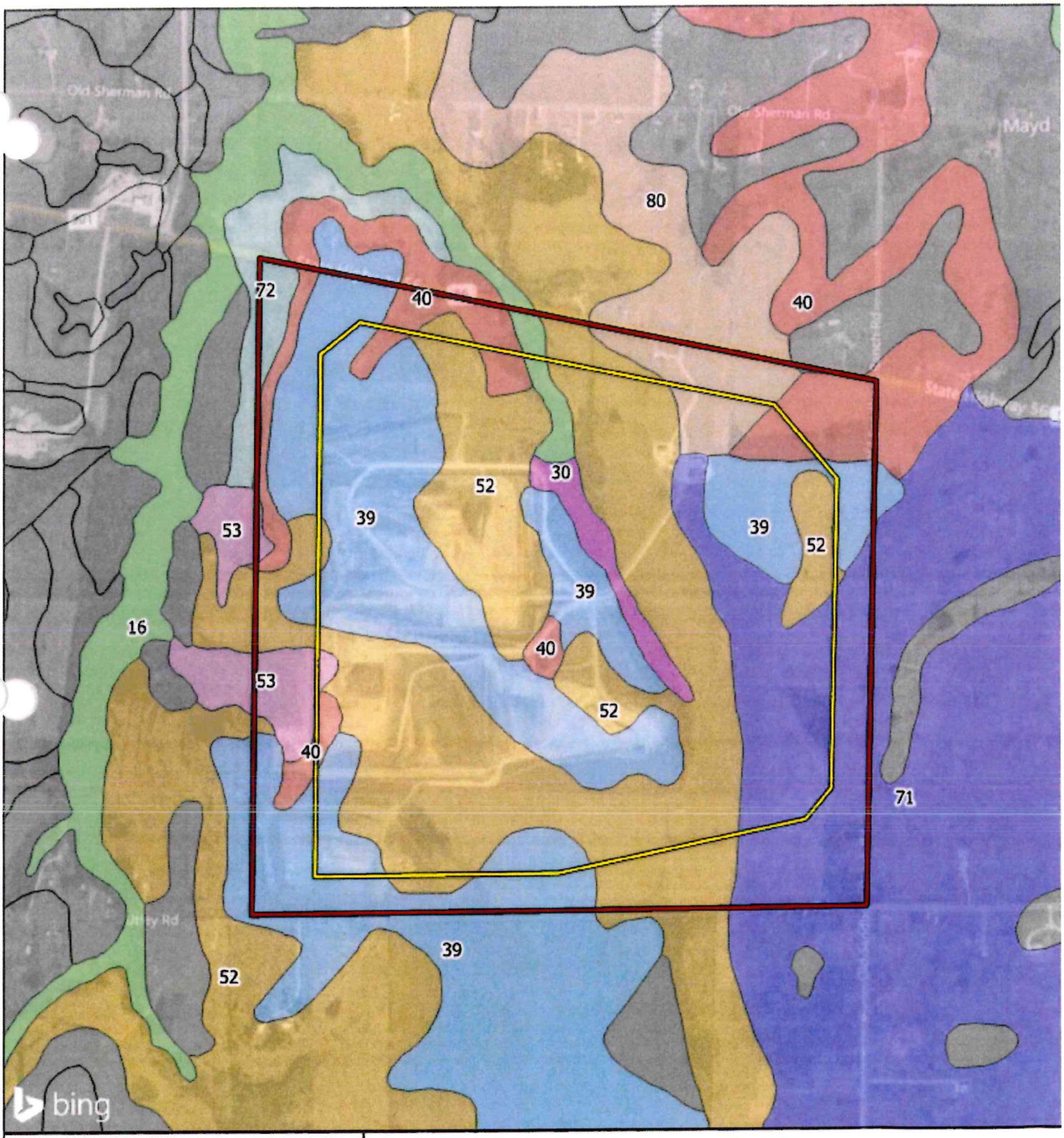


Figure 3.
Soils Map

TASWA Expansion
Grayson County, Texas

1 in = 1,200 ft

Feet
0 1,200

N
W E
S

File Ref. 04.240.095
Date: 12/27/2023

Waste Boundary
Permit Boundary
Soil map units outside survey area

Soil Map Units

16 - Bunyan and Whitesboro soils, frequently flooded
30 - Elbon soils, frequently flooded
39 - Heiden clay, 1 to 3 percent slopes
40 - Heiden clay, 3 to 5 percent slopes
52 - Normangee clay loam, 1 to 3 percent slopes
53 - Normangee clay loam, 4 to 8 percent slopes
71 - Vertel clay, 3 to 5 percent slopes
72 - Vertel clay, 5 to 12 percent slopes
80 - Wilson silty clay loam, 1 to 3 percent slopes

Figure 4.
Federal Emergency Management Agency Flood Insurance Rate Map

TASWA Expansion
Grayson County, Texas

1 in = 1,200 ft

Feet
0 1,200

File Ref. 04.240.095
Date: 12/27/2023

N
W E
S

Waste Boundary

Permit Boundary

FEMA FIRM Zone Descriptions

Zone X - Areas determined to be outside the 0.2% annual chance floodplain

Zone X - Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood

Zone A - Special Flood Hazard Areas subject to inundation by the 1% annual chance flood; No base flood elevations determined

Zone AE - Special Flood Hazard Areas subject to inundation by the 1% annual chance flood; Base flood elevations determined

Zone AE - Floodway areas in Zone AE

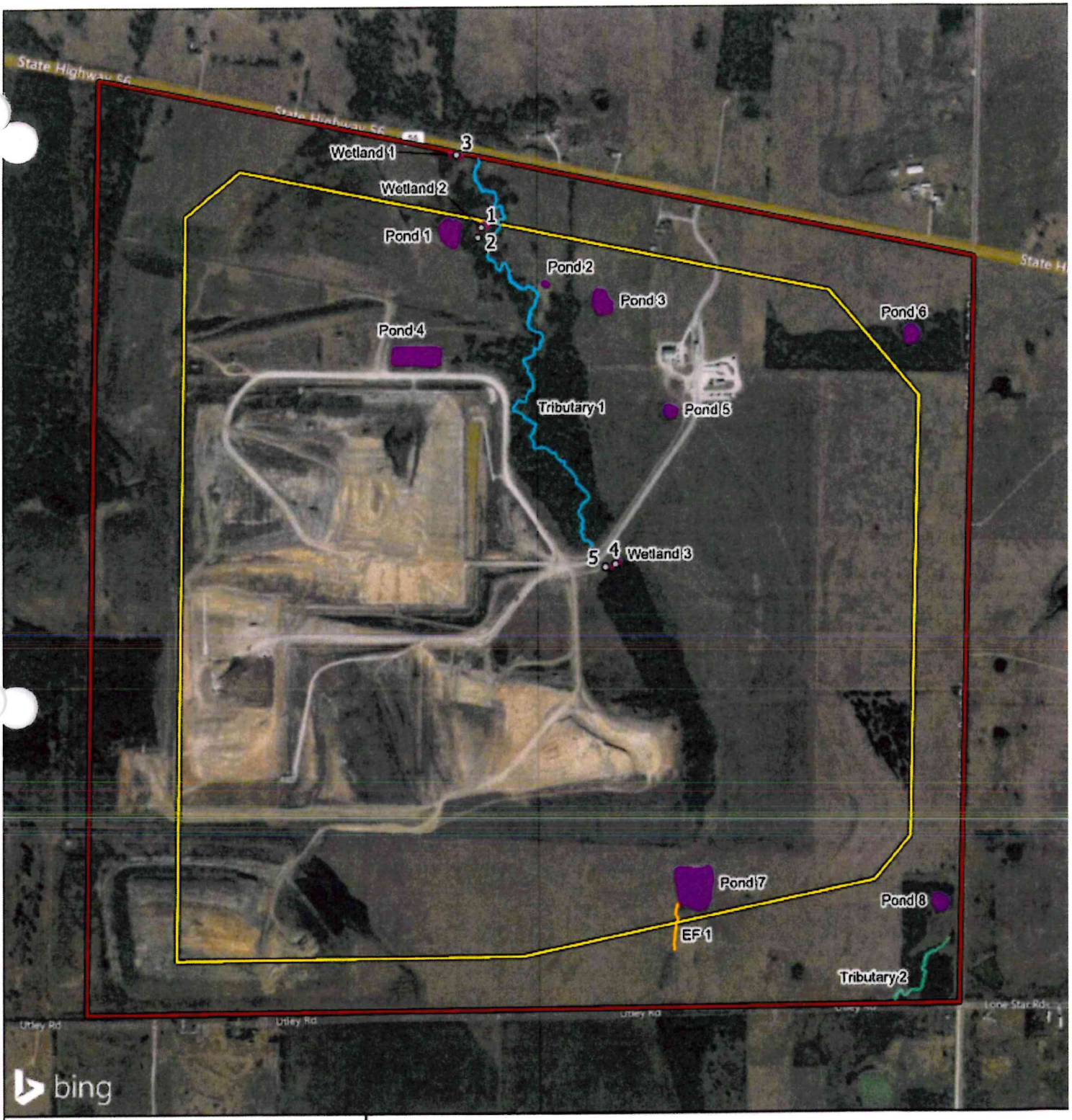


Figure 5.
Aquatic Features Identified within the Survey Area

TASWA Expansion
Grayson County, Texas

1 in = 850 ft

Feet
0 850

N
W E
S

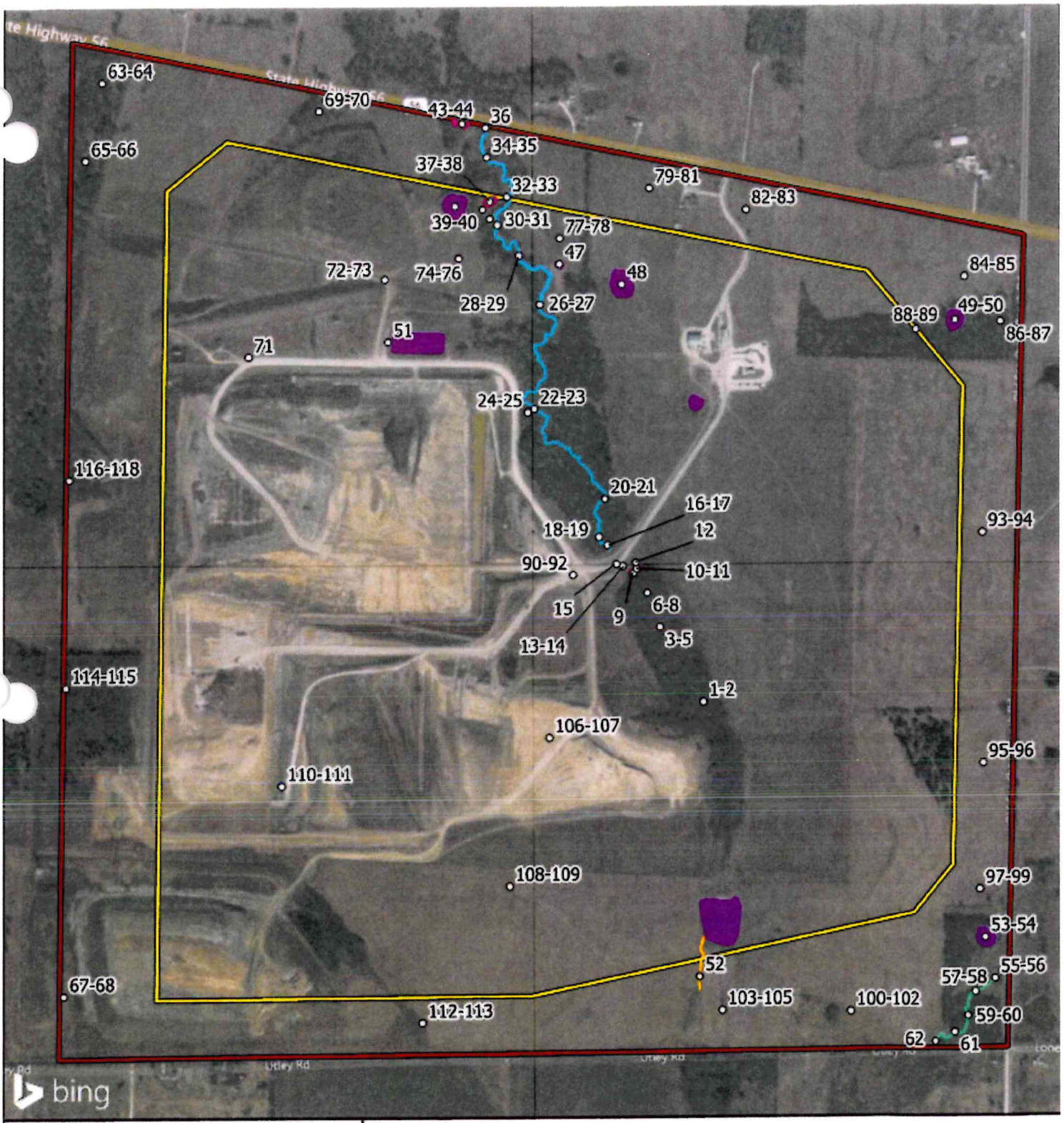
File Ref. 04.240.095
Date: 12/27/2023

- Waste Boundary
- Permit Boundary
- Wetland Determination Data Form

Aquatic Features

- RPW, Intermittent Tributary
- Non-RPW, Ephemeral Tributary
- Non-RPW, Erosion Feature
- Pond, Isolated
- Wetland, Isolated

ATTACHMENT B
Site Photographs



Photograph Location Map

TASWA Expansion
Grayson County, Texas

1 in = 775 ft

Feet
0
775

N
W
E
S

File Ref. 04.240.095
Date: 12/27/2023

- Waste Boundary
- Permit Boundary
- Photograph Location

Aquatic Features

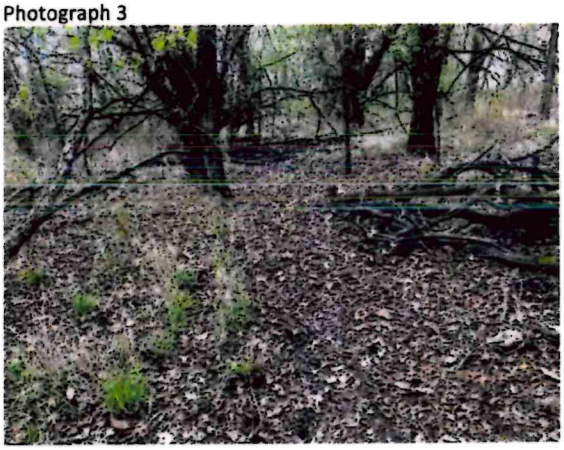
- RPW, Intermittent Tributary
- Non-RPW, Ephemeral Tributary
- Non-RPW, Erosion Feature
- Pond, Isolated
- Wetland, Isolated

Photograph 1

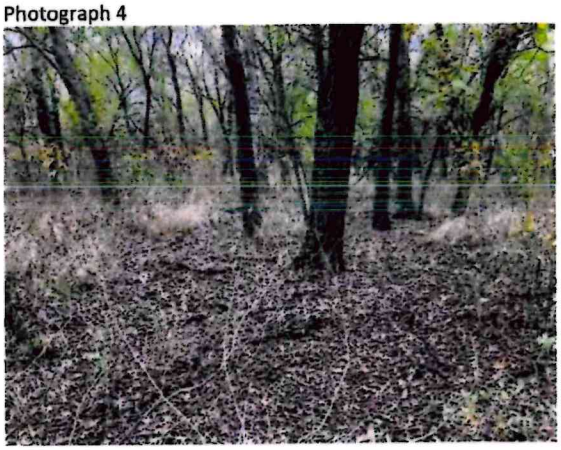
Photograph 2

Photograph 3

Photograph 4



Photograph 5



Photograph 6

Photograph 7

Photograph 8

Photograph 9

Photograph 10

Photograph 11

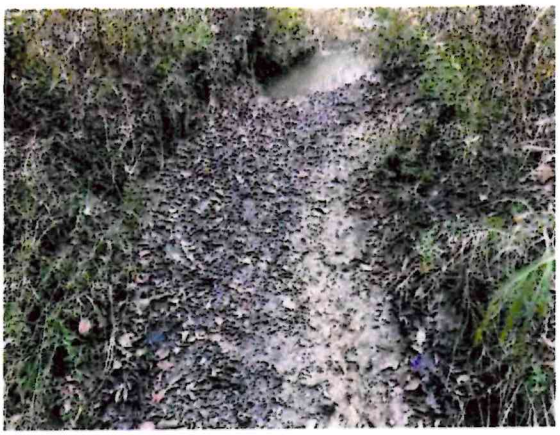
Photograph 12

Photograph 13

Photograph 14

Photograph 15

Photograph 16



Photograph 17

Photograph 18

Photograph 19

Photograph 20

Photograph 21

Photograph 22

Photograph 23

Photograph 24

Photograph 25

Photograph 26

Photograph 27

Photograph 28

Photograph 29

Photograph 30

Photograph 31

Photograph 32

Photograph 33

Photograph 34

Photograph 35

Photograph 36

Photograph 37

Photograph 38

Photograph 39

Photograph 40

Photograph 41

Photograph 42

Photograph 43

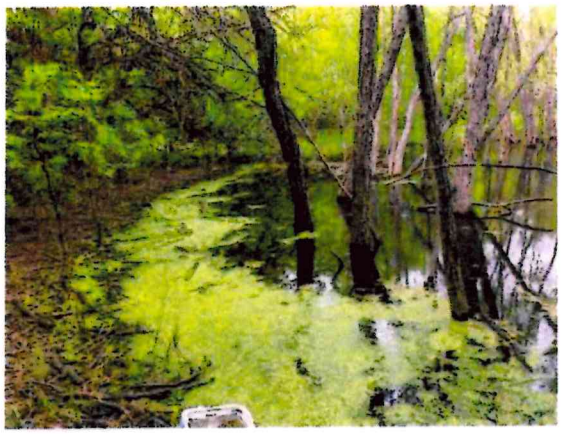
Photograph 44

Photograph 45

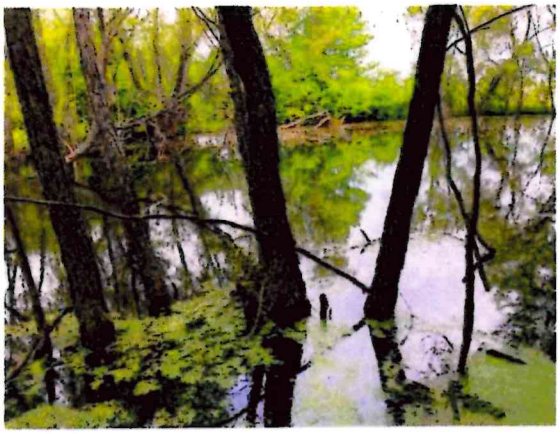
Photograph 46

Photograph 47

Photograph 48



Photograph 49



Photograph 50

Photograph 51

Photograph 52

Photograph 53

Photograph 54

Photograph 55

Photograph 56

Photograph 57

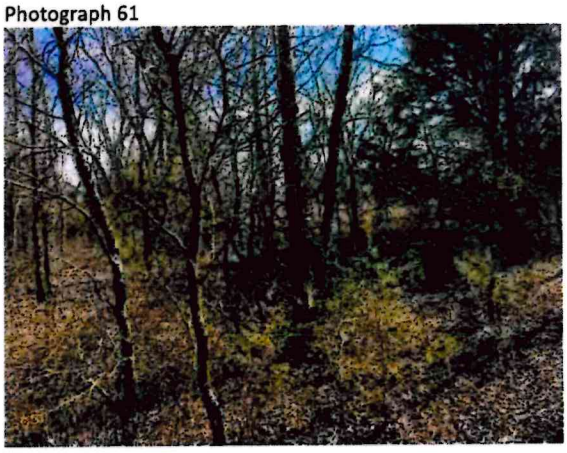
Photograph 58

Photograph 59

Photograph 60

Photograph 61

Photograph 62

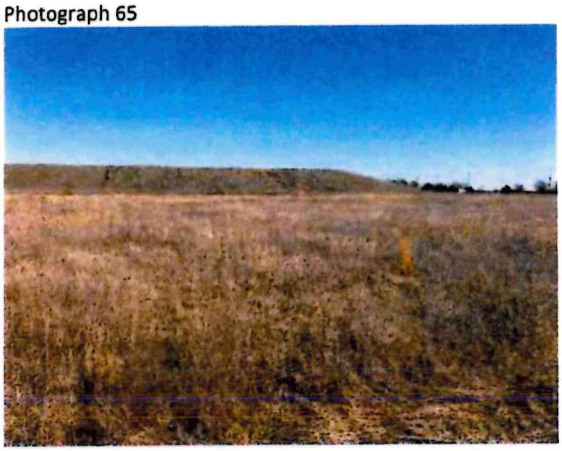


Photograph 63

Photograph 64

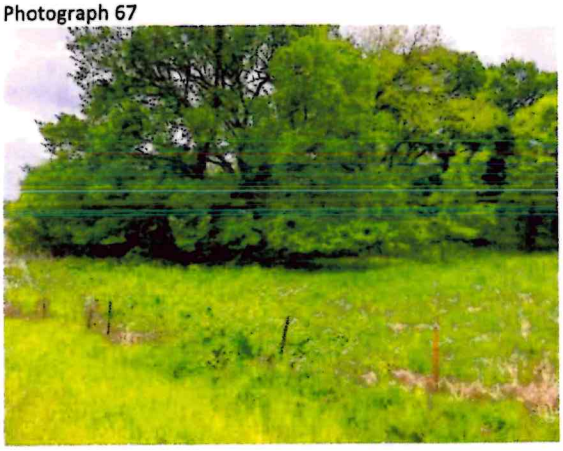
Photograph 65

Photograph 66



Photograph 67

Photograph 68



Photograph 69

Photograph 70

Photograph 71

Photograph 72

Photograph 73

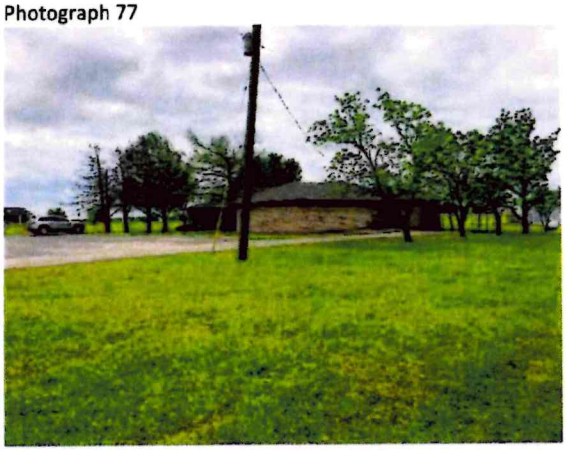
Photograph 74

Photograph 75

Photograph 76

Photograph 77

Photograph 78



Photograph 79

Photograph 80

Photograph 81

Photograph 82

Photograph 83

Photograph 84

Photograph 85

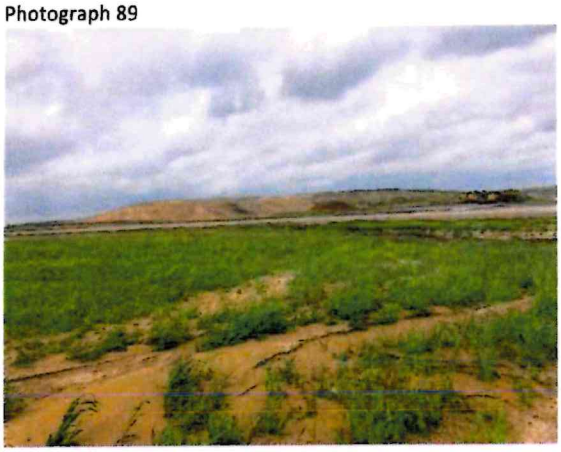
Photograph 86

Photograph 87

Photograph 88

Photograph 89

Photograph 90



Photograph 91

Photograph 92

Photograph 93

Photograph 94

Photograph 95

Photograph 96

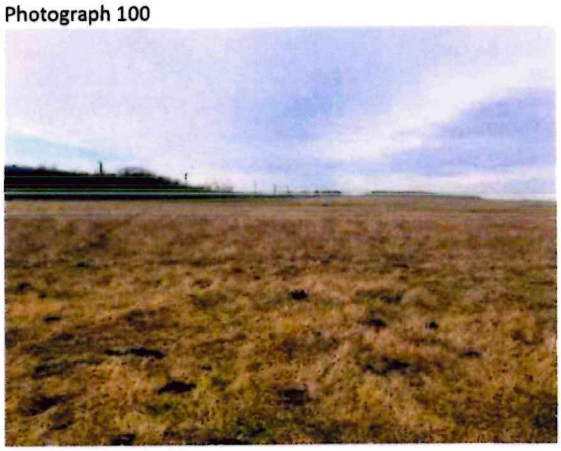
Photograph 97

Photograph 98

Photograph 99

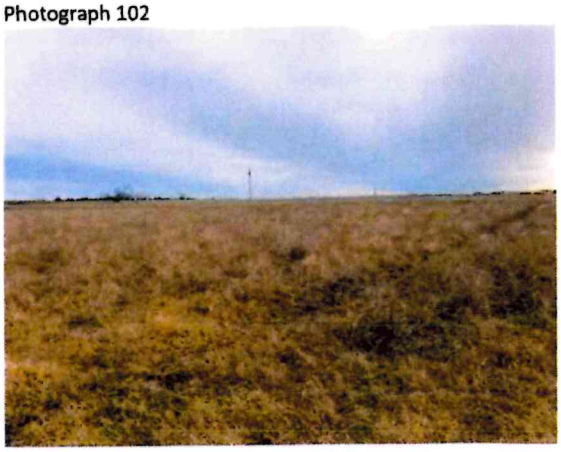
Photograph 100

Photograph 101



Photograph 102

Photograph 103



Photograph 104

Photograph 105

Photograph 106

Photograph 107

Photograph 108

Photograph 109

Photograph 110

Photograph 111

Photograph 112

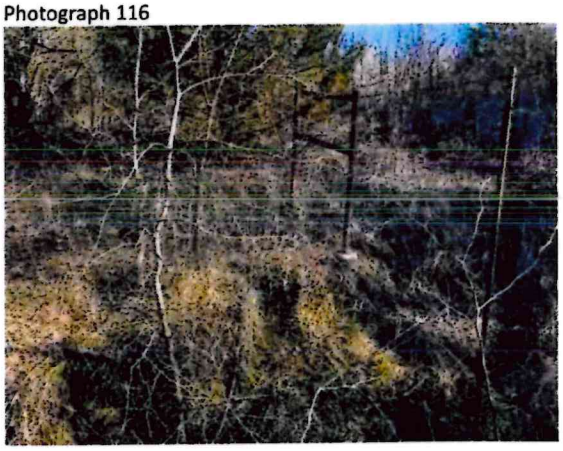
Photograph 113

Photograph 114

Photograph 115

Photograph 116

Photograph 117



Photograph 118

ATTACHMENT C
Routine Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: TASWA City/County: Grayson Sampling Date: 11/16/23

Applicant/Owner: TASWA State: TX Sampling Point: 1

Investigator(s): Karisa Fenton, Rudi Reinecke Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 2-3

Subregion (LRR): J Lat: 33.63683932 N Long: -96.83808372 W Datum: NAD 1983

Soil Map Unit Name: Bunyan and Whitesboro soils, frequently flooded NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are vegetation, ☐ Soil, ☐ Or hydrology ☐ Significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are vegetation, ☐ Soil, ☐ Or hydrology ☐ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	Is the Sampled Area within a wetland?	Yes ☒ No ☐
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: Depression upslope of intermittent tributary

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot Size: Depression)	Absolute % Coverage	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
	= Total Cover		

Sapling/Shrub Stratum (Plot Size: Depression)			
1. NA			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot Size: Depression)			
1. *Eleocharis microcarpa*	90	Y	OBL
2. *Ambrosia trifida*	35	Y	FAC
3. *Iva annua*	30	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	155 = Total Cover		

Woody Vine Stratum (Plot Size: Depression)			
1. NA			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum NA

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A= _____

Hydrophytic Vegetation Indicators:

_____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > 50%

_____ 3 - Prevalence Index is ≤ 3.0[1]

_____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: NL - Not Listed. When the indicator status is Not Listed, the species is assumed to be Upland.
Indicator Statuses have been provided by the US Army Corps of Engineers - https://wetland-plants.usace.army.mil/nwpl_static/v34/home/home.html
Updated scientific names have been provided by the USDA - https://plants.usda.gov/home

SOILS

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-16	10YR 3/1	97	5YR 4/6	3	C	PL/M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (LRR F)
- ☐ 1 cm Muck (A9) (LRR F, G, H)
- ☐ Depleted below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR F)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16 (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 CM Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16) (LRR F, G, H)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless distributed or problematic.

Restrictive Layer (if present):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
- ☒ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present?	Yes? ☐	No? ☒	Depth (inches): NA
Water Table Present?	Yes? ☐	No? ☒	Depth (inches): NA
Saturation Present? (includes capillary fringe)	Yes? ☐	No? ☒	Depth (inches): NA

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: TASWA City/County: Grayson Sampling Date: 11/16/23

Applicant/Owner: TASWA State: TX Sampling Point: 2

Investigator(s): Karisa Fenton, Rudi Reinecke Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1-2

Subregion (LRR): J Lat: 33.6366598 N Long: -96.83815024 W Datum: NAD 1983

Soil Map Unit Name: Bunyan and Whitesboro soils, frequently flooded NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are vegetation, ☐ Soil, ☐ Or hydrology ☐ Significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are vegetation, ☐ Soil, ☐ Or hydrology ☐ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	Is the Sampled Area within a wetland?	Yes ☐	No ☒
Hydric Soil Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☐	No ☒			

Remarks: Hillslope within larger depression

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot Size: Depression)	Absolute % Coverage	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
	= Total Cover		

Sapling/Shrub Stratum (Plot Size: Depression)			
1. *Carya illinoinensis*	10	Y	FAC
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot Size: Depression)			
1. *Festuca arundinacea*	95	Y	NL
2. *Cardiospermum halicacabum*	5	N	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		

Woody Vine Stratum (Plot Size: Depression)			
1. NA			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum NA

Remarks: NL - Not Listed. When the indicator status is Not Listed, the species is assumed to be Upland.
Indicator Statuses have been provided by the US Army Corps of Engineers - https://wetland-plants.usace.army.mil/nwpl_static/v34/home/home.html
Updated scientific names have been provided by the USDA - https://plants.usda.gov/home

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

SOILS

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/1	98	5YR 4/6	2	C	PL/M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) **(LRR F)**
- ☐ 1 cm Muck (A9) (**LRR F, G, H)**
- ☐ Depleted below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16 **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 CM Muck (A9) **(LRR I, J)**
- ☐ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ☐ Dark Surface (S7) **(LRR G)**
- ☐ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless distributed or problematic.

Restrictive Layer (if present):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes? ☐	No? ☒	Depth (inches): NA
Water Table Present?	Yes? ☐	No? ☒	Depth (inches): NA
Saturation Present? (includes capillary fringe)	Yes? ☐	No? ☒	Depth (inches): NA

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: TASWA City/County: Grayson Sampling Date: 11/16/23

Applicant/Owner: TASWA State: TX Sampling Point: 3

Investigator(s): Karisa Fenton, Rudi Reinecke Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1-2

Subregion (LRR): J Lat: 33.63814678 N Long: -96.83859409 W Datum: NAD 1983

Soil Map Unit Name: Bunyan and Whitesboro soils, frequently flooded NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are vegetation, ☐ Soil, ☐ Or hydrology ☐ Significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are vegetation, ☐ Soil, ☐ Or hydrology ☐ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	Is the Sampled Area within a wetland?	Yes ☒ No ☐
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: Depression along fenceline by roadside ditch

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot Size: Depression)	Absolute % Coverage	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
	= Total Cover		

Sapling/Shrub Stratum (Plot Size: Depression)			
1. NA			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot Size: Depression)			
1. *Carex crus-corvi*	90	Y	OBL
2. *Cardiospermum halicacabum*	20	N	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	110 = Total Cover		

Woody Vine Stratum (Plot Size: Depression)			
1. NA			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum NA

Remarks: NL - Not Listed. When the indicator status is Not Listed, the species is assumed to be Upland.
Indicator Statuses have been provided by the US Army Corps of Engineers - https://wetland-plants.usace.army.mil/nwpl_static/v34/home/home.html
Updated scientific names have been provided by the USDA - https://plants.usda.gov/home

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- ☐ 3 - Prevalence Index is ≤ 3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOILS

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/1	96	5YR 4/6	4	C	PL/M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) **(LRR F)**
- ☐ 1 cm Muck (A9) **(LRR F, G, H)**
- ☐ Depleted below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16 **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 CM Muck (A9) **(LRR I, J)**
- ☐ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ☐ Dark Surface (S7) **(LRR G)**
- ☐ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless distributed or problematic.

Restrictive Layer (if present):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary indicators (minimum of one required; check all that apply)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ☒ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

			Depth (inches):
Surface Water Present?	Yes? ☒	No? ☐	1-2
Water Table Present?	Yes? ☐	No? ☒	NA
Saturation Present? (includes capillary fringe)	Yes? ☒	No? ☐	0

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: TASWA City/County: Grayson Sampling Date: 11/16/23

Applicant/Owner: TASWA State: TX Sampling Point: 4

Investigator(s): Karisa Fenton, Rudi Reinecke Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 1-2

Subregion (LRR): J Lat: 33.630752 N Long: -96.835269 W Datum: NAD 1983

Soil Map Unit Name: Elbon soils, frequently flooded NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are vegetation, ☐ Soil, ☐ Or hydrology ☐ Significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are vegetation, ☐ Soil, ☐ Or hydrology ☐ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	Is the Sampled Area within a wetland?	Yes ☒ No ☐
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: Depression downslope of wooded section and culvert

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot Size: Depression)	Absolute % Coverage	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
	= Total Cover		

Sapling/Shrub Stratum (Plot Size: Depression)			
1. NA			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot Size: Depression)			
1. *Eleocharis palustris*	90	Y	OBL
2. *Paspalum dilatatum*	10	N	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 = Total Cover		

Woody Vine Stratum (Plot Size: Depression)			
1. NA			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum NA

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is > 50%
- ____ 3 - Prevalence Index is ≤ 3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: NL - Not Listed. When the indicator status is Not Listed, the species is assumed to be Upland.
Indicator Statuses have been provided by the US Army Corps of Engineers - https://wetland-plants.usace.army.mil/nwpl_static/v34/home/home.html
Updated scientific names have been provided by the USDA - https://plants.usda.gov/home

SOILS

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/1	97	5YR 4/6	3	C	PL/M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (LRR F)
- ☐ 1 cm Muck (A9) (LRR F, G, H)
- ☐ Depleted below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR F)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16 (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 CM Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16) (LRR F, G, H)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless distributed or problematic.

Restrictive Layer (if present):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☒ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
- ☒ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present?	Yes? ☒ No? ☐	Depth (inches):	2-3
Water Table Present?	Yes? ☐ No? ☒	Depth (inches):	NA
Saturation Present? (includes capillary fringe)	Yes? ☒ No? ☐	Depth (inches):	0

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: TASWA City/County: Grayson Sampling Date: 11/16/23

Applicant/Owner: TASWA State: TX Sampling Point: 5

Investigator(s): Karisa Fenton, Rudi Reinecke Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope %: 1-2

Subregion (LRR): J Lat: 33.630702 N Long: -96.835493 W Datum: NAD 1983

Soil Map Unit Name: Bunyan and Heiden clay, 1 to 3 percent slopessoils, frequently flooded NWI Classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are vegetation, ☐ Soil, ☐ Or hydrology ☐ Significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are vegetation, ☐ Soil, ☐ Or hydrology ☐ Naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒	Is the Sampled Area within a wetland?	Yes ☐ No ☒
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: Hillslope between wetland and culvert

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot Size: 30' Radius)	Absolute % Coverage	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
	= Total Cover		

Sapling/Shrub Stratum (Plot Size: 15' Radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot Size: 5' Radius)			
1. *Cynodon dactylon*	40	Y	FACU
2. *Paspalum dilatatum*	8	N	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	48 = Total Cover		

Woody Vine Stratum (Plot Size: 30' Radius)			
1. NA			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 52

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply By:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A=

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: NL - Not Listed. When the indicator status is Not Listed, the species is assumed to be Upland.
Indicator Statuses have been provided by the US Army Corps of Engineers - https://wetland-plants.usace.army.mil/nwpl_static/v34/home/home.html
Updated scientific names have been provided by the USDA - https://plants.usda.gov/home

SOILS

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-16	10YR 3/1	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (LRR F)
- ☐ 1 cm Muck (A9) (LRR F, G, H)
- ☐ Depleted below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
- ☐ 5 cm Mucky Peat or Peat (S3) (LRR F)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16 (MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 CM Muck (A9) (LRR I, J)
- ☐ Coast Prairie Redox (A16) (LRR F, G, H)
- ☐ Dark Surface (S7) (LRR G)
- ☐ High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless distributed or problematic.

Restrictive Layer (if present):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Dry-Season Water Table (C2)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (where not tilled)
- ☐ Presence of Reduced Iron (C4)
- ☐ Thin Muck Surface
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage patterns (B10)
- ☐ Oxidized Rhizospheres on Living Roots (C3) (where tilled)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)
- ☐ Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present?	Yes? ☐	No? ☒	Depth (inches): NA
Water Table Present?	Yes? ☐	No? ☒	Depth (inches): NA
Saturation Present? (includes capillary fringe)	Yes? ☐	No? ☒	Depth (inches): NA

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX IIE
ENDANGERED OR THREATENED SPECIES DOCUMENTATION

BIGGS & MATHEWS ENVIRONMENTAL, INC
TBPE No. F-256 TBPG No. 50222

June 24, 2022

Karen Hardin
Texas Parks and Wildlife Department
Wildlife Division - Wildlife Habitat Assessment Program
4200 Smith School Road
Austin, TX 78744

Re: Threatened and Endangered Species Assessment
TASWA Disposal and Recycling Facility, TCEQ Permit MSW 2290
Grayson County, Texas

On behalf of the Texoma Solid Waste Authority (TASWA), Biggs & Mathews Environmental, Inc. is preparing a permit amendment application to expand the existing TASWA Disposal and Recycling Facility (TCEQ Permit MSW 2290) located in Grayson County, Texas. The amendment application will request a vertical and horizontal expansion of the existing waste disposal boundary. The purpose of this letter is to document coordination with the Texas Parks and Wildlife Department consistent with the requirements of the municipal solid waste regulations, 30 Texas Administrative Code Chapter 330 (30 TAC §330.61(n)) for locations and specific data relating to endangered and threatened species in Texas.

TASWA has commissioned Integrated Environmental Solutions (IES) to perform a site specific evaluation for Protected Species Habitat Assessment. IES has completed the site work and prepared a draft assessment to be included in the permit amendment application. The IES draft assessment is included as an attachment to this correspondence. Please review the attached IES assessment and confirm concurrence with their assessment and conclusions and/or provided any additional information relating to endangered and threatened species in Texas that should be considered.

Please call or e-mail me at 817-563-1144 o[redacted]f you have any questions or need additional information.

Sincerely,

BIGGS & MATHEWS ENVIRONMENTAL

David Clark, P.E.
Principal

Attachments: Protected Species Habitat Assessment (IES draft dated May 23, 2022)

O:\TASWA\P\TPWD COORD.docx

BIGGS & MATHEWS ENVIRONMENTAL, INC
TBPE No. F-256 TBPG No. 50222

June 24, 2022

U.S. Fish and Wildlife Service
Arlington Ecological Services Field Office
2005 NE Green Oaks Boulevard
Arlington, TX 76006-6247

Re: Threatened and Endangered Species Assessment
TASWA Disposal and Recycling Facility, TCEQ Permit MSW 2290
Grayson County, Texas

On behalf of the Texoma Solid Waste Authority (TASWA), Biggs & Mathews Environmental, Inc. is preparing a permit amendment application to expand the existing TASWA Disposal and Recycling Facility (TCEQ Permit MSW 2290) located in Grayson County, Texas. The amendment application will request a vertical and horizontal expansion of the existing waste disposal boundary. The purpose of this letter is to document coordination with the US Fish and Wildlife Service consistent with the requirements of the municipal solid waste regulations, 30 Texas Administrative Code Chapter 330 (30 TAC §330.61(n)) for locations and specific data relating to endangered and threatened species in Texas.

TASWA has commissioned Integrated Environmental Solutions (IES) to perform a site specific evaluation for Protected Species Habitat Assessment. IES has completed the site work and prepared a draft assessment to be included in the permit amendment application. The IES draft assessment is included as an attachment to this correspondence. Please review the attached IES assessment and confirm concurrence with their assessment and conclusions and/or provided any additional information relating to endangered and threatened species in Texas that should be considered.

Please call or e-mail me at 817-563-1144 o[redacted]if you have any questions or need additional information.

Sincerely,

BIGGS & MATHEWS ENVIRONMENTAL

David Clark, P.E.
Principal

Attachments: Protected Species Habitat Assessment (IES draft dated May 23, 2022)

O:\TASWA\P\USFWS Coord.docx

29 January 2025

Mr. John O'Steen
Texoma Area Solid Waste Authority, Inc.
25090 State Highway 56
Whitesboro, Texas 76273

Re: Texoma Area Solid Waste Authority - Protected Species Habitat Assessment
Approximately 920 acres located southeast of the intersection of Texas State Highway 56 and Farm-to-Market Road 901, Grayson County, Texas

Dear Mr. O'Steen,

Integrated Environmental Solutions, LLC (IES) performed a protected species habitat assessment on approximately 920 acres located southeast of the intersection of Texas State Highway (SH) 56 and Farm-to-Market (FM) Road 901, Grayson County, Texas (**Attachment A, Figure 1**). This habitat assessment was performed to satisfy the requirements regarding the Endangered Species Act (ESA). The following report is a list of the federally listed protected species for Grayson County and their preferred vegetation assemblages, a summary of the vegetation communities identified on the site, an evaluation of whether the communities present on the site could support a protected species, and whether future proposed actions would affect listed species.

INTRODUCTION

Protected Species

Federal

The ESA of 1973 (Public Law [P.L.] 93-205) and the amendments of 1988 (P.L. 100-578) were enacted to provide a program of preservation for endangered and threatened species and to provide protection for ecosystems upon which these species depend for their survival. The ESA requires all federal agencies to implement protection programs for designated species and to use their authorities to further the purposes of the Act. Responsibility for the listing of an endangered or threatened species and for the development of recovery plans lies with the Secretary of Interior and Secretary of Commerce. The U.S. Fish and Wildlife Service (USFWS) is responsible for implementing the ESA within the United States.

An endangered species is a species, which is in danger of extinction throughout all or a significant portion of its range. A threatened species is a species likely to become endangered within the near future throughout all or a significant portion of its range. Proposed species are those, which have been formally submitted to Congress for official listing as endangered or threatened.

In addition, the USFWS has identified species, which are candidates for possible addition to the list of Endangered and Threatened Wildlife and Plants (50 Code of Federal Regulations [CFR] 17.11 and 17.12) under the ESA. The USFWS maintains a candidate list to: (1) provide advance knowledge of potential listings that could affect land planning decisions, (2) solicit input to identify candidates not requiring protection or additional species that may require protection under the ESA, and (3) solicit information needed to prioritize the order in which species will be proposed for listing. Candidate species have no legal protection under the ESA.

The Migratory Bird Treaty Act of 1918 states that it is unlawful to kill, capture, collect, possess, buy, sell, trade, or transport any migratory bird, nest, young, feather, or egg in part or in whole, without a federal permit issued in accordance with the Act's policies and regulations. However, in a recent decision the U.S. Court of Appeals for the Fifth Circuit found that for an unlawful "taking" to occur, a "deliberate act done directly and intentionally to migratory birds" would need to occur. (United States v. CITGO Petroleum Corp., No. 14-40128 [5th Cir. Sept. 4, 2015]).

State

The Texas Parks and Wildlife Department (TPWD) Wildlife Diversity Program (WDP) maintains computerized records of state-listed threatened and endangered species by county. The State of Texas does not list threatened and endangered species using the same criteria as the federal government. When the USFWS lists a plant species, the State of Texas then lists that plant. Thus, the list of threatened and endangered plants in Texas is the same as the Federal list. The state has separate laws governing the listing of animal species as threatened or endangered. Threatened and endangered animal species in Texas are those species so designated according to Chapters 67 and 68 of the Texas Parks and Wildlife Code and Section 65.171 - 65.184 of Title 31 of the Texas Administrative Code. Species that are not currently listed by the Federal government may be listed as threatened or endangered by the TPWD.

TAWSA Background

The Texoma Area Solid Waste Agency (TASWA) is a solid waste authority formed by the cities of Sherman, Gainesville, and Denison. TASWA is a publicly operated solid waste facility, located approximately three miles east of the City of Whitesboro, that is intended to provide long-term waste disposal services to the public. The TASWA authority owns 920+ acres and is looking to expand the footprint of their current landfill to increase the capacity and lifespan in order to accommodate growth in the area. Within the 920+ acres, the proposed facility expansion permit boundary will encompass approximately 689 acres. The landfill disposal footprint will cover approximately 475 acres within the facility permit boundary.

METHODOLOGY

Prior to conducting fieldwork, the list of Endangered and Threatened Wildlife and Plants under the ESA was obtained through the USFWS Information, Planning, and Conservation System (IPaC) and from the Texas Natural Diversity Database (TXNDD). The vegetation communities used by each species were obtained and are detailed below. During the field survey, vegetation composition within and adjacent to the project area was noted to determine whether there was any potential for protected species habitat. This survey was not designed to identify the presence of protected species; however, if any species were observed, they were recorded. Photographs were taken at representative points, illustrating common vegetation communities within the survey area (**Attachment B**).

RESULTS

Literature Review

According to the USFWS, three species; Piping Plover (*Charadrius melodus*), Red Knot (*Calidris canutus rufa*), and Whooping Crane (*Grus americana*) are listed as federally protected (i.e., threatened or endangered) with the potential to occur within Grayson County. Two of these species are conditionally listed as threatened within Grayson County on the basis that the proposed project is for wind energy production, Red Knot, and Piping Plover. The monarch butterfly (*Danaus plexippus*) and alligator snapping turtle (*Macrochelys temminckii*) are listed as proposed threatened with the potential to occur in Grayson County. No federally listed critical habitat for these species is located within the survey area vicinity. The TPWD lists 14 state protected species that could occur within Grayson County, three of which are also federally listed species. The review of the TXNDD files did not indicate any unique vegetation communities, state or federal parks or state or federal natural/managed areas within the survey area.

Attachment C identifies the federally protected species that could potentially occur within Grayson County from the IPAC list and Rare and Threated Endangered Species of Texas (RTEST) lists.

Site Survey

Ms. Karisa Fenton of IES evaluated the survey area on 10 February 2022. This survey was designed to provide a habitat evaluation of the overall survey area with the primary focus on the plant community. The TASWA property was comprised of five vegetation communities including **non-maintained grassland**, **maintained grassland, disturbed urban matrix**, and **forested riparian corridor** with small regions of **forested upland** scattered across the site. The following provide detailed descriptions of the habitat in each of these vegetation communities which are mapped in **Attachment A, Figure 2**.

The **non-maintained grassland** vegetation community was predominantly observed in undeveloped survey area portions that experienced low traffic with little access. These areas were observed in transition between strictly grasslands to savannah or shrubland habitat types. The maintenance regimes for these parcels were either limited or apparently non-existent beyond utility line rights-of-way (ROW) that were observed crossing some parcels. Though species dominance fluctuated, the species composition was relatively consistent. Grass and forbs species observed included Bermudagrass (*Cynodon dactylon*), Johnsongrass (*Sorghum halepense*), little bluestem (*Schizachyrium scoparium*), common sunflower (*Helianthus annuus*), giant ragweed (ambrosia t*rifida*), spreading hedge-parsley (*Torilis arvensis*), prairie broomweed (*Amphiachyris dracunculoides*), prairie threeawn (*Aristida oligantha*), sumpweed (*Iva annua*), white tridens (*Tridens albescens*), and goldenrod (*Solidago gigantea*). The lack of a maintenance regime frequently allows thickets of shrub species to inhabit the grassland habitats. The shrub species observed included eastern redcedar (*Juniperus virginiana*), honey mesquite (*Prosopis glandulosa*), sugarberry (*Celtis laevigata*), and honey locust (*Gleditsia triacanthos*). Trees of the same species were also observed in clusters and along the established forested areas, frequently creating a transitional area between grassland and forestland consisting of sporadic trees and shrubs in a savannah-like habitat.

The **maintained grassland** vegetation community was characterized by the presence of short turf grasses and sporadic forbs frequently maintained by mowing for hay production, landscaping, or active grazing. The dominant vegetation type in these areas was Bermudagrass with various other grasses and forbs, including Johnsongrass, white tridens, common sunflower, and goldenrod scattered throughout. The maintained grasslands were often bisected or bordered by paved/ gravel roads or buildings.

The **disturbed urban matrix** vegetation community was associated with the landfill footprint and was characterized by the presence of paved roads, parking lots, frequently traveled gravel or dirt roads, relocated fill dirt, and dump sites. While most of the vegetation had been cleared from this area, maintained Bermudagrass was observed surrounding buildings and roads.

The **forested riparian corridor** was predominantly observed to the northwest along an unnamed tributary of Mustang Creek. This vegetation community was also observed along drainages in the central, northeastern, and southeastern regions. The forested riparian corridor areas were dominated by sugarberry (*Celtis laevigata*), cedar elm (*Ulmus crassifolia*), and Osage orange (*Maclura pomifera*). Other tree and shrub species observed included common persimmon (*Diospyros virginiana*), green ash (*Fraxinus pennsylvanica*), American elm (*Ulmus americana*), post oak (*Quercus stellata*), rough leaf dogwood (*Cornus drummondii*), honey locust (*Gleditsia triacanthos*), and coralberry (*Symphoricarpos orbiculatus*). Ground cover was dominated by inland wood oats (*Chasmanthium latifolium*), eastern woodland sedge (*Carex blanda*), and Virginia wildrye (*Elymus virginicus*).

The **forested upland** vegetation community was observed in relatively small regions near the northern and eastern boundaries. The forested upland areas were dominated by eastern redcedar, sugarberry, and honey locust with an understory of common greenbrier (*Smilax bona-nox*), sedge (*Carex spp.*), and poison-ivy (*Toxicodendron radicans*).

CONCLUSIONS

Preferred Habitat for Federally Protected Species

Table 1 provides a summary of the state and federally listed species that could potentially occur within Grayson County, as well as a brief description of their habitat, whether this habitat is present within the survey area, and whether the proposed project would potentially affect the listed species.

Table 1. Federally- and State-listed Threatened and Endangered Species Occurring or Potentially Occurring in Grayson County, Texas

Species	State Status	Federal Status	Description of Habitat	Habitat Present[1]	Species Effect[2]
BIRDS					
Black Rail (*Laterallus jamaicensis*)	T	---	Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia.	**No**	**No**
Interior Least Tern (*Sternula antillarum athalassos*)	E	---	Sand beaches, flats, bays, inlets, lagoons, islands. Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony.	**No**	**No**
Piping Plover (*Charadrius melodus*)	T	LT	Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low-very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast. However, beaches are probably a vital habitat along the central and northern coast (i.e., north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.	**No**	**No**
Rufa Red Knot (*Calidris canutus rufa*)	T	LT	Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore. Bolivar Flats in Galveston County, sandy beaches Mustang Island, few on outer coastal and barrier beaches, tidal mudflats and salt marshes	**No**	**No**
White-faced Ibis (*Plegadis chihi*)	T	---	Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.	**No**	**No**
Whooping Crane (*Grus americana*)	E	LE	Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.	**No**	**No**
Wood Stork (*Mycteria americana*)	T	---	Prefers to nest in large tracts of baldcypress (Taxodium distichum) or red mangrove (Rhizophora mangle); forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960.	**No**	**No**
FISH					
Blue sucker (*Cycleptus elongatus*)	T	--	Blue Sucker usually inhabit rapids, riffles, runs and pools with moderate to fast current, with bottoms of exposed bedrock sometimes in combination with hard clay, sand, gravel, and boulders; generally intolerant of highly turbid conditions. Adults winter in deep pools and move upstream in spring to spawn on riffles. Current distribution in Texas includes the Red River downstream of Lake Texoma, Sabine and Neches rivers, and Colorado River downstream of Austin, Texas. May occur in other river systems (Warren et al. 2000).	**No**	**No**
Chub shiner (*Notropis potteri*)	T	--	Brazos, Colorado, San Jacinto, and Trinity river basins. Flowing water with silt or sand substrate	**No**	**No**

Species	State Status	Federal Status	Description of Habitat	Habitat Present[1]	Species Effect[2]
Paddlefish (*Polyodon spathula*)	T	--	Species occurred in every major river drainage from the Trinity Basin eastward, but its numbers and range had been substantially reduced by the 1950's; recently reintroduced into Big Cypress drainage upstream of Caddo Lake. Prefers large, free-flowing rivers but will frequent impoundments with access to spawning sites.	**No**	**No**
Shovelnose sturgeon (*Scaphirhynchus platorynchus*)	T	SAT	Found only in the Red River below Denison Dam (Lake Texoma). Evidence of the presence of this species in the lower Pecos River, during prehistoric times, strongly suggests that it likely occurred in many Texas rivers. Inhabits flowing water over sandy bottoms or near rocky points or bars.	**No**	**No**
			MAMMALS		
Black bear (*Ursus americanus*)	T	--	Generalist. Historically found throughout Texas. In Chisos, prefers higher elevations where pinyon-oaks predominate; also occasionally sighted in desert scrub of Trans-Pecos (Black Gap Wildlife Management Area) and Edwards Plateau in juniper-oak habitat. For ssp. luteolus, bottomland hardwoods, floodplain forests, upland hardwoods with mixed pine; marsh. Bottomland hardwoods and large tracts of inaccessible forested areas.	**No**	**No**
			REPTILES		
Texas horned lizard (*Phrynosoma cornutum*)	T	---	Terrestrial: Open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive. Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.	**No**	**No**
Alligator Snapping Turtle (*Macrochelys temminckii*)	---	PT	Aquatic: Perennial water bodies; rivers, canals, lakes, and oxbows; also swamps, bayous, and ponds near running water; sometimes enters brackish coastal waters. Females emerge to lay eggs close to the water's edge.	**No**	**No**
			INSECTS		
Monarch butterfly (*Danaus plexippus*)	---	PT	Adult monarch butterflies are large and conspicuous, with bright orange wings surrounded by a black border and covered with black veins. During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily Asclepias spp.), and larvae emerge after 2 to 5 days. Larvae develop through five larval instars (intervals between molts) over a period of 9 to 18 days, feeding on milkweed and sequestering toxic chemicals (cardenolides) as a defense against predators. The larva then pupates into a chrysalis before emerging 6 to 14 days later as an adult butterfly. There are multiple generations of monarchs produced during the breeding season, with most adult butterflies living approximately 2 to 5 weeks; overwintering adults enter into reproductive diapause (suspended reproduction) and live 6 to 9 months. Individual monarchs in temperate climates, such as eastern and western North America, undergo long-distance migration, and live for an extended period of time. In the fall, in both eastern and western North America, monarchs begin migrating to their respective overwintering sites.	**Yes**	**No**
			MOLLUSKS		
Texas heelsplitter (*Potamilus amphichaenus*)	T	---	Occurs in small streams to large rivers in standing to slow-flowing water; most common in banks, backwaters and quiet pools; adapts to some reservoirs. Often found in soft substrates such as mud, silt or sand (Howells et al. 1996; Randklev et al. 2017a). [Mussels of Texas 2019]	**No**	**No**

LE – Federally Listed Endangered, LT – Federally Listed Threatened C – Candidate PT – Proposed Threatened SAT - Similarity of Appearance to a Threatened Taxon E – State Listed Endangered T – State Listed Threatened

[1]Habitat Present? – Do the vegetation communities located within the survey area match the requirements for that particular protected species?

[2]Species Effect? – Will the proposed project potentially affect a protected species?

Data Sources: USFWS IPaC (Published and accessed 29 January 2025), TPWD (accessed 29 January 2025) and field survey of the survey area

Regarding federally listed threatened and endangered species, Red Knot, Piping Plover, and Whooping Crane were listed for Grayson County.

- As this project will not be related to wind energy, the Red Knot and Piping Plover will not be affected.
- Whooping Cranes utilize estuaries, prairie marshes, moist grasslands, croplands, and will use large shallow wetland areas associated with lakes for roosting and feeding. Although the survey area contained open water, the stock ponds were too deep to promote the marsh-type mix of vegetation communities in association with open water sources that this species utilizes.

- The alligator snapping turtle prefers perennial water bodies including rivers, canals, lakes, and oxbows as well as swamps, bayous, and ponds near running water. It sometimes enters brackish coastal waters. Although multiple tributaries were identified, the ephemeral and intermittent nature of the tributaries would not provide suitable habitat for the alligator snapping turtle.
- The monarch butterfly migrates through the United States, including Texas, to and from overwintering grounds and summer habitats primarily located in Mexico and Canada, respectively. During migration, monarch butterflies feed on various flowering plants and breed solely on milkweeds (*Asclepias* spp.). While flowering plants were observed, their occurrence was sporadic and restricted to non- or infrequently maintained areas. As such, minimal feeding habitat was observed. Therefore, the only occurrence of monarch butterflies would be in relation to stopover during migration.

As such, the habitats present within the survey area were not suitable for any of the federally listed threatened or endangered species. Nor were the habitats suitable for nesting, feeding, or stopover migration habitat for these species.

Preferred Habitat for State Protected Species

There were 14 state-listed threated and endangered species for Grayson County, which includes three of the aforementioned federally listed species. Any occurrence of the Piping Plover, and Whitefaced Ibis (*Plegadis chihi*) would be in relation to stopover during migration; however, no suitable stopover or nesting habitat was observed within the survey area. Whooping Crane, Black Rail, Interior Least Tern (*Sternula antillarum athalassos*), and Wood Stork (*Mycteria americana*) would be unlikely to utilize the survey area, as their preferred habitat types were not present. Black Rails utilize freshwater marshes and grassy swamps with dense emergent vegetation, which were not present within the site. While this site contained a freshwater wetland, this community did not meet the parameters of the Wood Stork for roosting with no tall snags, red mangrove (*Rhizophora mangle*) dominated areas, or bald cypress (*Taxodium distichum*) dominated areas. Wood Storks utilize flooded fields and marsh habitats with shallow standing water for feeding areas, but none were observed. As such, foraging habitat potentially suitable for the Wood Stork was not present within the survey area.

Due to the high-traffic nature of the survey area and lack of any records of the black bear in the area it is unlikely that this species will utilize the site. The Texas horned lizard (*Phrynosoma cornutum*) prefers bare ground with scattered clumps of vegetation which did not occur within the survey area. The Texas heelsplitter (*Potamilus amphichaenus*) occurs in streams with flowing or standing water. Although multiple tributaries were identified, the ephemeral and intermittent nature of the tributaries would not provide suitable habitat for the Texas heelsplitter or the state listed fish species.

Vegetation Communities

None of the vegetation observed within the survey area would be considered unique or compose a unique vegetation type for the region. The vegetation communities described were composed of species that are not only common to grassland and forested areas, but to the Cross-Timbers and Blackland Prairie eco-regions of North Central Texas. It is IES's professional opinion that the proposed project will not have any effect on any unique vegetation, vegetation communities, or habitat types.

Potential to Affect Protected Species

As previously noted, habitat for any of the federally listed species and state listed species was not present within the survey area. As such, the facility and the operation of the facility shall not result in the destruction or adverse modification of the critical habitat of endangered or threatened species, or cause or contribute to the taking of any endangered or threatened species.

IES appreciates the opportunity to work with you and Texoma Area Solid Waste Authority, Inc. on this project and hope we may be of assistance to you in the future. If you have any comments, questions, or concerns, please do not hesitate to contact me at 972-562-7672 or by email a[redacted]

Sincerely,

Integrated Environmental Solutions, LLC.

Karisa Fenton

Ms. Karisa Fenton
Environmental Specialist

Attachments

File ref: 04.240.095

ATTACHMENT A

Figures

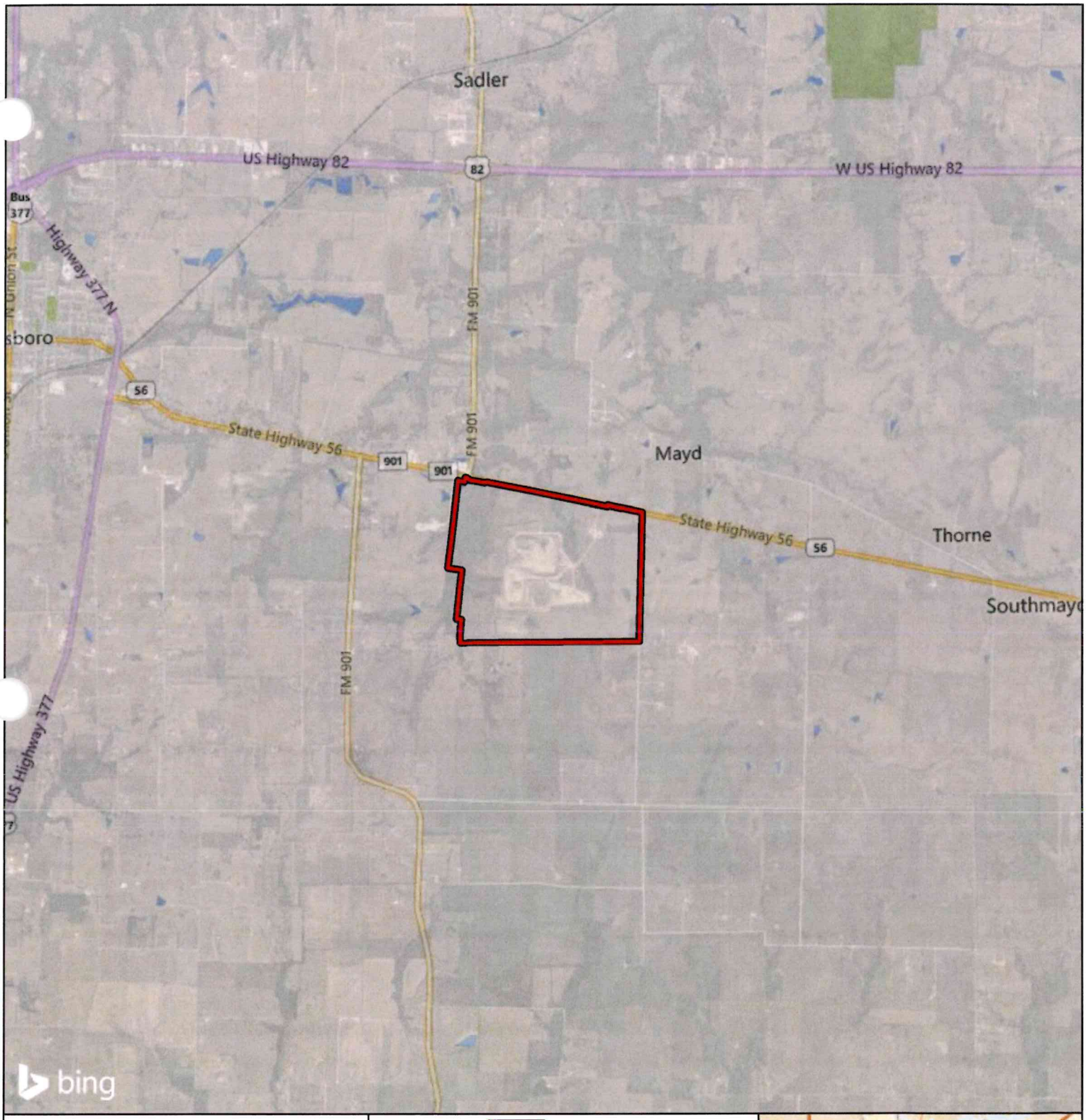


Figure 1.
General Location Map

TASWA
City of Whitesboro
Grayson County, Texas

1 in = 5,000 feet

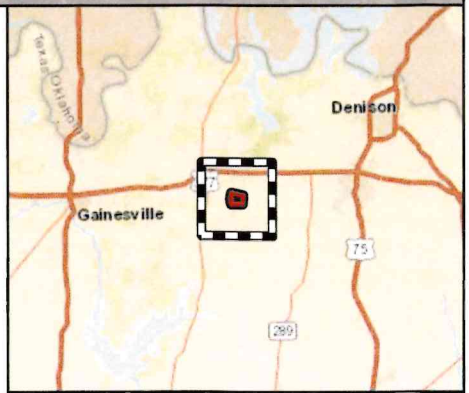
Feet
0 5,000

N
W E
S

File Ref. 04.240.095
Date: 5/16/2022

Survey Area

IIE.11



Area of Detail Scale: 1 inch equals 20 miles

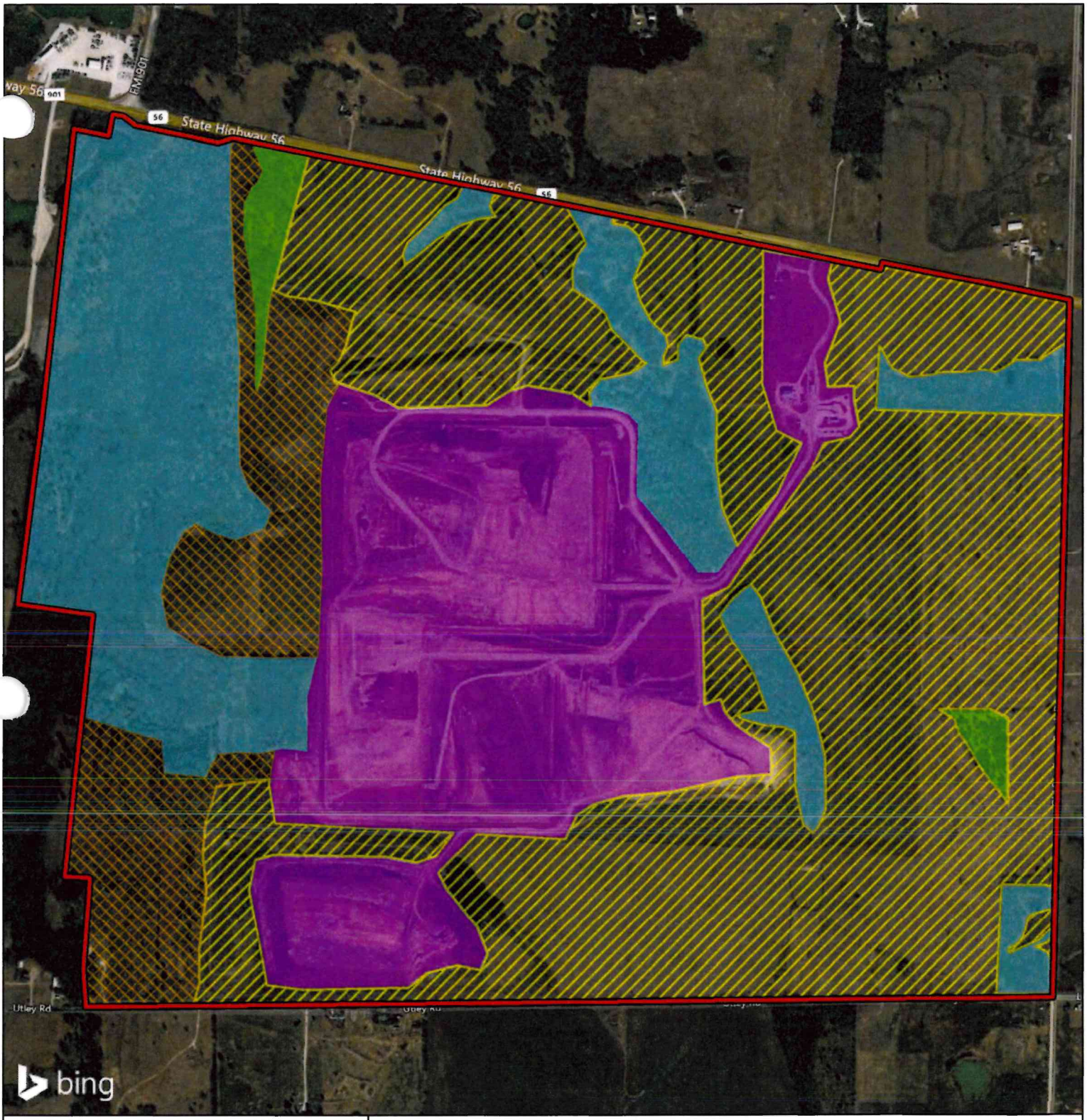


Figure 2.
Vegetation Communities Identified within the Survey Area

TASWA
City of Whitesboro
Grayson County, Texas

1 in = 925 feet

Feet
0 925

N
W E
S

File Ref. 04.240.095
Date: 5/16/2022

Survey Area

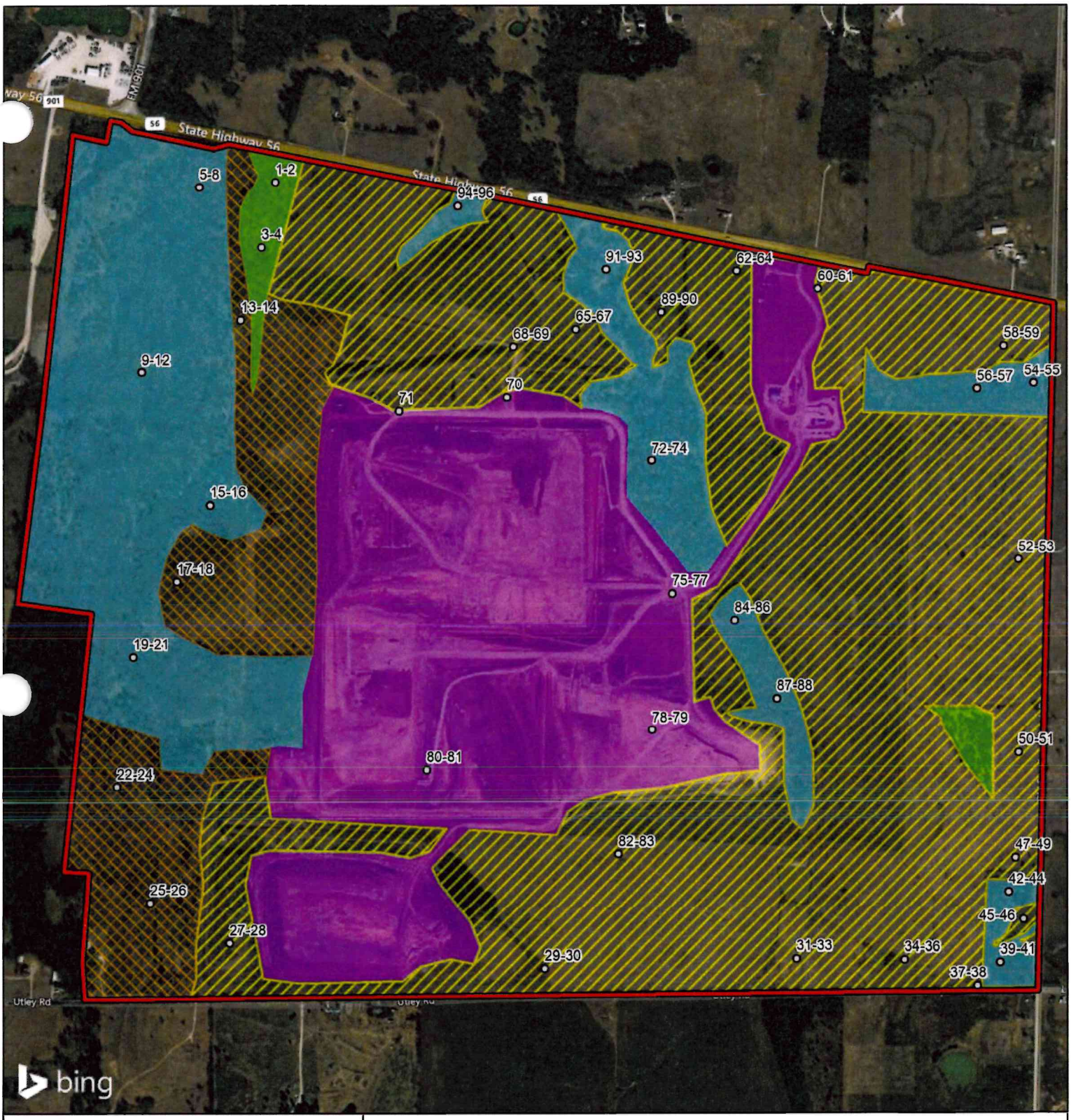
Vegetation Communities

- Forested Riparian Corridor
- Forested Upland
- Maintained Grassland
- Non-Maintained Grassland
- Disturbed Urban Matrix

IIE.12

ATTACHMENT B

Site Photographs



Photograph Location Map

TASWA
City of Whitesboro
Grayson County, Texas

1 in = 925 feet

Feet
0 925

N
W E
S

File Ref. 04.240.095
Date: 5/16/2022

Survey Area
Photograph Location

Vegetation Communities

- Forested Riparian Corridor
- Forested Upland
- Maintained Grassland
- Non-Maintained Grassland
- Disturbed Urban Matrix

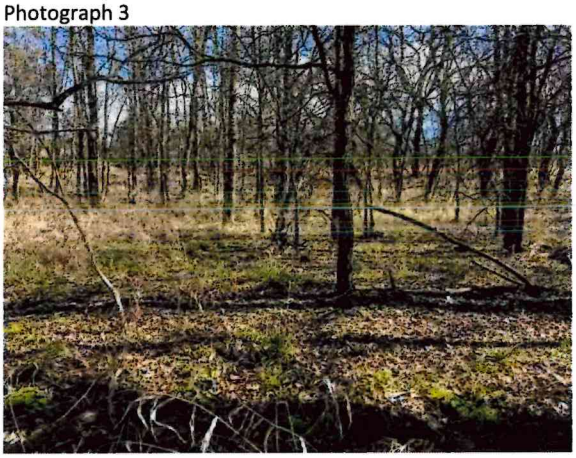
IIE.14

Photograph 1

Photograph 2

Photograph 3

Photograph 4



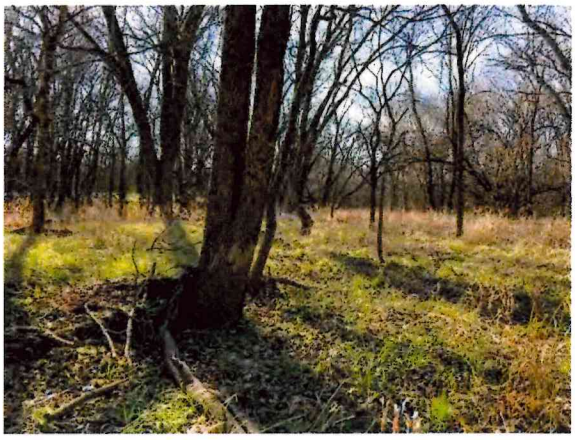
Photograph 5

Photograph 6

Photograph 7

Photograph 8

Photograph 9



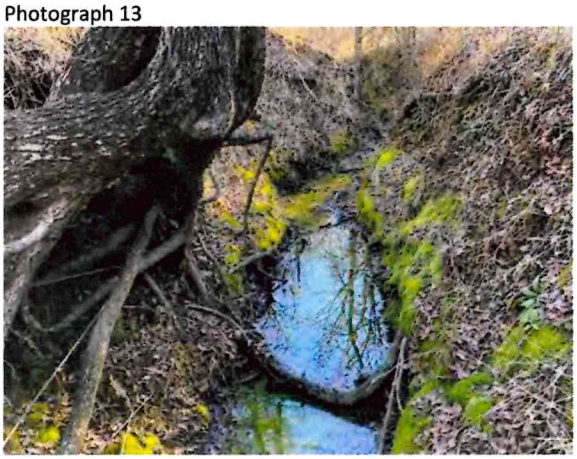
Photograph 10

Photograph 11

Photograph 12

Photograph 13

Photograph 14



Photograph 15

Photograph 16

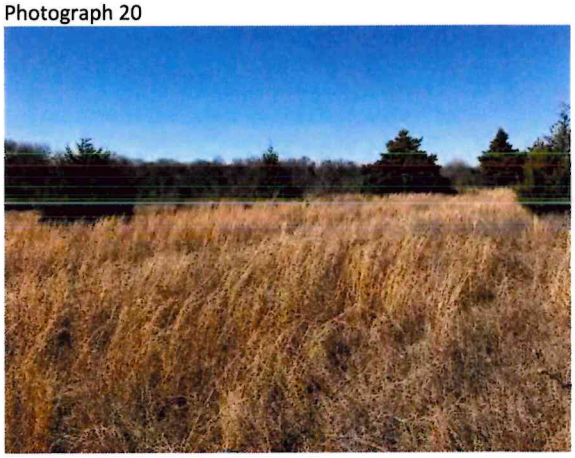
Photograph 17

Photograph 18

Photograph 19

Photograph 20

Photograph 21



Photograph 22

Photograph 23

Photograph 24

Photograph 25

Photograph 26

Photograph 27

Photograph 28

Photograph 29

Photograph 30

Photograph 31

Photograph 32

Photograph 33

Photograph 34

Photograph 35

Photograph 36

Photograph 37

Photograph 38

Photograph 39

Photograph 40

Photograph 41

Photograph 42

Photograph 43

Photograph 44

Photograph 45

Photograph 46

Photograph 47

Photograph 48

Photograph 49

Photograph 50

Photograph 51

Photograph 52

Photograph 53

Photograph 54

Photograph 55

Photograph 56

Photograph 57

Photograph 58

Photograph 59

Photograph 60

Photograph 61

Photograph 62

Photograph 63

Photograph 64

Photograph 65

Photograph 66

Photograph 67

Photograph 68

Photograph 69

Photograph 70

Photograph 71

Photograph 72

Photograph 73

Photograph 74

Photograph 75

Photograph 76

Photograph 77

Photograph 78

Photograph 79

Photograph 80

Photograph 81

Photograph 82

Photograph 83

Photograph 84

Photograph 85

Photograph 86

Photograph 87

Photograph 88

Photograph 89

Photograph 90

Photograph 91

Photograph 92

Photograph 93

Photograph 94

Photograph 95

Photograph 96

ATTACHMENT C

Protected Species Lists

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arlington Ecological Services Field Office
17629 El Camino Real, Suite 211
Houston, TX 77058-3051
Phone: (817) 277-1100 Fax: (817) 277-1129
Email Address: [redacted]

In Reply Refer To:
Project Code: 2022-0022863
Project Name: TASWA

01/29/2025 19:08:16 UTC

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, which may occur within the boundary of your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under section 7(a)(1) of the Act, Federal agencies are directed to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Under and 7(a)(2) and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether their actions may affect threatened and endangered species and/or designated critical habitat. A Federal action is an activity or program authorized, funded, or carried out, in whole or in part, by a Federal agency (50 CFR 402.02).

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For Federal actions other than major construction activities, the Service suggests that a biological evaluation (similar to a Biological Assessment) be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

After evaluating the potential effects of a proposed action on federally listed species, one of the following determinations should be made by the Federal agency:

1. *No effect* - the appropriate determination when a project, as proposed, is anticipated to have no effects to listed species or critical habitat. A "no effect" determination does not require section 7 consultation and no coordination or contact with the Service is necessary. However, the action agency should maintain a complete record of their evaluation, including the steps leading to the determination of affect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related information.
2. *May affect, but is not likely to adversely affect* - the appropriate determination when a proposed action's anticipated effects to listed species or critical habitat are insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and should never reach the scale where "take" of a listed species occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects, or expect discountable effects to occur. This determination requires written concurrence from the Service. A biological evaluation or other supporting information justifying this determination should be submitted with a request for written concurrence.
3. *May affect, is likely to adversely affect* - the appropriate determination if any adverse effect to listed species or critical habitat may occur as a consequence of the proposed action, and

the effect is not discountable or insignificant. This determination requires formal section 7 consultation.

The Service has performed up-front analysis for certain project types and species in your project area. These analyses have been compiled into *determination keys*, which allows an action agency, or its designated non-federal representative, to initiate a streamlined process for determining a proposed project's potential effects on federally listed species. The determination keys can be accessed through IPaC.

The Service recommends that candidate species, proposed species, and proposed critical habitat be addressed should consultation be necessary. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found at: https://www.fws.gov/service/section-7-consultations

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (https://www.fws.gov/library/collections/bald-and-golden-eagle-management). Additionally, wind energy projects should follow the wind energy guidelines (https://www.fws.gov/media/land-based-wind-energy-guidelines) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: https://www.fws.gov/media/recommended-best-practices-communication-tower-design-siting-construction-operation. The Federal Aviation Administration (FAA) released specifications for and made mandatory flashing L-810 lights on new towers 150-350 feet AGL, and the elimination of L-810 steady-burning side lights on towers above 350 feet AGL. While the FAA made these changes to reduce the number of migratory bird collisions (by as much as 70%), extinguishing steady-burning side lights also reduces maintenance costs to tower owners. For additional information concerning migratory birds and eagle conservation plans, please contact the Service's Migratory Bird Office at 505-248-7882.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in

the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Arlington Ecological Services Field Office
17629 El Camino Real, Suite 211
Houston, TX 77058-3051
(817) 277-1100

PROJECT SUMMARY

Project Code: 2022-0022863
Project Name: TASWA
Project Type: Landfill - Solid Waste
Project Description: 04.240.095
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@33.631491999999994,-96.83981105283601,14z

Counties: Grayson County, Texas

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

BIRDS

NAME	STATUS
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. Your location does not overlap the critical habitat. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Rufa Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane *Grus americana* Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

REPTILES

NAME	STATUS
Alligator Snapping Turtle *Macrochelys temminckii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4658	Proposed Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

---

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

THERE ARE NO BALD AND GOLDEN EAGLES WITHIN THE VICINITY OF YOUR PROJECT AREA.

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Little Blue Heron *Egretta caerulea* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9477	Breeds Mar 10 to Oct 15
Prairie Loggerhead Shrike *Lanius ludovicianus excubitorides* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8833	Breeds Feb 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

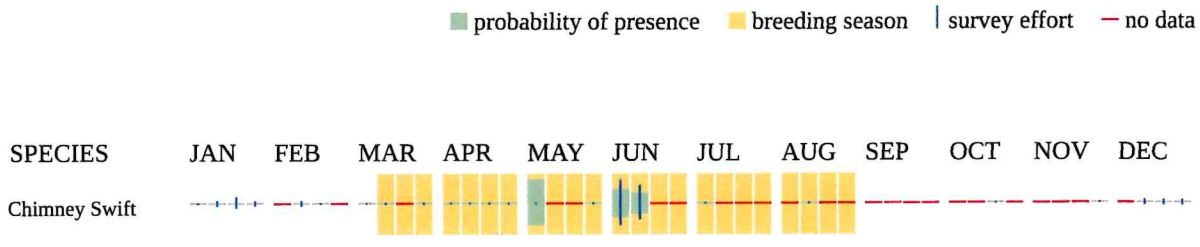
Probability of Presence (▪)

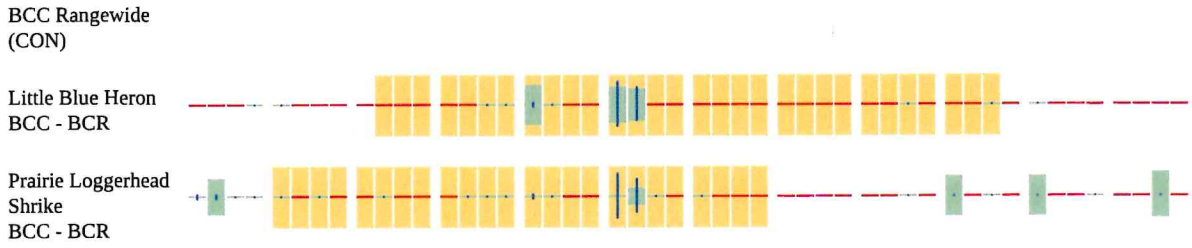
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.





Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- R4SBC
- R4SBA
- R5UBH

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1A

FRESHWATER POND

- PUBHh

IPAC USER CONTACT INFORMATION

Agency: Integrated Environmental Solutions
Name: Karisa Fenton
Address: 301 W Eldorado Pkwy, Suite 101
City: McKinney
State: TX
Zip: 75069
Email kfenton@intenvsol.com
Phone: 9725627672

Last Update: 1/15/2025

GRAYSON COUNTY

AMPHIBIANS

black rail *Laterallus jamaicensis*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia

Federal Status: T	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

interior least tern *Sternula antillarum athalassos*

Sand beaches, flats, bays, inlets, lagoons, islands. Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony

Federal Status:	State Status: E	SGCN: N
Endemic: N	Global Rank: G4T3Q	State Rank: S1B

piping plover *Charadrius melodus*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low-very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast. However, beaches are probably a vital habitat along the central and northern coast (i.e. north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.

Federal Status: T	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2N

rufa red knot *Calidris canutus rufa*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore. Bolivar Flats in Galveston County, sandy beaches Mustang Island, few on outer coastal and barrier beaches, tidal mudflats and salt marshes.

Federal Status: T	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4T2	State Rank: S2N

white-faced ibis *Plegadis chihi*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.

Federal Status:	State Status: T	SGCN: N

Endemic: N | Global Rank: G5 | State Rank: S4B

whooping crane *Grus americana*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.

Federal Status: E | State Status: E | SGCN: Y
Endemic: N | Global Rank: G1 | State Rank: S1S2N

wood stork *Mycteria americana*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Prefers to nest in large tracts of baldcypress (Taxodium distichum) or red mangrove (Rhizophora mangle); forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960.

Federal Status: | State Status: T | SGCN: Y
Endemic: N | Global Rank: G4 | State Rank: SHB,S3N

FISH

blue sucker *Cycleptus elongatus*

Blue Sucker usually inhabit rapids, riffles, runs and pools with moderate to fast current, with bottoms of exposed bedrock sometimes in combination with hard clay, sand, gravel, and boulders; generally intolerant of highly turbid conditions. Adults winter in deep pools and move upstream in spring to spawn on riffles. Current distribution in Texas includes the Red River downstream of Lake Texoma, Sabine and Neches rivers, and Colorado River downstream of Austin, Texas. May occur in other river systems (Warren et al. 2000).

Federal Status: | State Status: T | SGCN: Y
Endemic: N | Global Rank: G3G4 | State Rank: S3

chub shiner *Notropis potteri*

Brazos, Colorado, San Jacinto, and Trinity river basins. Flowing water with silt or sand substrate

Federal Status: | State Status: T | SGCN: Y
Endemic: N | Global Rank: G4 | State Rank: S2

paddlefish *Polyodon spathula*

Species occurred in every major river drainage from the Trinity Basin eastward, but its numbers and range had been substantially reduced by the 1950's; recently reintroduced into Big Cypress drainage upstream of Caddo Lake. Prefers large, free-flowing rivers but will frequent impoundments with access to spawning sites.

Federal Status: | State Status: T | SGCN: Y
Endemic: N | Global Rank: G4 | State Rank: S3

shovelnose sturgeon *Scaphirhynchus platorynchus*

Found only in the Red River below Denison Dam (Lake Texoma). Evidence of the presence of this species in the lower Pecos River, during prehistoric times, strongly suggests that it likely occurred in many Texas rivers. Inhabits flowing water over sandy bottoms or near rocky points or bars.

Federal Status: SAT | State Status: T | SGCN: Y
Endemic: N | Global Rank: G4 | State Rank: S2

MAMMALS

black bear *Ursus americanus*

Generalist. Historically found throughout Texas. In Chisos, prefers higher elevations where pinyon-oaks predominate; also occasionally sighted in desert scrub of Trans-Pecos (Black Gap Wildlife Management Area) and Edwards Plateau in juniper-oak habitat. For ssp. luteolus, bottomland hardwoods, floodplain forests, upland hardwoods with mixed pine; marsh. Bottomland hardwoods and large tracts of inaccessible forested areas.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

MOLLUSKS

Texas heelsplitter *Potamilus amphichaenus*

Occurs in small streams to large rivers in standing to slow-flowing water; most common in banks, backwaters and quiet pools; adapts to some reservoirs. Often found in soft substrates such as mud, silt or sand (Howells et al. 1996; Randklev et al. 2017a). [Mussels of Texas 2019]

Federal Status: PE	State Status: T	SGCN: Y
Endemic: N	Global Rank: G1G3	State Rank: S1

REPTILES

Texas horned lizard *Phrynosoma cornutum*

Terrestrial: Open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive. Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3

July 12, 2022

Mr. David Clark, P.E.
Biggs & Mathews Environmental
1700 Robert Road, Suite 100
Mansfield, TX 76063

RE: TASWA Disposal and Recycling Facility, TCEQ Permit MSW 2290, Proposed Permit Amendment for Facility Expansion, Grayson County

Dear Mr. David Clark:

Texas Parks and Wildlife Department (TPWD) received a review request dated June 24, 2022, for the facility referenced above.

Under Texas Parks and Wildlife Code (PWC) section 12.0011(b)(2) and (b)(3), TPWD has authority to provide recommendations and informational comments that will protect fish and wildlife resources to local, state, and federal agencies that approve, license, or construct developmental projects or make decisions affecting those resources. TPWD is providing input on this proposed project to facilitate the incorporation of beneficial management practices (BMP) during construction, operation, and maintenance that may assist the project proponent in minimizing impacts to the state's natural resources.

Pursuant to PWC section 12.0011(b)(2) and (b)(3), TPWD offers the following comments and recommendations concerning this project. Please be aware that a written response to a TPWD recommendation or informational comment received by a state governmental agency may be required by state law. For further guidance, see PWC section 12.0011. Please refer to TPWD project number 48803 in return correspondence regarding this project.

Project Description

Biggs & Mathews Environmental, Inc. is preparing a permit amendment application on behalf of the Texoma Solid Waste Authority (TASWA) to expand the existing TASWA Disposal and Recycling Facility (Project) located in Grayson County. The amendment will include a vertical and horizontal expansion of the existing waste disposal boundary. A 920-acre property owned by TASWA includes the existing facility. With the amendment, a proposed disposal footprint of approximately 382 acres will be located within a proposed 569-acre permit boundary in the 920-acre property. Biggs & Mathews Environmental, Inc. retained Integrated Environmental Solutions, LLC to conduct a *Protected Species Habitat Assessment* (PSHA) of the 920-acre property to include in the permit application. The PSHA was provided for TPWD review; however, the location of the proposed permit boundary and disposal footprint were not included in the review materials.

4200 SMITH SCHOOL ROAD
AUSTIN, TEXAS 78744-3291
512.389.4800
www.tpwd.texas.gov

Federal Law: Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits taking, attempting to take, capturing, killing, selling, purchasing, possessing, transporting, and importing of migratory birds, their eggs, parts, or nests, except when specifically authorized by the Department of the Interior. This protection applies to most native bird species, including ground nesting species. The U.S. Fish and Wildlife Service (USFWS) Migratory Bird Office can be contacted at (505) 248-7882 for more information on potential impacts to migratory birds.

The PSHA recognizes the MBTA though claims that incidental take is not a violation of the MBTA. Please note that the USFWS published a final rule revoking the January 7, 2021, regulation that limited the scope of the MBTA and returns to implementing the MBTA as prohibiting incidental take. Information regarding the USFWS rules can be found at fws.gov/regulations/mbta/.

Within the Project area, potential impacts to migratory birds may occur during disturbance of existing vegetation and bare ground that may harbor active bird nests, including nests that may occur in grass, shrubs and trees and on bare ground including gravel pads and roads.

> **Recommendation:** TPWD recommends excluding vegetation clearing activities during the general bird nesting season, March 15 through September 15, to avoid adverse impacts to breeding birds. If clearing vegetation during the migratory bird nesting season is unavoidable, TPWD recommends surveying the area proposed for disturbance to ensure that no nests with eggs or young will be disturbed by operations. TPWD generally recommends a 150-foot buffer of vegetation remain around active nests until the eggs have hatched and the young have fledged; however, the size of the buffer zone depends on various factors and can be coordinated with the local or regional USFWS office.

Sky glow because of light pollution can have negative impacts on wildlife and ecosystems by disrupting natural diurnal and nocturnal behaviors such as migration, reproduction, nourishment, rest, and cover from predators.

> **Recommendation:** As bird protection measures, TPWD recommends designing the Project's lighted areas to contain the minimum amount of permanent night-time lighting needed for safety and security. TPWD recommends minimizing the Project's contribution toward skyglow by focusing light downward, with cutoff luminaries to avoid emitting light above the horizontal, and to use dark-sky friendly lighting that is illuminated only when needed, down-shielded, as bright as needed, and minimizes blue light emissions. Lighting technologies, BMPs, and other dark sky resources can be found at the International Dark-Sky Association and McDonald Observatory websites.

Federal Law: Clean Water Act

Section 404 of the Clean Water Act (CWA) establishes a federal program to regulate the discharge of dredge and fill material into the waters of the U.S., including wetlands.

The United States Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA) are responsible for regulating water resources under this act.

The PSHA identifies riparian areas within the 902-acre survey area, though does not identify the location of streams or wetlands. TPWD review of U.S. Geological Survey topographical maps and USFWS National Wetland Inventory Maps indicates the Project survey area contains unnamed streams, freshwater ponds, and wetlands that may be jurisdictional waters of the U.S. and would be subject to USACE Section 404 CWA permitting if the Project would place dredge or fill into waters of the U.S.

Although isolated wetlands may not be applicable to the USACE Section 404 CWA permitting process, aquatic systems provide an essential role in providing habitat for wildlife and helping to protect water quality and TPWD recommends protecting all waters from disturbance to the extent feasible.

> **Recommendation:** TPWD recommends avoiding development within streams and wetlands and referring to the recommendations provided in the section below regarding *State Laws: Aquatic Resources*.

Federal Law: Endangered Species Act

Federally listed animal species and their habitat are protected from take on any property by the Endangered Species Act (ESA). Take of a federally listed species can be allowed if it is incidental to an otherwise lawful activity and must be permitted in accordance with Section 7 or 10 of the ESA. Take of a federally listed species or its habitat without allowance from USFWS is a violation of the ESA.

The Project materials and permit application include a list of federal threatened and endangered species that may occur in the Project area obtained March 22, 2022, from the USFWS Information Planning and Consultation (IPaC) website and indicated that no impacts to federally listed species will occur due to the proposed Project.

Please note that species lists generated from USFWS IPaC expire after 90 days.

> **Recommendation:** To be up to date on current listing status and to ensure compliance with ESA, prior to disturbance into natural areas and streams within the Project area, TPWD recommends referring to the USFWS IPaC periodically to ensure that the Project will not impact newly listed species that may occur in the Project area.

In December 2020, the USFWS determined that ESA listing for the monarch butterfly (*Danaus plexippus*) was warranted; however, listing was precluded by higher priority listing actions. Currently the monarch butterfly is a candidate species for listing, and the USFWS will review the species status annual until a proposal for listing is developed.

Significant declines in the population of migrating monarch butterflies have led to widespread concern about this species and other native insect pollinator species due to reductions in native floral resources. To support pollinators and migrating monarchs,

TPWD encourages the establishment of native wildflower habitats on private and public lands. Establishing wildflower habitats in land reclamation of landfill sites can contribute to pollinator conservation and can provide habitat for a diverse community of pollinators, providing food, breeding, or nesting opportunities. By acting as refugia for pollinators in otherwise inhospitable landscapes, this habitat can contribute to the maintenance of healthy ecosystems and provide ecological services. Resources regarding pollinators can be found on TPWD's Native Pollinator, Monarch Butterfly, and Pollinator Bioblitz webpages.

Recommendation: To provide pollinator conservation and support migrating monarchs, TPWD encourages TASWA to revegetate disposal areas with vegetation that provides habitat for monarch butterflies and other pollinator species. Species appropriate for the project area can be found by accessing the Lady Bird Johnson Wildflower Center, working with TPWD biologists to develop an appropriate list of species, or utilizing resources found at the Monarch Watch website or the Xerces Society's Guidelines webpage.

State Law: Chapter 64, Birds

PWC section 64.002, regarding protection of nongame birds, provides that no person may catch, kill, injure, pursue, or possess a bird that is not a game bird. PWC section 64.003, regarding destroying nests or eggs, provides that, no person may destroy or take the nests, eggs, or young and any wild game bird, wild bird, or wild fowl.

Recommendation: To minimize potential impacts to avian species, please review the *Migratory Bird Treaty Act* section above for recommendations as they are also applicable for compliance with PWC.

State Law: Aquatic Resources

PWC section 1.011 grants TPWD authority to regulate and conserve aquatic animal life of public waters. Texas Administrative Code (TAC) section 57.157 regulates take of mussels, including mussels that are not state listed. TPWD regulates the introduction and stocking of fish, shellfish, and aquatic plants into public waters of the state under PWC 12.015, 12.019, and 66.015 and TAC 52.101-52.105, 52.202, and 57.251-57.259.

Dewatering activities can impact aquatic resources through stranding fish and mussels. Other harmful construction activities can trample, dredge or fill areas exhibiting stationary aquatic resources such as plants and mussels. Relocating aquatic life to an area of suitable habitat outside the project footprint avoids or reduces impacts to aquatic life. Relocation activities are done under the authority of a TPWD *Permit to Introduce Fish, Shellfish or Aquatic Plants into Public Waters* with an approved Aquatic Resource Relocation Plans (ARRP). The permit allows for movement (i.e., introduction, stocking, transplant, relocation) of aquatic species in waters of the state. ARRPs are used to plan resource handling activities and assist in the permitting process. If dewatering activities and other project related activities cause mortality to fish and wildlife species, then the responsible party would be subject to investigation by the TPWD Kills and Spills Team (KAST) and will be liable for the value of lost resources under the authority of PWC sections 12.0011 (b) (1) and 12.301.

If the Project includes filling streams or stream relocation and channelization, then the Project may affect aquatic resources of the state.

Recommendation: If water is present and stream impacts will occur, the Project should be coordinated with the TPWD KAST for appropriate authorization and to ensure protection of native aquatic wildlife. TPWD recommends that impact avoidance measures for aquatic organisms, including all native fish and freshwater mussel species, regardless of state listing status, be considered during Project planning and construction activities.

Recommendation: When dewatering, excavating, or filling activities are involved with Project activities in streams when water is present, TPWD recommends relocating native aquatic resources, including fish and mussels, in conjunction with a *Permit to Introduce Fish, Shellfish or Aquatic Plants into Public Waters* and an ARRP. The ARRP should approved by the department 30 days prior to activity within Project waters or resource relocation and submitted with an application for a no-cost permit. ARRPs can be submitted to Bregan Brown TPWD Region 2 KAST available at Kirian.Brown@tpwd.texas.gov.

State Law: Aquatic Invasive Species

Per TAC chapter 57, it is an offense for any person to possess, transport, or release into the water of this state any species, hybrid of a species, subspecies, eggs, seeds, or any part of any species defined as a harmful or potentially harmful exotic fish, shellfish, or aquatic plant. This rule applies not only to zebra mussels (*Dreissena polymorpha*) (live or dead) and their larvae but also to any species or fragments thereof designated as harmful or potentially harmful under this subchapter (e.g., giant salvinia, hydrilla, Eurasian watermilfoil). The full list of prohibited species can be found on the TPWD webpage regarding prohibited aquatic species.

If the Project involves work within a stream, equipment and other vehicles coming in contact with surface waters could transport aquatic invasive species where mud, plant debris, or water accumulate.

Recommendation: If the Project involves work within a stream, TPWD recommends preparing and following an aquatic invasive species (AIS) transfer prevention plan which outlines BMP for preventing inadvertent transfer of aquatic invasive plants and animals on project equipment and materials. To minimize the risk of transporting aquatic invasive species, TPWD recommends reviewing and adhering to the AIS BMP identified in the ARRP guidelines packet and the *TPWD Clean/Drain/Dry Procedures and Zebra Mussel Decontamination Procedures for Contractors Working in Inland Public Waters*.

Species of Greatest Conservation Need

In addition to federal and state listed species, TPWD tracks SGCN and natural plant communities and actively promotes their conservation. TPWD considers it important to evaluate and, if feasible, minimize impacts to SGCN and their habitat to reduce the

likelihood of endangerment and preclude the need to list as threatened or endangered in the future.

Although the Project materials presented information regarding state listed species potentially occurring in Grayson County obtained from TPWD online application identifying rare, threatened, and endangered species by county (RTEST), the Project did not consider other SGCN of Grayson County.

The RTEST list for Grayson County identifies the following SGCN with potential to occur with the county, excluding the federal and state listed SGCN addressed above or in the project's PSHA. These species could be impacted due to construction, operation, and maintenance activities if suitable habitat or the species occur at the Project site. General habitat descriptions for these species are included in RTEST:

Taxon	Scientific Name	Common Name	GRank[1]	SRank[2]
Amphibians	*Ambystoma tigrinum*	eastern tiger salamander	G5	S3
Amphibians	*Anaxyrus woodhousii*	Woodhouse's toad	G5	SU
Amphibians	*Pseudacris streckeri*	Strecker's chorus frog	G5	S3
Amphibians	*Lithobates areolatus areolatus*	southern crawfish frog	G4T4	S3
Birds	*Haliaeetus leucocephalus*	bald eagle	G5	S3B,S3N
Birds	*Leucophaeus pipixcan*	Franklin's gull	G5	S2N
Birds	*Athene cunicularia hypugaea*	western burrowing owl	G4T4	S2
Birds	*Anthus spragueii*	Sprague's pipit	G3G4	S3N
Birds	*Calcarius ornatus*	chestnut-collared longspur	G5	S3
Fish	*Anguilla rostrata*	american eel	G4	S4
Fish	*Hiodon alosoides*	goldeye	G5	S3
Fish	*Notropis bairdi*	Red River shiner	G4	S3
Fish	*Macrhybopsis storeriana*	silver chub	G5	S3
Fish	*Etheostoma radiosum*	orangebelly darter	G4	S3
Mammals	*Perimyotis subflavus*	tricolored bat	G3G4	S2
Mammals	*Eptesicus fuscus*	big brown bat	G5	S5
Mammals	*Lasiurus borealis*	eastern red bat	G3G4	S4
Mammals	*Lasiurus cinereus*	hoary bat	G3G4	S4
Mammals	*Sylvilagus aquaticus*	swamp rabbit	G5	S5
Mammals	*Ondatra zibethicus*	muskrat	G5	S5
Mammals	*Mustela frenata*	long-tailed weasel	G5	S5
Mammals	*Spilogale putorius*	eastern spotted skunk	G4	S1S3
Mammals	*Puma concolor*	mountain lion	G5	S2S3
Reptiles	*Deirochelys reticularia miaria*	western chicken turtle	G5T5	S2S3

Reptiles	*Terrapene carolina*	eastern box turtle	G5	S3
Reptiles	*Terrapene ornata*	western box turtle	G5	S3
Reptiles	*Apalone mutica*	smooth softshell	G5	S3
Reptiles	*Ophisaurus attenuatus*	slender glass lizard	G5	S3
Reptiles	*Plestiodon septentrionalis*	prairie skink	G5	S2
Reptiles	*Crotalus horridus*	timber (canebrake) rattlesnake	G4	S4
Insects	*Bombus pensylvanicus*	American bumblebee	G3G4	SNR
Insects	*Bombus variabilis*	No accepted common name	G1G2	SNR
Plants	*Dalea hallii*	Hall's prairie clover	G3	S2
Plants	*Crataegus viridis var. glabriuscula*	Sutherland hawthorn	G5T3T4	S3
Plants	*Valerianella stenocarpa*	bigflower cornsalad	G3	S3

[1]GRank is the NatureServe global conservation status rank.
[2]SRank is the NatureServe subnational or state level conservation status rank.
See NatureServe's website for specific global and state ranking definitions.

The Project is located within the Texas Blackland Prairies Ecoregion, and priority habitats identified in the Texas Conservation Action Plan for conservation of SGCN of the within the Texas Blackland Prairies Ecoregion include barrens, native grassland communities, slope forests and woodlands, riparian and bottomland woodlands, freshwater wetlands, seeps, springs, and savannahs and woodlands. Of the species listed above, the southern crawfish frog and eastern spotted skunk are identified within the Texas Natural Diversity Database, occurring approximately 2 to 4 miles from the Project site. These and several of the SGCN listed above are associated with grassland habitats, and loss to grassland communities is a concern in the Texas Blackland Prairies ecoregion.

The PSHA identifies non-maintained grassland, maintained grassland, disturbed urban mix, forested riparian corridor, and forested upland vegetation communities within the 920-acre survey area. Of those habitats the forested riparian corridor and non-maintained grassland communities best represent priority habitats of the ecoregion for conservation including native grassland communities, riparian and bottomland woodlands, and savannahs and woodlands.

Beneficial Management Practices

TPWD recommends implementing the following additional BMP to avoid or minimize impacts to wildlife, particularly state listed species and other SGCN, potentially occurring at the project site:

1. TPWD recommends designing the project to minimize removal of native vegetation and retain native habitats. TPWD recommends that precautions be taken to avoid impact to SGCN flora and fauna, natural plant communities, and priority

habitat types of the ecoregion while working in Grayson County or if encountered during project construction, operation, maintenance, and reclamation activities. Areas exhibiting a native grass and forbs component should be protected from disturbance and from introduction of non-native vegetation. TPWD encourages clearly marking areas found to contain rare plants as work zone avoidance areas prior to disturbance activities.

2. TPWD recommends avoiding disturbance to streams, tributaries, and wetlands and providing robust setback distances to aquatic systems to serve as wooded stream buffers that provide aquatic resources with shade, protect streams from runoff and erosion, and serve as wildlife habitat and travel corridors.

3. Of the vegetation communities present within the 920-acre site, TPWD recommends the permit boundary and disposal footprint exclude streams, wetlands, riparian corridors, and the non-maintained grassland areas to the extent feasible. These areas likely provide greater species diversity and wildlife habitat than the maintained grassland and disturbed urban mix communities at the project site. There is an abundance of disturbed urban mix and maintained grassland to accommodate the approximately 382-acre disposal footprint and 569-acre permit boundary proposed for the permit amendment.

4. TPWD recommends informing employees and contractors of the potential for state listed species or SGCN to occur in the Project area. Contractors should be advised to avoid impacts to all wildlife that are encountered.

5. Wildlife, including aquatic wildlife, observed during construction should be allowed to safely leave the site or be translocated by a permitted individual to a nearby area with similar habitat that would not be disturbed during construction. TPWD recommends that any translocations of reptiles be the minimum distance possible no greater than one mile, preferably within 100-200 yards from the initial encounter location. For relocation of aquatic resources, a TPWD permit is required per the Section above regarding *State Law: Aquatic Resources*. For purposes of relocation, surveys, monitoring, and research, terrestrial state listed species may only be handled after obtaining authorization through the TPWD Wildlife Permits Office. TPWD recommends that consultants obtain such authorization and serve as on-site biological monitors if encounters of state listed terrestrial wildlife are likely.

6. Small vertebrates including snakes, lizards, toads, and mice fall into trenches and become trapped. Wildlife unable to escape from trenches are susceptible to loss from backfilling activities, exposure to elements, starvation, dehydration, and predation by other wildlife. Where trenching or other excavation is involved, TPWD recommends minimizing the length of trenches left open at any given time during construction. Trenches left open for more than two daylight hours should be inspected for the presence of trapped wildlife prior to backfilling. If trenches cannot be backfilled the day of initial trenching, then escape ramps, in the form of short lateral trenches or wooden planks sloping to the surface at an angle of less than 45 degrees, should be installed at least every 90 meters.

7. For soil stabilization and revegetation of disturbed areas within the proposed project area, TPWD recommends erosion and seed/mulch stabilization materials that avoid entanglement hazards to snakes and other wildlife species. Because the mesh found in many erosion control blankets or mats pose an entanglement hazard to wildlife, TPWD recommends the use of no-till drilling, hydromulching and/or hydroseeding rather than erosion control blankets or mats due to a reduced risk to wildlife. If erosion control blankets or mats will be used, the product should contain no netting or contain loosely woven, natural fiber netting in which the mesh design allows the threads to move, therefore allowing expansion of the mesh openings. Hydromulch containing plastic ingredients and plastic mesh matting should be avoided.

8. To aid in the scientific knowledge of a species' status and current range, TPWD encourages reporting encounters of protected and rare species to the TXNDD according to the data submittal instructions found at the TPWD Texas Natural Diversity Database: Submit Data webpage. An additional method for reporting observations of species is through the iNaturalist community app where plant and animal observations are uploaded from a smartphone. The observer then selects to add the observation to specific TPWD Texas Nature Tracker Projects appropriate for the taxa observed, including Herps of Texas, Birds of Texas, Texas Eagle Nests, Texas Whooper Watch, Mammals of Texas, Rare Plants of Texas, Bees & Wasps of Texas, Terrestrial Mollusks of Texas, Texas Freshwater Mussels, Fishes of Texas, and All Texas Nature.

TPWD appreciates the opportunity to provide input on the proposed project. Thank you for considering the fish and wildlife resources of Texas. If you have any questions, please contact me a[redacted] or (903) 322-5001.

Sincerely,

Karen B. Hardin
Wildlife Habitat Assessment Program
Wildlife Division

kbh/48803

David Clark

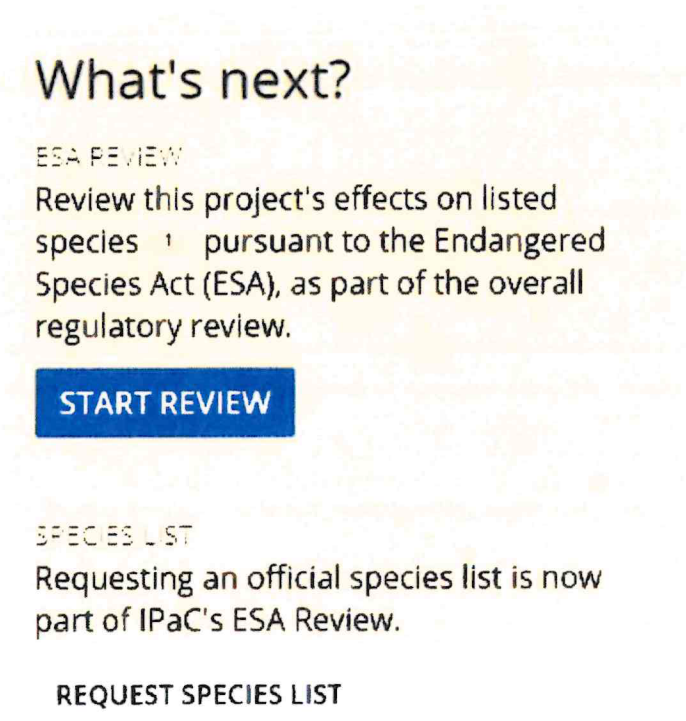
From: Khan, Jennifer M [redacted]
Sent: Tuesday, July 5, 2022 1:18 PM
To: David Clark
Subject: RE: [EXTERNAL] Threatened and Endangered Species - Wildlife Habitat Assessment

Hello Mr. Clark:

Thank you for sending this information on the proposed expansion of the TASWA Disposal and Recycling Facility in Grayson County, Texas. The biological assessment for the proposed project indicates you have determined the project would have no effect on federally listed species. For projects that are determined to have no effect on federally listed species, section 7 consultation under the Endangered Species Act is not required. We recommend the information in the assessment, as well as any other information relating to the determination, be provided to the federal action agency and maintained with the project file.

You may also find it useful to use our determination key within our Information for Planning and Consultation (IPaC) website. The determination key will lead you through a series of questions that can assist you in determining potential effects of a project on federally listed species. The Determination Key will also give you the option to download a letter documenting your coordination with this office. You can find the Determination Key feature by logging into the project home where you obtained the original species list from our IPaC system and then clicking "start review" as shown in the box below.

Please let me know if you have any questions. Thank you.



David Clark

From: Khan, Jennifer M [redacted]
Sent: Tuesday, July 5, 2022 1:18 PM
To: David Clark
Subject: RE: [EXTERNAL] Threatened and Endangered Species - Wildlife Habitat Assessment

Hello Mr. Clark:

Thank you for sending this information on the proposed expansion of the TASWA Disposal and Recycling Facility in Grayson County, Texas. The biological assessment for the proposed project indicates you have determined the project would have no effect on federally listed species. For projects that are determined to have no effect on federally listed species, section 7 consultation under the Endangered Species Act is not required. We recommend the information in the assessment, as well as any other information relating to the determination, be provided to the federal action agency and maintained with the project file.

You may also find it useful to use our determination key within our Information for Planning and Consultation (IPaC) website. The determination key will lead you through a series of questions that can assist you in determining potential effects of a project on federally listed species. The Determination Key will also give you the option to download a letter documenting your coordination with this office. You can find the Determination Key feature by logging into the project home where you obtained the original species list from our IPaC system and then clicking "start review" as shown in the box below.

Please let me know if you have any questions. Thank you.

Jen M. Khan
Fish & Wildlife Biologist
U.S. Fish & Wildlife Service
2005 NE Green Oaks Blvd, Suite 140
Arlington, Texas 76006
(817) 277-1100 ext. 22105

From: Arlington ES, FW2[redacted]
Sent: Friday, June 24, 2022 3:27 PM
To: Khan, Jennifer M[redacted]
Subject: Fw: [EXTERNAL] Threatened and Endangered Species - Wildlife Habitat Assessment

Please review and advise. Thanks.

From: David Clar[redacted]
Sent: Friday, June 24, 2022 3:19 PM
To: Arlington ES, FW2[redacted]
Subject: [EXTERNAL] Threatened and Endangered Species - Wildlife Habitat Assessment

On behalf of the Texoma Solid Waste Authority (TASWA), Biggs & Mathews Environmental, Inc. is preparing a permit amendment application to expand the existing TASWA Disposal and Recycling Facility (TCEQ Permit MSW 2290) located in Grayson County, Texas. The amendment application will request a vertical and horizontal expansion of the existing waste disposal boundary. The purpose of this correspondence is to document coordination with the Texas Parks and Wildlife Department consistent with the requirements of the municipal solid waste regulations, 30 Texas Administrative Code Chapter 330 (30 TAC §330.61(n)) for locations and specific data relating to endangered and threatened species in Texas.
A site-specific habitat assessment has been completed and the draft report is attached for your review and concurrence. A hard copy of the attached correspondence will also be sent to the Arlington office address.
If you need any additional information or have any questions, please do not hesitate to contact me.
Thanks for your assistance,
Clark

David Clark
Biggs and Mathews Env.
1700 Robert Road, Ste 100
Mansfield, TX 76063

APPENDIX IIF
TEXAS HISTORICAL COMMISSION DOCUMENTATION

TEXAS HISTORICAL COMMISSION

REQUEST FOR SHPO CONSULTATION:
Section 106 of the National Historic Preservation Act and/or the Antiquities Code of Texas

Please see instructions for completing this form and additional information on Section 106 and Antiquities Code consultation on the Texas Historical Commission website at http://www.thc.state.tx.us/crm/crmsend.shtml.

☒ This is a new submission.

☐ This is additional information relating to THC tracking number(s): _____

Project Information

PROJECT NAME
Permit Amendment Application - TASWA Disposal and Recycling Facility

PROJECT ADDRESS	PROJECT CITY	PROJECT ZIP CODE(S)
25090 State Highway 56	**Whitesboro**	**76273**

PROJECT COUNTY OR COUNTIES
Grayson

PROJECT TYPE (Check all that apply)

☐ Road/Highway Construction or Improvement	☐ Repair, Rehabilitation, or Renovation of Structure(s)
☒ Site Excavation	☐ Addition to Existing Structure(s)
☐ Utilities and Infrastructure	☐ Demolition or Relocation of Existing Structure(s)
☒ New Construction	☐ None of these

BRIEF PROJECT DESCRIPTION: Please explain the project in one or two sentences. More details should be included as an attachment to this form.
Site is an existing Type I Municipal Solid Waste landfill (TCEQ Permit MSW 2290) that is being expanded. A cultural survey of the property was conducted by Geo-Marine, Inc. and a report dated July 2000 was submitted to the THC during the initial permitting process. The waste boundary limit is being expanded within the same property as originally permitted.

Project Contact Information

PROJECT CONTACT NAME	TITLE	ORGANIZATION
David Clark	**Engineer**	**Biggs and Mathews Env.**

ADDRESS	CITY	STATE	ZIP CODE
1700 Robert Road, Suite 100	**Mansfield**	**TX**	**76063**

PHONE	EMAIL
817-563-1144	[redacted]

Federal Involvement (Section 106 of the National Historic Preservation Act)

Does this project involve approval, funding, permit, or license from a federal agency?

☐ Yes (Please complete this section) ☒ No (Skip to next section)

FEDERAL AGENCY	FEDERAL PROGRAM, FUNDING, OR PERMIT TYPE
CONTACT PERSON	PHONE
ADDRESS	EMAIL

State Involvement (Antiquities Code of Texas)

Does this project occur on land or property owned by the State of Texas or a political subdivision of the state?

☐ Yes (Please complete this section) ☒ No (Skip to next section)

CURRENT OR FUTURE OWNER OF THE PUBLIC LAND	
CONTACT PERSON	PHONE
ADDRESS	EMAIL

Identification of Historic Properties: Archeology

Does this project involve ground-disturbing activity?

☑ Yes (Please complete this section) ☐ No (Skip to next section)

Describe the nature of the ground-disturbing activity, including but not limited to depth, width, and length.

Site is an existing landfill facility with excavation to a depth of approximately 90 feet over the waste footprint boundary of approximately 385 acres. Earth stockpiles may be placed on adjacent areas within the property boundary. Site plans showing the property, permit and waste boundaries are attached.

Describe the previous and current land use, conditions, and disturbances.

Site has been operated as a landfill since 2005. Prior to development of the property as a landfill, the property was mainly agricultural.

Identification of Historic Properties: Structures

Does the project area or area of potential effects include buildings, structures, or designed landscape features (such as parks or cemeteries) that are 45 years of age or older?

☐ Yes (Please complete this section) ☑ No (Skip to next section)

Is the project area or area of potential effects within or adjacent to a property or district that is listed in or eligible for listing in the National Register of Historic Places?

☐ Yes, name of property or district: ☑ No ☐ Unknown

In the space below or as an attachment, describe each building, structure, or landscape feature within the project area or area of potential effect that is 45 years of age or older.

ADDRESS	DATE OF CONSTRUCTION	SOURCE FOR CONSTRUCTION DATE
ADDRESS	DATE OF CONSTRUCTION	SOURCE FOR CONSTRUCTION DATE
ADDRESS	DATE OF CONSTRUCTION	SOURCE FOR CONSTRUCTION DATE

Attachments

Please see detailed instructions regarding attachments.

Include the following with each submission:

- ☐ Project Work Description
- ☑ Maps
- ☐ Identification of Historic Properties
- ☐ Photographs

For Section 106 reviews only, also include:

- ☐ Consulting Parties/Public Notification
- ☐ Area of Potential Effects
- ☐ Determination of Eligibility
- ☐ Determination of Effect

Submit completed form and attachments to the address below. Faxes and email are not acceptable.

Mark Wolfe
State Historic Preservation Officer
Texas Historical Commission
P.O. Box 12276, Austin, TX 78711-2276 (mail service)
108 W. 16th Street, Austin, TX 78701 (courier service)

For SHPO Use Only

eTRAC
electronic THC review and compliance

TEXAS HISTORICAL COMMISSION
REAL PLACES TELLING REAL STORIES

Review Request Confirmation

Your request for consultation has been successfully submitted to the Texas Historical Commission.

Project Name

TASWA Disposal and Recycling Facility

Track Number

202211707

Date Received

6/24/2022 4:50:09 PM

Due Date:

7/24/2022 4:50:09 PM (30 Days)

Thank you!

David Clark

From: [redacted]
Sent: Tuesday, July 12, 2022 8:32 AM
To: David Clark; [redacted]
Subject: Section 106 Submission

TEXAS HISTORICAL COMMISSION
real places telling real stories

Re: THC Courtesy Project Review
THC Tracking #202211707
Date: 07/12/2022
TASWA Disposal and Recycling Facility
25090 State Highway 56
Whitesboro,TX 76273

Description: Site is an existing TCEQ permitted landfill that is expanding the waste fill area.

Dear David Clark:
Thank you for your submittal regarding the above-referenced project. This response represents the comments of the Executive Director of the Texas Historical Commission (THC), as a courtesy review only and does not suffice for review under Section 106 of the National Historic Preservation Act or the Antiquities Code of Texas.

The review staff, led by Arlo McKee and Caitlin Brashear, has completed its review and has made the following determinations based on the information submitted for review:

Above-Ground Resources

- No historic properties are present or affected by the project as proposed. However, if historic properties are discovered or unanticipated effects on historic properties are found, work should cease in the immediate area; work can continue where no historic properties are present. Please contact the THC's History Programs Division at 512-463-5853 to consult on further actions that may be necessary to protect historic properties.

Archeology Comments

- No historic properties affected. However, if cultural materials are encountered during construction or disturbance activities, work should cease in the immediate area; work can continue where no cultural materials are present. Please contact the THC's Archeology Division at 512-463-6096 to consult on further actions that may be necessary to protect the cultural remains.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If the project changes, or if new historic properties are found, please contact the review

staff. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: [redacted]

This response has been sent through the electronic THC review and compliance system (eTRAC). Submitting your project via eTRAC eliminates mailing delays and allows you to check the status of the review, receive an electronic response, and generate reports on your submissions. For more information, visit http://thc.texas.gov/etrac-system.

Sincerely,

Caitlin Bashear

for Mark Wolfe, State Historic Preservation Officer
Executive Director, Texas Historical Commission

Please do not respond to this email.

APPENDIX IIG
TPDES PERMIT

Water Quality General Permits Search

Summary of Authorization TXR05AH82

Permit Number: TXR05AH82
Authorization Status: ACTIVE
Date Coverage Began: 09/07/2011
Date Coverage Ended:

Authorization Details

Site Name on Permit: TEXOMA AREA SOLID WASTE AUTHORITY LANDFILL
Authorization Type: INDUSTRIAL
Primary SIC Code: 4953
Activity Code : LF
Facility Operational Status : ACTIVE
Hazardous Metals Waiver : NO
Msw Landfill Closed : YES
Sector : L

Outfall Number : 001
SEGMENT NUMBER - 0203
RECEIVING WATER BODY - MUSTANG CREEK
OUTFALL LATITUDE - 33.639864
OUTFALL LONGITUDE - (-96.847537)
DISCHARGE TO MARINE OR FRESH - FRESH WATER

Outfall Number : 002
SEGMENT NUMBER - 0203
RECEIVING WATER BODY - MUSTANG CREEK
OUTFALL LATITUDE - 33.638108
OUTFALL LONGITUDE - (-96.838109)
DISCHARGE TO MARINE OR FRESH - FRESH WATER

Outfall Number : 003
SEGMENT NUMBER - 0203
RECEIVING WATER BODY - MUSTANG CREEK
OUTFALL LATITUDE - 33.635007
OUTFALL LONGITUDE - (-96.827454)
DISCHARGE TO MARINE OR FRESH - FRESH WATER

Outfall Number : 004
SEGMENT NUMBER - 0203
RECEIVING WATER BODY - MUSTANG CREEK
OUTFALL LATITUDE - 33.632947
OUTFALL LONGITUDE - (-96.827605)
DISCHARGE TO MARINE OR FRESH - FRESH WATER

Outfall Number : 005
SEGMENT NUMBER - 0203
RECEIVING WATER BODY - MUSTANG CREEK
OUTFALL LATITUDE - 33.628309
OUTFALL LONGITUDE - (-96.827855)
DISCHARGE TO MARINE OR FRESH - FRESH WATER

Outfall Number : 006
SEGMENT NUMBER - 0203
RECEIVING WATER BODY - MUSTANG CREEK
OUTFALL LATITUDE - 33.624902
OUTFALL LONGITUDE - (-96.828031)
DISCHARGE TO MARINE OR FRESH - FRESH WATER

Permittee Information

Operator: CN600339428 - TEXOMA AREA SOLID WASTE AUTHORITY
Address: 25090 STATE HIGHWAY 56 WHITESBORO TX 76273 4993
Annual Fee Billing Address: JOHN OSTEEN
25090 STATE HIGHWAY 56 WHITESBORO TX 76273 4993

Permitted Site Information

RN: RN100629922
RE Name: TEXOMA AREA SOLID WASTE AUTHORITY LANDFILL
Site Location: 25090 STATE HIGHWAY 56 WHITESBORO TX 76273 4993
County: GRAYSON
TCEQ Region: REGION 04 - DFW METROPLEX
Latitude: 33.717222
Longitude: -96.912777

Regulated Entity Site Information

RE Name: TEXOMA AREA SOLID WASTE AUTHORITY LANDFILL
Site Location: 25090 STATE HIGHWAY 56 WHITESBORO TX 76273 4993
County: GRAYSON
TCEQ Region: REGION 04 - DFW METROPLEX
Latitude: 33.717222
Longitude: -96.912777

Application History for this Authorization

Application Type	Status	Received Date	Final Action Date
NOTICE OF INTENT	APPROVED	09/07/2011	09/07/2011
NOI-RENEWAL	APPROVED	11/01/2016	11/01/2016
NOI-RENEWAL	APPROVED	11/10/2021	11/10/2021

APPENDIX IIH
FEDERAL AVIATION ADMINISTRATION DOCUMENTATION

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2022-ASW-18834-OE

Issued Date: 10/04/2022

David Clark
Biggs and Mathews Environmental
1700 Robert Road
Suite 100
Mansfield, TX 76063

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Existing Municipal Solid Waste Landfill TASWA Disposal and Recycling Facility
Location:	Whitesboro, TX
Latitude:	33-37-57.24N NAD 83
Longitude:	96-49-43.20W
Heights:	731 feet site elevation (SE)
	394 feet above ground level (AGL)
	1125 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, red lights-Chapters 4,5(Red),&15.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

This determination expires on 04/04/2024 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.

(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (817) 222-5933, o[redacted]
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ASW-18834-OE.

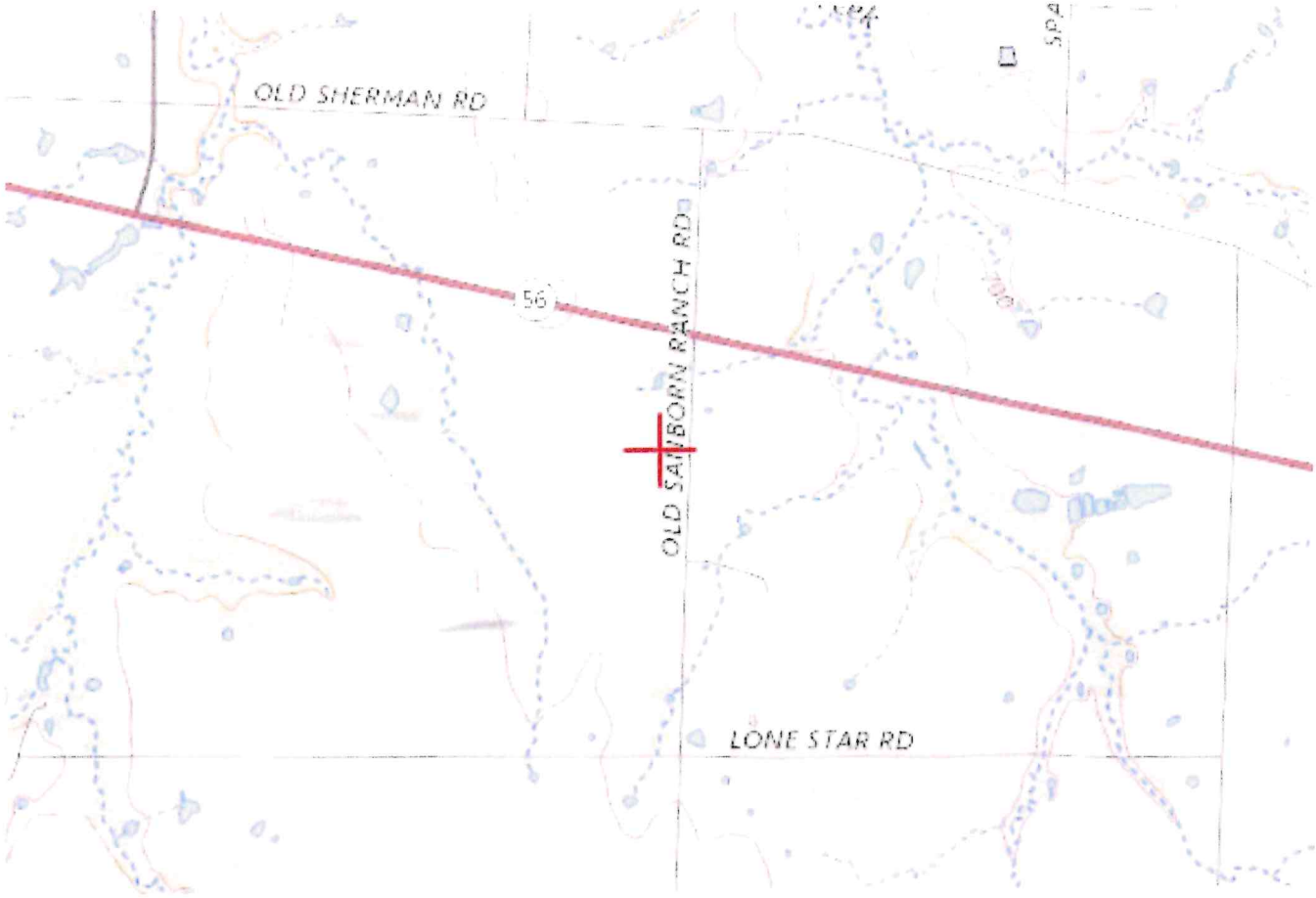
Signature Control No: 552255723-556445638 (DNE)
Andrew Hollie
Specialist

Attachment(s)
Case Description
Map(s)

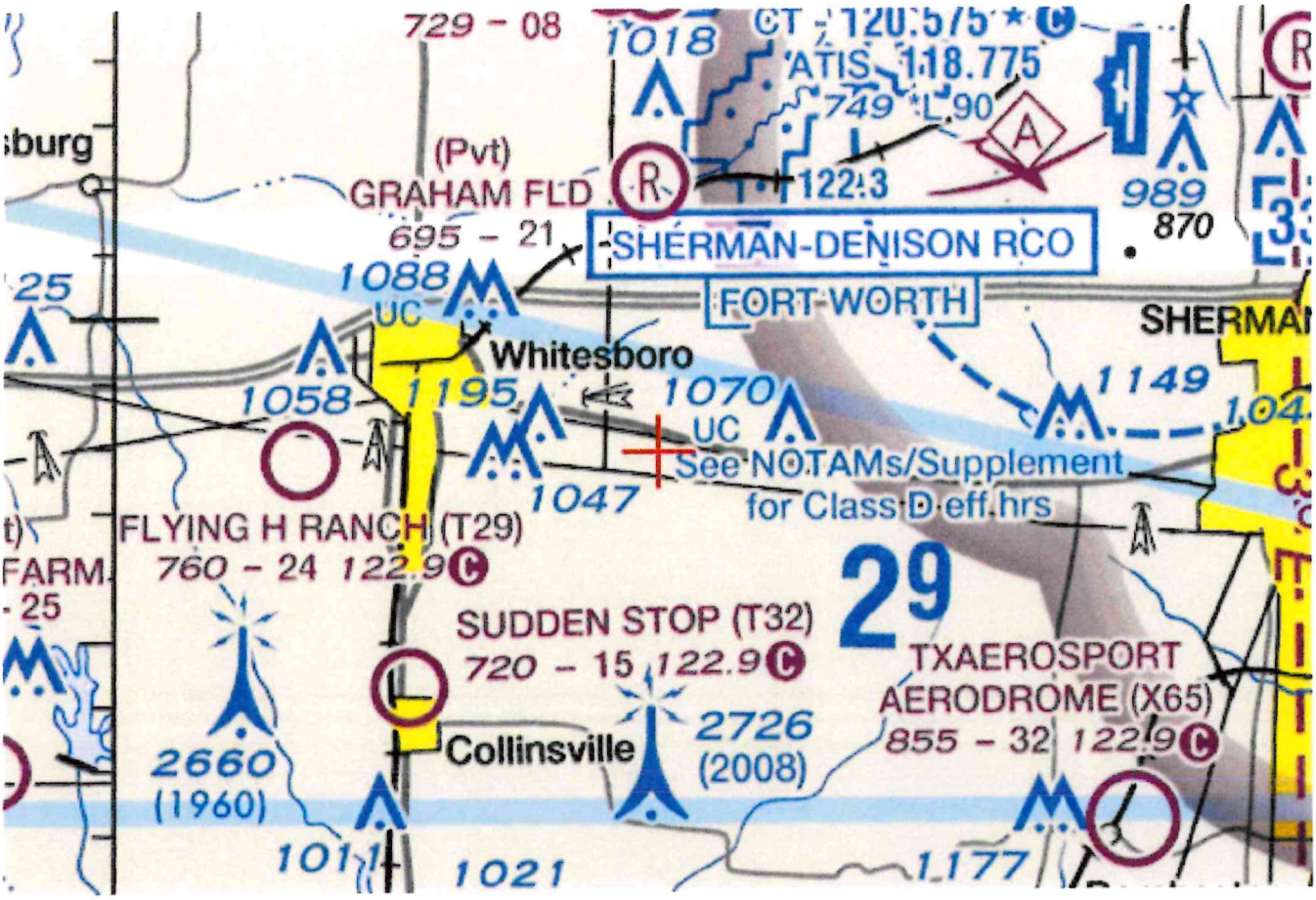
Case Description for ASN 2022-ASW-18834-OE

TASWA DRF is requesting a permit amendment from the TCEQ to increase the waste fill height from 835 ft msl to 1125 ft msl.

TOPO Map for ASN 2022-ASW-18834-OE



Sectional Map for ASN 2022-ASW-18834-OE



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2022-ASW-18837-OE

Issued Date: 10/04/2022

David Clark
Biggs and Mathews Environmental
1700 Robert Road
Suite 100
Mansfield, TX 76063

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Existing Municipal Solid Waste Landfill TASWA Disposal and Recycling Facility
Location:	Whitesboro, TX
Latitude:	33-38-02.34N NAD 83
Longitude:	96-50-40.29W
Heights:	757 feet site elevation (SE)
	361 feet above ground level (AGL)
	1118 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, red lights-Chapters 4,5(Red),&15.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

This determination expires on 04/04/2024 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.

(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (817) 222-5933, or [redacted]
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ASW-18837-OE.

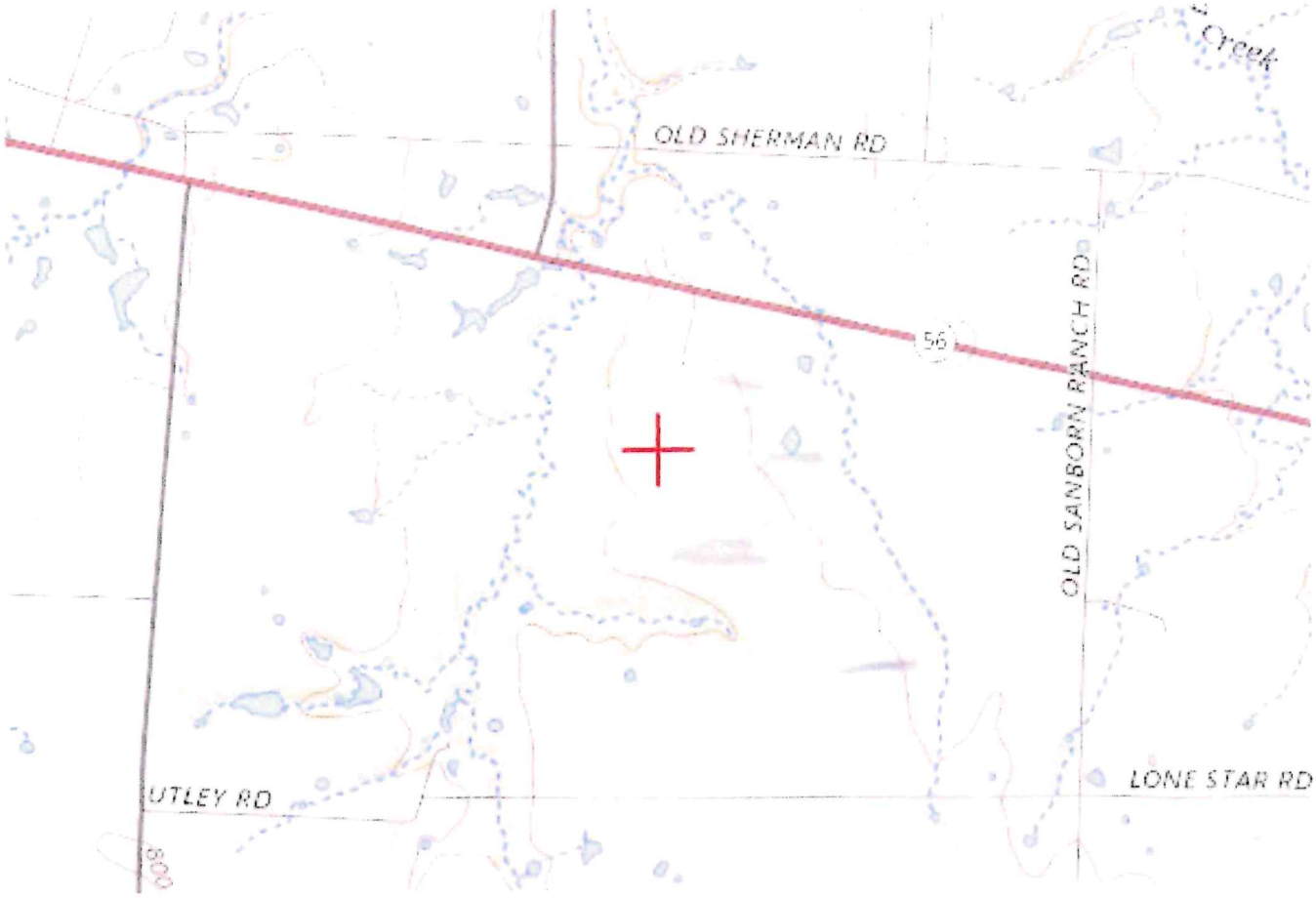
Signature Control No: 552255726-556445639 (DNE)
Andrew Hollie
Specialist

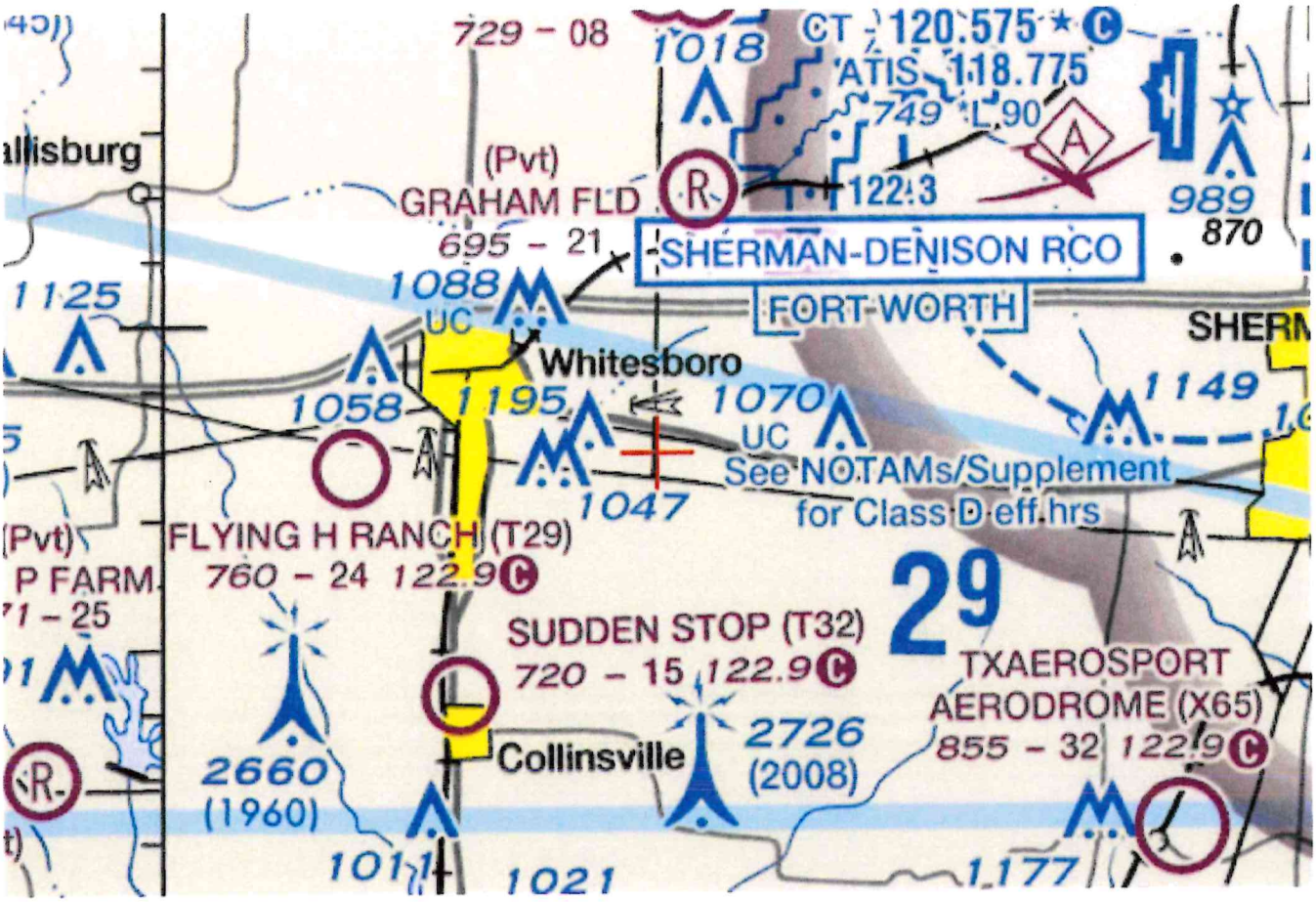
Attachment(s)
Case Description
Map(s)

Case Description for ASN 2022-ASW-18837-OE

TASWA DRF is requesting a permit amendment from the TCEQ to increase the waste fill height from 835 ft msl to 1125 ft msl.

TOPO Map for ASN 2022-ASW-18837-OE




729 – 08
1018
CT 120.575
ATIS 118.775
749 L 90
(Pvt)
GRAHAM FLD
695 – 21
122.3
SHERMAN-DENISON RCO
FORT-WORTH
989
870
1088
UC
Whitesboro
1125
1058
1195
1070
UC
1149
See NOTAMs/Supplement
for Class D eff.hrs
1047
FLYING H RANCH (T29)
760 – 24 122.9
SUDDEN STOP (T32)
720 – 15 122.9
29
TXAEROSPORT
AERODROME (X65)
855 – 32 122.9
2660
(1960)
Collinsville
2726
(2008)
1011
1021
1177

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2022-ASW-18835-OE

Issued Date: 10/04/2022

David Clark
Biggs and Mathews Environmental
1700 Robert Road
Suite 100
Mansfield, TX 76063

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Existing Municipal Solid Waste Landfill TASWA Disposal and Recycling Facility
Location:	Whitesboro, TX
Latitude:	33-37-32.64N NAD 83
Longitude:	96-49-44.39W
Heights:	740 feet site elevation (SE)
	384 feet above ground level (AGL)
	1124 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, red lights-Chapters 4,5(Red),&15.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

This determination expires on 04/04/2024 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.

(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (817) 222-5933, or andrew.hollie@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ASW-18835-OE.

Signature Control No: 552255724-556445640 (DNE)
Andrew Hollie
Specialist

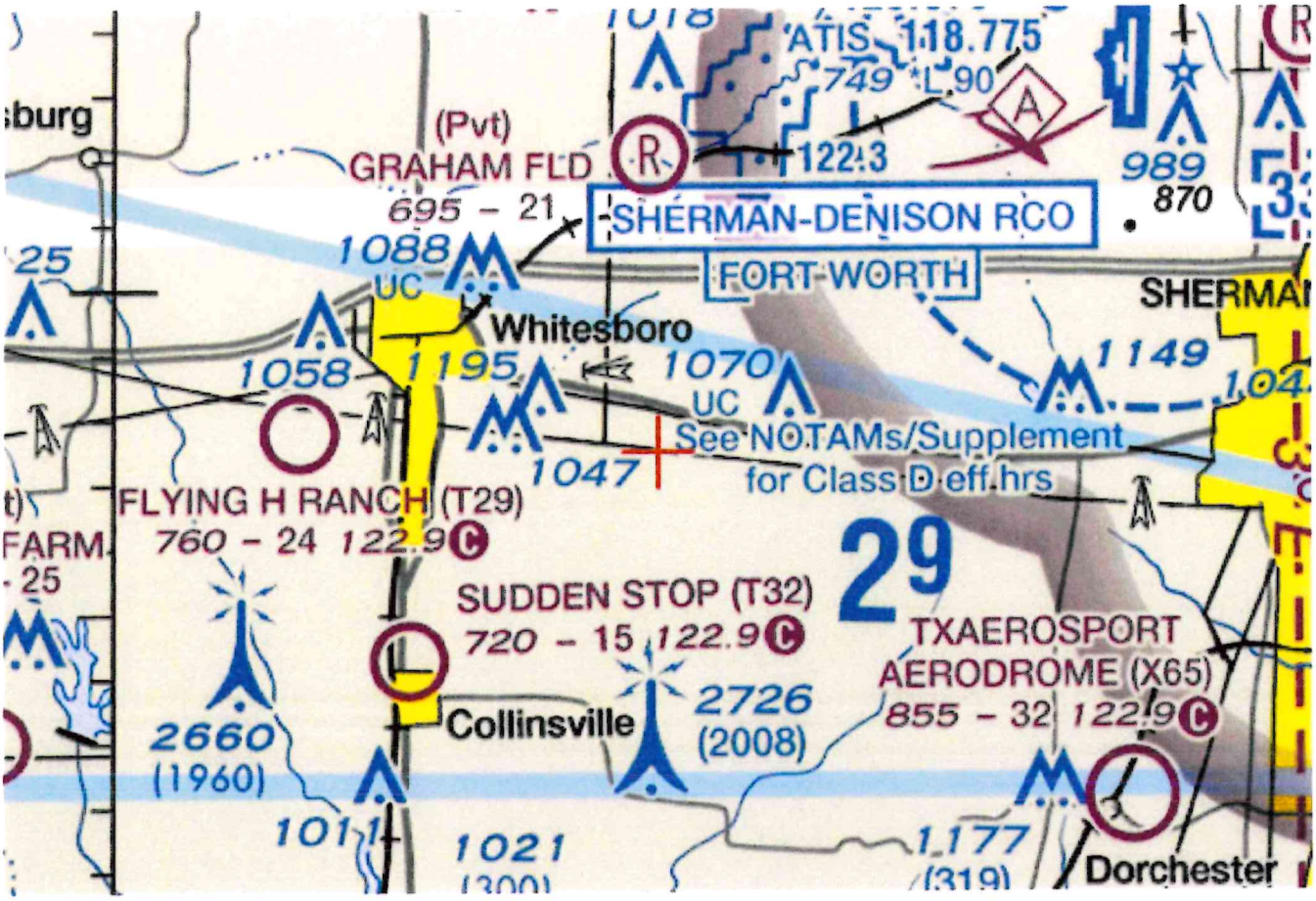
Attachment(s)
Case Description
Map(s)

Case Description for ASN 2022-ASW-18835-OE

TASWA DRF is requesting a permit amendment from the TCEQ to increase the waste fill height from 835 ft msl to 1125 ft msl.

TOPO Map for ASN 2022-ASW-18835-OE

Sectional Map for ASN 2022-ASW-18835-OE



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2022-ASW-18836-OE

Issued Date: 10/04/2022

David Clark
Biggs and Mathews Environmental
1700 Robert Road
Suite 100
Mansfield, TX 76063

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Existing Municipal Solid Waste Landfill TASWA Disposal and Recycling Facility
Location:	Whitesboro, TX
Latitude:	33-37-25.50N NAD 83
Longitude:	96-50-41.63W
Heights:	778 feet site elevation (SE)
	347 feet above ground level (AGL)
	1125 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, red lights-Chapters 4,5(Red),&15.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

This determination expires on 04/04/2024 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.

(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (817) 222-5933, or andrew.hollie@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ASW-18836-OE.

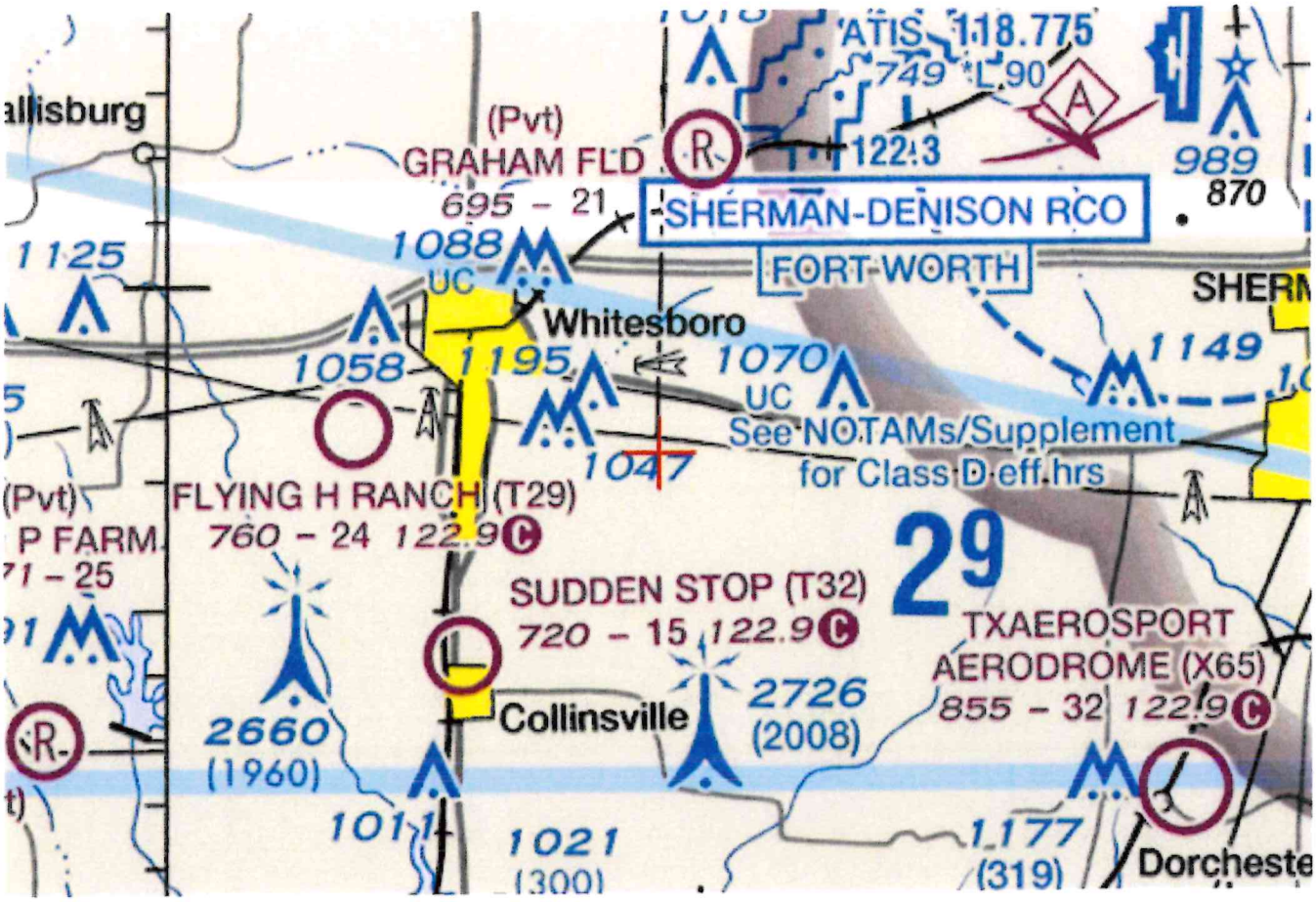
Signature Control No: 552255725-556445641 (DNE)
Andrew Hollie
Specialist

Attachment(s)
Case Description
Map(s)

Case Description for ASN 2022-ASW-18836-OE

TASWA DRF is requesting a permit amendment from the TCEQ to increase the waste fill height from 835 ft msl to 1125 ft msl.

TOPO Map for ASN 2022-ASW-18836-OE


ATIS 118.775
749 L 90
(Pvt)
GRAHAM FLD
695 - 21
122.3
SHERMAN-DENISON RCO
FORT-WORTH
989
870
1125
1088
UC
Whitesboro
1058
1195
1070
UC
See NOTAMs/Supplement
for Class D eff.hrs
1149
1047
(Pvt)
P FARM
71 - 25
FLYING H RANCH (T29)
760 - 24 122.9
29
SUDDEN STOP (T32)
720 - 15 122.9
TXAEROSPORT
AERODROME (X65)
855 - 32 122.9
2660
(1960)
Collinsville
2726
(2008)
1011
1021
(300)
1177
(319)
Dorcheste

BIGGS & MATHEWS ENVIRONMENTAL, INC
TBPE No. F-256 TBPG No. 50222

June 22, 2022

Mr. Joseph G. Washington
Airports Division
Safety and Standards Branch, ASW-620
U.S. Department of Transportation
Federal Aviation Administration
10101 Hillwood Pkwy
Fort Worth, Texas 76177

Re: TASWA Disposal and Recycling Facility, TCEQ Permit MSW 2290
Grayson County, Texas
Documentation of Coordination Relating to Airport Safety

Dear Mr. Washington:

On behalf of the Texoma Solid Waste Authority (TASWA), Biggs & Mathews Environmental, Inc. is preparing a permit amendment application to expand the existing TASWA Disposal and Recycling Facility (TCEQ Permit MSW 2290) located in Grayson County, Texas. The amendment application will request a vertical and horizontal expansion of the existing waste disposal boundary. The purpose of this letter is to document coordination with the Federal Aviation Administration consistent with the requirements of the municipal solid waste regulations, 30 Texas Administrative Code Chapter 330 (30 TAC §330.61(i)(5) and 30 TAC §330.545).

The location of the TASWA Disposal and Recycling Facility (TASWA DRF) is shown on attached Drawing IIA.1 – Detailed Highway Map. The site coordinates are approximately N33°38'13.70" and W96°49'58.55". Drawing IIA.2 illustrates that ground surface elevation of the site prior to any development of the facility ranged from approximately 730 ft msl to 770 ft msl. The proposed final elevation of the TASWA DRF facility at completion of all fill operations will be 1,124.50 ft msl.

Attached Drawing IIA.6 provides the proposed footprint of the TASWA DRF overlain on the Dallas – Ft Worth Sectional Aeronautical Chart effective May 19, 2022, through July 14, 2022 with 5,000 ft and 10,000 ft radius lines as well as a 6-mile radius line. The DFW chart indicates that there are no runways used by turbojet aircraft within 10,000 feet and no runways used by only piston-type aircraft within 5,000 feet of the proposed TASWA DRF footprint.

The DFW chart indicates that there are two general aviation airports within the 6-mile radius of the proposed TASWA DRF boundary. These two airports, Sudden Stop (T32) and Flying H Ranch (T29), are located approximately 4.8 nautical miles southwest and 5.4 nautical miles west of the proposed TASWA DRF boundary respectively and both have turf runway surfaces.

1700 Robert Road, Suite 100 • Mansfield, Texas 76063 • Phone: 817-563-1144

Please confirm our finding that there are no runways used by turbojet aircraft within 10,000 ft and no runways used by only piston-type aircraft within 5,000 ft of the proposed TASWA RDF boundary. Please also confirm that this correspondence provides notification to the FAA and the two airports within the 6-mile boundaries regarding the proposed expansion of the TASWA DRF facility.

Please call or e-mail me at 817-563-1144 or [redacted] if you have any questions or need additional information.

Sincerely,

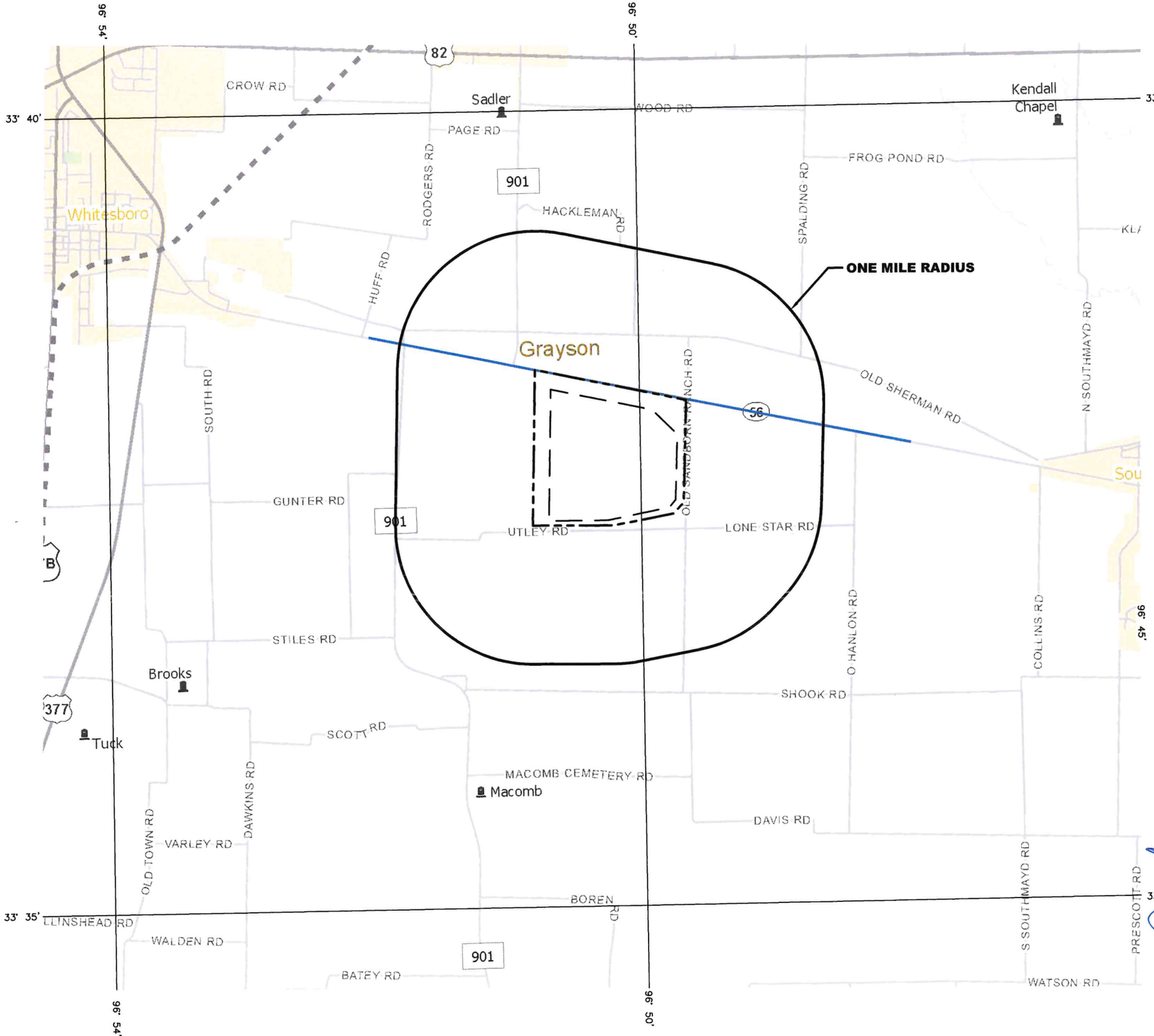
BIGGS & MATHEWS ENVIRONMENTAL

David Clark, P.E.
Principal

Attachments: Drawing IIA.1 – Detailed Highway Map
Drawing IIA.2 – General Topographic Map
Drawing IIA.6 – FAA Airport Location Map

cc: Jeff Howle, Manager – Flying H Ranch Airport, (T29)
P.O. Box 971
Whitesboro, TX 76273

Don Swindle, Manager – Sudden Stop Airport (T32)
1207 Joggers Trail
Collinsville, TX 76233



0 2000 4000
SCALE IN FEET

LEGEND

- 2290A PERMIT BOUNDARY
- 2290A LANDFILL FOOTPRINT
- REGULAR DELIVERY ROUTES WITHIN 2 MILES OF SITE ENTRANCE

- Unincorporated Community
- County Seat
- Border Crossing
- Cemetery
- Cemetery (Inside City)
- Deep Draft Port
- Shallow Draft Port
- Railroad
- Dam
- River or Stream
- TXDOT District
- Lakes
- Education
- Military
- Airport Runway
- Airport
- Prison
- Parks and Other Public Land

NOTES:

1. GRAYSON AND COOKE COUNTY HIGHWAY MAPS DOWNLOADED FROM TxDOT WEBSITE ON FEBRUARY 10, 2022.
2. PRIMARY ACCESS ROAD WITHIN ONE MILE OF THE FACILITY USED TO ACCESS THE FACILITY IS STATE HIGHWAY 56. THIS ROAD IS HARD SURFACED PAVED ROADS OF ASPHALT OR CONCRETE.

STATE OF TEXAS
DAVID L. CLARK
81905
LICENSED
PROFESSIONAL ENGINEER
1-30-25

ISSUED FOR PERMITTING PURPOSES ONLY

DETAILED HIGHWAY MAP GRAYSON COUNTY

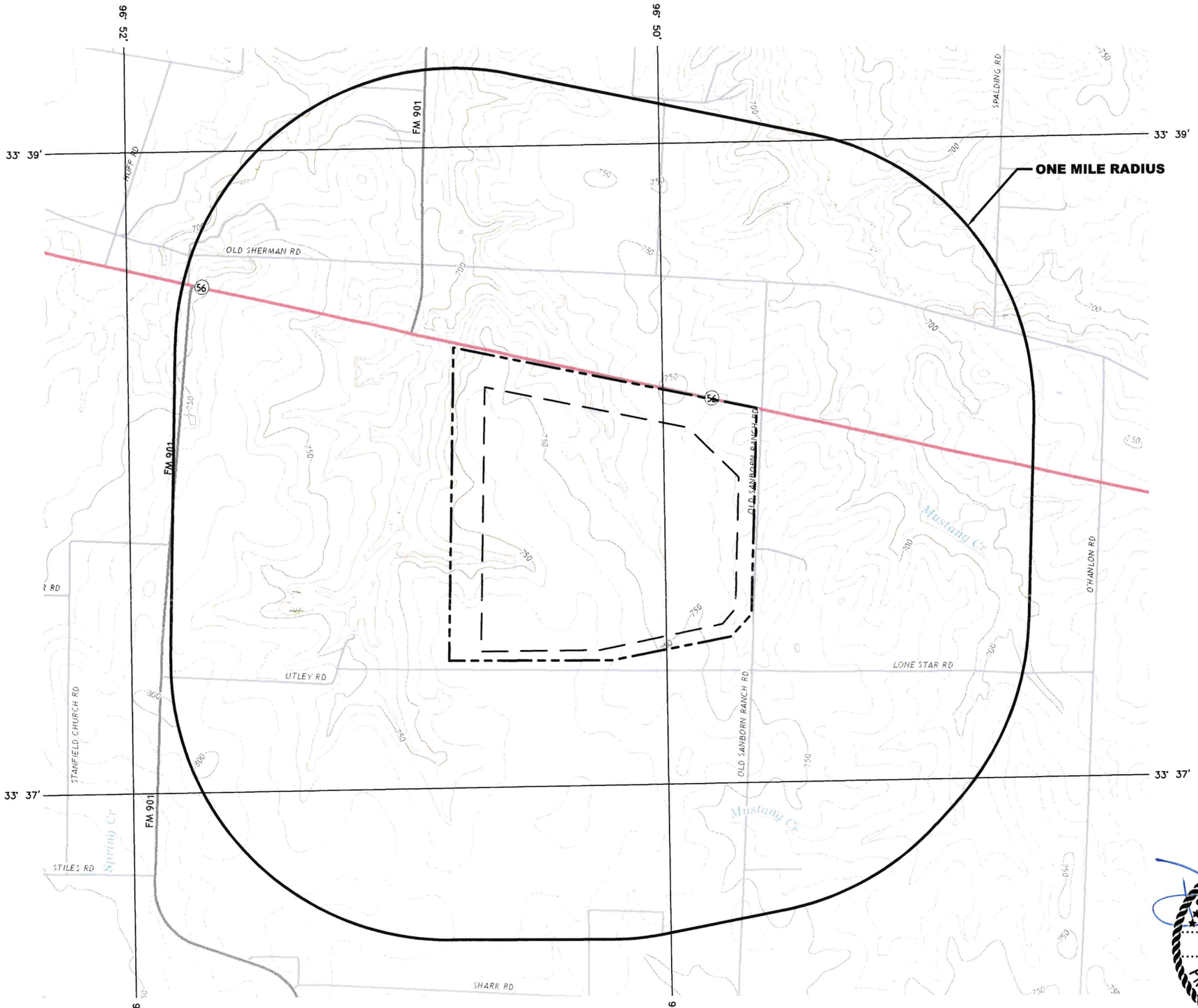
TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DRF
PERMIT AMENDMENT

BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DRAWING
IIA.1

O:\TASWA\P\Drawings\PART II\IIA.1-DetailedHwyMap.dwg Layout: Layout1 User: bboles



0 1000 2000
SCALE IN FEET

LEGEND

- 2290A PERMIT BOUNDARY
- 2290A LANDFILL FOOTPRINT
- 700 EXISTING 10' GROUND CONTOUR
- SURFACE WATER BODY OR OTHER WATER

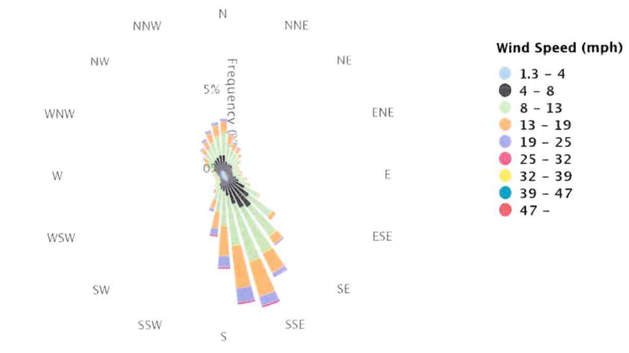
SADLER, TEX	ETHEL, TEX
2019	2019

ROAD CLASSIFICATION

Expressway	Local Connector
Secondary Hwy	Local Road
Ramp	4WD
Interstate Route	US Route / State Route

DENTON MUNI AP (TX) Wind Rose

July 1, 1996 - Feb. 14, 2022
Sub-Interval: Jan. 1 - Dec. 31, 0 - 23



WIND ROSE
SOURCE: MIDWEST REGIONAL CLIMATE CENTER

NOTE:

1. 7.5 MINUTE TOPOGRAPHIC BASE MAPS SADLER, TEX AND ETHEL, TEX DOWNLOADED FROM USGS WEBSITE ON FEBRUARY 10, 2022.

STATE OF TEXAS
DAVID L. CLARK
81905
LICENSED
PROFESSIONAL ENGINEER
1-30-25

ISSUED FOR PERMITTING PURPOSES ONLY

GENERAL TOPOGRAPHIC MAP

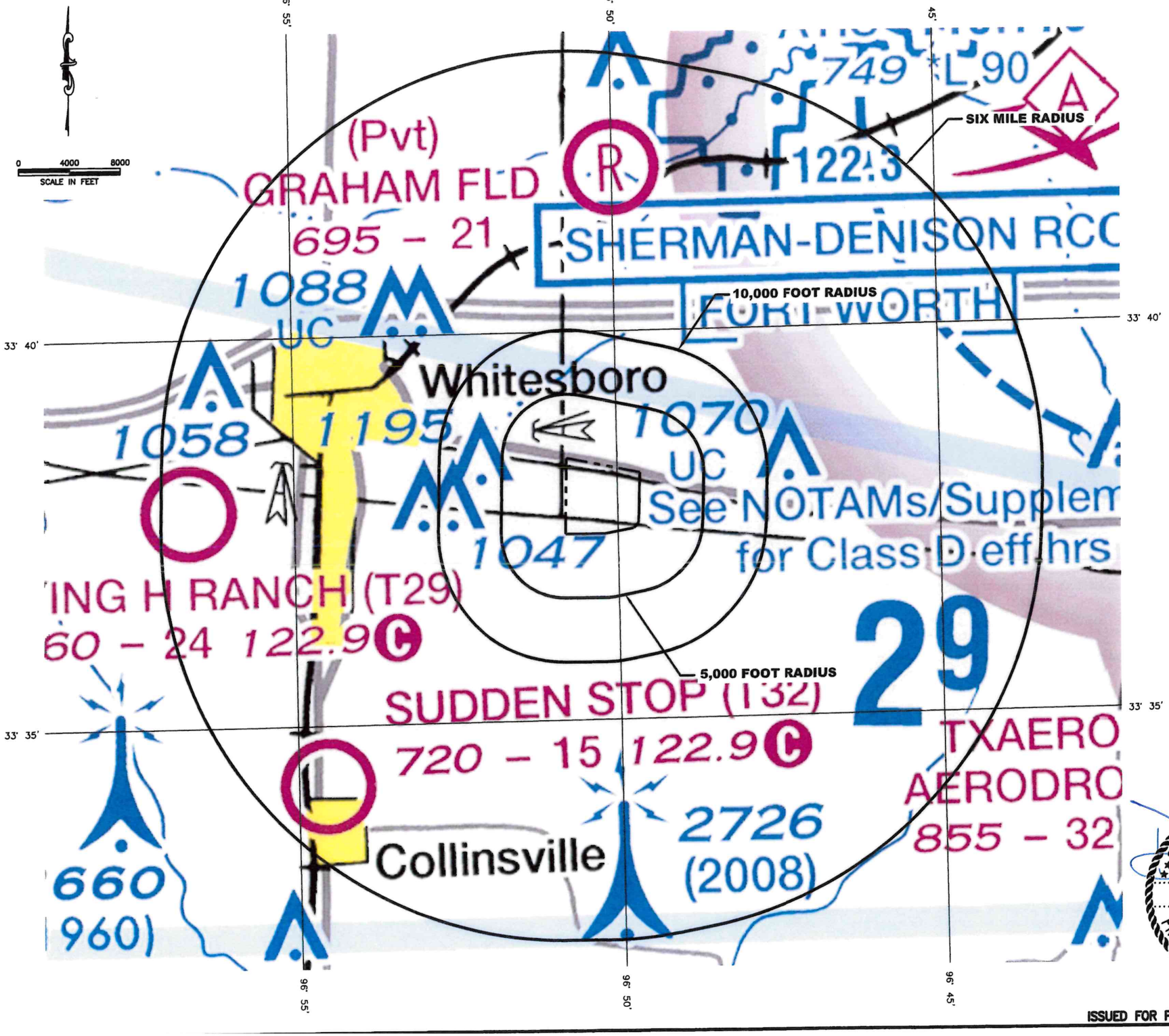
TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DRF
PERMIT AMENDMENT

BME
BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817-563-1144

TBPE FIRM NO. F-256
TBPG FIRM NO. 50222

DRAWING
IIA.2

O:\TASWA\P\Drawings\PART II\IIA.2-GenTopoMap.dwg Layout: Layout1 User: bboles



O:\TASWA\P\Drawings\PART II\IIA.6-AirportMap.dwg Layout: Layout1 User: scundiff

LEGEND

PERMIT BOUNDARY

AIRPORTS

Other than hard-surfaced runways

Seaplane Base

Hard-surfaced runways 1500 ft. to 8069 ft. in length

Hard-surfaced runways greater than 8069 ft. or some multiple runways less than 8069 ft.

Open dot within hard-surfaced runway configuration indicates approximate VOR, VOR-DME, DME or VORTAC location.

All recognizable hard-surfaced runways, including those closed, are shown for visual identification. Airports may be public or private.

AIRPORT DATA

Box indicates FAR 93 Special Air Traffic Rules & Airport Traffic Patterns.

Runways with Right Traffic Patterns (public use)

*RP Special conditions exist - see Supplement.

FSS - FAR 91

NO SVFR - Location Identifier

NAME (NAM) (PNAM) - ICAO Location Indicator shown outside contiguous U.S.

CT - 118.3 * C ATIS 123.8

285 L 72 122.95

RP 23, 34

VFR Advsy 125.0 - UNICOM

WX CAM - Weather Camera (AK)

AOE - Airport of Entry

FSS - Flight Service Station

NO SVFR - Fixed-wing special VFR flight is prohibited.

CT - 118.3 - Control Tower (CT) - primary frequency

* - Star indicates operation part-time. See tower frequencies tabulation for hours of operation.

C - Follows the Common Traffic Advisory Frequency (CTAF)

ATIS 123.8 - Automatic Terminal Information Service

AFIS 135.2 - Automatic Flight Information Service (AK)

ASOS/AWOS 135.42 - Automated Surface Weather Observing Systems (shown where full-time ATIS not available). Some ASOS/AWOS facilities may not be located at airports.

UNICOM - Aeronautical advisory station

VFR Advsy - VFR Advisory Service shown where full-time ATIS not available and frequency is other than primary CT frequency.

285 - Elevation in feet

L - Lighting in operation Sunset to Sunrise

*L - Lighting limitations exist; refer to Supplement.

72 - Length of longest runway in hundreds of feet; usable length may be less.

When information is lacking, the respective character is replaced by a dash. Lighting codes refer to runway edge lights and may not represent the longest runway or full length lighting.

OBSTRUCTIONS

1000 ft and higher AGL

Above 200 ft & below 1000 ft AGL (above 299 ft AGL in urban area)

Wind Turbine

Group Obstruction

Obstruction with high-intensity lights; may operate part-time

Wind Turbine Farm

2894' UC

Elevation of the top above mean sea level - 2049

Height above ground - (1149)

Under construction or reported: position and elevation unverified - UC

NOTICE: Guy wires may extend outward from structures.

NOTE:

1. THERE ARE 2 PUBLIC USE AIRPORTS LOCATED WITHIN SIX MILES OF THE FACILITY.
2. BASE MAP IS FAA SECTIONAL AERONAUTICAL CHART DALLAS–FT. WORTH, EFFECTIVE DATE MAY 19, 2022 TO JULY 14, 2022.

STATE OF TEXAS
DAVID L. CLARK
81905
PROFESSIONAL ENGINEER
1-30-25

ISSUED FOR PERMITTING PURPOSES ONLY

FAA AIRPORT LOCATION MAP

TEXOMA AREA SOLID WASTE AUTHORITY
TASWA DRF
PERMIT AMENDMENT

BME

BIGGS & MATHEWS ENVIRONMENTAL
1700 ROBERT ROAD, STE. 100
MANSFIELD, TEXAS 76063
817–563–1144

TBPE FIRM NO. F–256

TBPG FIRM NO. 50222

DRAWING IIA.6

APPENDIX III
TEXOMA COUNCIL OF GOVERNMENTS DOCUMENTATION

TCOG | office of the executive director

1117 Gallagher Drive, Suite 470
Sherman, Texas 75090
www.tcog.com
(903) 813-3512 Phone
(903) 813-3511 *Fax*

February 11, 2025

Mr. David Clark, PE
Biggs and Mathews Environmental
1700 Robert Road, Suite 100
Mansfield, Texas 76063

RE: Compliance Review of Parts I and II of the Permit Amendment Application for the TASWA DRF, Grayson County, Texas

Dear Mr. Clark,

The Texoma Texas Council of Governments (TCOG) has been directed by the Texas Commission on Environmental Quality to determine the consistency of solid waste permit applications, amendments, and registration applications with the 2022-2042 Regional Solid Waste Management Plan, Volumes I and II

On February 11, 2025, TCOG's Executive Director found the permit application for the TASWA DRF in Grayson County to be consistent with the goals of the Regional Management Plan.

If you have any questions regarding TCOG's conformance review, please contact Eric Bridges by phone at 903-893-2161 x3512 or by email at [redacted]

Sincerely,

Eric Bridges
Executive Director

cc: John O'Steen
Alexis Taylor-Baker

APPENDIX IIJ
WASTE ACCEPTANCE PLAN FORM TYPE I AND TYPE I AE LANDFILL FACILITIES

Texas Commission on Environmental Quality

Waste Acceptance Plan Form
Type I and Type IAE Landfill Facilities

This form is designed to address the requirements for Waste Acceptance Plans in Part II of an application, as required by Title 30 Texas Administrative Code, Chapter 330, §330.61(b)(1). Rules are from Chapter 330 unless otherwise specified. If more space is needed for a line item or table item, include the information on a separate sheet and reference the line or table item.

A. Applicant Information

1. Facility Name: TASWA Disposal and Recycling Facility
2. MSW Permit No.: 2290A

B. Waste Generation Areas and Population Estimates

Table 1. Areas contributing waste to the facility and estimate of population or population equivalent served by the facility. Values are estimates, not permit limits.

Waste Generation Area	Estimate of Population or Population Equivalent Served in each Area
City of Sherman	45,800
City of Denison	25,700
City of Gainesville	17,900
Grayson County	68,500
Cooke County	24,400
Other	10,000

Estimated population or population equivalent served by the facility

192,300

C. General Sources and Types of Waste to be Accepted at the Facility

General sources of waste to be received (household, commercial, industrial, etc.).

2. Types of Waste to be Accepted for Disposal at the Facility

a. Indicate whether the following wastes will be accepted for disposal (check "Yes" for will accept or "No" for will not accept).

i. ☑ Yes ☐ No Municipal solid waste [§330.3(88)]

ii. ☑ Yes ☐ No Construction or demolition waste [§330.3(33)]

iii. ☑ Yes ☐ No Brush [§330.3(18)]

iv. ☑ Yes ☐ No Rubbish [§330.3(130)]

v. ☑ Yes ☐ No Used or scrap tires that have been processed (such as by splitting, shredding, quartering or sidewall removal) in a manner acceptable to the executive director [§330.3(130)]

vi. ☑ Yes ☐ No Class 2 nonhazardous industrial solid waste [§330.3(22), §330.173(i)]

vii. ☑ Yes ☐ No Class 3 nonhazardous industrial solid waste [§330.3(23), §330.173(j)]

b. Indicate whether the following special wastes will be accepted for disposal. These wastes must have been or are to be treated and the treated materials have been tested and are certified to contain no free liquids.

i. ☑ Yes ☐ No Municipal wastewater treatment plant sludge. [§330.3(148)(D), §330.171(c)(7)]

ii. ☑ Yes ☐ No Other types of domestic sewage treatment plant sludge [§330.3(148)(D), §330.171(c)(7)]

iii. ☑ Yes ☐ No Municipal water-supply treatment plant sludge. [§330.3(148)(D), §330.171(c)(7)]

iv. ☑ Yes ☐ No Septic tank pumping waste [§330.171(c)(7)]

v. ☑ Yes ☐ No Grease trap waste. [§330.3(59), §330.171(c)(7)]

vi. ☑ Yes ☐ No Grit trap waste [TAC §330.3(60), §330.171(c)(7)]

vii. ☐ Yes ☑ No Waste from commercial or industrial wastewater treatment plants [§330.3(148)(G), §330.171(b)]

viii. ☐ Yes ☑ No Other liquid waste. Explain _____ [§330.171(c)(7)]

ix. Specify other special wastes to be accepted for disposal that are not listed above and for which free liquids may be an issue.

N/A

c. Indicate whether the following Special Wastes will be accepted for disposal.

i. ☑ Yes ☐ No Municipal hazardous waste from conditionally exempt small quantity generators [§330.171(c)(6), §330.3(32)].

ii. ☐ Yes ☑ No Class 1 industrial nonhazardous solid waste (excluding waste that is Class 1 only because of asbestos content). May be accepted only at Type I landfills with a Class 1 cell [§330.3(21), §330.171(b), §330.3(148)(B), §330.173]; may not be accepted at arid exempt [AE] landfills [330.173(a)].

iii. ☐ Yes ☑ No Waste that is Class 1 only because of asbestos content [§330.3(21), §330.171(b), §330.3(148)(B), §330.171(c)(3)(I), 30 TAC §330.171(c)(3)]

iv. ☐ Yes ☑ No Waste from commercial air pollution control devices [§330.171(b), §330.3(148)(G), §330.331(e)]

v. ☑ Yes ☑ No Tanks, drums, or containers that were used for shipping or storing any material that has been listed as a hazardous constituent in 40 CFR Part 261, Appendix VII but has not been listed as a commercial chemical product in 40 CFR §261.33(e) or (f) [§330.171(b), §330.3(148)(G)]

vi. ☐ Yes ☑ No Drugs, other than those contained in normal household waste [§330.171(b), §330.3(148)(J)]

vii. ☐ Yes ☑ No Contaminated foods, other than those contained in normal household waste [§330.171(b), §330.3(148)(J)]

viii. ☐ Yes ☑ No Contaminated beverages, other than those contained in normal household waste [§330.171(b), §330.3(148)(J)]

ix. ☑ Yes ☑ No Empty containers that have been used for pesticide, herbicide, fungicide, or rodenticide, that have been triple-rinsed before receipt at the landfill, are rendered unusable before receipt or on arrival, and are covered by the end of the same working day they are received [§330.171(c)(5)(A)]

x. ☑ Yes ☐ No Empty containers for which triple-rinsing is not feasible or practical (e.g. paper bags, cardboard containers) that are managed as a municipal hazardous waste from a conditionally exempt small quantity generator or in accordance with requirements for disposal of industrial wastes [§330.171(c)(5)(B), §330.171(c)(6), §330.173]

xi. ☐ Yes ☑ No Regulated asbestos-containing material (RACM) [40 CFR 261, §330.171(c)(3), §330.3(126)]

xii. ☑ Yes ☐ No Non-regulated asbestos-containing material (non-RACM) [40 CFR 261, §330.171(c)(4), §330.3(93)]

xiii. ☐ Yes ☑ No Incinerator ash [§330.3(148)(M), §330.171(b)]

xiv. ☐ Yes ☑ No Soil contaminated by petroleum products, crude oils, or chemicals in concentrations of greater than 1,500 mg/kg total petroleum hydrocarbons; or contaminated by constituents of concern that exceed the concentrations listed in §335.521(a)(1) [§330.3(148)(N), §330.171(b)(4)] (may be accepted at Type I landfills with Class 1 cells. [§330.331(e)] (Excluded from Type I AE. [§330.173(a)])

xv. ☑ Yes ☐ No Household-generated used oil filters that have been crushed to less than 20% of original volume or processed by a method other than crushing to remove all free-flowing used oil. The processing method may include (1) having the filter separated into component parts and free-flowing used oil removed from the filter element by compression; (2) having a replaceable filter medium that has been compressed to remove free-flowing used oil; **or** (3) having a housing that has been punctured and the filter drained for at least 24 hours. [§330.171(d)].

xvi. ☐ Yes ☑ No Waste from oil, gas, and geothermal activities subject to regulation by the Railroad Commission of Texas) [§330.171(b), §330.3(148)(P)]

xvii. ☐ Yes ☑ No Waste generated outside the boundaries of Texas that contains any industrial waste; any waste associated with oil, gas, and geothermal exploration; or any of the special wastes that are indicated in §330.3(148) [§330.171(b), §330.3(148)(Q)]

xviii. ☑ Yes ☐ No Dead animals [§330.171(c)(2)]

xix. ☑ Yes ☐ No Slaughterhouse wastes [§330.171(c)(2)]

xx. ☐ Yes ☑ No Treated medical waste from health care-related facilities. [§330.3(85), §326.75(r)]

xxi. Specify other special wastes to be accepted for disposal that are not listed above:

Special waste not listed above accepted only with prior written approval from the executive director.

D. Waste Prohibited from Disposal

The following wastes are prohibited from disposal.

- Any waste not authorized for disposal above, including those for which "No" has been indicated.
- Untreated medical waste. This prohibition may be superseded by the executive director in writing when disposal of untreated medical waste is required to protect human health and the environment from the effects of a natural or man-made disaster. [§330.171(c)(1), §330.3(85)]
- Lead-acid storage batteries. [§330.15(e)(1)]
- Used motor vehicle oil. [§330.15(e)(2)]
- Used oil filters from internal combustion engines except for used oil filters from households that have been processed as described in §330.171(d). [§330.15(e)(3)]
- Whole used or scrap tires. [§330.15(e)(4)]
- Items containing CFCs that have not been handled in accordance with 40 CFR §82.156(f). [§330.15(e)(5)]
- Bulk or noncontainerized liquid waste unless the waste is household waste other than septic waste and as defined by the Paint Filter Test, EPA Method 9095. [§330.15(e)(6), §330.3(81)]
- Containers holding liquids unless: the container is similar in size to those found in household waste, the container is designated to hold liquids for other than storage, **or** the waste is household waste. [§330.15(e)(6), §330.3(81)]
- Regulated hazardous waste [40 CFR §261.3] that is not excluded from regulation as a hazardous waste [40 CFR §261.4(b)] or that was not generated by a conditionally exempt small-quantity generator. [§330.15(e)(7), §330.3(127)]
- Waste that exhibits the characteristics for hazardous waste [40 CFR §261.3] from oil, gas, and geothermal activities subject to regulation by the Railroad Commission of Texas. [§330.15(e)(7)]
- Polychlorinated biphenyl (PCB) wastes, [40 CFR Part 761] unless authorized by the United States Environmental Protection Agency. [§330.15(e)(8)]
- Radioactive materials, [Chapter 336] except as authorized in Chapter 336 or that are subject to an exemption of the Department of State Health Services. [§330.15(e)(9)]

Specify any other wastes to be prohibited for disposal that are not listed above.

N/A

E. Material Recovery

Will the facility recover materials from incoming waste? ☐ Yes ☑ No

If yes, provide a descriptive narrative describing the percentage of incoming waste, if applicable, that must be recovered and its intended use.

N/A

F. Estimated Maximum Annual Waste Acceptance Rate Projected for Five Years [§330.61(b)(1)(C)]

Provide an **estimated** maximum annual waste acceptance rates at the facility, projected for five years. These rates are not permit limitations.

Table 1. Five-Year Projection for Waste Acceptance.

Year	Estimated Maximum Annual Waste Acceptance Rate
1	270,000 cy
2	275,400 cy
3	280,900 cy
4	286,500 cy
5	292,300 cy

G. Storage and Processing Units

Indicate units that will store or process waste at the facility. Describe the wastes that will be stored or processed in these units. Provide the final disposition or use (e.g., landfill disposal, composting) of the processed materials. **Waste storage and processing authorized separately (such as a registered transfer station within the permit boundary of a landfill) should not be included on this form.**

Storage and processing units must be illustrated (or locations described) on site layout figures in Part II of the application.

Examples:

1. Unit: liquid stabilization unit, Purpose: process, Waste Type: liquid waste, Disposition: solidified material to be disposed in a properly authorized landfill; or
2. Unit: grease separation and dewatering unit, Purpose: process, Disposition: water to WWTP and grease to composter or Type I landfill.

Table 1. Waste storage and processing units.

Unit	Purpose	Waste Type Stored or Processed	Final Disposition or Use
	☐Store ☐Process		
	☐Store ☐Process		
	☐Store ☐Process		
	☐Store ☐Process		
	☐Store ☐Process		
	☐Store ☐Process		

H. Prohibited from Processing

The following wastes are prohibited from processing:

- Any wastes not authorized for processing above.
- Lead-acid storage batteries may not be incinerated. [§330.15(e)(1)]
- Used motor vehicle oil may not be incinerated. [§330.15(e)(2)]
- Regulated hazardous waste [40 CFR §261.3] that is not excluded from regulation as a hazardous waste [40 CFR §261.4(b)] or that was not generated by a conditionally exempt small-quantity generator. [§330.15(e)(7), §330.3(127)]

Specify any other wastes to be prohibited for storage or processing that are not listed above.

N/A

I. Special Waste Acceptance Plan [§330.171(b)(2)]

Does this application include an **optional** Special Waste Acceptance Plan?
☐ Yes ☑ No

If yes, please provide its location in the application.

J. Limiting Parameters [§330.61(b)(1)]

1. Regulated Hazardous Waste
   MSW landfills may not accept regulated hazardous waste [§330.3(127)] for processing or disposal. The presence or characteristic of any material meeting the definition of a regulated hazardous waste is a limiting parameter for waste disposal or processing.
2. Free Liquids
   The presence of free liquids, as defined by the Paint Filter Test, EPA Method 9095, in waste, but not household waste and not liquid in containers similar in size to those found in household waste, is a limiting parameter for waste disposal. [§330.15(e)(6), §330.3(81)]
3. PCBs
   The presence of polychlorinated biphenyls (PCB) wastes [40 CFR Part 761] unless authorized by the United States Environmental Protection Agency is a limiting parameter for waste disposal or processing. [§330.15(e)(8)]
4. Radioactive Materials
   The presence of radioactive materials [Chapter 336], except as authorized in Chapter 336 or that are subject to an exemption of the Department of State Health Services, is a limiting parameter for waste disposal or processing. [§330.15(e)(9)]
5. Class 1 Solid Waste

   For all Type I AE landfills and for Type I landfills that do not have a Class 1 cell [330.331(e)] or have chosen to excluded Class 1 industrial nonhazardous solid waste, 1,500 mg/kg TPH and the concentrations in 30 TAC §335.521(a)(1) are limiting parameters for waste disposal.
6. Other limitations: