



# **Administrative Package Cover Page**

**This file contains the following documents:**

1. Summary of application (in plain language)
2. First Notice (NORI-Notice of Receipt of Application and Intent to Obtain a Permit)
3. Application Materials

*The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by 30 TAC Chapter 39. The information provided in this summary may change during the technical review of the application and are not federal enforceable representations of the permit application.*

San Antonio Water System (CN600529069) operates the Steven M. Clouse Water Recycling Center (SMCWRC) (RN103119020), a wastewater treatment facility. SMCWRC is a subdivision of its own within the city limits. The facility is located at 3495 Valley Road in the city of San Antonio, Bexar County, Texas 78221. This permit application is for renewal to discharge treated domestic wastewater at the following Outfalls:

- Outfall 001 = 125 million gallons per day
- Outfall 002 = 10 million gallons per day
- Outfall 003 = 10 million gallons per day
- Outfall 004 = 3 million gallons per day
- Outfall 005 = 2.6 million gallons per day
- Outfall 006 = 46 million gallons per day

The pollutants from these discharges are Carbonaceous Biochemical Oxygen Demand, Total Suspended Solids, Ammonia and Escherichia coli (E. coli). The discharges also contain chlorine residual less than 0.1 part per million and are required to have a potential of hydrogen (pH) between 6.0 and 9.0, or between 6.5 and 9.0, depending on discharge location, measured as standard units. Additional potential pollutants are included in the Domestic Wastewater Application Technical Report, Worksheet 2.0.

The Steven M. Clouse Water Recycling Center is a two-stage, conventional activated sludge plant that employs physical, biological, and chemical principles to remove contaminants from wastewater. First, influent wastewater is routed through screens to remove large solids. Next, the wastewater flows through grit removal chambers to remove inorganic particles like sand or gravel. The wastewater then flows through primary clarifiers where solids settle to the bottom and oils and fats rise to the top, which are removed and processed in anaerobic digesters.

From the primary clarifiers, the wastewater flows through aeration basins where the biological treatment occurs as microorganisms consume the organic materials. Flow from the aeration basins enters the final clarifiers where remaining solids settle to the bottom and are directed to the anaerobic digesters. Following the final clarifiers, flows pass through the filters where any remaining particles are filtered out. Finally, the water is treated with chlorine and flows through chlorine contact basins to ensure destruction of pathogenic organisms and dechlorinated with sulfur dioxide to safeguard the receiving stream. For biosolids processing, the facility includes screening, thickening, anaerobic digestion, holding tanks, mechanical dewatering, and drying beds.



Jon Niermann, *Chairman*  
Bobby Janecka, *Commissioner*  
Catarina R. Gonzales, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

December 20, 2024

Re: Confirmation of Submission of the Renewal without changes for Public Domestic Wastewater Authorization.

Dear Applicant:

This is an acknowledgement that you have successfully completed Renewal without changes for the Public Domestic Wastewater authorization.

ER Account Number: ER046829  
Application Reference Number: 656394  
Authorization Number: WQ0010137033  
Site Name: Steven M Clouse Water Recycling Center  
Regulated Entity: RN103119020 - Steven M Clouse Water Recycling Center  
Customer(s): CN600529069 - San Antonio Water System

Please be aware that TCEQ staff may contact your designated contact for any additional information.

If you have any questions, you may contact the Applications Review and Processing Team by email at [WQ-ARPTeam@tceq.texas.gov](mailto:WQ-ARPTeam@tceq.texas.gov) or by telephone at (512) 239-4671.

Sincerely,  
Applications Review and Processing Team  
Water Quality Division

## Texas Commission on Environmental Quality

Update Domestic or Industrial Individual Permit

WQ0010137033

### Site Information (Regulated Entity)

What is the name of the site to be authorized?	STEVEN M CLOUSE WATER RECYCLING CENTER
Does the site have a physical address?	Yes
<b>Physical Address</b>	
Number and Street	3495 VALLEY RD
City	SAN ANTONIO
State	TX
ZIP	78221
County	BEXAR
Latitude (N) (##.#####)	29.238611
Longitude (W) (-###.#####)	-98.430555
Primary SIC Code	4952
Secondary SIC Code	
Primary NAICS Code	221320
Secondary NAICS Code	
<b>Regulated Entity Site Information</b>	
What is the Regulated Entity's Number (RN)?	RN103119020
What is the name of the Regulated Entity (RE)?	STEVEN M CLOUSE WATER RECYCLING CENTER
Does the RE site have a physical address?	No
<b>Physical Address</b>	
Because there is no physical address, describe how to locate this site:	LOCATED ON VALLEY ROAD NEAR THE CONFLUENCE OF THE SAN ANTONIO AND MEDINA RIVERS APPROX 1 MILE WEST OF IH-37 AND 2.25 MILES EAST OF FM ROAD 1937
City	SAN ANTONIO
State	TX
ZIP	78221
County	BEXAR
Latitude (N) (##.#####)	
Longitude (W) (-###.#####)	

Facility NAICS Code

What is the primary business of this entity?

DOMESTIC

## San Ant-Customer (Applicant) Information (Owner)

How is this applicant associated with this site?

Owner

What is the applicant's Customer Number (CN)?

CN600529069

Type of Customer

City Government

### **Full legal name of the applicant:**

Legal Name

San Antonio Water System

Texas SOS Filing Number

Federal Tax ID

742632530

State Franchise Tax ID

State Sales Tax ID

Local Tax ID

DUNS Number

57582603

Number of Employees

501+

Independently Owned and Operated?

Yes

I certify that the full legal name of the entity applying for this permit has been provided and is legally authorized to do business in Texas.

Yes

### **Responsible Authority Contact**

Organization Name

San Antonio Water System

Prefix

MS

First

ALISSA

Middle

Last

LOCKETT

Suffix

Credentials

PE

Title

VICE PRESIDENT

### **Responsible Authority Mailing Address**

Enter new address or copy one from list:

Address Type

Domestic

Mailing Address (include Suite or Bldg. here, if applicable)

2800 US HIGHWAY 281 N

Routing (such as Mail Code, Dept., or Attn:)

City

SAN ANTONIO

State

TX

ZIP

78212

Phone (###-###-####)	2102333401
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	ALISSA.LOCKETT@SAWS.ORG

## Billing Contact

<b>Responsible contact for receiving billing statements:</b>	
Select the permittee that is responsible for payment of the annual fee.	CN600529069, San Antonio Water System
Organization Name	SAN ANTONIO WATER SYSTEM
Prefix	MS
First	FLORAMIE
Middle	
Last	WELCH
Suffix	
Credentials	
Title	ENVIRONMENTAL ANALYST III
Enter new address or copy one from list:	
<b>Mailing Address</b>	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	2800 US HIGHWAY 281 N
Routing (such as Mail Code, Dept., or Attn:)	
City	SAN ANTONIO
State	TX
ZIP	78212
Phone (###-###-####)	2102333744
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	FLORAMIE.WELCH@SAWS.ORG

## Application Contact

<b>Person TCEQ should contact for questions about this application:</b>	
Same as another contact?	
Organization Name	SAN ANTONIO WATER SYSTEM

Prefix	
First	FLORAMIE
Middle	
Last	WELCH
Suffix	
Credentials	
Title	ENVIRONMENTAL ANALYST III
Enter new address or copy one from list:	
<b>Mailing Address</b>	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	2800 US HIGHWAY 281 N
Routing (such as Mail Code, Dept., or Attn:)	
City	SAN ANTONIO
State	TX
ZIP	78212
Phone (###-###-####)	2102333744
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	FLORAMIE.WELCH@SAWS.ORG

Technical Contact

<b>Person TCEQ should contact for questions about this application:</b>	
Same as another contact?	Billing Contact
Organization Name	SAN ANTONIO WATER SYSTEM
Prefix	MS
First	FLORAMIE
Middle	
Last	WELCH
Suffix	
Credentials	
Title	ENVIRONMENTAL ANALYST III
Enter new address or copy one from list:	
<b>Mailing Address</b>	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	2800 US HIGHWAY 281 N

Routing (such as Mail Code, Dept., or Attn:)	
City	SAN ANTONIO
State	TX
ZIP	78212
Phone (###-###-####)	2102333744
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	FLORAMIE.WELCH@SAWS.ORG

## DMR Contact

### Person responsible for submitting Discharge Monitoring Report Forms:

Same as another contact?	Technical Contact
Organization Name	SAN ANTONIO WATER SYSTEM
Prefix	MS
First	FLORAMIE
Middle	
Last	WELCH
Suffix	
Credentials	
Title	ENVIRONMENTAL ANALYST III
Enter new address or copy one from list:	
<b>Mailing Address:</b>	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	2800 US HIGHWAY 281 N
Routing (such as Mail Code, Dept., or Attn:)	
City	SAN ANTONIO
State	TX
ZIP	78212
Phone (###-###-####)	2102333744
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	FLORAMIE.WELCH@SAWS.ORG

# Section 1# Permit Contact

## Permit Contact#: 1

Person TCEQ should contact throughout the permit term.

1) Same as another contact?	Technical Contact
2) Organization Name	SAN ANTONIO WATER SYSTEM
3) Prefix	MS
4) First	FLORAMIE
5) Middle	
6) Last	WELCH
7) Suffix	
8) Credentials	
9) Title	ENVIRONMENTAL ANALYST III
<b>Mailing Address</b>	
10) Enter new address or copy one from list	
11) Address Type	Domestic
11.1) Mailing Address (include Suite or Bldg. here, if applicable)	2800 US HIGHWAY 281 N
11.2) Routing (such as Mail Code, Dept., or Attn:)	
11.3) City	SAN ANTONIO
11.4) State	TX
11.5) ZIP	78212
12) Phone (###-###-####)	2102333744
13) Extension	
14) Alternate Phone (###-###-####)	
15) Fax (###-###-####)	
16) E-mail	FLORAMIE.WELCH@SAWS.ORG

# Owner Information

## Owner of Treatment Facility

1) Prefix	
2) First and Last Name	
3) Organization Name	SAN ANTONIO WATER SYSTEM
4) Mailing Address	2800 US HWY 281 N
5) City	SAN ANTONIO
6) State	TX

7) Zip Code	78023
8) Phone (###-###-####)	2107047297
9) Extension	
10) Email	FLORAMIE.WELCH@SAWS.ORG
11) What is ownership of the treatment facility?	Public
<b>Owner of Land (where treatment facility is or will be)</b>	
12) Prefix	
13) First and Last Name	
14) Organization Name	SAN ANTONIO WATER SYSTEM
15) Mailing Address	2800 US HWY 281 N
16) City	SAN ANTONIO
17) State	TX
18) Zip Code	78212
19) Phone (###-###-####)	2107047297
20) Extension	
21) Email	FLORAMIE.WELCH@SAWS.ORG
22) Is the landowner the same person as the facility owner or co-applicant?	Yes

## General Information Renewal-Amendment

1) Current authorization expiration date:	06/18/2025
2) Current Facility operational status:	Active
3) Is the facility located on or does the treated effluent cross American Indian Land?	No
4) What is the application type that you are seeking?	Renewal without changes
5) Current Authorization type:	Public Domestic Wastewater
5.1) What is the proposed total flow in MGD discharged at the facility?	125
5.2) Select the applicable fee	>= 1.0 MGD - Renewal - \$2,015
6) What is the classification for your authorization?	TPDES
6.1) What is the EPA Identification Number?	TX0077801
6.2) Is the wastewater treatment facility location in the existing permit accurate?	Yes
6.3) Are the point(s) of discharge and the discharge route(s) in the existing permit correct?	Yes
6.4) City nearest the outfall(s):	SAN ANTONIO
6.5) County where the outfalls are located:	BEXAR
6.6) Is or will the treated wastewater discharge to a city, county, or state highway right-of-way, or a flood control district drainage ditch?	Yes
6.6.1) What is your right-of-way authorization status?	Authorization Granted
6.7) Is the daily average discharge at your facility of 5 MGD or more?	Yes



6.7.1) Provide the names of all counties located within 100 statute miles downstream of the point(s) of discharge:

7) Did any person formerly employed by the TCEQ represent your company and get paid for service regarding this application?

BEXAR

No

## Public Notice Information

### Individual Publishing the Notices

1) Prefix

2) First and Last Name

LILLIANA GONZALEZ

3) Credential

4) Title

SR COMMUNICATIONS SPECIALIST

5) Organization Name

SAN ANTONIO WATER SYSTEM

6) Mailing Address

2800 US HIGHWAY 281 N

7) Address Line 2

8) City

SAN ANTONIO

9) State

TX

10) Zip Code

78212

11) Phone (###-###-####)

2102333247

12) Extension

13) Fax (###-###-####)

14) Email

Lilliana.Gonzalez@saws.org

### Contact person to be listed in the Notices

15) Prefix

16) First and Last Name

OLGA GALINDO

17) Credential

18) Title

EXECUTIVE ADMINISTRATIVE ASSISTANT

19) Organization Name

SAN ANTONIO WATER SYSTEM

20) Phone (###-###-####)

2102333830

21) Fax (###-###-####)

22) Email

Olga.Galindo@saws.org

### Bilingual Notice Requirements

23) Is a bilingual education program required by the Texas Education Code at the elementary or middle school nearest to the facility or proposed facility?

No

## Section 1# Public Viewing Information

## County#: 1

1) County	BEXAR
2) Public building name	SAN ANTONIO WATER SYSTEM ADMIN BLDG
3) Location within the building	FIRST FLOOR
4) Physical Address of Building	2800 US HWY 281 NORTH
5) City	SAN ANTONIO
6) Contact Name	FLORAMIE WELCH
7) Phone (###-###-####)	2102333744
8) Extension	
9) Is the location open to the public?	Yes

## Plain Language

1) Plain Language	
[File Properties]	
File Name	LANG_2024_SMC_TPDES_APPLICATION_PLAIN_LANGUAGE.docx
Hash	BF93CAFA215627257F812CBDA5883BA1689DF829B65FAE27635C5226AA6156AE
MIME-Type	application/vnd.openxmlformats-officedocument.wordprocessingml.document

## Supplemental Permit Information Form

1) Supplemental Permit Information Form (SPIF)	
[File Properties]	
File Name	SPIF_2024_SMC_TPDES_APPLICATION_SPIF.docx
Hash	50D8EC457CF11A22EC4CC43864AE34E9591C265727280A64CAE0A8AB4AD3FEC1
MIME-Type	application/vnd.openxmlformats-officedocument.wordprocessingml.document

## Domestic Attachments

1) Attach an 8.5"x11", reproduced portion of the most current and original USGS Topographic Quadrangle Map(s) that meets the 1:24,000 scale.	
[File Properties]	
File Name	MAP_2024_SMC_TPDES_APPLICATION_OUTFALLS_MAPS.pdf
Hash	6E49253A05C0E50568FB59675FF24BC311857FE11BD94F34FFC175122582A59C
MIME-Type	application/pdf

2) I confirm that all required sections of Technical Report 1.0 are complete and will be included in the Technical Attachment.	Yes
2.1) I confirm that Worksheet 2.0 (Receiving Waters) is complete and included in the Technical Attachment.	Yes
2.2) Are you planning to include Worksheet 2.1 (Stream Physical Characteristics) in the Technical Attachment?	Yes
2.3) Are you planning to include Worksheet 4.0 (Pollutant Analyses Requirements) in the Technical Attachment?	Yes
2.4) Are you planning to include Worksheet 5.0 (Toxicity Testing Requirements) in the Technical Attachment?	Yes
2.5) I confirm that Worksheet 6.0 (Industrial Waste Contribution) is complete and included in the Technical Attachment.	Yes
2.6) Are you planning to include Worksheet 7.0 (Class V Injection Well Inventory/Authorization Form) in the Technical Attachment?	Yes
2.7) Technical Attachment	
[File Properties]	
File Name	TECH_2024_SMC_TPDES_APPLICATION_TECHNICAL_REPORT_12172024.pdf
Hash	F2C98BCC5F3AC98A7AFCE39024C6E365BAE754F48D19CBEFD0B329D24FC329EF
MIME-Type	application/pdf
3) Buffer Zone Map	
[File Properties]	
File Name	BUFF_ZM_2024_SMC_TPDES_APPLICATION_BUFFER_ZONE.pdf
Hash	F5B35AC6E0F0E580A554A509AB4F03353CA7F42EC5C059809A9C137C7BB98047
MIME-Type	application/pdf
4) Flow Diagram	
[File Properties]	
File Name	FLDIA_2024_SMC_TPDES_APPLICATION_FLOW_DIAGRAM.pdf
Hash	C366E1EE815DB77352BBCAF02B8C704D509533D77A9EA6A4BC1153E3D400EE1C
MIME-Type	application/pdf
5) Site Drawing	
[File Properties]	
File Name	SITEDR_ATTACHMENT3_2024_SMC_TPDES_APPLICATION_BOUNDARY_MAP.pdf
Hash	F5B35AC6E0F0E580A554A509AB4F03353CA7F42EC5C059809A9C137C7BB98047
MIME-Type	application/pdf
6) Design Calculations	

[File Properties]

File Name	DES_CAL_2024_SMC_TPDES_APPLICATION_DESIGN_CALCULATION.pdf
Hash	81DF622BC5DCED0639B7D5D5D27158E6BC266C45DED638685CE36BCDC3F71DC0
MIME-Type	application/pdf

7) Solids Management Plan

[File Properties]

File Name	SMP_ATTACHMENT8_2024_SMC_TPDES_APPLICATION_BIOSOLID_MANAGEMENT_PLAN.pdf
Hash	FD3173826C1A9FE2F262FF90EBA80508A38FB045CF487D905121E9824308D8BA
MIME-Type	application/pdf

8) Water Balance

[File Properties]

File Name	WB_2024_TPDES_APPLICATION_WATER_BALANCE_CALCULATION_NOT_APPLICABLE.pdf
Hash	E5426BFC6C35A9CD775E8FB35E1A793F383E118DE67EDB62EAC45B1D7358837C
MIME-Type	application/pdf

9) Other Attachments

[File Properties]

File Name	OTHER_2024_SMC_TPDES_APPLICATION_CORE_DATA_FORM_SIGNED.pdf
Hash	38B8A60AE001676AAEE2CC29B824ADDD5C59917BFD4E277C019A76EAAAB666CB2
MIME-Type	application/pdf

[File Properties]

File Name	OTHER_2024_SMC_TPDES_APPLICATION_SLUDGE_WORKSHEET_12172024.pdf
Hash	A8F437AD28589DB25D8B93C1A75A9480B9A2B6C6B8B9DF5B64D1D1BBA08CD6D3
MIME-Type	application/pdf

## Certification

I certify that I am authorized under 30 Texas Administrative Code 305.44 to sign this document and can provide documentation in proof of such authorization upon request.

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.

1. I am Andrea L Beymer, the owner of the STEERS account ER109765.
2. I have the authority to sign this data on behalf of the applicant named above.
3. I have personally examined the foregoing and am familiar with its content and the content of any attachments, and based upon my personal knowledge and/or inquiry of any individual responsible for information contained herein, that this information is true, accurate, and complete.

- 4. I further certify that I have not violated any term in my TCEQ STEERS participation agreement and that I have no reason to believe that the confidentiality or use of my password has been compromised at any time.
- 5. I understand that use of my password constitutes an electronic signature legally equivalent to my written signature.
- 6. I also understand that the attestations of fact contained herein pertain to the implementation, oversight and enforcement of a state and/or federal environmental program and must be true and complete to the best of my knowledge.
- 7. I am aware that criminal penalties may be imposed for statements or omissions that I know or have reason to believe are untrue or misleading.
- 8. I am knowingly and intentionally signing Update Domestic or Industrial Individual Permit WQ0010137033.
- 9. My signature indicates that I am in agreement with the information on this form, and authorize its submittal to the TCEQ.

OWNER Signature: Andrea L Beymer OWNER

Customer Number:

CN600529069

Legal Name:

San Antonio Water System

Account Number:

ER109765

Signature IP Address:

155.190.8.7

Signature Date:

2024-12-20

Signature Hash:

C423E8859533AB71455727BB3A021D974AD956169CC1B36BD7325C5AD21BE9D0

Form Hash Code at time of Signature:

712199879E2F3E8283596035EBE04E20ED0F0E2D34490ED6C3AEBE55E46C2DDC

Fee Payment

Transaction by:

The application fee payment transaction was made by ER046829/Floramie Welch

Paid by:

The application fee was paid by FLORAMIE WELCH

Fee Amount:

\$2000.00

Paid Date:

The application fee was paid on 2024-12-20

Transaction/Voucher number:

The transaction number is 582EA000640440 and the voucher number is 737533

Submission

Reference Number:

The application reference number is 656394

Submitted by:

The application was submitted by ER046829/Floramie Welch

Submitted Timestamp:

The application was submitted on 2024-12-20 at 14:45:38 CST

Submitted From:

The application was submitted from IP address 155.190.8.5

Confirmation Number:

The confirmation number is 604991

Steers Version:

The STEERS version is 6.84

Permit Number:

The permit number is WQ0010137033

Additional Information

Application Creator: This account was created by Floramie Welch



# DOMESTIC WASTEWATER PERMIT APPLICATION: SEWAGE SLUDGE TECHNICAL REPORT 1.0

## GENERAL INFORMATION

---

If you have questions about completing this form please contact the Applications Review and Processing Team at 512-239-4671.

### SECTION 1. TREATMENT PROCESSING INFORMATION

A. Attach the engineering report and/or plans and specifications for the proposed facility which must include the following:

- Description of the type of process facility
- Process flow diagram
- Design calculations, features, and functional arrangements
- Site controls
- Groundwater protection
- Odor, dust, and bio-aerosol management
- Ultimate product

Attachment Number: **Attachment 1 – SMC Biosolids Management Plan**

B. Is the facility located or proposed to be located above the 100-year frequency flood plain? Yes ☒ No ☐

If No, provide a separate site map indicating the location of the sludge units within the 100-year frequency flood plain and a detailed description of the type and size of protective measures.

N/A

### SECTION 2. SOURCES OF SLUDGE

A. Provide the sources of generation, any water quality or public water supply permit number issued by TCEQ, and the quantity for each source.

Facility Name	Permit Number	Annual Quantity
N/A		

Facility Name	Permit Number	Annual Quantity

B. For each source of sludge, complete Table 1 located at the end of this form.

### SECTION 3. PATHOGEN AND VECTOR ATTRACTION REDUCTION

A. For each source of sludge, complete Tables 2 and 3 located at the end of this form.

B. Indicate by a checkmark that all of the following are being followed for Class B land application.

- ☐ Food crop harvesting restrictions
- ☐ Animal grazing restrictions
- ☐ Public access restrictions

### SECTION 4. WELL INFORMATION

In the table below, provide information about each well located on-site and within 500 feet of the processing, application, and/or disposal area. Water well information is available from the Texas Water Development Board, 512-936-0837. Oil and gas well information is available from the Texas Railroad Commission, 512-463-6851.

Well Type (Water Well, Oil Well, Injection Well)	Producing or Non-Producing	Open, Cased, or Capped*	Protective Measures**
N/A			

\* Casing, capping, and plugging rules are located in 16 TAC Chapter 76.

\*\* The following protective measures are required prior to initial sludge/septage application:

- If the well is producing and cased, no action is needed.
- If the well is producing and not cased, the well must be cased or describe other protective measures.
- If the well is non-producing and cased, the well must be plugged or capped.
- If the well is non-producing and not cased, the well must be plugged.



## SECTION 5. ADDITIONAL TECHNICAL REPORTS

Identify which additional technical reports are submitted with this application.

- ☒ Technical Report 2.0, Sewage Sludge Composting
- ☒ Technical Report 3.0, Marketing and Distribution
- ☐ Technical Report 4.0, Sewage Sludge Surface Disposal

## SITE OPERATOR SIGNATURE PAGE

If co-applicants are necessary, each co-applicant must submit an original, separate signature page.

Permit Number: WQ00010137033

Applicant: San Antonio Water System

I understand that I am responsible for operating the site described in this permit application in accordance with the requirements in 30 TAC Chapter 312, the conditions set forth in this application, and any additional conditions as required by the Texas Commission on Environmental Quality.

I certify, under penalty of law, that all 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, imprisonment for violations, and revocation of this permit.

I further certify that I am authorized under 30 Texas Administrative Code §305.44 to sign and submit this document, and can provide documentation in proof of such authorization upon request.

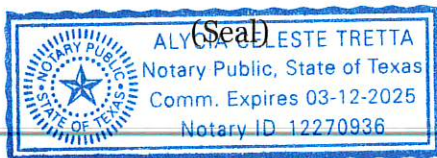
Signatory Name: Alissa Lockett, P.E.

Title: Vice President, Treatment Operations

Signature (use blue ink): Alissa Lockett Date: 12-6-2024

SUBSCRIBED AND SWORN to before me by the said Alissa Lockett on  
this 6<sup>th</sup> day of December, 20 24

My commission expires on the 13<sup>th</sup> day of March, 20 25



Alycia C. Tretta

Notary Public

Bexar

County, Texas

## LANDOWNER SIGNATURE PAGE

**Required if the landowner is not the applicant or co-applicant. Each landowner must submit an original, separate signature page.**

Permit Number: N/A

Applicant: N/A

I certify, as the owner of the land described in this permit application, that I have all rights and covenants to authorize the applicant to use this site for the land application of N/A (*identify the type(s) of sludge*). I understand that 30 TAC Chapter 312 requires me to make a reasonable effort to see that the applicant complies with the requirements in 30 TAC Chapter 312, the conditions set forth in this application, and any additional conditions as required by the TCEQ. I also certify, under penalty of law, that all information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine, imprisonment for violations, and revocation of the permit.

Signatory Name: N/A

Title: N/A

Signature (use blue ink): \_\_\_\_\_ Date: \_\_\_\_\_

SUBSCRIBED AND SWORN to before me by the said \_\_\_\_\_ on

this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_

My commission expires on the \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_

(Seal)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
County, Texas

**DOMESTIC WASTEWATER PERMIT APPLICATION:**  
**SEWAGE SLUDGE TECHNICAL REPORT 2.0**  
**SEWAGE SLUDGE COMPOSTING**

---

**SECTION 1. RENEWAL OF EXISTING AUTHORIZATION**

Provide the following information if you are requesting continued authorization to compost sewage sludge. Complete this section only if composting is currently authorized in the existing permit.

Date operation commenced: 1987

Location of operation: 3295 Valley Rd, San Antonio, TX 78221

Type of bulking agent: Polymer

Approximate amount of sludge composted: 26,660 dry tons

Provide a brief discussion of the composting process and any significant changes since the permit was last issued.

**Attachment 1 – SMC Biosolids Management Plan - No significant changes.**  
**Attachment 2 – SMC Process Flow Diagram and Buffer Zone Map**

**SECTION 2. NEW AUTHORIZATION TO COMPOST SEWAGE SLUDGE**

A. Submit an ORIGINAL General Highway (County) Map. See instructions for information that must be displayed on the map.

Attachment Number: N/A

B. Has sewage sludge/septage previously been composted at this facility?

Yes ☐ No ☐

If Yes, provide a use history of the composting operations.

N/A

C. Provide a detailed description of the composting operation. The description must include the following information:

- Amount of sludge originating off-site to be composted;
- Total amount of sludge to be composted and total amount of feedstocks;
- Fecal coliform or Salmonella bacteria analysis (in MPN or CFU);
- Type, origin, and amount of bulking material to be used;
- Set back distances from facility boundaries for receiving, processing, or storing feedstocks or final product;
- Plan view of site;
- Type of composting proposed;
- Construction, maintenance, and operation to manage run-on and run-off during a 25-year, 24-hour rainfall event, including all calculations and sources used;
- Leachate collection system and leachate processing and disposal method;
- Construction, maintenance, and operations for groundwater protection;
- Design plan to line all surfaces used for delivery, mixing, composting, curing, screening, and storage to control seepage; and
- Design to minimize windblown material, odor, and vector control.

Attachment Number: N/A

D. Does the end product meet the requirements in 30 TAC 332.72(d)(2)(A)-(D)?

Yes ☐

No ☐

E. Submit a site operating plan which provides guidance from the design engineer to site management and operating personnel in sufficient detail to enable them to conduct day to day operations in a manner consistent with the engineer's design. The plan must include the following information:

- Process description (feedstock identification, tipping process, process, post-processing, product distribution, process diagram);
- Minimum number of personnel and their functions provided by the site operator;
- Minimum equipment;
- Security, site access control, traffic control, and safety;
- Control of the delivery material in designated areas;
- Screening for unprocessable, prohibited, and unauthorized material;
- Fire prevention and suppression plan;
- Control of windblown material;

- Equipment failures;
- Anticipated final grade of materials; and
- Description of handling and/or disposal of materials that doesn't meet 30 TAC Chapter 312.

Attachment Number: N/A

**DOMESTIC WASTEWATER PERMIT APPLICATION:**  
**SEWAGE SLUDGE TECHNICAL REPORT 3.0**  
**SEWAGE SLUDGE MARKETING AND DISTRIBUTION**

---

- A. What is the TCEQ Permit number for the Wastewater Treatment Plant that is generating the Class A or Class AB sewage sludge? WQ0010137033
- B. What is the name and location of the distribution storage center? Steven M. Clouse WRC
- C. Provide a description of the marketing and distribution plan.

**Attachment 1 – SMC Biosolids Management Plan**

- D. Provide the following information for all entities receiving sludge directly from the permittee. If more than 2, submit an attachment which includes the follow information.

1. Contact Name: Brandt Klutts

Company Name: Second Nature

Mailing Address: 8449 Nelson Rd.

City, State, and Zip Code: San Antonio, TX 78252

Phone Number: (210) 960-6440 Fax Number: N/A

Longitude: -98.662158

Latitude: 29.325150

Permits: 42044

2. Contact Name: Greg Weidenfeller

Company Name: Wecare Denali LLC, dba New Earth

Mailing Address: One International Center, Suite 1075

City, State, and Zip Code: San Antonio, Texas 78216

Phone Number: (210) 661-5180 Fax Number: N/A

Longitude: -98.339943

Latitude: 29.450427

Permits: 42032

- E. Provide a copy of the label or information sheet that is provided to each entity receiving the sewage sludge.

Attachment Number: Attachment 3 - SMC Biosolids Contracts

- F. Indicate by a checkmark that the sewage sludge meets the following:

- ☒ Metal concentrations in 30 TAC §312.43(b)(3)
- ☒ Vector attraction reduction requirements
- ☒ Class A, Class AB or Class B pathogen requirements

- G. Indicate the type of recordkeeping: As prescribed by SMC Biosolids Contracts – Attachment 3

**PLEASE NOTE:** If Class AB sewage sludge, attach a topographic map that shows the required buffer zones stated in 30 TAC §312.44.



**DOMESTIC WASTEWATER PERMIT APPLICATION:**  
**SEWAGE SLUDGE TECHNICAL REPORT 4.0**  
**SEWAGE SLUDGE SURFACE DISPOSAL**

---

**SECTION 1. LOCATION INFORMATION**

A. Attach the following maps. See instructions for information that must be displayed on each map.

- Original General Highway (County) map;
- USDA Natural Resources Conservation Service Soil Map;
- Federal Emergency Management Agency Map; and
- Site Map.

Attachment Numbers: N/A

B. Indicate by checkmarks if the disposal unit contains any of the following:

- ☐ Overlaps a designated 100-year frequency floodplain
- ☐ Soils with flooding classification
- ☐ Wetlands
- ☐ Located less than 60 meters from a fault
- ☐ Overlaps an unstable area
- ☒ None of these

If the sludge disposal unit contains any of the above features, provide a detailed description of the type and size of protective measures.

N/A

**SECTION 2. DISPOSAL INFORMATION**

A. What is the volume and frequency of sludge disposal? N/A

B. What is the total dry tons placed on the disposal unit per 365-day period? N/A

- C. What is the total dry tons placed on the disposal unit over the life of the unit? N/A
- D. Attach a current TCLP test result from each sludge source.  
Attachment Number: N/A

### SECTION 3. FACILITY INFORMATION

- A. Does the disposal unit have a liner with a maximum hydraulic conductivity of  $1 \times 10^{-7}$  cm/sec? Yes ☐ No ☐

If yes, describe the liner.

N/A

- B. Does the disposal unit have a leachate collection system?  
Yes ☐ No ☐

If yes, describe the leachate collection system and the method used for leachate treatment and disposal.

N/A

- C. If you answered No to A. and B., is the boundary of the disposal unit less than 150 meters from the nearest property boundary?  
Yes ☐ No ☐

If you answered No to C., what is the actual distance to the nearest property boundary in meters? N/A

[Click here to enter text.](#)

Yes ☐ No ☐

- D. Do the design calculations for the disposal unit show that stormwater will not run-off of the disposal unit during a 25-year, 24-hour rainfall event?

Yes ☐ No ☐

- E. If sludge dewatering is used, describe the method of sludge dewatering and the average percent solids disposed of in the disposal unit.

N/A

- F. Are crops grown or animals allowed to graze at the disposal site?

Yes ☐ No ☐

If yes, provide a detailed description of management practices that protect human health from accumulation of metals in the sewage sludge.

N/A

#### SECTION 4. SITE DEVELOPMENT PLAN

- A. Provide a detailed description of the methods used to deposit sludge in the disposal unit.

N/A

- B. Indicate by a checkmark that the following information is provided with this application.

- ☐ Plan view and cross-sectional view of the disposal unit  
☐ Source and physical properties of the soil and/or other media for sludge bulking

- ☐ Locations of stockpiles of media and the area for sludge loading and unloading
- ☐ Operation procedures detailing mixing, ratio of mixture, handling of mixture, placement of the mixture, and daily cover
- ☐ Copy of the closure plan and post-closure maintenance requirements developed in accordance with 30 TAC §312.62(c) and (d)
- ☐ Copy of deed record for the site
- ☐ Description of the method of controlling infiltration of groundwater and surface water from entering the site
- ☐ Financial assurances of proper operation and final closure of the disposal unit and storage in accordance with 30 TAC §312.62(g)
- ☐ Description of methane gas monitoring if cover is placed on the disposal unit
- ☐ Description of method to restrict public access to the site.

## SECTION 5. GROUNDWATER MONITORING

A. Is groundwater monitoring currently conducted at this disposal unit, or is groundwater monitoring data otherwise available?

Yes ☐ No ☒

If yes, attach a copy of available groundwater monitoring data.

Attachment Number: N/A

B. Has a groundwater monitoring program been prepared for this disposal unit? Yes

☐ No ☒

If yes, attach a copy of the groundwater monitoring program.

Attachment Number: N/A

C. Provide a certification from a qualified groundwater scientist that the aquifer below the disposal unit will not be contaminated.

Attachment Number: N/A

D. Provide a profile of soil types encountered down to the groundwater table and the depth to the shallowest groundwater.

Attachment Number: N/A

## Appendix A

### Pollutant Concentrations in Sewage Sludge

---

Complete this table for each source of sludge.

Facility Name: Steven M. Clouse WRC

TCEQ Authorization Number: WQ00010137033

#### POLLUTANT/METAL ANALYSIS

Pollutant	Maximum Concentration, mg/kg dry weight	Test Results, mg/kg dry weight	Sample Date	Detection Level for Analysis	Sample Method
Arsenic (As)	75	2.16	10-7-2024	6.17	SW 846 6010C
Cadmium (Cd)	85	0.89	10-7-2024	3.08	SW 846 6010C
Chromium (Cr)	3000	68	10-7-2024	3.08	SW 846 6010C
Copper (Cu)	4300	446	10-7-2024	3.08	SW 846 6010C
Lead (Pb)	840	49	10-7-2024	3.08	SW 846 6010C
Mercury (Hg)	57	0.44	10-7-2024	0.04/mg/Kg	SW 846 7471A
Molybdenum (Mo)	75	16.10	10-7-2024	3.08	SW 846 6010C
Nickel (Ni)	420	24.80	10-7-2024	3.08	SW 846 6010C
Selenium (Se)	100	2.36	10-7-2024	6.17	SW 846 6010C
Zinc (Zn)	7500	931	10-7-2024	3.08	SW 846 6010C
PCB (ppm)	50.0 ppm	<50	10-7-2024	0.419	SW 846 8082
Fecal Coliform (MPN)		600,000	10-7-2024		SM 9221B

## Appendix B

### PATHOGEN REDUCTION REQUIREMENTS

---

**For each source**, select the pathogen reduction alternative that will be used prior to land application of sewage sludge. Requirements for each alternative can be found in 30 TAC §312.82.

TCEQ Permit Number	Pathogen Reduction Alternative Used	Fecal Coliform Geometric Mean (cfu/gram total solids)*	Fecal Test Date*	Is PSRP Certification Attached?** (Yes/No/NA)
Example WQ11280-001	Option 1: Density of Fecal Coliform	300,000 cfu/g	12/2/98	NA
	Choose an item.			
	Choose an item.			
	Choose an item.			
	Choose an item.			
	Choose an item.			
	Choose an item.			
	Choose an item.			
	Choose an item.			
	Choose an item.			
	Choose an item.			
	Choose an item.			

\*Applicable to Option 1 only.

\*\*Applicable to Option 2a - f.

If Other or PFRP Equivalent is selected as the Alternative Used, please explain: N/A

## Appendix C

### VECTOR ATTRACTION REDUCTION REQUIREMENTS

---

**For each source**, provide the vector attraction reduction option that will be used prior to or after land application of sewage sludge/septage. Requirements for each alternative can be found in 30 TAC §312.83.

<b>TCEQ Permit Number</b>	<b>Vector Attraction Reduction Alternative Used*</b>	<b>Monitoring Criteria and results needed for alternative</b>
Example WQ11280-001	Option 10: Incorporate within 6 hrs	Visual inspection of area after tilling
Example WQ13450-003	Option 4: SOUR ≤1.5 mg O <sub>2</sub> /hr/g total solids at 20C (<2% solids)	Aerobically digested, 2.0% solids, SOUR=1.3 mg/g
	Choose an item.	
	Choose an item.	
	Choose an item.	
	Choose an item.	
	Choose an item.	
	Choose an item.	
	Choose an item.	
	Choose an item.	
	Choose an item.	

\*Options 1-8 are sludge treatment alternatives. Options 9-10 are onsite alternatives. Option 12 is for domestic septage only.

# INSTRUCTIONS FOR SEWAGE SLUDGE TECHNICAL REPORTS

---

## GENERAL INFORMATION

### Purpose of the Application

This form is used to request authorization for certain sludge disposal options within or adjacent to a publicly-owned wastewater treatment plant (WWTP).

The Administrative and Technical Reports of the Domestic Wastewater Permit Application (TCEQ-10053 and TCEQ-10054) must be submitted with this form.

### Who Should Apply?

This application should be submitted by owners of domestic wastewater treatment plants that are requesting authorization for sewage sludge and/or septage disposal in a **surface disposal site** (ie. sludge monofill) at a site located adjacent to the wastewater treatment facility, **sewage sludge composting**, or **sludge marketing and distribution**.

### When Is The Application Submitted?

For new and amendment applications, the completed application must be submitted at least 180 days before the proposed activity is to occur. For renewal applications, the completed application must be submitted at least 180 days before the expiration date of the current wastewater permit.

### Where to Send the Application Form

**One original and three copies** of the application, including attachments, must be provided to the address below:

#### Regular U.S. Mail:

TCEQ  
ARP Team, MC 148  
PO Box 13087  
Austin TX 78711-3087

#### Express Mail or Hand Delivery:

TCEQ  
ARP Team, MC 148  
Building F Room 2101  
12100 Park 35 Circle  
Austin TX 78753

### TCEQ Contact List

Permit Information and Application Forms:	512-239-4671
Technical Information, Land Application Team:	512-239-4671
Environmental Law Division:	512-239-0600



Copies of records on file with the TCEQ may be obtained for a minimal fee from the Records Management Office at 512-239-2900.

## Abbreviations and Acronyms

CFR - Code of Federal Regulations  
CFU - Colony Forming Units  
EPA - United States Environmental Protection Agency  
MPN - Most Probable Number  
mg/l - Milligrams per Liter  
PFRP - Process to Further Reduce Pathogens  
PSRP - Process to Significantly Reduce Pathogens  
TAC - Texas Administrative Code  
TCEQ - Texas Commission on Environmental Quality  
USDA - United States Department of Agriculture  
USGS - United States Geological Survey

## SEWAGE SLUDGE TECHNICAL REPORT 1.0 - GENERAL INFORMATION

### Section 1. Treatment Processing Information

A. Attach an engineer's report that includes the following information:

- **Description of the type of sludge processing** (e.g., aerobic digestion, heat drying, and lime stabilization). Provide a detailed description of processes and treatment units utilized to meet pathogen and vector reduction requirements as needed for the sludge use or disposal. Include any admixtures and blending agents.
- **Process flow diagram** of the entire wastewater treatment process. Include all components of the treatment system and flow streams through the process, storage, and removal from the treatment plant site. Provide more detailed flow stream information regarding the sludge treatment units. The flow streams must indicate the quantity of sludge on a wet weight, dry weight, and volumetric basis through each sludge process unit.
- **Design calculations** for the specified treatment process. Provide the dimensions of the treatment units (Length x Width x Height, capacity in gallons and/or cubic feet). Include design calculations for the specified treatment process (temperature ranges, residence time, chemical additions, dewatering capability, etc). Provide information within the design calculations that discuss design features (alarms, standby and duplicate units, holding tanks) and functional arrangements (flexibility of piping, valves, backup generator) within the sludge process units that will prevent the partial treatment of sewage sludge or the overflow of wastewater (e.g., supernate) due to: 1) power failure; 2) equipment malfunction; 3) plant maintenance; or 4) other circumstances.
- **Site Controls.** Description of storage method. Include the method to control surface water run-on and run-off, collection of leachate, and/or process wastewater generated from the facility, and any bulk material storage areas. For uncovered bulk material storage or processed material, provide design calculations for protecting the areas from the 25-year, 24-hour rainfall event. Include sources of information and assumptions.

- **Groundwater protection.** Description of method to control groundwater contamination.
  - **Odor, dust, and bio-aerosol management plan.** Describe how the production and migration of each of these emissions will be monitored and minimized, including design and operational practices. The buffer zone requirements for treatment units are found in 30 TAC Section 312.13(e) and are applicable for all wastewater treatment plant units.
  - Description of the **ultimate use for the finished product.** The description of the proposed use or disposal and method of disposal of any product that cannot be used in the expected manner due to poor quality or change in market conditions.
- B. Indicate whether the facility is above the 100-year frequency flood plain. All units must be protected from inundation from a 100-year frequency flood. If any units are not located above the 100-year frequency flood, provide a separate site map that shows the location of the units within the 100-year frequency flood plain and a detailed description of the type and size of protective measures.

## Section 2. Sources of Sludge

- A. For each source of sewage sludge or domestic septage, provide the name of the facility; the TCEQ permit number, registration number, or transporter number; and the average quantity received from the source.
- B. For each source of sewage sludge or domestic septage, use the sludge laboratory analyses to complete Appendix A Pollutant Concentrations in Sewage Sludge.

## Section 3. Pathogen and Vector Attraction Reduction

- A. For each source of sewage sludge or domestic septage, complete Appendix B Pathogen Reduction Requirements and Appendix C Vector Attraction Reduction Requirements. The requirements for each option are found in 30 TAC §312.82-83.
- B. Indicate that the following restrictions are being followed for land application of Class B sewage sludge and domestic septage:
- Food crop harvesting restrictions:
    - Food crops with harvested parts totally above the land surface (**e.g., strawberries, squash, pecans picked up from the ground**) must not be harvested from the land for at least 14 months after the last application of sludge if any of the harvested parts contact the sludge or soil.
    - Food crops with harvested parts below the surface of the land (**e.g., onions, potatoes**) must not be harvested from the land for at least 20 months after application of sludge when the sludge remains on the land surface for 4 months or longer prior to incorporation into the soil.
    - Food crops with harvested parts below the surface of the land (**e.g., onions, potatoes**) must not be harvested for at least 38 months after application of sludge when the sludge remains on the land surface for less than four months prior to the incorporation into the soil.
    - Food crops (when grown and harvested in a manner that prevents any part of the crop from contacting the soil or sludge such as **hand-picked oranges and apples**), feed crops (**e.g., hay**), and fiber crops (**e.g., cotton**) must not be harvested for at least 30 days after application of sludge.

- Animal grazing restrictions:
  - Animals must not be allowed to graze on the land for at least 30 days after application of sludge.
- Public access restrictions:
  - Public access to land with a high potential for public exposure (**e.g., parks, soccer fields**) must be restricted for at least one year after application of sludge.
  - Public access to land with a low potential for public exposure (**e.g. land at the WWTP**) must be restricted for at least 30 days after application of the sludge.

## Section 4. Well Information

Complete the table by providing the requested information for each well located on and within 500 feet of the application area, including off-site wells. Each well shall also be provided on the site map.

## Section 5. Additional Technical reports

Indicate with a checkmark each additional technical report that is submitted with Technical Report 1.0.

## Signature Pages

A separate signature page must be provided for the site operator, each co-applicant, and the landowner of the application site (if the landowner is different from the site operator and co-applicant). The signature page must bear an original signature and the seal of a notary public. The date signed by the applicant must be the same as the date notarized. The signature page will not be acceptable if the dates are different.

In accordance with 30 Texas Administrative Code §305.44 relating to Signatories to Applications, all applications shall be signed as follows:

For a corporation, the application shall be signed by a responsible corporate officer. For purposes of this paragraph, a responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit or post-closure order applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

For a partnership or sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively.

For a municipality, state, federal, or other public agency, the application shall be signed by either a principal executive officer or a ranking elected official. For purposes of this

paragraph, a principal executive officer of a federal agency includes the chief executive officer of the agency, or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., regional administrator of the EPA).

## **SEWAGE SLUDGE TECHNICAL REPORT 2.0 - SEWAGE SLUDGE COMPOSTING**

This technical report is required if you are requesting authorization to compost sewage sludge.

### **Section 1. Renewal of an existing authorization to compost sewage sludge**

This section is only applicable if composting sewage sludge is authorized in the existing and the applicant is seeking to continue that authorization. This does not include facilities that obtained composting authorization through a Municipal Solid Waste Permit.

### **Section 2. New and amended authorization to compost sewage sludge**

- A. Submit an original **General Highway (County) Map** showing the applicant's property boundaries in RED ink and the location of the composting area. Copies may be submitted on 8.5 x 11-inch sheets. These maps can be ordered from the Texas Department of Transportation Map Sales from the following web site:  
[http://www.txdot.gov/travel/county\\_grid\\_search.htm](http://www.txdot.gov/travel/county_grid_search.htm)
- B. Indicate whether composting has previously been conducted at this site. If yes, the discussion of the use history of the composting operations must include the following information:
  - the type of sludge composted
  - the amount of sludge composted so far (in tons)
  - the quality of the final product with respect to 30 TAC §332.72
  - how the final product was marketed and distributed
  - compliance history (e.g., enforcement, upsets)
  - copy of any closure plan developed for this facility including anticipated closure date
- C. Provide a detailed description of the sewage sludge composting site and operation. The description must include the following information.
  - Amount of sludge originating off-site which is to be composted
  - Total amount of sewage sludge to be composted and total amount of feedstocks identified in 30 TAC §332.3(b)
  - The Fecal Coliform or Salmonella sp. bacteria analysis of the sludge in MPN or CFU
  - The type, origin and the amount of bulking material to be used
  - Set back distance from the facility boundary to the areas for receiving, processing, or storing feedstocks or final product
  - A plan view of the site showing all the equipment, storage facilities, and sludge management facilities
  - Types of composting proposed (e.g., windrow process, aerated pile process, etc.)

- Description how the facility shall be constructed, maintained, and operated to manage run-on and run-off during a 25-year, 24-hour rainfall event and include calculations and provide source of all assumptions used
  - Description the leachate collection system and the method used for leachate processing and disposal in accordance with applicable requirements and provide the TCEQ permit(s) numbers for leachate treatment and disposal
  - Description of how the facility will be constructed, maintained, and operated to protect groundwater
  - Description of a design plan to line all the surfaces used for sewage sludge delivery, mixing, composting, curing, screening and storing to control seepage
  - Design of facility to minimize windblown material, odor and vector control
- D. Indicate whether the end product meets the requirements set forth in 30 TAC §332.72(d)(2)(A)-(D).
- E. Submit a site operating plan. This document provides guidance from the design engineer to site management and operating personnel in sufficient detail to enable them to conduct day to day operations in a manner consistent with the engineer's design. At a minimum, the site operating plan shall include specific guidance or instructions on all of the following:
- Process description. The process description must include the following.
    - Feedstock identification. The applicant must prepare a list of the materials intended for processing along with the anticipated volume to be processed. This section must also contain an estimate of the daily quantity of material to be processed at the facility along with a description of the proposed process of screening for unauthorized and prohibited materials.
    - Tipping process. Indicate what happens to the feedstock material from the point it enters the gate. Indicate how the material is handled in the tipping area, how long it remains in the tipping area, what equipment is used, how the material is evacuated from the tipping area, at what interval the tipping area is cleaned, the process used to clean the tipping area.
    - Process. Indicate what happens to the material as it leaves the tipping area. Indicate how the material is incorporated into the process and what process or processes are used until it goes to the post-processing area. The narrative shall include: water addition; processing rates; equipment; energy and mass balance calculations; process monitoring method; testing and monitoring methods and frequency.
    - Post-processing. Provide a complete narrative on the post-processing process to include: post-processing times; identification and segregation of product; storage of product; quality assurance and quality control; testing methods and frequency.
    - Product distribution. Provide a complete narrative on product distribution to include but not limited to: end-product quantities; anticipated final grades; packaging; labeling; loading; tracking bulk material; anticipated end use; method of distribution or use.
    - Process diagram. Present a process diagram that displays graphically the narrative discussion identified in the previous bullets.
  - Minimum number of personnel and their functions to be provided by the site operator in order to have adequate capability to conduct the operation in conformance with the design and operational standards;

- Minimum number and operational capacity of each type of equipment to be provided by the site operator in order to have adequate capability to conduct the operation in conformance with the design and operational standards;
- Security, site access control, traffic control and safety;
- Control of dumping within designated areas
- Mechanical and process screening for unprocessable, prohibited, and unauthorized material;
- A fire prevention and suppression plan that complies with provisions of the local fire code, which must also be sent to the local fire protection entity responsible for responding to a fire at the facility;
- Control of windblown material;
- Equipment failures including alternative plans in the event of an equipment failure; and
- A description of the anticipated final grade of the materials.
- Submit a description of the method(s) by which materials that do not meet the end product requirements of 30 TAC Chapters 312 and 332 will be handled and/or disposed.

## **SEWAGE SLUDGE TECHNICAL REPORT 3.0 - SEWAGE SLUDGE MARKETING AND DISTRIBUTION**

This technical report is required if you are requesting authorization to market and distribute Class A or Class AB sewage sludge.

- A. Provide the TCEQ Permit Number of the facility generating the Class A or Class AB sewage sludge.
- B. Provide the name and location of the sites used for the storage and distribution of the Class A or Class AB sewage sludge.
- C. Provide a description of the marketing and distribution plan. The plan must include, but is not limited to, the following activities:
  - If the sewage sludge will be sold or given away directly to the public, include a general description of the types of end uses proposed by persons who will be receiving the sewage sludge;
  - The methods of distribution, marketing, handling, and transportation of the sewage sludge;
  - A reasonable estimate of the expected quantity of sewage sludge to be generated or handled; and
  - Any proposed storage and the methods used to prevent surface water runoff of the sewage sludge or contamination of groundwater.
- D. For all entities that receive Class A or Class AB sewage sludge directly from the permittee, provide the name, company name, telephone and fax numbers, address, and all federal, state, and local permits that the receiving facility has obtained. If more than two entities receive Class A or Class AB sewage sludge directly, provide a separate attachment that includes the requested information for all entities.
- E. Provide a copy of the label or information sheet provided to all entities that receive the sewage sludge.

F. Indicate by a check mark that the Class A or Class AB sewage sludge being sold, given away in bulk, bag, or container for land application meets the following (as shown on Appendix A,B and C:

- Metal concentrations in 30 TAC Section 312.82(a);
- Vector attraction reduction requirements; and
- Class A or Class AB pathogen requirements.

G. Describe the type of recordkeeping.

## SEWAGE SLUDGE TECHNICAL REPORT 4.0 - SEWAGE SLUDGE SURFACE DISPOSAL

This technical report is required if you are requesting authorization to dispose of sewage sludge by placing it in a sewage sludge surface disposal unit (ie. sludge monofill). Do not use this technical report for sludge that is disposed of in a municipal landfill.

NOTE: Sewage sludge that has failed a TCLP test cannot be disposed of within a sewage sludge surface disposal unit.

### Section 1. Location information

A. Attach the following maps which display the required information noted below:

- Submit an original **General Highway (County) Map** showing all applicant's property boundaries in RED ink, the location of the disposal unit, a scale sufficient to verify the distance of the disposal unit from the property line in accordance with 30 TAC Section 312.63, and all areas within 1000 feet of the site. Copies may be submitted on 8.5 x 11-inch sheets. These maps can be ordered from the Texas Department of Transportation Map Sales from the following web site: [http://www.txdot.gov/travel/county\\_grid\\_search.htm](http://www.txdot.gov/travel/county_grid_search.htm)
- Submit a legible copy of a **USDA Natural Resources Conservation Service (NRCS) Soil Map** with soil legend and necessary interpretative information. These maps can be created on the NRCS Web Soil Survey web site: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. If the county is not mapped, have a soil scientist identify the soils.
- Submit a copy of the **Federal Emergency Management Agency (FEMA) Map** showing the 100-year floodplain. These maps can be obtained by requesting a Flood Insurance Study at no charge from the FEMA Flood Map Distribution Center at (800) 358-9616. The flood insurance study will contain a booklet and the FEMA maps.
- Submit a site map that indicates all of the components that pertain to the disposal unit (cross section diagram(s), storage area(s), run-off collection area(s), etc.)

B. Indicate with checkmarks if the sludge disposal unit contains one or more of the features listed in the application. For each identified feature, provide a discussion of the type and size of the protective measures.

## **Section 2. Disposal information**

- A. Provide the approximate volume of sludge and the frequency of each sludge disposal activity.
- B. Provide the total amount of sludge placed in the disposal unit each year, in dry tons.
- C. Provide the total amount of sludge that has been placed in the disposal unit over the life of the unit, in dry tons.
- D. For each sludge source, provide the most recent TCLP test result.

## **Section 3. Facility information**

- A. If the disposal unit has a liner, indicate how the liner meets the hydraulic conductivity listed in the application.
- B. Indicate if the disposal unit has leachate collection system. If so, describe the leachate collection system and the method used for leachate treatment and disposal.
- C. If the disposal unit does not have a liner or leachate collection system, indicate if the disposal unit located less than 150 meters from the nearest property boundary.  
If the disposal unit is located less than 150 meters from the nearest property boundary, provide the actual distance to the nearest property boundary, in meters. Also indicate if the metal concentrations listed in the application exceed the maximum metal concentrations and property boundary distances required by 30 TAC 3212.63(b)(2).
- D. Indicate if the design calculations for the disposal unit show that stormwater will not leave the disposal unit during a 25-year, 24-hour rainfall event.
- E. If the sewage sludge is dewatered prior to placing in the disposal unit, describe the method of sludge dewatering and the average percent solids of the sludge placed in the disposal unit.
- F. Indicate if crops are grown or animals allowed to graze at the disposal site. If yes, provide a detailed description of management practices that protect human health from bioaccumulation of metals in the sewage sludge.

## **Section 4. Site development plan**

- A. Describe the methods used to deposit sludge in the disposal unit. This description should include site layout plan, site entrance roads from public access roads, rate of sludge deposition, average and maximum lift size, average and maximum trench or cell size, sludge unit cover, seismic impact design, protection from floods, and other information necessary to depict how the surface disposal unit will be developed.
- B. Indicate by a checkmark that each the following information has been submitted with the application.
  - A detailed plan view and cross-section view of the surface disposal unit.
  - The source and physical properties of the soil, daily cover, and other media for sludge bulking, if applicable.
  - Locations of stockpiles of the bulking media and the area for sludge unloading and mixing within the plant site and include



on the site map.

- Describe operational procedures detailing the following: how the sludge is to be mixed; the ratio of the media/sludge mixture; the handling and placement of the mixture in the sludge unit; the method of spreading the daily cover; the depth of the daily cover.
- Provide a copy of any closure plan, which includes post-closure maintenance requirements, that has been developed for disposal unit in accordance with 30 TAC §312.62(c) and (d).
- A copy of deed record for the site showing that a sludge disposal unit is located at the site.
- Provide a description controlling the infiltration of sludge from entering ground and surface water.
- Provide financial assurance to properly operate this surface disposal unit and to provide final closure of this surface disposal unit and storage (if applicable) (30 TAC Section 312.62(g)).
- Provide a brief description of how methane gas is monitored, if cover is placed on unit and
- Provide a brief description of how public access to the site is restricted.

## **Section 5. Groundwater monitoring**

- A. Indicate if groundwater monitoring data is available for the site. If so, attach a copy of the data.
- B. Indicate if a groundwater monitoring program has been developed. If so, attach a copy.
- C. Provide a certification from a qualified groundwater scientist that the aquifer below the disposal unit will not be contaminated.
- D. Provide a profile of the soil types encountered down to the groundwater table and the depth to the shallowest groundwater.

**SEWAGE SLUDGE TECHNICAL REPORT 1.0**  
**APPLICATION**

**ATTACHMENT 1**

**TPDES Permit No. 10137-033**  
**SMC Biosolids Management Plan**

# **Steven M. Clouse Water Recycling Center Sewage Sludge Management Plan**

## **Introduction**

Sludges are generated through multiple treatment operations at the Steven M. Clouse WRC. These include both Primary and Waste Activated sludges from the processes outlined in the flow diagram attached. The Steven M. Clouse facility also treats all sludges generated at the Leon Creek and Medio Creek WRC's called Transfer sludge. These include the Primary and Waste Activated sludges from Leon Creek WRC and Waste Activated sludge from the Medio Creek WRC and is the centralized sludge processing facility for all the solids generated in San Antonio.

### **Primary Sludge/Skimmings**

Primary sludge is generated in the eight circular primary clarifiers at the Steven M. Clouse facility. These residues are thickened to approximately 3-4 % total solids in the primary tankage. From the primary's, the thickened sludge is pumped to a pre-strain blending tank.

### **Transfer Sludge**

Leon Creek and Medio Creek sludge are received and blended with Steven M. Clouse Primary sludge in the pre-strain blend tank. The sludge is pumped to the strain press where debris is removed from the sludge prior to additional blending, thickening and then they are anaerobically digested.

## **Waste Activated Sludge**

Waste activated sludges are generated in secondary treatment process. Typically the First Stage Activated Sludge process is optimized at about 3500 mg/l MLSS and 450,000 pounds under aeration. The Second Stage Activated Sludge process is optimized at about 2500 mg/l MLSS and 300,000 pounds under aeration. Operations personnel have found these to be the best levels to achieve the maximum removals of carbonaceous and nitrogenous demands.

Screw pumps are utilized to either return the solids to the Activated Sludge process or to be wasted to the thickening processes.

## **Sludge Blending**

Primary Sludge, Leon Creek, Medio Creek sludge that has been strained along with the Steven M. Clouse Waste Activated Sludge are sent to a large Blend Tank. In the Blend Tank, the sludge is then recirculated to ensure a uniform mixture has been achieved is then sent to the thickening process.

## **Sludge Thickening**

From the Sludge Blending Tank, all the sludge is then thickened to approximately 5% to 6% TS via 4 Gravity Belt Thickeners or 2 thickening Centrifuges.

## **Sludge Digestion**

All sludges are transferred from the Blend Tank to a series of nine Mesophilic Anaerobic Digesters. Temperatures are held at about 95 degrees F, and feed rates are set to achieve a hydraulic detention time of about 24 days. This has been found to be sufficient to achieve a Volatile Solids Reduction greater than 38%. Sludges are then sent to a holding tank until they are dewatered.

## **Sludge Dewatering**

All sludges are dewatered by either the use of Belt Filter Presses or by using Sand Drying Beds. Sludges are consistently dewatered to about 18 % total solids using the Belt Filter Presses. Sand Drying Beds are used as weather permits and can achieve a total solids content of greater than 85 % total solids concentration.

## **Final Disposal**

The final disposal options used are either Composting by New Earth at their permitted facility, Composting by TLM/GardenVille at the SARA Martinez facility or by disposal in a Sanitary Landfill. No Biosolids are disposed of via Land Application. Biosolids that are composted by New Earth and TLM/GardenVille are Marketed/Distributed by the contractor. Composting operations are summarized under the Steven M. Clouse WRC portion of this Permit Application. There are no proposed changes to this operation in SAWS' future.

**SEWAGE SLUDGE TECHNICAL REPORT 1.0**  
**APPLICATION**

**ATTACHMENT 2**

**TPDES Permit No. 10137-033**

**Steven M. Clouse WRC Flow Diagram**

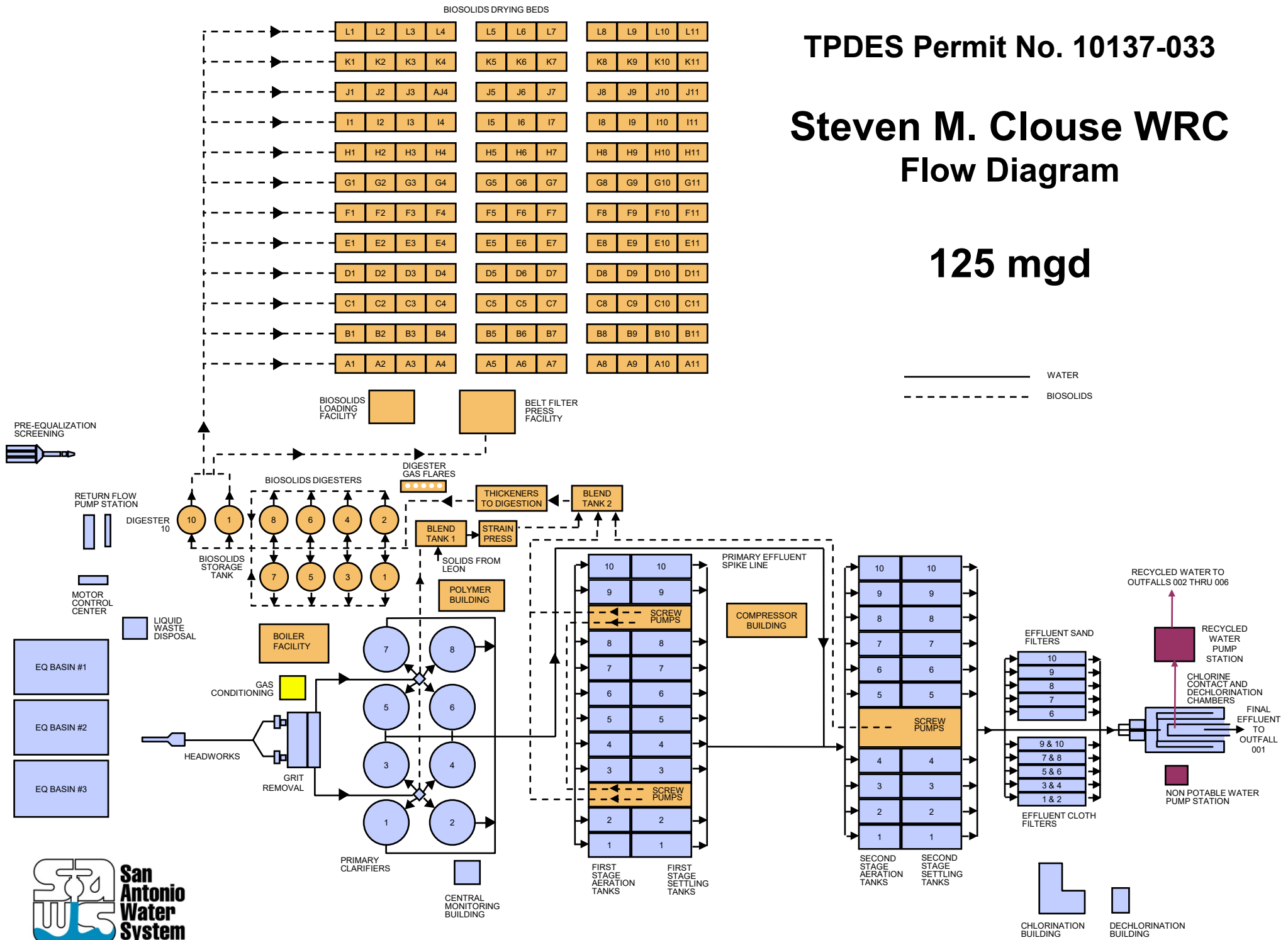
**and**

**Buffer Zone Map**

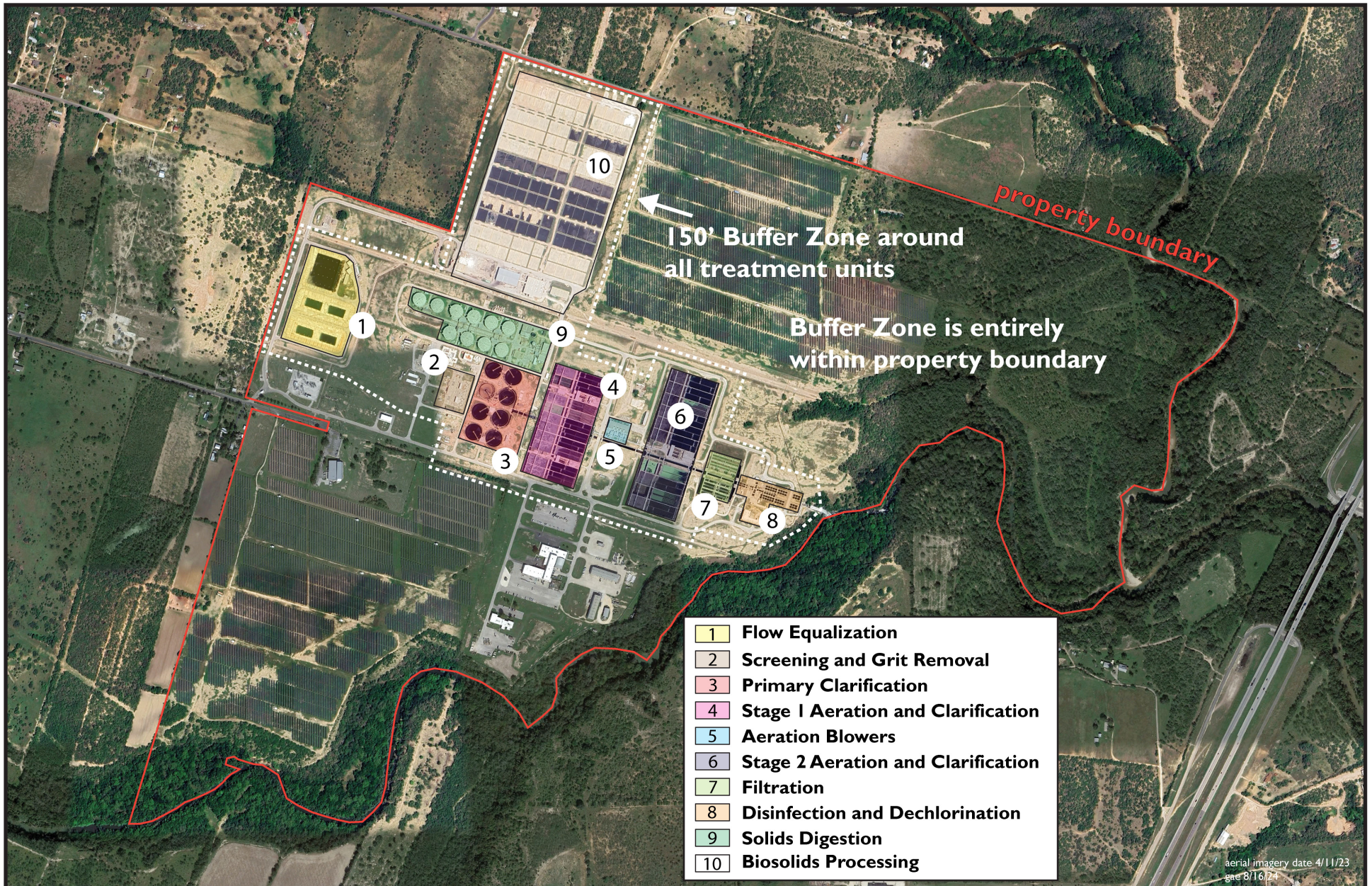
TPDES Permit No. 10137-033

# Steven M. Clouse WRC Flow Diagram

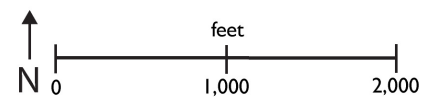
125 mgd







Buffer Zone Map  
Steven M. Clouse Water Recycling Center  
Permit ID TX007780 I





**SEWAGE SLUDGE TECHNICAL REPORT 3.0 - SEWAGE  
SLUDGE MARKETING AND DISTRIBUTION**

**APPLICATION**

**ATTACHMENT 3**

**TPDES Permit No. 10137-033**

**SMC Biosolids Marketing and Distribution**



Enter search criteria...

q



**US** Composting  
Council®

(/)

MENU

Share |

([https://www.addtoany.com/share#url=https%3A%2F%2Fwww.compostingcouncil.org%2Fpage%2FCertifiedCompostSTA&title=Using%20STA%20Certified%20Compost](https://www.addtoany.com/share?url=https%3A%2F%2Fwww.compostingcouncil.org%2Fpage%2FCertifiedCompostSTA&title=Using%20STA%20Certified%20Compost)) ([/#facebook](#)) ([/#x](#)) ([/#email](#)) ([/#linkedin](#))

# USING STA CERTIFIED COMPOST



## Using STA Certified Compost

**Quality is in the eye of the consumer:** Compost use and selection decisions consider many factors, and therefore one size does not fit all! The Seal of Testing Assurance (STA) Program helps you make the best decision for what you are doing by providing the 3 C's:

### Clarity –

Similar to a nutrition label, the STA Program's Compost Technical Data Sheet (CTDS) includes test results, a list of ingredients, and recommended directions for use.

### Consistency –

The STA Program provides checks and balances within a network of compost producers and labs who test their product, to ensure proficiency and consistency with testing procedures and compliance. This provides apples to apples comparisons of compost properties.

### Confidence –

Similar to trusting a vehicle history report when purchasing a vehicle, the STA's CTDS report provides consumers with confidence and knowledge of what is in the compost and how it was produced.

The program – created in 2000 – is the culmination of research and discussion by many of the leading compost research scientists in the United States. Currently this is the only compost testing program available providing this. Joe Lamp'l from PBS's Growing a Greener World explains why he values the program **in this video** (<https://www.youtube.com/watch?v=-RUdnJo4nJ4&list=PLlotznzK3pON-Mn7hd-nFUops2eooBVxU&index=2&t=0s>).



Program Foundation

The STA Certified Compost Program is founded on highly researched compost testing methods, and careful lab oversight to give you confidence the test results are accurate for the product you purchase through the STA Certified Compost Program.

**READ MORE ([HTTPS://WWW.COMPOSTINGCOUNCIL.ORG/PAGE/STAFFOUNDATION](https://www.compostingcouncil.org/page/stafoundation))**



## Manufacturer Requirements

Compost manufacturers participating in the STA Certified Compost program are held to high standards for using quality labs, testing frequently, disclosing specific information about their product, and following regulations. With these products, you can be sure that you know what you are getting.

**READ MORE ([HTTPS://WWW.COMPOSTINGCOUNCIL.ORG/PAGE/STAREQUIREMENTS](https://www.compostingcouncil.org/page/starequirements))**



## Suggested Consumer Uses and Endorsements

Using compost brings many benefits to your project or garden. It's important to apply compost in a way that's appropriate for the setting.

This page provides guidance on what test results you should be looking for and how to apply the compost to grow plants and or for erosion control. These are exact specifications for each state, used by landscape architects, engineers, and transportation departments who have done their research into how to get exactly what they want.

**READ MORE ([HTTPS://WWW.COMPOSTINGCOUNCIL.ORG/PAGE/HOWUSECOMPOST](https://www.compostingcouncil.org/page/howusecompost))**



**STA Certified™  
COMPOST**  
A program of the US Composting Council

## Sources to Buy

These compost manufacturers have made the grade to be included in our list of STA Certified Compost providers. Ask your local source to join if you don't see them here.

*Interested in joining the highly respected group of STA Certified Compost participants? Compost manufacturers contact us here (<https://www.compostingcouncil.org/page/STA-Interest>) to learn more.*

## Contact Us


### **US Composting Council**

#### **Physical Address:**

1053 E Whitaker Mill Rd., Suite 115  
Raleigh, NC 27604

#### **Mailing Address:**

PO Box 19246  
Raleigh, NC 27619

 tel: 301-897-2715

## Quick Links

[Homepage \(/\)](#)

[News & Events \(/news/\)](#)

[Site Map \(/page/SiteMap\)](#)

[COMPOST2025 \(https://compostconference.com/\)](https://compostconference.com/)

[Contact Us \(/general/?type=CONTACT\)](#)

[Privacy Policy \(/page/USCCPrivacyPolicy\)](#)

## Connect With Us



[\(https://www.linkedin.com/company/us-](https://www.linkedin.com/company/us-composting-council/)



[compostingcouncil/](https://www.facebook.com/USCompostingCouncil/)



<https://www.instagram.com/compostingcouncil/>

[compostingcouncil](https://www.youtube.com/watch?v=USCompostingCouncil)

Target Organics Hub (<https://hub.compostingcouncil.org/>) | CREF (<https://compostfoundation.org/>) | COMPOSTCONFERENCE  
(<https://compostconference.com/sponsorship-opportunities/>) | Compost Jobs (<https://compostjobs.com/>) | COMPOSTU (<https://www.compostu.net/>) |  
CERTIFICATION (<https://certificationsuscc.org/>) | USCIC (<https://compostinfrastructure.com/>)



# SECONDNATURE

COMPOST | SOIL | MULCH

8449 Nelson Rd  
San Antonio, TX 78252  
[www.txcompost.com](http://www.txcompost.com) | (210) 960-6440

## Response to RFP

San Antonio Water System  
Five Year Contract for  
Biosolids Composting  
Bid No: 22-22104





## Table of Contents

1. Project Site, Permitting, and Site Viability .....	3
a) Provide information on proposed composting site, including the following:	
• Property boundaries on location map.....	4
• A scale and north arrow .....	4
• Location and size of active piles or windrows, the staging piles, curing piles, and finished compost storage area .....	5
• Direction pad is sloping relative to windrow direction.....	6
• On-site traffic and process flow.....	7
• Staging areas .....	5
• Routes to transport raw materials and finished compost to and from facility .....	11
• Land use denoted on adjoining properties.....	12
• Any applicable local zoning and permit requirements .....	13
• Storm Water Pollution Prevention Plan (SWPPP) for the site .....	14
b) Provide a copy of your permit to compost biosolids on the proposed site from TCEQ .....	15
c) Confirm how many wet tons of biosolids can physically be processed on the site during various weather conditions. ....	16
2. Operational Plan .....	18
a) Composition of compost, incl. information about the raw materials in the feedstock .....	19
• Sources of feedstock .....	19
• Estimated annual weight (tons).....	19
• Estimated annual volume (cubic yards).....	19
• Typical C:N ratio .....	19
• Typical moisture content.....	19
• Odor, vector, and dust control plan .....	19
b) Loading and transporting of biosolids from the Clouse WRC to the composting site.....	20
c) Processing of biosolids before it is incorporated into a windrow .....	21
d) Equipment used at composting site for turning, mixing, screening, etc. ....	21
e) Marketing of the compost, including bulk and residential as applicable .....	21
f) Testing of finished compost .....	21
3. References / Similar Prior Experience .....	23
4. Financial / Operational Stability.....	27
5. Compensation Proposal .....	29
6. Other Submission Requirements .....	30
7. Other Attachments .....	31



## **Project Site, Permitting, and Site Viability**






## PROPERTY BOUNDARIES ON LOCATION MAP A SCALE AND NORTH ARROW

**Second Nature Compost Site**  
Texas, AC +/-



 Boundary

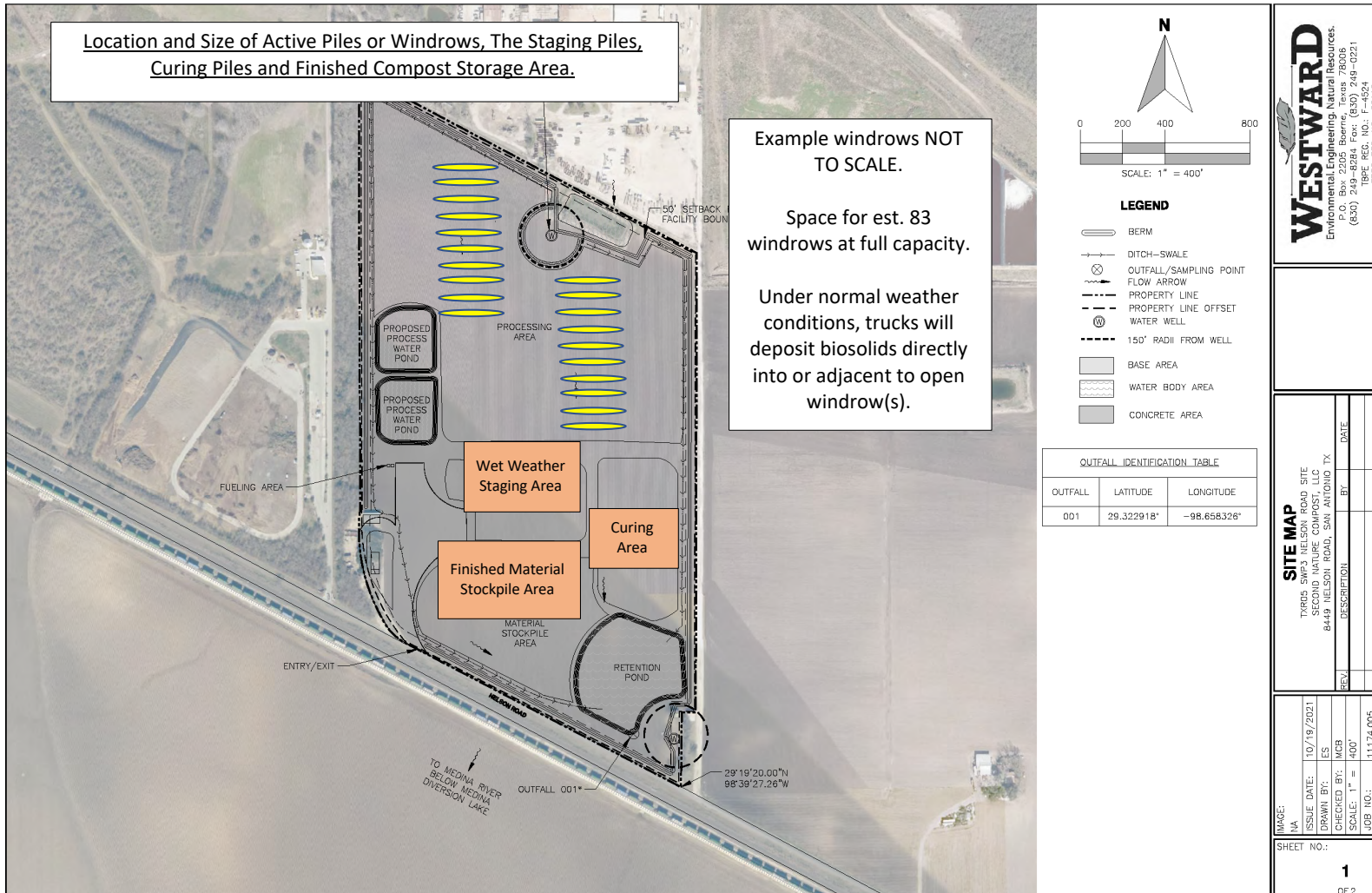
Brandt Klutts

 The information contained herein was obtained from sources deemed to be reliable. MapRight Services makes no warranties or guarantees as to the completeness or accuracy thereof.



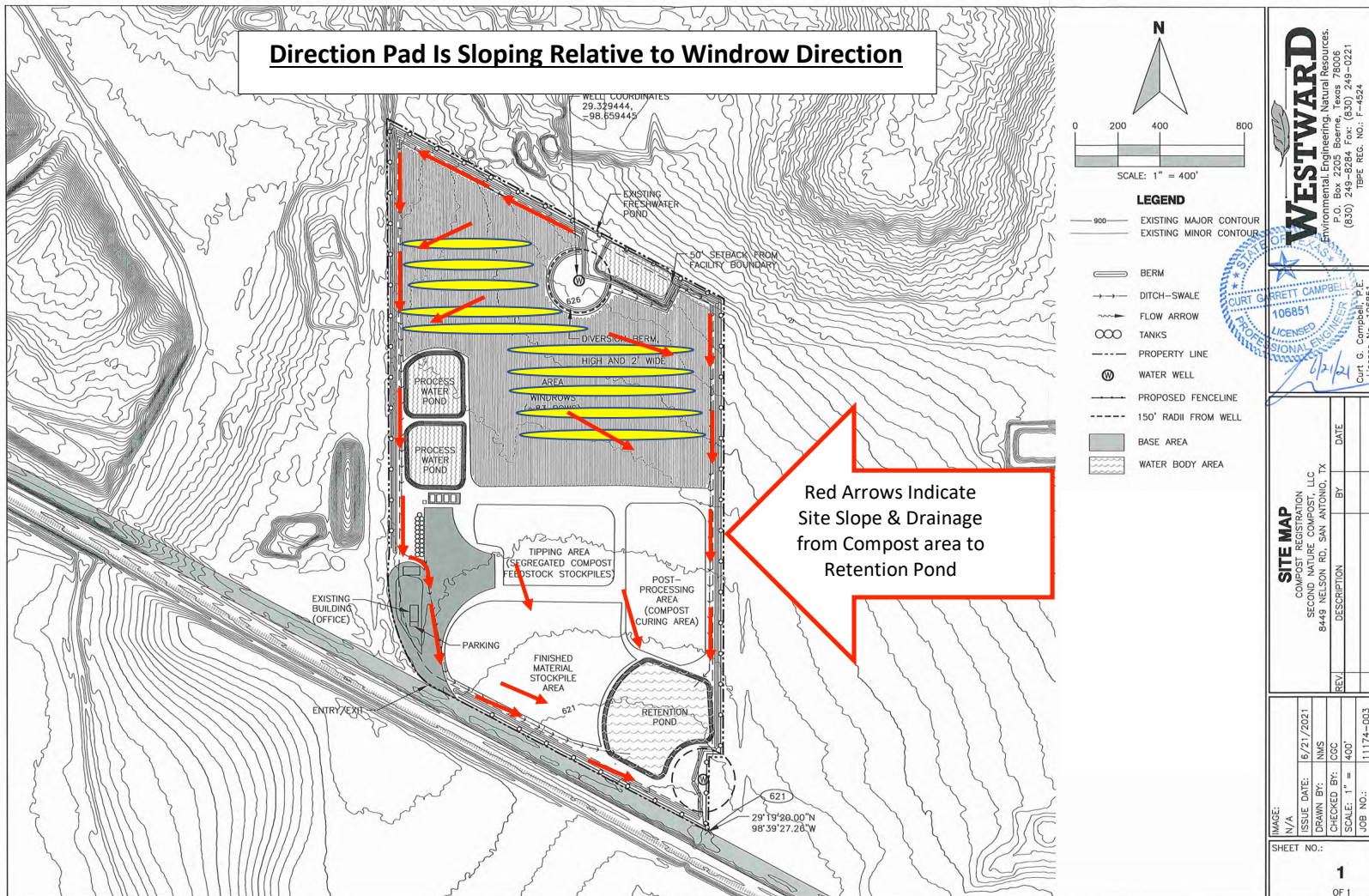


## LOCATION AND SIZE OF ACTIVE PILES OR WINDROWS, THE STAGING PILES, CURING PILES, AND FINISHED COMPOST STORAGE AREA





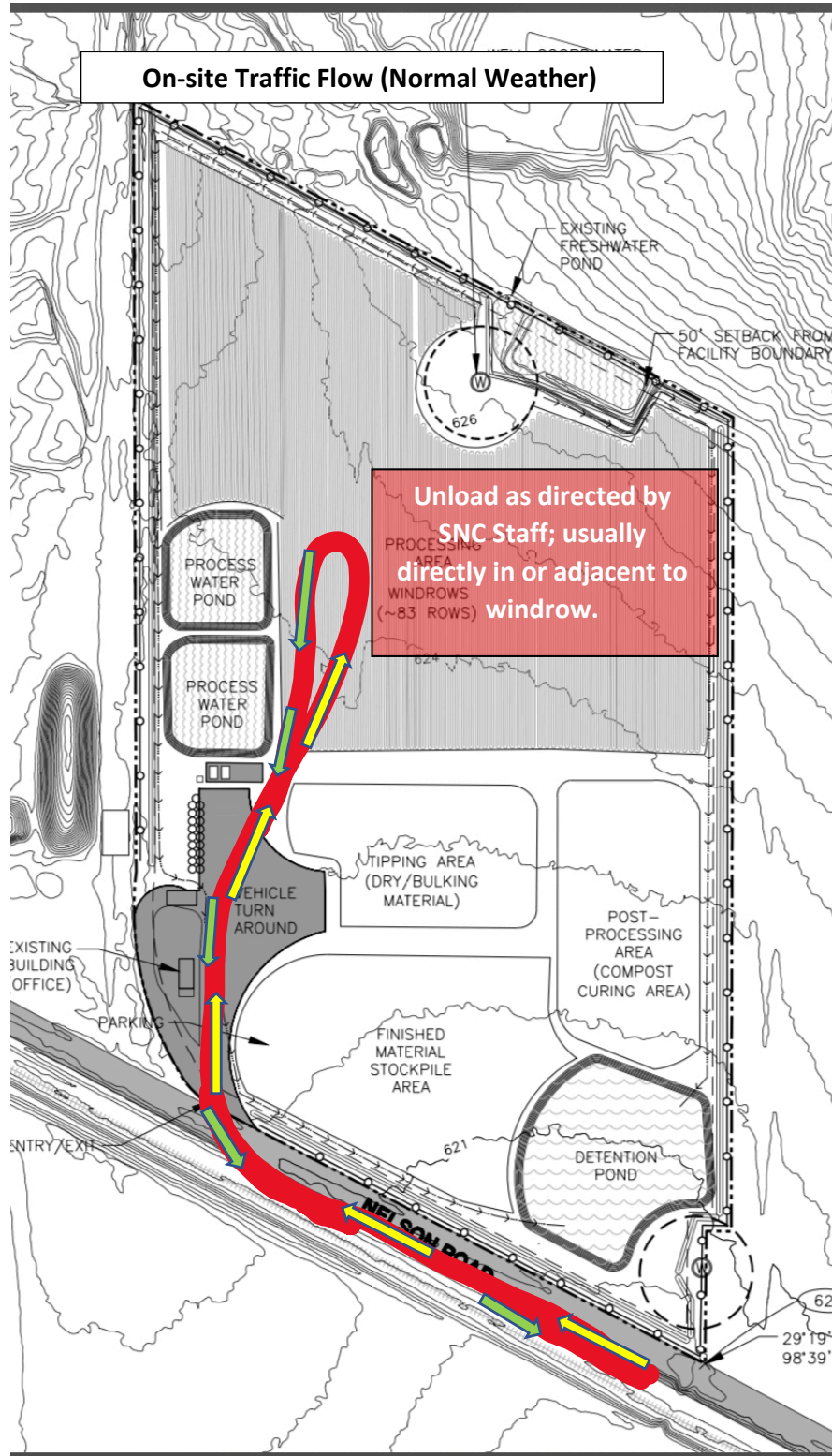
## DIRECTION PAD IS SLOPING RELATIVE TO WINDROW DIRECTION





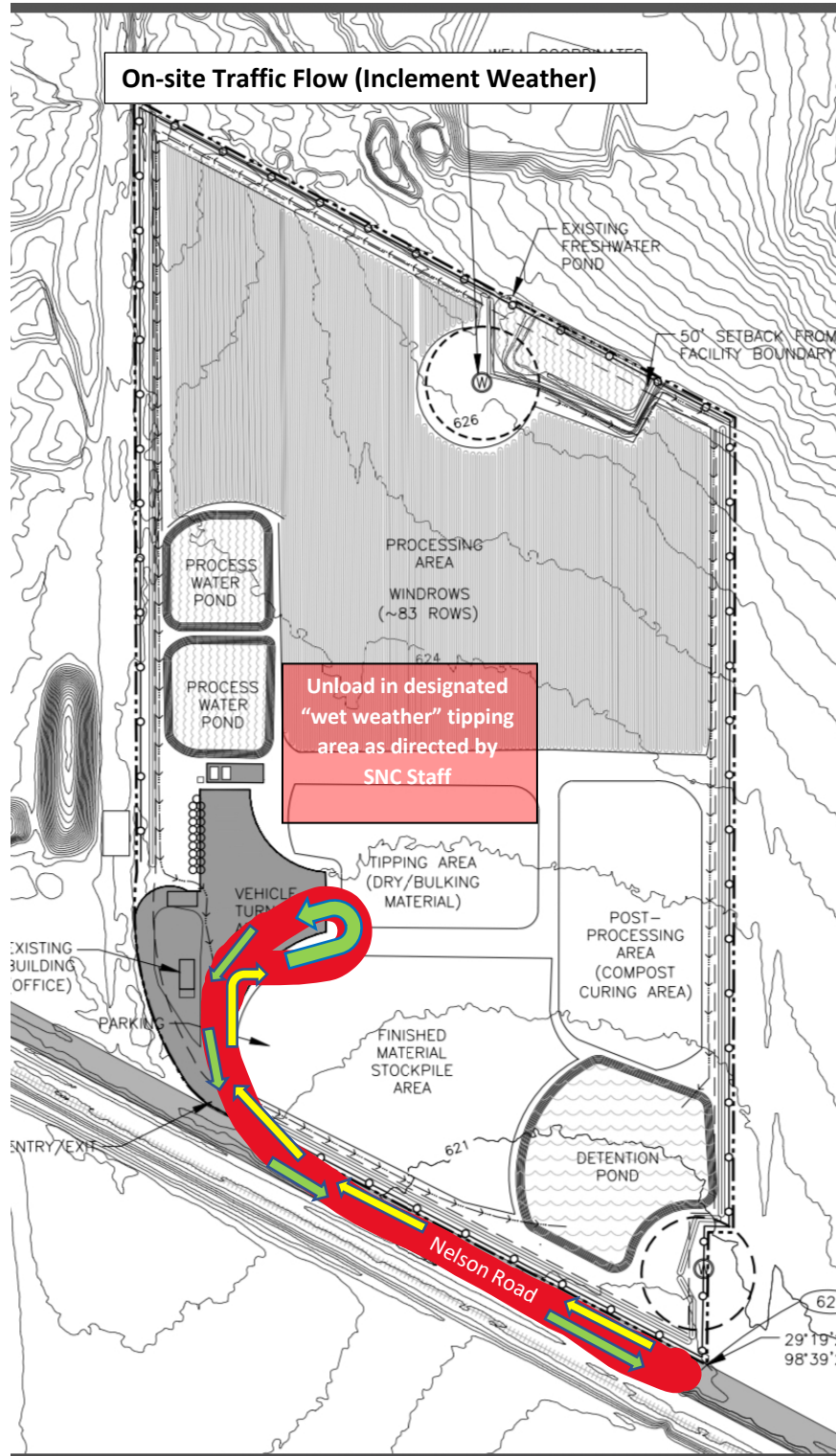


## ON-SITE TRAFFIC FLOW Normal Weather Conditions



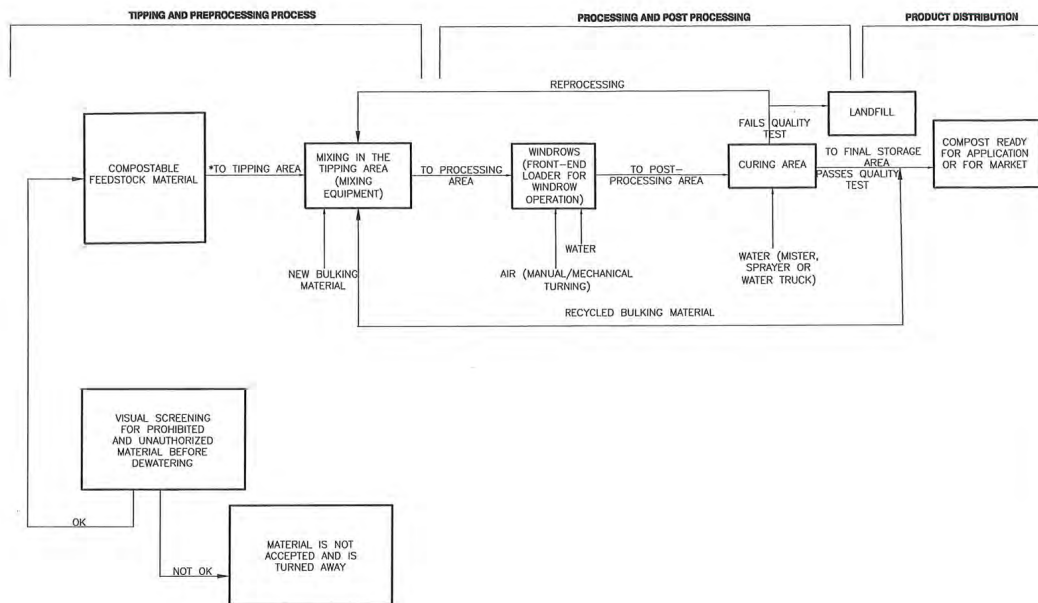


## ON-SITE TRAFFIC FLOW Inclement Weather Conditions





## PROCESS FLOW (Engineering)



**WESTWARD**  
Environmental Engineering, Natural Resources  
P.O. Box 2205, Beerna, Texas 78005  
(512) 498-1001  
(512) 498-0221  
TYPE REG. NO.: F-4624  
License No.: 106851

12/15/20  
Curt G. Campbell, P.E.  
License No.: 106851

PROCESS DIAGRAM			
MSW COMPOSTING REGISTRATION SA			
SECOND NATURE COMPOSTING			
NELSON RD. SAN ANTONIO, BEXAR COUNTY, TX			
REV.	DESCRIPTION	BY	DATE

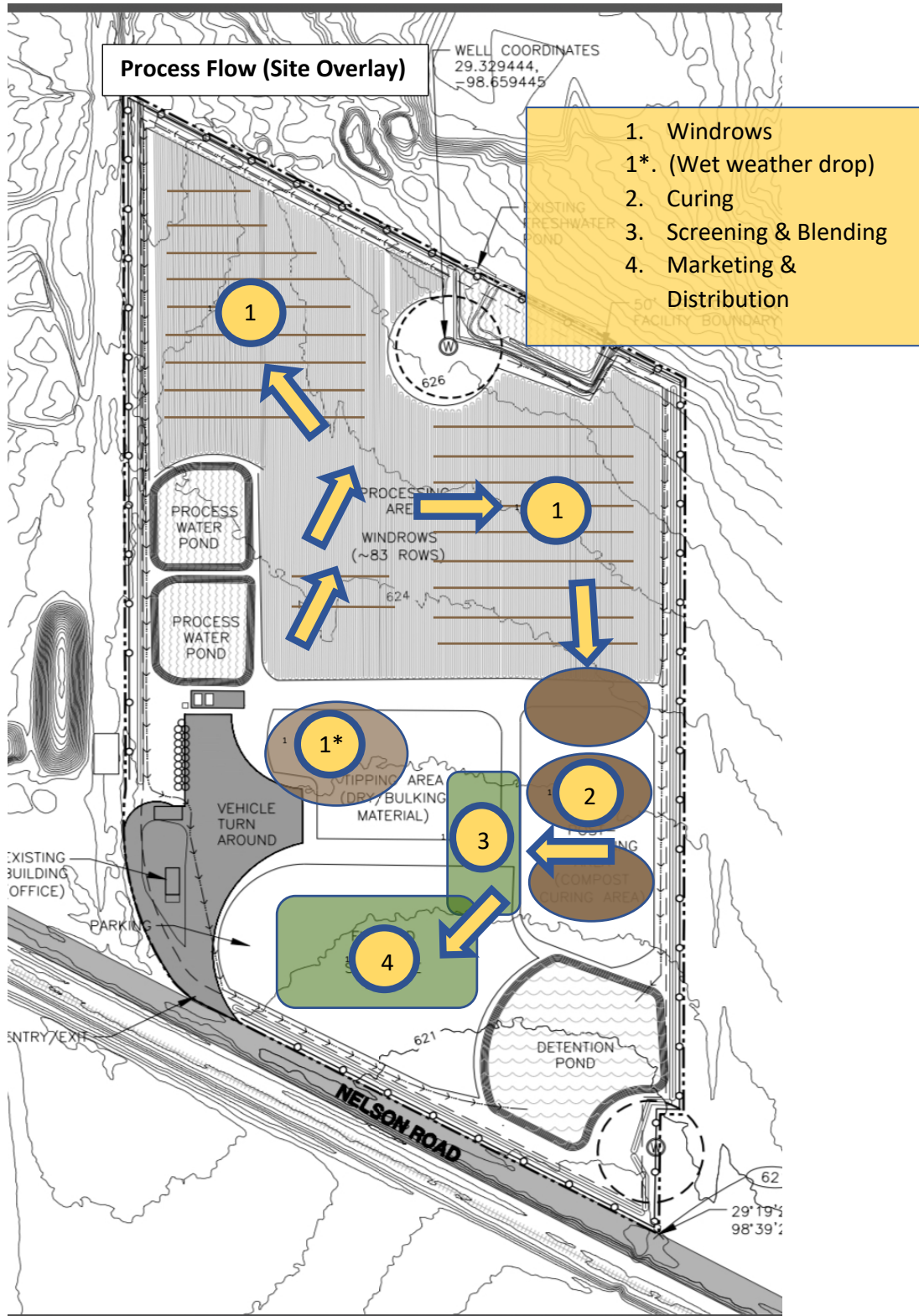
IMAGE:	N/A
ISSUE DATE:	11/4/2020
DRAWN BY:	NMS
CHECKED BY:	ICC
SCALE:	1" = N/A
JOB #:	11174-003

SHEET #:	1
OF 1	





## PROCESS FLOW (Site Overlay)

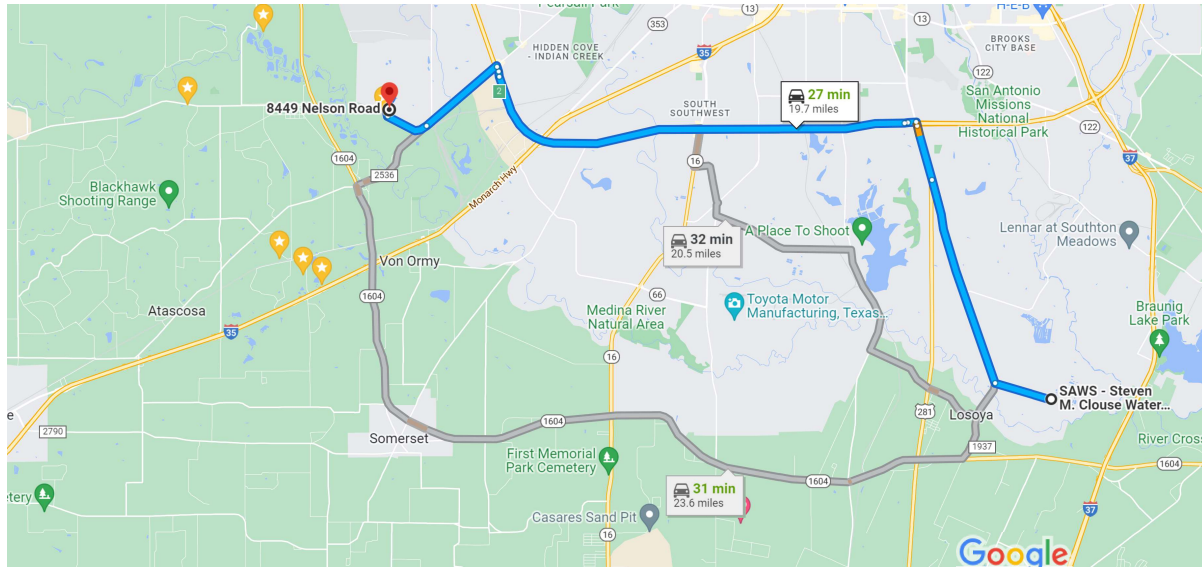




## ROUTES TO TRANSPORT RAW MATERIALS



**SAWS - Steven M. Clouse Water Recycling Center,** Drive 19.7 miles, 27 min  
3495 Valley Rd, San Antonio, TX 78221 to 8449 Nelson Rd, San Antonio, TX 78252



Map data ©2022 Google 2 mi

**SAWS - Steven M. Clouse Water Recycling Center**  
3495 Valley Rd, San Antonio, TX 78221

### Take S Flores Rd to US-281 N

- ↑ 1. Head west on Valley Rd 8 min (5.7 mi)
- ↪ 2. Turn right onto S Flores Rd 1.2 mi
- 4.5 mi

### Take I-410 W to I- 410 Access Rd/SW Loop 410. Take exit 2 from I-410 W

- ↪ 3. Turn right onto US-281 N 11 min (10.9 mi)
- 1.2 mi
- ↑ 4. Continue onto Roosevelt Ave 430 ft
- ↶ 5. Turn left onto I- 410 Access Rd/SE Loop 410 Acc Rd 0.2 mi
- ↑ 6. Use the left lane to take the Interstate 410 W ramp 387 ft

- ↑ 7. Merge onto I-410 W 9.3 mi
- ↪ 8. Take exit 2 toward FM 2536/Old Pearsall Rd 0.1 mi

### Follow Old Pearsall Rd and Nelson Rd to your destination

- ↑ 9. Merge onto I- 410 Access Rd/SW Loop 410 6 min (3.1 mi)
- 0.1 mi
- ↶ 10. Use the left 2 lanes to turn left onto Old Pearsall Rd 2.0 mi
- ↪ 11. Turn right onto Nelson Rd 0.9 mi
- ↗ 12. Slight right 0.1 mi

8449 Nelson Rd  
San Antonio, TX 78252



1-2:	West (beyond Alamo 1 easement): City of San Antonio (brush/compost site)
3-4:	North: Alamo Commercial Properties (industrial use)
5:	North: Fuel Brokers, Inc. (industrial use)
6:	North/Northeast: Waste Management (landfill)
7:	East (beyond Alamo 1 easement): Verstuyft Farm (Corn/cotton farm)
8-9:	South: Union Pacific Railroad (multi-track railroad, land leased for farming)










## SAN ANTONIO ZONING MAP

### ZONED I-1 GENERAL INDUSTRIAL DISTRICT (*Pink*)

And C-3NA General Commercial Nonalcoholic Sales (*Red*)

One Stop Map  CITY OF SAN ANTONIO

Report an Issue  8449 NELSON RD 

Quick Search

Layers

One Stop

Legend

Bookmarks

Identify

Advanced Search

Draw



Measurement

Print

Title: 8449 Nelson Rd Zoning

Format: PDF

Layout: A4 Landscape

Settings  Print 

Basemaps

Identify Results

COSA Parcel Key: Zoom in to Display

Click on a layer for more info. [Nearby ROW Projects](#)

Layer	Description
Zoning	Zoning Detail: I-1

0.25km  
600ft

1:8,000 X: 2073194 Y: 13668428



**Complete SWPPP Permit is uploaded to lonwave under Item 11 "Other Attachment"**

[Questions or Comments >>](#)

[Search Again](#)   [CR Query](#)   [TCEQ Home](#)

**Water Quality General Permits Search**

**Summary of Authorization TXR05FC13**

**Permit Number:** TXR05FC13  
**Authorization Status:** ACTIVE  
**Date Coverage Began:** 10/20/2021  
**Date Coverage Ended:**

**Authorization Details**

**Site Name on Permit:** NELSON ROAD SITE  
**Authorization Type:** INDUSTRIAL  
**Primary SIC Code:** 2875  
**Facility Operational Status :** ACTIVE  
**Hazardous Metals Waiver :** YES  
**MS4 Operator :** CITY OF SAN ANTONIO/BEXAR COUNTY  
**Sector :** C  
**Outfall Number :** 001  
SEGMENT NUMBER - 1903  
RECEIVING WATER BODY - UNNAMED TRIBUTARY OF MEDINA RIVER BELOW MEDINA  
DIVERSION LAKE  
OUTFALL LATITUDE - 29.322918  
OUTFALL LONGITUDE - (-98.658326)  
DISCHARGE TO MARINE OR FRESH - FRESH WATER

**Permittee Information**

**Operator:** CN605843770 - Second Nature Compost LLC  
**Address:** PO BOX 143 BOERNE TX 78006 0143  
**Annual Fee Billing Address:** PO BOX 143 BOERNE TX 78006 0143

**Permitted Site Information**

**RN:** RN111157020  
**RE Name:** NELSON ROAD SITE  
**Site Location:** 8449 NELSON RD SAN ANTONIO TX 78252 2605  
**County:** BEXAR  
**TCEQ Region:** REGION 13 - SAN ANTONIO  
**Latitude:** 29.322381  
**Longitude:** -98.657777

**Regulated Entity Site Information**

**RE Name:** NELSON ROAD SITE  
**Site Location:** 8449 NELSON RD SAN ANTONIO TX 78252 2605  
**County:** BEXAR  
**TCEQ Region:** REGION 13 - SAN ANTONIO  
**Latitude:** 29.322381  
**Longitude:** -98.657777

**Application History for this Authorization**

Application Type	Status	Received Date	Final Action Date
NOTICE OF INTENT	APPROVED	10/20/2021	10/20/2021



**Complete Registration is uploaded to Ionwave under Item 10 "Other Attachment"**

## Texas Commission on Environmental Quality



### Registration for Composting Facility

Issued under provisions of Texas  
Health & Safety Code  
Chapter 361

MSW Registration No.: 42044  
Name of Site Operator/Registrant: Second Nature Compost LLC  
Property Owner: Second Nature Compost LLC  
Facility Name: Nelson Road Site  
Facility Address: 8449 Nelson Road, San Antonio, Texas 78252  
Facility Classification: Registered Composting Facility

The registrant is authorized to store and process feedstock materials for composting in accordance with the limitations, requirements, and other conditions set forth herein. This registration is granted subject to the rules and orders of the Commission and laws of the State of Texas. Nothing in this registration exempts the registrant from compliance with other applicable rules and regulations of the Texas Commission on Environmental Quality (TCEQ). This registration will be valid until canceled, amended, or revoked by the Commission.

*Approved, Issued and Effective* in accordance with Title 30 Texas Administrative Code (30 TAC) Chapter 332.

Issued Date: February 3, 2022

For the Commission



- c) Confirm how many wet tons of biosolids can physically be processed on the site during various weather conditions.
  - a. The Second Nature Compost Site is engineered and permitted to receive up to 6,000 cubic yards per day of material, including biosolids and bulking agents.
  - b. Operating with a mulch-to-biosolid ratio of 3:1, the Site can accept 1,500 cubic yards of biosolids per day, 5 days per week.
  - c. Annualizing that number generates an estimated 390,000 cubic yards of biosolids processing capacity, per Registration 42044.**
  - d. The Site was engineered and operates as an all-weather site; weather is not expected to affect annual processing capacity.**

Additional Information Regarding Storage (Not Processing):

- a. The maximum storage capacity the Site is permitted for is approximately 191,472 cubic yards of biosolids, however the Operational Plan was engineered to avoid stockpiling biosolids.
- b. Using lab-tested data from San Antonio-area belt-pressed material, biosolids have an approximate density of .815 tons per cubic yard.

*(Source: San Antonio Test Labs Report No. 2204294, included on next page)*

- 1.  $.815 \times 191,472 = 156,049$  tons of biosolid storage



## LABORATORY REPORT



Second Nature Compost  
PO Box 143  
Boerne TX, 78006

Project Manager: Michael Ethridge  
Project: Sludge Weight Analysis  
Project Number: [none]

**Reported:**  
04/20/22 11:29  
**Received:**  
04/19/22 09:11

Additional Notes:

**Report No. 2204294**

### SAMPLE QUALIFIERS

K Reported concentration equivalent to 1630 lb/ yd<sup>3</sup>, or 0.815 tons/ yd<sup>3</sup>.

### DEFINITIONS

*	TNI / NELAC accredited analyte
PQL	Practical Quantitation Limit
MCL	Maximum Contaminant Level
mg/Kg	Milligrams per Kilogram (Parts per Million)
mg/L	Milligrams per Liter (Parts per Million)
PPM	Parts per Million
L	LCS recovery is outside QC acceptance limits, the results may have a slight bias.
M	MS recovery is outside QC limits, the results may have a slight bias due to possible matrix interferences.
NR	Not Recovered due to source sample concentration exceeds spiked concentration.
RMCCCL	Recommended Maximum Concentration of Contaminants Level
Surr L	Surrogate recovery is low outside QC limits.
Surr H	Surrogate recovery is high outside QC limits.
HT	Sample received past holdtime
IC	Improper Container
IT	Improper Temperature
V	Inssufficient Volume
B	Sample collected in Bulk
S	RPD is outside QC limits.
AB	VOA Vial contained air bubbles.
OP	ortho-Phosphate was not filtered in the field within 15minutes of collection.
CCV	Continuing Calibration Verification Standard.
ICV	Initial Calibration Verification Standard.

Test Methods followed by the laboratory are referenced in the following approved methodology, unless otherwise specified.

Standard Methods for the Examination of Water and Wastewater, 23rd Edition, 2017  
Methods for Chemical Analysis of Water and Wastes, EPA 600/4-79-020, Rev. March 1983  
EPA SW Test Methods for the Examination of Solid Waste, SW-846, 1996

1610 S. Laredo Street, San Antonio, Texas 78207-7029 (210) 229-9920 Fax (210) 229-9921

[www.satestinglab.com](http://www.satestinglab.com)



## **Operational Plan**

The full “Site Operating Plan” is uploaded under Item 10 “Other Attachment”.  
The Plan goes into detail regarding the following items, but they are summarized below.

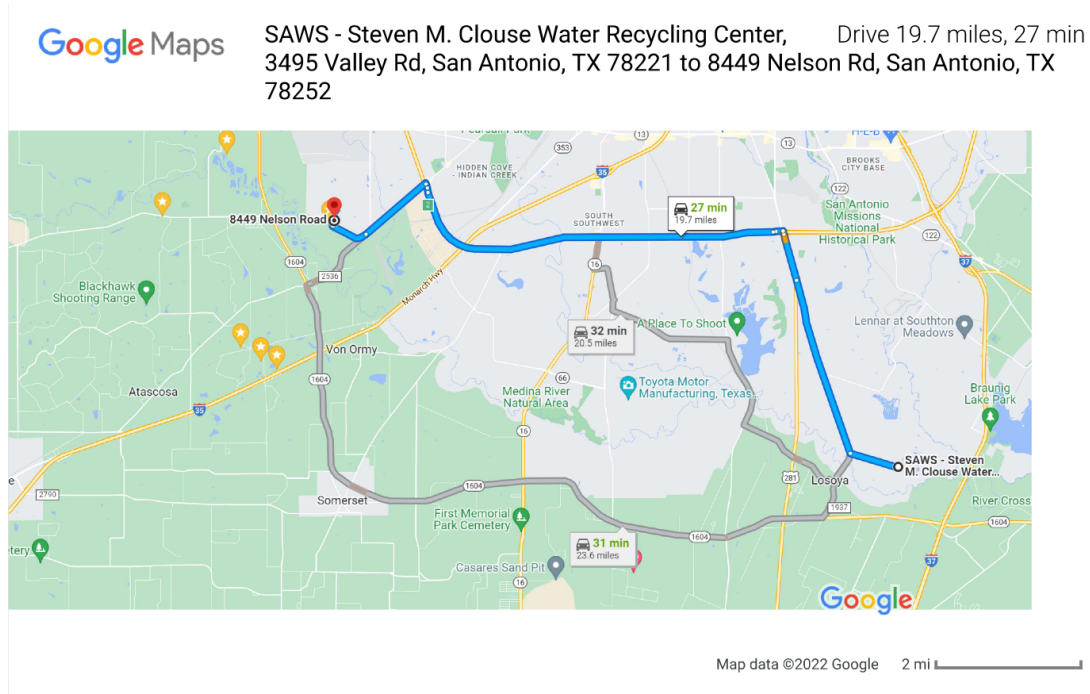


- a) Composition Of Compost, Including Information About the Raw Materials in the Feedstock
  - a) Sources of feedstock
    - Per TCEQ MSW Registration 42044:
      - The materials authorized for composting are positively sorted organics, municipal sewage sludge, septage, disposable diapers or paper products soiled by human excreta, yard trimmings, mulch, clean wood material, vegetative material, paper, manure, meat, fish, dead animal carcasses, dairy materials, meat and vegetable oils and greases. Composting operations must be conducted by aerobic windrow operation.
  - b) Estimated annual weight (tons)
    - Per Registration 42044, the site can process approximately 236,925 tons of bulking material (mulch) annually and approximately 317,850 tons of biosolids annually. \*
  - c) Estimated annual volume (cubic yards)
    - Per Registration 42044, the site can process approximately 1,170,000 cubic yards of bulking material (mulch) annually and approximately 390,000 cubic yards of biosolids annually. \*
  - d) Typical C:N ratio
    - C:N ratio should remain around the EPA recommended 25-35:1 ratio
  - e) Typical moisture content
    - Moisture content of finished compost will be 40-50%
  - f) Odor, vector and dust control plan
    - Odor: controlled through appropriate capping of in-process compost, immediate covering of staged biosolids, MSAP® composting process which allows for less turning, and odor control chemicals used throughout site
    - Vector: controlled through capping of in-process compost and staged biosolids, KunaFin biological fly control, and grading site to eliminate standing water
    - Dust: maintaining compacted roads treated with dust control chemical, frequent road and work area watering by on-site water truck, reduced compost turning using MSAP® method

*\*From Registration 42044: Estimated Daily Quantities are 4,500 cubic yards of mulch and 1,500 cubic yards of biosolids. From there, the numbers were extrapolated to annual quantities by multiplying each number times 5 days per week and 52 operating weeks per year. The numbers were then converted to tons using data from the EPA and San Antonio Testing Labs (405 lb/yd for mulch (EPA) and 1,630 lb/yd of biosolids (SATL)).*



- b) Loading and Transporting of Biosolids from the Clouse WRC to the Composting Site
- Biosolids will be loaded and removed from the SMC WRC biosolids storage locations in a routine manner so as not to impede plant operations, other loader operations, other truck traffic, or other biosolids contractors' operations.
  - All transport vehicles will be kept in good operating condition and avoid tracking of materials or spills on roadways.
  - All transport vehicles and transport of biosolids materials will have required Texas Department of Transportation (TXDOT) and TCEQ transporter registrations. All materials transported from the SMC WRC will be covered and have a minimum of four locking devices such as turn-buckles. Immediate cleanup of any tracked materials or spills on roadways will be the responsibility of the Respondent.
  - Biosolids from the Clouse WRC will be transported to the Nelson Road Site and deposited in appropriate staging areas. The routes available for the transporters are included below.







- c) Processing of biosolids before it is incorporated into a windrow
  - a. Compostable material is brought to the site with over-the-road haul trucks. Each truck load is visually inspected for un-processable and prohibited material. If the load does not meet acceptance standards, it is rejected. The inspected loads are then unloaded into the designated tipping area. Once the biosolids have been unloaded, they are mixed with the dry bulking materials (e.g., yard trimmings, clean wood materials, and vegetative material) in the tipping area and processing area. Once mixed, the material is transported to the processing area and stockpiled in windrows to start the composting process.
- d) Equipment used at composting site for turning, mixing, screening, etc.
  - a. Current equipment includes:
    - i. 2 John Deere Wheel Loaders
    - ii. 2 Case Wheel Loaders
    - iii. 1 Midwest Biosystems Compost Turner
    - iv. 1 Powerscreen Trommel Screen
    - v. 1 Powerscreen Shaker Screen
    - vi. 1 John Deere Tractor
  - b. Additional equipment to be added as necessary as operations expand.
- e) Marketing of the compost, including bulk and residential applications
  - a. The final product (finished compost) will be available for purchase from the site. Compost will be loaded from the final product storage area into trucks and trailers with either a loader, backhoe, or other site mobile equipment to be delivered off-site. Bulk purchases are anticipated to be the primary type of sale. Trucks and trailers that will be picking up material at the site will use tarps or other covers to keep the material from causing a nuisance condition as it is delivered offsite. The presence of a vehicle cover will be monitored by Second Nature Compost, LLC employees during the time of loading.
- f) Testing of finished compost
  - a. Finished compost will be tested for STA certification, which satisfies TCEQ and EPA End-Product Standards. In the event that a product does not meet final specifications, it will either be returned to the beginning stages of the composting process where it will be reintroduced into a new windrow and undergo a complete cycle of composting, or if reintroduction into the composting process is not feasible it will be disposed of as waste at an authorized facility. This process will occur until the product meets final product standards.



# LICENSE CERTIFICATE



*Participant*

8/11/2022 – 6/30/2023

**Frank Franciosi - Executive Director**

*This document certifies that the Participant has met all the requirements set forth in the Seal of Testing Assurance Program Rules and continues to comply through the dates noted on this certificate.*

***Company* – Second Nature Compost LLC**

***Facility* – Second Nature Compost**

***Specific Product(s)* – Second Nature Compost Plus**

US Composting Council • PO Box 19246 • Raleigh, NC 27619  
Phone: 301.897.2715 • Fax: 919-779.5642 • [www.CompostingCouncil.org](http://www.CompostingCouncil.org)

Made For Texas, In Texas.

📍 8449 Nelson Rd | San Antonio, Texas 78252 (<https://goo.gl/maps/nE2caxnRkW8mhP6k9>)

☎ (210) 960-6440 (tel:1-210-960-6440)

🕒 Mon-Fri: 8 AM - 5 PM

@ [info@txcompost.com](mailto:info@txcompost.com) (mailto:info@txcompost.com)



**MENU**

(<https://txcompost.com/>)

# Our Compost+

Healthy & Happy Lawns and Gardens

[Second Nature Compost | Soil | Mulch](#)

[Products](#)

**[Our Compost+](#)**

## COMPOST IS BOTH A PROCESS AND A PRODUCT

Our Compost+ is made from a mix of organic & green wastes blended with shredded natural wood products. These ingredients are mixed and placed into windrows to allow the composting to begin. Once the materials have fully composted, each row is scientifically tested to ensure the compost is finished, safe, and ready for use. Once cleared, each batch is screened to remove any large unwanted particles.

Biologically active, nutrient-rich, and ready for use! Compost+ is perfect for fertilizing lawns, trees, gardens, crops, and more. Our Compost+ can also be used to stabilize your sandy soils - a great tool for new sod and turf farmers!



We offer Compost+ and soil mixing, sales, and delivery for both commercial and residential projects. Our delivery trucks range from trailers for smaller residential endeavors to high side semis to meet the needs of a larger scale projects. Contact us today to discuss your project.

#### **HEALTHY LAWNS AND STUNNING GARDENS**

Our Compost+ is an organic, green, long-lasting alternative to synthetic, chemically-produced fertilizers. Our Compost+ can fertilize your lawns and gardens for multiple years with just one application! Compost+ will also bring life back into your existing soil and over time will create a deeper, healthier soil profile.

#### **ADHERING TO THE STRICTEST OF STANDARDS**



Our Compost+ and the process by which it is produced is meets or exceeds the United States Compost Council's Seal of Testing Assurance

(<https://www.compostingcouncil.org/page/CertifiedCompostSTA>) standards and is regulated by the Texas Commission on Environmental Quality - and we gladly work hand-in-hand with them - to produce a product that is safe and healthy for the general public. You can be sure you're getting the highest quality compost on the market!



---

## Interested In This Product? Contact Us Today!

GET IN TOUCH ([HTTP://YN0.A67.MYWEBSITETRANSFER.COM/CONTACT-US/](http://YN0.A67.MYWEBSITETRANSFER.COM/CONTACT-US/))

**View All Products** (<https://txcompost.com/products/>)

**Our Compost+**



**Soil Products** ([https://txcompost.com/products/soil\\_products/](https://txcompost.com/products/soil_products/))

**Mulch** (<https://txcompost.com/products/mulch/>)

**Have Any Questions?**



**SECOND**NATURE  
COMPOST | SOIL | MULCH

**GET IN TOUCH WITH US >**

## About Us

"Our state has some of the best farmers anywhere in the world, and we want to provide materials to provide nutrients and improve long term sustainability..."

**READ MORE (/ABOUT-US/)**

## Our Products

- ➔ View All Products (<https://txcompost.com/products/>)
- ➔ Our Compost+ (<https://txcompost.com/products/compost/>)
- ➔ Soil Products ([https://txcompost.com/products/soil\\_products/](https://txcompost.com/products/soil_products/))
- ➔ Mulch (<https://txcompost.com/products/mulch/>)



**SECOND****NATURE**  
COMPOST | SOIL | MULCH







*Change Order No. 1*

January 12, 2024

Second Nature  
8449 Nelson Rd.  
San Antonio, TX 78252  
Attn: Mr. Brandt Klutts: President

Attn: Mr. Brandt Klutts, COO

Subject: SAWS **Bid No. 22-22104**  
Biosolids Composting and Marketing

Dear Mr. Klutts;

The San Antonio Water System has received your December 28, 2023 request for a price increase. The contract allows for a not-to-exceed 5% increase based upon the Consumer Price Index US City Average; Reference Base: (1982-84=100), Not Seasonally Adjusted [https://www.bls.gov/regions/new-england/data/consumerpriceindex\\_us\\_table.htm](https://www.bls.gov/regions/new-england/data/consumerpriceindex_us_table.htm) . Calculations are below:

\$28.48/ton – current price  
August 2022: 296.171  
August 2023: 307.026  
Index Point Change:  $307.026 - 296.171 = 10.855$   
Divided by the earlier index:  $10.855/296.171 = .03665$   
Multiplied by 100 =  $.03665 * 100 = 3.665$   
Equals percent change = 3.665%  
Revised Price:  $28.48 + (28.48 * 3.665\%) = \$29.52$

This change order 1 increases the price from \$28.48/ton to \$29.52/ton effective January 1, 2024.

If you have any questions, you may contact me at (210) 233-3821.

Sincerely,

A handwritten signature in black ink that reads "Yvonne C. Torres".

Yvonne C. Torres, C.P.M.  
Senior Director Purchasing

Cc: Tad Eaton

To report suspected ethics violations impacting the San Antonio Water System, please call 1-800-687-1918.



CONTRACT AGREEMENT  
FORMAL AWARD

Dec 21, 2022

Second Nature Compost LLC  
8449 Nelson Road  
San Antonio, TX 78252

Subject:

San Antonio Water System Contract for Five Year Contract for Biosolids Composting  
SAWS Bid No. 22-22104

Award Date: December 6, 2022

No. of Extensions: 5

Contract Period: January 1, 2023 to December 31, 2027

To Whom It May Concern:

At the San Antonio Water System (SAWS) Board of Trustees meeting, you were awarded the Contract Agreement. This Contract Agreement includes the availability to extend if requested and approved by SAWS. All purchases made under this contract will be subject to the terms and conditions of the applicable bid documents.

**Purchase order(s) will be issued by the using department as they require items listed on the contract. Please reference purchase order on all submitted invoices.**

This letter constitutes an agreement between your company and SAWS, which includes all terms and conditions such as billings, delivery locations, and price changes. Any requests for changes to the Contract Agreement, including items, pricing, etc. must be in writing. Approved changes will be via a written Change Order.

Please show each newly generated Purchase Order No. on all invoices submitted during the period of the contract. It is very important for both your company and SAWS that **all** invoices indicate a "Ship To" location or have some indication of who placed the order or that the signature of the employee signing for receipt of the item is legible so that it can be read **(if necessary, please have the employee also print their name).**

If you have any questions, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Yvonne C. Torres".

Yvonne Torres

Director

SAWS Purchasing Dept., (210) 233-3821

yvonne.torres@saws.org

**To report suspected ethics violations impacting the San Antonio Water System, please call 1-800-687-1918.**



# Formal Award Letter

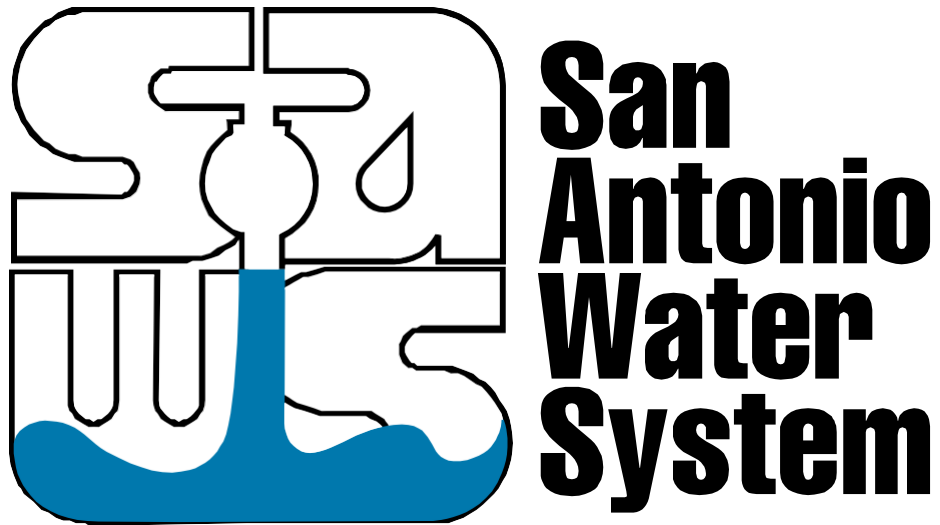
Final Audit Report

2022-12-22

Created:	2022-12-15
By:	Rosie Baiza (Rosie.Baiza@saws.org)
Status:	Signed
Transaction ID:	CBJCHBCAABAA07C-W4cOsObWLH_h-kiZ_3aJLrfd-qwn

## "Formal Award Letter" History

-  Document created by Rosie Baiza (Rosie.Baiza@saws.org)  
2022-12-15 - 8:16:24 PM GMT- IP address: 70.123.224.251
-  Document emailed to Yvonne Torres (yvonne.torres@saws.org) for signature  
2022-12-15 - 8:16:39 PM GMT
-  Email viewed by Yvonne Torres (yvonne.torres@saws.org)  
2022-12-22 - 1:17:23 AM GMT- IP address: 198.181.6.163
-  Document e-signed by Yvonne Torres (yvonne.torres@saws.org)  
Signature Date: 2022-12-22 - 1:17:36 AM GMT - Time Source: server- IP address: 198.181.6.163
-  Agreement completed.  
2022-12-22 - 1:17:36 AM GMT



**SAN ANTONIO WATER SYSTEM**

**AGREEMENT WITH**

**SECOND NATURE COMPOST LLC**

---

**RFP: 22-22104  
FIVE YEAR CONTRACT FOR BIOSOLIDS  
COMPOSTING**

# SAN ANTONIO WATER SYSTEM

## TABLE OF CONTENTS

<b>ARTICLE I. CONTRACT INTERPRETATION.....</b>	
1.01 <u>CONTRACT DEFINITIONS</u> .....	1
1.02 <u>INTENT OF THE CONTRACT</u> .....	2
1.03 <u>DISCREPANCY IN CONTRACT DOCUMENTS</u> .....	3
1.04 <u>REQUESTED SAWS APPROVALS</u> .....	3
<b>ARTICLE II. CONTRACT OBLIGATIONS AND RESPONSIBILITIES .....</b>	
2.01 <u>BIOSOLIDS QUANTITY AND QUALITY</u> .....	3
2.02 <u>COMPOSTING OPERATIONS</u> .....	6
2.03 <u>CONTRACTOR’S OVERALL OBLIGATIONS</u> .....	6
2.04 <u>COMPOST PRODUCTION</u> .....	8
<b>ARTICLE III. COMPENSATION FOR SERVICES .....</b>	
3.01 <u>FEE PAID TO CONTRACTOR FOR TAKING BIOSOLIDS</u> .....	9
3.02 <u>ANNUAL FEE MODIFICATION</u> .....	10
3.03 <u>MINIMUM AMOUNT OF BIOSOLIDS</u> .....	10
<b>ARTICLE IV. REGULATORY COMPLIANCE AND RECORDKEEPING .....</b>	
4.01 <u>MONTHLY REPORTS</u> .....	10
4.02 <u>WITHHOLDING PAYMENTS</u> .....	11
4.03 <u>ANNUAL PAYMENTS</u> .....	11
4.04 <u>BIOSOLIDS FROM DIFFERENT SOURCES</u> .....	11
4.05 <u>REPORT OF VIOLATIONS</u> .....	11
4.06 <u>COMPLIANCE AND RESPONSE DATA</u> .....	11
4.07 <u>PERMITS</u> .....	11
<b>ARTICLE V. LEGAL RELATIONSHIPS, LIABILITY AND INDEMNITY .....</b>	
5.01 <u>GENERAL UNDERSTANDING</u> .....	11
5.02 <u>LEGAL RESPONSIBILITIES</u> .....	11
5.03 <u>LIABILITY &amp; INDEMNIFICATION</u> .....	12
5.04 <u>INDEMNITY; SOLE REMEDY; LIMITATION OF LIABILITY</u> .....	12
5.05 <u>NO WAIVER OF RIGHTS</u> .....	13
5.06 <u>INTEREST IN CONTRACT PROHIBITED</u> .....	13
5.07 <u>PREVAILING WAGES PURSUANT TO 5159(a)</u> .....	13
5.08 <u>EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS/NONDISCRIMINATION CLAUSE</u> .....	13
5.09 <u>SMALL, MINORITY, AND WOMEN BUSINESS PROGRAM(SMWBP) REQUIREMENTS</u> .....	13
5.10 <u>AMERICANS WITH DISABILITIES ACT (ADA)</u> .....	14
5.11 <u>IMPOSSIBILITY OF PERFORMANCE</u> .....	14
5.12 <u>ANTI-RAIDING CLAUSE</u> .....	14
<b>ARTICLE VI. INSURANCE REQUIREMENTS .....</b>	
6.01 <u>COVERAGE</u> .....	14
6.02 <u>SUBCONTRACTOR’S INSURANCE</u> .....	15
6.03 <u>CERTIFICATES OF INSURANCE</u> .....	15
6.04 <u>NOTICES TO SAWS</u> .....	15
6.05 <u>CERTIFICATE HOLDER</u> .....	16
6.06 <u>DELIVERY OF CERTIFICATE OF INSURANCE TO SAWS</u> .....	16
6.07 <u>DEDUCTIBLES</u> .....	16
6.08 <u>MINIMUM INSURANCE LIMITS</u> .....	16
6.09 <u>INSURANCE RATINGS AND TYPES</u> .....	16
6.10 <u>SURVIVAL</u> .....	16
<b>ARTICLE VII. PERFORMANCE BOND .....</b>	
7.01 <u>PERFORMANCE BOND</u> .....	17
7.02 <u>CONTRACTOR, SURETIES, AND PARENT CORPORATION STILL BOUND</u> .....	17
<b>ARTICLE VIII. CONTRACT ADMINISTRATION.....</b>	

8.01	<u>ASSIGNMENTS AND SUBLETTING</u>	17
8.02	<u>LAWS, REGULATIONS AND PERMITS</u>	17
8.03	<u>RELATIONS WITH CUSTOMERS AND THE GENERAL PUBLIC</u>	18
8.04	<u>RECYCLING PROGRAMS</u>	18
8.05	<u>TREND UPDATE REPORT</u>	18
8.06	<u>LOCAL CONSERVATION PROMOTION</u>	18
<b>ARTICLE IX. SAFETY PRECAUTIONS AND PROGRAMS</b>		
9.01	<u>GENERAL</u>	18
9.02	<u>EMPLOYEE SAFETY</u>	19
9.03	<u>PUBLIC SAFETY AND CONVENIENCE</u>	19
9.04	<u>PROTECTION OF PRIVATE PROPERTY</u>	19
<b>ARTICLE X. CONTRACT TERMINATION &amp; SUSPENSION</b>		
10.01	<u>DEFAULT</u>	19
10.02	<u>TERMINATION BY CONTRACTOR</u>	19
10.03	<u>SUSPENSION OF WORK BY SAWS</u>	19
<b>ARTICLE XI. DISPUTES AND DAMAGES</b>		
11.01	<u>MEDIATION</u>	20
11.02	<u>DAMAGES</u>	20
11.03	<u>ADDITIONAL COSTS AND FEES</u>	20
<b>ARTICLE XII. CONTRACT TIMES AND COMMENCEMENT OF WORK</b>		
12.01	<u>COMMENCEMENT OF WORK</u>	21
12.02	<u>CONTRACT YEARS</u>	21
<b>ARTICLE XIII. TERM; EXTENSION OF CONTRACT</b>		
13.01	<u>EXTENSION OF CONTRACT</u>	22
<b>ARTICLE XIV. CONTRACT CHANGES</b>		
14.01	<u>AMENDMENTS</u>	22
<b>ARTICLE XV. MISCELLANEOUS</b>		
15.01	<u>ENTIRE AGREEMENT</u>	22
15.02	<u>GENERAL</u>	22
15.03	<u>STARTUP DATE</u>	22
15.04	<u>NOTICES</u>	22
15.05	<u>RIGHT OF ENTRY</u>	23
15.06	<u>WAIVER OF BREACH</u>	23
15.07	<u>TIME OF ESSENCE</u>	23
15.08	<u>BINDING OF HEIRS AND ASSIGNS</u>	23
15.09	<u>RIGHTS AND REMEDIES CUMULATIVE</u>	23
15.10	<u>TEXAS LAW TO APPLY</u>	23
15.11	<u>LEGAL CONSTRUCTION</u>	23
15.12	<u>PRIOR AGREEMENTS SUPERSEDED</u>	23
15.13	<u>SECURITY REQUIREMENTS</u>	23
15.14	<u>NO THIRD PARTY BENEFICIARIES</u>	23

**SAN ANTONIO WATER SYSTEM  
AGREEMENT WITH SECOND NATURE COMPOST LLC  
FIVE YEAR CONTRACT FOR BIOSOLIDS COMPOSTING**

**THIS AGREEMENT** (“Contract”) dated December 23, 2022, is made and entered into between San Antonio Water Systems, a municipally owned water utility (hereinafter referred to as "SAWS") and Second Nature a Texas Corp. (hereinafter referred to as “Second Nature”). The parties hereby agree as follows:

**ARTICLE I. CONTRACT INTERPRETATION**

**1.01 CONTRACT DEFINITIONS**- Where used in this Contract, the following words and terms shall have the meanings indicated:

- A. **ACT OF GOD**. A cataclysmic phenomenon of nature, such as an earthquake, flood or cyclone. Rain, wind, high water, or other natural phenomenon which might reasonably have been anticipated from historical records of the general locality of the Work shall not be construed as Acts of God.
- B. **BFP**. Belt Filter Press
- C. **BIOSOLIDS**. Digested and dewatered anaerobically digested sludge produced by SAWS from the sanitary sewer treatment facilities at SMC WRC, as further described in the specifications set out in Section 2.01.2 below.
- D. **COMMENCEMENT CONDITIONS**. Commencement Conditions shall have the definition set out in Section 12.01 below.
- E. **COMMENCEMENT DATE**. Commencement Date shall have the definition as set out in Section 12.01 below.
- F. **COMMISSION**. The Texas Commission on Environmental Quality or its successors.
- G. **CONTRACT**. This Contract is between SAWS and Second Nature governing the agreement of Second Nature to take Biosolids from SAWS, make compost with such Biosolids and other compostable materials and market the compost. The Contract includes the exhibits attached hereto and all subsequent written amendments executed by SAWS and Second Nature.
- H. **COSA**. City of San Antonio.
- I. **EXCESS AMOUNT OF BIOSOLIDS**. The amount of Biosolids in excess of the Minimum Amount of Biosolids.
- J. **HAZARDOUS SUBSTANCES**. Hazardous Substance has the same definition as in Texas Water Code, Section 26.263; the definition of Hazardous Substance also includes any solid waste identified or listed as a hazardous waste by the administrator of the United States Environmental Protection Agency in accordance with the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 United States Code, §§6901 *et seq.*

- K. MINIMUM AMOUNT OF BIOSOLIDS. 85,000 wet tons of Biosolids material per year.
  - L. PERFORMANCE BOND. The security furnished by Second Nature through the Surety in the specified amount of \$500,000.00 as a guaranty that the Work will be faithfully performed and completed and that SAWS will be held harmless from all costs and damages which SAWS may suffer by reason of Second Nature's default or failure to perform its obligations under this Contract.
  - M. SAN ANTONIO WATER SYSTEM. San Antonio Water System (SAWS) shall mean the San Antonio Water System Board of Trustees as established pursuant to Sections 402.141 et.seq. of the Texas Local Government Code and City of San Antonio Ordinance No. 75686. Whenever in this Contract is found the term SAWS, the same shall, unless indicated otherwise, be understood to mean the San Antonio Water System Board of Trustees, or its successors or any person or persons acting lawfully in an official capacity on behalf of SAWS at such time and within the power and authority specifically delegated to him or them by this Contract.
  - N. SAWS REPRESENTATIVE. The Sr. Vice President of Production and Treatment Operations or his/her duly authorized representative.
  - O. PROJECT SITE REPRESENTATIVE. The on project site representative of Second Nature is Adolf Garcia and is authorized to communicate with SAWS' Representative regarding performance of this Contract. The Project Site Representative or his designee shall supervise and direct the Work.
  - P. SURETY. The corporate body licensed to conduct business in the State of Texas that provides assurance that Second Nature or its permitted substitute will faithfully perform the Work covered by this Contract.
  - Q. TERM. The Term shall be the period commencing on the date hereof and ending 60 months from commencement date or at the end of any extension of the Term properly exercised pursuant to Section 13.01.
  - R. WORK. The entire process of loading, hauling and processing Biosolids and other compostable material into compost for beneficial use. Work is the result of Second Nature performing services, furnishing labor and furnishing and incorporating materials and equipment in accordance with the terms of the Contract.
  - S. WRC. Water Recycling Center operated by SAWS, being the Steven M. Clouse Water Recycling Center at 3495 Valley Road, San Antonio, Texas ("SMC WRC").
- 1.02 INTENT OF THE CONTRACT. The intent of this Contract is to describe the parties agreement for Second Nature to pick up designated quantities of Biosolids from the WRC and process such Biosolids with wood chips and other compostable materials into compost for sale. Any work, materials or equipment that may reasonably be inferred as being required to pick up Biosolids, produce compost and market the compost is to be supplied by Second Nature whether or not specifically called for by this Contract. Unless otherwise defined herein, when words which have a well-known technical or trade meaning are used to describe work, materials or equipment such words shall be interpreted in accordance with that meaning. Where phrases "directed by," "ordered by" or "to the satisfaction of SAWS Representatives" occur, it is to be understood that the directions, orders, or instructions to which they relate are within the scope of, and authorized by this Contract and shall not constitute a direction of the Work by SAWS. Reference to standard



specifications, manuals or codes of any technical society, organization or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or Laws or Regulations in effect at the time date of this Contract and as subsequently modified by the issuing organization, association or governmental body.

- 1.03     DISCREPANCY IN CONTRACT DOCUMENTS- If, during the performance of the Work, Second Nature finds a conflict, error or discrepancy in the Contract, Second Nature shall promptly report the same to SAWS in writing and before proceeding with further Work affected thereby and obtain a written interpretation or clarification of the conflict error discrepancy from SAWS. SAWS shall provide Second Nature a prompt response (within five (5) working days after receipt of a request).
- 1.04     REQUESTED SAWS APPROVALS- SAWS will respond promptly (within five (5) working days after receipt of a request for approval) to written requests for approvals from Second Nature. SAWS responses shall be in writing and if a requested approval is not given by SAWS, the response shall include the specific reasons for SAWS withholding the approval. Approvals of SAWS may be conditioned upon Commission approvals or permits or similar specific conditions.

## **ARTICLE II. CONTRACT OBLIGATIONS AND RESPONSIBILITIES**

### 2.01     BIOSOLIDS QUANTITY AND QUALITY

- 2.01.01 SAWS shall deliver to Second Nature and Second Nature shall take from SAWS at the WRC the Minimum Amount of Biosolids in approximate equal monthly quantities. Such Biosolids substantially conforming to the standards attached hereto as Attachment 1, will be delivered at the WRC. Biosolids will be delivered on the BFP storage pad, conveyer system or materials storage area at the WRC for loading directly to Second Nature transport vehicles Second Nature is responsible for providing loading and hauling equipment that will suitably fit under the chutes at the WRC. Second Nature acknowledges and agrees that it has inspected the delivery points for Second Nature loading, hauling and transport vehicles and determined them to be suitable for use under this Contract.
- 2.01.02 The Biosolids delivered to Second Nature by SAWS will be anaerobically digested sludge that has been dewatered by either a BFP, sand drying bed or any other future dewatering method meeting Class B (as defined by 40 CFR Part 503 and 30 TAC Chapter 312) pathogen reduction requirements. The anaerobically digested BFP will average fifteen percent (15%) to twenty-five percent (25%) total solids content for the calendar year. The drying bed Biosolids total solid contents will average fifty percent (50%) to ninety percent (90%) total solids for the calendar year. SAWS will remove Biosolids from sand drying beds and transport such Biosolids to the storage pad at the WRC where the drying beds are located and Second Nature will pick up the Biosolids material from the storage pad, and be responsible for loading the Biosolids into Second Nature's transport vehicles. The Biosolids will be reasonably free of foreign material but some quantities of plastic and other solid materials may be present and will contain a sand component.
- 2.01.03 Sampling and testing of materials, laboratory inspection of materials and processes for Biosolids released by SAWS to Second Nature for composting shall be performed at the expense of SAWS in a laboratory maintained by SAWS or a commercial testing laboratory designated by SAWS. SAWS will be responsible for testing/analysis of

Biosolids to confirm that it meets applicable Class B Biosolids requirements and the specifications set forth on Attachment 1. SAWS will be responsible for management and disposal of Biosolids that are not Class B Biosolids at its sole cost and expense. Second Nature shall furnish, samples of material from the WRC it believes may not meet the requirements for composting and SAWS shall be responsible for testing the samples and determining if such Biosolids meet the required Class B requirements. Second Nature has no responsibility to pickup, transport or dispose of Biosolids not meeting Class B Biosolids requirements.

- 2.01.04 Actual quantities of Biosolids delivered to Second Nature shall be determined by certified scales located at the WRC. These scales will be used for weighing of all Second Nature vehicles entering and exiting the WRC. Scale tickets shall be provided for each load of Biosolids material. The weights from the scales will be the basis of billing to SAWS. All payments to Second Nature will be based on wet tons (rounded to 20 pound increments). The scales will be certified in accordance with SAWS' Standard Maintenance Schedule from time-to-time; provided that SAWS will not have to certify the scales more than once every twelve (12) months.
- 2.01.05 Second Nature may at its sole risk and expense, store at the WRC equipment used for loading and hauling Biosolids from the WRC. SAWS shall have no liability for any loss or damage to such equipment on the WRC. All such storage shall be in locations designated by the SAWS Representative from time-to-time. All such equipment stored at the WRC shall be in good working order and maintaining all valid registrations, insurance and licensing requirements. Second Nature may perform routine preventative maintenance approved by SAWS on such equipment at the WRC, but no major equipment repairs may be performed at the WRC. SAWS will not operate any equipment used for loading or transporting Biosolids from the WRC to the Second Nature Compost Site.
- 2.01.06 Second Nature will pick up a minimum of **7083 wet tons** of Biosolids per month from the WRC. Second Nature shall provide and operate all equipment for loading Biosolids from the BFP storage and drying bed storage area. Biosolids will not be stored or stockpiled at the WRC for more than three (3) days. The storage pad must be cleaned off by on a weekly basis by scraping with a front-end loader to prevent nuisance odors and vectors and other health hazards from developing. Second Nature is also responsible for cleaning any spills of Biosolids at the WRC conveyor that occurs while Second Nature is loading Biosolids from the conveyor.
- 2.01.07 Second Nature acknowledges and agrees that they are not the exclusive user of the Biosolids, and that other sludge haulers will be loading and transporting Biosolids from the WRC. Second Nature must coordinate its loading work with the SAWS Representative so as not to interfere with or jeopardize the routine operation of the WRC's dewatering facilities or the operations of any other Biosolids hauling contractor. The SAWS Representative shall provide information for coordination of loading and hauling schedules, sequencing and order of access in its sole discretion; provided, however, in no event shall such information constitute control over Second Nature or direction of the work by the SAWS representative. The Biosolids loading and transportation activities may be conducted Monday through Sunday during normal working hours (6:00 a.m.-6:00 p.m., with some flexibility upon prior written approval by the SAWS Representative).

- 2.01.08 Transportation of Biosolids will be completed in a vehicle or container equipped in such a manner to prevent any spillage, leakage, splashing, blowing or any other accidental loss or discharge of the Biosolids. The vehicle or Biosolids rolloff container may be an open truck provided that it has a water tight bed and sealed gates that are fitted with a minimum of four manually operated closures such as “T” handles or turn-buckles to avoid accidental opening during transit. All vehicles or containers must be fitted with a tarp or other suitable cover over the load. Overloaded vehicles will not be authorized to leave the WRC property and proper compliance is the sole responsibility of Second Nature.

Second Nature shall establish a procedure at the WRC to insure that all trucks traveling on a public street to or from the WRC are properly covered, not overloaded and turnbuckles are in use. Second Nature shall be responsible for clean up of any spills of Biosolids on any WRC or public street. Second Nature must commence clean up of any Biosolids spill within one (1) hour of notification of the occurrence of the spill and pursue completion of the clean up with immediate due diligence. Second Nature shall report any spills to appropriate regulatory agencies in accordance with legal and regulatory requirements. All spills must be reported by phone to the SAWS Representative within 1 hour of notification of the occurrence of the spill. If Second Nature fails to timely commence the clean up or complete the clean up with immediate due diligence, SAWS may at the sole cost and expense of Second Nature clean up the spill using its staff and equipment or a third party contractor Second Nature, upon receipt of an invoice with copies of documents supporting the costs or charges, shall reimburse SAWS on demand all of SAWS’ costs of clean up, including labor, equipment, material and disposal charges plus an overhead and administrative fee of thirty-five percent (35%) of the labor, equipment and disposal charges.

- 2.01.09 Second Nature will provide appropriate multi-part trip tickets to insure compliance with the record keeping requirements of 30 TAC Chapter 312 Subchapter G for transportation of Biosolids to the composting site. Trip tickets will be distributed and maintained in accordance within the above state regulations.

- 2.01.10 Second Nature shall transport Biosolids from the WRC to the compost site in conformance with all applicable Federal, State, or Local laws. Second Nature shall require all vehicle operators to comply with all posted speed limits on and off the WRC. Farm to Market Road 1937 has a current maximum load limit of 58,420 lbs. and any additional weight permits will be the responsibility of Second Nature. Only vehicles that are properly registered under state and local rules with the required certifications and markings to conform to the requirement of these specifications will be allowed to load. Second Nature must provide SAWS with copies of registration letters of anyone who may or will be transporting Biosolids, at the time of the Effective Date of this Contract and upon any changes thereafter.

No Biosolids transport vehicle will be allowed on the WRC until SAWS has been furnished with copies of the then current Commission transport registration documents or permits for the vehicle. In addition, SAWS may deny any vehicle or driver access to and the right to travel on the WRC property and to load or unload materials at the WRC property if SAWS believes in its sole discretion that (i) the vehicle is in need of maintenance or repair work which in SAWS’ reasonable opinion, makes it unsafe to perform the Work, (ii) the driver is impaired, (iii) the vehicle does not have proper registration or insurance, or (iv) such vehicle or driver may be a danger to SAWS’ personnel or property or the public and its property. SAWS has no duty to inspect or

test the vehicles or drivers. SAWS' Representative shall notify Second Nature if SAWS has determined not to allow a vehicle to load or unload material pursuant to this subsection Second Nature shall be responsible for any delays under this Section.

- 2.01.11 Second Nature shall compost at least seventy-five percent (75%) of Biosolids awarded per year. Second Nature may dispose of Biosolids under this Contract at other composting sites only with the specific prior written approval of the SAWS' Representative. Further, any Biosolids not composted shall be disposed at a properly licensed municipal solid waste landfill, provided that Second Nature is composting at least seventy-five percent (75%) of the Biosolids. Failure to compost at least seventy-five percent (75%) of the Biosolids shall constitute a default under this Contract, and SAWS shall be entitled to any and all remedies at law or in equity, including, without limitation, termination of this Contract. In addition, if Second Nature fails to compost at least seventy-five percent (75%) of the Biosolids in any calendar year, (i) SAWS shall no longer be obligated to deliver or pay Second Nature for the Minimum Amount of Biosolids, (ii) SAWS may dispose of the Biosolids in any manner SAWS determines, in its sole discretion, and iii Second Nature shall be responsible for any cost SAWS incurs in disposal of the Biosolids in excess of the cost payable to Second Nature under this Contract, which sum may be deducted from any sum then due and owing to Second Nature or from the Performance Bond provided by Second Nature hereunder.

## 2.02 COMPOSTING OPERATIONS

- 2.02.01 Consistent high quality Biosolid products and compost shall be produced in accordance with all current applicable and future legal and regulatory standards
- 2.02.02 Second Nature will transport all Biosolids it takes under Section 2.01 to the Second Nature composting site. Second Nature shall provide all labor, equipment and material needed or used to produce the compost. Second Nature will determine the type or mix of compost produced, including percentages of sand, mulch and other materials added to the compost Second Nature may utilize any materials in the compost process that are acceptable for notification and exempt tier compost facilities as authorized by 30 TAC 332.3 (c) and (d).
- 2.02.03 Second Nature, as an independent contractor, shall be responsible for all composting activities, including but not limited to, loading, hauling, transportation, assembly of windrows or compost piles, turning such piles, adding any required materials, including compostable material, nitrogen sources, water and any other specialty mixes such as sand or soil, and for screening, storing, packaging and selling.
- 2.02.04 Second Nature shall manage the space at the Second Nature compost site; constructing compost piles or windrows and removing completed compost so as to insure that Second Nature shall be able to take and process into compost, all Biosolids it is required to take under this Contract. Second Nature shall maintain the compost site in compliance with all applicable rules, regulations, codes and laws.

## 2.03 SECOND NATURE'S OVERALL OBLIGATIONS

- 2.03.01 Second Nature shall obtain, maintain and provide all permits, licenses, equipment, labor, material, monitoring, fuel and all other labor, material, equipment and services required to remove the designated quantities of Biosolids from the WRC to the Second

Nature composting site processing areas and process such Biosolids into compost for beneficial use and to market the compost.

- 2.03.02 Second Nature as an independent contractor, shall supervise and direct the Work using its best skill and attention. Second Nature shall be solely responsible for all means, methods, techniques, sequences and procedures necessary to complete the Work under this Contract, as well as for implementing safety precautions and for coordinating all portions of the Work under this Contract.
- 2.03.03 In connection with SAWS' visual observation/inspection of the Work or materials testing contemplated herein, it is clearly understood that Second Nature is responsible for performing quality control inspection and testing services to assure that the compost meets all applicable laws, rules and regulations for resale to and use by consumers.
- 2.03.04 If Second Nature, in the course of the Work, finds any discrepancies between the physical conditions of the Biosolids and application requirements, Second Nature shall immediately inform SAWS by phone and in writing of the discrepancies. Any Work performed by Second Nature after discovery of the discrepancy but before being authorized by SAWS to continue Work will be done at Second Nature's sole risk and/or expense. SAWS will promptly respond to Second Nature requests for testing and analysis in light of the specific problem.
- 2.03.05 Second Nature is responsible for all loading, transportation, processing, packaging and sales, including the compliance with all Federal, State and Local laws, rules and regulations for these activities.
- 2.03.06 Second Nature shall provide SAWS with a detailed plan, updated at least annually, advising SAWS on how Second Nature is complying and will comply with all Federal, State, and Local laws, rules, codes, ordinances and regulations pertaining to the Work. Failure of Second Nature to comply with any of the applicable laws, rules, codes, ordinances and/or regulations after appropriate notice and cure periods set out in Section 10.01 below, shall be events of default under this Contract, and may be considered cause for termination of this Contract.
- 2.03.07 Second Nature shall be knowledgeable of and comply with all notice, recordkeeping and other requirements of the WRC TPDES Permit No. W00010137033 [EPA ID No. TX 0077801] as they apply to the beneficial use of Biosolids as set out in Section 11.03. Failure to comply with any of these requirements shall be a default under this Contract, and may be considered cause for termination of this Contract.
- 2.03.08 Second Nature agrees to reimburse SAWS for any and all fines or additional operation expenses arising from any regulatory enforcement action that is imposed on SAWS by any Federal, State or Local regulatory agency that result from any actions or omissions of Second Nature, and/or subcontractors or agents of Second Nature.
- 2.03.09 The operation of the compost facility must be performed in accordance with all legal and regulatory requirements and in a manner to limit complaints or nuisance conditions created by vectors, odors and dust. The contractor will be responsible for responding to all complaints and implementing any practices or processes needed to rectify such complaints. Failure to manage the facility to minimize odor, vectors or dust, or failure to respond to complaints which result in regulatory violations or infractions shall be a default under this Contract and may be grounds for termination of the Contract.

- 2.03.10 Inclement weather events do not relieve Second Nature from the Second Nature performance of its obligation to pick up Biosolids at the WRC and haul to the Second Nature Compost Site.
- 2.03.11 Equipment failure shall not be an excuse for Second Nature not complying with its obligations under this Contract. Failure to obtain or maintain permits shall not be an excuse for Second Nature's failure to comply with its obligations under this Contract.
- 2.03.12 Second Nature shall have a competent superintendent or assistant superintendent available twenty-four (24) hours a day, seven (7) days a week, by phone and shall respond to calls from SAWS within two (2) hours after being contacted.
- 2.03.13 Second Nature declares that Second Nature has thoroughly examined the SMC WRC and has become familiar with typical local geophysical conditions at or near the WRC, and has read and has thoroughly understood this Contract.
- 2.03.14 Second Nature shall maintain at its offices at 8449 Nelson Rd., San Antonio TX 78252 compost site, a detailed set of operation records pertaining to the Work, including Biosolids hauling and transport records (both inbound and outbound of the Second Nature Compost Site), testing results, etc. SAWS shall have the right to inspect records dealing with Commission's 30 TAC Chapter 332 and 312 rules and standards to the extent reasonably necessary to verify compliance with this Contract.
- 2.03.15 SAWS may require reasonable special inspection, testing or approval of (i) any non-SAWS' bulking or mixing material Second Nature brings into the Second Nature compost site, and (ii) the compost before it is removed by Second Nature to determine compliance with the requirements of this Contract, Second Nature shall promptly arrange for such reasonable special testing and inspection at an approved Lab, Second Nature or the SAWS' laboratory when requested by SAWS. SAWS' current lab rates are set out on Exhibit A hereto. Should the material or compost fail to comply with the requirements of this Contract, Second Nature shall pay the reasonable cost of correcting the deficiency or land filling the compost.
- 2.03.16 Second Nature shall at its sole cost and expense restore property of any description, including property of SAWS, which may be damaged in the performance of this Contract by Second Nature, its agents, employees, subcontractors or their employees and subcontractors, to the condition existing prior to such damage.

## 2.04 COMPOST PRODUCTION

- 2.04.01 All compost produced by SAWS Biosolids at the Second Nature compost site shall meet Commission's 30 TAC Chapter 332 and 312 rules and standards. In addition, Second Nature shall comply with the requirements for processing the biosolids into Class A compost as set forth on Attachment 2 hereto.
- 2.04.02 It is the responsibility of Second Nature to establish and submit a marketing plan for the Biosolids. It is SAWS stated goal to obtain 100 percent beneficial use of Biosolids, and this should be reflected in Second Nature's marketing plan. In keeping with SAWS' goal of diversification and the intent of this Contract, it is the responsibility of Second Nature to strive to generate products for suitable market uses. Alternative use or disposal markets should only be used as failsafe backup options. Should it appear to SAWS that Second Nature is not complying with appropriate marketing and use of the product,

SAWS may take corrective steps, such as reducing the tonnage required to be delivered to Second Nature under this Contract, or may terminate the Contract.

- 2.04.03 Second Nature will conduct all Class A pathogen reduction sampling and other required testing under 30 TAC Chapters 312 and 332 of the compost produced at the Second Nature compost site that contains quantities of SAWS' Biosolids. SAWS will provide all sampling and analysis of Biosolids to Second Nature and certify the Biosolids meet Class B criteria. Second Nature is responsible for all Class A performance sampling. The SAWS laboratory is available to conduct all Class A testing and report the results to Second Nature. Second Nature will be charged for the testing according to the then existing SAWS' rate structures. Second Nature will be responsible for certifying pathogen reduction and vector attraction reduction for Class A proposals. Copies of certifications shall be sent monthly to the SAWS Representative.

Any other analytical work performed will be the responsibility of Second Nature. Second Nature may use the SAWS laboratory for any additional testing and pay according to the then existing SAWS' rate structures. All results shall be reported to the SAWS Biosolids Manager within thirty (30) days identifying the laboratory used for any analysis, the phone number, contact person, test performed, method used and analytical result.

Hazardous Substances: Second Nature shall not use, release, manufacture or dispose of any Hazardous Substances at the Second Nature compost site or the WRC. Second Nature shall defend, indemnify, and hold harmless SAWS from any and all liabilities (including strict liability), actions, demands, penalties, losses, costs, or expenses (including without limitation attorneys' fees and expenses, and remedial costs), suits, costs of any settlement or judgment and claims of any and every kind whatsoever which may now or in the future (whether before or after the termination of this Contract) be paid, incurred or suffered by or asserted against SAWS by any person or entity or governmental agency for, with respect to, or as a direct or indirect result of, the presence on or under, or the escape, seepage, leakage, spillage, discharge, emission or release from the Second Nature Compost Site of any Hazardous Substances which arise out of or result from Second Nature's performance of its obligations under this Contract and/or Second Nature's operations on the Second Nature compost site.

- 2.04.04 Second Nature shall make available and provide to SAWS at the Second Nature composting site up to 100 cubic yards per year of bulk compost at no cost to SAWS.

### **ARTICLE III. COMPENSATION FOR SERVICES**

- 3.01 FEE PAID TO SECOND NATURE FOR TAKING BIOSOLIDS-Subject to the terms and provisions of Section 2.01.11, SAWS shall pay **\$28.48** per wet ton of Biosolids material delivered to Second Nature for the Minimum Amount of Biosolids. Second Nature will invoice SAWS monthly by the 10th of each month for Biosolids materials hauled during the prior calendar month based on scale ticket weight receipts from the scales at the WRC. All reasonable record keeping requirements (i.e., scale weight records, load tickets, invoice forms) shall be met before invoices are processed for payment. All monthly invoices will be paid within 30 days from receipt of all required documentation.

### 3.02 ANNUAL FEE MODIFICATION

Beginning one year after the Start Date, the fees shall be subject to annual adjustment according to the following provisions. Said price per ton payable by SAWS for the services hereunder, may be adjusted effective on the anniversary date of the contract award by SAWS each year to an amount determined by using the Consumer Price Index US City Average; Reference Base: (1982-84=100), Not Seasonally Adjusted [https://www.bls.gov/regions/new-england/data/consumerpriceindex\\_us\\_table.htm](https://www.bls.gov/regions/new-england/data/consumerpriceindex_us_table.htm).

Annual Fee Modification will be calculated by using the Consumer Price Index Previous August figure in comparison to the most recent Consumer Price Index August figure. Annual Fee Modification will be calculated as follows (using August 2021 and August 2022 figures as an example):

\$30/ton unit price in August 2021

August, 2021 (273.567)

August, 2022 (296.171)

Index Point Change:  $296.171 - 273.567 = 22.604$

Divided by the earlier index:  $22.604 / 273.567 = 0.082627$

Multiplied by 100 =  $0.082627 * 100 = 8.26$

Equals percent change = 8.26%

Revised Price:  $30 + (30 * 8.26\%) = \$32.478$

The following year's calculation will be based upon using August 2022 and August 2023 figures and so forth for subsequent years.

It is agreed by SAWS and Contractor(s) that the CPI adjustment shall not exceed five percent (5.0%) in any given year; nor, shall the cumulative adjustments exceed a total of twenty five percent (25%). Consumer Price Index shall mean the United States Department of Labor Bureau of Labor Statistics, Consumer Price Index, All Urban Consumers, All Items, Dallas-Ft. Worth, Texas, or any successor to that index. Contractor will notify SAWS in writing for acceptance as soon as practicable following the determination of any such proposed adjustment, which acceptance will not be unreasonably withheld. Failure to notify SAWS of any adjustment within thirty (30) days following the date of adjustment shall constitute a waiver by the contractor of the right to the price adjustment.

3.03 MINIMUM AMOUNT OF BIOSOLIDS-Subject to the terms and provisions of Section 2.01.11, this Contract will be based on "take or pay" for the Minimum Amount of Biosolids per year. Second Nature is required to remove Biosolids in a consistent and timely manner (awarded amount in tons / 52 weeks). If Second Nature cannot process Biosolids through composting, Second Nature must make alternative arrangements and pay all associated costs to landfill the Biosolids.

## **ARTICLE IV. REGULATORY COMPLIANCE AND RECORDKEEPING**

4.01 MONTHLY REPORTS – SECOND NATURE must supply monthly reports to SAWS by the 10th of the following month along with the monthly invoice, documenting the volumes of Biosolids hauled from the WRC, the volumes of SAWS' Biosolids processed at Second Nature's facility, the volumes of SAWS' Biosolids disposed of at other facilities, the status of the products manufactured from SAWS' Biosolids (e.g. in storage, in distribution, utilized by end user), and records of complete treatment and management of all by-products and waste streams. The monthly report



shall include (i) environmental monitoring records, copies of all reports submitted to regulatory or oversight agencies, hauling records, product quality information, as well as information that documents product shipping and complete treatment and management of waste streams and by-products, and (ii) summaries of operational and questions and responses described in Section 4.06 below.

- 4.02     WITHHOLDING PAYMENTS - SAWS reserves the right to withhold payment if complete and correct information is not provided to document complete processing and beneficial use of the Biosolids.
- 4.03     ANNUAL REPORTS - Where applicable, Second Nature shall provide SAWS with an annual report addressing compliance with the requirements of 40 CFR, Parts 501 and 503, no later than September 30 following the end of the immediately preceding reporting period.
- 4.04     BIOSOLIDS FROM DIFFERENT SOURCES - For processes and products that are a mixture of Biosolids from different sources and other additives, Second Nature shall provide tracking of all Biosolids through processing and marketing or beneficial use. If there is a batch of product that does not meet specifications, Second Nature will inform SAWS whether the batch contained SAWS' Biosolids and must provide remediation procedures and actions to improve quality control.
- 4.05     REPORT OF VIOLATIONS- Second Nature must demonstrate compliance with all Federal, State, and local laws, rules, codes, ordinances and regulations requiring the reporting of violations. Any violations or investigations at the compost site must be reported to SAWS immediately and also to the appropriate regulatory authority on the earlier of the date that SAWS requests, or time required by any applicable law, code, rule, or regulation or ordinance.
- 4.06     COMPLIANCE AND RESPONSE DATA - Second Nature must also keep a record of all compliance operational data, complaints or questions received, the response provided and the response time. SAWS shall be notified of all notices or any violations, complaints and responses at the compost site within one business day. Summaries should be provided to SAWS in the monthly report.
- 4.07     PERMITS- All necessary permits must be maintained by Second Nature and kept current. Copies shall be provided to SAWS upon issuance and renewal and should be available at the Second Nature composting site.

## **ARTICLE V. LEGAL RELATIONSHIPS, LIABILITY AND INDEMNITY**

- 5.01     GENERAL UNDERSTANDING: Second Nature, at its own cost and expense, shall furnish all supervision, tools, implements, machinery, labor, materials and accessories, such as are necessary and proper for the Work. Second Nature shall obtain, maintain and provide all required permits and licenses at its own cost and expense, complete and conform to and comply with all laws, regulations, codes and ordinances pertaining to the Work and/or the maintenance and operation of the Second Nature Compost Site operations. SAWS will cooperate with Second Nature at no expense to SAWS and provide all reasonably required consents or approvals for permits. Failure of Second Nature to comply with any of the applicable laws, rules, codes, ordinances and/or regulations after appropriate notice and cure periods set out in Section 10.01 below, shall be events of default under this Contract, and may be considered cause for termination of this Contract.
- 5.02     LEGAL RESPONSIBILITIES Second Nature in the performance of the Work shall comply at its sole cost and expense with all pertinent Ordinances of the City of San Antonio (COSA), Regulations of the San Antonio Water System (SAWS), Laws of the State of Texas, and of the

United States, including Rules and Regulations of the United States Department of Labor, pertaining to Occupational Safety and Health Administration standards, Commission and Environmental Protection Agency (EPA) as presently existing or as may hereinafter be modified or amended.

- 5.03 LIABILITY & INDEMNIFICATION- Second Nature shall protect the public, SAWS and COSA fully by taking reasonable precaution to safeguard persons from death or bodily injury and to safeguard property of any nature whatsoever from damage. Where any dangerous condition or nuisance exists in and around sites, equipment and supply storage areas, and other areas in anyway connected with the performance of this Contract, Second Nature shall provide and maintain reasonable warning of such danger or nuisance. Second Nature shall not create excavation, obstructions, or any dangerous condition or nuisance of any nature whatsoever in connection with the performance of this Contract. The duties of Second Nature in this section shall be non-delegable, and Second Nature's compliance with the specific recommendations and requirements of the San Antonio Water System or the City of San Antonio as to the means of warning shall not excuse Second Nature from the faithful performance of these duties should such recommendations and requirements not be adequate or reasonable under the circumstances.

5.04 INDEMNITY; SOLE REMEDY; LIMITATION OF LIABILITY

- 5.04.01 Second Nature hereby agrees to indemnify, defend and hold harmless SAWS, COSA and their respective agents and employees from and against any and all losses, damages, fines, penalties, fees (including, without limitation attorneys' fees and costs of dispute resolution), judgments, decrees, and expenses or costs of any nature whatsoever (collectively, "Damages"), arising out of any material breach of any representation, warranty, covenant or obligation made by Second Nature in this Contract ("Claims"), Damages suffered by SAWS, COSA and their agents and employees for the death or injury to persons or for damage to property caused, or allegedly caused, by any willful acts, negligence, or breach of any term or condition of this Contract in connection with work to be performed pursuant to said Contract, by Second Nature, its agents, subcontractors, or employees. Second Nature shall furthermore indemnify, defend and save harmless SAWS and COSA and their respective agents and employees from all demands of subcontractors, workmen, materialmen, or suppliers of machinery and parts thereof, equipment, power tools, and supplies incurred in connection with work to be performed under this Contract.

**SUCH INDEMNITY SHALL APPLY WHERE THE CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, JUDGMENTS, DECREES, OR LIABILITY ARISE IN PART FROM THE NEGLIGENCE OF SAWS OR COSA. IT IS THE EXPRESSED INTENTION OF SECOND NATURE, SAWS AND COSA THAT THE INDEMNITY PROVIDED FOR IN THIS PARAGRAPH IS INDEMNITY BY SECOND NATURE, TO INDEMNIFY AND PROTECT SAWS AND COSA FROM THE CONSEQUENCES OF SECOND NATURE'S NEGLIGENCE. WHERE THE NEGLIGENCE OF SAWS AND/OR COSA IS A CONCURRING CAUSE OF THE INJURY, DEATH, OR DAMAGE, SECOND NATURE SHALL BE LIABLE FOR ITS PROPORTIONATE SHARE OF THE INJURIES AND DAMAGES. FURTHERMORE, THE INDEMNITY PROVIDED FOR IN THIS PARAGRAPH SHALL HAVE NO APPLICATION TO ANY CLAIM, LOSS, DEATH OR DAMAGE THAT RESULTS FROM THE SOLE NEGLIGENCE OF SAWS AND COSA UNMIXED WITH THE FAULT OF ANY PERSON OR ENTITY. NOTHING HEREIN SHALL LIMIT, WAIVE OR AFFECT**

**THE IMMUNITY OR GOVERNMENTAL LIMITATIONS OF LIABILITY  
AFFORDED SAWSAND/OR COSA BY STATE LAW.**

In any Claims against SAWS or COSA or their agents or employees by Second Nature, any employee of Second Nature, any subcontractor, anyone directly or indirectly employed by Second Nature, or any subcontractor or anyone for whose acts any of them may be liable, the indemnification obligation under this paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Second Nature or any subcontractor under workers' compensation acts, disability benefit acts or other employer's benefit acts.

5.04.02 ROYALTIES AND PATENTS – Second Nature shall pay all royalties and license fees, and defend all suits or claims for infringement of any patent rights or royalties arising from Second Nature's compost operations at the Second Nature Compost Site. This indemnity does not apply to any royalties or fees arising from SAWS' water treatment process before the Biosolids are delivered to Second Nature for composting.

5.04.03 The terms of this Section 5.04 shall survive the expiration of the Term or earlier termination of this Contract.

5.05 NO WAIVER OF RIGHTS- Unless specifically and unambiguously set out in this Contract, no observation/inspection or approval by either party or any officer or employee of either party, or any order, measurement or certificate by SAWS, or any estimate or payment by either party for any part of said Work, or material or method or equipment, or any extension of time, at any time shall operate as a waiver of any provision or obligation of this Contract or any right or power herein given or reserved to either party, or of any right to claim any indemnity or damages in connection with the Work or otherwise as herein provided for; nor shall any waiver by either party of any breach of this Contract be deemed as a waiver of any other or subsequent breach; and every right or remedy provided to either party under the Contract Documents shall be cumulative, and in addition to all other rights and remedies available to such party.

5.06 INTEREST IN CONTRACT PROHIBITED- No officer or employee of SAWS shall have a financial interest, direct or indirect, in any Contract with SAWS, or shall be financially interested, directly, in the sale to SAWS of any land, materials, supplies or service, except on behalf of SAWS as an officer or employee. This prohibition extends to CPS Energy, the City of San Antonio, and City boards and commissions other than those which are purely advisory.

5.07 WAGES PURSUANT TO LABOR CODE- Second Nature shall comply with the terms of Labor Code Section 61, as amended, to the extent, if any, that it applies to the work performed by Second Nature under this Contract.

5.08 EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS NONDISCRIMINATION CLAUSE- The San Antonio Water System highly encourages Second Nature to implement Affirmative Action practices in their employment programs. Furthermore, Second Nature agrees not to discriminate against any employee or applicant for employment because of race, color, national origin, religion, sex, age, handicap or political belief or affiliation.

5.09 SMALL, MINORITY, WOMEN AND VETERAN-OWNED BUSINESS POLICY (SMWVB) REQUIREMENTS- The San Antonio Water System highly encourages Second Nature to form joint ventures and/or provide subcontract opportunities to small, minority, woman and veteran owned firms.

- 5.10 AMERICANS WITH DISABILITIES ACT (ADA)- Second Nature shall, to the extent required by law, comply with the ADA, as amended, and any regulation, law or ordinance promulgated under authority of such Act with regard to the public's access to the Second Nature compost site by the handicapped.
- 5.11 IMPOSSIBILITY OF PERFORMANCE- Should the performance of the obligations of SAWS or Second Nature be prevented or delayed by an Act of God, war, civil insurrection, fire, flood, storm, strike, lockout, or by any law, regulation, order of any federal, state, county, or municipal authority, or by any other cause beyond the control of the party to be excused, that party's performance, to the extent it is prevented or delayed, shall be excused. Rain or high water which might reasonably have been anticipated resulting from up to eight inches (8") of rain within a twenty-four (24) hour period shall not be construed as Acts of God excusing Second Nature's performance under this Contract.
- 5.12 ANTI-RAIDING CLAUSE – Second Nature acknowledges and agrees that any former Water System employee who may establish employment with Second Nature shall not, for a period of two (2) years from the date of cessation of employment with SAWS, (i) work on SAWS or SAWS related contracts or projects which the former employee awarded, managed or participated in while an employee of SAWS, (ii) solicit business from SAWS, nor (iii) participate in the negotiation of contracts with SAWS, unless, in any event, the prior written consent is obtained from the President/Chief Executive Officer (or his designee) of SAWS. The terms of this provision shall survive the expiration of the Term or earlier termination of this Contract.

#### ARTICLE VI. INSURANCE REQUIREMENTS:

- 6.01 COVERAGE-Commencing on the date of this Contract, the Contractor shall, at his own expense, purchase, maintain and keep in force such insurance as will protect Second Nature and SAWS and the City of San Antonio ("COSA") and their employees and agents from claims, which may arise out of or result from Second Nature's operations under this contract, whether such operations are by Second Nature, by any subcontractor, supplier or by anyone directly or indirectly employed by any of them or by anyone for whose acts of any of them may be liable, including, without limitation, the following:
- A. Workers' Compensation (WC) insurance that will protect Second Nature, SAWS and COSA from claims under statutory Workers' Compensation laws, disability laws or such other employee benefit laws and that will fulfill the requirements of the jurisdiction in which the work is to be performed
- This insurance shall be endorsed to provide a Waiver of Subrogation in favor of SAWS and COSA with respect to both this insurance coverage and the Employers' Liability (EL) insurance (as specified immediately below in section 1.b.).
- B. Employers' Liability (EL) insurance (Coverage B under standard Workers' Compensation policy) that will protect Second Nature, SAWS and COSA for damages because of bodily injury, sickness, disease of vendor's employees apart from that imposed by Workers' Compensation laws. The employers' liability insurance shall have minimum limits of liability of not less than:

\$ 1,000,000.00	Bodily Injury by Accident
1,000,000.00	Bodily Injury by Disease - Each Employee
1,000,000.00	Bodily Injury by Disease - Policy Limit

- C. Commercial General Liability (CGL) insurance that will protect Second Nature, SAWS and COSA from claims for damages because of bodily injury, personal injury, sickness, disease or death and insurance that will protect Second Nature, SAWS and COSA from claims for damages to or destruction of tangible property of others, including loss of use thereof.

This coverage shall:

- Cover independent contractors;
- Not include any exclusions relating to blasting, explosion, collapse of buildings or damage to underground property where applicable;
- Afford coverage for Products Liability and/or Completed Operations and, Contractual Liability.

The minimum limits of liability for this coverage shall be:

\$ 1,000,000.00 Occurrence Limit  
2,000,000.00 General Aggregate  
1,000,000.00 Products/Completed Operations Aggregate  
1,000,000.00 Personal and Advertising Injury  
1,000,000.00 Contractual Liability

This insurance shall be endorsed:

- Naming SAWS and COSA as an Additional Insured; and
- To provide a Waiver of Subrogation in favor of SAWS and COSA.

- D. Commercial/ Business Automobile Liability (AL) insurance that will protect Second Nature, SAWS and COSA from claims for damages arising out of the maintenance, operation, or use of any owned, non-owned or hired vehicles. Minimum policy limits of liability for bodily injury and property damage combined shall be not less than \$1,000,000.00 per each occurrence.

This insurance shall be endorsed:

- Naming SAWS and COSA as an Additional Insured; and
- To provide a Waiver of Subrogation in favor of SAWS and COSA.

6.02 SUBCONTRACTOR'S INSURANCE- Second Nature shall require all Sub-contractors to carry insurance coverage appropriate to their scope of Work.

6.03 CERTIFICATES OF INSURANCE - Second Nature shall furnish a completed Certificate of Insurance, which shall be completed by an agent authorized to bind the named underwriter(s) and their company to the coverage, limits, and termination provisions shown thereon.

6.04 NOTICES TO SAWS - The insurance that is specified under these Requirements shall be written so that SAWS and COSA will be notified in writing in the event of cancellation, restrictive endorsement or non-renewal at least thirty (30) days prior to such action.

6.05    CERTIFICATE HOLDER- SAWS shall be shown as the Certificate Holder in the Certificate Holder section located in the bottom half of the standard ACORD Certificate forms as follows:

San Antonio Water System  
Attention: Purchasing Division  
2800 US Hwy. 281 North  
San Antonio, Texas 78212

6.06    DELIVERY OF CERTIFICATE OF INSURANCE TO SAWS - Certificates of Insurance shall be filed with the System 10 days prior to the SAWS Board of Trustee's award of the Contract. The SAWS Contract name/Bid number shall be included in the Description of Operations section located in the bottom half of the standard ACORD Certificate forms.

1) Send Original:

a) By Mail

Ebix BPO  
P.O. Box 100085-ZD  
Duluth, GA 30096

b) By Fax: (770) 325-6502

c) By E-Mail: [saws@ebix.com](mailto:saws@ebix.com)

Second Nature shall be responsible for obtaining Certificates of Insurance from the first tier Sub-contractor, and upon request furnish copies to SAWS.

6.07    DEDUCTIBLES - Second Nature is responsible for all deductibles under all of the insurance policies specified under these Requirements.

6.08    MINIMUM INSURANCE LIMITS - The stated limits of insurance specified under these Requirements are MINIMUM ONLY and it shall be Second Nature's responsibility to determine what limits are adequate and the length of time this coverage shall be maintained; the insurance limits are not a limit of Second Nature's liability. These minimum limits may be basic policy limits or any combination of basic limits and umbrella limits. SAWS acceptance of Certificates of Insurance that in any respect do not comply with these Requirements does not release Second Nature from compliance herewith.

6.09    INSURANCE RATINGS AND TYPES - Second Nature agrees that all insurance policies specified under these Requirements shall be with insurance companies, firms or entities that have an A.M. Best rating of "A- ("A"- minus)" and a Financial Size Category rating of a "VII" or better. All insurance policies shall be of an "Occurrence" type except the Contractor's Pollution Liability line of coverage.

6.10    SURVIVAL- Any and all representations, conditions and warranties made by Second Nature under this Contract including, without limitation, the provisions of Section 6.01.B., 6.01.C. and 6.01.D. of these Insurance Requirements are of the essence of this Contract and shall survive the execution and delivery of it, and all statements contained in any document required by SAWS whether delivered at the time of the execution, or at a later date, shall constitute representations and warranties hereunder.

## ARTICLE VII. PERFORMANCE BOND

7.01 PERFORMANCE BOND - Second Nature shall furnish a Performance Bond in favor of SAWS in an amount equal to Five Hundred Thousand and No/100 Dollars (\$500,000.00) as security for the faithful performance of all of Second Nature's obligations under this Contract. The bond shall cover the Term of this Contract and allow for claims by SAWS up to one (1) year after termination of this Contract for any claims arising during the Term of this Contract, remain in effect at least two (2) years after the completion of work, except as otherwise provided by Law and Regulation. The bonds shall be issued and maintained by corporate Sureties that are licensed to conduct business in Texas. If the surety on any bond furnished by Second Nature to SAWS is declared bankrupt or becomes insolvent, or has its right to do business revoked in the State of Texas, then Second Nature, at its expense, will have ten (10) days to substitute another bond and surety therefor which shall be acceptable to SAWS.

7.02 Second Nature, SURETIES, AND PARENT CORPORATION STILL BOUND- No assignment, transfer or subletting, without the written consent of SAWS and no change in operations or preference of the Work agreed on by SAWS and Second Nature shall ever in any manner release or diminish the responsibility of Second Nature or any Surety on any bond of Second Nature or any guaranty, but on the contrary, such responsibility shall extend to all such changes and other matters.

## ARTICLE VIII. CONTRACT ADMINISTRATION

8.01 ASSIGNMENTS AND SUBLETTING - Second Nature shall not assign, transfer, convey or otherwise dispose of this Contract, or any portion thereof, or any right, title or interest in, to or under the same, without the previous written consent of SAWS; provided, however, Second Nature may assign its rights and obligations under this Contract without the prior written consent of SAWS (but with notice to SAWS) in the case of an acquisition of equity or merger or in connection with the sale of substantially all of Second Nature's assets, provided such successor has a net worth and experience level at least as good as Second Nature had on the Effective Date of this Contract and such successor agrees in writing to be bound by the terms of this Contract; provided, further, however, that if Second Nature is in default under the terms of this Contract at the time of notice of or completion of the assignment, Second Nature shall provide SAWS with written notice of such assignment and SAWS shall have the right to terminate this Contract within 60 days of receipt of said notice. Second Nature shall notify SAWS, by written notification by certified mail to SAWS, 2800 US Hwy. 281 North, San Antonio, Texas, 78212, Attn: Vice President of Production and Treatment Operations, that such assignment, transfer or conveyance or other disposition of this Contract or any portion thereof, or any right, title or interest, in, to or under the same, is contemplated. If Second Nature does not receive written approval of such contemplated action by SAWS, within thirty days of receipt of such initial request by the SAWS' Representative, such contemplated assignment, transfer, conveyance or subletting, or other disposition of this Contract or any portion thereof, or any right, title or interest in, to, or under the same, shall be deemed disapproved. In no event shall SAWS be liable in excess of the consideration of this Contract in the case of any such assignment, transfer or conveyance of the Work or performance which is subject hereof. Notwithstanding any provision to the contrary, Second Nature shall be entitled to subcontract the services to be provided hereunder provided that Second Nature shall be solely responsible for the acts of its subcontractors in furtherance of this Contract.

### 8.02 LAWS, REGULATIONS AND PERMITS

- A. Second Nature shall comply with all laws, ordinances, rules and regulations pertaining to the conduct of the Work. Second Nature shall be liable for violations of the law in connection with work provided by Second Nature. If Second Nature observes that the

specifications or other portions of this Contract are at variance with any laws, ordinances, rules or regulations, it shall at its sole cost and expense promptly bring about compliance with the law, ordinance, rule or regulation in question. Second Nature agrees not to perform work known to be contrary to any laws ordinances, rules or regulations.

- B. PERMITS AND LICENSES - Unless otherwise specified herein, permits and licenses from governmental agencies which are necessary only for and during the prosecution of the Work and the subsequent guaranty period shall be secured and paid for by Second Nature 281 North, San Antonio, Texas, 78212, Attn: Vice-President of Production and Treatment Operations, within five (5) working days of issuance.
- C. PATENTS AND ROYALTIES - The costs involved in fees, royalties or claims for any patented invention, article, process or method that may be used upon or in a manner connected with the Work under this Contract, shall be paid by Second Nature.

8.03 RELATIONS WITH CUSTOMERS AND THE GENERAL PUBLIC - Second Nature shall promptly deliver to SAWS, copies of all written complaints, objections or other adverse comments Second Nature receives from any customer or citizen in general regarding in any way (i) compost produced with SAWS' Biosolids, (ii) Second Nature's Biosolids hauling, storage or disposal of SAWS' Biosolids, (iii) composting operations at the Second Nature composting facility, or (iv) otherwise which involves directly or indirectly Biosolids hauling, compost production and/or compost sales and deliveries subject to this Contract. Second Nature shall also advise the SAWS Representative of any oral complaints involving Biosolids transportation and/or compost plant operations within two (2) calendar days of receiving them. Each such comment letter forwarded to SAWS shall include a notation of Second Nature's representative regarding what action Second Nature intends to take. Second Nature shall furnish SAWS with copies of correspondence and other communications until the complaint is resolved or determined by Second Nature to be unresolvable together with a written explanation of why the complaint cannot be or should not be resolved by Second Nature.

8.04 RECYCLING PROGRAMS - Second Nature may each year during the Term of this Contract, submit the Biosolids composting progress to appropriate conservation and recycling programs for recognition, including SAWS as a participant in the program and contest. SAWS shall have the right to review all such submittals prior to submission. Any awards for the Biosolids recycling and composting program shall be in SAWS and Second Nature's names.

8.05 LOCAL CONSERVATION PROMOTION- Second Nature, at SAWS' request, will participate in local convention and gardening presentations or public events promoting the use of compost made with SAWS' Biosolids.

## **ARTICLE IX. SAFETY PRECAUTIONS AND PROGRAMS**

9.01 GENERAL- In addition to Second Nature's duties and obligations related to safety stated herein, Second Nature shall abide by the following general safety requirements:

- A. In any emergency affecting the safety of persons or property, Second Nature shall act to prevent threatened damage, injury or loss.
- B. Second Nature shall provide equipment and supplies necessary to administer first aid service to anyone who may be injured in connection with the Work performed by Second Nature. Such equipment shall comply with the most current regulations of the Occupational Safety and Health Administration of the United States Department of Labor,



States Department of Labor and the State of Texas Statutes relating to use, training, and maintenance of any and all first aid devices.

- C. Second Nature must promptly report in writing to SAWS all accidents whatsoever arising out of, or in connection with, the performance of the Work which caused death, personal injury requiring hospitalization, or property damage in excess of \$50,000, giving full details and any statements of witnesses. In addition, if death, serious injury, or serious damage is caused, the accident then shall be reported immediately by telephone or messenger to SAWS. Second Nature has no duty to report to SAWS accidents or injuries to employees that are not reportable under OSHA 300.

9.02 EMPLOYEE SAFETY - Second Nature alone shall be solely responsible for the safety of its employees. Second Nature's agents and subcontractor's alone shall be solely responsible for their respective employees. Second Nature shall maintain the project site at which its work is performed and perform the Work in a manner which meets SAWS' responsibility under statutory and common law for the provision of a safe place to work. SAWS' authorized representative may, at any time, request that Second Nature cease operations if such representative finds that dangerous conditions exist which, in the reasonable opinion of the SAWS' Representative, may threaten the immediate safety and well-being of anyone including, but not limited to, Second Nature's employees, agents, or subcontractors' employees, SAWS' personnel or guests. The recommendations herein are merely to attempt to cause Second Nature to maintain a safe work place; provided, however, Second Nature is solely responsible for the means and methods for performance of the work and the safety requirements for its employees, and the work site and nothing herein shall constitute a direction of the safety procedures by SAWS.

9.03 PUBLIC SAFETY AND CONVENIENCE - Second Nature shall conduct its work so as to insure the least possible obstruction to traffic and inconvenience to the general public and the residents in the vicinity of the WRC and the Work and to insure the protection of persons and property.

9.04 PROTECTION OF PRIVATE PROPERTY - Second Nature shall take proper measures to protect all property against injury by any process of the Work; and, in case of any injury or damage, it shall restore at its own expense, the damaged property to a condition similar or equal to that existing before such injury or damage was done, or it shall make good such injury or damage in a manner acceptable to those whose property was damaged.

## **ARTICLE X. CONTRACT TERMINATION & SUSPENSION**

10.01 DEFAULT- As used in this Contract, the term "Event of Default" shall mean any one of the following:

- A. Second Nature or SAWS shall fail to timely pay any obligation hereunder involving the payment of money and such default continues uncured for thirty (30) days after written notice of the default is sent to the defaulting party;
- B. Second Nature or SAWS shall fail to comply with any term, provision or covenant of this Contract and such default continues uncured for thirty (30) days after written notice of the default is sent to the defaulting party;
- C. Second Nature shall fail to maintain its stocks of materials (including compost) in a manner to prevent such material from being a nuisance based on Commission confirmed notice of violation due to odor, dust, flies, vector or otherwise, and Second Nature shall fail to cure the nuisance within fifteen (15) days or the nuisance occurs.

- D. Second Nature shall fail to supply enough properly skilled workmen or trucks and equipment or disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction over the Work and fails to cure such breach within fifteen (15) days of written notice.
- E. Second Nature or SAWS, or any surety or guarantor of this Contract, shall become insolvent or unable to pay its debts as they become due, or shall make a transfer of its property that is fraudulent under any bankruptcy, fraudulent conveyance or similar law, or shall make an assignment for the benefit of creditors;
- F. Second Nature takes any action to file a petition under any section or chapter of the United States Bankruptcy Code, as amended from time to time, or under any similar law or statute of the United States or any state thereof; or a petition shall be filed against Second Nature under any statute or Second Nature notifies SAWS that it knows such a petition will be filed; or the appoint of a receiver or trustee to take possession of substantially all of Second Nature's assets located at the Second Nature compost site or of Second Nature's interest in this Contract, or the attachment, execution or other judicial service of substantially all of Second Nature's assets located at the Second Nature compost site or of Second Nature's interest in this Contract;
- G. The occurrence of any event or condition having a material adverse effect on the assets, liabilities, financial condition, business or operations of Second Nature as they exist on the date of this Contract, or the ability of Second Nature to meet its obligations under this Contract on a timely basis as provided herein.

Upon the occurrence of an event of Default, the non-defaulting party, at its option, in addition to any other remedy or right given hereunder or by law or equity, terminate this Contract by written notice to the other party.

**10.02** TERMINATION BY Second Nature If the Work is stopped for a period of one hundred fifty (150) consecutive working days under an order of any court or other public authority having jurisdiction, or as a result of an act of a higher governmental authority, such as a declaration of a state or federal agency prohibiting the composting of Biosolids, through no act or fault of Second Nature or their agents or employees, or a force majeure event that makes production of compost at the Second Nature compost site impossible, then Second Nature may upon thirty (30) additional days written notice to SAWS, terminate this Contract and recover from SAWS payment for all Work previously executed in accordance with this Contract; however, no payment shall be owed for any delays or loss of future income under this Contract. If the Work is recommenced during the thirty (30) day notice period, Second Nature may not terminate this Contract.

**10.03** SUSPENSION OF WORK BY SAWS-SAWS may suspend the Work either partially or totally by written order whenever, in SAWS' reasonable opinion, the interests of SAWS requires the suspension of such Work to protect the health and safety of SAWS' employees and/or the general public. Furthermore, SAWS shall have the right to stop the Work whenever such stoppage may be necessary to insure proper execution of the Work.

## **ARTICLE XI. DISPUTES AND DAMAGES:**

**11.01** MEDIATION- Prior to any litigation between SAWS and Second Nature, both hereby agree that disputed matters shall first be submitted to mediation by a third party neutral mediator in Bexar County, Texas selected by the parties. Prior to any party instituting litigation under this Contract such party (the "instituting party") shall notify the other party (the "responding party") of the dispute

and request that the parties enter into nonbinding mediation. The responding party and the instituting party shall meet to select a mediator and undertake mediation within twenty (20) days of the written notice the mediator shall be a neutral third party whose function shall be to assist the parties in their negotiations. The mediator may not impose his own judgment on the issues for that of the parties. If mediation is not instituted within twenty (20) days of the date of the written notice, or the matter resolved within thirty (30) days of written notice, then the other party may proceed to institute suit and the other party may respond and defend and assert counterclaims without obligations or further mediation unless ordered by the Court.

**11.02 DAMAGES-** Notwithstanding the terms and requirements of Section 11.03, and in addition to any rights or remedies of SAWS under this Contract, at law or in equity, if Second Nature fails to load and remove Biosolids for beneficial use as required under this Contract for a period exceeding 24 hours, excluding Saturday and Sunday, SAWS may transport and dispose of such Biosolids by hauling such Biosolids to a landfill and Second Nature, upon demand, shall reimburse SAWS all costs of loading, hauling and disposing of such Biosolids (including tipping or landfill fees). Second Nature shall be entitled to a credit or offset against such disposal fees and costs equal to the sum SAWS would otherwise have paid Second Nature under this Contract for removal and processing into compost of such Biosolids. SAWS may continue such landfill disposal until SAWS has entered into a new Contract to remove Biosolids from SAWS for beneficial use with a replacement contractor. Furthermore, Second Nature acknowledges and agrees that the bidding process and negotiation of a new Contract for hauling Biosolids for beneficial use may take up to three (3) years and during which time Biosolids may be disposed of at a landfill at Second Nature's cost. Once a new contract is entered into with a replacement contractor, Second Nature shall remain obligated to reimburse SAWS for costs exceeding the contract price under this Contract for disposing of Biosolids under the provisions of this Contract for the remainder of the Term.

**11.03 ADDITIONAL COSTS AND FEES-**SAWS at its option may correct any default or breach of Second Nature under this Contract and Second Nature shall reimburse SAWS all costs incurred by SAWS, including court costs and attorneys fees. Such sums shall be payable on demand and Second Nature failure to make timely repayment shall be a default or breach allowing SAWS to terminate this Contract pursuant to Section 11.03.

## **ARTICLE XII. CONTRACT TIMES AND COMMENCEMENT OF WORK**

**12.01 COMMENCEMENT OF WORK-** The Work called for in this Contract shall be commenced by Second Nature on January 3, 2023 (the "Commencement Date"). Under no circumstances shall the Work commence prior to Second Nature (i) obtaining all required permits, licenses and insurance for the Work, copies of which shall be delivered to SAWS prior to any such commencement, and (ii) completing the necessary construction and having necessary equipment in place to commence the Work (such conditions being referred to herein as the "Commencement Conditions"). The Commencement Date may be extended for up to one hundred eighty (180) days by Second Nature providing written notice to SAWS prior to the Commencement Date if the Commencement Conditions are not satisfied by Second Nature on or before the Commencement Date.

**12.02 CONTRACT PERIODS-** For purpose of computing the first contract period, the period shall extend from the Commencement Date until December 31, 2027, without regard to the actual number of days. Thereafter, each contract year shall be from January 1 to the following December 31. There shall be no adjustment in the quantities of Biosolids Second Nature is required to take in the first contract period.

### ARTICLE XIII. TERM; EXTENSION OF CONTRACT

13.01 EXTENSION OF CONTRACT- Second Nature and SAWS, by mutual agreement, may extend the Term five (5) times for a period of one (1) additional year each. The extensions shall be on the same terms of this Contract in existence at the time of exercising the extension. The first option to extend the Term shall be exercised, if at all, by SAWS providing written notice to Second Nature not earlier than 180 days and not later than 90 days prior to the termination of the Contract, or subsequent Contract extensions, that SAWS would like to extend the Term of this Contract and Second Nature and SAWS both agreeing in writing by no later than 60 days prior to the termination of the Contract, or subsequent extensions, to extend the term of this Contract. The second option to extend the term shall be exercised, if at all, by SAWS providing written notice to Second Nature not earlier than June 30, 2027 and not later than September 30, 2027 that SAWS would like to extend the term of this Contract and Second Nature and SAWS both agreeing in writing by October 31, 2027 to extend the term of this Contract. All references in this Contract to the phrase "Term" shall include the initial term and any extension of the Term properly exercised pursuant to this Section 13.01.

### ARTICLE XIV. CONTRACT CHANGES

14.01 AMENDMENTS- This Contract may be changed only by written Amendment executed by SAWS and Second Nature.

### ARTICLE XV. MISCELLANEOUS

15.01 ENTIRE AGREEMENT-This CONTRACT, is the entire and integrated agreement between the Owner and Second Nature regarding the Biosolids from the WRC and supersedes all prior negotiations, representations or agreements, either written or oral.

15.02 GENERAL- Any and all representations, conditions and warranties made by Second Nature under this Contract including, without limitation, the insurance provisions under Article V of this Contract are of the essence of this Contract and shall survive the execution and delivery of it, and all statements contained in any document required by SAWS whether delivered at the time of the execution, or at a later date, shall constitute representations and warranties hereunder.

15.03 STARTUP DATE-The Startup Date of this Contract shall be January 3, 2023. In the event Second Nature fails to commence taking Biosolids on the Startup Date, Second Nature shall be in default and SAWS shall be entitled to all remedies at law and under this Contract.

15.04 NOTICES- All notices hereunder shall be in writing and shall be deemed effective when delivered in person to the addressee of the notice or when deposited in the U.S. Mail or a nationally recognized overnight carrier, such as UPS or Federal Express, addressed to the party to receive the notice as follows:

If to SAWS:

San Antonio Water System  
Attn: Jeff Haby  
Sr. Vice President of Production and Treatment Operations  
2800 US Hwy. 281 North  
San Antonio, Texas 78212

Copy to:

San Antonio Water System  
Attn: Ms. Nancy Belinsky  
Executive Vice President  
2800 US Hwy. 281 North  
San Antonio, Texas 78212

If to Second Nature  
Attn: Brandt Klutts  
President  
8449 Nelson Rd.  
San Antonio, TX 78252

- 15.05 RIGHT OF ENTRY-SAWS shall have the right during normal business hours to enter the Second Nature compost site: (a) to inspect the general condition and state of the compost facility, (b) for any other reasonable purpose related to the WORK.
- 15.06 WAIVER OF BREACH-The waiver by SAWS of any breach of any provision of this Contract shall not constitute a continuing waiver or a waiver of any subsequent breach of the same or a different provision of this Contract.
- 15.07 TIME OF ESSENCE- Time is expressly declared to be of the essence in this Contract.
- 15.08 BINDING OF HEIRS AND ASSIGNS-Subject to the provisions of this Contract pertaining to assignment of Second Nature 's interest, all provisions of this Contract shall extend to and bind, or inure to the benefit not only of the parties to this Contract but to the heirs, executors, representatives, successors, and permitted assigns of SAWS or Second Nature.
- 15.09 RIGHTS AND REMEDIES CUMULATIVE- The rights and remedies by this Contract are cumulative and the use of any one right or remedy by either party shall not preclude or waive its right to use any or all other remedies. Said rights and remedies are given in addition to any other rights the parties may have by law, statute, ordinance, or otherwise.
- 15.10 TEXAS LAW TO APPLY-This Contract shall be construed under and in accordance with the laws of the State of Texas. Venue shall be proper in Bexar County, Texas only.
- 15.11 LEGAL CONSTRUCTION-In case any one or more of the provisions contained in this Contract shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision hereof and this Contract shall be construed as if such invalid, illegal, or unenforceable provision has never been contained herein.
- 15.12 PRIOR AGREEMENTS SUPERSEDED-This Contract constitutes the sole and only agreement of the parties to this Contract and supersedes any prior understandings or written or oral agreements between the parties respecting the subject matter of this Contract.
- 15.13 SECURITY REQUIREMENTS - Second Nature shall comply with the security requirements attached as Attachment 3 hereto.
- 15.14 NO THIRD PARTY BENEFICIARIES - Nothing in this Contract shall be interpreted as providing any rights to any third parties under this Contract (other than the parties hereto) and the parties

expressly acknowledge and agree that there are no intended third party beneficiaries to this Contract.

(SIGNATURE PAGE FOLLOWS)

IN WITNESS WHEREOF, the parties hereto have executed this agreement on the 23 day of December, 2022.

SECOND NATURE A TEXAS CORP.

**Brandt Klutts**

By: Brandt Klutts (Dec 27, 2022 11:57 CST)

Its: President

Date: 12/27/2022

SAN ANTONIO WATER SYSTEM

By: *Joanne C. Jones*

Its: Sr. Director

Date: 12/23/2022

Schedule of Exhibits:

Exhibit A-SAWS Standard Laboratory Rates

Attachment 1 - Standards for SAWS' Biosolids delivered to Second Nature

Attachment 2 - Standards for Beneficial Use of Biosolids

Attachment 3 – Security Requirements

**EXHIBIT A**  
**SAWS Standard Laboratory Rates**

<b>Laboratory Test/ Method</b>	<b>Reporting Limit</b>	<b>2021 Fees</b>
<b>Ammonia Distillation</b> Method: EPA 350.2	125 mg/L	\$ 43.19
<b>Nitrogen, total Kjeldahl (TKN)</b> Method: EPA 351.3	200 mg/kg	\$ 41.64
<b>Phosphorus - Total</b> Method: EPA 365.2	2500 mg/kg	\$ 27.61
<b>Total Solids</b>	percent solids	\$ 19.74
<b>Mercury by CVAA</b> Method: SW 846 7471A	0.04 mk/kg	\$37.02
<b>Metals</b> Method: SW 846 6010C		\$ 17.27
<b>Fecal Coliform - Multiple Tube Fermentation</b> Method: SM 9221B	2 MPN/100 ml	\$ 22.21
<b>IC (Nitrate-N and Nitrite - N)</b> Method: EPA 300.0 SW 846 9056M		\$19.17

For the most current accreditation please visit the  
TCEQ Website at  
[https://www.tceq.texas.gov/agency/qa/env\\_lab\\_accreditation.html](https://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html)



**ATTACHMENT 1**  
**STANDARDS FOR SAWS' BIOSOLIDS DELIVERED TO SECOND NATURE**

The Biosolids delivered by SAWS to Second Nature will be anaerobically digested sludge that has been dewatered by belt filter press, drying bed or any other approved dewatering method. The biosolids will meet Class B (as defined by 40 CFR Part 503 and 30 TAC Chapter 312) pathogen reduction requirements. The biosolids will be reasonably free of foreign material but some quantities of plastic and other solid materials may be present.

**Pathogen Reduction Class B** – Presently using method (b) (2)

(b) *Sewage sludge—Class B.* (1)(i) The requirements in either §503.32(b)(2), (b)(3), or (b)(4) shall be met for a sewage sludge to be classified Class B with respect to pathogens.

(ii) The site restrictions in §503.32(b)(5) shall be met when sewage sludge that meets the Class B pathogen requirements in §503.32(b)(2), (b)(3), or (b)(4) is applied to the land.

(2) *Class B—Alternative 1.* (i) Seven representative samples of the sewage sludge that is used or disposed shall be collected.

(ii) The geometric mean of the density of fecal coliform in the samples collected in paragraph (b)(2)(i) of this section shall be less than either 2,000,000 Most Probable Number per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

(3) *Class B—Alternative 2.* Sewage sludge that is used or disposed shall be treated in one of the Processes to Significantly Reduce Pathogens described in appendix B of this part.

(4) *Class B—Alternative 3.* Sewage sludge that is used or disposed shall be treated in a process that is equivalent to a Process to Significantly Reduce Pathogens, as determined by the permitting authority.

**Vector Attraction Reduction** – Presently using method (b) (1)

**503.33 Vector attraction reduction.**

(a)(1) One of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(10) shall be met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site.

(2) One of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(8) shall be met when bulk sewage sludge is applied to a lawn or a home garden.

(3) One of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(8) shall be met when sewage sludge is sold or given away in a bag or other container for application to the land.

(4) One of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(11) shall be met when sewage sludge (other than domestic septage) is placed on an active sewage sludge unit.

(5) One of the vector attraction reduction requirements in §503.33 (b)(9), (b)(10), or (b)(12) shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site and one of the vector attraction reduction requirements in §503.33 (b)(9) through (b)(12) shall be met when domestic septage is placed on an active sewage sludge unit.

(b)(1) The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent (see calculation procedures in “Environmental Regulations and Technology—Control of Pathogens and Vector Attraction in Sewage Sludge”, EPA-625/R-92/013, 1992, U.S. Environmental Protection Agency, Cincinnati, Ohio 45268).

(2) When the 38 percent volatile solids reduction requirement in §503.33(b)(1) cannot be met for an anaerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. When at the end of the 40 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 17 percent, vector attraction reduction is achieved.

(3) When the 38 percent volatile solids reduction requirement in §503.33(b)(1) cannot be met for an aerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15 percent, vector attraction reduction is achieved.

(4) The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.

(5) Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.

(6) The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.

(7) The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials.

(8) The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials.

(9)(i) Sewage sludge shall be injected below the surface of the land.

(ii) No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

(iii) When the sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

(10)(i) Sewage sludge applied to the land surface or placed on an active sewage sludge unit shall be incorporated into the soil within six hours after application to or placement on the land, unless otherwise specified by the permitting authority.

(ii) When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

(11) Sewage sludge placed on an active sewage sludge unit shall be covered with soil or other material at the end of each operating day.

(12) The pH of domestic septage shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 30 minutes.

[58 FR 9387, Feb. 19, 1993, as amended at 64 FR 42571, Aug. 4, 1999]

## **Pollution limits.**

### **503.13 Pollutant limits**

(a) *Sewage sludge.* (1) Bulk sewage sludge or sewage sludge sold or given away in a bag or other container shall not be applied to the land if the concentration of any pollutant in the sewage sludge exceeds the ceiling concentration for the pollutant in Table 1 of §503.13.

(2) If bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site, either:

(i) The cumulative loading rate for each pollutant shall not exceed the cumulative pollutant loading rate for the pollutant in Table 2 of §503.13; or

(ii) The concentration of each pollutant in the sewage sludge shall not exceed the concentration for the pollutant in Table 3 of §503.13.

(3) If bulk sewage sludge is applied to a lawn or a home garden, the concentration of each pollutant in the sewage sludge shall not exceed the concentration for the pollutant in Table 3 of §503.13.

(4) If sewage sludge is sold or given away in a bag or other container for application to the land, either:

(i) The concentration of each pollutant in the sewage sludge shall not exceed the concentration for the pollutant in Table 3 of §503.13; or

(ii) The product of the concentration of each pollutant in the sewage sludge and the annual whole sludge application rate for the sewage sludge shall not cause the annual pollutant loading rate for the pollutant in Table 4 of §503.13 to be exceeded. The procedure used to determine the annual whole sludge application rate is presented in appendix A of this part.

(b) *Pollutant concentrations and loading rates—sewage sludge.*

**Table 3 of §503.13—Pollutant Concentrations**

<b>Pollutant</b>	<b>Monthly average concentration (milligrams per kilogram)<sup>1</sup></b>
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2800

<sup>1</sup>Dry weight basis.

(4) *Annual pollutant loading rates.*

**ATTACHMENT 2**  
**STANDARDS FOR BENEFICIAL USE OF BIOSOLIDS**

Requirements of Second Nature for processing of SAWS biosolids into 40 CFR 503 or 30 TAC 312 Class A compost.

**503.32 Pathogens**

(a) *Sewage sludge—Class A.* (1) The requirement in §503.32(a)(2) and the requirements in either §503.32(a)(3), (a)(4), (a)(5), (a)(6), (a)(7), or (a)(8) shall be met for a sewage sludge to be classified Class A with respect to pathogens.

(2) The Class A pathogen requirements in §503.32 (a)(3) through (a)(8) shall be met either prior to meeting or at the same time the vector attraction reduction requirements in §503.33, except the vector attraction reduction requirements in §503.33 (b)(6) through (b)(8), are met.

(3) *Class A—Alternative 1.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in §503.10 (b), (c), (e), or (f).

(ii) The temperature of the sewage sludge that is used or disposed shall be maintained at a specific value for a period of time.

(A) When the percent solids of the sewage sludge is seven percent or higher, the temperature of the sewage sludge shall be 50 degrees Celsius or higher; the time period shall be 20 minutes or longer; and the temperature and time period shall be determined using equation (2), except when small particles of sewage sludge are heated by either warmed gases or an immiscible liquid.

$$D = \frac{131,700,000}{10^{0.1400t}} \quad Eq. (2)$$

Where,

D=time in days.

t=temperature in degrees Celsius.

(B) When the percent solids of the sewage sludge is seven percent or higher and small particles of sewage sludge are heated by either warmed gases or an immiscible liquid, the temperature of the sewage sludge shall be 50 degrees Celsius or higher; the time period shall be 15 seconds or longer; and the temperature and time period shall be determined using equation (2).

(C) When the percent solids of the sewage sludge is less than seven percent and the time period is at least 15 seconds, but less than 30 minutes, the temperature and time period shall be determined using equation (2).

(D) When the percent solids of the sewage sludge is less than seven percent; the temperature of the sewage sludge is 50 degrees Celsius or higher; and the time period is 30 minutes or longer, the temperature and time period shall be determined using equation (3).

$$D = \frac{50,070,000}{10^{0.1400t}} \quad Eq. (3)$$

Where,

D=time in days.

t=temperature in degrees Celsius.

4) *Class A—Alternative 2.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in §503.10 (b), (c), (e), or (f).

(ii)(A) The pH of the sewage sludge that is used or disposed shall be raised to above 12 and shall remain above 12 for 72 hours.

(B) The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12.

(C) At the end of the 72 hour period during which the pH of the sewage sludge is above 12, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

(5) *Class A—Alternative 3.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in §503.10 (b), (c), (e), or (f).

(ii)(A) The sewage sludge shall be analyzed prior to pathogen treatment to determine whether the sewage sludge contains enteric viruses.

(B) When the density of enteric viruses in the sewage sludge prior to pathogen treatment is less than one Plaque-forming Unit per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to enteric viruses until the next monitoring episode for the sewage sludge.

(C) When the density of enteric viruses in the sewage sludge prior to pathogen treatment is equal to or greater than one Plaque-forming Unit per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to enteric viruses when the density of enteric viruses in the sewage sludge after pathogen treatment is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces the sewage sludge that meets the enteric virus density requirement are documented.

(D) After the enteric virus reduction in paragraph (a)(5)(ii)(C) of this section is demonstrated for the pathogen treatment process, the sewage sludge continues to be Class A with respect to enteric viruses when the values for the pathogen treatment process operating parameters are consistent with the values or ranges of values documented in paragraph (a)(5)(ii)(C) of this section.

(iii)(A) The sewage sludge shall be analyzed prior to pathogen treatment to determine whether the sewage sludge contains viable helminth ova.

(B) When the density of viable helminth ova in the sewage sludge prior to pathogen treatment is less than one per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to viable helminth ova until the next monitoring episode for the sewage sludge.

(C) When the density of viable helminth ova in the sewage sludge prior to pathogen treatment is equal to or greater than one per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to viable helminth ova when the density of viable helminth ova in the sewage sludge after pathogen treatment is less than one per four grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces the sewage sludge that meets the viable helminth ova density requirement are documented.

(D) After the viable helminth ova reduction in paragraph (a)(5)(iii)(C) of this section is demonstrated for the pathogen treatment process, the sewage sludge continues to be Class A with respect to viable helminth ova when the values for the pathogen treatment process operating parameters are consistent with the values or ranges of values documented in paragraph (a)(5)(iii)(C) of this section.

(6) *Class A—Alternative 4.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in §503.10 (b), (c), (e), or (f).

(ii) The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in §503.10 (b), (c), (e), or (f), unless otherwise specified by the permitting authority.

(iii) The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in §503.10 (b), (c), (e), or (f), unless otherwise specified by the permitting authority.

(7) *Class A—Alternative 5.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella*, sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in §503.10(b), (c), (e), or (f).

(ii) Sewage sludge that is used or disposed shall be treated in one of the Processes to Further Reduce Pathogens described in appendix B of this part.

(8) *Class A—Alternative 6.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella*, sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in §503.10(b), (c), (e), or (f).

(ii) Sewage sludge that is used or disposed shall be treated in a process that is equivalent to a Process to Further Reduce Pathogens, as determined by the permitting authority.

(b) *Sewage sludge—Class B.* (1)(i) The requirements in either §503.32(b)(2), (b)(3), or (b)(4) shall be met for a sewage sludge to be classified Class B with respect to pathogens.

(ii) The site restrictions in §503.32(b)(5) shall be met when sewage sludge that meets the Class B pathogen requirements in §503.32(b)(2), (b)(3), or (b)(4) is applied to the land.

(2) *Class B—Alternative 1.* (i) Seven representative samples of the sewage sludge that is used or disposed shall be collected.

(ii) The geometric mean of the density of fecal coliform in the samples collected in paragraph (b)(2)(i) of this section shall be less than either 2,000,000 Most Probable Number per gram of total



solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

(3) *Class B—Alternative 2.* Sewage sludge that is used or disposed shall be treated in one of the Processes to Significantly Reduce Pathogens described in appendix B of this part.

(4) *Class B—Alternative 3.* Sewage sludge that is used or disposed shall be treated in a process that is equivalent to a Process to Significantly Reduce Pathogens, as determined by the permitting authority.

(5) *Site restrictions.* (i) Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.

(ii) Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for four months or longer prior to incorporation into the soil.

(iii) Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than four months prior to incorporation into the soil.

(iv) Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.

(v) Animals shall not be grazed on the land for 30 days after application of sewage sludge.

(vi) Turf grown on land where sewage sludge is applied shall not be harvested for one year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority.

(vii) Public access to land with a high potential for public exposure shall be restricted for one year after application of sewage sludge.

(viii) Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.

(c) *Domestic septage.* (1) The site restrictions in §503.32(b)(5) shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site; or

(2) The pH of domestic septage applied to agricultural land, forest, or a reclamation site shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 30 minutes and the site restrictions in §503.32 (b)(5)(i) through (b)(5)(iv) shall be met.

[58 FR 9387, Feb. 19, 1993, as amended at 64 FR 42571, Aug. 4, 1999]

## **Appendix B to Part 503—Pathogen Treatment Processes**

### **A. Processes To Significantly Reduce Pathogens (PSRP)**

1. Aerobic digestion—Sewage sludge is agitated with air or oxygen to maintain aerobic conditions for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 40 days at 20 degrees Celsius and 60 days at 15 degrees Celsius.
2. Air drying—Sewage sludge is dried on sand beds or on paved or unpaved basins. The sewage sludge dries for a minimum of three months. During two of the three months, the ambient average daily temperature is above zero degrees Celsius.
3. Anaerobic digestion—Sewage sludge is treated in the absence of air for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 15 days at 35 to 55 degrees Celsius and 60 days at 20 degrees Celsius.
4. Composting—Using either the within-vessel, static aerated pile, or windrow composting methods, the temperature of the sewage sludge is raised to 40 degrees Celsius or higher and remains at 40 degrees Celsius or higher for five days. For four hours during the five days, the temperature in the compost pile exceeds 55 degrees Celsius.
5. Lime stabilization—Sufficient lime is added to the sewage sludge to raise the pH of the sewage sludge to 12 after two hours of contact.

### **B. Processes to Further Reduce Pathogens (PFRP)**

1. Composting—Using either the within-vessel composting method or the static aerated pile composting method, the temperature of the sewage sludge is maintained at 55 degrees Celsius or higher for three days.

Using the windrow composting method, the temperature of the sewage sludge is maintained at 55 degrees or higher for 15 days or longer. During the period when the compost is maintained at 55 degrees or higher, there shall be a minimum of five turnings of the windrow.

2. Heat drying—Sewage sludge is dried by direct or indirect contact with hot gases to reduce the moisture content of the sewage sludge to 10 percent or lower. Either the temperature of the sewage sludge particles exceeds 80 degrees Celsius or the wet bulb temperature of the gas in contact with the sewage sludge as the sewage sludge leaves the dryer exceeds 80 degrees Celsius.
3. Heat treatment—Liquid sewage sludge is heated to a temperature of 180 degrees Celsius or higher for 30 minutes.
4. Thermophilic aerobic digestion—Liquid sewage sludge is agitated with air or oxygen to maintain aerobic conditions and the mean cell residence time of the sewage sludge is 10 days at 55 to 60 degrees Celsius.

5. Beta ray irradiation—Sewage sludge is irradiated with beta rays from an accelerator at dosages of at least 1.0 megarad at room temperature (ca. 20 degrees Celsius).

(6) Gamma ray irradiation—Sewage sludge is irradiated with gamma rays from certain isotopes, such as <sup>60</sup> Cobalt and <sup>137</sup> Cesium, at dosages of at least 1.0 megarad at room temperature (ca. 20 °Celsius).

7. Pasteurization—The temperature of the sewage sludge is maintained at 70 degrees Celsius or higher for 30 minutes or longer.

[58 FR 9387, Feb. 19, 1993, as amended at 64 FR 42573, Aug. 4, 1999]

### **ATTACHMENT 3 SECURITY PROCEDURES**

If work will be conducted on SAWS property, on SAWS infrastructure, on a SAWS customer's property, or involve any SAWS networks, or any SAWS facility, the Contractor shall provide background screening information of their employees and sub-contractors to CastleBranch, the SAWS-approved vendor of background screening services, at [sawsbackgroundcheck@castlebranch.com](mailto:sawsbackgroundcheck@castlebranch.com). Any person found to have an unacceptable background check will not be allowed to perform work under this Contract (however, at SAWS's sole discretion, a waiver may be given by SAWS Security for an unacceptable finding, provided that it must first be approved and signed off on by the Director of SAWS Security). Any sub-contractors performing work must also receive a background screening by CastleBranch. Contractor shall be responsible for the accuracy of information on the background screening information sent to [sawsbackgroundcheck@castlebranch.com](mailto:sawsbackgroundcheck@castlebranch.com). For further questions about background screening, call CastleBranch at 910-679-2979 or 888-723-4263 ext. 7857 and advise them the Contractor is working for SAWS. Once background screening is approved by SAWS Security, Contractor must also complete a Project Contractor Data Form ("PCDF"). The PCDF will be sent to [securitygroup@saws.org](mailto:securitygroup@saws.org). The PCDF is required for the Contractor and its sub-contractors to receive the required badges and parking tags necessary to fulfill the work under this Contract. The PCDF must be sent electronically to [securitygroup@saws.org](mailto:securitygroup@saws.org).

Each employee and agent of Contractor shall obtain a SAWS photo identification badge (a "Contractor's Badge") and parking tag prior to any work on SAWS property or asset, which shall be used only for purposes necessary to perform the work under this Contract. SAWS Badge Office hours are Monday, Wednesday and Friday from 9:00am to 12:00pm, excluding SAWS holidays (hours are subject to change). SAWS Security staff can be contacted at (210) 233-3177 or (210) 233-3338. Once the Project is completed, the Contractor shall return all Contractor Badges and parking tags to the Security Office. A Contractor who does not return the Contractor Badges or parking tags is not in compliance with these procedures.

SAWS facilities require a SAWS employee to physically escort the Contractor at all times. SAWS may, at its sole discretion, waive the escort requirements if the PCDF and a "clean" background screening from CastleBranch are approved. Waiver of the escort requirement shall only be through a written correspondence to Contractor from SAWS Security.

Sub-contractors must always be under escort of Contractor while performing work on any SAWS property or asset. Sub-contractors must display the Contractor's Badge at all times while working on any SAWS property or asset. Sub-contractors are required to complete a background screening and be listed on the PCDF regardless of receiving a Contractor's Badge. The Contractor is solely responsible for the actions of its employees, agents, sub-contractors and consultants.

Contractor shall advise their SAWS Project Manager/Inspector of any employee terminations or changes to personnel performing work under this Contract, and the Contractor shall immediately turn in any and all Contractor's Badges and/or parking tags of employees or agents who are terminated or no longer performing work under this Contract. If Contractor becomes aware of any changes in the information contained in the PCDF or the background screening information, Contractor shall immediately notify the SAWS Project Manager/Inspector and provide an updated PCDF to [securitygroup@saws.org](mailto:securitygroup@saws.org) and background screening information to [sawsbackgroundcheck@castlebranch.com](mailto:sawsbackgroundcheck@castlebranch.com).

Contractor is responsible for being in compliance with SAWS Security requirements and for maintaining security of SAWS property, infrastructure, SAWS customer's property, networks, and facilities for the length of the Project. Security incidents must be reported to SAWS Security immediately at (210) 233-3338.

If the Contractor plans to leave the site unsecure or open during the Project, they must provide a SAWS-approved security guard to monitor ingress and egress to the SAWS site.

If Contractor takes any action that diminishes the security of a SAWS site, Contractor will be responsible for providing additional security requirements at its expense. Some examples of additional requirements that SAWS may require include hiring of SAWS approved security guards, temporary fencing, mobile Closed Circuit Television Monitoring trailer(s), or extra lighting. Notwithstanding anything herein to the contrary, any provisions in these Security Procedures that may appear to give SAWS the right to direct Contractor as to details of doing any work under this Contract or to exercise a measure of control over any security measures or such work shall be deemed to mean that Contractor shall follow the desires of SAWS in the results of the work or security measures only.

Advance coordination by Contractor with SAWS Security for these security requirements is necessary to ensure no delays with timely performance of work. Any other provision of this Contract notwithstanding, in the event Contractor fails to comply with SAWS Security requirements, SAWS may, with no penalty, claim of any nature (including but not limited to breach of contract) against SAWS by the Contractor:

- Issue a Work Stoppage Order until the security violation (s) are remedied
- Ask any unidentified or improperly identified person or equipment to leave SAWS site immediately and not return until items or deficiencies are remedied to SAWS's satisfaction.

*Rev. 03/04/2020 SP-10*

# 22-22104 Biosolids Agreement

Final Audit Report

2022-12-27

Created:	2022-12-23
By:	Yvonne Torres (yvonne.torres@saws.org)
Status:	Signed
Transaction ID:	CBJCHBCAABAAEyNzHKYYR6zCwT1A8NYc0He48aL64Kqr

## "22-22104 Biosolids Agreement" History



Document created by Yvonne Torres (yvonne.torres@saws.org)

2022-12-23 - 4:55:07 PM GMT- IP address: 96.8.128.56



Document e-signed by Yvonne Torres (yvonne.torres@saws.org)

Signature Date: 2022-12-23 - 4:57:57 PM GMT - Time Source: server- IP address: 96.8.128.56



Document emailed to brandt@txcompost.com for signature

2022-12-23 - 4:57:58 PM GMT



Email viewed by brandt@txcompost.com

2022-12-27 - 5:44:48 PM GMT- IP address: 96.8.129.190



Signer brandt@txcompost.com entered name at signing as Brandt Klutts

2022-12-27 - 5:57:03 PM GMT- IP address: 96.8.129.190



Document e-signed by Brandt Klutts (brandt@txcompost.com)

Signature Date: 2022-12-27 - 5:57:05 PM GMT - Time Source: server- IP address: 96.8.129.190



Agreement completed.

2022-12-27 - 5:57:05 PM GMT

No.	Tract Name	Developer	Acres	W EDUs	WW EDUs	CoSA / CoSA ETJ / Outside	EARZ / CZ	JBSA	Board Reason	W CCN	WW CCN	Special Conditions
1	Foster Road Manufactured Housing Tract	Empower Communities LLC	100.99	650	650	CoSA ETJ	NO	NO	CCN	OUTSIDE	OUTSIDE	-
Total			100.99	650	650							

### Production, Transmission and Treatment Improvements

31. A Resolution awarding a construction contract to Associated Construction Partners, Ltd. in an amount not to exceed \$4,229,980.00 in connection with the 2019 Lift Station Elimination Near Port SA Project. (ANDREA BEYMER – CRISTINA BRANTLEY)
32. A Resolution awarding a construction contract to Payton Construction, Inc. in an amount not to exceed \$6,299,990.00 in connection with the Ranch Town No. 2 Pump Station Improvements Project; authorizing additional expenditures in an amount not to exceed \$225,000.00 to Lockwood, Andrews & Newnam, Inc. for additional engineering services in connection with the project. (ANDREA BEYMER – JUAN GOMEZ)
33. A Resolution awarding a professional services contract to Garver, LLC in an amount not to exceed \$17,750,000.00 in connection with the Steven M. Clouse WRC Primary and Secondary Treatment Expansion Project. (ANDREA BEYMER – JUAN GOMEZ)

## REPLACEMENT AND ADJUSTMENT PROJECTS

### Governmental Relocations and Replacements

34. A Resolution approving the expenditure of funds in an amount not to exceed \$14,656,946.10 for the relocation and replacement of water, sewer and chilled water main facilities by the City of San Antonio in connection with the South Alamo Street (Market Street to Cesar Chavez Boulevard) Project. (ANDREA BEYMER – CRISTINA BRANTLEY)

## MISCELLANEOUS ITEMS

35. A Resolution awarding a contract to New Earth, Inc., a subsidiary of WeCare Denali, LLC, in an amount not to exceed \$12,377,414.00 for a five-year period, with five optional one-year extensions in connection with biosolids composting. (JEFF HABY – ALISSA LOCKETT)
36. A Resolution awarding a contract to Second Nature Compost, LLC in an amount not to exceed \$13,376,458.50 for a five-year period with five optional one-year extensions in connection with biosolids composting. (JEFF HABY – ALISSA LOCKETT)

TO: San Antonio Water System Board of Trustees

FROM: Alissa R. Lockett, P.E., Senior Director, Production and Treatment Operations, and  
Jeffrey J. Haby, P.E., Vice President, Production and Treatment Operations

THROUGH: Robert R. Puente, President/Chief Executive Officer

SUBJECT: AWARD OF FIVE-YEAR CONTRACT FOR BIOSOLIDS COMPOSTING

Board Action Date: December 6, 2022

**SUMMARY AND RECOMMENDATION:**

The attached resolution awards a contract to Second Nature Compost, LLC, a local, non-SMWVB vendor, for a period of five years with five optional one-year extensions, in an amount not to exceed \$13,376,458.50 in connection with biosolids composting.

- The San Antonio Water System (the “System”) processes approximately 170,000 tons of biosolids at the Steven M. Clouse Water Recycling Center annually with 145,000 tons of the biosolids composted for beneficial reuse through current contracts with New Earth, Inc. and Texas Landfill Management, LLC. The remaining 25,000 tons is landfilled under a separate contract with Republic Services.
- Compost is a valuable horticultural product that protects the environment by diverting recyclable materials away from landfilling. Compost products improve soil quality and support SAWS water conservation programs.
- A Request for Proposals was issued due to the pending expiration of one of the two biosolids composting contracts. This allowed for selection of multiple contractors for biosolids composting that offer the “best value” to the System. The “best value” was determined using the weighted criteria published in the solicitation.
- Second Nature Compost, LLC was one of two contractors selected to provide biosolids composting services, which includes loading, transporting and processing the biosolids into compost at their registered composting facility. Second Nature Compost, LLC will also be responsible for all marketing and sales of the finished compost product.
- Second Nature Compost, LLC will compost a maximum of 85,000 wet tons of biosolids material per year at a unit price of \$28.48 per wet ton. The unit price may be adjusted annually based upon a calculation of the Consumer Price Index, not to exceed five percent in any given year.



- The contract term with Second Nature Compost, LLC will begin January 1, 2023 and end December 31, 2027, with the option of five, one-year extensions.

Staff recommends that the Board approve this resolution.

**FINANCIAL IMPACT:**

The services for the first contract year will be paid from the System Fund budgeted in the 2023 budget (Company: 1000, Accounting Unit: 5037600, Account: 511312, Total 2023 Amount: \$2,420,800.00).

Funds for these services to be provided in subsequent years will be paid from System funds, pursuant to and contingent upon the Board's approval of subsequent year's budgets with a line item for such expenditures (Company: 1000, Accounting Unit: 5037600, Account: 511312).

<b>Year</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Total</b>
January 2023 – December 2023	85,000	Tons	\$28.4800	\$2,420,800.00
January 2024 – December 2024	85,000	Tons	\$29.9040*	\$2,541,840.00
January 2025 – December 2025	85,000	Tons	\$31.3992*	\$2,668,932.00
January 2026 – December 2026	85,000	Tons	\$32.9692*	\$2,802,382.00
January 2027 – December 2027	85,000	Tons	\$34.6177*	\$2,942,504.50
<b>Total</b>				<b>\$13,376,458.50</b>

\* Unit prices reflect maximum price escalation of 5 percent allowed per year.

**SUPPLEMENTARY COMMENTS:**

Proposals were received on October 18, 2022 at 3:00 p.m. The selection of contractors providing the best value was made based on the following evaluation criteria and weighting.

<b>Criteria</b>	<b>Points</b>
Project Site, Permitting and Site Viability	20
Operational Plan	20
References / Similar Prior Experience	10
Presentation	10
Financial / Operational Stability	10
Compensation Proposal	30
<b>Total</b>	<b>100</b>

The following three proposals were submitted. Based on the criteria and a 2023 unit price of \$41.89 per ton for landfilling biosolids, Second Nature Compost, LLC was considered a best value to the System.

<b>Respondent</b>	<b>Annual Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Local/SMWVB</b>
<b>Second Nature Compost, LLC*</b>	<b>85,000</b>	<b>Ton</b>	<b>\$28.48</b>	<b>Local/Non-SMWVB</b>
New Earth Inc.	70,000	Ton	\$32.00	Local/Non-SMWVB
Texas Landfill Management, LLC	None	Ton	\$42.50	Local/Non-SMWVB

\*Selected Firm

**RESOLUTION NO. 2022-272**

**OF THE SAN ANTONIO WATER SYSTEM BOARD OF TRUSTEES AWARDING A FIVE-YEAR CONTRACT FOR BIOSOLIDS COMPOSTING TO SECOND NATURE COMPOST, LLC IN AN AMOUNT NOT TO EXCEED \$13,376,458.50 WITH FIVE, ONE-YEAR EXTENSION OPTIONS; APPROVING THE EXPENDITURE OF FUNDS AND MAKING AVAILABLE AN AMOUNT NOT TO EXCEED \$13,376,458.50 FROM THE SYSTEM FUND, AND THAT EXPENDITURE OF FUNDS FOR SUBSEQUENT FISCAL YEARS ARE CONTINGENT UPON BOARD APPROVAL OF BUDGETS FOR THE SUBSEQUENT FISCAL YEARS WITH A LINE ITEM FOR SUCH EXPENDITURES; AUTHORIZING THE PRESIDENT/ CHIEF EXECUTIVE OFFICER OR HIS DULY APPOINTED DESIGNEE TO EXECUTE A FIVE-YEAR CONTRACT WITH SECOND NATURE COMPOST, LLC, AND TO PAY SECOND NATURE COMPOST, LLC AN AMOUNT NOT TO EXCEED \$13,376,458.50 FOR THE CONTRACT WORK; FINDING THE RESOLUTION TO HAVE BEEN CONSIDERED PURSUANT TO THE LAWS GOVERNING OPEN MEETINGS; PROVIDING A SEVERABILITY CLAUSE; AND ESTABLISHING AN EFFECTIVE DATE**

**WHEREAS**, the San Antonio Water System (the "System") processes approximately 170,000 tons of biosolids per year and solicited a request for proposals to allow selection of multiple contractors for a five-year contract for biosolids composting; and

**WHEREAS**, compost is a valuable horticultural product that protects the environment by diverting recyclable materials away from landfilling; and

**WHEREAS**, Second Nature Compost, LLC was one of two contractors selected to provide biosolids composting services through a best value competitive selection, both at a lower unit price than landfilling biosolids; and

**WHEREAS**, Second Nature Compost, LLC, a local, non-SMWVB vendor, has submitted a unit price of \$28.48 per ton with a maximum annual quantity of 85,000 tons; and

**WHEREAS**, System funds in the amount of \$13,376,458.50 are required for the initial period of the contract; and

**WHEREAS**, the amount of \$13,376,458.50 is available from the System Fund for the initial period of the contract; and

**WHEREAS**, the San Antonio Water System Board of Trustees desires (i) to award a contract to Second Nature Compost, LLC in an amount not to exceed \$13,376,458.50 for the initial period of five years with five optional one-year extensions in connection with biosolids composting, (ii) to approve the expenditure of funds and make available an amount not to exceed \$13,376,458.50 from the System Fund for the initial period, and that subsequent expenditures are made pursuant to and contingent upon Board approval of subsequent years' budgets with a line item for such expenditures, and (iii) to authorize the President/Chief Executive Officer or his duly appointed designee to execute a contract with Second Nature Compost, LLC, and to pay Second Nature Compost, LLC an amount not to exceed \$13,376,458.50 for the initial period of the contract work; now, therefore:

**BE IT RESOLVED BY THE SAN ANTONIO WATER SYSTEM BOARD OF TRUSTEES:**

1. That a five-year contract for biosolids composting in an amount not to exceed \$13,376,458.50 with five optional one-year extension is hereby awarded to Second Nature Compost, LLC.
2. That the expenditure of funds in an amount not to exceed \$13,376,458.50 for the initial period of the contract is hereby approved and made available from the System Fund, and that subsequent expenditures are made pursuant to and contingent upon Board approval of subsequent years' budgets with a line item for such expenditures
3. That the President/Chief Executive Officer or his duly appointed designee is hereby authorized to execute a contract with Second Nature Compost, LLC, and to pay Second Nature Compost, LLC an amount not to exceed \$13,376,458.50 for the initial period of the contract in connection with biosolids composting.
4. It is officially found, determined, and declared that the meeting at which this resolution is adopted was open to the public, and that the public notice of the time, place, and subject matter of the public business to be conducted at such meeting, including this resolution, was given to all as required by the Texas Codes Annotated, as amended, Title 5, Chapter 551, Government Code.
5. If any part, section, paragraph, sentence, phrase or word of this resolution is for any reason held to be unconstitutional, illegal, inoperative or invalid, or if any exception to or limitation upon any general provision herein contained is held to be unconstitutional, illegal, invalid or ineffective, the remainder of this resolution shall nevertheless stand effective and valid as if it had been enacted without the portion held to be unconstitutional, illegal, invalid or ineffective.
6. This resolution becomes effective immediately upon its passage.

PASSED AND APPROVED this 6<sup>th</sup> day of December, 2022.

ATTEST:

  
\_\_\_\_\_  
Eduardo Parra, Secretary

  
\_\_\_\_\_  
Jelynn LeBlanc Jamison, Chairwoman



[OUR BRANDS](#) › [WECARE](#) › [PRODUCTS](#) › [COMPOST](#)

# WeCare

High Quality Compost Manufactured Sustainably.

LOCATIONS



SERVICES

PRODUCTS



ABOUT

DELIVERY





## **WeCare Bulk Compost**

WeCare Denali proudly produces compost products nationally that are manufactured in strict accordance with all state and federal guidelines. We are a top participant in the US Compost Council Seal of Testing Assurance (STA) Program and invest in extensive testing on a regular basis.

Our wholesale compost products are comprised of multiple feedstocks including green waste, biosolids, food waste and more, depending on the facility. We have the expertise to manufacture the highest quality bulk organic compost and the experience to support its end use.

# Benefits of Compost

Compost is extremely beneficial to your soil, as most gardeners already know. Whether worked into the earth or applied as a top dressing, compost can give your plants extra vigor as they grow. Even people who regularly use compost are surprised at just how many ways it can improve their soil with its rich mix of organic matter and living organisms. Below are the top five benefits of using compost in your garden.



## 1. Supplying Nutrients

Compost enriches soil with nutrients from broken-down organic matter, supporting healthy plant growth. Many see compost as another fertilizer for its nitrogen, phosphorus, potassium, and micronutrients. However, unlike commercial fertilizers, compost releases nutrients slowly over months or years, not all at once.



This slow release helps prevent deficiencies of minor elements like manganese or calcium, offering a more balanced nutrient supply for plants.

## 2. Adding Organic Matter

Most home sites lack fertile soil, making it hard to grow fruits and vegetables in mucky clay or sandy soil. Compost improves these conditions by adding rich organic matter, nourishing the soil, and supporting a dynamic food web of beneficial organisms. Additionally, compost is rich in carbon, helping to sequester it and counter greenhouse gas emissions.

## 3. Building Soil Structure

Soil is a mix of sand, silt, clay, and organic matter with pores for air, water, and roots. Compaction often occurs with new construction due to heavy traffic and vegetation clearing, which disrupts soil structure. Lawns can also become compacted from foot and mower traffic. Compost can help rebuild soil structure by introducing beneficial organisms that create new pores. Mulching with compost aids this process, while tilling compost into soil adds diversity but may harm existing soil organisms.

## 4. Retaining Water

Improving soil structure with compost enhances its ability to absorb and store water. Open pores allow precipitation to sink in rather than run off, preventing erosion and contamination. Compost-amended soil captures more water, holding it where plants need it. Additionally, a thick layer of compost as a top-dressing helps keep the soil cooler and reduces moisture loss through evaporation.

## 5. Reducing Waste

In the U.S., about 40% of grown food is wasted, filling landfills and releasing methane, a potent greenhouse gas. Organic materials like yard waste and pizza boxes also end up in landfills but are excellent for composting. Composting these wastes reduces landfill use and sequesters carbon. Home composting eliminates the need for waste transport, while commercial facilities handle materials difficult to compost at home. Even if you don't compost at home, participating in a green waste program helps reduce landfill waste.

Compost has many uses including:

- Topdressing
- Soil Amendment
- Nursery Potting Mixture
- Synthetic Fertilizer Alternative
- Erosion and Sediment Control
- Existing Soil Improvement

# Why use WeCare compost?

- Supplies a significant quantity of organic matter
- Improves soil structure, porosity, density, and creates a better plant root environment
- Increases infiltration and permeability of heavy soils, reducing erosion and runoff
- Increases infiltration and permeability of heavy soils, reducing erosion and runoff
- Supplies a variety of slow-release macro and micronutrients
- May control or suppress certain soil-borne plant pathogens
- Improves cation exchange capacity (CEC), improving ability to retain nutrients
- Supplies beneficial microorganisms to soils
- Improves and stabilizes soil pH and can bind and degrade specific pollutants

# Got Questions? We're here to help

Our goal to be an industry leader drives us to constantly seek innovative solutions that will improve both customer and vendor satisfaction. Get in touch today to help find a solution for your specific needs.

→ CONTACT US



[220 S Commerce Ave,](#)

[Russellville, AR 72801](#)

[855-530-7333](#)

[email\\_address](#)



OUR SERVICES

## Eco-Friendly Food Waste Recycling Services

Composting

DAF Skimmings

Land Reclamation

Biosolids Management

Dewatering

Lagoon & Digester Cleaning

Used Cooking Oil Collections

Grease Trap Services

Depackaging

## OUR MARKETS

Supermarkets

Food Manufacturers

Municipal

Hospitality

Healthcare

Schools & Universities

Agriculture

## OUR PRODUCTS

Compost, Soils & Mulch

Animal Feed

Natural Fertilizer

Soaps & Lubricants

Biofuels

## QUICK LINKS

Home

Contact Us

Resources

Privacy Policy

[Terms and Conditions](#)

## **PARTNERS**

© 2024 Denali Water Solutions. All Rights Reserved.

## **ALSO OF INTEREST**

[Food Waste Depackaging and Recycling Solutions](#)

[High Quality Compost Manufacturer Locations](#)

[Burlington County Co-Composting Facility](#)



OUR BRANDS › NEW EARTH › SAN ANTONIO

# New Earth

HOME

ABOUT

PRODUCTS

CONTACT

**O U R   L O C A T I O N S**

SAN ANTONIO, TX

CONROE, TX



KATY, TX

## **NEW EARTH SAN ANTONIO, TX PRODUCTS**

Whether you're looking for a premixed product or a special mix, we have a product to meet your project specifications. We source quality bark from local mills to produce a unique blend of mulch and soil.

Try out our [Calculator](#) to find out exactly how much product you need for your next project.

BAGGED PRODUCTS

COMPOST

SOIL BLENDS

MULCH

NURSERY

HARDSCAPE

KIDDIE CUSHION

**BAGGED PRODUCTS**



BLACK MULCH



RED MULCH



BROWN MULCH



CEDAR MULCH



COMPOSTED MULCH



HARDWOOD MULCH





ENRICHED TOPSOIL

TOPSHELF GARDEN  
SOIL



TOPSHELF COMPOST

**COMPOST**





MANURE COMPOST



LANDSCAPER'S  
COMPOST



LEAF MOLD COMPOST

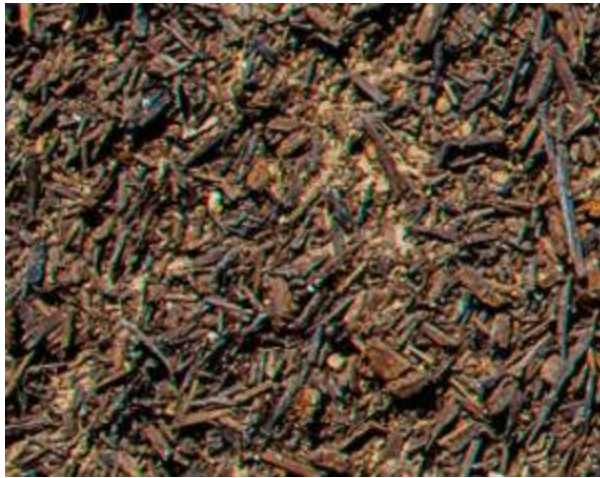
## **SOIL BLENDS**



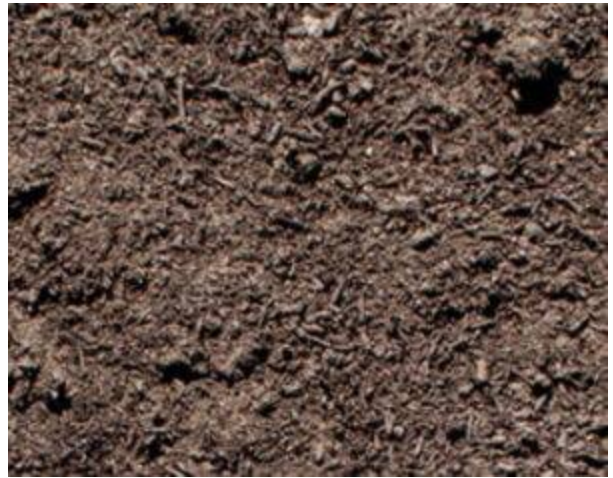
**GARDEN SOIL**



**ENRICHED TOPSOIL**



**4-WAY MIX  
(CONTRACTORS MIX)**



**TOP DRESSING MIX  
(SAND & COMPOST)**



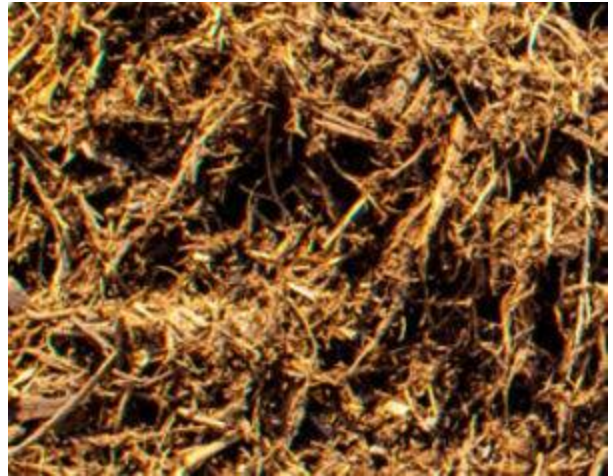


**DIVOT MIX**

## **MULCH**



**SINGLE GRIND  
NATIVE MULCH**



**DOUBLE SHREDDED  
NATIVE MULCH**



**COMPOSTED MULCH**

## DOUBLE SHREDDED CEDAR MULCH



## RED DYED MULCH



## BLACK DYED MULCH



## BROWN DYED MULCH

## NURSERY





**NURSERY MIX**



**POTTING SOIL**

## **HARDSCAPE**



**SMALL TEXAS BLEND  
RIVER ROCK (1-2")**



**LARGE TEXAS RIVER  
ROCK (2-4")**



DECOMPOSED  
GRANITE

## **KIDDIE CUSHION**



KIDDIE CUSHION

# Got Questions? We're here to help

Our goal to be an industry leader drives us to constantly seek innovative solutions that will improve both customer and vendor satisfaction. Get in touch today to help find a solution for your specific needs.

→ CONTACT US



[220 S Commerce Ave,](#)

[Russellville, AR 72801](#)

[855-530-7333](#)

[email\\_address](#)



OUR SERVICES

## Eco-Friendly Food Waste Recycling Services

Composting

DAF Skimmings

Land Reclamation

Biosolids Management

Dewatering

Lagoon & Digester Cleaning

Used Cooking Oil Collections

Grease Trap Services

Depackaging

## OUR MARKETS

Supermarkets

Food Manufacturers

Municipal

Hospitality

Healthcare

Schools & Universities

Agriculture

## OUR PRODUCTS

Compost, Soils & Mulch

Animal Feed

Natural Fertilizer

Soaps & Lubricants

Biofuels

## QUICK LINKS

Home

Contact Us

Resources

Privacy Policy



[Terms and Conditions](#)

## PARTNERS



© 2024 Denali Water Solutions. All Rights Reserved.

## ALSO OF INTEREST

[Food Waste Collections](#)

[Compost, Soils and Mulch Calculator](#)

[Water Removal and Dewatering Solutions](#)



CONTRACT AGREEMENT  
FORMAL AWARD

Mar 2, 2023

We care Denali LLC, dba New Earth  
7800 I-10 E  
San Antonio, TX 78219

Subject:

San Antonio Water System Contract for Five Year Contract for Biosolids Composting

SAWS Bid No. 22-22104

Award Date: December 6, 2022

No. of Extensions: 5

Contract Period: March 1, 2023 to December 31, 2027

To Whom It May Concern:

At the San Antonio Water System (SAWS) Board of Trustees meeting, you were awarded the Contract Agreement. This Contract Agreement includes the availability to extend if requested and approved by SAWS. All purchases made under this contract will be subject to the terms and conditions of the applicable bid documents.

**Purchase order(s) will be issued by the using department as they require items listed on the contract. Please reference purchase order on all submitted invoices.**

This letter constitutes an agreement between your company and SAWS, which includes all terms and conditions such as billings, delivery locations, and price changes. Any requests for changes to the Contract Agreement, including items, pricing, etc. must be in writing. Approved changes will be via a written Change Order.

Please show each newly generated Purchase Order No. on all invoices submitted during the period of the contract. It is very important for both your company and SAWS that **all** invoices indicate a "Ship To" location or have some indication of who placed the order or that the signature of the employee signing for receipt of the item is legible so that it can be read **(if necessary, please have the employee also print their name).**

If you have any questions, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Yvonne C. Torres".

Yvonne Torres

Sr. Director

SAN ANTONIO WATER SYSTEM

yvonne.torres@saws.org

**To report suspected ethics violations impacting the San Antonio Water System, please call 1-800-687-1918.**

# Formal Award Letter

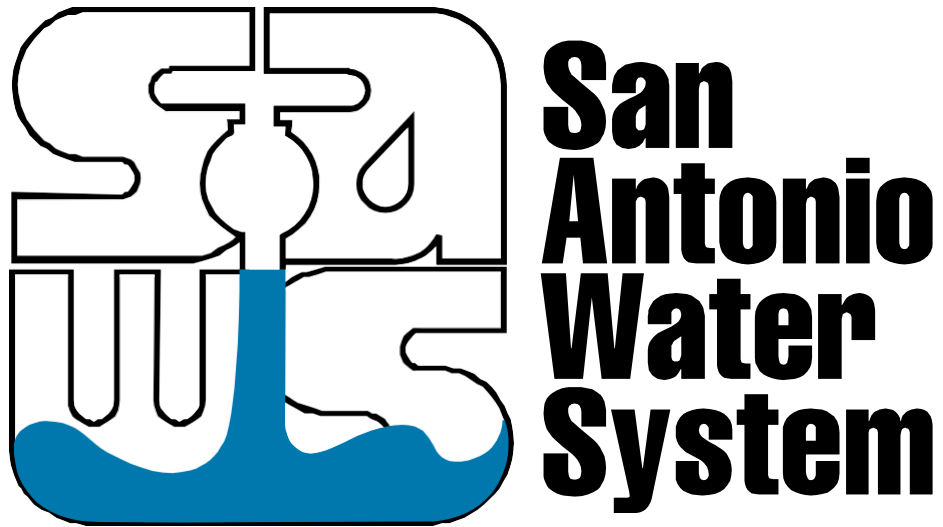
Final Audit Report

2023-03-02

Created:	2023-03-02
By:	Rosie Baiza (Rosie.Baiza@saws.org)
Status:	Signed
Transaction ID:	CBJCHBCAABAAjym9kQf3JPhV-95oNrAYwwH3h_JVwSeP

## "Formal Award Letter" History

-  Document created by Rosie Baiza (Rosie.Baiza@saws.org)  
2023-03-02 - 7:09:52 PM GMT- IP address: 70.123.237.142
-  Document emailed to Yvonne Torres (yvonne.torres@saws.org) for signature  
2023-03-02 - 7:10:08 PM GMT
-  Email viewed by Yvonne Torres (yvonne.torres@saws.org)  
2023-03-02 - 8:52:29 PM GMT- IP address: 96.8.128.56
-  Document e-signed by Yvonne Torres (yvonne.torres@saws.org)  
Signature Date: 2023-03-02 - 8:52:44 PM GMT - Time Source: server- IP address: 96.8.128.56
-  Agreement completed.  
2023-03-02 - 8:52:44 PM GMT



**SAN ANTONIO WATER SYSTEM**

**AGREEMENT WITH**

**WECARE DENALI LLC, DBA NEW EARTH LLC**

---

**RFP: 22-22104  
FIVE YEAR CONTRACT FOR BIOSOLIDS  
COMPOSTING**

# SAN ANTONIO WATER SYSTEM

## TABLE OF CONTENTS

<b>ARTICLE I. CONTRACT INTERPRETATION .....</b>	
1.01 <u>CONTRACT DEFINITIONS</u> .....	1
1.02 <u>INTENT OF THE CONTRACT</u> .....	2Error! Bookmark not defined.
1.03 <u>DISCREPANCY IN CONTRACT DOCUMENTS</u> .....	3
1.04 <u>REQUESTED SAWS APPROVALS</u> .....	3
<b>ARTICLE II. CONTRACT OBLIGATIONS AND RESPONSIBILITIES.. ERROR! BOOKMARK NOT DEFINED.</b>	
2.01 <u>BIOSOLIDS QUANTITY AND QUALITY</u> .....	3
2.02 <u>COMPOSTING OPERATIONS</u> .....	6
2.03 <u>CONTRACTOR’S OVERALL OBLIGATIONS</u> .....	6
2.04 <u>COMPOST PRODUCTION</u> .....	8
<b>ARTICLE III. COMPENSATION FOR SERVICES .....</b>	
3.01 <u>FEE PAID TO CONTRACTOR FOR TAKING BIOSOLIDS</u> .....	9
3.02 <u>ANNUAL FEE MODIFICATION</u> .....	9
3.03 <u>MINIMUM AMOUNT OF BIOSOLIDS</u> .....	10
<b>ARTICLE IV. REGULATORY COMPLIANCE AND RECORDKEEPING .....</b>	
4.01 <u>MONTHLY REPORTS</u> .....	10
4.02 <u>WITHHOLDING PAYMENTS</u> .....	10
4.03 <u>ANNUAL PAYMENTS</u> .....	10
4.04 <u>BIOSOLIDS FROM DIFFERENT SOURCES</u> .....	10
4.05 <u>REPORT OF VIOLATIONS</u> .....	10
4.06 <u>COMPLIANCE AND RESPONSE DATA</u> .....	11
4.07 <u>PERMITS</u> .....	11
<b>ARTICLE V. LEGAL RELATIONSHIPS, LIABILITY AND INDEMNITY .....</b>	
5.01 <u>GENERAL UNDERSTANDING</u> .....	11
5.02 <u>LEGAL RESPONSIBILITIES</u> .....	11
5.03 <u>LIABILITY &amp; INDEMNIFICATION</u> .....	11
5.04 <u>INDEMNITY; SOLE REMEDY; LIMITATION OF LIABILITY</u> .....	11
5.05 <u>NO WAIVER OF RIGHTS</u> .....	12
5.06 <u>INTEREST IN CONTRACT PROHIBITED</u> .....	13
5.07 <u>PREVAILING WAGES PURSUANT TO 5159(a)</u> .....	13
5.08 <u>EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS/NONDISCRIMINATION CLAUSE</u> .....	13
5.09 <u>SMALL, MINORITY, AND WOMEN BUSINESS PROGRAM(SMWBP) REQUIREMENTS</u> .....	13
5.10 <u>AMERICANS WITH DISABILITIES ACT (ADA)</u> .....	13
5.11 <u>IMPOSSIBILITY OF PERFORMANCE</u> .....	13
5.12 <u>ANTI-RAIDING CLAUSE</u> .....	13
<b>ARTICLE VI. INSURANCE REQUIREMENTS .....</b>	
6.01 <u>COVERAGE</u> .....	13
6.02 <u>SUBCONTRACTOR’S INSURANCE</u> .....	16
6.03 <u>CERTIFICATES OF INSURANCE</u> .....	16
6.04 <u>NOTICES TO SAWS</u> .....	16
6.05 <u>CERTIFICATE HOLDER</u> .....	16
6.06 <u>DELIVERY OF CERTIFICATE OF INSURANCE TO SAWS</u> .....	16
6.07 <u>DELIVERY OF CERTIFICATE OF INSURANCE TO CITY OF SAN ANTONIO</u> .....	17
6.08 <u>DEDUCTIBLES</u> .....	17
6.09 <u>MINIMUM INSURANCE LIMITS</u> .....	17
6.10 <u>INSURANCE RATINGS AND TYPES</u> .....	17
6.11 <u>SURVIVAL</u> .....	17
<b>ARTICLE VII. PERFORMANCE BOND .....</b>	
7.01 <u>PERFORMANCE BOND</u> .....	18
7.02 <u>CONTRACTOR, SURETIES, AND PARENT CORPORATION STILL BOUND</u> .....	18

<b>ARTICLE VIII. CONTRACT ADMINISTRATION .....</b>	
8.01 <u>ASSIGNMENTS AND SUBLETTING</u> .....	18
8.02 <u>LAWS, REGULATIONS AND PERMITS</u> .....	19
8.03 <u>RELATIONS WITH CUSTOMERS AND THE GENERAL PUBLIC</u> .....	19
8.04 <u>RECYCLING PROGRAMS</u> .....	19
8.05 <u>TREND UPDATE REPORT</u> .....	19
8.06 <u>LOCAL CONSERVATION PROMOTION</u> .....	19
<b>ARTICLE IX. SAFETY PRECAUTIONS AND PROGRAMS .....</b>	
9.01 <u>GENERAL</u> .....	19
9.02 <u>EMPLOYEE SAFETY</u> .....	20
9.03 <u>PUBLIC SAFETY AND CONVENIENCE</u> .....	20
9.04 <u>PROTECTION OF PRIVATE PROPERTY</u> .....	20
<b>ARTICLE X. CONTRACT TERMINATION &amp; SUSPENSION.....</b>	
10.01 <u>DEFAULT</u> .....	20
10.02 <u>TERMINATION BY CONTRACTOR</u> .....	21
10.03 <u>SUSPENSION OF WORK BY SAWS</u> .....	21
<b>ARTICLE XI. DISPUTES AND DAMAGES .....</b>	
11.01 <u>MEDIATION</u> .....	22
11.02 <u>DAMAGES</u> .....	22
11.03 <u>ADDITIONAL COSTS AND FEES</u> .....	22
<b>ARTICLE XII. CONTRACT TIMES AND COMMENCEMENT OF WORK.....ERROR! BOOKMARK NOT DEFINED.</b>	
12.01 <u>COMMENCEMENT OF WORK</u> .....	22
12.02 <u>CONTRACT YEARS</u> .....	23
<b>ARTICLE XIII. TERM; EXTENSION OF CONTRACT .....</b>	
13.01 <u>EXTENSION OF CONTRACT</u> .....	23
<b>ARTICLE XIV. CONTRACT CHANGES .....</b>	
14.01 <u>AMENDMENTS</u> .....	23
<b>ARTICLE XV. MISCELLANEOUS .....</b>	
15.01 <u>ENTIRE AGREEMENT</u> .....	23
15.02 <u>GENERAL</u> .....	23
15.03 <u>STARTUP DATE</u> .....	23
15.04 <u>NOTICES</u> .....	23
15.05 <u>RIGHT OF ENTRY</u> .....	24
15.06 <u>WAIVER OF BREACH</u> .....	24
15.07 <u>TIME OF ESSENCE</u> .....	24
15.08 <u>BINDING OF HEIRS AND ASSIGNS</u> .....	24
15.09 <u>RIGHTS AND REMEDIES CUMULATIVE</u> .....	24
15.10 <u>TEXAS LAW TO APPLY</u> .....	25
15.11 <u>LEGAL CONSTRUCTION</u> .....	25
15.12 <u>PRIOR AGREEMENTS SUPERSEDED</u> .....	25
15.13 <u>SECURITY REQUIREMENTS</u> .....	25
15.14 <u>NO THIRD PARTY BENEFICIARIES</u> .....	25

<b>ARTICLE VIII. CONTRACT ADMINISTRATION .....</b>	
8.01 <u>ASSIGNMENTS AND SUBLETTING</u> .....	18
8.02 <u>LAWS, REGULATIONS AND PERMITS</u> .....	19
8.03 <u>RELATIONS WITH CUSTOMERS AND THE GENERAL PUBLIC</u> .....	19
8.04 <u>RECYCLING PROGRAMS</u> .....	19
8.05 <u>LOCAL CONSERVATION PROMOTION</u> .....	19
<b>ARTICLE IX. SAFETY PRECAUTIONS AND PROGRAMS .....</b>	
9.01 <u>GENERAL</u> .....	19
9.02 <u>EMPLOYEE SAFETY</u> .....	20
9.03 <u>PUBLIC SAFETY AND CONVENIENCE</u> .....	20
9.04 <u>PROTECTION OF PRIVATE PROPERTY</u> .....	20
<b>ARTICLE X. CONTRACT TERMINATION &amp; SUSPENSION.....</b>	
10.01 <u>DEFAULT</u> .....	20
10.02 <u>TERMINATION BY CONTRACTOR</u> .....	21
10.03 <u>SUSPENSION OF WORK BY SAWS</u> .....	21
<b>ARTICLE XI. DISPUTES AND DAMAGES .....</b>	
11.01 <u>MEDIATION</u> .....	22
11.02 <u>DAMAGES</u> .....	22
11.03 <u>ADDITIONAL COSTS AND FEES</u> .....	22
<b>ARTICLE XII. CONTRACT TIMES AND COMMENCEMENT OF WORK .....ERROR! BOOKMARK NOT DEFINED.</b>	
12.01 <u>COMMENCEMENT OF WORK</u> .....	22
12.02 <u>CONTRACT PERIODS</u> .....	23
<b>ARTICLE XIII. TERM; EXTENSION OF CONTRACT .....</b>	
13.01 <u>EXTENSION OF CONTRACT</u> .....	23
<b>ARTICLE XIV. CONTRACT CHANGES .....</b>	
14.01 <u>AMENDMENTS</u> .....	23
<b>ARTICLE XV. MISCELLANEOUS .....</b>	
15.01 <u>ENTIRE AGREEMENT</u> .....	23
15.02 <u>GENERAL</u> .....	23
15.03 <u>STARTUP DATE</u> .....	23
15.04 <u>NOTICES</u> .....	23
15.05 <u>RIGHT OF ENTRY</u> .....	24
15.06 <u>WAIVER OF BREACH</u> .....	24
15.07 <u>TIME OF ESSENCE</u> .....	24
15.08 <u>BINDING OF HEIRS AND ASSIGNS</u> .....	24
15.09 <u>RIGHTS AND REMEDIES CUMULATIVE</u> .....	24
15.10 <u>TEXAS LAW TO APPLY</u> .....	25
15.11 <u>LEGAL CONSTRUCTION</u> .....	25
15.12 <u>PRIOR AGREEMENTS SUPERSEDED</u> .....	25
15.13 <u>SECURITY REQUIREMENTS</u> .....	25
15.14 <u>NO THIRD PARTY BENEFICIARIES</u> .....	25

**SAN ANTONIO WATER SYSTEM  
AGREEMENT WITH WECARE DENALI LLC, DBA NEW EARTH LLC  
FIVE YEAR CONTRACT FOR BIOSOLIDS COMPOSTING**

**THIS AGREEMENT** (“Contract”) dated March 1, 2023, is made and entered into between San Antonio Water Systems, a municipally owned water utility (hereinafter referred to as "SAWS") and New Earth, LLC, a Texas limited liability company (hereinafter referred to as “NEW EARTH”. The parties hereby agree as follows:

**ARTICLE I. CONTRACT INTERPRETATION**

**1.01 CONTRACT DEFINITIONS**- Where used in this Contract, the following words and terms shall have the meanings indicated:

- A. **ACT OF GOD**. A cataclysmic phenomenon of nature, such as an earthquake, flood or cyclone. Rain, wind, high water, or other natural phenomenon which might reasonably have been anticipated from historical records of the general locality of the Work shall not be construed as Acts of God.
- B. **BFP**. Belt Filter Press
- C. **BIOSOLIDS**. Digested and dewatered anaerobically digested sludge produced by SAWS from the sanitary sewer treatment facilities at SMC WRC, as further described in the specifications set out in Section 2.01.2 below.
- D. **COMMENCEMENT CONDITIONS**. Commencement Conditions shall have the definition set out in Section 12.01 below.
- E. **COMMENCEMENT DATE**. Commencement Date shall have the definition as set out in Section 12.01 below.
- F. **COMMISSION**. The Texas Commission on Environmental Quality or its successors.
- G. **CONTRACT**. This Contract is between SAWS and NEW EARTH governing the agreement of NEW EARTH to take Biosolids from SAWS, make compost with such Biosolids and other compostable materials and market the compost. The Contract includes the exhibits attached hereto and all subsequent written amendments executed by SAWS and NEW EARTH
- H. **COSA**. City of San Antonio.
- I. **EXCESS AMOUNT OF BIOSOLIDS**. The amount of Biosolids in excess of the Minimum Amount of Biosolids.
- J. **HAZARDOUS SUBSTANCES**. Hazardous Substance has the same definition as in Texas Water Code, Section 26.263; the definition of Hazardous Substance also includes any solid waste identified or listed as a hazardous waste by the administrator of the United States Environmental Protection Agency in accordance with the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 United States Code, §§6901 *et seq.*



- K. MINIMUM AMOUNT OF BIOSOLIDS. Seventy Thousand (70,000) wet tons of Biosolids material per year.
- L. PERFORMANCE BOND. The security furnished by NEW EARTH through the Surety in the specified amount of \$500,000.00 as a guaranty that the Work will be faithfully performed and completed and that SAWS will be held harmless from all costs and damages which SAWS may suffer by reason of NEW EARTH's default or failure to perform its obligations under this Contract.
- M. SAN ANTONIO WATER SYSTEM. San Antonio Water System (SAWS) shall mean the San Antonio Water System Board of Trustees as established pursuant to Sections 402.141 et.seq. of the Texas Local Government Code and City of San Antonio Ordinance No. 75686. Whenever in this Contract is found the term SAWS, the same shall, unless indicated otherwise, be understood to mean the San Antonio Water System Board of Trustees, or its successors or any person or persons acting lawfully in an official capacity on behalf of SAWS at such time and within the power and authority specifically delegated to him or them by this Contract.
- N. SAWS REPRESENTATIVE. The Vice President of Production and Treatment Operations or his/her duly authorized representative.
- O. PROJECT SITE REPRESENTATIVE. The on project site representative of NEW EARTH is Greg Weidenfeller and is authorized to communicate with SAWS' Representative regarding performance of this Contract but is not authorized to bind NEW EARTH for additional obligations beyond this Contract. The Project Site Representative or his designee shall supervise and direct the Work.
- P. SURETY. The corporate body licensed to conduct business in the State of Texas that provides assurance that NEW EARTH or its permitted substitute will faithfully perform the Work covered by this Contract.
- Q. TERM. The Term shall be the period commencing on the date hereof and ending 60 months from commencement date or at the end of any extension of the Term properly exercised pursuant to Section 13.01.
- R. WORK. The entire process of loading, hauling and processing Biosolids and other compostable material into compost for beneficial use. Work is the result of NEW EARTH performing services, furnishing labor and furnishing and incorporating materials and equipment in accordance with the terms of the Contract.
- S. WRC. Water Recycling Center operated by SAWS, being the Steven M. Clouse Water Recycling Center at 3495 Valley Road, San Antonio, Texas ("SMC WRC").

1.02 INTENT OF THE CONTRACT. The intent of this Contract is to describe the parties agreement for NEW EARTH to pick up designated quantities of Biosolids from the WRC and process such Biosolids with wood chips and other compostable materials into compost for sale. Any work, materials or equipment that may reasonably be inferred as being required to pick up Biosolids, produce compost and market the compost is to be supplied by NEW EARTH whether or not specifically called for by this Contract. Unless otherwise defined herein, when words which have a well-known technical or trade meaning are used to describe work, materials or equipment such words shall be interpreted in accordance with that meaning. Where phrases "directed by," "ordered by" or "to the satisfaction of SAWS Representatives" occur, it is to be understood that the

directions, orders, or instructions to which they relate are within the scope of, and authorized by this Contract and shall not constitute a direction of the Work by SAWS. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or Laws or Regulations in effect at the time date of this Contract and as subsequently modified by the issuing organization, association or governmental body.

- 1.03     DISCREPANCY IN CONTRACT DOCUMENTS- If, during the performance of the Work, NEW EARTH finds a conflict, error or discrepancy in the Contract, NEW EARTH shall promptly report the same to SAWS in writing and before proceeding with further Work affected thereby and obtain a written interpretation or clarification of the conflict error discrepancy from SAWS. SAWS shall provide NEW EARTH a prompt response (within five (5) working days after receipt of a request).
- 1.04     REQUESTED SAWS APPROVALS- SAWS will respond promptly (within five (5) working days after receipt of a request for approval) to written requests for approvals from NEW EARTH. SAWS responses shall be in writing and if a requested approval is not given by SAWS, the response shall include the specific reasons for SAWS withholding the approval. Approvals of SAWS may be conditioned upon Commission approvals or permits or similar specific conditions.

## **ARTICLE II. CONTRACT OBLIGATIONS AND RESPONSIBILITIES**

### 2.01     BIOSOLIDS QUANTITY AND QUALITY

- 2.01.01 SAWS shall deliver to NEW EARTH and NEW EARTH shall take from SAWS at the WRC the Minimum Amount of Biosolids in approximate equal monthly quantities. Such Biosolids substantially conforming to the standards attached hereto as Attachment 1, will be delivered at the WRC. Biosolids will be delivered on the BFP storage pad, conveyer system or materials storage area at the WRC for loading directly to NEW EARTH's transport vehicles. NEW EARTH is responsible for providing loading and hauling equipment that will suitably fit under the chutes at the WRC. NEW EARTH acknowledges and agrees that it has inspected the delivery points for NEW EARTH's loading, hauling and transport vehicles and determined them to be suitable for use under this Contract.
- 2.01.02 The Biosolids delivered to NEW EARTH by SAWS will be anaerobically digested sludge that has been dewatered by either a BFP, sand drying bed or any other future dewatering method meeting Class B (as defined by 40 CFR Part 503 and 30 TAC Chapter 312) pathogen reduction requirements. The anaerobically digested BFP will average fifteen percent (15%) to twenty-five percent (25%) total solids content for the calendar year. The drying bed Biosolids total solid contents will average fifty percent (50%) to ninety percent (90%) total solids for the calendar year. SAWS will remove Biosolids from sand drying beds and transport such Biosolids to the storage pad at the WRC where the drying beds are located and NEW EARTH will pick up the Biosolids material from the storage pad, and be responsible for loading the Biosolids into NEW EARTH's transport vehicles. The Biosolids will be reasonably free of foreign material but some quantities of plastic and other solid materials may be present and will contain a sand component.
- 2.01.03 Sampling and testing of materials, laboratory inspection of materials and processes for Biosolids released by SAWS to NEW EARTH for composting shall be performed at the expense of SAWS in a laboratory maintained by SAWS or a commercial testing laboratory designated by SAWS. SAWS will be responsible for testing/analysis of Biosolids to confirm that it meets applicable Class B Biosolids requirements and the specifications set forth on Attachment 1. SAWS will be responsible for management and disposal of Biosolids that are not Class B Biosolids at its sole cost

and expense. NEW EARTH shall furnish, samples of material from the WRC it believes may not meet the requirements for composting and SAWS shall be responsible for testing the samples and determining if such Biosolids meet the required Class B requirements. NEW EARTH has no responsibility to pickup, transport or dispose of Biosolids not meeting Class B Biosolids requirements.

- 2.01.04 Actual quantities of Biosolids delivered to NEW EARTH shall be determined by certified scales located at the WRC. These scales will be used for weighing of all NEW EARTH vehicles entering and exiting the WRC. Scale tickets shall be provided for each load of Biosolids material. The weights from the scales will be the basis of billing to SAWS. All payments to NEW EARTH will be based on wet tons (rounded to 20 pound increments). The scales will be certified in accordance with SAWS' Standard Maintenance Schedule from time-to-time; provided that SAWS will not have to certify the scales more than once every twelve (12) months.
- 2.01.05 NEW EARTH may at its sole risk and expense, store at the WRC equipment used for loading and hauling Biosolids from the WRC. SAWS shall have no liability for any loss or damage to such equipment on the WRC. All such storage shall be in locations designated by the SAWS Representative from time-to-time. All such equipment stored at the WRC shall be in good working order and maintaining all valid registrations, insurance and licensing requirements. NEW EARTH may perform routine preventative maintenance approved by SAWS on such equipment at the WRC, but no major equipment repairs may be performed at the WRC. SAWS will not operate any equipment used for loading or transporting Biosolids from the WRC to the NEW EARTH Compost Site.
- 2.01.06 NEW EARTH will pick up a minimum of 5,000 wet tons of Biosolids per month from the WRC. NEW EARTH shall provide and operate all equipment for loading Biosolids from the BFP storage and drying bed storage area. Biosolids will not be stored or stockpiled at the WRC for more than three (3) days. The storage pad must be cleaned off by NEW EARTH on a weekly basis by scraping with a front-end loader to prevent nuisance odors and vectors and other health hazards from developing. NEW EARTH is also responsible for cleaning any spills of Biosolids at the WRC conveyor that occurs while NEW EARTH is loading Biosolids from the conveyor.
- 2.01.07 NEW EARTH acknowledges and agrees that they are not the exclusive user of the Biosolids, and that other sludge haulers will be loading and transporting Biosolids from the WRC. NEW EARTH must coordinate its loading work with the SAWS Representative so as not to interfere with or jeopardize the routine operation of the WRC's dewatering facilities or the operations of any other Biosolids hauling contractor. The SAWS Representative shall provide information for coordination of loading and hauling schedules, sequencing and order of access in its sole discretion; provided, however, in no event shall such information constitute control over NEW EARTH or direction of the work by the SAWS representative. The Biosolids loading and transportation activities may be conducted Monday through Sunday during normal working hours (6:00 a.m.-6:00 p.m., with some flexibility upon prior written approval by the SAWS Representative).
- 2.01.08 Transportation of Biosolids will be completed in a vehicle or container equipped in such a manner to prevent any spillage, leakage, splashing, blowing or any other accidental loss or discharge of the Biosolids. The vehicle or Biosolids rolloff container may be an open truck provided that it has a water tight bed and sealed gates that are fitted with a minimum of four manually operated closures such as "T" handles or turn-buckles to avoid accidental opening during transit. All vehicles or containers must be fitted with a tarp or other suitable cover over the load. Overloaded vehicles will not be authorized to leave the WRC property and proper compliance is the sole responsibility of NEW EARTH.

NEW EARTH shall establish a procedure at the WRC to insure that all trucks traveling on a public street to or from the WRC are properly covered, not overloaded and turnbuckles are in use. NEW EARTH shall be responsible for clean up of any spills of Biosolids on any WRC or public street. NEW EARTH must commence clean up of any Biosolids spill within five (5) hours of notification of the occurrence of the spill and pursue completion of the clean up with immediate due diligence. NEW EARTH shall report any spills to appropriate regulatory agencies in accordance with legal and regulatory requirements. All spills must be reported by phone to the SAWS Representative within 1 hour of notification of the occurrence of the spill. If NEW EARTH fails to timely commence the clean up or complete the clean up with immediate due diligence, SAWS may at the sole cost and expense of NEW EARTH clean up the spill using its staff and equipment or a third party contractor. NEW EARTH, upon receipt of an invoice with copies of documents supporting the costs or charges, shall reimburse SAWS on demand all of SAWS' costs of clean up, including labor, equipment, material and disposal charges plus an overhead and administrative fee of thirty-five percent (35%) of the labor, equipment and disposal charges.

2.01.09 NEW EARTH will provide appropriate multi-part trip tickets to insure compliance with the record keeping requirements of 30 TAC Chapter 312 Subchapter G for transportation of Biosolids to the composting site. Trip tickets will be distributed and maintained in accordance within the above state regulations.

2.01.10 NEW EARTH shall transport Biosolids from the WRC to the compost site in conformance with all applicable Federal, State, or Local laws. NEW EARTH shall require all vehicle operators to comply with all posted speed limits on and off the WRC. Farm to Market Road 1937 has a current maximum load limit of 58,420 lbs. and any additional weight permits will be the responsibility of NEW EARTH. Only vehicles that are properly registered under state and local rules with the required certifications and markings to conform to the requirement of these specifications will be allowed to load. NEW EARTH must provide SAWS with copies of registration letters of anyone who may or will be transporting Biosolids, at the time of the Effective Date of this Contract and upon any changes thereafter.

No Biosolids transport vehicle will be allowed on the WRC until SAWS has been furnished with copies of the then current Commission transport registration documents or permits for the vehicle. In addition, SAWS may deny any vehicle or driver access to and the right to travel on the WRC property and to load or unload materials at the WRC property if SAWS believes in its sole discretion that (i) the vehicle is in need of maintenance or repair work which in SAWS' reasonable opinion, makes it unsafe to perform the Work, (ii) the driver is impaired, (iii) the vehicle does not have proper registration or insurance, or (iv) such vehicle or driver may be a danger to SAWS' personnel or property or the public and its property. SAWS has no duty to inspect or test the vehicles or drivers. SAWS' Representative shall notify NEW EARTH if SAWS has determined not to allow a vehicle to load or unload material pursuant to this subsection. NEW EARTH shall be responsible for any delays under this Section.

2.01.11 NEW EARTH shall compost at least seventy-five percent (75%) of Biosolids awarded per year. NEW EARTH may dispose of Biosolids under this Contract at other composting sites only with the specific prior written approval of the SAWS' Representative. Further, any Biosolids not composted shall be disposed at a properly licensed municipal solid waste landfill, provided that NEW EARTH is composting at least seventy-five percent (75%) of the Biosolids. Failure to compost at least seventy-five percent (75%) of the Biosolids shall constitute a default under this Contract, and SAWS shall be entitled to any and all remedies at law or in equity, including, without limitation, termination of this Contract. In addition, if NEW EARTH fails to compost at least seventy-five percent (75%) of the Biosolids in any calendar year, (i) SAWS shall no longer be

obligated to deliver or pay NEW EARTH for the Minimum Amount of Biosolids, or (ii)SAWS may dispose of the Biosolids in any manner SAWS determines, in its sole discretion.

## 2.02 COMPOSTING OPERATIONS

- 2.02.01 Consistent high quality Biosolid products and compost shall be produced in accordance with all current applicable and future legal and regulatory standards
- 2.02.02 NEW EARTH will transport all Biosolids it takes under Section 2.01 to NEW EARTH composting site. NEW EARTH shall provide all labor, equipment and material needed or used to produce the compost. NEW EARTH will determine the type or mix of compost produced, including percentages of sand, mulch and other materials added to the compost NEW EARTH may utilize any materials in the compost process that are acceptable for notification and exempt tier compost facilities as authorized by 30 TAC 332.3 (c) and (d).
- 2.02.03 NEW EARTH, as an independent contractor, shall be responsible for all composting activities, including but not limited to, loading, hauling, transportation, assembly of windrows or compost piles, turning such piles, adding any required materials, including compostable material, nitrogen sources, water and any other specialty mixes such as sand or soil, and for screening, storing, packaging and selling.
- 2.02.04 NEW EARTH shall manage the space at the NEW EARTH compost site; constructing compost piles or windrows and removing completed compost so as to insure that NEW EARTH shall be able to take and process into compost, all Biosolids it is required to take under this Contract. NEW EARTH shall maintain the compost site in compliance with all applicable rules, regulations, codes and laws.

## 2.03 NEW EARTH'S OVERALL OBLIGATIONS

- 2.03.01 NEW EARTH shall obtain, maintain and provide all permits, licenses, equipment, labor, material, monitoring, fuel and all other labor, material, equipment and services required to remove the designated quantities of Biosolids from the WRC to the NEW EARTH composting site processing areas and process such Biosolids into compost for beneficial use and to market the compost.
- 2.03.02 NEW EARTH as an independent contractor, shall supervise and direct the Work using its best skill and attention. NEW EARTH shall be solely responsible for all means, methods, techniques, sequences and procedures necessary to complete the Work under this Contract, as well as for implementing safety precautions and for coordinating all portions of the Work under this Contract.
- 2.03.03 In connection with SAWS' visual observation/inspection of the Work or materials testing contemplated herein, it is clearly understood that NEW EARTH is responsible for performing quality control inspection and testing services to assure that the compost meets all applicable laws, rules and regulations for resale to and use by consumers.
- 2.03.04 If NEW EARTH, in the course of the Work, finds any discrepancies between the physical conditions of the Biosolids and application requirements, NEW EARTH shall immediately inform SAWS by phone and in writing of the discrepancies. Any Work performed by NEW EARTH after discovery of the discrepancy but before being authorized by SAWS to continue Work will be done at NEW EARTH's sole risk and/or expense. SAWS will promptly respond to NEW EARTH requests for testing and analysis in light of the specific problem.

- 2.03.05 NEW EARTH\_is responsible for all loading, transportation, processing, packaging and sales, including the compliance with all Federal, State and Local laws, rules and regulations for these activities.
- 2.03.06 NEW EARTH shall provide SAWS with a detailed plan, updated at least annually, advising SAWS on how NEW EARTH is complying and will comply with all Federal, State, and Local laws, rules, codes, ordinances and regulations pertaining to the Work. Failure of NEW EARTH to comply with any of the applicable laws, rules, codes, ordinances and/or regulations after appropriate notice and cure periods set out in Section 10.01 below, shall be events of default under this Contract, and may be considered cause for termination of this Contract.
- 2.03.07 NEW EARTH shall be knowledgeable of and comply with all notice, recordkeeping and other requirements of the WRC TPDES Permit No.W00010137033 [EPA ID No. TX 0077801] as they apply to the beneficial use of Biosolids as set out in Section 11.03. Failure to comply with any of these requirements shall be a default under this Contract, and may be considered cause for termination of this Contract.
- 2.03.08 . NEW EARTH agrees to reimburse SAWS for any and all fines or additional operation expenses arising from any regulatory enforcement action that is imposed on SAWS by any Federal, State or Local regulatory agency that result from any actions or omissions of NEW EARTH, and/or subcontractors or agents of NEW EARTH.
- 2.03.09 The operation of the compost facility must be performed in accordance with all legal and regulatory requirements and in a manner to limit complaints or nuisance conditions created by vectors, odors and dust. The contractor will be responsible for responding to all complaints and implementing any practices or processes needed to rectify such complaints. Failure to manage the facility to minimize odor, vectors or dust, or failure to respond to complaints which result in regulatory violations or infractions shall be a default under this Contract and may be grounds for termination of the Contract.
- 2.03.10 Subject to the terms of Section 5.11, inclement weather events do not relieve NEW EARTH from the performance of its obligation to pick up Biosolids at the WRC and haul to the NEW EARTH Compost Site.
- 2.03.11 Equipment failure shall not be an excuse for NEW EARTH\_not complying with its obligations under this Contract. Failure to obtain or maintain permits shall not be an excuse for NEW EARTH's failure to comply with its obligations under this Contract.
- 2.03.12 NEW EARTH shall have a competent superintendent or assistant superintendent available twenty-four (24) hours a day, seven (7) days a week, by phone and shall respond to calls from SAWS within two (2) hours after being contacted.
- 2.03.13 NEW EARTH declares that NEW EARTH has thoroughly examined the SMC WRC and has become familiar with typical local geophysical conditions at or near the WRC, and has read and has thoroughly understood this Contract.
- 2.03.14 NEW EARTH shall maintain at its offices at NEW EARTH compost site, a detailed set of operation records pertaining to the Work, including Biosolids hauling and transport records (both inbound and outbound of the NEW EARTH Compost Site), testing results, etc. SAWS shall have the right to inspect records dealing with Commission's 30 TAC Chapter 332 and 312 rules and standards to the extent reasonably necessary to verify compliance with this Contract.

- 2.03.15 SAWS may require reasonable special inspection, testing or approval of (i) any non-SAWS' bulking or mixing material NEW EARTH brings into the NEW EARTH compost site, and (ii) the compost before it is removed by NEW EARTH to determine compliance with the requirements of this Contract, NEW EARTH shall promptly arrange for such reasonable special testing and inspection at an approved Lab, NEW EARTH or the SAWS' laboratory when requested by SAWS. SAWS' current lab rates are set out on Exhibit A hereto. Should the material or compost fail to comply with the requirements of this Contract, NEW EARTH shall pay the reasonable cost of correcting the deficiency or land filling the compost.
- 2.03.16 NEW EARTH shall at its sole cost and expense restore property of any description, including property of SAWS, which may be damaged in the performance of this Contract by NEW EARTH, its agents, employees, subcontractors or their employees and subcontractors, to the condition existing prior to such damage.

## 2.04 COMPOST PRODUCTION

- 2.04.01 All compost produced by SAWS Biosolids at the NEW EARTH compost site shall meet Commission's 30 TAC Chapter 332 and 312 rules and standards. In addition, NEW EARTH shall comply with the requirements for processing the biosolids into Class A compost as set forth on Attachment 2 hereto.
- 2.04.02 It is the responsibility of NEW EARTH to establish and submit a marketing plan for the Biosolids. It is SAWS stated goal to obtain 100 percent beneficial use of Biosolids, and this should be reflected in NEW EARTH's marketing plan. In keeping with SAWS' goal of diversification and the intent of this Contract, it is the responsibility of NEW EARTH to strive to generate products for suitable market uses. Alternative use or disposal markets should only be used as failsafe backup options. Should it appear to SAWS that NEW EARTH is not complying with appropriate marketing and use of the product, SAWS may take corrective steps, such as reducing the tonnage required to be delivered to NEW EARTH under this Contract, or may terminate the Contract.
- 2.04.03 NEW EARTH will conduct all Class A pathogen reduction sampling and other required testing under 30 TAC Chapters 312 and 332 of the compost produced at the NEW EARTH compost site that contains quantities of SAWS' Biosolids. SAWS will provide all sampling and analysis of Biosolids to NEW EARTH and certify the Biosolids meet Class B criteria. NEW EARTH is responsible for all Class A performance sampling. The SAWS laboratory is available to conduct all Class A testing and report the results to NEW EARTH. NEW EARTH will be charged for the testing according to the then existing SAWS' rate structures. NEW EARTH will be responsible for certifying pathogen reduction and vector attraction reduction for Class A proposals. Copies of certifications shall be sent monthly to the SAWS Representative.

Any other analytical work performed will be the responsibility of NEW EARTH. NEW EARTH may use the SAWS laboratory for any additional testing and pay according to the then existing SAWS' rate structures. All results shall be reported to the SAWS Biosolids Manager within thirty (30) days identifying the laboratory used for any analysis, the phone number, contact person, test performed, method used and analytical result.

Hazardous Substances: NEW EARTH shall not use, release, manufacture or dispose of any Hazardous Substances at the NEW EARTH compost site or the WRC. NEW EARTH shall defend, indemnify, and hold harmless SAWS from any and all liabilities (including strict liability), actions, demands, penalties, losses, costs, or expenses (including without limitation attorneys' fees and expenses, and remedial costs), suits, costs of any settlement or judgment and claims of any and

every kind whatsoever which may now or in the future (whether before or after the termination of this Contract) be paid, incurred or suffered by or asserted against SAWS by any person or entity or governmental agency for, with respect to, or as a direct or indirect result of, the presence on or under, or the escape, seepage, leakage, spillage, discharge, emission or release from the NEW EARTH Compost Site of any Hazardous Substances which arise out of or result from NEW EARTH's performance of its obligations under this Contract and/or NEW EARTH's operations on the NEW EARTH compost site, unless such liability arises from Hazardous Substances in materials provided by, or picked up from, SAWS or WRC.

2.04.04 NEW EARTH shall make available and provide to SAWS at the NEW EARTH composting site up to 100 cubic yards per year of bulk compost at no cost to SAWS.

### **ARTICLE III. COMPENSATION FOR SERVICES**

3.01     FEE PAID TO NEW EARTH FOR TAKING BIOSOLIDS-Subject to the terms and provisions of Section 2.01.11, SAWS shall pay **\$32.00** per wet ton of Biosolids material delivered to NEW EARTH for the Minimum Amount of Biosolids. NEW EARTH will invoice SAWS monthly by the 10th of each month for Biosolids materials hauled during the prior calendar month based on scale ticket weight receipts from the scales at the WRC. All reasonable record keeping requirements (i.e., scale weight records, load tickets, invoice forms) shall be met before invoices are processed for payment. All monthly invoices will be paid within 30 days from receipt of all required documentation.

3.02     ANNUAL FEE MODIFICATION

Beginning one year after the Start Date, the fees shall be subject to annual adjustment according to the following provisions. Said price per ton payable by SAWS for the services hereunder, may be adjusted effective on the anniversary date of the contract award by SAWS each year to an amount determined by using the Consumer Price Index US City Average; Reference Base: (1982-84=100), Not Seasonally Adjusted [https://www.bls.gov/regions/new-england/data/consumerpriceindex\\_us\\_table.htm](https://www.bls.gov/regions/new-england/data/consumerpriceindex_us_table.htm). Annual Fee Modification will be calculated by using the Consumer Price Index Previous August figure in comparison to the most recent Consumer Price Index August figure. Annual Fee Modification will be calculated as follows (using August 2021 and August 2022 figures as an example):

\$30/ton unit price in August 2021  
August, 2021 (273.567)  
August, 2022 (296.171)  
Index Point Change:  $296.171 - 273.567 = 22.604$   
Divided by the earlier index:  $22.604 / 273.567 = 0.082627$   
Multiplied by 100 =  $0.082627 * 100 = 8.26$   
Equals percent change = 8.26%  
Revised Price:  $30 + (30 * 8.26\%) = \$32.478$

The following year's calculation will be based upon using August 2022 and August 2023 figures and so forth for subsequent years.



It is agreed by SAWS and Contractor(s) that the CPI adjustment shall not exceed five percent (5.0%) in any given year; nor, shall the cumulative adjustments exceed a total of twenty five percent (25%). Consumer Price Index shall mean the United States Department of Labor Bureau of Labor Statistics, Consumer Price Index, All Urban Consumers, All Items, Dallas-Ft. Worth, Texas, or any successor to that index. Contractor will notify SAWS in writing for acceptance as soon as practicable following the determination of any such proposed adjustment, which acceptance will not be unreasonably withheld. Failure to notify SAWS of any adjustment within thirty (30) days following the date of adjustment shall constitute a waiver by the contractor of the right to the price adjustment.

- 3.03     MINIMUM AMOUNT OF BIOSOLIDS-Subject to the terms and provisions of Section 2.01.11, this Contract will be based on “take or pay” for the Minimum Amount of Biosolids per year NEW EARTH is required to remove Biosolids in a consistent and timely manner (awarded amount in tons / 52 weeks).If NEW EARTH cannot process Biosolids through composting, NEW EARTH must make alternative arrangements and pay all associated costs to landfill the Biosolids.

#### **ARTICLE IV. REGULATORY COMPLIANCE AND RECORDKEEPING**

- 4.01     MONTHLY REPORTS - NEW EARTH must supply monthly reports to SAWS by the 10th of the following month along with the monthly invoice, documenting the volumes of Biosolids hauled from the WRC, the volumes of SAWS’ Biosolids processed at NEW EARTH’s facility, the volumes of SAWS’ Biosolids disposed of at other facilities, the status of the products manufactured from SAWS’ Biosolids (e.g. in storage, in distribution, utilized by end user), and records of complete treatment and management of all by-products and waste streams. The monthly report shall include (i) environmental monitoring records, copies of all reports submitted to regulatory or oversight agencies, hauling records, product quality information, as well as information that documents product shipping and complete treatment and management of waste streams and by-products, and (ii) summaries of operational and questions and responses described in Section 4.06 below.
- 4.02     WITHHOLDING PAYMENTS - SAWS reserves the right to withhold payment if complete and correct information is not provided to document complete processing and beneficial use of the Biosolids.
- 4.03     ANNUAL REPORTS - Where applicable, NEW EARTH shall provide SAWS with an annual report addressing compliance with the requirements of 40 CFR, Parts 501 and 503, no later than September 30 following the end of the immediately preceding reporting period.
- 4.04     BIOSOLIDS FROM DIFFERENT SOURCES - For processes and products that are a mixture of Biosolids from different sources and other additives, NEW EARTH shall provide tracking of all Biosolids through processing and marketing or beneficial use. If there is a batch of product that does not meet specifications, NEW EARTH will inform SAWS whether the batch contained SAWS’ Biosolids and must provide remediation procedures and actions to improve quality control.
- 4.05     REPORT OF VIOLATIONS- NEW EARTH must demonstrate compliance with all Federal, State, and local laws, rules, codes, ordinances and regulations requiring the reporting of violations. Any violations or investigations at the compost site must be reported to SAWS immediately and also to the appropriate regulatory authority on the earlier of the date that SAWS requests, or time required by any applicable law, code, rule, or regulation or ordinance.

- 4.06    COMPLIANCE AND RESPONSE DATA - NEW EARTH must also keep a record of all compliance operational data, complaints or questions received, the response provided and the response time. SAWS shall be notified of all notices or any violations, complaints and responses at the compost site within one business day. Summaries should be provided to SAWS in the monthly report.
- 4.07    PERMITS- All necessary permits must be maintained by NEW EARTH and kept current. Copies shall be provided to SAWS upon issuance and renewal and should be available at the NEW EARTH composting site.

## **ARTICLE V. LEGAL RELATIONSHIPS, LIABILITY AND INDEMNITY**

- 5.01    GENERAL UNDERSTANDING: NEW EARTH, at its own cost and expense, shall furnish all supervision, tools, implements, machinery, labor, materials and accessories, such as are necessary and proper for the Work. NEW EARTH shall obtain, maintain and provide all required permits and licenses at its own cost and expense, complete and conform to and comply with all laws, regulations, codes and ordinances pertaining to the Work and/or the maintenance and operation of the NEW EARTH Compost Site operations. SAWS will cooperate with NEW EARTH at no expense to SAWS and provide all reasonably required consents or approvals for permits. Failure of NEW EARTH to comply with any of the applicable laws, rules, codes, ordinances and/or regulations after appropriate notice and cure periods set out in Section 10.01 below, shall be events of default under this Contract, and may be considered cause for termination of this Contract.
- 5.02    LEGAL RESPONSIBILITIES NEW EARTH in the performance of the Work shall comply at its sole cost and expense with all pertinent Ordinances of the City of San Antonio (COSA), Regulations of the San Antonio Water System (SAWS), Laws of the State of Texas, and of the United States, including Rules and Regulations of the United States Department of Labor, pertaining to Occupational Safety and Health Administration standards, Commission and Environmental Protection Agency (EPA) as presently existing or as may hereinafter be modified or amended.
- 5.03    LIABILITY & INDEMNIFICATION- NEW EARTH shall protect the public, SAWS and COSA fully by taking reasonable precaution to safeguard persons from death or bodily injury and to safeguard property of any nature whatsoever from damage. Where any dangerous condition or nuisance exists in and around sites, equipment and supply storage areas, and other areas in anyway connected with the performance of this Contract, NEW EARTH shall provide and maintain reasonable warning of such danger or nuisance. NEW EARTH shall not create excavation, obstructions, or any dangerous condition or nuisance of any nature whatsoever in connection with the performance of this Contract. The duties of NEW EARTH in this section shall be non-delegable, and NEW EARTH's compliance with the specific recommendations and requirements of the San Antonio Water System or the City of San Antonio as to the means of warning shall not excuse NEW EARTH from the faithful performance of these duties should such recommendations and requirements not be adequate or reasonable under the circumstances.
- 5.04    INDEMNITY; SOLE REMEDY; LIMITATION OF LIABILITY
- 5.04.01 NEW EARTH hereby agrees to indemnify, defend and hold harmless SAWS, COSA and their respective agents and employees from and against any and all losses, damages, fines, penalties, fees (including, without limitation attorneys' fees and costs of dispute resolution), judgments, decrees, and expenses or costs of any nature whatsoever (collectively, "Damages"): arising out of any material breach of any representation, warranty, covenant or obligation made by NEW EARTH in this Contract ("Claims"); and

damages suffered by SAWS, COSA and their agents and employees for the death or injury to persons or for damage to property caused, or allegedly caused, by any willful acts, negligence, or breach of any term or condition of this Contract in connection with work to be performed pursuant to said Contract, by NEW EARTH, its agents, subcontractors, or employees. NEW EARTH shall furthermore indemnify, defend and save harmless SAWS and COSA and their respective agents and employees from all demands of subcontractors, workmen, materialmen, or suppliers of machinery and parts thereof, equipment, power tools, and supplies incurred in connection with NEW EARTH's work to be performed under this Contract.

**SUCH INDEMNITY SHALL APPLY WHERE THE CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, JUDGMENTS, DECREES, OR LIABILITY ARISE IN PART FROM THE NEGLIGENCE OF SAWS OR COSA. IT IS THE EXPRESSED INTENTION OF NEW EARTH, SAWS AND COSA THAT THE INDEMNITY PROVIDED FOR IN THIS PARAGRAPH IS INDEMNITY BY NEW EARTH, TO INDEMNIFY AND PROTECT SAWS AND COSA FROM THE CONSEQUENCES OF NEW EARTH'S NEGLIGENCE. WHERE THE NEGLIGENCE OF SAWS AND/OR COSA IS A CONCURRING CAUSE OF THE INJURY, DEATH, OR DAMAGE, NEW EARTH SHALL BE LIABLE FOR ITS PROPORTIONATE SHARE OF THE INJURIES AND DAMAGES. FURTHERMORE, THE INDEMNITY PROVIDED FOR IN THIS PARAGRAPH SHALL HAVE NO APPLICATION TO ANY CLAIM, LOSS, DEATH OR DAMAGE THAT RESULTS FROM THE SOLE NEGLIGENCE OF SAWS AND COSA UNMIXED WITH THE FAULT OF ANY PERSON OR ENTITY. NOTHING HEREIN SHALL LIMIT, WAIVE OR AFFECT THE IMMUNITY OR GOVERNMENTAL LIMITATIONS OF LIABILITY AFFORDED SAWS AND/OR COSA BY STATE LAW.**

In any Claims against SAWS or COSA or their agents or employees by NEW EARTH, any employee of NEW EARTH, any subcontractor, anyone directly or indirectly employed by NEW EARTH, or any subcontractor or anyone for whose acts any of them may be liable, the indemnification obligation under this paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for NEW EARTH or any subcontractor under workers' compensation acts, disability benefit acts of other employer's benefit acts.

5.04.02 ROYALTIES AND PATENTS – NEW EARTH shall pay all royalties and license fees, and defend all suits or claims for infringement of any patent rights or royalties arising from NEW EARTH's compost operations at the NEW EARTH Compost Site. This indemnity does not apply to any royalties or fees arising from SAWS' water treatment process before the Biosolids are delivered to NEW EARTH for composting.

5.04.03 The terms of this Section 5.04 shall survive the expiration of the Term or earlier termination of this Contract.

5.05 NO WAIVER OF RIGHTS- Unless specifically and unambiguously set out in this Contract, no observation/inspection or approval by either party or any officer or employee of either party, or any order, measurement or certificate by SAWS, or any estimate or payment by either party for any part of said Work, or material or method or equipment, or any extension of time, at any time shall operate as a waiver of any provision or obligation of this Contract or any right or power herein given or reserved to either party, or of any right to claim any indemnity or damages in connection with the Work or otherwise as herein provided for; nor shall any waiver by either party of any

breach of this Contract be deemed as a waiver of any other or subsequent breach; and every right or remedy provided to either party under the Contract Documents shall be cumulative, and in addition to all other rights and remedies available to such party.

- 5.06 INTEREST IN CONTRACT PROHIBITED- No officer or employee of SAWS shall have a financial interest, direct or indirect, in any Contract with SAWS, or shall be financially interested, directly, in the sale to SAWS of any land, materials, supplies or service, except on behalf of SAWS as an officer or employee. This prohibition extends to CPS Energy, the City of San Antonio, and City boards and commissions other than those which are purely advisory.
- 5.07 WAGES PURSUANT TO LABOR CODE- NEW EARTH shall comply with the terms of Labor Code Section 61, as amended, to the extent, if any, that it applies to the work performed by NEW EARTH under this Contract.
- 5.08 EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS NONDISCRIMINATION CLAUSE- The San Antonio Water System highly encourages NEW EARTH to implement Affirmative Action practices in their employment programs. Furthermore, NEW EARTH agrees not to discriminate against any employee or applicant for employment because of race, color, national origin, religion, sex, age, handicap or political belief or affiliation.
- 5.09 SMALL, MINORITY, WOMEN AND VETERAN-OWNED BUSINESS POLICY (SMWVB) REQUIREMENTS- The San Antonio Water System highly encourages NEW EARTH to form joint ventures and/or provide subcontract opportunities to small, minority, woman and veteran owned firms.
- 5.10 AMERICANS WITH DISABILITIES ACT (ADA)- NEW EARTH shall, to the extent required by law, comply with the ADA, as amended, and any regulation, law or ordinance promulgated under authority of such Act with regard to the public's access to the NEW EARTH compost site by the handicapped.
- 5.11 IMPOSSIBILITY OF PERFORMANCE (FORCE MAJEURE)- Should the performance of the obligations of SAWS or NEW EARTH be prevented or delayed by an Act of God, war, civil insurrection, fire, flood, storm, pandemic, epidemic, strike, lockout, or by any law, regulation, order of any federal, state, county, or municipal authority, or by any other cause beyond the control of the party to be excused, that party's performance, to the extent it is prevented or delayed, shall be excused. Rain or high water which might reasonably have been anticipated resulting from up to eight inches (8") of rain within a twenty-four (24) hour period shall not be construed as Acts of God excusing NEW EARTH's performance under this Contract.
- 5.12 ANTI-RAIDING CLAUSE – NEW EARTH acknowledges and agrees that any former Water System employee who may establish employment with NEW EARTH shall not, for a period of two (2) years from the date of cessation of employment with SAWS, (i) work on SAWS or SAWS related contracts or projects which the former employee awarded, managed or participated in while an employee of SAWS, (ii) solicit business from SAWS, nor (iii) participate in the negotiation of contracts with SAWS, unless, in any event, the prior written consent is obtained from the President/Chief Executive Officer (or his designee) of SAWS. The terms of this provision shall survive the expiration of the Term or earlier termination of this Contract.

## **ARTICLE VI. INSURANCE REQUIREMENTS:**

- 6.01 COVERAGE-Commencing on the date of this Contract, the Contractor shall, at his own expense, purchase, maintain and keep in force such insurance as will protect NEW EARTH and SAWS and

the City of San Antonio (“COSA”) and their employees and agents from claims, which may arise out of or result from NEW EARTH’s operations under this contract, whether such operations are by NEW EARTH, by any subcontractor, supplier or by anyone directly or indirectly employed by any of them or by anyone for whose acts of any of them may be liable, including, without limitation, the following:

- A. Workers' Compensation (WC) insurance that will protect NEW EARTH, SAWS and COSA from claims under statutory Workers' Compensation laws, disability laws or such other employee benefit laws and that will fulfill the requirements of the jurisdiction in which the work is to be performed

This insurance shall be endorsed to provide a Waiver of Subrogation in favor of SAWS and COSA with respect to both this insurance coverage and the Employers' Liability (EL) insurance (as specified immediately below in section 1.b.).

- B. Employers' Liability (EL) insurance (Coverage B under standard Workers’ Compensation policy) that will protect NEW EARTH, SAWS and COSA for damages because of bodily injury, sickness, disease of vendor's employees apart from that imposed by Workers' Compensation laws. The employers' liability insurance shall have minimum limits of liability of not less than:

\$ 1,000,000.00	Bodily Injury by Accident
1,000,000.00	Bodily Injury by Disease - Each Employee
1,000,000.00	Bodily Injury by Disease - Policy Limit

- C. Commercial General Liability (CGL) insurance that will protect NEW EARTH, SAWS and COSA from claims for damages because of bodily injury, personal injury, sickness, disease or death and insurance that will protect NEW EARTH, SAWS and COSA from claims for damages to or destruction of tangible property of others, including loss of use thereof.

This coverage shall:

- Cover independent contractors;
- Not include any exclusions relating to blasting, explosion, collapse of buildings or damage to underground property where applicable;
- Afford coverage for Products Liability and/or Completed Operations and, Contractual Liability.

The minimum limits of liability for this coverage shall be:

\$ 1,000,000.00	Occurrence Limit
2,000,000.00	General Aggregate
1,000,000.00	Products/Completed Operations Aggregate
1,000,000.00	Personal and Advertising Injury
1,000,000.00	Contractual Liability

This insurance shall be endorsed:

- Naming SAWS and COSA as an Additional Insured; and
- To provide a Waiver of Subrogation in favor of SAWS and COSA.

- D. Comprehensive Automobile Liability (AL) insurance that will protect NEW EARTH, SAWS and COSA from claims for damages arising out of the maintenance, operation, or use of any owned, non-owned or hired vehicles. Minimum limits of liability for bodily injury and property damage combined shall be not less than \$1,000,000.00 per each occurrence.

This insurance shall be endorsed:

- Naming SAWS and COSA as an Additional Insured; and
- To provide a Waiver of Subrogation in favor of SAWS and COSA.

- E. Excess/ Umbrella Liability (UL) insurance in the amount of \$2,000,000.00. This policy shall be of an "Occurrence" type and the limit of liability shall be concurrent with (following form) and in excess of the EL, CGL, and AL insurance coverage as described in paragraphs 1.b., 1.c., and 1.d. above.

- F. Pollution Liability Insurance with limits of \$2,000,000 per occurrence/\$2,000,000 in the aggregate. The policy shall provide "claims made" coverage for all claims, liabilities, damages, costs, fees, and expenses of any kind or character arising out of any Pollution Condition(s) (as defined below) that is in any way related to NEW EARTH's operations, actions or inactions, and completed operations associated with any work performed by NEW EARTH, its subcontractors, or any of their respective employees, agents, representatives, or officers under this Contract. Coverage must be maintained for a minimum of twenty-four (24) months after the date that a Certificate of Completion is issued, or if the Contract is terminated for any reason, for a minimum of twenty-four (24) months following the date of termination. The policy retroactive date will be no later than the Contract date or the project commencement date, whichever is earliest.

Pollution Condition(s) means the discharge, dispersal, release or escape of any solid, liquid, gaseous or thermal irritant or contaminant, including, but not limited to, smoke, sewage, vapors, soot, fumes, acids, alkalis, toxic chemicals, medical waste and waste materials into or upon land, the atmosphere or any watercourse or body of water, including groundwater, provided such conditions are not naturally present in the environment in the amounts or concentrations discovered.

The Pollution Liability Insurance will pay on behalf of NEW EARTH, SAWS and COSA all claims, demands, damages, liabilities, costs, fees, and expenses of any kind or character for bodily injury or death, property damage, environmental or natural resource damage, and any fines, fees, assessments or penalties of any kind assessed by any governmental department, agency or commission that result from or are related to a Pollution Condition(s). Coverage will include all subcontractors hired by NEW EARTH to perform any work on the Project or under this Contract.

The policy shall also include the following provisions:

- 1) Coverage for bodily injury to include physical injury, sickness, disease, mental anguish and emotional distress sustained by any person, including death;
- 2) All costs that are related to or that arise out of or from the investigation or adjustment of any claim or in connection with any court, arbitration, mediation, state administrative hearing, or other proceeding of any kind, including attorneys

fees, expert witness fees, costs, charges and expenses of any kind or character, that arise out of or that are related to a Pollution Condition(s);

- 3) Coverage shall be Primary and in addition to any other valid and collectible insurance carried by SAWS and COSA as respects to this Contract;
- 4) Coverage for Natural Resource Damages and any fines, fees penalties or assessments by any governmental agency, commission or department related to any Pollution Condition(s);
- 5) Insured versus Insured exclusion, if found in the policy, shall not apply to a claim by an Insured who qualifies as a Client of the Named Insured under the policy;
- 6) If Non-Owned Disposal sites are used for disposal of wastes, these sites shall be specifically included under the Contractors Pollution Liability Insurance policy; and
- 7) Coverage for punitive, exemplary, and multiple damages.

6.02 Commercial/ Business Automobile Liability policy of NEW EARTH *hauling excavated spoil* shall either be endorsed to provide coverage under the CA9948 endorsement or NEW EARTH's Pollution Liability Insurance policy shall be endorsed to provide transportation coverage beyond the boundaries of the job site.

6.03 SUBCONTRACTOR'S INSURANCE- NEW EARTH shall require all Sub-contractors to carry insurance coverage appropriate to their scope of Work.

6.04 CERTIFICATES OF INSURANCE - NEW EARTH shall furnish a completed Certificate of Insurance, which shall be completed by an agent authorized to bind the named underwriter(s) and their company to the coverage, limits, and termination provisions shown thereon.

6.05 NOTICES TO SAWS - The insurance that is specified under these Requirements shall be written so that SAWS and COSA will be notified in writing in the event of cancellation, restrictive endorsement or non-renewal at least thirty (30) days prior to such action.

6.06 CERTIFICATE HOLDER- SAWS shall be shown as the Certificate Holder in the Certificate Holder section located in the bottom half of the standard ACORD Certificate forms as follows:

San Antonio Water System  
Attention: Purchasing Division  
2800 US Hwy. 281 North  
San Antonio, Texas 78212

6.07 DELIVERY OF CERTIFICATE OF INSURANCE TO SAWS - Certificates of Insurance shall be filed with the System 10 days prior to the SAWS Board of Trustee's award of the Contract. The SAWS Contract name/Bid number shall be included in the Description of Operations section located in the bottom half of the standard ACORD Certificate forms.

1) Send Original:

a) By Mail

Ebix BPO  
P.O. Box 100085-ZD  
Duluth, GA 30096

b) By Fax: (770) 325-6502

c) By E-Mail: [saws@ebix.com](mailto:saws@ebix.com)

NEW EARTH shall be responsible for obtaining Certificates of Insurance from the first tier Sub-contractor, and upon request furnish copies to SAWS.

6.08 DELIVERY OF CERTIFICATE OF INSURANCE TO CITY OF SAN ANTONIO – Separate Certificates of Insurance shall be filed with COSA ten (10) days prior to the SAWS Board of Trustee’s award of the Contract. The SAWS Contract name/Bid number shall be included in the Description of Operations section located in the bottom half of the standard ACORD Certificate forms.

Certificates shall be mailed to COSA directly to:

City of San Antonio  
Attention: Risk Management  
P.O. Box 39966  
San Antonio, TX78283-3966

A copy of the certificate of insurance provided to COSA shall be provided to SAWS at the same time.

6.09 DEDUCTIBLES - NEW EARTH is responsible for all deductibles under all of the insurance policies specified under these Requirements.

6.10 MINIMUM INSURANCE LIMITS - The stated limits of insurance specified under these Requirements are MINIMUM ONLY and it shall be NEW EARTH 's responsibility to determine what limits are adequate and the length of time this coverage shall be maintained; the insurance limits are not a limit of NEW EARTH 's liability. These minimum limits may be basic policy limits or any combination of basic limits and umbrella limits. SAWS acceptance of Certificates of Insurance that in any respect do not comply with these Requirements does not release NEW EARTH from compliance herewith.

6.11 INSURANCE ON FOLLOW FORM/UMBRELLA BASIS IS ACCEPTABLE- Any limits requirement may be met with any combination of primary and excess coverage so long as the excess coverage is written on a "follow form" or umbrella basis.

6.12 INSURANCE RATINGS AND TYPES - NEW EARTH agrees that all insurance policies specified under these Requirements shall be with insurance companies, firms or entities that have an A.M. Best rating of “A- (“A”- minus)”and a Financial Size Category rating of a “VII” or better. All insurance policies shall be of an “Occurrence” type except the Contractor’s Pollution Liability line of coverage.

6.13 SURVIVAL- Any and all representations, conditions and warranties made by NEW EARTH under this Contract including, without limitation, the provisions of Section 6.01.B., 6.01.C. and 6.01.D. of these Insurance Requirements are of the essence of this Contract and shall survive the execution and delivery of it, and all statements contained in any document required by SAWS whether



delivered at the time of the execution, or at a later date, shall constitute representations and warranties hereunder.

## **ARTICLE VII. PERFORMANCE BOND**

7.01 PERFORMANCE BOND - NEW EARTH shall furnish a Performance Bond in favor of SAWS in an amount equal to Five Hundred Thousand and No/100 Dollars (\$500,000.00) as security for the faithful performance of all of NEW EARTH's obligations under this Contract. The bond shall cover the Term of this Contract and allow for claims by SAWS up to one (1) year after termination of this Contract for any claims arising during the Term of this Contract, remain in effect at least two (2) years after the completion of work, except as otherwise provided by Law and Regulation. The bonds shall be issued and maintained by corporate Sureties that are licensed to conduct business in Texas. If the surety on any bond furnished by NEW EARTH to SAWS is declared bankrupt or becomes insolvent, or has its right to do business revoked in the State of Texas, then NEW EARTH, at its expense, will have ten (10) days to substitute another bond and surety therefor which shall be acceptable to SAWS.

7.02 NEW EARTH, SURETIES, AND PARENT CORPORATION STILL BOUND- No assignment, transfer or subletting, without the written consent of SAWS and no change in operations or preference of the Work agreed on by SAWS and NEW EARTH shall ever in any manner release or diminish the responsibility of NEW EARTH or any Surety on any bond of NEW EARTH or any guaranty, but on the contrary, such responsibility shall extend to all such changes and other matters.

## **ARTICLE VIII. CONTRACT ADMINISTRATION**

8.01 ASSIGNMENTS AND SUBLETTING - NEW EARTH shall not assign, transfer, convey or otherwise dispose of this Contract, or any portion thereof, or any right, title or interest in, to or under the same, without the previous written consent of SAWS, which consent shall not be unreasonably withheld; provided, however, NEW EARTH may assign its rights and obligations under this Contract without the prior written consent of SAWS (but with notice to SAWS) in the case of an acquisition of equity or merger or in connection with the sale of substantially all of NEW EARTH's assets, provided such successor has a net worth and experience level at least as good as NEW EARTH had on the Effective Date of this Contract and such successor agrees in writing to be bound by the terms of this Contract; provided, further, however, that if NEW EARTH is in default under the terms of this Contract at the time of notice of or completion of the assignment, NEW EARTH shall provide SAWS with written notice of such assignment and SAWS shall have the right to terminate this Contract within 60 days of receipt of said notice. NEW EARTH shall notify SAWS, by written notification by certified mail to SAWS, 2800 US Hwy. 281 North, San Antonio, Texas, 78212, Attn: Vice President of Production and Treatment Operations, that such assignment, transfer or conveyance or other disposition of this Contract or any portion thereof, or any right, title or interest, in, to or under the same, is contemplated. If NEW EARTH does not receive written approval of such contemplated action by SAWS, within thirty days of receipt of such initial request by the SAWS' Representative, such contemplated assignment, transfer, conveyance or subletting, or other disposition of this Contract or any portion thereof, or any right, title or interest in, to, or under the same, shall be deemed disapproved. In no event shall SAWS be liable in excess of the consideration of this Contract in the case of any such assignment, transfer or conveyance of the Work or performance which is subject hereof. Notwithstanding any provision to the contrary, NEW EARTH shall be entitled to subcontract the services to be provided hereunder provided that NEW EARTH shall be solely responsible for the acts of its subcontractors in furtherance of this Contract.

## 8.02 LAWS, REGULATIONS AND PERMITS

- A. NEW EARTH shall comply with all laws, ordinances, rules and regulations pertaining to the conduct of the Work. NEW EARTH shall be liable for violations of the law in connection with work provided by NEW EARTH. If NEW EARTH observes that the specifications or other portions of this Contract are at variance with any laws, ordinances, rules or regulations, it shall at its sole cost and expense promptly bring about compliance with the law, ordinance, rule or regulation in question. NEW EARTH agrees not to perform work known to be contrary to any laws ordinances, rules or regulations.
- B. PERMITS AND LICENSES - Unless otherwise specified herein, permits and licenses from governmental agencies which are necessary only for and during the prosecution of the Work and the subsequent guaranty period shall be secured and paid for by NEW EARTH. Copies of all such permits and licenses must be mailed to SAWS, 2800 US Hwy. 281 North, San Antonio, Texas, 78212, Attn: Vice-President of Production and Treatment Operations, within five (5) working days of issuance.
- C. PATENTS AND ROYALTIES - The costs involved in fees, royalties or claims for any patented invention, article, process or method that may be used upon or in a manner connected with the Work under this Contract, shall be paid by NEW EARTH.

8.03 RELATIONS WITH CUSTOMERS AND THE GENERAL PUBLIC - NEW EARTH shall promptly deliver to SAWS, copies of all written complaints, objections or other adverse comments NEW EARTH receives from any customer or citizen in general regarding in any way (i) compost produced with SAWS' Biosolids, (ii) NEW EARTH's Biosolids hauling, storage or disposal of SAWS' Biosolids, (iii) composting operations at the NEW EARTH composting facility, or (iv) otherwise which involves directly or indirectly Biosolids hauling, compost production and/or compost sales and deliveries subject to this Contract. NEW EARTH shall also advise the SAWS Representative of any oral complaints involving Biosolids transportation and/or compost plant operations within two (2) business days of receiving them. Each such comment letter forwarded to SAWS shall include a notation of NEW EARTH's representative regarding what action NEW EARTH intends to take. NEW EARTH shall furnish SAWS with copies of correspondence and other communications until the complaint is resolved or determined by NEW EARTH to be unresolvable together with a written explanation of why the complaint cannot be or should not be resolved by NEW EARTH.

8.04 RECYCLING PROGRAMS - NEW EARTH may each year during the Term of this Contract, submit the Biosolids composting progress to appropriate conservation and recycling programs for recognition, including SAWS as a participant in the program and contest. SAWS shall have the right to review all such submittals prior to submission. Any awards for the Biosolids recycling and composting program shall be in SAWS and NEW EARTH's names.

8.05 LOCAL CONSERVATION PROMOTION- NEW EARTH, at SAWS' request, will participate in local convention and gardening presentations or public events promoting the use of compost made with SAWS' Biosolids.

## **ARTICLE IX. SAFETY PRECAUTIONS AND PROGRAMS**

9.01 GENERAL- In addition to NEW EARTH'S duties and obligations related to safety stated herein, NEW EARTH shall abide by the following general safety requirements:

- A. In any emergency affecting the safety of persons or property, NEW EARTH shall act to prevent threatened damage, injury or loss.
- B. NEW EARTH shall provide equipment and supplies necessary to administer first aid service to anyone who may be injured in connection with the Work performed by NEW EARTH. Such equipment shall comply with the most current regulations of the Occupational Safety and Health Administration of the United States Department of Labor, States Department of Labor and the State of Texas Statutes relating to use, training, and maintenance of any and all first aid devices.
- C. NEW EARTH must promptly report in writing to SAWS all accidents whatsoever arising out of, or in connection with, the performance of the Work which caused death, personal injury requiring hospitalization, or property damage in excess of \$50,000, giving full details and any statements of witnesses. In addition, if death, serious injury, or serious damage is caused, the accident then shall be reported immediately by telephone or messenger to SAWS. NEW EARTH has no duty to report to SAWS accidents or injuries to employees that are not reportable under OSHA 300.

9.02 EMPLOYEE SAFETY - NEW EARTH alone shall be solely responsible for the safety of its employees. NEW EARTH's agents and subcontractor's alone shall be solely responsible for their respective employees. NEW EARTH shall maintain the project site at which its work is performed and perform the Work in a manner which meets SAWS' responsibility under statutory and common law for the provision of a safe place to work. SAWS' authorized representative may, at any time, request that NEW EARTH cease operations if such representative finds that dangerous conditions exist which, in the reasonable opinion of the SAWS' Representative, may threaten the immediate safety and well-being of anyone including, but not limited to, NEW EARTH's employees, agents, or subcontractors' employees, SAWS' personnel or guests. The recommendations herein are merely to attempt to cause NEW EARTH to maintain a safe work place; provided, however, NEW EARTH is solely responsible for the means and methods for performance of the work and the safety requirements for its employees, and the work site and nothing herein shall constitute a direction of the safety procedures by SAWS.

9.03 PUBLIC SAFETY AND CONVENIENCE - NEW EARTH shall conduct its work so as to insure the least possible obstruction to traffic and inconvenience to the general public and the residents in the vicinity of the WRC and the Work and to insure the protection of persons and property.

9.04 PROTECTION OF PRIVATE PROPERTY - NEW EARTH shall take proper measures to protect all property against injury by any process of the Work; and, in case of any injury or damage, it shall restore at its own expense, the damaged property to a condition similar or equal to that existing before such injury or damage was done, or it shall make good such injury or damage in a manner acceptable to those whose property was damaged.

## **ARTICLE X. CONTRACT TERMINATION & SUSPENSION**

10.01 DEFAULT- As used in this Contract, the term "Event of Default" shall mean any one of the following:

- A. NEW EARTH or SAWS shall fail to timely pay any obligation hereunder involving the payment of money and such default continues uncured for thirty (30) days after written notice of the default is sent to the defaulting party;

- B. NEW EARTH or SAWS shall fail to comply with any term, provision or covenant of this Contract and such default continues uncured for thirty (30) days after written notice of the default is sent to the defaulting party;
- C. NEW EARTH shall fail to maintain its stocks of materials (including compost) in a manner to prevent such material from being a nuisance based on Commission confirmed notice of violation due to odor, dust, flies, vector or otherwise, and NEW EARTH shall fail to cure the nuisance within fifteen (15) days or the nuisance occurs.
- D. NEW EARTH shall fail to supply enough properly skilled workmen or trucks and equipment or disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction over the Work and fails to cure such breach within fifteen (15) days of written notice.
- E. NEW EARTH or SAWS, or any surety or guarantor of this Contract, shall become insolvent or unable to pay its debts as they become due, or shall make a transfer of its property that is fraudulent under any bankruptcy, fraudulent conveyance or similar law, or shall make an assignment for the benefit of creditors;
- F. NEW EARTH takes any action to file a petition under any section or chapter of the United States Bankruptcy Code, as amended from time to time, or under any similar law or statute of the United States or any state thereof; or a petition shall be filed against NEW EARTH under any statute or NEW EARTH notifies SAWS that it knows such a petition will be filed; or the appoint of a receiver or trustee to take possession of substantially all of NEW EARTH's assets located at the NEW EARTH compost site or of NEW EARTH 's interest in this Contract, or the attachment, execution or other judicial service of substantially all of NEW EARTH 's assets located at the NEW EARTH compost site or of NEW EARTH's interest in this Contract;
- G. The occurrence of any event or condition having a material adverse effect on the assets, liabilities, financial condition, business or operations of NEW EARTH as they exist on the date of this Contract, or the ability of NEW EARTH to meet its obligations under this Contract on a timely basis as provided herein.

Upon the occurrence of an event of Default, the non-defaulting party, at its option, in addition to any other remedy or right given hereunder or by law or equity, terminate this Contract by written notice to the other party.

10.02 TERMINATION BY NEW EARTH If the Work is stopped for a period of one hundred fifty (150) consecutive working days under an order of any court or other public authority having jurisdiction, or as a result of an act of a higher governmental authority, such as a declaration of a state or federal agency prohibiting the composting of Biosolids, through no act or fault of NEW EARTH or their agents or employees, or a force majeure event that makes production of compost at the NEW EARTH compost site impossible, then NEW EARTH may upon thirty (30) additional days written notice to SAWS, terminate this Contract and recover from SAWS payment for all Work previously executed in accordance with this Contract; however, no payment shall be owed for any delays or loss of future income under this Contract. If the Work is recommenced during the thirty (30) day notice period, NEW EARTH may not terminate this Contract.

10.03 SUSPENSION OF WORK BY SAWS-SAWS may suspend the Work either partially or totally by written order whenever, in SAWS' reasonable opinion, the interests of SAWS requires the suspension of such Work to protect the health and safety of SAWS' employees and/or the general

public. Furthermore, SAWS shall have the right to stop the Work whenever such stoppage may be necessary to insure proper execution of the Work.

#### **ARTICLE XI. DISPUTES AND DAMAGES:**

**11.01** MEDIATION- Prior to any litigation between SAWS and NEW EARTH, both hereby agree that disputed matters shall first be submitted to mediation by a third party neutral mediator in Bexar County, Texas selected by the parties. Prior to any party instituting litigation under this Contract such party (the "instituting party") shall notify the other party (the "responding party") of the dispute and request that the parties enter into nonbinding mediation. The responding party and the instituting party shall meet to select a mediator and undertake mediation within twenty (20) days of the written notice the mediator shall be a neutral third party whose function shall be to assist the parties in their negotiations. The mediator may not impose his own judgment on the issues for that of the parties. If mediation is not instituted within twenty (20) days of the date of the written notice, or the matter resolved within thirty (30) days of written notice, then the other party may proceed to institute suit and the other party may respond and defend and assert counterclaims without obligations or further mediation unless ordered by the Court.

**11.02** DAMAGES- Notwithstanding the terms and requirements of Section 11.03, and in addition to any rights or remedies of SAWS under this Contract, at law or in equity, if NEW EARTH fails to load and remove Biosolids for beneficial use as required under this Contract for a period exceeding 24 hours, excluding Saturday and Sunday, SAWS may transport and dispose of such Biosolids by hauling such Biosolids to a landfill and NEW EARTH, upon demand, shall reimburse SAWS all costs of loading, hauling and disposing of such Biosolids (including tipping or landfill fees). NEW EARTH shall be entitled to a credit or offset against such disposal fees and costs equal to the sum SAWS would otherwise have paid NEW EARTH under this Contract for removal and processing into compost of such Biosolids. SAWS may continue such landfill disposal until SAWS has entered into a new Contract to remove Biosolids from SAWS for beneficial use with a replacement contractor. Furthermore, NEW EARTH acknowledges and agrees that the bidding process and negotiation of a new Contract for hauling Biosolids for beneficial use may take up to three (3) years and during which time Biosolids may be disposed of at a landfill at NEW EARTH 's cost. Once a new contract is entered into with a replacement contractor, NEW EARTH shall remain obligated to reimburse SAWS for costs exceeding the contract price under this Contract for disposing of Biosolids under the provisions of this Contract for the remainder of the Term.

**11.03** ADDITIONAL COSTS AND FEES-SAWS at its option may correct any default or breach of NEW EARTH under this Contract and NEW EARTH shall reimburse SAWS all costs incurred by SAWS, including court costs and attorneys' fees.

#### **ARTICLE XII. CONTRACT TIMES AND COMMENCEMENT OF WORK**

**12.01** COMMENCEMENT OF WORK- The Work called for in this Contract shall be commenced by NEW EARTH on March 1, 20203 (the "Commencement Date"). Under no circumstances shall the Work commence prior to NEW EARTH (i) obtaining all required permits, licenses and insurance for the Work, copies of which shall be delivered to SAWS prior to any such commencement, and (ii) completing the necessary construction and having necessary equipment in place to commence the Work (such conditions being referred to herein as the "Commencement Conditions"). The Commencement Date may be extended for up to one hundred eighty (180) days by NEW EARTH providing written notice to SAWS prior to the Commencement Date if the Commencement Conditions are not satisfied by NEW EARTH on or before the Commencement Date.

12.02 CONTRACT PERIODS- For purpose of computing the first contract period, the period shall extend from the Commencement Date until December 31, 2027, without regard to the actual number of days. Thereafter, each contract year shall be from January 1 to the following December 31. There shall be no adjustment in the quantities of Biosolids NEW EARTH is required to take in the first contract period.

### **ARTICLE XIII. TERM; EXTENSION OF CONTRACT**

13.01 EXTENSION OF CONTRACT- NEW EARTH and SAWS, by mutual agreement, may extend the Term five (5) times for a period of one (1) additional year each. The extensions shall be on the same terms of this Contract in existence at the time of exercising the extension. The first option to extend the Term shall be exercised, if at all, by SAWS providing written notice to NEW EARTH not earlier than 180 days and not later than 90 days prior to the termination of the Contract, or subsequent Contract extensions, that SAWS would like to extend the Term of this Contract and NEW EARTH and SAWS both agreeing in writing by no later than 60 days prior to the termination of the Contract, or subsequent extensions, to extend the term of this Contract. The second option to extend the term shall be exercised, if at all, by SAWS providing written notice to NEW EARTH not earlier than June 30, 2027, and not later than September 30, 2027 that SAWS would like to extend the term of this Contract and NEW EARTH and SAWS both agreeing in writing by October 31, 2027 to extend the term of this Contract. All references in this Contract to the phrase "Term" shall include the initial term and any extension of the Term properly exercised pursuant to this Section 13.01.

### **ARTICLE XIV. CONTRACT CHANGES**

14.01 AMENDMENTS- This Contract may be changed only by written Amendment executed by SAWS and NEW EARTH. NEW EARTH shall have no obligation to perform additional work prior to receiving a change order signed by both parties.

### **ARTICLE XV. MISCELLANEOUS**

15.01 ENTIRE AGREEMENT-This CONTRACT, is the entire and integrated agreement between the Owner and NEW EARTH regarding the Biosolids from the WRC and supersedes all prior negotiations, representations or agreements, either written or oral.

15.02 GENERAL- Any and all representations, conditions and warranties made by NEW EARTH under this Contract including, without limitation, the insurance provisions under Article V of this Contract are of the essence of this Contract and shall survive the execution and delivery of it, and all statements contained in any document required by SAWS whether delivered at the time of the execution, or at a later date, shall constitute representations and warranties hereunder.

15.03 STARTUP DATE-The Startup Date of this Contract shall be March 1, 2023, or as soon as conditions of 12.01 are met. In the event NEW EARTH fails to commence taking Biosolids on the Startup Date, NEW EARTH shall be in default and SAWS shall be entitled to all remedies at law and under this Contract.

15.04 NOTICES- All notices hereunder shall be in writing and shall be deemed effective when delivered in person to the addressee of the notice or when deposited in the U.S. Mail or a nationally recognized overnight carrier, such as UPS or Federal Express, addressed to the party to receive the notice as follows:

If to SAWS:

San Antonio Water System  
Attn: Jeff Haby  
Vice President of Production and Treatment Operations  
2800 US Hwy. 281 North  
San Antonio, Texas 78212

Copy to:

San Antonio Water System  
Attn: Ms. Nancy Belinsky  
Corporate Counsel  
2800 US Hwy. 281 North  
San Antonio, Texas 78212

If to contractor-

NEW EARTH, LLC  
Attn: John Niedecken  
General Manager  
One International Center, Suite 1075  
San Antonio, Texas 78216

Mandatory copy to:

NEW EARTH, LLC  
Attn: Legal Department  
3308 Bernice Ave  
Russellville, AR 72802

- 15.05 RIGHT OF ENTRY-SAWS shall have the right during normal business hours to enter the NEW EARTH compost site: (a) to inspect the general condition and state of the compost facility, (b) for any other reasonable purpose related to the WORK.
- 15.06 WAIVER OF BREACH-The waiver by SAWS of any breach of any provision of this Contract shall not constitute a continuing waiver or a waiver of any subsequent breach of the same or a different provision of this Contract.
- 15.07 TIME OF ESSENCE- Time is expressly declared to be of the essence in this Contract.
- 15.08 BINDING OF HEIRS AND ASSIGNS-Subject to the provisions of this Contract pertaining to assignment of NEW EARTH 's interest, all provisions of this Contract shall extend to and bind, or inure to the benefit not only of the parties to this Contract but to the heirs, executors, representatives, successors, and permitted assigns of SAWS or NEW EARTH.
- 15.09 RIGHTS AND REMEDIES CUMULATIVE- The rights and remedies by this Contract are cumulative and the use of any one right or remedy by either party shall not preclude or waive its right to use any or all other remedies. Said rights and remedies are given in addition to any other rights the parties may have by law, statute, ordinance, or otherwise.

- 15.10 TEXAS LAW TO APPLY-This Contract shall be construed under and in accordance with the laws of the State of Texas. Venue shall be proper in Bexar County, Texas only.
- 15.11 LEGAL CONSTRUCTION-In case any one or more of the provisions contained in this Contract shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision hereof and this Contract shall be construed as if such invalid, illegal, or unenforceable provision has never been contained herein.
- 15.12 PRIOR AGREEMENTS SUPERSEDED-This Contract constitutes the sole and only agreement of the parties to this Contract and supersedes any prior understandings or written or oral agreements between the parties respecting the subject matter of this Contract.
- 15.13 SECURITY REQUIREMENTS - NEW EARTH shall comply with the security requirements attached as Attachment 3 hereto.
- 15.14 NO THIRD PARTY BENEFICIARIES - Nothing in this Contract shall be interpreted as providing any rights to any third parties under this Contract (other than the parties hereto) and the parties expressly acknowledge and agree that there are no intended third party beneficiaries to this Contract.

(SIGNATURE PAGE FOLLOWS)



IN WITNESS WHEREOF, the parties hereto have executed this agreement on the 2<sup>nd</sup> day of March, 2023.

NEW EARTH, LLC

By: Todd B. Sims

Its: Executive Vice President Central Division

Date: 03/02/2023

SAN ANTONIO WATER SYSTEM

By: Guadalupe C. Torres

Its: Sr. Director Purchasing

Date: 03/01/2023

Schedule of Exhibits:

Exhibit A-SAWS Standard Laboratory Rates

Attachment 1 - Standards for SAWS' Biosolids delivered to New Earth

Attachment 2 - Standards for Beneficial Use of Biosolids

Attachment 3 – Security Requirements

**EXHIBIT A**  
**SAWS Standard Laboratory Rates**

Laboratory Test/ Method	Reporting Limit	2023 Fees
<b>Ammonia Distillation</b> Method: EPA 350.2	125 mg/L	\$ 40.52
<b>Nitrogen, total Kjeldahle (TKN)</b> Method: EPA 351.3	200 mg/kg	\$ 39.08
<b>Phosphorus - Total</b> Method: EPA 365.2	2500 mg/kg	\$ 25.92
<b>Total Solids</b>	percent solids	\$ 14.89
<b>Mercury by CVAA</b> Method: SW 846 7471A	0.04 mk/kg	\$ 34.74
<b>Metals</b> Method: SW 846 6010C		\$ 16.21
<b>Fecal Coliform - Multiple Tube Fermentation</b> Method: SM 9221B	2 MPN/100 ml	\$ 20.84
<b>IC (Nitrate-N and Nitrite - N)</b> Method: EPA 300.0 SW 846 9056M		\$ 17.99

For the most current accreditation please visit the TCEQ Website  
at  
[https://www.tceq.texas.gov/agency/qa/env\\_lab\\_accreditation.html](https://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html)

**ATTACHMENT 1**  
**STANDARDS FOR SAWS' BIOSOLIDS DELIVERED TO NEW EARTH**

The Biosolids delivered by SAWS to NEW EARTH will be anaerobically digested sludge that has been dewatered by belt filter press, drying bed or any other approved dewatering method. The biosolids will meet Class B (as defined by 40 CFR Part 503 and 30 TAC Chapter 312) pathogen reduction requirements. The biosolids will be reasonably free of foreign material but some quantities of plastic and other solid materials may be present.

**Pathogen Reduction Class B** – Presently using method (b) (2)

(b) *Sewage sludge—Class B.* (1)(i) The requirements in either §503.32(b)(2), (b)(3), or (b)(4) shall be met for a sewage sludge to be classified Class B with respect to pathogens.

(ii) The site restrictions in §503.32(b)(5) shall be met when sewage sludge that meets the Class B pathogen requirements in §503.32(b)(2), (b)(3), or (b)(4) is applied to the land.

(2) *Class B—Alternative 1.* (i) Seven representative samples of the sewage sludge that is used or disposed shall be collected.

(ii) The geometric mean of the density of fecal coliform in the samples collected in paragraph (b)(2)(i) of this section shall be less than either 2,000,000 Most Probable Number per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

(3) *Class B—Alternative 2.* Sewage sludge that is used or disposed shall be treated in one of the Processes to Significantly Reduce Pathogens described in appendix B of this part.

(4) *Class B—Alternative 3.* Sewage sludge that is used or disposed shall be treated in a process that is equivalent to a Process to Significantly Reduce Pathogens, as determined by the permitting authority.

**Vector Attraction Reduction** – Presently using method (b) (1)

**503.33 Vector attraction reduction.**

(a)(1) One of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(10) shall be met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site.

(2) One of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(8) shall be met when bulk sewage sludge is applied to a lawn or a home garden.

(3) One of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(8) shall be met when sewage sludge is sold or given away in a bag or other container for application to the land.

(4) One of the vector attraction reduction requirements in §503.33 (b)(1) through (b)(11) shall be met when sewage sludge (other than domestic septage) is placed on an active sewage sludge unit.

(5) One of the vector attraction reduction requirements in §503.33 (b)(9), (b)(10), or (b)(12) shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site and one of the vector attraction reduction requirements in §503.33 (b)(9) through (b)(12) shall be met when domestic septage is placed on an active sewage sludge unit.

(b)(1) The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent (see calculation procedures in “Environmental Regulations and Technology—Control of Pathogens and Vector Attraction in Sewage Sludge”, EPA-625/R-92/013, 1992, U.S. Environmental Protection Agency, Cincinnati, Ohio 45268).

(2) When the 38 percent volatile solids reduction requirement in §503.33(b)(1) cannot be met for an anaerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. When at the end of the 40 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 17 percent, vector attraction reduction is achieved.

(3) When the 38 percent volatile solids reduction requirement in §503.33(b)(1) cannot be met for an aerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15 percent, vector attraction reduction is achieved.

(4) The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.

(5) Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.

(6) The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.

(7) The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials.

(8) The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials.

(9)(i) Sewage sludge shall be injected below the surface of the land.

(ii) No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

(iii) When the sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

(10)(i) Sewage sludge applied to the land surface or placed on an active sewage sludge unit shall be incorporated into the soil within six hours after application to or placement on the land, unless otherwise specified by the permitting authority.

(ii) When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

(11) Sewage sludge placed on an active sewage sludge unit shall be covered with soil or other material at the end of each operating day.

(12) The pH of domestic septage shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 30 minutes.

[58 FR 9387, Feb. 19, 1993, as amended at 64 FR 42571, Aug. 4, 1999]

## **Pollution limits.**

### **503.13 Pollutant limits**

(a) *Sewage sludge.* (1) Bulk sewage sludge or sewage sludge sold or given away in a bag or other container shall not be applied to the land if the concentration of any pollutant in the sewage sludge exceeds the ceiling concentration for the pollutant in Table 1 of §503.13.

(2) If bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site, either:

(i) The cumulative loading rate for each pollutant shall not exceed the cumulative pollutant loading rate for the pollutant in Table 2 of §503.13; or

(ii) The concentration of each pollutant in the sewage sludge shall not exceed the concentration for the pollutant in Table 3 of §503.13.

(3) If bulk sewage sludge is applied to a lawn or a home garden, the concentration of each pollutant in the sewage sludge shall not exceed the concentration for the pollutant in Table 3 of §503.13.

(4) If sewage sludge is sold or given away in a bag or other container for application to the land, either:

(i) The concentration of each pollutant in the sewage sludge shall not exceed the concentration for the pollutant in Table 3 of §503.13; or

(ii) The product of the concentration of each pollutant in the sewage sludge and the annual whole sludge application rate for the sewage sludge shall not cause the annual pollutant loading rate for the pollutant in Table 4 of §503.13 to be exceeded. The procedure used to determine the annual whole sludge application rate is presented in appendix A of this part.

(b) *Pollutant concentrations and loading rates—sewage sludge.*

**Table 3 of §503.13—Pollutant Concentrations**

<b>Pollutant</b>	<b>Monthly average concentration (milligrams per kilogram)<sup>1</sup></b>
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2800

<sup>1</sup>Dry weight basis.

(4) *Annual pollutant loading rates.*

**ATTACHMENT 2**  
**STANDARDS FOR BENEFICIAL USE OF BIOSOLIDS**

Requirements of NEW EARTH for processing of SAWS biosolids into 40 CFR 503 or 30 TAC 312 Class A compost.

**503.32 Pathogens**

(a) *Sewage sludge—Class A.* (1) The requirement in §503.32(a)(2) and the requirements in either §503.32(a)(3), (a)(4), (a)(5), (a)(6), (a)(7), or (a)(8) shall be met for a sewage sludge to be classified Class A with respect to pathogens.

(2) The Class A pathogen requirements in §503.32 (a)(3) through (a)(8) shall be met either prior to meeting or at the same time the vector attraction reduction requirements in §503.33, except the vector attraction reduction requirements in §503.33 (b)(6) through (b)(8), are met.

(3) *Class A—Alternative 1.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in §503.10 (b), (c), (e), or (f).

(ii) The temperature of the sewage sludge that is used or disposed shall be maintained at a specific value for a period of time.

(A) When the percent solids of the sewage sludge is seven percent or higher, the temperature of the sewage sludge shall be 50 degrees Celsius or higher; the time period shall be 20 minutes or longer; and the temperature and time period shall be determined using equation (2), except when small particles of sewage sludge are heated by either warmed gases or an immiscible liquid.

$$D = \frac{131,700,000}{10^{0.1400t}} \quad \text{Eq. (2)}$$

Where,

D=time in days.

t=temperature in degrees Celsius.

(B) When the percent solids of the sewage sludge is seven percent or higher and small particles of sewage sludge are heated by either warmed gases or an immiscible liquid, the temperature of the sewage sludge shall be 50 degrees Celsius or higher; the time period shall be 15 seconds or longer; and the temperature and time period shall be determined using equation (2).

(C) When the percent solids of the sewage sludge is less than seven percent and the time period is at least 15 seconds, but less than 30 minutes, the temperature and time period shall be determined using equation (2).

(D) When the percent solids of the sewage sludge is less than seven percent; the temperature of the sewage sludge is 50 degrees Celsius or higher; and the time period is 30 minutes or longer, the temperature and time period shall be determined using equation (3).

$$D = \frac{50,070,000}{10^{0.1400t}} \quad Eq. (3)$$

Where,

D=time in days.

t=temperature in degrees Celsius.

4) *Class A—Alternative 2.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in §503.10 (b), (c), (e), or (f).

(ii)(A) The pH of the sewage sludge that is used or disposed shall be raised to above 12 and shall remain above 12 for 72 hours.

(B) The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12.

(C) At the end of the 72 hour period during which the pH of the sewage sludge is above 12, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

(5) *Class A—Alternative 3.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in §503.10 (b), (c), (e), or (f).

(ii)(A) The sewage sludge shall be analyzed prior to pathogen treatment to determine whether the sewage sludge contains enteric viruses.



(B) When the density of enteric viruses in the sewage sludge prior to pathogen treatment is less than one Plaque-forming Unit per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to enteric viruses until the next monitoring episode for the sewage sludge.

(C) When the density of enteric viruses in the sewage sludge prior to pathogen treatment is equal to or greater than one Plaque-forming Unit per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to enteric viruses when the density of enteric viruses in the sewage sludge after pathogen treatment is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces the sewage sludge that meets the enteric virus density requirement are documented.

(D) After the enteric virus reduction in paragraph (a)(5)(ii)(C) of this section is demonstrated for the pathogen treatment process, the sewage sludge continues to be Class A with respect to enteric viruses when the values for the pathogen treatment process operating parameters are consistent with the values or ranges of values documented in paragraph (a)(5)(ii)(C) of this section.

(iii)(A) The sewage sludge shall be analyzed prior to pathogen treatment to determine whether the sewage sludge contains viable helminth ova.

(B) When the density of viable helminth ova in the sewage sludge prior to pathogen treatment is less than one per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to viable helminth ova until the next monitoring episode for the sewage sludge.

(C) When the density of viable helminth ova in the sewage sludge prior to pathogen treatment is equal to or greater than one per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to viable helminth ova when the density of viable helminth ova in the sewage sludge after pathogen treatment is less than one per four grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces the sewage sludge that meets the viable helminth ova density requirement are documented.

(D) After the viable helminth ova reduction in paragraph (a)(5)(iii)(C) of this section is demonstrated for the pathogen treatment process, the sewage sludge continues to be Class A with respect to viable helminth ova when the values for the pathogen treatment process operating parameters are consistent with the values or ranges of values documented in paragraph (a)(5)(iii)(C) of this section.

(6) *Class A—Alternative 4.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in §503.10 (b), (c), (e), or (f).

(ii) The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in §503.10 (b), (c), (e), or (f), unless otherwise specified by the permitting authority.

(iii) The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in §503.10 (b), (c), (e), or (f), unless otherwise specified by the permitting authority.

(7) *Class A—Alternative 5.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella*, sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in §503.10(b), (c), (e), or (f).

(ii) Sewage sludge that is used or disposed shall be treated in one of the Processes to Further Reduce Pathogens described in appendix B of this part.

(8) *Class A—Alternative 6.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella*, sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in §503.10(b), (c), (e), or (f).

(ii) Sewage sludge that is used or disposed shall be treated in a process that is equivalent to a Process to Further Reduce Pathogens, as determined by the permitting authority.

(b) *Sewage sludge—Class B.* (1)(i) The requirements in either §503.32(b)(2), (b)(3), or (b)(4) shall be met for a sewage sludge to be classified Class B with respect to pathogens.

(ii) The site restrictions in §503.32(b)(5) shall be met when sewage sludge that meets the Class B pathogen requirements in §503.32(b)(2), (b)(3), or (b)(4) is applied to the land.

(2) *Class B—Alternative 1.* (i) Seven representative samples of the sewage sludge that is used or disposed shall be collected.

(ii) The geometric mean of the density of fecal coliform in the samples collected in paragraph (b)(2)(i) of this section shall be less than either 2,000,000 Most Probable Number per gram of total

solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

(3) *Class B—Alternative 2.* Sewage sludge that is used or disposed shall be treated in one of the Processes to Significantly Reduce Pathogens described in appendix B of this part.

(4) *Class B—Alternative 3.* Sewage sludge that is used or disposed shall be treated in a process that is equivalent to a Process to Significantly Reduce Pathogens, as determined by the permitting authority.

(5) *Site restrictions.* (i) Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.

(ii) Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for four months or longer prior to incorporation into the soil.

(iii) Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than four months prior to incorporation into the soil.

(iv) Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.

(v) Animals shall not be grazed on the land for 30 days after application of sewage sludge.

(vi) Turf grown on land where sewage sludge is applied shall not be harvested for one year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority.

(vii) Public access to land with a high potential for public exposure shall be restricted for one year after application of sewage sludge.

(viii) Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.

(c) *Domestic septage.* (1) The site restrictions in §503.32(b)(5) shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site; or

(2) The pH of domestic septage applied to agricultural land, forest, or a reclamation site shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 30 minutes and the site restrictions in §503.32 (b)(5)(i) through (b)(5)(iv) shall be met.

[58 FR 9387, Feb. 19, 1993, as amended at 64 FR 42571, Aug. 4, 1999]

## **Appendix B to Part 503—Pathogen Treatment Processes**

### **A. Processes To Significantly Reduce Pathogens (PSRP)**

1. Aerobic digestion—Sewage sludge is agitated with air or oxygen to maintain aerobic conditions for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 40 days at 20 degrees Celsius and 60 days at 15 degrees Celsius.
2. Air drying—Sewage sludge is dried on sand beds or on paved or unpaved basins. The sewage sludge dries for a minimum of three months. During two of the three months, the ambient average daily temperature is above zero degrees Celsius.
3. Anaerobic digestion—Sewage sludge is treated in the absence of air for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 15 days at 35 to 55 degrees Celsius and 60 days at 20 degrees Celsius.
4. Composting—Using either the within-vessel, static aerated pile, or windrow composting methods, the temperature of the sewage sludge is raised to 40 degrees Celsius or higher and remains at 40 degrees Celsius or higher for five days. For four hours during the five days, the temperature in the compost pile exceeds 55 degrees Celsius.
5. Lime stabilization—Sufficient lime is added to the sewage sludge to raise the pH of the sewage sludge to 12 after two hours of contact.

### **B. Processes to Further Reduce Pathogens (PFRP)**

1. Composting—Using either the within-vessel composting method or the static aerated pile composting method, the temperature of the sewage sludge is maintained at 55 degrees Celsius or higher for three days.

Using the windrow composting method, the temperature of the sewage sludge is maintained at 55 degrees or higher for 15 days or longer. During the period when the compost is maintained at 55 degrees or higher, there shall be a minimum of five turnings of the windrow.

2. Heat drying—Sewage sludge is dried by direct or indirect contact with hot gases to reduce the moisture content of the sewage sludge to 10 percent or lower. Either the temperature of the sewage sludge particles exceeds 80 degrees Celsius or the wet bulb temperature of the gas in contact with the sewage sludge as the sewage sludge leaves the dryer exceeds 80 degrees Celsius.
3. Heat treatment—Liquid sewage sludge is heated to a temperature of 180 degrees Celsius or higher for 30 minutes.
4. Thermophilic aerobic digestion—Liquid sewage sludge is agitated with air or oxygen to maintain aerobic conditions and the mean cell residence time of the sewage sludge is 10 days at 55 to 60 degrees Celsius.

5. Beta ray irradiation—Sewage sludge is irradiated with beta rays from an accelerator at dosages of at least 1.0 megarad at room temperature (ca. 20 degrees Celsius).

(6) Gamma ray irradiation—Sewage sludge is irradiated with gamma rays from certain isotopes, such as <sup>60</sup> Cobalt and <sup>137</sup> Cesium, at dosages of at least 1.0 megarad at room temperature (ca. 20 °Celsius).

7. Pasteurization—The temperature of the sewage sludge is maintained at 70 degrees Celsius or higher for 30 minutes or longer.

[58 FR 9387, Feb. 19, 1993, as amended at 64 FR 42573, Aug. 4, 1999]

### **ATTACHMENT 3 SECURITY PROCEDURES**

If work will be conducted on SAWS property, on SAWS infrastructure, on a SAWS customer's property, or involve any SAWS networks, or any SAWS facility, the Contractor shall provide background screening information of their employees and sub-contractors to CastleBranch, the SAWS-approved vendor of background screening services, at [sawsbackgroundcheck@castlebranch.com](mailto:sawsbackgroundcheck@castlebranch.com). Any person found to have an unacceptable background check will not be allowed to perform work under this Contract (however, at SAWS's sole discretion, a waiver may be given by SAWS Security for an unacceptable finding, provided that it must first be approved and signed off on by the Director of SAWS Security). Any sub-contractors performing work must also receive a background screening by CastleBranch. Contractor shall be responsible for the accuracy of information on the background screening information sent to [sawsbackgroundcheck@castlebranch.com](mailto:sawsbackgroundcheck@castlebranch.com). For further questions about background screening, call CastleBranch at 910-679-2979 or 888-723-4263 ext. 7857 and advise them the Contractor is working for SAWS. Once background screening is approved by SAWS Security, Contractor must also complete a Project Contractor Data Form ("PCDF"). The PCDF will be sent to [securitygroup@saws.org](mailto:securitygroup@saws.org). The PCDF is required for the Contractor and its sub-contractors to receive the required badges and parking tags necessary to fulfill the work under this Contract. The PCDF must be sent electronically to [securitygroup@saws.org](mailto:securitygroup@saws.org).

Each employee and agent of Contractor shall obtain a SAWS photo identification badge (a "Contractor's Badge") and parking tag prior to any work on SAWS property or asset, which shall be used only for purposes necessary to perform the work under this Contract. SAWS Badge Office hours are Monday, Wednesday and Friday from 9:00am to 12:00pm, excluding SAWS holidays (hours are subject to change). SAWS Security staff can be contacted at (210) 233-3177 or (210) 233-3338. Once the Project is completed, the Contractor shall return all Contractor Badges and parking tags to the Security Office. A Contractor who does not return the Contractor Badges or parking tags is not in compliance with these procedures.

SAWS facilities require a SAWS employee to physically escort the Contractor at all times. SAWS may, at its sole discretion, waive the escort requirements if the PCDF and a "clean" background screening from CastleBranch are approved. Waiver of the escort requirement shall only be through a written correspondence to Contractor from SAWS Security.

Sub-contractors must always be under escort of Contractor while performing work on any SAWS property or asset. Sub-contractors must display the Contractor's Badge at all times while working on any SAWS property or asset. Sub-contractors are required to complete a background screening and be listed on the PCDF regardless of receiving a Contractor's Badge. The Contractor is solely responsible for the actions of its employees, agents, sub-contractors and consultants.

Contractor shall advise their SAWS Project Manager/Inspector of any employee terminations or changes to personnel performing work under this Contract, and the Contractor shall immediately turn in any and all Contractor's Badges and/or parking tags of employees or agents who are terminated or no longer performing work under this Contract. If Contractor becomes aware of any changes in the information contained in the PCDF or the background screening information, Contractor shall immediately notify the SAWS Project Manager/Inspector and provide an updated PCDF to [securitygroup@saws.org](mailto:securitygroup@saws.org) and background screening information to [sawsbackgroundcheck@castlebranch.com](mailto:sawsbackgroundcheck@castlebranch.com).

Contractor is responsible for being in compliance with SAWS Security requirements and for maintaining security of SAWS property, infrastructure, SAWS customer's property, networks, and facilities for the length of the Project. Security incidents must be reported to SAWS Security immediately at (210) 233-3338.

If the Contractor plans to leave the site unsecure or open during the Project, they must provide a SAWS-approved security guard to monitor ingress and egress to the SAWS site.

If Contractor takes any action that diminishes the security of a SAWS site, Contractor will be responsible for providing additional security requirements at its expense. Some examples of additional requirements that SAWS may require include hiring of SAWS approved security guards, temporary fencing, mobile Closed Circuit Television Monitoring trailer(s), or extra lighting. Notwithstanding anything herein to the contrary, any provisions in these Security Procedures that may appear to give SAWS the right to direct Contractor as to details of doing any work under this Contract or to exercise a measure of control over any security measures or such work shall be deemed to mean that Contractor shall follow the desires of SAWS in the results of the work or security measures only.

Advance coordination by Contractor with SAWS Security for these security requirements is necessary to ensure no delays with timely performance of work. Any other provision of this Contract notwithstanding, in the event Contractor fails to comply with SAWS Security requirements, SAWS may, with no penalty, claim of any nature (including but not limited to breach of contract) against SAWS by the Contractor:

- Issue a Work Stoppage Order until the security violation (s) are remedied
- Ask any unidentified or improperly identified person or equipment to leave SAWS site immediately and not return until items or deficiencies are remedied to SAWS's satisfaction.

*Rev. 03/04/2020 SP-10*







# San Antonio Water-New Earth-Biosolids Agreement Final

Final Audit Report

2023-03-02

Created:	2023-03-01
By:	Yvonne Torres (yvonne.torres@saws.org)
Status:	Signed
Transaction ID:	CBJCHBCAABAANT8fLPgbxXX0zdVfPnH00C-Fh1m5Ejpn

## "San Antonio Water-New Earth-Biosolids Agreement Final" History

-  Document created by Yvonne Torres (yvonne.torres@saws.org)  
2023-03-01 - 10:41:13 PM GMT- IP address: 198.181.6.163
-  Document e-signed by Yvonne Torres (yvonne.torres@saws.org)  
Signature Date: 2023-03-01 - 10:52:38 PM GMT - Time Source: server- IP address: 198.181.6.163
-  Document emailed to Todd Sims (todd.sims@denaliwater.com) for signature  
2023-03-01 - 10:52:39 PM GMT
-  Email viewed by Todd Sims (todd.sims@denaliwater.com)  
2023-03-02 - 2:18:38 PM GMT- IP address: 173.218.168.132
-  Document e-signed by Todd Sims (todd.sims@denaliwater.com)  
Signature Date: 2023-03-02 - 2:19:49 PM GMT - Time Source: server- IP address: 173.218.168.132
-  Agreement completed.  
2023-03-02 - 2:19:49 PM GMT





## 22-22104 Addendum 1

### Wecare Denali

### Supplier Response

#### Event Information

Number: 22-22104 Addendum 1  
Title: Five Year Contract for Biosolids Composting (RFP)  
Type: Request for Proposal  
Issue Date: 9/26/2022  
Deadline: 10/18/2022 03:00 PM (CT)  
Notes: **INSTRUCTIONS TO RESPONDENTS**

Bids are solicited for furnishing the goods, supplies, equipment and/or services as set forth in this solicitation. **Bids must be received Electronically or by Sealed Bid in the Purchasing Office by date and time specified**, and then publicly opened and read aloud. Sealed Bids that are either mailed or delivered must be enclosed in a sealed envelope, addressed to the Director Purchasing, and have the bid number, bid name, closing date, and company name clearly marked on the outside of the envelope. **Sealed Bids should be mailed or hand delivered to the following address:**

**San Antonio Water System  
Purchasing Department  
2800 US Highway 281 North,  
Administration Bldg, 5th Floor  
San Antonio, TX 78212**

Electronic Bids can not be accepted after the specified date/ time. Sealed Bids received late will be returned; they will not be opened nor considered in the evaluation of the bid. The undersigned agrees, if the bid is accepted, to furnish any and all items upon which prices are

offered, at the price(s) and upon the terms and conditions contained in the specifications. The period of acceptance of this bid will be 90 calendar days after the bid opening date.

**SCOPE:** The San Antonio Water System (SAWS) is soliciting proposals for the services for management of biosolids through off-site composting and is accepting bids to select qualified contractors to provide the complete management of dewatered biosolids through composting at an established, permitted facility. Services will include loading, hauling, manufacture of compost, and the distribution of the product(s) to suitable beneficial reuse markets. Only compost facilities that are permitted will be considered in the bid evaluation. All compost processing and distribution shall comply with Texas Commission on Environmental Quality (TCEQ) requirements for Class A biosolids products.

We **highly** recommend online submission. This expedites the process and reduces errors for both buyer and supplier.

**For technical assistance, please contact Ion Wave's Customer Success Team: 1-866-277-2645 x 4 or email [support@ionwave.net](mailto:support@ionwave.net).**

The San Antonio Water System Purchasing Department is willing to assist any bidder(s) in the interpretation of bid provisions or explanation of how bid forms are to be completed. Assistance may be received by visiting the Purchasing Office in the SAWS Main Office, 2800 US Hwy 281 North, San Antonio, TX 78212, or by calling (210) 233-3819.

**To report suspected ethics violations impacting the San Antonio Water System, please call 1-800-687-1918.**

## **Contact Information**

Contact: Yvonne Torres  
Address: Purchasing Department  
2800 U.S. Hwy. 281 North  
San Antonio, TX 78212  
Phone: (210) 233-3821  
Fax: (210) 233-4167  
Email: [Yvonne.Torres@saws.org](mailto:Yvonne.Torres@saws.org)

## Wecare Denali Information

Contact: Donna Treiber  
Address: 7800 I-10 E.  
San Antonio, TX 78219  
Phone: (210) 661-5180  
Email: donna.treiber@denaliwater.com  
Web Address: <https://www.newearthcompost.com/>

By entering his/her digital signature, the undersigned represents that he/she is authorized to bind the Bidder to fully comply with the Specifications and General Requirements for the amount(s) shown on the accompanying bid sheet(s). By signing below, Bidder has read the entire document and agreed to the terms therein.

John Niedecken

*Signature*

[john.niedecken@denaliwater.com](mailto:john.niedecken@denaliwater.com)

*Email*

*Submitted at 10/18/2022 01:00:47 PM (CT)*

## Requested Attachments

### Response to RFP

RESPONSE TO SAWS RFP - Shortcut.zip

Vendor to provide the response to the RFP.

### Proof of Insurance

Final Insurance Docs SAWS RFP.pdf

Exhibit A

### Conflict of Interest Form

Final COI Form.pdf

Exhibit C

### Sample Agreement

San Antonio Water-Denali-Biosolids Agreement-2022.10.17 WKL Red.docx

Exhibit E - Any exceptions shall be redlined and returned as part of the RFP electronic response in Word version for SAWS review and consideration. New provision requests may be considered.

### Bid Bond

SAWS New Earth Bid Bond\_2022-10-11.pdf

Exhibit F1 - All bids must be accompanied by Certified or Cashier's Check or an approved Bid Bond in the amount of not less than five percent (5%) of the total bid, payable without recourse to the San Antonio Water System. Bid Bonds, Certified or Cashier's checks will be retained for the first, second, and third lowest bidders until the contract is executed. A copy of the Bid Bond shall be uploaded. Certified or Cashier's checks shall be sent or delivered to SAWS Headquarters, 2800 US Highway 281 North, San Antonio, TX 78212 prior to date and time for bid opening.

### Performance Bond

New Earth letter-Performance Bond.pdf

Exhibit F2 - Bidders must provide a letter with bid from Bonding Company stating that in the event of award, bidder will be able to provide the requested Performance Bond.

### Price Per Wet Ton for various quantities

Exhibit G Price Per Ton for Various Quantities.xlsx

Exhibit G - Respondent shall provide a price for all applicable quantities.

### Respondent Questionnaire

Respondant Questionnaire with Exceptions.pdf

### W9

WECARE DBA NEW EARTH.pdf

### Other Attachment

New Earth Property Boundaries Power Point - jn edits.pptx

### Other Attachment

No response

## Bid Attributes

### 2 Submission Response

San Antonio Water System (SAWS) prefers responses to be submitted online via our electronic system. Submissions may be submitted manually. Manual submissions must be delivered to the Procurement and Contracts office, in a sealed envelope by the date and time stated in this bid event. No fax or email submissions will be accepted. Only one format is needed. Manual submission shall consist of one (1) original hard copy and one (1) electronic flash drive. For any questions, please contact the SAWS Purchasing Office at 210-233-3819.

### 3 Cooperative Purchasing

Should other Governmental Entities decide to participate in this contract, would you, the Vendor, agree that all terms, conditions, specification and pricing would apply?

Yes

### 4 Prompt Payment Discount

Prompt Payment Discount: \_\_\_\_\_ % \_\_\_\_\_ days. (If no discount is offered, Net 30 will apply.)

No prompt payment discounts are offered

### 5 Attachments Required

Be sure to upload all required documents and forms to the "Response Attachments" tab of this bid event.

### 6 Biosolids and Compost RFP Document

From the "Attachments Tab", download and read the the **Request for Proposal** document. Indicate below you have reviewed the document.

☒ I have read, understand and agree. (I have read, understand and agree.)

### 7 SAWS Standard Insurance Specifications & Certificate of Liability Insurance Requirements

From the "Attachments Tab", download and read the **SAWS Standard Insurance Specifications & Certificate of Liability Insurance Requirements** document. Indicate below you have reviewed the document.

☒ I have read, understand and agree. (I have read, understand and agree.)

### 8 Security Procedures

From the "Attachments Tab", download and read the **Security Procedures** document. Indicate below you have reviewed the document.

☒ I have read, understand and agree. (I have read, understand and agree.)

### 9 Safety

- Vendor/Contractor recognizes and agrees that safety is of great importance in performing any work for SAWS, regardless of the risk associated with the work.
- Vendor/Contractor shall perform all work safely, in compliance with SAWS PPE Guidelines for Industrial Facilities, Vendor/Contractors safety program, and any additional safety standards, plans, procedures, rules or requirements set for in the Contract.

☒ I have read, understand and agree. (I have read, understand and agree.)

### 10 Conflict of Interest Questionnaire

From the "Attachments Tab", download and *complete* the the **Conflict of Interest Questionnaire** document. Once completed, scan and attach the signed document to the "Response Attachments" tab of this bid event.

☒ I have read, understand and agree. (I have read, understand and agree.)

**1 Policies on Equal Employment Opportunity and SMWVBs**

Policies on Equal Employment Opportunity and SMWVBs

☒ I have read, understand and agree. (I have read, understand and agree.)

**1 No Boycotting and No Discrimination Verifications**

Contractor agrees that, unless it is a sole proprietorship or a company with fewer than 10 full-time employees or the value of this Contract is less than \$100,000, it:

a) does not boycott Israel and will not do so during the term of this Contract;

b) does not boycott energy companies and will not do so during the term of this Contract; and

c) does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association and will not discriminate during the term of the Contract against a firearm entity or firearm trade association;

This provision is in compliance with Chapters 2271 and 2274 of the Texas Government Code. SAWS agrees to comply with the United States and Texas Constitutions in consideration of whether to enforce this provision.

☒ Agree (Agree)

**1 Form 1295 - Certificate of Interested Parties**

Pursuant HB 1295, the addition of section 2252.908 of the Government Code, all awarded vendors must fill out electronically, with the Texas Ethics Commission's online filing application.

<https://www.ethics.state.tx.us/TECCertInt/pages/login/certLogin.jsf>

The law states that a governmental entity or state may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties (Form 1295) to the governmental entity or state agency at the time the business entity submits the signed contract to the governmental or state agency. The Texas Ethics Commission has adopted rules requiring the business to file Form 1295 electronically with the Commission. This form must then be signed and attached in the "Response Attachments" tab of this bid event, prior to any business transaction.

Please note the following:

**Box 2:** Please enter San Antonio Water System

**Box 3:** Please use SAWS' solicitation (bid) number as the identification number being requested and the contract name as description of goods or services.

Please acknowledge that you have read and understand that the System may not do business with your company without the submittal of this form (for Formal Board Approved projects).

**1 Communications Statement**

Contact between vendors and the San Antonio Water System (SAWS) personnel during the proposal process or evaluation process is prohibited. Any attempt by vendors during the proposal process to contact SAWS personnel may result in disqualification. All communication shall go through the SAWS Purchasing Department during this competitive process.

All questions pertaining to this bid event are to be submitted via the "Questions" tab. No verbal responses will be provided. The deadline for questions about this proposal is listed on the "Questions" tab. The SAWS Purchasing office will not respond to questions after this time and date.

Response to questions will be posted in the form of an addendum to this proposal. The vendors will be responsible for checking the website for any posted addenda.

1  
5**Proposal Opening**

Any proposal received later than the specified time, whether delivered in person or by any other method shall be disqualified.

If the SAWS Purchasing Office location where bids/proposals are to be submitted is closed due to inclement weather, natural disaster, or for any other cause including if the electronic bid system is unavailable on the due date, the deadline for submission shall be extended until the next calendar business day, unless the bidder is otherwise notified by SAWS. The time of day for submission shall remain the same.

1  
6**Section Break****VENDOR INFORMATION**1  
7**Vendor Classification**

Please indicate if any of the following apply to your company:

Non-Minority

Hispanic

African-American

Female Owned

Handicapped Owned

Small Business

Other Minority (Specify)

None Apply

1  
8**Local Representative Name**

Please provide the name for a main contact or local representative and/or office.

John Niedecken

1  
9**Local Representative Email**

Please provide the email address for the main contact or local representative and/or office.

john.niedecken@denaliwater.com

2  
0**Local Representative Phone**

Please provide the phone number for the main contact or local representative and/or office.

210-661-5180

2  
1**How many years has your company been in business?**

25

2  
2**Foreign Countries: Question 1**

Are you, Vendor, held or controlled by:

Individuals who are citizens of China, Iran, North Korea, Russia or a country designated by the Governor of the State of Texas pursuant to Texas Government Code Chapter 2274?

☐ Yes (Yes)

☒ No (No)

2  
3**Foreign Countries: Question 2**

Are you, Vendor, held or controlled by:

A company or other entity, including a governmental entity, that is owned or controlled by citizens of or directly controlled by the government of China, Iran, North Korea, Russia or a country designated by the Governor of the State of Texas pursuant to Texas Government Code Chapter 2274?

☐ Yes (Yes)☒ No (No)2  
4**Foreign Countries: Question 3**

Are you, Vendor:

Headquartered in China, Iran, North Korea, Russia or a country designated by the Governor of the State of Texas pursuant to Texas Government Code Chapter 2274?

☐ Yes (Yes)☒ No (No)**Bid Lines**

1

Total available amount 170,000 wet tons of biosolids. The maximum quantity that any one contractor will be award is 85,000 tons per year.

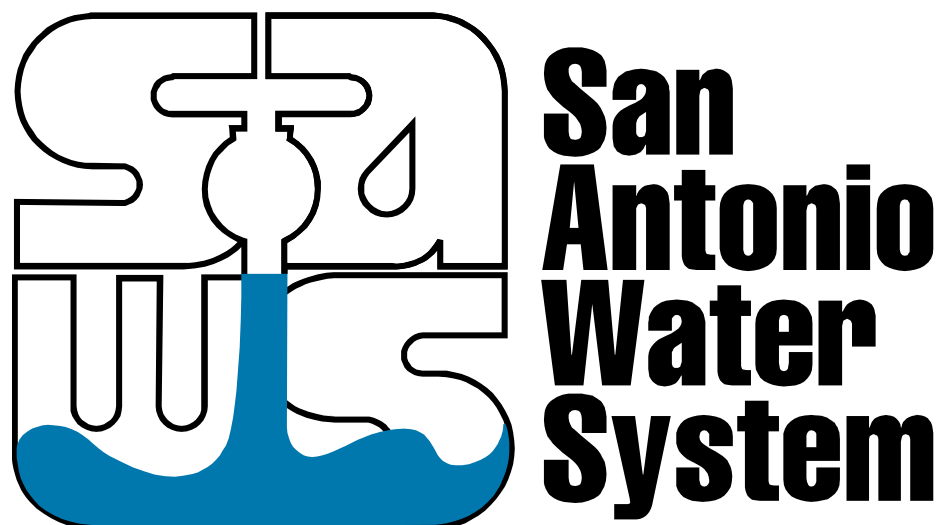
Pricing shall include the following:

- Loading
- Transportation
- Processing
- Marketing and distribution
- Tipping Fees

Respondent to provide maximum unit price/ wet ton.

SAWS will evaluate completed Excel Document with price/ wet ton for various quantities (Exhibit G). Completed Excel document shall be uploaded to the Response Attachments Tab.

Quantity: 85000 UOM: WET TON Price: \$32.00 Total: \$2,720,000.00**Response Total: \$2,720,000.00**



## **REQUEST FOR PROPOSALS**

**FIVE YEAR CONTRACT FOR  
BIOSOLIDS COMPOSTING  
BID NO: 22-22104**

---

---

**BIDS DUE: October 18, 2022 @ 3:00 PM Central Time**

**To report suspected ethics violations impacting the San Antonio Water System,  
please call 1-800-687-1918.**

---

---



# TABLE OF CONTENTS

<b>I.</b>	<b>Project Information</b>	
	A. Objective .....	1
	B. Background.....	1
	C. Current Biosolids Use and Disposal Pathways .....	1
	D. Scope of Services.....	1
	E. Period of Contract.....	4
	F. Estimated Timeline .....	4
<b>II.</b>	<b>Selection Process</b>	
	A. Selection .....	5
	B. Evaluation Criteria Summary .....	5
<b>III.</b>	<b>Communication</b>	
	A. Restrictions .....	5
	B. Non-Mandatory Pre-submittal Conference .....	5
	C. Technical Questions .....	6
	D. Submittal or Status Questions .....	6
	E. Submittal Clarification .....	6
<b>IV.</b>	<b>Submitting a Response</b>	
	A. Evaluation Criteria Submission Requirements .....	6
	B. Bonding Requirements .....	7
	C. Other Submission Requirements.....	8
<b>V.</b>	<b>Sample Contract</b> .....	9
<b>VI.</b>	<b>Proposal Protest Procedures</b> .....	9
<b>VII.</b>	<b>Requests for Debriefings</b> .....	9
<b>VIII.</b>	<b>Other Requirements</b> .....	9
<b>IX.</b>	<b>Reservation of Rights</b> .....	10

## Attachments

Download from “Attachments” tab where required and upload as required to “Response Attachments” tab in IonWave

Submittal Response Checklist.....	
Respondent Questionnaire .....	
Exhibit “A” – SAWS Standard Insurance Requirements .....	
Exhibit “B” – Disclosure of Interested Parties (required from successful contractor).....	
Exhibit “C” – Conflict of Interest .....	
Exhibit “D” – Security Procedures .....	
Exhibit “E” – Sample Contract (Review Only) .....	
Exhibit “F” – Bond Samples .....	
Exhibit “G” – Price per ton for Various Quantities .....	

## I. Project Information

### A. Objective

The San Antonio Water System (SAWS) is soliciting proposals for the services for management of biosolids through off-site composting and is accepting bids to select qualified contractors to provide the complete management of dewatered biosolids through composting at an established, permitted facility. Services will include loading, hauling, manufacture of compost, and the distribution of the product(s) to suitable beneficial reuse markets. Only compost facilities that are permitted will be considered in the bid evaluation. All compost processing and distribution shall comply with Texas Commission on Environmental Quality (TCEQ) requirements for Class A biosolids products.

### B. Background

SAWS is a municipally owned water utility established by the San Antonio City Council in May 1992. SAWS serves the corporate limits of the City of San Antonio and other municipalities outside the corporate limits of the City of San Antonio providing water, wastewater, reuse and other services to approximately 2 million people.

SAWS operates 3 major Water Recycling Centers (WRC's) with a combined permitted flow of 187 million gallons per day resulting in approximately 170,000 wet tons of biosolids per year. All facilities are biological domestic waste treatment, and biosolids are stabilized through anaerobic digestion. SAWS' biosolids are high quality with low trace heavy metals. SAWS has an active wastewater pretreatment program.

All biosolids digestion and dewatering operations occur at the Steven M. Clouse WRC (SMC WRC). The SMC WRC operates 12 belt filter presses and sand-drying beds for dewatering operations. The belt presses at SMC WRC produce approximately 17 percent total solids and operate 7 days per week, 24 hours per day. Sand drying beds can produce solids ranging from 50 to 90 percent total solids.

### C. Current Biosolids Use and Disposal Pathways

SAWS manages multiple biosolids composting contracts and an emergency landfill disposal contract. SAWS intent is to beneficially reuse 100 percent of all biosolids produced through composting.

### D. Scope of Services

#### 1. PERFORMANCE STANDARDS

Consistent loading, hauling, processing and beneficial reuse distribution of biosolids materials shall be in accordance with all current and/or future TCEQ or other regulatory standards in force during the term of this contract.

Biosolids shall be loaded and removed from the SMC WRC biosolids storage locations in a routine manner so as not to impede plant operations, other loader operations, other truck traffic, or other biosolids contractors' operations. Under no circumstance will the contractor be allowed to force stockpiling of biosolids at the WRC storage locations as a result of inconsistent loading and removal of biosolids.

The contractor(s) shall keep all transport vehicles in good operating condition and avoid tracking of materials or spills on roadways. The contractor shall operate the compost location in a manner that prohibits odor and vector conditions. The contractor shall distribute finished materials in a manner that prohibits excessive stockpiling of composted product.

All transport vehicles and transport of biosolids materials will require Texas Department of Transportation (TXDOT) and TCEQ transporter registrations. All materials transported from the SMC WRC will be covered and have a minimum of four locking devices such as turn-buckles. Contractor(s) shall be responsible for immediate cleanup of any tracked materials or spills on roadways.

#### 2. REGULATORY COMPLIANCE / RECORD KEEPING

The Contractor(s) will supply monthly reports to SAWS by the 10th of the following month. The reports will include the monthly invoice, documenting the measured weights of each load of biosolids transported from SMC WRC. Additionally, the monthly report shall include copies of all reports submitted to regulatory

agencies, reports of any regulatory inspections or violations, finished compost product quality information, reports of any biosolids or finished compost products that were disposed of in a landfill, and any public nuisance complaints.

SAWS reserves the right to withhold payment if complete and correct information is not provided in the monthly report.

Where applicable, the Contractor(s) shall provide SAWS with an annual report addressing compliance with the requirements of 40 CFR, Parts 501 and 503, no later than January 31 following the end of the immediately preceding calendar year.

For products that are a mixture of biosolids from different sources other than SAWS, the Contractor(s) shall provide monthly reporting of all biosolids through ultimate beneficial use. If there is a finished compost product that does not meet regulatory specifications, the Contractor(s) will pay any costs to landfill that material or conduct any additional processing necessary on that material at no additional cost to SAWS.

The Contractor(s) must demonstrate compliance with all Federal, State, and local regulatory standards. Any public nuisance complaints, regulatory violations or investigations must be reported to SAWS by the next business day.

Copies of all permits shall be provided to SAWS at contract initiation and upon renewal. The permits shall be available at the composting site.

### **3. MARKETING**

All finished product materials must be identified as being produced from biosolids.

The Contractor(s) shall generate products, suitable markets and necessary distribution pathways to ensure consistent throughput at the WRC and finished compost site.

Landfilling of biosolids or finished compost product shall only occur under emergency conditions and will require immediate telephone notification to SAWS.

### **4. BIOSOLIDS QUANTITY AND QUALITY**

Composting of all biosolids produced by SAWS (approximately 170,000 wet tons per year) will be managed through award of multiple contracts. Biosolids will be anaerobically digested and dewatered to 15% (or greater) total solids.

SAWS anticipates, but makes no guarantees, that 70 percent of biosolids supplied to the contractor(s) will be belt filter pressed with total solids ranging from 15 percent to 22 percent total solids. Additionally sand drying beds will be used with up to 90 percent total solids. Biosolids from the drying beds will contain a sand component.

SAWS will make every effort to distribute biosolids to the contractor(s) in a consistent and routine manner. Fluctuations should be expected in distribution based on seasonal and weather related changes at the WRC.

SAWS will provide a minimum of TCEQ Class B biosolids quality to the contractor(s).

### **5. BASIS OF BILLING**

Certified scales are located at the SMC WRC. These scales will be used for weighing of all contractor vehicles entering and exiting the WRC. The certified scales will be the basis of billing to SAWS.

### **6. OPERATION SCHEDULE**

The loading and transportation of biosolids is expected to be conducted every day of the week (Sunday to Saturday). Most loading and transportation of biosolids will occur on normal workdays, Monday to Friday during normal working hours at the SMC WRC (5:00 a.m. - 6:00 p.m.).

## **7. LOADING**

The contractor(s) shall provide sufficient loading and transport equipment to handle daily volumes. No exceptions will be allowed (this includes inclement weather). The contractor(s) is responsible for providing loading or hauling equipment that will suitably fit under the dewatered biosolids conveyor discharge chutes at the SMC WRC.

Loading and transportation must be coordinated with SAWS and other biosolids contractors.

## **8. TRANSPORTATION**

The contractor will be responsible for all transportation activities (including but not limited to, loading, transporting, tarping, spill cleanup, vehicle registration) in compliance with all Federal, State and Local laws, rules and regulations. Copies of all truck registrations and permits will be delivered to SAWS Biosolids Manager before the contractor(s) will be allowed to begin operation.

SAWS will not authorize/approve any overweight vehicle to leave the WRC property.

Contractor(s) are responsible to immediately clean any biosolids that are spilled or tracked onto roadways. If SAWS is notified of a roadway spill, SAWS will immediately dispatch cleanup crews and the contractor shall be responsible for the cost of all manpower, equipment and materials used in the cleanup, which amount may be deducted from sums otherwise due and owed to the contractor.

SAWS reserves the right to remove any contractor vehicle from service due to safety or operational problems. Farm to Market Road 1937 has a maximum load limit of 58,420 pounds and any additional weight permits will be the responsibility of the contractor. The contractor shall abide by all posted speed limits.

## **9. SAMPLING AND REPORTING**

SAWS will provide Class B materials to the contractor(s) and SAWS will provide analytical quality results to the contractor(s) as requested.

Contractor(s) are responsible for all final product Class A metals, pathogen reduction and vector attraction reduction sampling and analysis. The contractor(s) shall be responsible to certify pathogen reduction and vector attraction reduction for the finished product produced.

Any other analytical work performed or required will be the responsibility of the contractor(s).

## **10. PAYMENTS TO SAWS**

The contractor(s) must reimburse SAWS for any costs, fines and corrective actions taken due to non-performance or failure of the contractor(s) to comply with the Contract. This may include costs incurred by SAWS due to failure of the contractor(s) to remove the agreed volume of biosolids from the SMC WRC, or products stockpiled by the contractor(s) at any other location.

## **11. ANNUAL FEE MODIFICATION**

Beginning one year after the Start Date, the fees shall be subject to annual adjustment according to the following provisions. Said price per ton payable by SAWS for the services hereunder, may be adjusted effective on the anniversary date of the contract award by SAWS each year to an amount determined by using the Consumer Price Index US City Average; Reference Base: (1982-84=100), Not Seasonally Adjusted [https://www.bls.gov/regions/new-england/data/consumerpriceindex\\_us\\_table.htm](https://www.bls.gov/regions/new-england/data/consumerpriceindex_us_table.htm). Annual Fee Modification will be calculated by using the Consumer Price Index Previous August figure in comparison to the most recent Consumer Price Index August figure. Annual Fee Modification will be calculated as follows (using August 2021 and August 2022 figures as an example):

\$30/ton unit price in August 2021

August, 2021 (273.567)

August, 2022 (296.171)

Index Point Change:  $296.171 - 273.567 = 22.604$

Divided by the earlier index:  $22.604 / 273.567 = 0.082627$

Multiplied by 100 =  $0.082627 * 100 = 8.26$

Equals percent change = 8.26%

Revised Price:  $30 + (30 * 8.26\%) = \$32.478$

The following year's calculation will be based upon using August 2022 and August 2023 figures and so forth for subsequent years.

It is agreed by SAWS and Contractor(s) that the CPI adjustment shall not exceed five percent (5.0%) in any given year; nor, shall the cumulative adjustments exceed a total of twenty five percent (25%). Consumer Price Index shall mean the United States Department of Labor Bureau of Labor Statistics, Consumer Price Index, All Urban Consumers, All Items, Dallas-Ft. Worth, Texas, or any successor to that index. Contractor will notify SAWS in writing for acceptance as soon as practicable following the determination of any such proposed adjustment, which acceptance will not be unreasonably withheld. Failure to notify SAWS of any adjustment within thirty (30) days following the date of adjustment shall constitute a waiver by the contractor of the right to the price adjustment.

## 12. CONSISTENT SERVICE REQUIREMENT

The contractor(s) are required to remove biosolids in a consistent and routine manner (**awarded amount in tons / 52 weeks**). If the contractor(s) cannot process the awarded amount of biosolids through composting, the contractor(s) must make arrangements and pay all associated costs to landfill the biosolids. The contractor(s) must compost at least 85 percent of the awarded amount of biosolids per year or will be considered to be in default and the contract may be terminated.

### Insurance Requirement: See Exhibit "A"

#### E. Period of Contract

1. The contract award date is estimated to be December 6, 2022 and the operational start date will be January 1, 2023 for a five year period ending December 31, 2027. The contractor(s) must be able to start removing biosolids from the SMC WRC on January 1, 2023.
2. At SAWS option, this Contract may be renewed under the same terms and conditions for five (5) additional one (1) year periods. Proposed contract renewals will be prepared by SAWS, reviewed and approved by the contractor(s), signed by the contractor(s), and then recommended to the SAWS Board of Trustees for approval.
3. SAWS shall also have the right to extend this contract under the same terms and conditions beyond the original term or any renewal thereof, on a month to month basis, not to exceed 6 months. Said month to month extensions shall be in writing, signed by SAWS Director of Purchasing or her designee, and shall not require Board approval, subject to and contingent upon appropriation of funding therefore.

#### F. Estimated Timeline – The dates listed below are subject to change without notice.

September 26, 2022..... RFP Released  
October 4, 2022 1:00 PM ..... Non-Mandatory Pre-Submittal Conference  
October 7, 2022 by 12:00 PM Central Time ..... Receipt of Written Questions Due  
October 18, 2022 by 2:00 PM Central Time ..... Proposals Due  
October 2022..... Proposals Evaluated  
November 2022..... Presentations  
December 6, 2022..... SAWS Board Approval and Award  
December 2022..... Contractor Notification(s) of Award  
January 1, 2023..... Start Work

## II. Selection Process

### A. Selection

All proposals received will be evaluated by a Selection Committee that will review, evaluate and rank the proposals according to a numerical scoring system based on the responses to the criteria listed below. The successful contractor(s) will be notified following SAWS Board approval.

### B. Evaluation Criteria Summary

Respondents not providing a response to each of the criteria listed in this RFP shall be considered non-responsive and ineligible for consideration.

Evaluation Criteria	Points
a. Project Site, Permitting and Site Viability	20
b. Operational Plan	20
c. References/ Similar Prior Experience	10
d. Presentation	10
e. Financial / Operational Stability	10
f. Compensation Proposal	30
TOTAL	100

## III. Communication

### A. Restrictions

- Respondents or their representatives are prohibited from communicating with any City of San Antonio officials to include:
  - City Council members (as defined by the City of San Antonio Ethics Code),
  - City Council member's staff, and
  - San Antonio Water System (SAWS) Board of Trustees regarding the RFP from the time the RFP is released until it has been acted upon by the Board of Trustees.
- Respondents or their representatives are prohibited from communicating with SAWS employees regarding this RFP, except as provided under TECHNICAL QUESTIONS, from the time the RFP/RFQ is released until the contract is awarded.
- This includes "thank you" letters, phone calls, emails, and any contact that results in the direct or indirect discussion of the RFP and/or proposal submitted by Respondents.
- Violation of this provision by the Respondent and/or their agent may lead to disqualification of the Respondent's proposal from consideration.

### B. Non-Mandatory Pre-Submittal Conference

- A **Non-Mandatory Pre-Submittal Conference** will be held at the SAWS Steven M. Clouse Water Recycling Center located at 3495 Valley Road, San Antonio, TX 78221 on **October 4, 2022 at 1:00 pm** for all prospective bidders to clarify any questions pertaining to the specifications.
- Attendance is encouraged in order for the proposed Respondent to gain a better understanding of the project and ask relevant questions.

3. Any oral responses provided by SAWS staff at the Pre-Submittal Conference shall be preliminary. A written summary of the Pre-Submittal Conference shall contain official responses, if any. Any oral response given at the Pre-Submittal Conference that is not confirmed in the written summary of the Pre-Submittal Conference or by a subsequent addendum shall not be official or binding on SAWS. Only written responses shall be official and all other forms of communication with any officer, employee or agent of SAWS shall not be binding on SAWS.

C. Technical Questions

1. Respondents may submit technical questions concerning the services in this RFP in writing. Questions should be submitted through the IonWave application. The Contact Person for this project is:

Yvonne Torres  
Director-Purchasing  
San Antonio Water System  
Administrative Building  
2800 U.S. Hwy 281 North  
San Antonio, TX 78212  
Email: [ytorres@saws.org](mailto:ytorres@saws.org)  
Fax to 210-233-4167

2. Questions regarding this RFP received after the date and time specified in IonWave will not be answered in order to allow ample time for distribution of answers and/or addendums to this RFP.
3. Answers to the questions will be posted on the SAWS website by 4:00 PM Central Time on October 12, 2022.
4. Verbal questions are not permitted other than as described in this section and during interviews, if any.

D. Submittal or Status Questions

For questions regarding this solicitation please contact Yvonne Torres, Director Purchasing, via e-mail at [ytorres@saws.org](mailto:ytorres@saws.org).

E. Submittal Clarification

SAWS reserves the right to contact any Respondent for clarification after responses are opened and/or to further negotiate with any Respondent if such is deemed desirable by SAWS.

## IV. Submitting a Response

A. Evaluation Criteria Submission Requirements

1. Project Site, Permitting and Site Viability
  - a) Provide information on proposed composting site, including the following:
    - Property boundaries on location map
    - A scale and north arrow
    - Location and size of active piles or windrows, the staging piles, curing piles and finished compost storage area
    - Direction pad is sloping relative to windrow direction
    - On-site traffic and process flow
    - Staging areas
    - Routes to transport raw materials and finished compost to and from facility
    - Land use denoted on adjoining properties
    - Any applicable local zoning and permit requirements
    - Storm Water Pollution Prevention Plan (SWPPP) for the site
  - b) Provide a copy of your permit to compost biosolids on the proposed site from TCEQ.

- c) Confirm how many wet tons of biosolids can physically be processed on the site during various weather conditions.
2. Operational Plan
  - a) Composition of compost, including information about the raw materials in the feedstock
    - Sources of feedstock
    - Estimated annual weight (tons)
    - Estimated annual volume (cubic yards)
    - Typical C:N ratio
    - Typical moisture content
    - Odor, vector and dust control plan
  - b) Loading and transporting of biosolids from the Clouse WRC to the composting site
  - c) Processing of biosolids before it is incorporated into a windrow
  - d) Equipment used at composting site for turning, mixing, screening, etc.
  - e) Marketing of the compost, including bulk and residential as applicable
  - f) Testing of finished compost
3. References / Similar Prior Experience
 

Provide a list of at least three (3) current and/or previous composting operations in the last five (5) years in which the Respondent has performed services similar to those sought in this solicitation. This list should include:

  - Name of customer
  - Location (city and state)
  - Duration of assignment
  - Approximate size of composting operations (annual weight or volume)
  - Reference contact to include name, phone number, and email address
4. Financial / Operational Stability
 

Provide information to assist SAWS in assessing Bidder's demonstrated capability and financial resources to provide the goods or services described in this Bid. Financial Stability includes the following: The bidder has been in business at least 3 years. The bidder must provide a current audited financial report to include Income Statement, Balance Sheet and Statement of Cash Flow. If privately owned, SAWS reserves the right to accept non audited financial reports as defined above. Written references must be provided if requested by SAWS. Information provided must offer an indication of Bidder's financial stability, history, and commitment to providing quality services for clients.
5. Presentation
 

Respondents will provide a brief presentation to the Selection Committee summarizing their proposal as well as answering questions posed by the Selection Committee. SAWS will schedule the presentations within 2 weeks of the proposal due date.
6. Compensation Proposal
 

The pricing will be evaluated based upon the lowest total price submitted on the Pricing Schedule. The Proposal with the lowest price will receive thirty (30) points. All other proposals will be allotted a percentage of the 30 points based on a comparison with the lowest priced proposal. The following formula will be used:

$$[(\text{Lowest price}) \div (\text{Bidder's price})] \times 30 = \text{Bidder's allotted points}$$

Price in IonWave shall be the maximum unit price/ wet ton. SAWS will evaluate completed Excel Document (Exhibit G) for various quantities.

## B. Bonding Requirements

1. **Bid Bond:** All bids must be accompanied by Certified or Cashier's Check or an approved Bid Bond in the amount of not less than five percent (5%) of the total bid, payable without recourse to the San Antonio Water System. Surety shall provide a copy of the Power of Attorney authorizing the Executing Agent the authority to execute the bid bond documents and bind the Surety to the bid bond conditions. The bid bond



shall have a corporate Surety that is licensed to conduct business in Texas and authorized to underwrite bonds in the amount of the bid bond. ***Submission of an Individual Surety is not acceptable for purposes of bonding a bid bond.*** Bid Bonds, Certified or Cashier's checks will be retained for the first, second, and third lowest bidders until the contract is executed.

2. **Performance Bond:** A Performance Bond of \$500,000.00 will be required from the successful bidder for the initial contract period, renewable annually. The Performance Bond will be required for the length of the contract to include the execution of each extension period. Bidders must provide a letter with bid from Bonding Company stating that in the event of award, bidder will be able to provide the requested Performance Bond. [Sample bond forms are attached. Bonds submitted must meet the requirements as specified in these samples.](#)

C. Other Submission Requirements

1. Exhibit "A" - Proof of Insurability
  - a. Respondent shall submit a copy of a Certificate(s) of Insurance giving evidence of the various lines of Respondent's commercial insurance coverage currently in force; and
  - b. Respondent shall submit a letter on Respondent's Company stationary stating Respondent's commitment to provide the various lines of insurance coverage required, and at the limits of coverage specified in Exhibit "A", if awarded a contract under this RFP.
2. Exhibit "B" - Disclosure of Interested Parties

**DISCLOSURE OF INTERESTED PARTIES**

Section 2252.908 of the Government Code is an ethics law that was enacted by H.B. 1295 in 2015, that prohibits a governmental entity from entering into a contract with a business entity (contractor) unless contractor submits a disclosure of interested parties for applicable contracts entered into after January 1, 2016.

The Texas Ethics Commission website, [https://www.ethics.state.tx.us/whatsnew/elf\\_info\\_form1295.htm](https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm) provides the electronic filing application that must be used by the successful contractor to file Form 1295.

Upon notification from SAWS, the successful contractor will be required to use the electronic application to enter the required information on Form 1295 and print a copy of the completed form, which will include a certification of filing that will contain a unique certification number. An authorized agent of the contractor will be required to sign the printed copy of the form and have the form notarized. The electronic form requests a Contract ID be entered which should be the **Bid Number 22-22104**.

Respondent to acknowledge that if selected for award, form will be completed as required.

Please consult your own legal advisor if you have questions regarding the statute or form. This form is required and is considered part of the response to this RFP.

4. Exhibit "C" – Conflict of Interest

The Bidder is required to submit a completed Conflict of Interest Questionnaire (CIQ Form). Effective January 1, 2006, Chapter 176 of the Texas Local Government Code requires that persons, or their agents, who seek to contract for the sale or purchase of property, goods, or services with SAWS shall file a completed Conflict of Interest Questionnaire (CIQ) with SAWS. The CIQ Form will be submitted as part of the bid. This form is available from the Texas Ethics Commission at [www.ethics.state.tx.us](http://www.ethics.state.tx.us). Please consult your own legal advisor if you have questions regarding the statute or form. To report suspected ethics violations impacting The San Antonio Water System, please call 1-800-687-1918.

## **V. Sample Contract**

- A. The Contract terms and conditions are attached as Exhibit "E" for review purposes only. Respondent must acknowledge the contract terms and conditions on the Respondent Questionnaire. The contract sample may be replaced by addendum to provide a sample contract more specific to the requested scope of services. Redlines should be provided and uploaded to the "Response Attachments" tab in IonWave.

- B. Contract Requirements after award:

Upon receipt of the notice of pending Board award of a Contract for Services, the selected Respondent shall prepare all necessary:

1. Certificates of Liability Insurance in compliance with Section 2. Certificate(s) of Liability Insurance ("Certificate") Requirements detailed in Exhibit "A" – "SAWS STANDARD INSURANCE & CERTIFICATE OF LIABILITY INSURANCE REQUIREMENTS" attached to the contract. Certificate(s) submitted must include the SAWS contract number, project name and job number to which this Contract applies. The distribution of the completed certificates shall be in strict accordance with Section 2.h. Distribution of Completed Certificates.

From this point forward the verification and tracking of insurance compliance throughout the life of this contract will be performed through the services of Ebix BPO.

1. A "Corporate Authorization Resolution" listing by name or position the individuals authorized to contractually bind the company must accompany the signed contract returned to SAWS.

## **VI. Proposal Protest Procedures**

Any Respondent who is adversely affected in connection with the solicitation, evaluation, or proposed award of a contract may file a protest appealing the adverse decision to the SAWS Purchasing Director or her designee. The SAWS Purchasing Director or her designee decision on such an appeal shall be final.

Vendor must deliver a written notice of protest to the Purchasing Director or designee within seven (7) calendar days of SAWS notice of non-selection. If vendor does not file a written notice within this time, the vendor will have waived all rights to formally protest the intent to award.

## **VII. Requests for Debriefings**

Contractors not selected for a contract award may request a debriefing for this solicitation within ten (10) days of SAWS Board of Trustees award. Requests for debriefings after ten (10) days of award will not be granted. To schedule a debriefing, please send a written or e-mail request to the contact person listed in Section III, Communication.

## **VIII. Other Requirements**

Other key requirements that should be noted are as follows:

1. Unresolved issues with SAWS may affect your competitiveness.
2. All contracts will require the provision for a "Right-to-Audit" clause.
3. The SAWS shall retain the right to approve or disapprove all sub-consultant selections on all projects.
4. The SAWS shall retain the right to approve or disapprove any changes/variances of proposed sub-consultants and their related percentage of work "as proposed" from the original submittal form of the selected Respondents.
5. All resulting contracts from this solicitation will be required to define and provide supporting documentation for reimbursable costs with no additional markup applied.
6. Gift Policy: SAWS employees are prohibited from soliciting, accepting or agreeing to accept any gifts from outside sources; please see Section M. – Gifts or Benefits of the Water System's Code of Ethical Standards. Section M of the Water System's Code of Ethical Standards regarding Gifts or Benefits is available on the SAWS Business Center website.

**IX. Reservation of Rights**

A. SAWS reserves the right to:

1. Reject any and all proposals received;
2. Issue a subsequent RFP;
3. Cancel the entire RFP;
4. Remedy technical errors in the RFP process;
5. Negotiate with any, all, or none of the Respondents to the RFP;
6. Accept the written proposal as an offer;
7. Waive informalities and irregularities;
8. Accept multiple proposals;
9. Make multiple recommendations to the Board;
10. Request additional information or clarification;
11. All responses and their contents will become the property of SAWS.

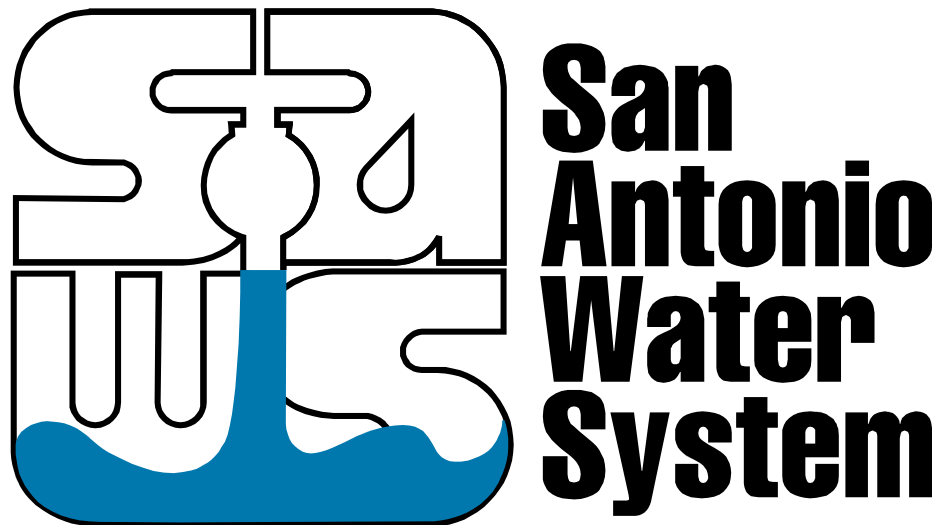
B. SAWS will not reimburse Respondents or sub-contractors for any costs associated with any travel and/or per diem incurred in any presentations associated with the selection process.

C. This RFP does not commit SAWS to enter into a contract, nor does it obligate it to pay any costs incurred in the preparation and submission of proposals or in anticipation of a contract.

## Response Attachments

The following items will be downloaded where needed from IonWave, completed, and uploaded under the "Response Attachments" tab in IonWave.

- ☐ Respondent Questionnaire
- ☐ Completed and signed W-9 Form
- RFP Proposal Response to include the following:
  - ☐ Project Site, Permitting and Site Viability
  - ☐ Operational Plan
  - ☐ References/ Similar Prior Experience
  - ☐ Financial / Operational Stability
  - ☐ Exhibit "A" – Copy of Current Certificate of Liability Insurance and Respondent's commitment letter to provide the lines of insurance coverage required.
  - ☐ Exhibit "B" – Disclosure of Interested Parties (submitted after selection)
  - ☐ Exhibit "C" – Conflict of Interest Questionnaire
  - ☐ Exhibit "D" – Security Requirements (does not need to be returned)
  - ☐ Exhibit "E" – Sample Contract
  - ☐ Exhibit "F1" – Bid Bond
  - ☐ Exhibit "F2" – Performance Bond
  - ☐ Exhibit "G" – Prices for Various Quantities



## **REQUEST FOR PROPOSALS**

**FIVE YEAR CONTRACT FOR  
BIOSOLIDS COMPOSTING  
ADDENDUM 1  
BID NO: 22-22104**

---

**BIDS DUE: October 18, 2022 @ 3:00 PM Central Time**

**To report suspected ethics violations impacting the San Antonio Water System,  
please call 1-800-687-1918.**

---

Addendum 1 is issued to provide the following:

1. Questions asked and the responses to those questions.
2. Revised language to B1. Bid Bond and B2. Performance Bond.
3. Provide language to be added to the Scope of Services, D.5.: Basis of Billing
4. Provide placeholder dates and times for Interviews.
5. Provide a revised Sample Service Agreement under the "Attachments" tab in IonWave. Some dates and the Lab Rates have been updated.

## 1. Questions and Responses to Questions

#	Question	Answer
1.	Performance Bond..."will be required from the successful bidder for the initial contract, renewed annually". They take that to mean that the performance bond of \$500k would be for 1 year with options to extend.	Language revised to state that the Performance Bond shall be based upon one year, and shall be renewable annually. 2) I don't know what they are referring to a "Letter of Credit". We allow a bond or Cashiers check. 3) They should be able to give prior years, but will research this one.
2.	Will a letter of credit, much like the one required for TCEQ would suffice in place of a bond?	No. All bids must be accompanied by Certified or Cashier's Check or an approved Bid Bond in the amount of not less than five percent (5%) <b>of the first year</b> , payable without recourse to the San Antonio Water System.
3.	Our accountants have asked if a short financial summary/company snapshot etc.. would suffice? They are working with hard deadlines for filing on the 15th and are concerned about the time involved to fulfill request.	The requirement is that the bidder must provide a current audited financial report to include Income Statement, Balance Sheet and Statement of Cash Flow. SAWS will accept a non-audited financial report; however, detail is required in order to make a Financial/ Operational Stability determination.
4.	Regarding the performance bond, there is conflicting guidance regarding "warranty" claims. First provision says one year after contract termination, but the next provision says the bond must remain in effect "at least 2 years" after completion of the work. Sureties will resist the longer exposure term. Can we delete the reference to 2 years and will one year be sufficient?	Language in the Service Agreement remains as proposed.
5.	Regarding the bid bond or Certified/Cashier's check, is the bond or check required to cover 5% of the total 5-year bid or just the 1st year's bid?	Language has been revised to reflect 5% of the first year.
6.	While I assume it is not SAWS intent to exclude registered facility's, can you please clarify if TCEQ registered facilities are acceptable vs permitted facilities?	Registered facilities will be allowed to submit a response to the RFP.

7.	Will there be a public posting of bids or announcements of bids tabulations at the deadline for submission but prior to presentations?	No, this is a Request for Proposal. Pricing will not be read aloud. Pricing is one of six criteria and will be evaluated as a part of the overall evaluation.
8.	3. If belt filter press material and drying bed material are both available, who will determine which material will go where in a scenario with multiple haulers and composters?	The Manager of Biosolids Operations will decide where drying bed material will be processed. SAWS will split the drying bed material based on % of tonnage needed to be removed for the week.
9.	4. In the agreement, section 12.01 – 13.01, 15.03, We assume those dates will be changed to reflect the start date of 1/1/2023 and then subsequent dates after that will follow in line?	Service Agreement is a "Sample" and is intended to provide applicable language, however, dates have been updated. Additionally, the Lab Rates have been updated with current rates. A revised Sample Service Agreement has been uploaded to IonWave.

**2. B1. Bid Bond and B2. Performance Bond, revised to read as follows:**

**B.1. Bid Bond:** All bids must be accompanied by Certified or Cashier's Check or an approved Bid Bond in the amount of not less than five percent (5%) of the total bid of the first year, payable without recourse to the San Antonio Water System. Surety shall provide a copy of the Power of Attorney authorizing the Executing Agent the authority to execute the bid bond documents and bind the Surety to the bid bond conditions. The bid bond shall have a corporate Surety that is licensed to conduct business in Texas and authorized to underwrite bonds in the amount of the bid bond. ***Submission of an Individual Surety is not acceptable for purposes of bonding a bid bond.*** Bid Bonds, Certified or Cashier's checks will be retained for the first, second, and third lowest bidders until the contract is executed.

**B.2. Performance Bond:** A Performance Bond of \$500,000.00 will be required from the successful bidder for the initial contract first year period, renewable annually. The Performance Bond will be required for the length of the contract to include the execution of each extension period. Bidders must provide a letter with bid from Bonding Company stating that in the event of award, bidder will be able to provide the requested Performance Bond. [Sample bond forms are attached. Bonds submitted must meet the requirements as specified in these samples.](#)

**3. D.5.: Basis of Billing (of the RFP)**

Certified scales are located at the SMC WRC. These scales will be used for weighing of all contractor vehicles entering and exiting the WRC. The certified scales will be the basis of billing to SAWS.

**Add the following language:**

Any biosolids load delivered to the contractor that does not accompany a SAWS scale ticket must be verified and weighed or scanned by the SAWS contractors. The contractor shall notify the SAWS staff to advise of the missing ticket. The Contractor will need to also provide a printed scan or scale ticket from the receiving facility and send a copy of the printed scan or scale ticket by the end of that business day.

**4. Placeholder dates and times for Interviews.**

Each respondent meeting the requirements will be allotted 30 mins for a presentation and 15 minutes for questions. The following dates and times are placeholders for Interviews.

- November 1, 2022; 1:00 PM
- November 1, 2022; 2:00 PM
- November 2, 2022; 9:00 AM
- November 2, 2022; 10:00 AM

**5. Sample Service Agreement**

A revised Sample Service Agreement under the “Attachments” tab in IonWave. Some dates and the Lab Rates have been updated.

All other terms and conditions remain unchanged.



## **SECURITY PROCEDURES**

If work will be conducted on SAWS property, on SAWS infrastructure, on a SAWS customer's property, or involve any SAWS networks, or any SAWS facility, the Contractor shall provide background screening information of their employees and sub-contractors to CastleBranch, the SAWS-approved vendor of background screening services, at [sawsbackgroundcheck@castlebranch.com](mailto:sawsbackgroundcheck@castlebranch.com). Any person found to have an unacceptable background check will not be allowed to perform work under this Contract (however, at SAWS's sole discretion, a waiver may be given by SAWS Security for an unacceptable finding, provided that it must first be approved and signed off on by the Director of SAWS Security). Any sub-contractors performing work must also receive a background screening by CastleBranch. Contractor shall be responsible for the accuracy of information on the background screening information sent to [sawsbackgroundcheck@castlebranch.com](mailto:sawsbackgroundcheck@castlebranch.com). For further questions about background screening, call CastleBranch at 910-679-2979 or 888-723-4263 ext. 7857 and advise them the Contractor is working for SAWS. Once background screening is approved by SAWS Security, Contractor must also complete a Project Contractor Data Form ("PCDF"). The PCDF will be sent to [securitygroup@saws.org](mailto:securitygroup@saws.org). The PCDF is required for the Contractor and its sub-contractors to receive the required badges and parking tags necessary to fulfill the work under this Contract. The PCDF must be sent electronically to [securitygroup@saws.org](mailto:securitygroup@saws.org).

Each employee and agent of Contractor shall obtain a SAWS photo identification badge (a "Contractor's Badge") and parking tag prior to any work on SAWS property or asset, which shall be used only for purposes necessary to perform the work under this Contract. SAWS Badge Office hours are Monday, Wednesday and Friday from 9:00am to 12:00pm, excluding SAWS holidays (hours are subject to change). SAWS Security staff can be contacted at (210) 233-3177 or (210) 233-3338. Once the Project is completed, the Contractor shall return all Contractor Badges and parking tags to the Security Office. A Contractor who does not return the Contractor Badges or parking tags is not in compliance with these procedures.

SAWS facilities require a SAWS employee to physically escort the Contractor at all times. SAWS may, at its sole discretion, waive the escort requirements if the PCDF and a "clean" background screening from CastleBranch are approved. Waiver of the escort requirement shall only be through a written correspondence to Contractor from SAWS Security.

Sub-contractors must always be under escort of Contractor while performing work on any SAWS property or asset. Sub-contractors must display the Contractor's Badge at all times while working on any SAWS property or asset. Sub-contractors are required to complete a background screening and be listed on the PCDF regardless of receiving a Contractor's Badge. The Contractor is solely responsible for the actions of its employees, agents, sub-contractors and consultants.

Contractor shall advise their SAWS Project Manager/Inspector of any employee terminations or changes to personnel performing work under this Contract, and the Contractor shall immediately turn in any and all Contractor's Badges and/or parking tags of employees or agents who are terminated or no longer performing work under this Contract. If Contractor becomes aware of any changes in the information contained in the PCDF or the background screening information, Contractor shall immediately notify the SAWS Project Manager/Inspector and provide an updated PCDF to [securitygroup@saws.org](mailto:securitygroup@saws.org) and background screening information to [sawsbackgroundcheck@castlebranch.com](mailto:sawsbackgroundcheck@castlebranch.com).

Contractor is responsible for being in compliance with SAWS Security requirements and for maintaining security of SAWS property, infrastructure, SAWS customer's property, networks, and facilities for the length of the Project. Security incidents must be reported to SAWS Security immediately at (210) 233-3338.

If the Contractor plans to leave the site unsecure or open during the Project, they must provide a SAWS-approved security guard to monitor ingress and egress to the SAWS site.

If Contractor takes any action that diminishes the security of a SAWS site, Contractor will be responsible for providing additional security requirements at its expense. Some examples of additional requirements that SAWS may require include hiring of SAWS approved security guards, temporary fencing, mobile Closed Circuit Television Monitoring trailer(s), or extra lighting. Notwithstanding anything herein to the contrary, any provisions in these Security Procedures that may appear to give SAWS the right to direct Contractor as to details of doing any work under this Contract or to exercise a measure of control over any security measures or such work shall be deemed to mean that Contractor shall follow the desires of SAWS in the results of the work or security measures only.

Advance coordination by Contractor with SAWS Security for these security requirements is necessary to ensure no delays with timely performance of work. Any other provision of this Contract notwithstanding, in the event Contractor fails to comply with SAWS Security requirements, SAWS may, with no penalty, claim of any nature (including but not limited to breach of contract) against SAWS by the Contractor:

- Issue a Work Stoppage Order until the security violation (s) are remedied
- Ask any unidentified or improperly identified person or equipment to leave SAWS site immediately and not return until items or deficiencies are remedied to SAWS's satisfaction.



# TCEQ Core Data Form

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

## SECTION I: General Information

<b>1. Reason for Submission</b> (If other is checked please describe in space provided.)		
<input type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input checked="" type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)		<input type="checkbox"/> Other
<b>2. Customer Reference Number</b> (if issued)	<a href="#">Follow this link to search for CN or RN numbers in Central Registry**</a>	<b>3. Regulated Entity Reference Number</b> (if issued)
CN 600529069		RN 103119020

## SECTION II: Customer Information

<b>4. General Customer Information</b>		<b>5. Effective Date for Customer Information Updates</b> (mm/dd/yyyy)		
<input type="checkbox"/> New Customer		<input checked="" type="checkbox"/> Update to Customer Information		<input type="checkbox"/> Change in Regulated Entity Ownership
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)				
<i>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).</i>				
<b>6. Customer Legal Name</b> (If an individual, print last name first: eg: Doe, John)		<i>If new Customer, enter previous Customer below:</i>		
SAN ANTONIO WATER SYSTEM (SAWS)				
<b>7. TX SOS/CPA Filing Number</b>	<b>8. TX State Tax ID</b> (11 digits)	<b>9. Federal Tax ID</b> (9 digits)	<b>10. DUNS Number</b> (if applicable)	
	17426325308	74-2632530	057582603	
<b>11. Type of Customer:</b>	<input type="checkbox"/> Corporation	<input type="checkbox"/> Individual	Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited	
Government: <input checked="" type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> Other	<input type="checkbox"/> Sole Proprietorship		<input type="checkbox"/> Other:	
<b>12. Number of Employees</b>		<b>13. Independently Owned and Operated?</b>		
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input checked="" type="checkbox"/> 501 and higher		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<b>14. Customer Role</b> (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following				
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Owner & Operator <input type="checkbox"/> Other:				
<input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> VCP/BSA Applicant				
<b>15. Mailing Address:</b>	2800 US HIGHWAY 281 NORTH			
	City	SAN ANTONIO	State	TX
			ZIP	78212
			ZIP + 4	3106
<b>16. Country Mailing Information</b> (if outside USA)			<b>17. E-Mail Address</b> (if applicable)	
<b>18. Telephone Number</b>		<b>19. Extension or Code</b>		<b>20. Fax Number</b> (if applicable)

**SECTION III: Regulated Entity Information****21. General Regulated Entity Information** (If 'New Regulated Entity' is selected, a new permit application is also required.)☐ 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 Core 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.)

STEVEN M. CLOUSE WATER RECYCLING CENTER (SMCWRC)

**23. Street Address of the Regulated Entity:**

3495 VALLEY ROAD

**(No PO Boxes)**

City	State	TX	ZIP	ZIP + 4
SAN ANTONIO			78221	5238

**24. County** BEXAR

If no Street Address is provided, fields 25-28 are required.

**25. Description to****Physical Location:****26. Nearest City****State****Nearest ZIP Code**

*Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).*

**27. Latitude (N) In Decimal:****28. Longitude (W) In Decimal:**

Degrees

Minutes

Seconds

Degrees

Minutes

Seconds

**29. Primary SIC Code****30. Secondary SIC Code****31. Primary NAICS Code****32. Secondary NAICS Code**

(4 digits)

(4 digits)

(5 or 6 digits)

(5 or 6 digits)

4952

221320

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

MUNICIPAL WASTEWATER TREATMENT/RECYCLING

**34. Mailing**

2800 US HIGHWAY 281 NORTH

**Address:**

City	State	TX	ZIP	ZIP + 4
SAN ANTONIO			7821	3106

**35. E-Mail Address:****36. Telephone Number****37. Extension or Code****38. Fax Number** (if applicable)

( 210 ) 704-7297

( ) -

**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.




<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source Review Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS
<input type="checkbox"/> Sludge	<input type="checkbox"/> Storm Water	<input type="checkbox"/> Title V Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil
<input type="checkbox"/> Voluntary Cleanup	<input checked="" type="checkbox"/> Wastewater	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:
	WQ10137033			

#### **SECTION IV: Preparer Information**

<b>40. Name:</b>	FLORAMIE WELCH	<b>41. Title:</b>	ENVIRONMENTAL ANALYST III
<b>42. Telephone Number</b>	<b>43. Ext./Code</b>	<b>44. Fax Number</b>	<b>45. E-Mail Address</b>
( 210 ) 233-3744		( ) -	FLORAMIE.WELCH@SAWS.ORG

#### **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.

<b>Company:</b>	SAN ANTONIO WATER SYSTEM (SAWS)	<b>Job Title:</b>	VICE PRESIDENT, TREATMENT OPERATIONS
<b>Name (In Print):</b>	ALISSA LOCKETT, P.E.	<b>Phone:</b>	( 210 ) 233- 3104
<b>Signature:</b>		<b>Date:</b>	12-6-2024

*The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by 30 TAC Chapter 39. The information provided in this summary may change during the technical review of the application and are not federal enforceable representations of the permit application.*

San Antonio Water System (CN600529069) operates the Steven M. Clouse Water Recycling Center (RN103119020), a wastewater treatment facility. The facility is located at 3495 Valley Road near the city of San Antonio, Bexar County, Texas 78221. This permit application is for renewal to discharge treated domestic wastewater at the following Outfalls:

- Outfall 001 = 125 million gallons per day
- Outfall 002 = 10 million gallons per day
- Outfall 003 = 10 million gallons per day
- Outfall 004 = 3 million gallons per day
- Outfall 005 = 2.6 million gallons per day
- Outfall 006 = 46 million gallons per day

The pollutants from these discharges are Carbonaceous Biochemical Oxygen Demand, Total Suspended Solids, Ammonia and Escherichia coli (E. coli). The discharges also contain chlorine residual of at least 1 part per million and are required to have a potential of hydrogen (pH) between 6.0 and 9.0, measured as standard units. Additional potential pollutants are included in the **Domestic Wastewater Application Technical Report, Worksheet 2.0.**

We need a brief description of the process and NO fancy words 😊

Raw water is supplied by Medina Lake where it is withdrawn from an intake structure at the Medina River and is fed through a clarification system to remove turbidity, which are particles that cause cloudiness in water. The water is then fed through pre-filtration and ultra-filtration membranes to remove dissolved solids and the finished water is distributed for potable drinking water use while the solids are stored in lagoons.

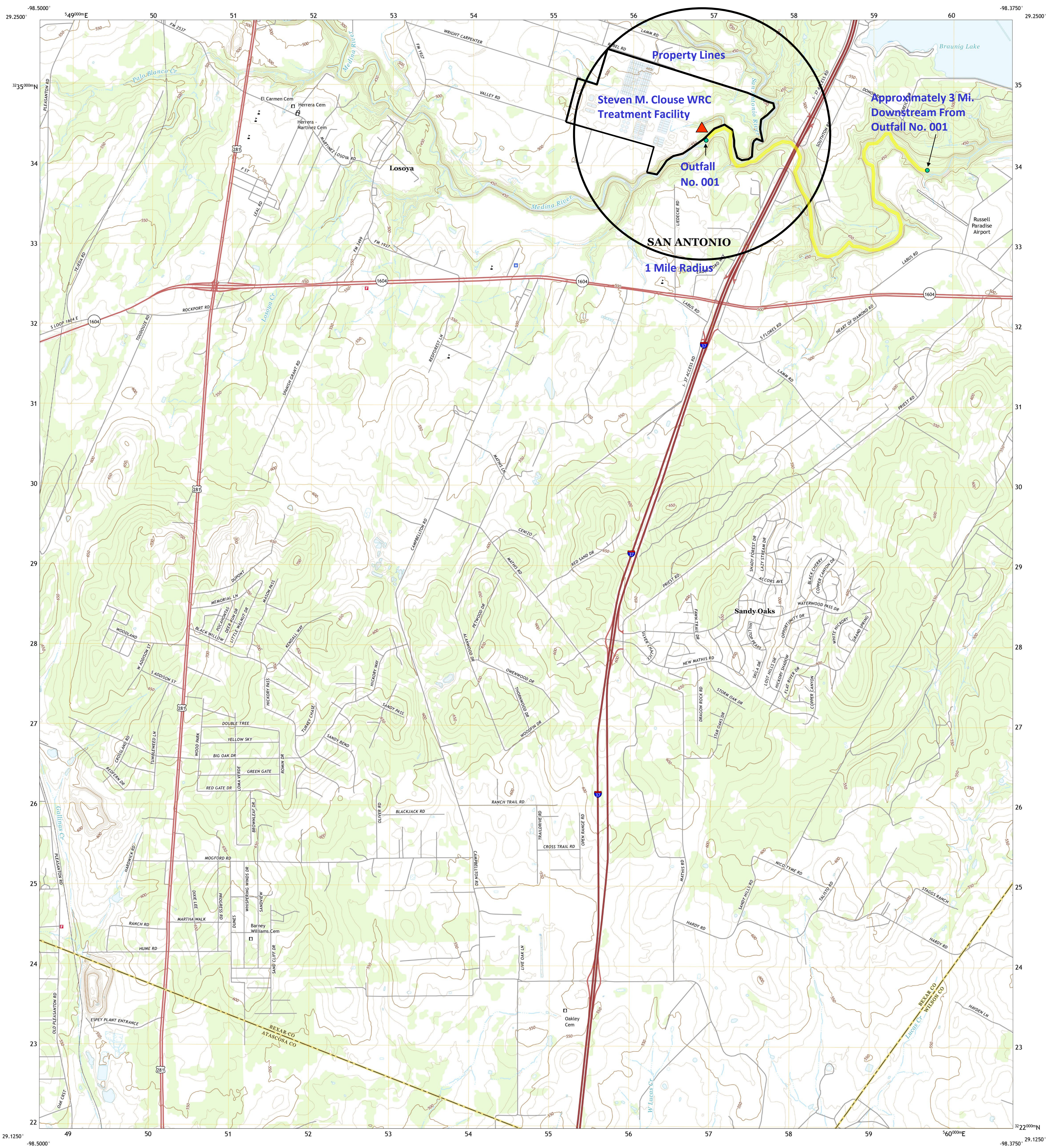




U.S. DEPARTMENT OF THE INTERIOR  
U.S. GEOLOGICAL SURVEY



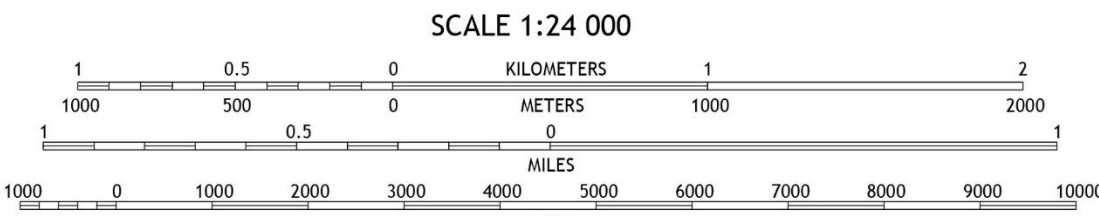
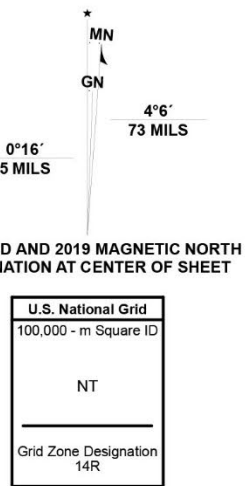
LOSOYA QUADRANGLE  
TEXAS  
7.5-MINUTE SERIES



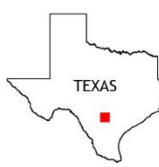
Produced by the United States Geological Survey

North American Datum of 1983 (NAD83)  
World Geodetic System of 1984 (WGS84), Projection and  
1 000-meter grid/Universal Transverse Mercator, Zone 14R  
This map is not a legal document. Boundaries may be  
generalized for this map scale. Private lands within government  
reservations may not be shown. Obtain permission before  
entering private lands.

Imagery.....NAIP, September 2016 - November 2016  
Roads.....U.S. Census Bureau, 2015  
Names.....GNIS, 1979 - 2021  
Hydrography.....National Hydrography Dataset, 2003 - 2021  
Contours.....National Elevation Dataset, 2021  
Boundaries.....Multiple sources; see metadata file 2019 - 2021  
Wetlands.....FWS National Wetlands Inventory Not Available



CONTOUR INTERVAL 10 FEET  
NORTH AMERICAN VERTICAL DATUM OF 1988  
This map was produced to conform with the  
National Geospatial Program US Topo Product Standard.



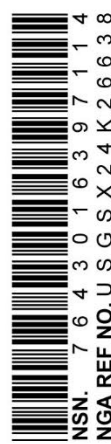
1	2	3
4	5	6
7	8	9

ADJOINING QUADRANGLES

1 Terrell Wells  
2 Southon  
3 Elmendorf  
4 Thelma  
5 Sapanco  
6 Poteet  
7 Leming  
8 Sapanco SE

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

LOSOYA, TX  
2022



NSA 7 8 3 0 1 0 3 3 9 7 1 1 4 4  
NSA REF NO. USGS X 2 4 K 2 6 6 3 8

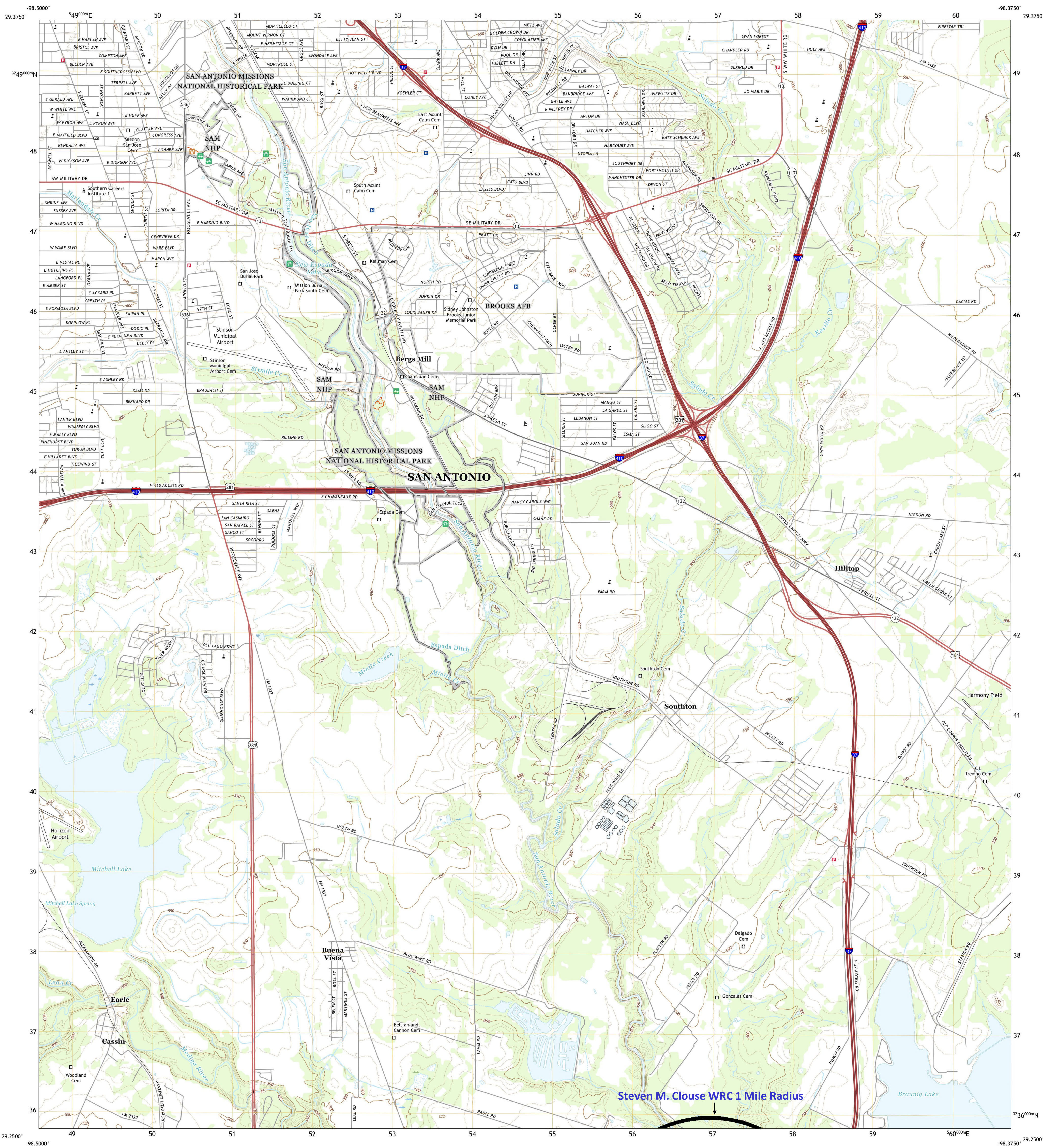




U.S. DEPARTMENT OF THE INTERIOR  
U.S. GEOLOGICAL SURVEY



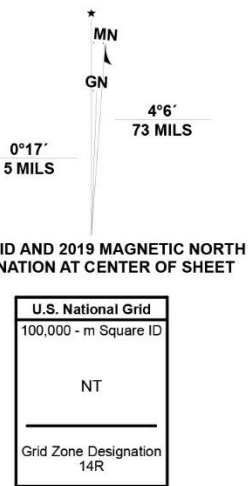
SOUTHTON QUADRANGLE  
TEXAS - BEXAR COUNTY  
7.5-MINUTE SERIES



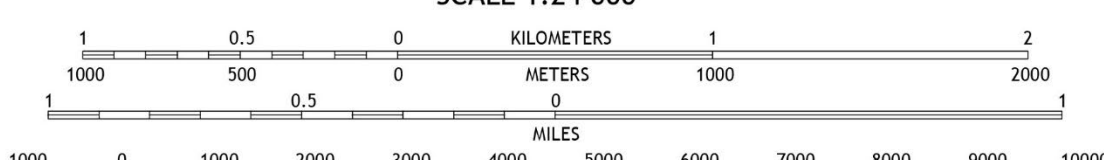
Produced by the United States Geological Survey

North American Datum of 1983 (NAD83)  
World Geodetic System of 1984 (WGS84). Projection and  
1 000-meter grid/Universal Transverse Mercator, Zone 14R.  
This map is not a legal document. Boundaries may be  
generalized for this map scale. Private lands within government  
reservations may not be shown. Obtain permission before  
entering private lands.

Imagery.....NAIP, September 2016 - November 2016  
Roads.....U.S. Census Bureau, 2015  
Names.....GNIS, 1979 - 2022  
Hydrography.....National Hydrography Dataset, 2003 - 2021  
Contours.....National Elevation Dataset, 2021  
Boundaries.....Multiple sources; see metadata file 2019 - 2021  
Wetlands.....FWS National Wetlands Inventory Not Available

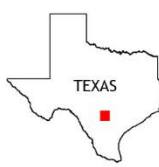


SCALE 1:24 000



CONTOUR INTERVAL 10 FEET  
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the  
National Geospatial Program US Topo Product Standard.



1	2	3
4	5	6
7	8	9

ADJOINING QUADRANGLES

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

SOUTHTON, TX  
2022



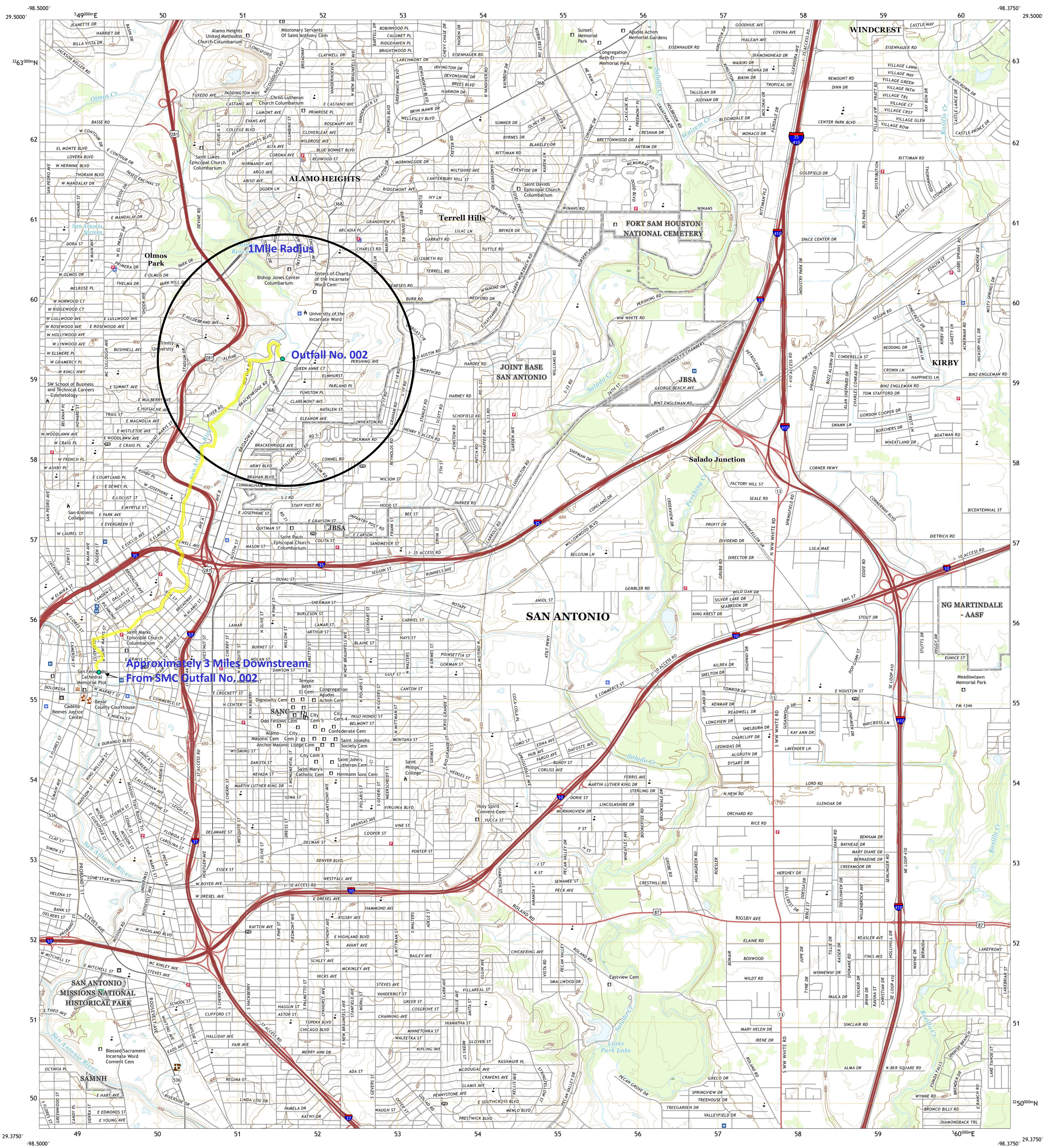




U.S. DEPARTMENT OF THE INTERIOR  
U.S. GEOLOGICAL SURVEY



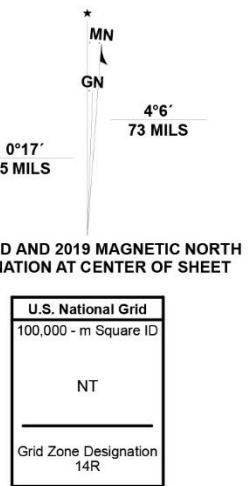
SAN ANTONIO EAST QUADRANGLE  
TEXAS - BEXAR COUNTY  
7.5-MINUTE SERIES



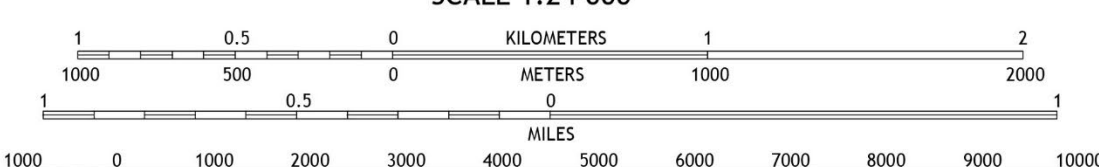
Produced by the United States Geological Survey

North American Datum of 1983 (NAD83)  
World Geodetic System of 1984 (WGS84). Projection and  
1 000-meter grid/Universal Transverse Mercator, Zone 14R.  
This map is not a legal document. Boundaries may be  
generalized for this map scale. Private lands within government  
reservations may not be shown. Obtain permission before  
entering private lands.

Imagery.....NAIP, September 2016 - November 2016  
Roads.....U.S. Census Bureau, 2015  
Names.....GNIS, 1979 - 2022  
Hydrography.....National Hydrography Dataset, 2003 - 2018  
Contours.....National Elevation Dataset, 2019  
Boundaries.....Multiple sources; see metadata file 2013 - 2021  
Wetlands.....FWS National Wetlands Inventory Not Available



SCALE 1:24 000



CONTOUR INTERVAL 10 FEET  
NORTH AMERICAN VERTICAL DATUM OF 1988  
This map was produced to conform with the  
National Geospatial Program US Topo Product Standard.



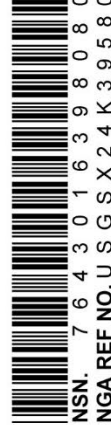
1	2	3
4	5	6
7	8	

ADJOINING QUADRANGLES

1 Castle Hills  
2 Langhorne  
3 Schertz  
4 San Antonio West  
5 Hartweg  
6 Terrell Hills  
7 Southtown  
8 Elmendorf



SAN ANTONIO EAST, TX  
2022



NSA 7 5 0 1 0 3 9 8 0 0 0  
NGA REF NO. USGS X 2 4 K 3 9 5 8 0

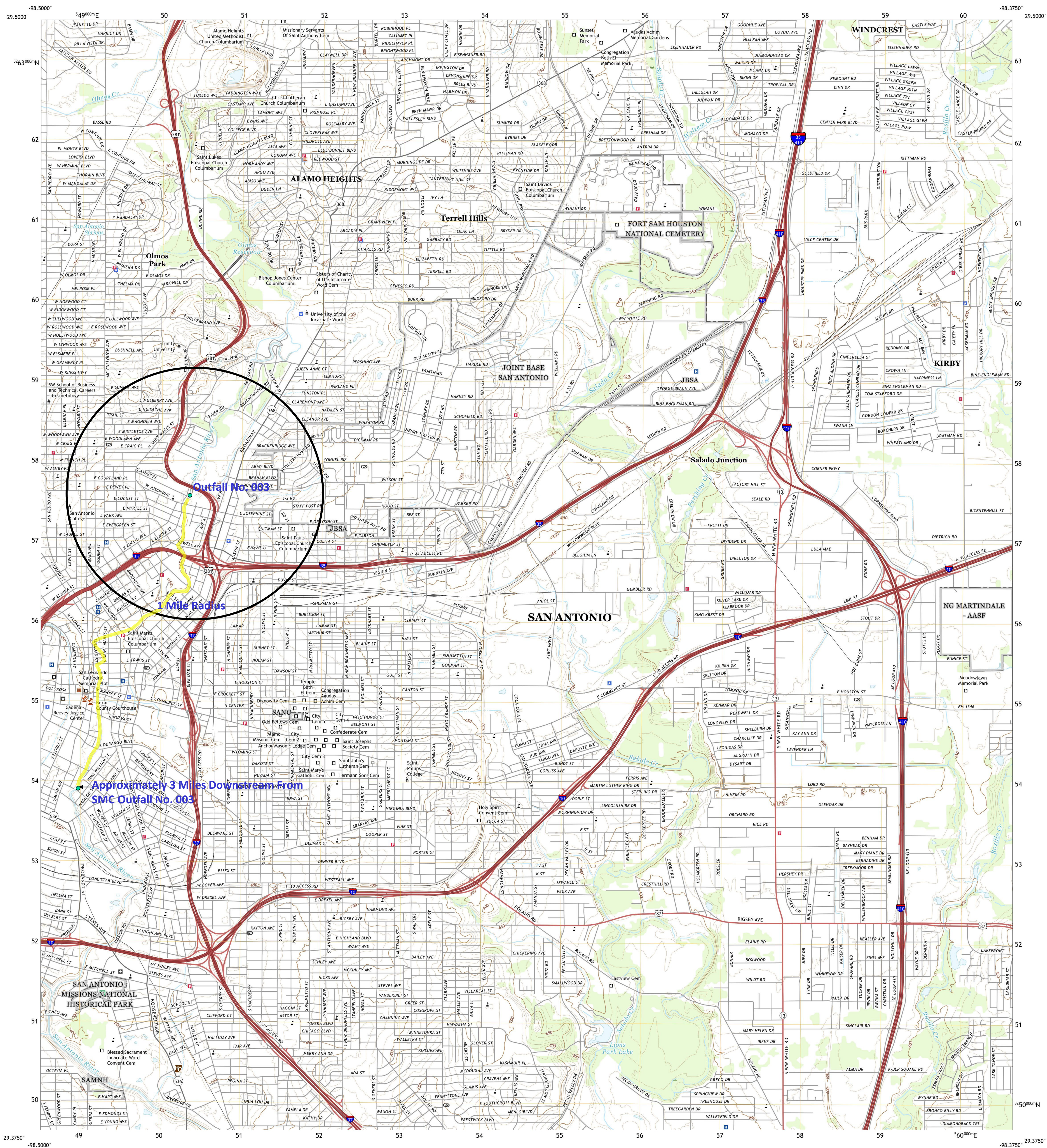




U.S. DEPARTMENT OF THE INTERIOR  
U.S. GEOLOGICAL SURVEY



SAN ANTONIO EAST QUADRANGLE  
TEXAS - BEXAR COUNTY  
7.5-MINUTE SERIES



Produced by the United States Geological Survey

North American Datum of 1983 (NAD83)  
World Geodetic System of 1984 (WGS84). Projection and  
1 000-meter grid/Universal Transverse Mercator, Zone 14R.  
This map is not a legal document. Boundaries may be  
generalized for this map scale. Private lands within government  
reservations may not be shown. Obtain permission before  
entering private lands.

Imagery.....NAIP, September 2016 - November 2016  
Roads.....U.S. Census Bureau, 2015  
Names.....GNIS, 1979 - 2022  
Hydrography.....National Hydrography Dataset, 2003 - 2018  
Contours.....National Elevation Dataset, 2019  
Boundaries.....Multiple sources; see metadata file 2013 - 2021  
Wetlands.....FWS National Wetlands Inventory Not Available



SCALE 1:24 000  
KILOMETERS  
METERS  
MILES  
FEET  
NORTH AMERICAN VERTICAL DATUM OF 1988  
This map was produced to conform with the  
National Geospatial Program US Topo Product Standard.



1	2	3
4	5	6
7	8	

ADJOINING QUADRANGLES

1 Castle Hills  
2 Langhorne  
3 Schertz  
4 San Antonio West  
5 Hartweg  
6 Terrell Hills  
7 Southtown  
8 Elmendorf

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

SAN ANTONIO EAST, TX  
2022



NSN 7540-01-000-0000  
NGA REF NO. USGS X 24 K 3 9 5 8 0

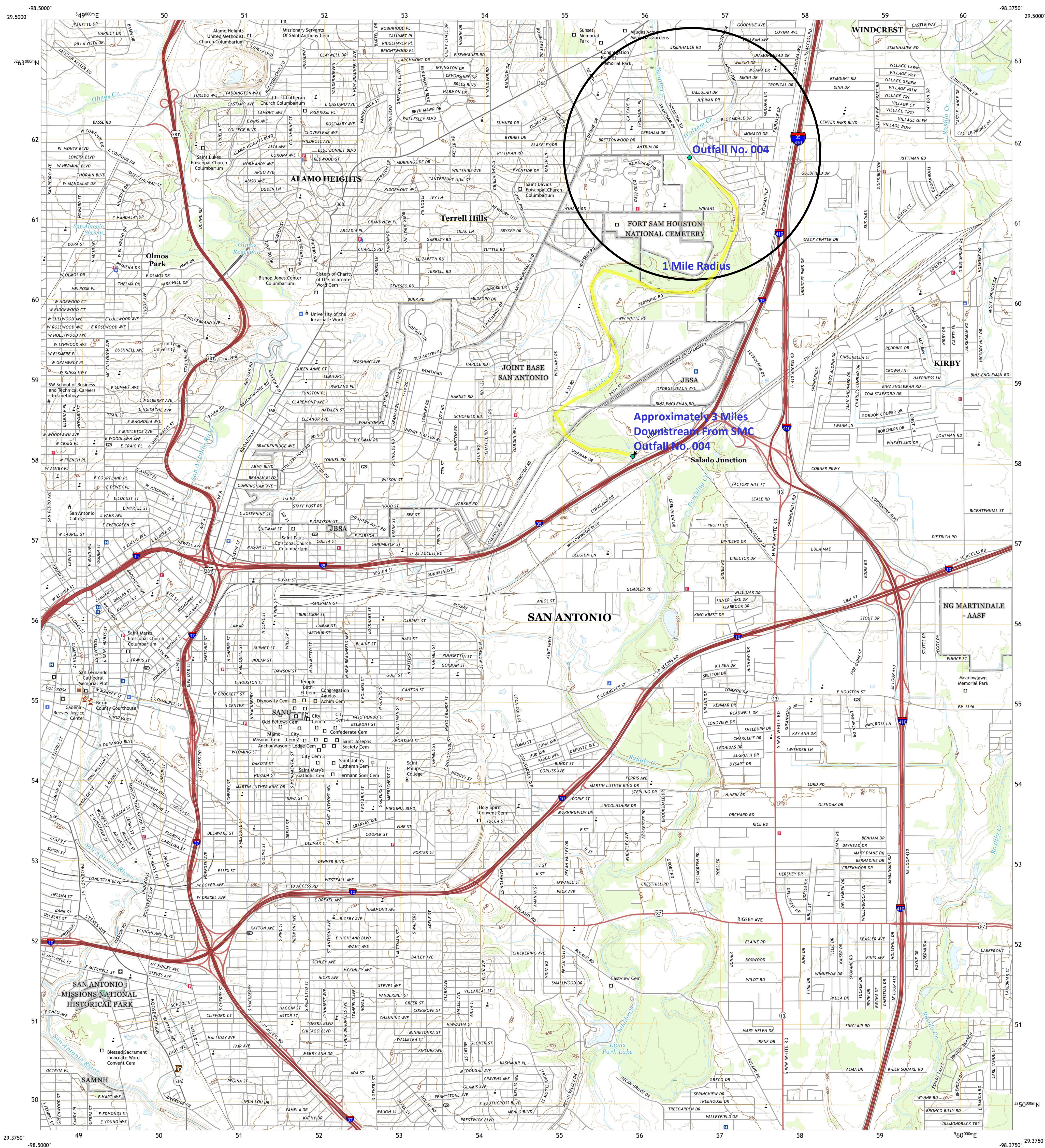




U.S. DEPARTMENT OF THE INTERIOR  
U.S. GEOLOGICAL SURVEY



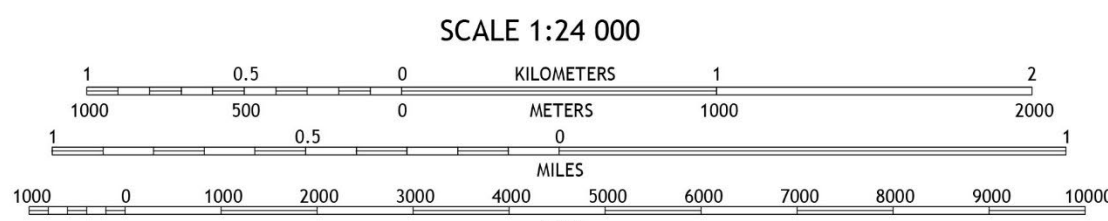
SAN ANTONIO EAST QUADRANGLE  
TEXAS - BEXAR COUNTY  
7.5-MINUTE SERIES



Produced by the United States Geological Survey

North American Datum of 1983 (NAD83)  
World Geodetic System of 1984 (WGS84). Projection and  
1 000-meter grid/Universal Transverse Mercator, Zone 14R.  
This map is not a legal document. Boundaries may be  
generalized for this map scale. Private lands within government  
reservations may not be shown. Obtain permission before  
entering private lands.

Imagery.....NAIP, September 2016 - November 2016  
Roads.....U.S. Census Bureau, 2015  
Names.....GNIS, 1979 - 2022  
Hydrography.....National Hydrography Dataset, 2003 - 2018  
Contours.....National Elevation Dataset, 2019  
Boundaries.....Multiple sources; see metadata file 2013 - 2021  
Wetlands.....FWS National Wetlands Inventory Not Available



QUADRANGLE LOCATION  
TEXAS  
QUADRANGLE LOCATION  
1 Castle Hills  
2 Longhorn  
3 Schertz  
4 San Antonio West  
5 Hartweg  
6 Terrell Hills  
7 Southtown  
8 Elmsdorf

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

SAN ANTONIO EAST, TX  
2022



NSN 7540-01-000-0000  
NGA REF NO. USGS X 24 K 3 9 5 8 0

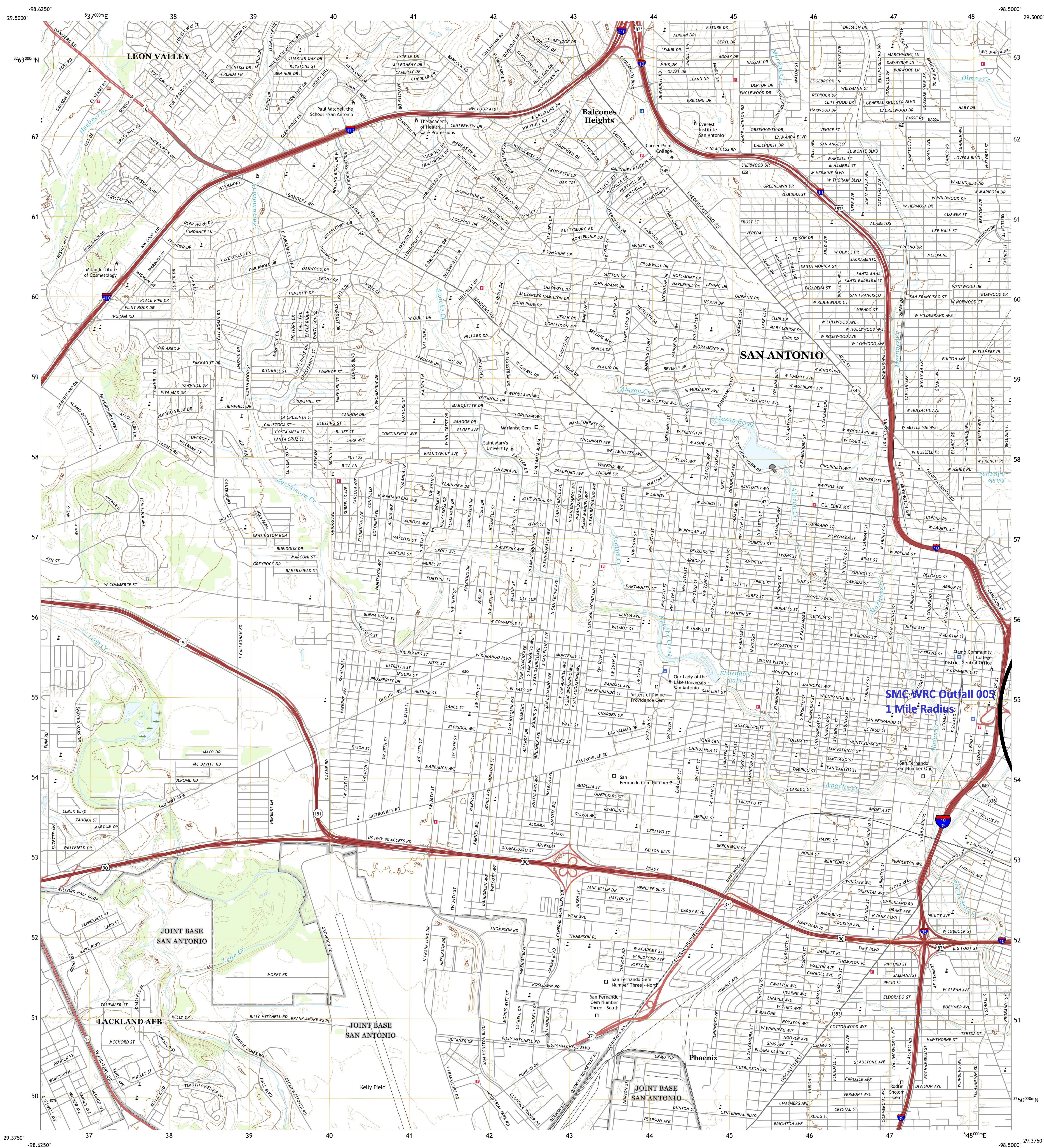




U.S. DEPARTMENT OF THE INTERIOR  
U.S. GEOLOGICAL SURVEY



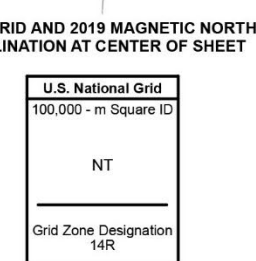
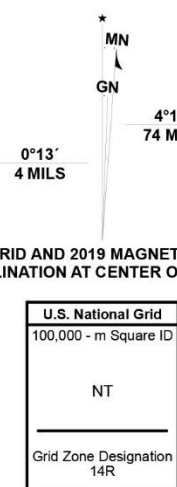
SAN ANTONIO WEST QUADRANGLE  
TEXAS - BEXAR COUNTY  
7.5-MINUTE SERIES



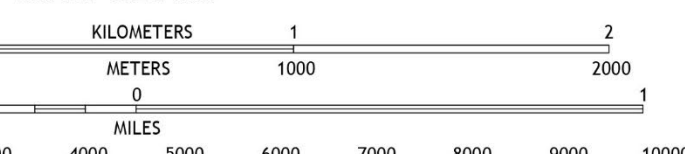
Produced by the United States Geological Survey

North American Datum of 1983 (NAD83)  
World Geodetic System of 1984 (WGS84). Projection and  
1 000-meter grid/Universal Transverse Mercator, Zone 14R.  
This map is not a legal document. Boundaries may be  
generalized for this map scale. Private lands within government  
reservations may not be shown. Obtain permission before  
entering private lands.

Imagery.....NAIP, September 2016 - November 2016  
Roads.....U.S. Census Bureau, 2015  
Names.....GNIS, 1979 - 2022  
Hydrography.....National Hydrography Dataset, 2003 - 2018  
Contours.....National Elevation Dataset, 2019  
Boundaries.....Multiple sources; see metadata file 2019 - 2021  
Wetlands.....FWS National Wetlands Inventory Not Available



SCALE 1:24 000



CONTOUR INTERVAL 10 FEET  
NORTH AMERICAN VERTICAL DATUM OF 1988  
This map was produced to conform with the  
National Geospatial Program US Topo Product Standard.



1	2	3
4	5	6
7	8	9

1 Helotes  
2 Castle Hills  
3 Longhorn  
4 Culebra Hill  
5 San Antonio East  
6 Nacodon  
7 Terrell Wells  
8 Southtown



SAN ANTONIO WEST, TX  
2022



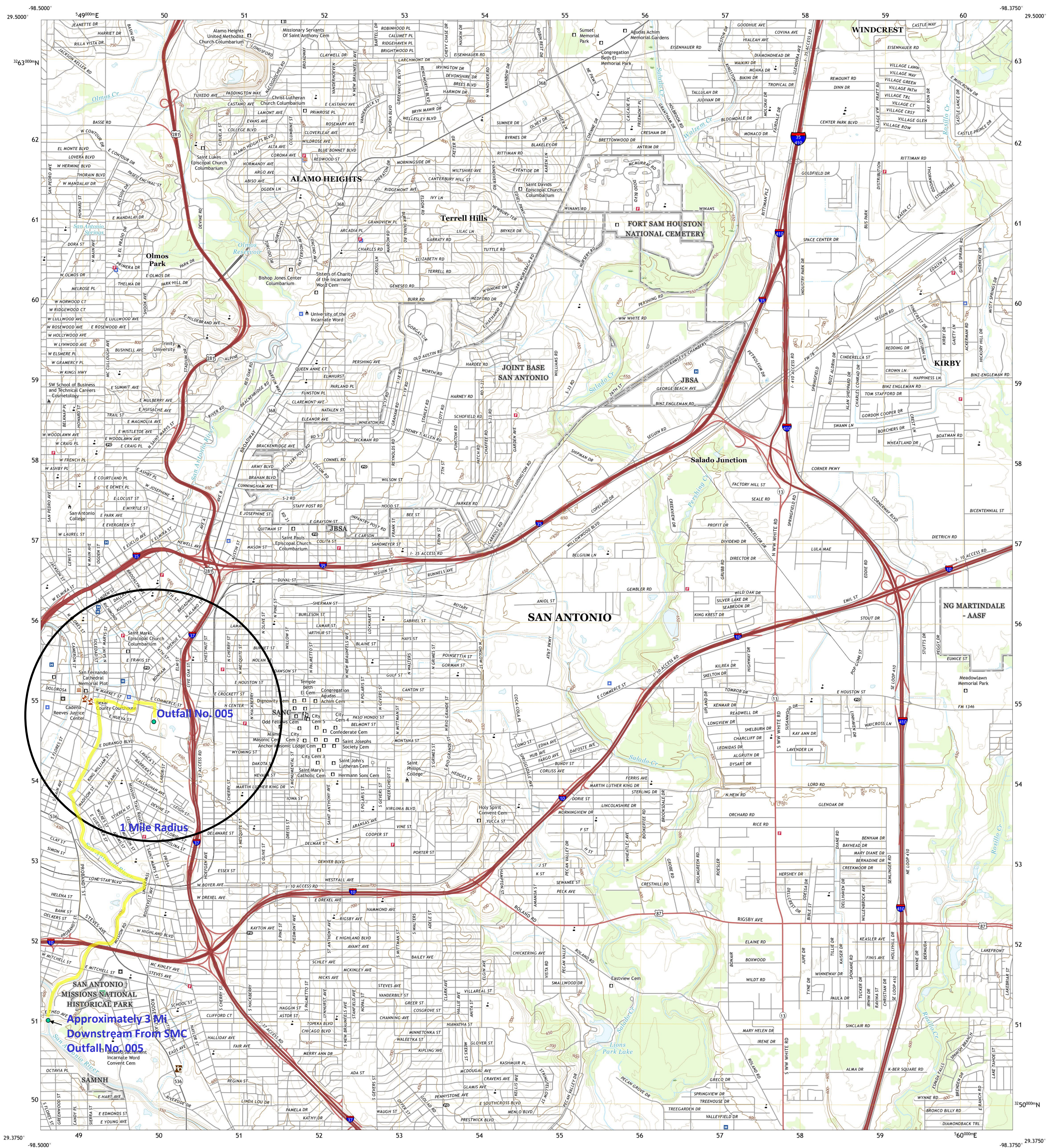




U.S. DEPARTMENT OF THE INTERIOR  
U.S. GEOLOGICAL SURVEY



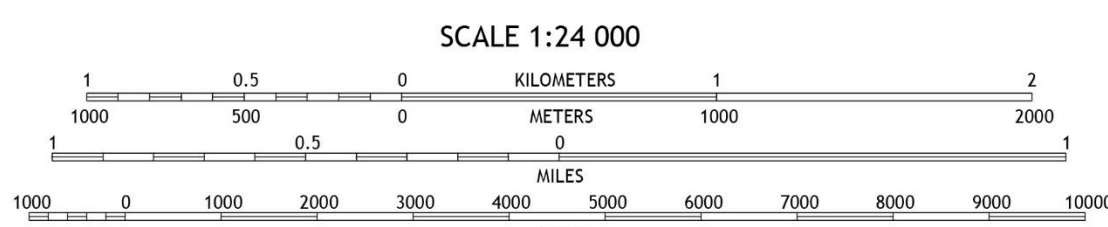
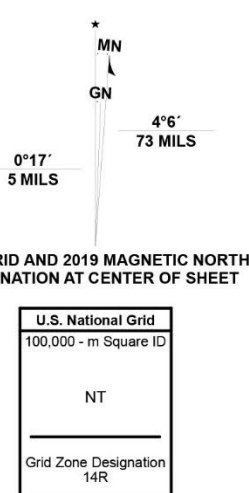
SAN ANTONIO EAST QUADRANGLE  
TEXAS - BEXAR COUNTY  
7.5-MINUTE SERIES



Produced by the United States Geological Survey

North American Datum of 1983 (NAD83)  
World Geodetic System of 1984 (WGS84). Projection and  
1 000-meter grid/Universal Transverse Mercator, Zone 14R.  
This map is not a legal document. Boundaries may be  
generalized for this map scale. Private lands within government  
reservations may not be shown. Obtain permission before  
entering private lands.

Imagery.....NAIP, September 2016 - November 2016  
Roads.....U.S. Census Bureau, 2015  
Names.....GNIS, 1979 - 2022  
Hydrography.....National Hydrography Dataset, 2003 - 2018  
Contours.....National Elevation Dataset, 2019  
Boundaries.....Multiple sources; see metadata file 2013 - 2021  
Wetlands.....FWS National Wetlands Inventory Not Available



QUADRANGLE LOCATION  
1 Castle Hills  
2 Longhorn  
3 Schertz  
4 San Antonio West  
5 Hartweg  
6 Terrell Hills  
7 Southtown  
8 Ellensdorf



SAN ANTONIO EAST, TX  
2022



NSN 7540-01-301-330-0000  
NGA REF NO. USGS X 24 K 3 9 5 8 0

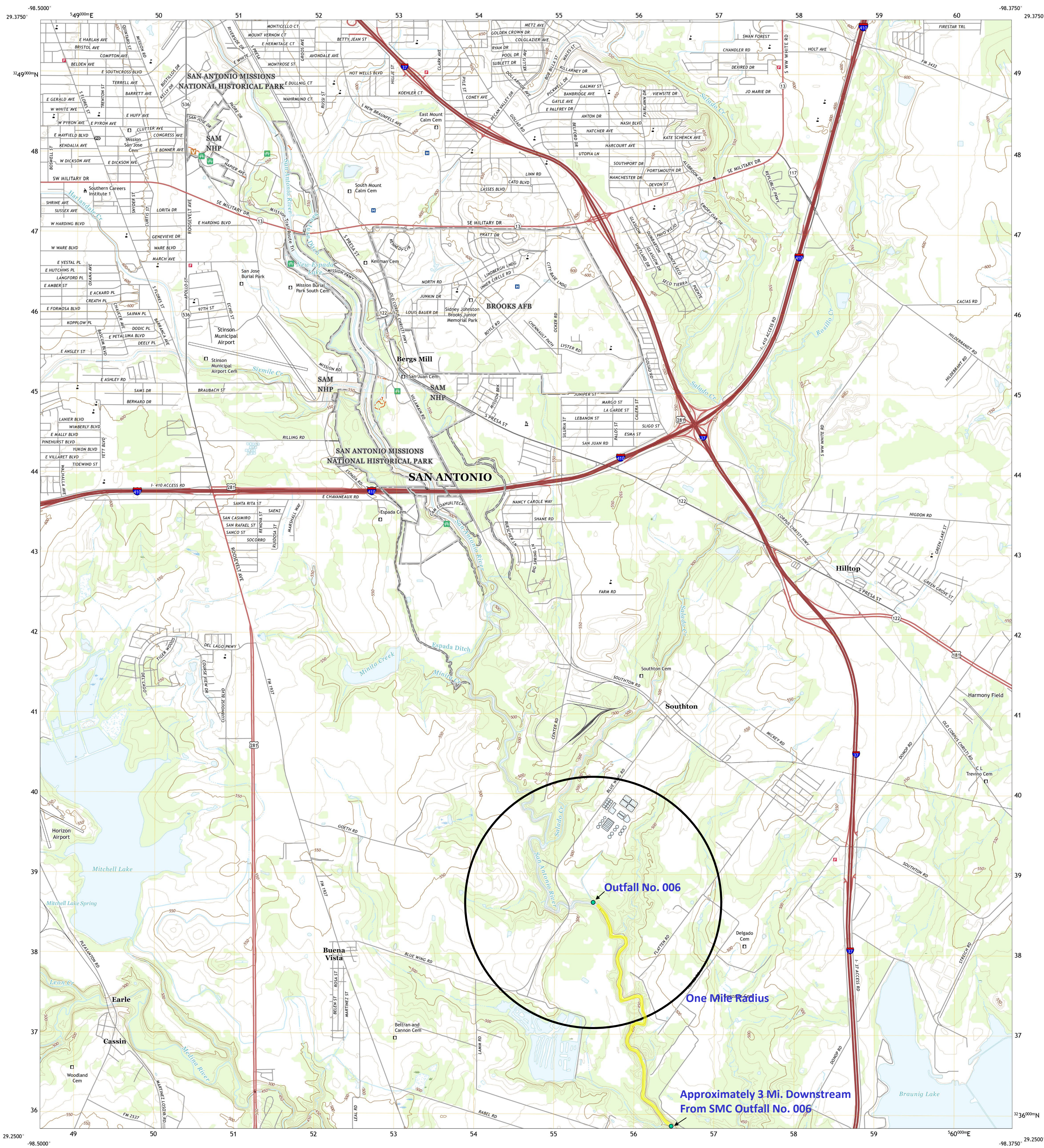




U.S. DEPARTMENT OF THE INTERIOR  
U.S. GEOLOGICAL SURVEY



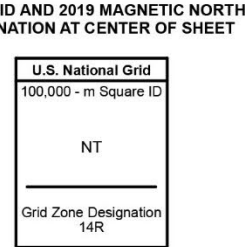
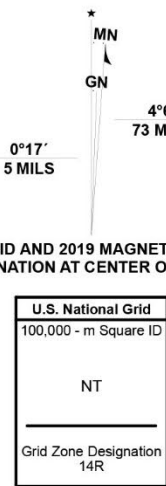
SOUTHTON QUADRANGLE  
TEXAS - BEXAR COUNTY  
7.5-MINUTE SERIES



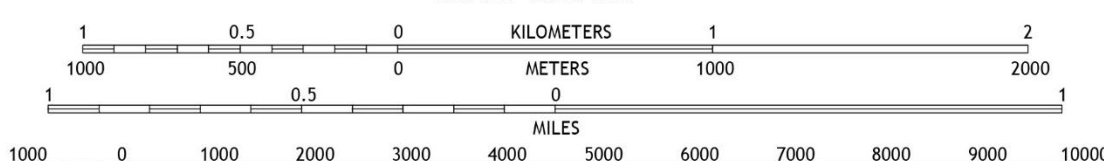
Produced by the United States Geological Survey

North American Datum of 1983 (NAD83)  
World Geodetic System of 1984 (WGS84). Projection and  
1 000-meter grid/Universal Transverse Mercator, Zone 14R.  
This map is not a legal document. Boundaries may be  
generalized for this map scale. Private lands within government  
reservations may not be shown. Obtain permission before  
entering private lands.

Imagery.....NAIP, September 2016 - November 2016  
Roads.....U.S. Census Bureau, 2015  
Names.....GNIS, 1979 - 2022  
Hydrography.....National Hydrography Dataset, 2003 - 2021  
Contours.....National Elevation Dataset, 2021  
Boundaries.....Multiple sources; see metadata file 2019 - 2021  
Wetlands.....FWS National Wetlands Inventory Not Available



SCALE 1:24 000



CONTOUR INTERVAL 10 FEET  
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the  
National Geospatial Program US Topo Product Standard.



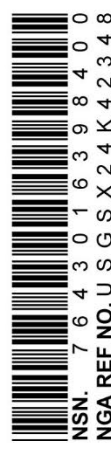
1	2	3
4	5	6
7	8	9

ADJOINING QUADRANGLES

1 San Antonio West  
2 San Antonio East  
3 Martinez  
4 Terrell Wells  
5 Elmendorf  
6 Thelma  
7 Losoya  
8 Sargent

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

SOUTHTON, TX  
2022





# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

## SUPPLEMENTAL PERMIT INFORMATION FORM (SPIF)

### FOR AGENCIES REVIEWING DOMESTIC OR INDUSTRIAL TPDES WASTEWATER PERMIT APPLICATIONS

#### TCEQ USE ONLY:

Application type: \_\_\_\_Renewal \_\_\_\_Major Amendment \_\_\_\_Minor Amendment \_\_\_\_New

County: \_\_\_\_\_ Segment Number: \_\_\_\_\_

Admin Complete Date: \_\_\_\_\_

Agency Receiving SPIF:

\_\_\_\_ Texas Historical Commission

\_\_\_\_ U.S. Fish and Wildlife

\_\_\_\_ Texas Parks and Wildlife Department

\_\_\_\_ U.S. Army Corps of Engineers

#### **This form applies to TPDES permit applications only.** (Instructions, Page 53)

Complete this form as a separate document. TCEQ will mail a copy to each agency as required by our agreement with EPA. If any of the items are not completely addressed or further information is needed, we will contact you to provide the information before issuing the permit. Address each item completely.

**Do not refer to your response to any item in the permit application form.** Provide each attachment for this form separately from the Administrative Report of the application. The application will not be declared administratively complete without this SPIF form being completed in its entirety including all attachments. Questions or comments concerning this form may be directed to the Water Quality Division's Application Review and Processing Team by email at [WQ-ARPTeam@tceq.texas.gov](mailto:WQ-ARPTeam@tceq.texas.gov) or by phone at (512) 239-4671.

The following applies to all applications:

1. Permittee: San Antonio Water System

Permit No. WQ00 10137033

EPA ID No. TX0077801

Address of the project (or a location description that includes street/highway, city/vicinity, and county):

3495 Valley Road San Antonio TX 78221 Approximately 2 miles southeast of the intersection of FM 1937 & Valley Road in South Bexar County.



Provide the name, address, phone and fax number of an individual that can be contacted to answer specific questions about the property.

Prefix (Mr., Ms., Miss): Ms.

First and Last Name: Floramie Welch

Credential (P.E, P.G., Ph.D., etc.):

Title: Environmental Analyst III

Mailing Address: 2800 US Hwy 281 North

City, State, Zip Code: San Antonio, TX 78212

Phone No.: 210 233 3744 Ext.:  Fax No.:

E-mail Address: Floramie.Welch@saws.org

2. List the county in which the facility is located: Bexar
3. If the property is publicly owned and the owner is different than the permittee/applicant, please list the owner of the property.

N/A

4. Provide a description of the effluent discharge route. The discharge route must follow the flow of effluent from the point of discharge to the nearest major watercourse (from the point of discharge to a classified segment as defined in 30 TAC Chapter 307). If known, please identify the classified segment number.

Outfall 001 – at the Medina River below Medina Lake Diversion in Segment No. 1903 of the San Antonio River Basin.  
Outfall 002 – through approximately 15 miles of pipeline to the Upper San Antonio River in Segment No. 1911 of the San Antonio River Basin at a point approximately 600 feet northwest of the intersection of Tuleta and Broadway.  
Outfall 003 – through approximately 14 miles of pipeline to the Upper San Antonio River in Segment No. 1911 of the San Antonio River Basin at a point approximately 500 feet northwest of the intersection of Isleta and East Josephine Streets  
Outfall 004 – through approximately 20 miles of pipeline to the Salado Creek in Segment No. 1910 of the San Antonio River Basin at a point approximately 100 feet south of the intersection of Salado Creek and Rittiman Road.  
Outfall 005 – through a pipeline to the Upper San Antonio River in Segment No. 1911 of the San Antonio River Basin at a point approximately 800 feet southeast of the intersection of South Alamo Street and East Market Street.  
Outfall 006 – to the Upper San Antonio River in Segment No. 1911 of the San Antonio River Basin

5. Please provide a separate 7.5-minute USGS quadrangle map with the project boundaries plotted and a general location map showing the project area. Please highlight the discharge route from the point of discharge for a distance of one mile downstream. (This map is required in addition to the map in the administrative report).

Provide original photographs of any structures 50 years or older on the property.

Does your project involve any of the following? Check all that apply.

- ☐ Proposed access roads, utility lines, construction easements
- ☐ Visual effects that could damage or detract from a historic property's integrity
- ☐ Vibration effects during construction or as a result of project design
- ☐ Additional phases of development that are planned for the future
- ☐ Sealing caves, fractures, sinkholes, other karst features
- ☐ Disturbance of vegetation or wetlands

1. List proposed construction impact (surface acres to be impacted, depth of excavation, sealing of caves, or other karst features):

N/A

2. Describe existing disturbances, vegetation, and land use:

N/A

THE FOLLOWING ITEMS APPLY ONLY TO APPLICATIONS FOR NEW TPDES PERMITS AND MAJOR AMENDMENTS TO TPDES PERMITS

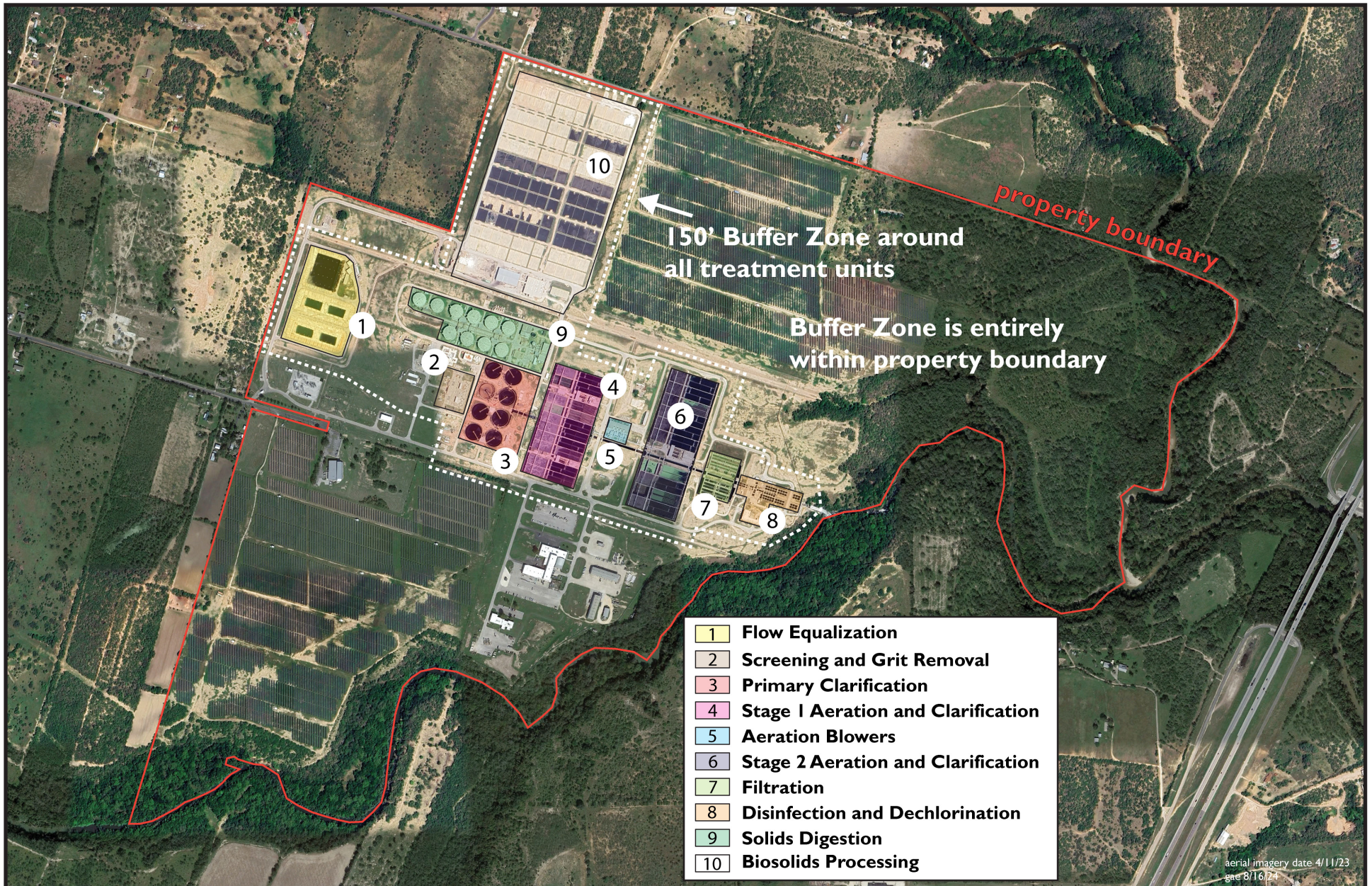
3. List construction dates of all buildings and structures on the property:

N/A

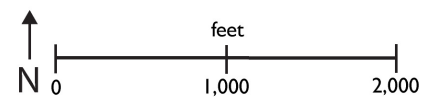
4. Provide a brief history of the property, and name of the architect/builder, if known.

N/A

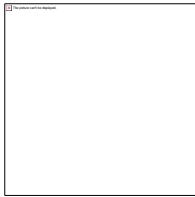




Buffer Zone Map  
Steven M. Clouse Water Recycling Center  
Permit ID TX007780 I







TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

**DOMESTIC WASTEWATER PERMIT APPLICATION  
TECHNICAL REPORT 1.0**

---

For any questions about this form, please contact the Domestic Wastewater Permitting Team at 512-239-4671.

The following information is required for all renewal, new, and amendment applications.

### **Section 1. Permitted or Proposed Flows (Instructions Page 43)**

**A. Existing/Interim I Phase**

Design Flow (MGD): 125

2-Hr Peak Flow (MGD): 250

Estimated construction start date: N/A

Estimated waste disposal start date: Existing

**B. Interim II Phase**

Design Flow (MGD): N/A

2-Hr Peak Flow (MGD): N/A

Estimated construction start date: N/A

Estimated waste disposal start date: N/A

**C. Final Phase**

Design Flow (MGD): N/A

2-Hr Peak Flow (MGD): N/A

Estimated construction start date: N/A

Estimated waste disposal start date: N/A

**D. Current Operating Phase**

Provide the startup date of the facility: 1987

### **Section 2. Treatment Process (Instructions Page 43)**

**A. Current Operating Phase**

Provide a detailed description of the treatment process. **Include the type of treatment plant, mode of operation, and all treatment units.** Start with the plant's head works and

finish with the point of discharge. Include all sludge processing and drying units. **If more than one phase exists or is proposed, a description of *each phase* must be provided.**

**Conventional Activated Sludge**

**B. Treatment Units**

In Table 1.0(1), provide the treatment unit type, the number of units, and dimensions (length, width, depth) of each treatment unit, accounting for ***all*** phases of operation.

**Table 1.0(1) - Treatment Units**

Treatment Unit Type	Number of Units	Dimensions (L x W x D)
<b>Attachment 1 – SMC Treatment Plant Units</b>		

**C. Process Flow Diagram**

Provide flow diagrams for the existing facilities and **each** proposed phase of construction.

Attachment: **Attachment 2 – SMC Process Flow Diagram**

**Section 3. Site Information and Drawing (Instructions Page 44)**

Provide the TPDES discharge outfall latitude and longitude. Enter N/A if not applicable.

- Latitude: **Outfall 001 29.235827**
- Longitude: **Outfall 001 -98.416244**
- Latitude: **Outfall 002 29.461615**
- Longitude: **Outfall 002 -98.468752**
- Latitude: **Outfall 003 29.446454**
- Longitude: **Outfall 003 -98.480740**
- Latitude: **Outfall 004 29.484730**
- Longitude: **Outfall 004 -98.416819**
- Latitude: **Outfall 005 29.420978**
- Longitude: **Outfall 005 -98.485352**
- Latitude: **Outfall 006 29.275560**

- Longitude: **Outfall 006 -98.428978**

Provide the TLAP disposal site latitude and longitude. Enter N/A if not applicable.

- Latitude: N/A
- Longitude: N/A

Provide a site drawing for the facility that shows the following:

- The boundaries of the treatment facility;
- The boundaries of the area served by the treatment facility;
- If land disposal of effluent, the boundaries of the disposal site and all storage/holding ponds; and
- If sludge disposal is authorized in the permit, the boundaries of the land application or disposal site.

**Attachment: Attachment 3 – SMC Facility Boundary Map**

Provide the name **and** a description of the area served by the treatment facility.

**Attachment 4 – SMC Service Area Boundary Map**

Collection System Information **for wastewater TPDES permits only:** Provide information for each **uniquely owned** collection system, existing and new, served by this facility, including satellite collection systems. **Please see the instructions for a detailed explanation and examples.**

#### Collection System Information

Collection System Name	Owner Name	Owner Type	Population Served
N/A	N/A	Choose an item.	N/A
		Choose an item.	
		Choose an item.	
		Choose an item.	

## Section 4. Unbuilt Phases (Instructions Page 45)

Is the application for a renewal of a permit that contains an unbuilt phase or phases?

☐ Yes ☒ No

**If yes**, does the existing permit contain a phase that has not been constructed **within five years** of being authorized by the TCEQ?

☐ Yes ☐ No

**If yes**, provide a detailed discussion regarding the continued need for the unbuilt phase. **Failure to provide sufficient justification may result in the Executive Director recommending denial of the unbuilt phase or phases.**



N/A

## Section 5. Closure Plans (Instructions Page 45)

Have any treatment units been taken out of service permanently, or will any units be taken out of service in the next five years?

☐ Yes ☒ No

If **yes**, was a closure plan submitted to the TCEQ?

☐ Yes ☐ No

If **yes**, provide a brief description of the closure and the date of plan approval.

N/A

## Section 6. Permit Specific Requirements (Instructions Page 45)

For applicants with an existing permit, check the Other Requirements or Special Provisions of the permit.

### A. Summary transmittal

Have plans and specifications been approved for the existing facilities and each proposed phase?

☒ Yes ☐ No

If **yes**, provide the date(s) of approval for each phase: June 25, 2020

Provide information, including dates, on any actions taken to meet a *requirement or provision* pertaining to the submission of a summary transmittal letter. **Provide a copy of an approval letter from the TCEQ, if applicable.**

**B. Buffer zones**

Have the buffer zone requirements been met?

☒ Yes ☐ No

Provide information below, including dates, on any actions taken to meet the conditions of the buffer zone. If available, provide any new documentation relevant to maintaining the buffer zones.

N/A

**C. Other actions required by the current permit.**

Does the *Other Requirements* or *Special Provisions* section in the existing permit require submission of any other information or other required actions? Examples include Notification of Completion, progress reports, soil monitoring data, etc.

☐ Yes ☒ No

**If yes**, provide information below on the status of any actions taken to meet the conditions of an *Other Requirement* or *Special Provision*.

N/A

**D. Grit and grease treatment**

**1. Acceptance of grit and grease waste**

Does the facility have a grit and/or grease processing facility onsite that treats and decants or accepts transported loads of grit and grease waste that are discharged directly to the wastewater treatment plant prior to any treatment?

☐ Yes ☒ No

**If No**, stop here and continue with Subsection E. Stormwater Management.

**2. Grit and grease processing**

Describe below how the grit and grease waste is treated at the facility. In your description, include how and where the grit and grease is introduced to the treatment

works and how it is separated or processed. Provide a flow diagram showing how grit and grease is processed at the facility.

N/A

### 3. *Grit disposal*

Does the facility have a Municipal Solid Waste (MSW) registration or permit for grit disposal?

☐ Yes ☒ No

**If No**, contact the TCEQ Municipal Solid Waste team at 512-239-2335. Note: A registration or permit is required for grit disposal. Grit shall not be combined with treatment plant sludge. See the instruction booklet for additional information on grit disposal requirements and restrictions.

Describe the method of grit disposal.

N/A

### 4. *Grease and decanted liquid disposal*

Note: A registration or permit is required for grease disposal. Grease shall not be combined with treatment plant sludge. For more information, contact the TCEQ Municipal Solid Waste team at 512-239-2335.

Describe how the decant and grease are treated and disposed of after grit separation.

N/A

## E. Stormwater management

### 1. *Applicability*

Does the facility have a design flow of 1.0 MGD or greater in any phase?

☒ Yes ☐ No

Does the facility have an approved pretreatment program, under 40 CFR Part 403?



☒ Yes ☐ No

If **no** to both of the above, then skip to Subsection F, Other Wastes Received.

**2. MSGP coverage**

Is the stormwater runoff from the WWTP and dedicated lands for sewage disposal currently permitted under the TPDES Multi-Sector General Permit (MSGP), TXR050000?

☒ Yes ☐ No

If **yes**, please provide MSGP Authorization Number and skip to Subsection F, Other Wastes Received:

TXR05 O020 or TXRNE N/A

If **no**, do you intend to seek coverage under TXR050000?

☐ Yes ☒ No

**3. Conditional exclusion**

Alternatively, do you intend to apply for a conditional exclusion from permitting based TXR050000 (Multi Sector General Permit) Part II B.2 or TXR050000 (Multi Sector General Permit) Part V, Sector T 3(b)?

☐ Yes ☒ No

If **yes**, please explain below then proceed to Subsection F, Other Wastes Received:

N/A
-----

**4. Existing coverage in individual permit**

Is your stormwater discharge currently permitted through this individual TPDES or TLAP permit?

☐ Yes ☒ No

If **yes**, provide a description of stormwater runoff management practices at the site that are authorized in the wastewater permit then skip to Subsection F, Other Wastes Received.

N/A
-----

**5. Zero stormwater discharge**

Do you intend to have no discharge of stormwater via use of evaporation or other means?

☐ Yes ☒ No

If **yes**, explain below then skip to Subsection F. Other Wastes Received.

N/A

Note: If there is a potential to discharge any stormwater to surface water in the state as the result of any storm event, then permit coverage is required under the MSGP or an individual discharge permit. This requirement applies to all areas of facilities with treatment plants or systems that treat, store, recycle, or reclaim domestic sewage, wastewater or sewage sludge (including dedicated lands for sewage sludge disposal located within the onsite property boundaries) that meet the applicability criteria of above. You have the option of obtaining coverage under the MSGP for direct discharges, (recommended), or obtaining coverage under this individual permit.

**6. Request for coverage in individual permit**

Are you requesting coverage of stormwater discharges associated with your treatment plant under this individual permit?

☐ Yes ☒ No

If **yes**, provide a description of stormwater runoff management practices at the site for which you are requesting authorization in this individual wastewater permit and describe whether you intend to comingle this discharge with your treated effluent or discharge it via a separate dedicated stormwater outfall. Please also indicate if you intend to divert stormwater to the treatment plant headworks and indirectly discharge it to water in the state.

N/A

Note: Direct stormwater discharges to waters in the state authorized through this individual permit will require the development and implementation of a stormwater pollution prevention plan (SWPPP) and will be subject to additional monitoring and reporting requirements. Indirect discharges of stormwater via headworks recycling will require compliance with all individual permit requirements including 2-hour peak flow limitations. All stormwater discharge authorization requests will require additional information during the technical review of your application.

**F. Discharges to the Lake Houston Watershed**

Does the facility discharge in the Lake Houston watershed?

☐ Yes ☒ No

If yes, attach a Sewage Sludge Solids Management Plan. See Example 5 in the instructions.

N/A

**G. Other wastes received including sludge from other WWTPs and septic waste**

**1. Acceptance of sludge from other WWTPs**

Does or will the facility accept sludge from other treatment plants at the facility site?

☒ Yes ☐ No

**If yes, attach sewage sludge solids management plan. See Example 5 of instructions.**

In addition, provide the date the plant started or is anticipated to start accepting sludge, an estimate of monthly sludge acceptance (gallons or millions of gallons), an estimate of the BOD<sub>5</sub> concentration of the sludge, and the design BOD<sub>5</sub> concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.

**Started accepting sludge waste from other treatment plants on 3/1/2005. The amount of accepted sludge waste for the period of 11/1/23 to 10/31/24 is 14,537,386 gallons per month. BOD concentration of the accepted sludge is 7,794 mg/l. The design BOD concentration of the influent from the collection system is 360 mg/l. This information has been updated from the last permit action. The accepted sludge does not enter the liquid treatment process, but goes directly to solids handling.**

Note: Permits that accept sludge from other wastewater treatment plants may be required to have influent flow and organic loading monitoring.

## **2. Acceptance of septic waste**

Is the facility accepting or will it accept septic waste?

☒ Yes ☐ No

**If yes, does the facility have a Type V processing unit?**

☐ Yes ☒ No

**If yes, does the unit have a Municipal Solid Waste permit?**

☐ Yes ☒ No

**If yes to any of the above, provide the date the plant started or is anticipated to start accepting septic waste, an estimate of monthly septic waste acceptance (gallons or millions of gallons), an estimate of the BOD<sub>5</sub> concentration of the septic waste, and the design BOD<sub>5</sub> concentration of the influent from the collection system. Also note if this information has or has not changed since the last permit action.**

**Started accepting septic waste on 2/19/2001. The amount of accepted septic waste for the period 11/1/23 to 10/31/24 is 632,807 gallons per month. BOD concentration of the accepted septic waste is 3,212 mg/l. The design BOD concentration of the influent from the collection system is 360 mg/l. This information has not changed from the last permit action.**

Note: Permits that accept sludge from other wastewater treatment plants may be required to have influent flow and organic loading monitoring.

## **3. Acceptance of other wastes (not including septic, grease, grit, or RCRA, CERCLA or as discharged by IUs listed in Worksheet 6)**

Is or will the facility accept wastes that are not domestic in nature excluding the categories listed above?

☒ Yes ☐ No

**If yes, provide the date that the plant started accepting the waste, an estimate how much waste is accepted on a monthly basis (gallons or millions of gallons), a description of the entities generating the waste, and any distinguishing chemical or**



other physical characteristic of the waste. Also note if this information has or has not changed since the last permit action.

**Steven M. Clouse Water Recycling Center started accepting other waste on February 19, 2001. For the period 11/1/23 to 10/31/24, the average monthly volume of waste accepted is 704,815 gallons per month. Waste is received from waste haulers' hauling liquids such as portable toilet wastes, which are treated with a deodorizing compound prior to discharging at the Water Recycling Center.**

## Section 7. Pollutant Analysis of Treated Effluent (Instructions Page 50)

Is the facility in operation?

☒ Yes ☐ No

If **no**, this section is not applicable. Proceed to Section 8.

If **yes**, provide effluent analysis data for the listed pollutants. ***Wastewater treatment facilities*** complete Table 1.0(2). ***Water treatment facilities*** discharging filter backwash water, complete Table 1.0(3). Provide copies of the laboratory results sheets. **These tables are not applicable for a minor amendment without renewal.** See the instructions for guidance.

Note: The sample date must be within 1 year of application submission.

**Table 1.0(2) – Pollutant Analysis for Wastewater Treatment Facilities**

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
CBOD <sub>5</sub> , mg/l	<b>3.00</b>	<b>3.00</b>	<b>1</b>	<b>Composite</b>	6-9-2024/11:00PM
Total Suspended Solids, mg/l	<b>3.40</b>	<b>3.40</b>	<b>1</b>	<b>Composite</b>	6-9-2024/11:00PM
Ammonia Nitrogen, mg/l	<b>0.10</b>	<b>0.10</b>	<b>1</b>	<b>Composite</b>	6-9-2024/11:00PM
Nitrate Nitrogen, mg/l	<b>25.80</b>	<b>25.80</b>	<b>1</b>	<b>Composite</b>	6-9-2024/11:00PM
Total Kjeldahl Nitrogen, mg/l	<b>4.27</b>	<b>4.27</b>	<b>1</b>	<b>Composite</b>	6-10-2024/11:00PM
Sulfate, mg/l	<b>60</b>	<b>60</b>	<b>1</b>	<b>Composite</b>	6-9-2024/11:00PM
Chloride, mg/l	<b>194</b>	<b>194</b>	<b>1</b>	<b>Composite</b>	6-9-2024/11:00PM
Total Phosphorus, mg/l	<b>4.45</b>	<b>4.45</b>	<b>1</b>	<b>Composite</b>	6-10-2024/11:00PM
pH, standard units	<b>7.52</b>	<b>7.52</b>	<b>1</b>	<b>Grab</b>	6-9-2024/9:38AM
Dissolved Oxygen*, mg/l	<b>7.36</b>	<b>7.36</b>	<b>1</b>	<b>Grab</b>	6-9-2024/8:30AM
Chlorine Residual, mg/l	<b>1.45</b>	<b>1.45</b>	<b>1</b>	<b>Grab</b>	6-9-2024/9:15AM
<i>E.coli</i> (CFU/100ml) freshwater	<b>1.00</b>	<b>1.00</b>	<b>1</b>	<b>Grab</b>	6-9-2024/9:25AM
Enterococci (CFU/100ml) saltwater	N/A	N/A		N/A	N/A
Total Dissolved Solids, mg/l	<b>732</b>	<b>732</b>	<b>1</b>	<b>Composite</b>	6-10-2024/11:00PM

Electrical Conductivity, $\mu\text{mohs/cm}$ , †	N/A	N/A		N/A	N/A
Oil & Grease, mg/l	<5	<5	1	Composite	6-9-2024/11:00PM
Alkalinity ( $\text{CaCO}_3$ )*, mg/l	160	160	1	Composite	6-10-2024/11:00PM

\*TPDES permits only

†TLAP permits only

**Table1.0(3) – Pollutant Analysis for Water Treatment Facilities**

Pollutant	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
Total Suspended Solids, mg/l	N/A				
Total Dissolved Solids, mg/l	N/A				
pH, standard units	N/A				
Fluoride, mg/l	N/A				
Aluminum, mg/l	N/A				
Alkalinity ( $\text{CaCO}_3$ ), mg/l	N/A				

## Section 8. Facility Operator (Instructions Page 50)

Facility Operator Name: Alissa Lockett

Facility Operator's License Classification and Level: Wastewater A

Facility Operator's License Number: WW0070523

## Section 9. Sludge and Biosolids Management and Disposal (Instructions Page 51)

### A. WWTP's Biosolids Management Facility Type

Check all that apply. See instructions for guidance

- ☒ Design flow  $\geq 1$  MGD
- ☒ Serves  $\geq 10,000$  people
- ☒ Class I Sludge Management Facility (per 40 CFR § 503.9)
- ☐ Biosolids generator
- ☐ Biosolids end user – land application (onsite)
- ☐ Biosolids end user – surface disposal (onsite)
- ☐ Biosolids end user – incinerator (onsite)

### B. WWTP's Biosolids Treatment Process

Check all that apply. See instructions for guidance.

- ☐ Aerobic Digestion
- ☐ Air Drying (or sludge drying beds)
- ☐ Lower Temperature Composting

- ☐ Lime Stabilization
- ☐ Higher Temperature Composting
- ☐ Heat Drying
- ☐ Thermophilic Aerobic Digestion
- ☐ Beta Ray Irradiation
- ☐ Gamma Ray Irradiation
- ☐ Pasteurization
- ☒ Preliminary Operation (e.g. grinding, de-gritting, blending)
- ☒ Thickening (e.g. gravity thickening, centrifugation, filter press, vacuum filter)
- ☐ Sludge Lagoon
- ☐ Temporary Storage (< 2 years)
- ☐ Long Term Storage (>= 2 years)
- ☒ Methane or Biogas Recovery
- ☒ Other Treatment Process: **Anaerobic Digestion, Dewatering (Drying Beds and Belt Filter Presses)**

### C. Biosolids Management

Provide information on the *intended* biosolids management practice. Do not enter every management practice that you want authorized in the permit, as the permit will authorize all biosolids management practices listed in the instructions. Rather indicate the management practice the facility plans to use.

#### Biosolids Management

Management Practice	Handler or Preparer Type	Bulk or Bag Container	Amount (dry metric tons)	Pathogen Reduction Options	Vector Attraction Reduction Option
Distribution & Marketing- Other	Off-site Third-Party Handler or Preparer	Bulk	26266	Class A: PFRP Composting	Option 5: Aerobic process for 14 days at >40C
Disposal in Landfill	Off-site Third-Party Handler or Preparer	Bulk	2893	Class B: PSRP Anaerobic Digestion	Option 1: Volatile solids reduced by 38%
Distribution & Marketing- Composting	Off-site Third-Party Handler or Preparer	Not Applicable	N/A		

If "Other" is selected for Management Practice, please explain (e.g. monofill or transport to another WWTP): **N/A**



#### D. Disposal site

Disposal site name: **Republic Services**

TCEQ permit or registration number: **1410C**

County where disposal site is located: **Bexar**

#### E. Transportation method

Method of transportation (truck, train, pipe, other): **Truck**

Name of the hauler: **Rafter P**

Hauler registration number: **23606**

Sludge is transported as a:

Liquid ☐      semi-liquid ☐      semi-solid ☐      solid ☒

### Section 10. Permit Authorization for Sewage Sludge Disposal (Instructions Page 53)

#### A. Beneficial use authorization

Does the existing permit include authorization for land application of sewage sludge for beneficial use?

☐ Yes ☒ No

If **yes**, are you requesting to continue this authorization to land apply sewage sludge for beneficial use?

☐ Yes ☐ No

If **yes**, is the completed **Application for Permit for Beneficial Land Use of Sewage Sludge (TCEQ Form No. 10451)** attached to this permit application (see the instructions for details)?

☐ Yes ☐ No

#### B. Sludge processing authorization

Does the existing permit include authorization for any of the following sludge processing, storage or disposal options?

Sludge Composting	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Marketing and Distribution of sludge	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Sludge Surface Disposal or Sludge Monofill	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Temporary storage in sludge lagoons	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

If **yes** to any of the above sludge options and the applicant is requesting to continue this authorization, is the completed **Domestic Wastewater Permit Application: Sewage Sludge Technical Report (TCEQ Form No. 10056)** attached to this permit application?

☒ Yes ☐ No

## Section 11. Sewage Sludge Lagoons (Instructions Page 53)

Does this facility include sewage sludge lagoons?

☐ Yes ☒ No

If yes, complete the remainder of this section. If no, proceed to Section 12.

### A. Location information

The following maps are required to be submitted as part of the application. For each map, provide the Attachment Number.

- Original General Highway (County) Map:  
**Attachment: N/A**
- USDA Natural Resources Conservation Service Soil Map:  
**Attachment: N/A**
- Federal Emergency Management Map:  
**Attachment: N/A**
- Site map:  
**Attachment: N/A**

Discuss in a description if any of the following exist within the lagoon area. Check all that apply.

- ☐ Overlap a designated 100-year frequency flood plain
- ☐ Soils with flooding classification
- ☐ Overlap an unstable area
- ☐ Wetlands
- ☐ Located less than 60 meters from a fault
- ☒ None of the above

**Attachment: N/A**

If a portion of the lagoon(s) is located within the 100-year frequency flood plain, provide the protective measures to be utilized including type and size of protective structures:

**N/A**

### B. Temporary storage information

Provide the results for the pollutant screening of sludge lagoons. These results are in addition to pollutant results in *Section 7 of Technical Report 1.0*.

Nitrate Nitrogen, mg/kg: **N/A**

Total Kjeldahl Nitrogen, mg/kg: **N/A**

Total Nitrogen (=nitrate nitrogen + TKN), mg/kg: **N/A**

Phosphorus, mg/kg: N/A  
Potassium, mg/kg: N/A  
pH, standard units: N/A  
Ammonia Nitrogen mg/kg: N/A  
Arsenic: N/A  
Cadmium: N/A  
Chromium: N/A  
Copper: N/A  
Lead: N/A  
Mercury: N/A  
Molybdenum: N/A  
Nickel: N/A  
Selenium: N/A  
Zinc: N/A  
Total PCBs: N/A

Provide the following information:

Volume and frequency of sludge to the lagoon(s): N/A  
Total dry tons stored in the lagoons(s) per 365-day period: N/A  
Total dry tons stored in the lagoons(s) over the life of the unit: N/A

### C. Liner information

Does the active/proposed sludge lagoon(s) have a liner with a maximum hydraulic conductivity of  $1 \times 10^{-7}$  cm/sec?

☐ Yes ☐ No

If yes, describe the liner below. Please note that a liner is required.

N/A

### D. Site development plan

Provide a detailed description of the methods used to deposit sludge in the lagoon(s):

N/A

Attach the following documents to the application.

- Plan view and cross-section of the sludge lagoon(s)

**Attachment:** N/A

- Copy of the closure plan

**Attachment:** N/A

- Copy of deed recordation for the site

**Attachment:** N/A

- Size of the sludge lagoon(s) in surface acres and capacity in cubic feet and gallons

**Attachment:** N/A

- Description of the method of controlling infiltration of groundwater and surface water from entering the site

**Attachment:** N/A

- Procedures to prevent the occurrence of nuisance conditions

**Attachment:** N/A

#### E. Groundwater monitoring

Is groundwater monitoring currently conducted at this site, or are any wells available for groundwater monitoring, or are groundwater monitoring data otherwise available for the sludge lagoon(s)?

☐ Yes ☒ No

If groundwater monitoring data are available, provide a copy. Provide a profile of soil types encountered down to the groundwater table and the depth to the shallowest groundwater as a separate attachment.

**Attachment:** N/A

## Section 12. Authorizations/Compliance/Enforcement (Instructions Page 55)

#### A. Additional authorizations

Does the permittee have additional authorizations for this facility, such as reuse authorization, sludge permit, etc?

☒ Yes ☐ No

If yes, provide the TCEQ authorization number and description of the authorization:

**210 Authorization - Authorization for the Provision and Use of Reclaimed Water granted by the TNRCC on June 4, 1997 (TNRCC Log No. 057/009)**



## B. Permittee enforcement status

Is the permittee currently under enforcement for this facility?

☐ Yes ☒ No

Is the permittee required to meet an implementation schedule for compliance or enforcement?

☐ Yes ☒ No

If **yes** to either question, provide a brief summary of the enforcement, the implementation schedule, and the current status:

N/A

## Section 13. RCRA/CERCLA Wastes (Instructions Page 55)

### A. RCRA hazardous wastes

Has the facility received in the past three years, does it currently receive, or will it receive RCRA hazardous waste?

☐ Yes ☒ No

### B. Remediation activity wastewater

Has the facility received in the past three years, does it currently receive, or will it receive CERCLA wastewater, RCRA remediation/corrective action wastewater or other remediation activity wastewater?

☐ Yes ☒ No

### C. Details about wastes received

If **yes** to either Subsection A or B above, provide detailed information concerning these wastes with the application.

Attachment: N/A

## Section 14. Laboratory Accreditation (Instructions Page 56)

All laboratory tests performed must meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification*, which includes the following general exemptions from National Environmental Laboratory Accreditation Program (NELAP) certification requirements:

- The laboratory is an in-house laboratory and is:
  - periodically inspected by the TCEQ; or
  - located in another state and is accredited or inspected by that state; or

## Section 14. Laboratory Accreditation (Instructions Page 56)

All laboratory tests performed must meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification*, which includes the following general exemptions from National Environmental Laboratory Accreditation Program (NELAP) certification requirements:

- The laboratory is an in-house laboratory and is:
  - periodically inspected by the TCEQ; or
  - located in another state and is accredited or inspected by that state; or
  - performing work for another company with a unit located in the same site; or
  - performing pro bono work for a governmental agency or charitable organization.
- The laboratory is accredited under federal law.
- The data are needed for emergency-response activities, and a laboratory accredited under the Texas Laboratory Accreditation Program is not available.
- The laboratory supplies data for which the TCEQ does not offer accreditation.

The applicant should review 30 TAC Chapter 25 for specific requirements.

The following certification statement shall be signed and submitted with every application. See the Signature Page section in the Instructions, for a list of designated representatives who may sign the certification.

### CERTIFICATION:

I certify that all laboratory tests submitted with this application meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification*.

Printed Name: Alissa Lockett, P.E.

Title: Vice President, Treatment Operations

Signature: Alissa Lockett

Date: 12-6-2024

# DOMESTIC WASTEWATER PERMIT APPLICATION

## TECHNICAL REPORT 1.1

The following information is required for new and amendment major applications.

### Section 1. Justification for Permit (Instructions Page 57)

#### A. Justification of permit need

Provide a detailed discussion regarding the need for any phase(s) not currently permitted. Failure to provide sufficient justification may result in the Executive Director recommending denial of the proposed phase(s) or permit.

N/A

#### B. Regionalization of facilities

For additional guidance, please review [TCEQ's Regionalization Policy for Wastewater Treatment](#)<sup>1</sup>.

Provide the following information concerning the potential for regionalization of domestic wastewater treatment facilities:

##### 1. Municipally incorporated areas

If the applicant is a city, then Item 1 is not applicable. Proceed to Item 2 Utility CCN areas.

Is any portion of the proposed service area located in an incorporated city?

☐ Yes ☐ No ☒ Not Applicable

If yes, within the city limits of: N/A

If yes, attach correspondence from the city.

Attachment: N/A

If consent to provide service is available from the city, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the city versus the cost of the proposed facility or expansion attached.

Attachment: N/A

##### 2. Utility CCN areas

Is any portion of the proposed service area located inside another utility's CCN area?

☐ Yes ☒ No

<sup>1</sup> <https://www.tceq.texas.gov/permitting/wastewater/tceq-regionalization-for-wastewater>

If **yes**, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the CCN facilities versus the cost of the proposed facility or expansion.

Attachment: N/A

### 3. *Nearby WWTPs or collection systems*

Are there any domestic permitted wastewater treatment facilities or collection systems located within a three-mile radius of the proposed facility?

☐ Yes ☒ No

If **yes**, attach a list of these facilities and collection systems that includes each permittee's name and permit number, and an area map showing the location of these facilities and collection systems.

Attachment: N/A

If **yes**, attach proof of mailing a request for service to each facility and collection system, the letters requesting service, and correspondence from each facility and collection system.

Attachment: N/A

If the facility or collection system agrees to provide service, attach a justification for the proposed facility and a cost analysis of expenditures that includes the cost of connecting to the facility or collection system versus the cost of the proposed facility or expansion.

Attachment: N/A

## Section 2. Proposed Organic Loading (Instructions Page 59)

Is this facility in operation?

☒ Yes ☐ No

If **no**, proceed to Item B, Proposed Organic Loading.

If **yes**, provide organic loading information in Item A, Current Organic Loading

### A. Current organic loading

Facility Design Flow (flow being requested in application):

Average Influent Organic Strength or BOD<sub>5</sub> Concentration in mg/l: **211**

Average Influent Loading (lbs/day = total average flow X average BOD<sub>5</sub> conc. X 8.34):  
**171,839**

Provide the source of the average organic strength or BOD<sub>5</sub> concentration.

**Average concentration and loading are based on plant operating data from November 2023 to October 2024.**



## B. Proposed organic loading

This table must be completed if this application is for a facility that is not in operation or if this application is to request an increased flow that will impact organic loading.

**Table 1.1(1) – Design Organic Loading**

Source	Total Average Flow (MGD)	Influent BOD <sub>5</sub> Concentration (mg/l)
Municipality	N/A	
Subdivision		
Trailer park – transient		
Mobile home park		
School with cafeteria and showers		
School with cafeteria, no showers		
Recreational park, overnight use		
Recreational park, day use		
Office building or factory		
Motel		
Restaurant		
Hospital		
Nursing home		
Other		
TOTAL FLOW from all sources		
AVERAGE BOD <sub>5</sub> from all sources		

## Section 3. Proposed Effluent Quality and Disinfection (Instructions Page 59)

### A. Existing/Interim I Phase Design Effluent Quality

Biochemical Oxygen Demand (5-day), mg/l: N/A

Total Suspended Solids, mg/l: N/A

Ammonia Nitrogen, mg/l: N/A

Total Phosphorus, mg/l: N/A

Dissolved Oxygen, mg/l: N/A

Other: N/A

**B. Interim II Phase Design Effluent Quality**

Biochemical Oxygen Demand (5-day), mg/l: N/A

Total Suspended Solids, mg/l: N/A

Ammonia Nitrogen, mg/l: N/A

Total Phosphorus, mg/l: N/A

Dissolved Oxygen, mg/l: N/A

Other: N/A

**C. Final Phase Design Effluent Quality**

Biochemical Oxygen Demand (5-day), mg/l: N/A

Total Suspended Solids, mg/l: N/A

Ammonia Nitrogen, mg/l: N/A

Total Phosphorus, mg/l: N/A

Dissolved Oxygen, mg/l: N/A

Other: N/A

**D. Disinfection Method**

Identify the proposed method of disinfection.

☐ Chlorine: N/A mg/l after N/A minutes detention time at peak flow

Dechlorination process: N/A

☐ Ultraviolet Light: N/A seconds contact time at peak flow

☐ Other: N/A

**Section 4. Design Calculations (Instructions Page 59)**

Attach design calculations and plant features for each proposed phase. Example 4 of the instructions includes sample design calculations and plant features.

Attachment: N/A

**Section 5. Facility Site (Instructions Page 60)**

**A. 100-year floodplain**

Will the proposed facilities be located above the 100-year frequency flood level?

☒ Yes ☐ No

If **no**, describe measures used to protect the facility during a flood event. Include a site map showing the location of the treatment plant within the 100-year frequency flood level. If applicable, provide the size and types of protective structures.

N/A

Provide the source(s) used to determine 100-year frequency flood plain.

**FEMA, City of San Antonio, Bexar County**

For a new or expansion of a facility, will a wetland or part of a wetland be filled?

☐ Yes ☒ No

If **yes**, has the applicant applied for a US Corps of Engineers 404 Dredge and Fill Permit?

☐ Yes ☐ No

If **yes**, provide the permit number: N/A

If **no**, provide the approximate date you anticipate submitting your application to the Corps: N/A

## B. Wind rose

Attach a wind rose: Attachment 6 – San Antonio Wind Rose

# Section 6. Permit Authorization for Sewage Sludge Disposal (Instructions Page 60)

## A. Beneficial use authorization

Are you requesting to include authorization to land apply sewage sludge for beneficial use on property located adjacent to the wastewater treatment facility under the wastewater permit?

☐ Yes ☒ No

If **yes**, attach the completed **Application for Permit for Beneficial Land Use of Sewage Sludge (TCEQ Form No. 10451)**: N/A

## B. Sludge processing authorization

Identify the sludge processing, storage or disposal options that will be conducted at the wastewater treatment facility:

- ☒ Sludge Composting
- ☒ Marketing and Distribution of sludge
- ☐ Sludge Surface Disposal or Sludge Monofill

If **any of the above**, sludge options are selected, attach the completed **Domestic Wastewater Permit Application: Sewage Sludge Technical Report (TCEQ Form No. 10056)**: Attachment

# Section 7. Sewage Sludge Solids Management Plan (Instructions Page 61)

Attach a solids management plan to the application.

**Attachment: Attachment 7 – SMC Biosolids Management Plan**

The sewage sludge solids management plan must contain the following information:

- Treatment units and processes dimensions and capacities

- Solids generated at 100, 75, 50, and 25 percent of design flow
- Mixed liquor suspended solids operating range at design and projected actual flow
- Quantity of solids to be removed and a schedule for solids removal
- Identification and ownership of the ultimate sludge disposal site
- For facultative lagoons, design life calculations, monitoring well locations and depths, and the ultimate disposal method for the sludge from the facultative lagoon

An example of a sewage sludge solids management plan has been included as Example 5 of the instructions.



# DOMESTIC WASTEWATER PERMIT APPLICATION

## WORKSHEET 2.0: RECEIVING WATERS

The following information is required for all TPDES permit applications.

### Section 1. Domestic Drinking Water Supply (Instructions Page 64)

Is there a surface water intake for domestic drinking water supply located within 5 miles downstream from the point or proposed point of discharge?

☐ Yes ☒ No

If **no**, proceed to Section 2. If **yes**, provide the following:

Owner of the drinking water supply: N/A

Distance and direction to the intake: N/A

Attach a USGS map that identifies the location of the intake.

Attachment: N/A

### Section 2. Discharge into Tidally Affected Waters (Instructions Page 64)

Does the facility discharge into tidally affected waters?

☐ Yes ☒ No

If **no**, proceed to Section 3. If **yes**, complete the remainder of this section. If no, proceed to Section 3.

#### A. Receiving water outfall

Width of the receiving water at the outfall, in feet: N/A

#### B. Oyster waters

Are there oyster waters in the vicinity of the discharge?

☐ Yes ☒ No

If **yes**, provide the distance and direction from outfall(s).

N/A

#### C. Sea grasses

Are there any sea grasses within the vicinity of the point of discharge?

☐ Yes ☒ No

If **yes**, provide the distance and direction from the outfall(s).

N/A

### Section 3. Classified Segments (Instructions Page 64)

Is the discharge directly into (or within 300 feet of) a classified segment?

☒ Yes ☐ No

If **yes**, this Worksheet is complete.

If **no**, complete Sections 4 and 5 of this Worksheet.

### Section 4. Description of Immediate Receiving Waters (Instructions Page 65)

Name of the immediate receiving waters: N/A

#### A. Receiving water type

Identify the appropriate description of the receiving waters.

- ☐ Stream
- ☐ Freshwater Swamp or Marsh
- ☐ Lake or Pond

Surface area, in acres: N/A

Average depth of the entire water body, in feet: N/A

Average depth of water body within a 500-foot radius of discharge point, in feet: N/A

- ☐ Man-made Channel or Ditch
- ☐ Open Bay
- ☐ Tidal Stream, Bayou, or Marsh
- ☐ Other, specify: N/A

#### B. Flow characteristics

If a stream, man-made channel or ditch was checked above, provide the following. For existing discharges, check one of the following that best characterizes the area *upstream* of the discharge. For new discharges, characterize the area *downstream* of the discharge (check one).

- ☐ Intermittent - dry for at least one week during most years
- ☐ Intermittent with Perennial Pools - enduring pools with sufficient habitat to maintain significant aquatic life uses
- ☐ Perennial - normally flowing

Check the method used to characterize the area upstream (or downstream for new dischargers).

- ☐ USGS flow records
- ☐ Historical observation by adjacent landowners
- ☐ Personal observation
- ☐ Other, specify: N/A

### C. Downstream perennial confluences

List the names of all perennial streams that join the receiving water within three miles downstream of the discharge point.

N/A

### D. Downstream characteristics

Do the receiving water characteristics change within three miles downstream of the discharge (e.g., natural or man-made dams, ponds, reservoirs, etc.)?

☐ Yes ☐ No

If yes, discuss how.

N/A

### E. Normal dry weather characteristics

Provide general observations of the water body during normal dry weather conditions.

N/A

Date and time of observation: N/A

Was the water body influenced by stormwater runoff during observations?

☐ Yes ☐ No

## Section 5. General Characteristics of the Waterbody (Instructions Page 66)

### A. Upstream influences

Is the immediate receiving water upstream of the discharge or proposed discharge site influenced by any of the following? Check all that apply.

- |   |  |
|---|--|
| <input type="checkbox"/> Oil field activities | <input type="checkbox"/> Urban runoff                  |
| <input type="checkbox"/> Upstream discharges  | <input type="checkbox"/> Agricultural runoff           |
| <input type="checkbox"/> Septic tanks         | <input type="checkbox"/> Other(s), specify: <u>N/A</u> |

## B. Waterbody uses

Observed or evidences of the following uses. Check all that apply.

- |  |  |
|--|--|
| <input type="checkbox"/> Livestock watering    | <input type="checkbox"/> Contact recreation            |
| <input type="checkbox"/> Irrigation withdrawal | <input type="checkbox"/> Non-contact recreation        |
| <input type="checkbox"/> Fishing               | <input type="checkbox"/> Navigation                    |
| <input type="checkbox"/> Domestic water supply | <input type="checkbox"/> Industrial water supply       |
| <input type="checkbox"/> Park activities       | <input type="checkbox"/> Other(s), specify: <u>N/A</u> |

## C. Waterbody aesthetics

Check one of the following that best describes the aesthetics of the receiving water and the surrounding area.

- ☐ Wilderness: outstanding natural beauty; usually wooded or unpastured area; water clarity exceptional
- ☐ Natural Area: trees and/or native vegetation; some development evident (from fields, pastures, dwellings); water clarity discolored
- ☐ Common Setting: not offensive; developed but uncluttered; water may be colored or turbid
- ☐ Offensive: stream does not enhance aesthetics; cluttered; highly developed; dumping areas; water discolored



# DOMESTIC WASTEWATER PERMIT APPLICATION

## WORKSHEET 2.1: STREAM PHYSICAL CHARACTERISTICS

Required for new applications, major facilities, and applications adding an outfall.

Worksheet 2.1 is not required for discharges to intermittent streams or discharges directly to (or within 300 feet of) a classified segment.

### Section 1. General Information (Instructions Page 66)

Date of study: N/A Time of study: N/A

Stream name: N/A

Location: N/A

Type of stream upstream of existing discharge or downstream of proposed discharge (check one).

☐ Perennial ☐ Intermittent with perennial pools

### Section 2. Data Collection (Instructions Page 66)

Number of stream bends that are well defined: N/A

Number of stream bends that are moderately defined: N/A

Number of stream bends that are poorly defined: N/A

Number of riffles: N/A

Evidence of flow fluctuations (check one):

☐ Minor ☐ moderate ☐ severe

Indicate the observed stream uses and if there is evidence of flow fluctuations or channel obstruction/modification.

N/A

## Stream transects

In the table below, provide the following information for each transect downstream of the existing or proposed discharges. Use a separate row for each transect.

**Table 2.1(1) - Stream Transect Records**

<b>Stream type at transect</b> Select riffle, run, glide, or pool. See Instructions, Definitions section.	<b>Transect location</b>	<b>Water surface width (ft)</b>	<b>Stream depths (ft)</b> at 4 to 10 points along each transect from the channel bed to the water surface. Separate the measurements with commas.
Choose an item.	N/A	N/A	N/A
Choose an item.			
Choose an item.			
Choose an item.			
Choose an item.			
Choose an item.			
Choose an item.			
Choose an item.			
Choose an item.			
Choose an item.			

## Section 3. Summarize Measurements (Instructions Page 66)

Streambed slope of entire reach, from USGS map in feet/feet: N/A

Approximate drainage area above the most downstream transect (from USGS map or county highway map, in square miles): N/A

Length of stream evaluated, in feet: N/A

Number of lateral transects made: N/A

Average stream width, in feet: N/A

Average stream depth, in feet: N/A

Average stream velocity, in feet/second: N/A

Instantaneous stream flow, in cubic feet/second: N/A

Indicate flow measurement method (type of meter, floating chip timed over a fixed distance, etc.): N/A

Size of pools (large, small, moderate, none): N/A

Maximum pool depth, in feet: N/A

# DOMESTIC WASTEWATER PERMIT APPLICATION WORKSHEET 3.0: LAND DISPOSAL OF EFFLUENT

The following is required for renewal, new, and amendment permit applications.

## Section 1. Type of Disposal System (Instructions Page 68)

Identify the method of land disposal:

- |  |  |
|--|--|
| <input type="checkbox"/> Surface application                               | <input type="checkbox"/> Subsurface application                |
| <input type="checkbox"/> Irrigation  | <input type="checkbox"/> Subsurface soils absorption           |
| <input type="checkbox"/> Drip irrigation system                            | <input type="checkbox"/> Subsurface area drip dispersal system |
| <input type="checkbox"/> Evaporation                                       | <input type="checkbox"/> Evapotranspiration beds               |
| <input checked="" type="checkbox"/> Other (describe in detail): <u>N/A</u> |  |

NOTE: All applicants without authorization or proposing new/amended subsurface disposal MUST complete and submit Worksheet 7.0.

For existing authorizations, provide Registration Number: N/A

## Section 2. Land Application Site(s) (Instructions Page 68)

In table 3.0(1), provide the requested information for the land application sites. Include the agricultural or cover crop type (wheat, cotton, alfalfa, bermuda grass, native grasses, etc.), land use (golf course, hayland, pastureland, park, row crop, etc.), irrigation area, amount of effluent applied, and whether or not the public has access to the area. Specify the amount of land area and the amount of effluent that will be allotted to each agricultural or cover crop, if more than one crop will be used.

**Table 3.0(1) – Land Application Site Crops**

Crop Type & Land Use	Irrigation Area (acres)	Effluent Application (GPD)	Public Access? Y/N
N/A	N/A	N/A	N/A

### Section 3. Storage and Evaporation Lagoons/Ponds (Instructions Page 68)

Table 3.0(2) – Storage and Evaporation Ponds

Pond Number	Surface Area (acres)	Storage Volume (acre-feet)	Dimensions	Liner Type
N/A	N/A	N/A	N/A	N/A

Attach a copy of a liner certification that was prepared, signed, and sealed by a Texas licensed professional engineer for each pond.

Attachment: N/A

### Section 4. Flood and Runoff Protection (Instructions Page 68)

Is the land application site within the 100-year frequency flood level?

☐ Yes ☐ No

If yes, describe how the site will be protected from inundation.

N/A

Provide the source used to determine the 100-year frequency flood level:

N/A

Provide a description of tailwater controls and rainfall run-on controls used for the land application site.

N/A



## Section 5. Annual Cropping Plan (Instructions Page 68)

Attach an Annual Cropping Plan which includes a discussion of each of the following items. If not applicable, provide a detailed explanation indicating why. **Attachment:** N/A

- Soils map with crops
- Cool and warm season plant species
- Crop yield goals
- Crop growing season
- Crop nutrient requirements
- Additional fertilizer requirements
- Minimum/maximum harvest height (for grass crops)
- Supplemental watering requirements
- Crop salt tolerances
- Harvesting method/number of harvests
- Justification for not removing existing vegetation to be irrigated

## Section 6. Well and Map Information (Instructions Page 69)

Attach a USGS map with the following information shown and labeled. If not applicable, provide a detailed explanation indicating why. **Attachment:** N/A

- The boundaries of the land application site(s)
- Waste disposal or treatment facility site(s)
- On-site buildings
- Buffer zones
- Effluent storage and tailwater control facilities
- All water wells within 1-mile radius of the disposal site or property boundaries
- All springs and seeps onsite and within 500 feet of the property boundaries
- All surface waters in the state onsite and within 500 feet of the property boundaries
- All faults and sinkholes onsite and within 500 feet of the property

List and cross reference all water wells located within a half-mile radius of the disposal site or property boundaries shown on the USGS map in the following table. Attach additional pages as necessary to include all of the wells.

**Table 3.0(3) – Water Well Data**

Well ID	Well Use	Producing? Y/N	Open, cased, capped, or plugged?	Proposed Best Management Practice
N/A	N/A	N/A	<b>Choose an item.</b>	N/A
			Choose an item.	
			Choose an item.	
			Choose an item.	
			Choose an item.	

If water quality data or well log information is available please include the information in an attachment listed by Well ID.

Attachment: N/A

## Section 7. Groundwater Quality (Instructions Page 69)

Attach a Groundwater Quality Technical Report which assesses the impact of the wastewater disposal system on groundwater. This report shall include an evaluation of the water wells (including the information in the well table provided in Item 6. above), the wastewater application rate, and pond liners. Indicate by a check mark that this report is provided.

Attachment: N/A

Are groundwater monitoring wells available onsite? ☐ Yes ☐ No

Do you plan to install ground water monitoring wells or lysimeters around the land application site? ☐ Yes ☐ No

If **yes**, provide the proposed location of the monitoring wells or lysimeters on a site map.

Attachment: N/A

## Section 8. Soil Map and Soil Analyses (Instructions Page 70)

### A. Soil map

Attach a USDA Soil Survey map that shows the area to be used for effluent disposal.

Attachment: N/A

### B. Soil analyses

Attach the laboratory results sheets from the soil analyses. **Note:** for renewal applications, the current annual soil analyses required by the permit are acceptable as long as the test date is less than one year prior to the submission of the application.

Attachment: N/A

List all USDA designated soil series on the proposed land application site. Attach additional pages as necessary.

**Table 3.0(4) – Soil Data**

Soil Series	Depth from Surface	Permeability	Available Water Capacity	Curve Number
N/A	N/A	N/A	N/A	N/A

## Section 9. Effluent Monitoring Data (Instructions Page 71)

Is the facility in operation?

☐ Yes ☐ No

**If no**, this section is not applicable and the worksheet is complete.

**If yes**, provide the effluent monitoring data for the parameters regulated in the existing permit. If a parameter is not regulated in the existing permit, enter N/A.

**Table 3.0(5) – Effluent Monitoring Data**

[illegible]

Provide a discussion of all persistent excursions above the permitted limits and any corrective actions taken.

**N/A**



# DOMESTIC WASTEWATER PERMIT APPLICATION

## WORKSHEET 3.1: SURFACE LAND DISPOSAL OF EFFLUENT

The following is required for new and major amendment permit applications. Renewal and minor amendment permit applications may be asked for this worksheet on a case by case basis.

### Section 1. Surface Disposal (Instructions Page 72)

Complete the item that applies for the method of disposal being used.

#### A. Irrigation

Area under irrigation, in acres: N/A

Design application frequency:

hours/day N/A And days/week N/A

Land grade (slope):

average percent (%): N/A

maximum percent (%): N/A

Design application rate in acre-feet/acre/year: N/A

Design total nitrogen loading rate, in lbs N/acre/year: N/A

Soil conductivity (mmhos/cm): N/A

Method of application: N/A

Attach a separate engineering report with the water balance and storage volume calculations, method of application, irrigation efficiency, and nitrogen balance.

**Attachment:** N/A

#### B. Evaporation ponds

Daily average effluent flow into ponds, in gallons per day: N/A

Attach a separate engineering report with the water balance and storage volume calculations.

**Attachment:** N/A

#### C. Evapotranspiration beds

Number of beds: N/A

Area of bed(s), in acres: N/A

Depth of bed(s), in feet: N/A

Void ratio of soil in the beds: N/A

Storage volume within the beds, in acre-feet: N/A

Attach a separate engineering report with the water balance and storage volume calculations, and a description of the lining.

**Attachment:** N/A

#### D. Overland flow

Area used for application, in acres: N/A

Slopes for application area, percent (%): N/A

Design application rate, in gpm/foot of slope width: N/A

Slope length, in feet: N/A

Design BOD<sub>5</sub> loading rate, in lbs BOD<sub>5</sub>/acre/day: N/A

Design application frequency:

hours/day: N/A And days/week: N/A

Attach a separate engineering report with the method of application and design requirements according to *30 TAC Chapter 217*.

**Attachment:** N/A

## Section 2. Edwards Aquifer (Instructions Page 73)

Is the facility subject to *30 TAC Chapter 213*, Edwards Aquifer Rules?

☐ Yes ☒ No

If **yes**, is the facility located on the Edwards Aquifer Recharge Zone?

☐ Yes ☒ No

If **yes**, attach a geological report addressing potential recharge features.

**Attachment:** N/A

# DOMESTIC WASTEWATER PERMIT APPLICATION

## WORKSHEET 3.2: SURFACE LAND DISPOSAL OF EFFLUENT

The following **is required** for **new and major amendment** permit applications. Renewal and minor amendments applicants may be asked for the worksheet on a case by case basis.

NOTE: All applicants proposing new/amended subsurface disposal **MUST** complete and submit Worksheet 7.0. This worksheet applies to any subsurface disposal system that **does not meet** the definition of a subsurface area drip dispersal system as defined in *30 TAC Chapter 222, Subsurface Area Drip Dispersal System*.

### Section 1. Subsurface Application (Instructions Page 74)

Identify the type of system:

- ☐ Conventional Gravity Drainfield, Beds, or Trenches (new systems must be less than 5,000 GPD)
- ☐ Low Pressure Dosing
- ☐ Other, specify: N/A

Application area, in acres: N/A

Area of drainfield, in square feet: N/A

Application rate, in gal/square foot/day: N/A

Depth to groundwater, in feet: N/A

Area of trench, in square feet: N/A

Dosing duration per area, in hours: N/A

Number of beds: N/A

Dosing amount per area, in inches/day: N/A

Infiltration rate, in inches/hour: N/A

Storage volume, in gallons: N/A

Area of bed(s), in square feet: N/A

Soil Classification: N/A

Attach a separate engineering report with the information required in *30 TAC § 309.20*, excluding the requirements of *§ 309.20 b(3)(A)* and (B) design analysis which may be asked for on a case by case basis. Include a description of the schedule of dosing basin rotation.

Attachment: N/A

### Section 2. Edwards Aquifer (Instructions Page 74)

Is the subsurface system over the Edwards Aquifer Recharge Zone as mapped by TCEQ?

- ☐ Yes ☐ No

Is the subsurface system over the Edwards Aquifer Transition Zone as mapped by TCEQ?

- ☐ Yes ☐ No

**If yes to either question**, the subsurface system may be prohibited by *30 TAC §213.8*. Please call the Municipal Permits Team, at 512-239-4671, to schedule a pre-application meeting.

# DOMESTIC WASTEWATER PERMIT APPLICATION

## WORKSHEET 3.3: SUBSURFACE AREA DRIP DISPERSAL (SADDS) LAND DISPOSAL OF EFFLUENT

The following **is required** for **new and major amendment** subsurface area drip dispersal system permit applications. Renewal and minor amendments applicants may be asked for the worksheet on a case by case basis.

NOTE: All applicants proposing new/amended subsurface disposal **MUST** complete and submit Worksheet 7.0. This worksheet applies to any subsurface disposal system that **meets** the definition of a subsurface area drip dispersal system as defined in *30 TAC Chapter 222, Subsurface Area Drip Dispersal System*.

### Section 1. Administrative Information (Instructions Page 75)

- A. Provide the legal name of all corporations or other business entities managed, owned, or otherwise closely related to the owner of the treatment facility:
- B. N/A Is the owner of the land where the treatment facility is located the same as the owner of the treatment facility?

☐ Yes ☐ No

If **no**, provide the legal name of all corporations or other business entities managed, owned, or otherwise closely related to the owner of the land where the treatment facility is located.

N/A

- C. Owner of the subsurface area drip dispersal system: N/A
- D. Is the owner of the subsurface area drip dispersal system the same as the owner of the wastewater treatment facility or the site where the wastewater treatment facility is located?

☐ Yes ☐ No

If **no**, identify the names of all corporations or other business entities managed, owned, or otherwise closely related to the entity identified in Item 1.C.

N/A

- E. Owner of the land where the subsurface area drip dispersal system is located: N/A
- F. Is the owner of the land where the subsurface area drip dispersal system is located the same as owner of the wastewater treatment facility, the site where the wastewater treatment facility is located, or the owner of the subsurface area drip dispersal system?

☐ Yes ☐ No

If **no**, identify the name of all corporations or other business entities managed, owned, or otherwise closely related to the entity identified in item 1.E.

N/A

### Section 2. Subsurface Area Drip Dispersal System (Instructions Page



**A. Type of system**

- ☐ Subsurface Drip Irrigation
- ☐ Surface Drip Irrigation
- ☐ Other, specify: N/A

**B. Irrigation operations**

Application area, in acres: N/A

Infiltration Rate, in inches/hour: N/A

Average slope of the application area, percent (%): N/A

Maximum slope of the application area, percent (%): N/A

Storage volume, in gallons: N/A

Major soil series: N/A

Depth to groundwater, in feet: N/A

**C. Application rate**

Is the facility located **west** of the boundary shown in *30 TAC § 222.83* **and** also using a vegetative cover of non-native grasses over seeded with cool season grasses during the winter months (October-March)?

☐ Yes ☐ No

If **yes**, then the facility may propose a hydraulic application rate not to exceed 0.1 gal/square foot/day.

Is the facility located **east** of the boundary shown in *30 TAC § 222.83* **or** in any part of the state when the vegetative cover is any crop other than non-native grasses?

☐ Yes ☐ No

If **yes**, the facility must use the formula in *30 TAC §222.83* to calculate the maximum hydraulic application rate.

Do you plan to submit an alternative method to calculate the hydraulic application rate for approval by the executive director?

☐ Yes ☐ No

Hydraulic application rate, in gal/square foot/day: N/A

Nitrogen application rate, in lbs/gal/day: N/A

**D. Dosing information**

Number of doses per day: N/A

Dosing duration per area, in hours: N/A

Rest period between doses, in hours: N/A

Dosing amount per area, in inches/day: N/A

Number of zones: N/A

Does the proposed subsurface drip irrigation system use tree vegetative cover as a crop?

☐ Yes ☐ No

If **yes**, provide a vegetation survey by a certified arborist. Please call the Water Quality Assessment Team at (512) 239-4671 to schedule a pre-application meeting.

Attachment: N/A

### Section 3. Required Plans (Instructions Page 75)

#### A. Recharge feature plan

Attach a Recharge Feature Plan with all information required in *30 TAC §222.79*.

Attachment: N/A

#### B. Soil evaluation

Attach a Soil Evaluation with all information required in *30 TAC §222.73*.

Attachment: N/A

#### C. Site preparation plan

Attach a Site Preparation Plan with all information required in *30 TAC §222.75*.

Attachment: N/A

#### D. Soil sampling/testing

Attach soil sampling and testing that includes all information required in *30 TAC §222.157*.

Attachment: N/A

### Section 4. Floodway Designation (Instructions Page 76)

#### A. Site location

Is the existing/proposed land application site within a designated floodway?

☐ Yes ☐ No

#### B. Flood map

Attach either the FEMA flood map or alternate information used to determine the floodway.

Attachment: N/A

### Section 5. Surface Waters in the State (Instructions Page 76)

#### A. Buffer Map

Attach a map showing appropriate buffers on surface waters in the state, water wells, and springs/seeps.

Attachment: N/A

#### B. Buffer variance request

Do you plan to request a buffer variance from water wells or waters in the state?

☐ Yes ☐ No

If **yes**, then attach the additional information required in *30 TAC § 222.81(c)*.

Attachment: N/A

## Section 6. Edwards Aquifer (Instructions Page 76)

A. Is the SADDs located over the Edwards Aquifer Recharge Zone as mapped by TCEQ?

☐ Yes ☐ No

B. Is the SADDs located over the Edwards Aquifer Transition Zone as mapped by TCEQ?

☐ Yes ☐ No

If **yes to either question**, then the SADDs may be prohibited by *30 TAC §213.8*. Please call the Municipal Permits Team at 512-239-4671 to schedule a pre-application meeting.

# DOMESTIC WASTEWATER PERMIT APPLICATION

## WORKSHEET 4.0: POLLUTANT ANALYSIS REQUIREMENTS

The following **is required** for facilities with a permitted or proposed flow of **1.0 MGD or greater**, facilities with an approved **pretreatment** program, or facilities classified as a **major** facility. See instructions for further details.

This worksheet is not required minor amendments without renewal.

### Section 1. Toxic Pollutants (Instructions Page 78)

For pollutants identified in Table 4.0(1), indicate the type of sample.

Grab ☒

Composite ☒

Date and time sample(s) collected: **See Attachment 8 – SMC Effluent Table 4.0 - Laboratory Reports**

**Table 4.0(1) – Toxics Analysis**

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acrylonitrile	<0.10	<0.10	1	50
Aldrin	ND	ND	1	0.01
Aluminum	9.02	9.02	1	2.5
Anthracene	0.679	0.679	1	10
Antimony	0.608	0.608	1	5
Arsenic	<.05	<0.5	1	0.5
Barium	27	27	1	3
Benzene	<5.0	<5.0	1	10
Benzidine	ND	ND	1	50
Benzo(a)anthracene	ND	ND	1	5
Benzo(a)pyrene	ND	ND	1	5
Bis(2-chloroethyl)ether	ND	ND	1	10
Bis(2-ethylhexyl)phthalate	ND	ND	1	10
Bromodichloromethane	ND	ND	1	10
Bromoform	<10	<10	1	10
Cadmium	<0.5	<0.5	1	1
Carbon Tetrachloride	ND	ND	1	2
Carbaryl	ND	ND	1	5
Chlordane*	ND	ND	1	0.2
Chlorobenzene	ND	ND	1	10



<b>Pollutant</b>	<b>AVG Effluent Conc. (µg/l)</b>	<b>MAX Effluent Conc. (µg/l)</b>	<b>Number of Samples</b>	<b>MAL (µg/l)</b>
Chlorodibromomethane	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Chloroform	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Chlorpyrifos	<b>ND</b>	<b>ND</b>	<b>1</b>	0.05
Chromium (Total)	<b>1.55</b>	<b>1.55</b>	<b>1</b>	3
Chromium (Tri) (*1)	<b>0.982</b>	<b>0.982</b>	<b>1</b>	N/A
Chromium (Hex)	<b>0.568</b>	<b>0.568</b>	<b>1</b>	3
Copper	<b>5.88</b>	<b>5.88</b>	<b>1</b>	2
Chrysene	<b>ND</b>	<b>ND</b>	<b>1</b>	5
p-Chloro-m-Cresol	<b>ND</b>	<b>ND</b>	<b>1</b>	10
4,6-Dinitro-o-Cresol	<b>ND</b>	<b>ND</b>	<b>1</b>	50
p-Cresol	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Cyanide (*2)	<b>0.0155</b>	<b>0.0155</b>	<b>1</b>	10
4,4'- DDD	<b>ND</b>	<b>ND</b>	<b>1</b>	0.1
4,4'- DDE	<b>ND</b>	<b>ND</b>	<b>1</b>	0.1
4,4'- DDT	<b>ND</b>	<b>ND</b>	<b>1</b>	0.02
2,4-D	<b>ND</b>	<b>ND</b>	<b>1</b>	0.7
Demeton (O and S)	<b>ND</b>	<b>ND</b>	<b>1</b>	0.20
Diazinon	<b>ND</b>	<b>ND</b>	<b>1</b>	0.5/0.1
1,2-Dibromoethane	<b>ND</b>	<b>ND</b>	<b>1</b>	10
m-Dichlorobenzene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
o-Dichlorobenzene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
p-Dichlorobenzene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
3,3'-Dichlorobenzidine	<b>ND</b>	<b>ND</b>	<b>1</b>	5
1,2-Dichloroethane	<b>ND</b>	<b>ND</b>	<b>1</b>	10
1,1-Dichloroethylene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Dichloromethane	<b>ND</b>	<b>ND</b>	<b>1</b>	20
1,2-Dichloropropane	<b>ND</b>	<b>ND</b>	<b>1</b>	10
1,3-Dichloropropene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Dicofol	<b>ND</b>	<b>ND</b>	<b>1</b>	1
Dieldrin	<b>ND</b>	<b>ND</b>	<b>1</b>	0.02
2,4-Dimethylphenol	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Di-n-Butyl Phthalate	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Diuron	<b>ND</b>	<b>ND</b>	<b>1</b>	0.09

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Endosulfan I (alpha)	<b>0.0564</b>	<b>0.0564</b>	<b>1</b>	0.01
Endosulfan II (beta)	<b>ND</b>	<b>ND</b>	<b>1</b>	0.02
Endosulfan Sulfate	<b>ND</b>	<b>ND</b>	<b>1</b>	0.1
Endrin	<b>ND</b>	<b>ND</b>	<b>1</b>	0.02
Ethylbenzene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Fluoride	<b>422</b>	<b>422</b>	<b>1</b>	500
Guthion	<b>ND</b>	<b>ND</b>	<b>1</b>	0.1
Heptachlor	<b>ND</b>	<b>ND</b>	<b>1</b>	0.01
Heptachlor Epoxide	<b>ND</b>	<b>ND</b>	<b>1</b>	0.01
Hexachlorobenzene	<b>ND</b>	<b>ND</b>	<b>1</b>	5
Hexachlorobutadiene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Hexachlorocyclohexane (alpha)	<b>ND</b>	<b>ND</b>	<b>1</b>	0.05
Hexachlorocyclohexane (beta)	<b>ND</b>	<b>ND</b>	<b>1</b>	0.05
gamma-Hexachlorocyclohexane (Lindane)	<b>ND</b>	<b>ND</b>	<b>1</b>	0.05
Hexachlorocyclopentadiene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Hexachloroethane	<b>ND</b>	<b>ND</b>	<b>1</b>	20
Hexachlorophene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Lead	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>1</b>	0.5
Malathion	<b>ND</b>	<b>ND</b>	<b>1</b>	0.1
Mercury	<b>0.000999</b>	<b>0.000999</b>	<b>1</b>	0.005
Methoxychlor	<b>ND</b>	<b>ND</b>	<b>1</b>	2
Methyl Ethyl Ketone	<b>ND</b>	<b>ND</b>	<b>1</b>	50
Mirex	<b>ND</b>	<b>ND</b>	<b>1</b>	0.02
Nickel	<b>2.85</b>	<b>2.85</b>	<b>1</b>	2
Nitrate-Nitrogen	<b>&lt;5</b>	<b>&lt;5</b>	<b>1</b>	100
Nitrobenzene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
N-Nitrosodiethylamine	<b>ND</b>	<b>ND</b>	<b>1</b>	20
N-Nitroso-di-n-Butylamine	<b>ND</b>	<b>ND</b>	<b>1</b>	20
Nonylphenol	<b>ND</b>	<b>ND</b>	<b>1</b>	333
Parathion (ethyl)	<b>ND</b>	<b>ND</b>	<b>1</b>	0.1
Pentachlorobenzene	<b>ND</b>	<b>ND</b>	<b>1</b>	20
Pentachlorophenol	<b>ND</b>	<b>ND</b>	<b>1</b>	5

<b>Pollutant</b>	<b>AVG Effluent Conc. (µg/l)</b>	<b>MAX Effluent Conc. (µg/l)</b>	<b>Number of Samples</b>	<b>MAL (µg/l)</b>
Phenanthrene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Polychlorinated Biphenyls (PCB's) (*3)	<b>ND</b>	<b>ND</b>	<b>1</b>	0.2
Pyridine	<b>ND</b>	<b>ND</b>	<b>1</b>	20
Selenium	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>1</b>	5
Silver	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>1</b>	0.5
1,2,4,5-Tetrachlorobenzene	<b>ND</b>	<b>ND</b>	<b>1</b>	20
1,1,2,2-Tetrachloroethane	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Tetrachloroethylene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Thallium	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>1</b>	0.5
Toluene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Toxaphene	<b>ND</b>	<b>ND</b>	<b>1</b>	0.3
2,4,5-TP (Silvex)	<b>ND</b>	<b>ND</b>	<b>1</b>	0.3
Tributyltin (see instructions for explanation)	<b>N/A</b>	<b>N/A</b>	<b>1</b>	0.01
1,1,1-Trichloroethane	<b>ND</b>	<b>ND</b>	<b>1</b>	10
1,1,2-Trichloroethane	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Trichloroethylene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
2,4,5-Trichlorophenol	<b>ND</b>	<b>ND</b>	<b>1</b>	50
TTHM (Total Trihalomethanes)	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Vinyl Chloride	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Zinc	<b>14.2</b>	<b>14.2</b>	<b>1</b>	5

(\*1) Determined by subtracting hexavalent Cr from total Cr.

(\*2) Cyanide, amenable to chlorination or weak-acid dissociable.

(\*3) The sum of seven PCB congeners 1242, 1254, 1221, 1232, 1248, 1260, and 1016.

## Section 2. Priority Pollutants

For pollutants identified in Tables 4.0(2)A-E, indicate type of sample.

Grab ☐ Composite ☐

Date and time sample(s) collected: June 9, 2024

**Table 4.0(2)A – Metals, Cyanide, and Phenols**

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Antimony	<b>0.608</b>	<b>0.608</b>	<b>1</b>	5
Arsenic	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>1</b>	0.5
Beryllium	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>1</b>	0.5
Cadmium	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>1</b>	1
Chromium (Total)	<b>1.55</b>	<b>1.55</b>	<b>1</b>	3
Chromium (Hex)	<b>0.568</b>	<b>0.568</b>	<b>1</b>	3
Chromium (Tri) (*1)	<b>0.982</b>	<b>0.982</b>	<b>1</b>	N/A
Copper	<b>5.88</b>	<b>5.88</b>	<b>1</b>	2
Lead	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>1</b>	0.5
Mercury	<b>0.000999</b>	<b>0.000999</b>	<b>1</b>	0.005
Nickel	<b>2.85</b>	<b>2.85</b>	<b>1</b>	2
Selenium	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>1</b>	5
Silver	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>1</b>	0.5
Thallium	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>1</b>	0.5
Zinc	<b>14.2</b>	<b>14.2</b>	<b>1</b>	5
Cyanide (*2)	<b>16.61</b>	<b>30.8</b>	<b>4</b>	10
Phenols, Total	<b>&lt;10</b>	<b>&lt;10</b>	<b>4</b>	10

(\*1) Determined by subtracting hexavalent Cr from total Cr.

(\*2) Cyanide, amenable to chlorination or weak-acid dissociable



**Table 4.0(2)B – Volatile Compounds**

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acrolein	<10	<10	4	50
Acrylonitrile	<10	<10	4	50
Benzene	<5.0	<5.0	4	10
Bromoform	<10	<10	4	10
Carbon Tetrachloride	<2.0	<2.0	4	2
Chlorobenzene	<10	<10	4	10
Chlorodibromomethane	8.71	8.71	1	10
Chloroethane	<5.0	<5.0	4	50
2-Chloroethylvinyl Ether	<10	<10	4	10
Chloroform	17.3	26.4	4	10
Dichlorobromomethane [Bromodichloromethane]	7.92	12	4	10
1,1-Dichloroethane	<5.0	<5.0	4	10
1,2-Dichloroethane	<5.0	<5.0	4	10
1,1-Dichloroethylene	<5.0	<5.0	4	10
1,2-Dichloropropane	<2.0	<2.0	4	10
1,3-Dichloropropylene [1,3-Dichloropropene]	<10	<10	4	10
1,2-Trans-Dichloroethylene	<5.0	<5.0	4	10
Ethylbenzene	<2.0	<2.0	4	10
Methyl Bromide	ND	ND	4	50
Methyl Chloride	ND	ND	4	50
Methylene Chloride	<20	<20	4	20
1,1,2,2-Tetrachloroethane	<5.0	<5.0	4	10
Tetrachloroethylene	<10	<10	4	10
Toluene	<5.0	<5.0	4	10
1,1,1-Trichloroethane	<5.0	<5.0	4	10
1,1,2-Trichloroethane	<5.0	<5.0	4	10
Trichloroethylene	<5.0	<5.0	4	10
Vinyl Chloride	<5.0	<5.0	4	10

**Table 4.0(2)C – Acid Compounds**

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
2-Chlorophenol	ND	ND	1	10
2,4-Dichlorophenol	ND	ND	1	10
2,4-Dimethylphenol	ND	ND	1	10
4,6-Dinitro-o-Cresol	ND	ND	1	50
2,4-Dinitrophenol	ND	ND	1	50
2-Nitrophenol	ND	ND	1	20
4-Nitrophenol	ND	ND	1	50
P-Chloro-m-Cresol	ND	ND	1	10
Pentalchlorophenol	ND	ND	1	5
Phenol	ND	ND	1	10
2,4,6-Trichlorophenol	ND	ND	1	10

**Table 4.0(2)D – Base/Neutral Compounds**

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acenaphthene	ND	ND	1	10
Acenaphthylene	ND	ND	1	10
Anthracene	ND	ND	1	10
Benzidine	ND	ND	1	50
Benzo(a)Anthracene	ND	ND	1	5
Benzo(a)Pyrene	ND	ND	1	5
3,4-Benzofluoranthene	ND	ND	1	10
Benzo(ghi)Perylene	ND	ND	1	20
Benzo(k)Fluoranthene	ND	ND	1	5
Bis(2-Chloroethoxy)Methane	ND	ND	1	10
Bis(2-Chloroethyl)Ether	ND	ND	1	10
Bis(2-Chloroisopropyl)Ether	ND	ND	1	10
Bis(2-Ethylhexyl)Phthalate	ND	ND	1	10
4-Bromophenyl Phenyl Ether	ND	ND	1	10
Butyl benzyl Phthalate	ND	ND	1	10
2-Chloronaphthalene	ND	ND	1	10
4-Chlorophenyl phenyl ether	ND	ND	1	10
Chrysene	ND	ND	1	5
Dibenzo(a,h)Anthracene	ND	ND	1	5
1,2-(o)Dichlorobenzene	ND	ND	1	10
1,3-(m)Dichlorobenzene	ND	ND	1	10
1,4-(p)Dichlorobenzene	ND	ND	1	10
3,3-Dichlorobenzidine	ND	ND	1	5
Diethyl Phthalate	ND	ND	1	10
Dimethyl Phthalate	ND	ND	1	10
Di-n-Butyl Phthalate	ND	ND	1	10
2,4-Dinitrotoluene	ND	ND	1	10
2,6-Dinitrotoluene	ND	ND	1	10
Di-n-Octyl Phthalate	ND	ND	1	10
1,2-Diphenylhydrazine (as Azo-benzene)	ND	ND	1	20
Fluoranthene	ND	ND	1	10

<b>Pollutant</b>	<b>AVG Effluent Conc. (µg/l)</b>	<b>MAX Effluent Conc. (µg/l)</b>	<b>Number of Samples</b>	<b>MAL (µg/l)</b>
Fluorene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Hexachlorobenzene	<b>ND</b>	<b>ND</b>	<b>1</b>	5
Hexachlorobutadiene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Hexachlorocyclo-pentadiene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Hexachloroethane	<b>ND</b>	<b>ND</b>	<b>1</b>	20
Indeno(1,2,3-cd)pyrene	<b>ND</b>	<b>ND</b>	<b>1</b>	5
Isophorone	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Naphthalene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Nitrobenzene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
N-Nitrosodimethylamine	<b>ND</b>	<b>ND</b>	<b>1</b>	50
N-Nitrosodi-n-Propylamine	<b>ND</b>	<b>ND</b>	<b>1</b>	20
N-Nitrosodiphenylamine	<b>ND</b>	<b>ND</b>	<b>1</b>	20
Phenanthrene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
Pyrene	<b>ND</b>	<b>ND</b>	<b>1</b>	10
1,2,4-Trichlorobenzene	<b>ND</b>	<b>ND</b>	<b>1</b>	10



**Table 4.0(2)E - Pesticides**

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Aldrin	ND	ND	1	0.01
alpha-BHC (Hexachlorocyclohexane)	0.0694	0.0694	1	0.05
beta-BHC (Hexachlorocyclohexane)	ND	ND	1	0.05
gamma-BHC (Hexachlorocyclohexane)	ND	ND	1	0.05
delta-BHC (Hexachlorocyclohexane)	ND	ND	1	0.05
Chlordane	ND	ND	1	0.2
4,4-DDT	ND	ND	1	0.02
4,4-DDE	ND	ND	1	0.1
4,4,-DDD	ND	ND	1	0.1
Dieldrin	ND	ND	1	0.02
Endosulfan I (alpha)	0.0564	0.0564	1	0.01
Endosulfan II (beta)	ND	ND	1	0.02
Endosulfan Sulfate	ND	ND	1	0.1
Endrin	ND	ND	1	0.02
Endrin Aldehyde	ND	ND	1	0.1
Heptachlor	ND	ND	1	0.01
Heptachlor Epoxide	ND	ND	1	0.01
PCB-1242	ND	ND	1	0.2
PCB-1254	ND	ND	1	0.2
PCB-1221	ND	ND	1	0.2
PCB-1232	ND	ND	1	0.2
PCB-1248	ND	ND	1	0.2
PCB-1260	ND	ND	1	0.2
PCB-1016	ND	ND	1	0.2
Toxaphene	ND	ND	1	0.3

\* For PCBs, if all are non-detects, enter the highest non-detect preceded by a "<".

### Section 3. Dioxin/Furan Compounds

A. Indicate which of the following compounds from may be present in the influent from a contributing industrial user or significant industrial user. Check all that apply.

- ☐ 2,4,5-trichlorophenoxy acetic acid  
Common Name 2,4,5-T, CASRN 93-76-5
- ☐ 2-(2,4,5-trichlorophenoxy) propanoic acid  
Common Name Silvex or 2,4,5-TP, CASRN 93-72-1
- ☐ 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate  
Common Name Erbon, CASRN 136-25-4
- ☐ 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate  
Common Name Ronnel, CASRN 299-84-3
- ☐ 2,4,5-trichlorophenol  
Common Name TCP, CASRN 95-95-4
- ☐ hexachlorophene  
Common Name HCP, CASRN 70-30-4

For each compound identified, provide a brief description of the conditions of its/their presence at the facility.

N/A

B. Do you know or have any reason to believe that 2,3,7,8 Tetrachlorodibenzo-P-Dioxin (TCDD) or any congeners of TCDD may be present in your effluent?

☐ Yes ☒ No

If yes, provide a brief description of the conditions for its presence.

N/A

C. If any of the compounds in Subsection A **or** B are present, complete Table 4.0(2)F.

For pollutants identified in Table 4.0(2)F, indicate the type of sample.

Grab ☐ Composite ☐

Date and time sample(s) collected: N/A

**Table 4.0(2)F – Dioxin/Furan Compounds**

Compound	Toxic Equivalenc y Factors	Wastewater Concentration (ppq)	Wastewater Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Equivalents (ppt)	MAL (ppq)
2,3,7,8 TCDD	1					10
1,2,3,7,8 PeCDD	0.5					50
2,3,7,8 HxCDDs	0.1					50
1,2,3,4,6,7,8 HpCDD	0.01					50
2,3,7,8 TCDF	0.1					10
1,2,3,7,8 PeCDF	0.05					50
2,3,4,7,8 PeCDF	0.5					50
2,3,7,8 HxCDFs	0.1					50
2,3,4,7,8 HpCDFs	0.01					50
OCDD	0.0003					100
OCDF	0.0003					100
PCB 77	0.0001					0.5
PCB 81	0.0003					0.5
PCB 126	0.1					0.5
PCB 169	0.03					0.5
Total						

# DOMESTIC WASTEWATER PERMIT APPLICATION

## WORKSHEET 5.0: TOXICITY TESTING REQUIREMENTS

The following **is required** for facilities with a current operating design flow of **1.0 MGD or greater**, with an EPA-approved **pretreatment** program (or those required to have one under 40 CFR Part 403), or are required to perform Whole Effluent Toxicity testing. See instructions for further details.

This worksheet is not required minor amendments without renewal.

### Section 1. Required Tests (Instructions Page 88)

Indicate the number of 7-day chronic or 48-hour acute Whole Effluent Toxicity (WET) tests performed in the four and one-half years prior to submission of the application.

7-day Chronic: **26 – Attachment 9 – SMC Whole Effluent Toxicity (WET) Tables**

48-hour Acute: **10 – Attachment 9 – SMC Whole Effluent Toxicity (WET) Tables**

### Section 2. Toxicity Reduction Evaluations (TREs)

Has this facility completed a TRE in the past four and a half years? Or is the facility currently performing a TRE?

☐ Yes ☒ No

If yes, describe the progress to date, if applicable, in identifying and confirming the toxicant.

N/A



## Section 3. Summary of WET Tests

If the required biomonitoring test information has not been previously submitted via both the Discharge Monitoring Reports (DMRs) and the Table 1 (as found in the permit), provide a summary of the testing results for all valid and invalid tests performed over the past four and one-half years. Make additional copies of this table as needed.

**Table 5.0(1) Summary of WET Tests**

Test Date	Test Species	NOEC Survival	NOEC Sub-lethal
<b>October, 2024</b>	D. Dubia	95%	95%
	P. Promelas	95%	95%
<b>July, 2024</b>	E. Dubia	95%	95%
	P. Promelas	95%	95%
<b>April, 2024</b>	F. Dubia	95%	95%
	P. Promelas	95%	95%
<b>February, 2024</b>	G. Dubia	95%	95%
	P. Promelas	95%	95%
<b>October, 2023</b>	H. Dubia	95%	95%
	P. Promelas	95%	95%
<b>September, 2023</b>	I. Dubia	95%	95%
	P. Promelas	95%	95%
<b>June, 2023</b>	J. Dubia	95%	95%
	P. Promelas	95%	95%
<b>March 2023</b>	K. Dubia	95%	95%
	P. Promelas	95%	95%
<b>October, 2022</b>	L. Dubia	95%	95%
	P. Promelas	95%	95%
<b>September, 2022</b>	M. Dubia	95%	95%
	P. Promelas	95%	95%

Test Date	Test Species	NOEC Survival	NOEC Sub-lethal
<b>April, 2022</b>	<b>N. Dubia</b>	<b>95%</b>	<b>95%</b>
	<b>P. Promelas</b>	<b>95%</b>	<b>95%</b>
<b>February, 2022</b>	<b>O. Dubia</b>	<b>95%</b>	<b>95%</b>
	<b>P. Promelas</b>	<b>95%</b>	<b>95%</b>
<b>October, 2021</b>	<b>P. Dubia</b>	<b>95%</b>	<b>95%</b>
	<b>P. Promelas</b>	<b>95%</b>	<b>95%</b>
<b>August, 2021</b>	<b>Q. Dubia</b>	<b>95%</b>	<b>95%</b>
	<b>P. Promelas</b>	<b>95%</b>	<b>95%</b>
<b>April, 2021</b>	<b>R. Dubia</b>	<b>95%</b>	<b>95%</b>
	<b>P. Promelas</b>	<b>95%</b>	<b>95%</b>
<b>January, 2021</b>	<b>S. Dubia</b>	<b>95%</b>	<b>95%</b>
	<b>P. Promelas</b>	<b>95%</b>	<b>95%</b>
<b>October, 2020</b>	<b>T. Dubia</b>	<b>95%</b>	<b>95%</b>
	<b>P. Promelas</b>	<b>95%</b>	<b>95%</b>
<b>July, 2020</b>	<b>U. Dubia</b>	<b>95%</b>	<b>95%</b>
	<b>P. Promelas</b>	<b>95%</b>	<b>95%</b>

# DOMESTIC WASTEWATER PERMIT APPLICATION

## WORKSHEET 6.0: INDUSTRIAL WASTE CONTRIBUTION

The following is required for all publicly owned treatment works.

### Section 1. All POTWs (Instructions Page 89)

#### A. Industrial users (IUs)

Provide the number of each of the following types of industrial users (IUs) that discharge to your POTW and the daily flows from each user. See the Instructions for definitions of Categorical IUs, Significant IUs - non-categorical, and Other IUs.

**If there are no users, enter 0 (zero).**

Categorical IUs:

Number of IUs: 16

Average Daily Flows, in MGD: 0.298043

Significant IUs - non-categorical:

Number of IUs: 48

Average Daily Flows, in MGD: 6.177460

Other IUs:

Number of IUs: 5

Average Daily Flows, in MGD: 0.00782

#### B. Treatment plant interference

In the past three years, has your POTW experienced treatment plant interference (see instructions)?

☐ Yes ☒ No

**If yes**, identify the dates, duration, description of interference, and probable cause(s) and possible source(s) of each interference event. Include the names of the IUs that may have caused the interference.

N/A

### C. Treatment plant pass through

In the past three years, has your POTW experienced pass through (see instructions)?

☐ Yes ☒ No

If **yes**, identify the dates, duration, a description of the pollutants passing through the treatment plant, and probable cause(s) and possible source(s) of each pass through event. Include the names of the IUs that may have caused pass through.

N/A

### D. Pretreatment program

Does your POTW have an approved pretreatment program?

☒ Yes ☐ No

If **yes**, complete Section 2 only of this Worksheet.

Is your POTW required to develop an approved pretreatment program?

☒ Yes ☐ No

If **yes**, complete Section 2.c. and 2.d. only, and skip Section 3.

If **no to either question above**, skip Section 2 and complete Section 3 for each significant industrial user and categorical industrial user.

## Section 2. POTWs with Approved Programs or Those Required to Develop a Program (Instructions Page 90)

### A. Substantial modifications

Have there been any **substantial modifications** to the approved pretreatment program that have not been submitted to the TCEQ for approval according to *40 CFR §403.18*?

☐ Yes ☒ No

If **yes**, identify the modifications that have not been submitted to TCEQ, including the purpose of the modification.

N/A



## B. Non-substantial modifications

Have there been any **non-substantial modifications** to the approved pretreatment program that have not been submitted to TCEQ for review and acceptance?

☐ Yes ☒ No

If yes, identify all non-substantial modifications that have not been submitted to TCEQ, including the purpose of the modification.

N/A

## C. Effluent parameters above the MAL

In Table 6.0(1), list all parameters measured above the MAL in the POTW's effluent monitoring during the last three years. Submit an attachment if necessary.

**Table 6.0(1) – Parameters Above the MAL**

Pollutant	Concentration	MAL	Units	Date
Chloroform	17.3	10	ug/L	6-9-2024
alpha-BHC (Hexachlorocyclohexane)	0.0694	0.05	ug/L	6-9-2024
Endosulfan I (alpha)	0.0564	0.01	ug/L	6-9-2024
Aluminum (Al)	9.02	2.5	ug/L	6-9-2024
Barium (Ba)	27	3	ug/L	6-9-2024
Copper (Cu)	5.88	2	ug/L	6-9-2024
Nickel (Ni)	2.85	2	ug/L	6-9-2024
Zinc (Zn)	14.2	5	ug/L	6-9-2024
Cyanide, Amenable	16.61	10	ug/L	6-9-2024

## D. Industrial user interruptions

Has any SIU, CIU, or other IU caused or contributed to any problems (excluding interferences or pass throughs) at your POTW in the past three years?

☐ Yes ☒ No

If yes, identify the industry, describe each episode, including dates, duration, description of the problems, and probable pollutants.

N/A

### Section 3. Significant Industrial User (SIU) Information and Categorical Industrial User (CIU) (Instructions Page 90)

#### A. General information

Company Name: **See Attachment 11 – SMC Significant Industrial Users (SIUs)**

SIC Code: Click to enter text.

Contact name: Click to enter text.

Address: Click to enter text.

City, State, and Zip Code: Click to enter text.

Telephone number: Click to enter text.

Email address: Click to enter text.

#### B. Process information

Describe the industrial processes or other activities that affect or contribute to the SIU(s) or CIU(s) discharge (i.e., process and non-process wastewater).

**See Attachment 10 – SMC Significant Industrial Users (SIUs)**

#### C. Product and service information

Provide a description of the principal product(s) or services performed.

**See Attachment 11 – SMC Significant Industrial Users (SIUs)**

#### D. Flow rate information

See the Instructions for definitions of “process” and “non-process wastewater.”

**Process Wastewater:**

Discharge, in gallons/day: **See Attachment 11 – SMC Significant Industrial Users (SIUs)**

Discharge Type: ☐ Continuous ☐ Batch ☐ Intermittent

**Non-Process Wastewater:**

Discharge, in gallons/day: [Click to enter text.](#)

Discharge Type: ☐ Continuous ☐ Batch ☐ Intermittent

**E. Pretreatment standards**

Is the SIU or CIU subject to technically based local limits as defined in the instructions?

☐ Yes ☐ No

Is the SIU or CIU subject to categorical pretreatment standards found in *40 CFR Parts 405-471*?

☐ Yes ☐ No

**If subject to categorical pretreatment standards**, indicate the applicable category and subcategory for each categorical process.

Category: Subcategories: **See Attachment 11 – SMC Significant Industrial Users (SIUs)**

[Click or tap here to enter text.](#) [Click to enter text.](#)

Category: [Click to enter text.](#)

Subcategories: [Click to enter text.](#)

Category: [Click to enter text.](#)

Subcategories: [Click to enter text.](#)

Category: [Click to enter text.](#)

Subcategories: [Click to enter text.](#)

Category: [Click to enter text.](#)

Subcategories: [Click to enter text.](#)

**F. Industrial user interruptions**

Has the SIU or CIU caused or contributed to any problems (e.g., interferences, pass through, odors, corrosion, blockages) at your POTW in the past three years?

☐ Yes ☒ No

**If yes**, identify the SIU, describe each episode, including dates, duration, description of problems, and probable pollutants.

**N/A**



# WORKSHEET 7.0

## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

### CLASS V INJECTION WELL INVENTORY/AUTHORIZATION FORM

Submit the completed form to:

TCEQ  
IUC Permits Team  
Radioactive Materials Division  
MC-233  
PO Box 13087  
Austin, Texas 78711-3087  
512-239-6466

For TCEQ Use Only

Reg. No. \_\_\_\_\_

Date Received \_\_\_\_\_

Date Authorized \_\_\_\_\_

#### Section 1. General Information (Instructions Page 92)

**1. TCEQ Program Area**

Program Area (PST, VCP, IHW, etc.): N/A

Program ID: N/A

Contact Name: N/A

Phone Number: N/A

**2. Agent/Consultant Contact Information**

Contact Name: N/A

Address: N/A

City, State, and Zip Code: N/A

Phone Number: N/A

**3. Owner/Operator Contact Information**

☐ Owner ☐ Operator

Owner/Operator Name: N/A

Contact Name: N/A

Address: N/A

City, State, and Zip Code: N/A

Phone Number: N/A

**4. Facility Contact Information**

Facility Name: N/A

Address: N/A

City, State, and Zip Code: N/A

Location description (if no address is available): N/A

Facility Contact Person: N/A

Phone Number: N/A

5. **Latitude and Longitude, in degrees-minutes-seconds**

Latitude: N/A

Longitude: N/A

Method of determination (GPS, TOPO, etc.): N/A

Attach topographic quadrangle map as attachment A.

6. **Well Information**

Type of Well Construction, select one:

- ☐ Vertical Injection
- ☐ Subsurface Fluid Distribution System
- ☐ Infiltration Gallery
- ☐ Temporary Injection Points
- ☐ Other, Specify: N/A

Number of Injection Wells: N/A

7. **Purpose**

Detailed Description regarding purpose of Injection System:

N/A
-----

Attach a Site Map as Attachment B (Attach the Approved Remediation Plan, if appropriate.)

8. **Water Well Driller/Installer**

Water Well Driller/Installer Name: N/A

City, State, and Zip Code: N/A

Phone Number: N/A

License Number: N/A

## Section 2. Proposed Down Hole Design

Attach a diagram signed and sealed by a licensed engineer as Attachment C.

**Table 7.0(1) – Down Hole Design Table**

Name of String	Size	Setting Depth	Sacks Cement/Grout – Slurry Volume – Top of Cement	Hole Size	Weight (lbs/ft) PVC/Steel
Casing	N/A	N/A	N/A	N/A	N/A
Tubing	N/A	N/A	N/A	N/A	N/A
Screen	N/A	N/A	N/A	N/A	N/A

### Section 3. Proposed Trench System, Subsurface Fluid Distribution System, or Infiltration Gallery

Attach a diagram signed and sealed by a licensed engineer as Attachment D.

System(s) Dimensions: N/A

System(s) Construction: N/A

### Section 4. Site Hydrogeological and Injection Zone Data

1. Name of Contaminated Aquifer: N/A
2. Receiving Formation Name of Injection Zone: N/A
3. Well/Trench Total Depth: N/A
4. Surface Elevation: N/A
5. Depth to Ground Water: N/A
6. Injection Zone Depth: N/A
7. Injection Zone vertically isolated geologically? ☐ Yes ☒ No  
Impervious Strata between Injection Zone and nearest Underground Source of Drinking Water:  
Name: N/A  
Thickness: N/A
8. Provide a list of contaminants and the levels (ppm) in contaminated aquifer  
Attach as Attachment E.
9. Horizontal and Vertical extent of contamination and injection plume  
Attach as Attachment F.
10. Formation (Injection Zone) Water Chemistry (Background levels) TDS, etc.  
Attach as Attachment G.
11. Injection Fluid Chemistry in PPM at point of injection  
Attach as Attachment H.
12. Lowest Known Depth of Ground Water with < 10,000 PPM TDS: N/A
13. Maximum injection Rate/Volume/Pressure: N/A
14. Water wells within 1/4 mile radius (attach map as Attachment I): N/A
15. Injection wells within 1/4 mile radius (attach map as Attachment J): N/A
16. Monitor wells within 1/4 mile radius (attach drillers logs and map as Attachment K): N/A
17. Sampling frequency: N/A
18. Known hazardous components in injection fluid: N/A

## Section 5. Site History

1. Type of Facility: N/A
2. Contamination Dates: N/A
3. Original Contamination (VOCs, TPH, BTEX, etc.) and Concentrations (attach as Attachment L): N/A
4. Previous Remediation (attach results of any previous remediation as attachment M): N/A

**NOTE: Authorization Form should be completed in detail and authorization given by the TCEQ before construction, operation, and/or conversion can begin. Attach additional pages as necessary.**

### *Class V Injection Well Designations*

- 5A07 Heat Pump/AC return (IW used for groundwater to heat and/or cool buildings)
- 5A19 Industrial Cooling Water Return Flow (IW used to cool industrial process equipment)
- 5B22 Salt Water Intrusion Barrier (IW used to inject fluids to prevent the intrusion of salt water into an aquifer)
- 5D02 Storm Water Drainage (IW designed for the disposal of rain water)
- 5D04 Industrial Stormwater Drainage Wells (IW designed for the disposal of rain water associated with industrial facilities)
- 5F01 Agricultural Drainage (IW that receive agricultural runoff)
- 5R21 Aquifer Recharge (IW used to inject fluids to recharge an aquifer)
- 5S23 Subsidence Control Wells (IW used to control land subsidence caused by ground water withdrawal)
- 5W09 Untreated Sewage
- 5W10 Large Capacity Cesspools (Cesspools that are designed for 5,000 gpd or greater)
- 5W11 Large Capacity Septic systems (Septic systems designed for 5,000 gpd or greater)
- 5W12 WTP disposal
- 5W20 Industrial Process Waste Disposal Wells
- 5W31 Septic System (Well Disposal method)
- 5W32 Septic System Drainfield Disposal
- 5X13 Mine Backfill (IW used to control subsidence, dispose of mining byproducts, and/or fill sections of a mine)
- 5X25 Experimental Wells (Pilot Test) (IW used to test new technologies or tracer dye studies)
- 5X26 Aquifer Remediation (IW used to clean up, treat, or prevent contamination of a USDW)
- 5X27 Other Wells
- 5X28 Motor Vehicle Waste Disposal Wells (IW used to dispose of waste from a motor vehicle site - These are currently banned)
- 5X29 Abandoned Drinking Water Wells (waste disposal)



# **DOMESTIC WASTEWATER PERMIT APPLICATION**

**TPDES PERMIT NO. 10137-033**

**ATTACHMENT 1**

**SMC PLANT UNITS**

## Steven M. Clouse WRC Treatment Units

Type of Unit	Number of units	Size
Flow Equalization Basins	1	180' x 245' x 35'
Flow Equalization Basins	2	100' x 400' x 35'
Grit Chambers	8	24' dia. X 18.3' depth
Primary Clarifiers	8	140' dia. X 12' depth
1st Stage Aeration Basins	9	78' x 174' x 25'
1st Stage Aeration Basins	1	73' x 174' x 25'
1st Stage Clarifiers	9	78' x 227' x 14'
1st Stage Clarifiers	1	73' x 227' x 14'
2nd Stage Aeration Basins	10	98' x 124' x 25'
2nd Stage Clarifiers	10	98' x 223' x 14'
Effluent Sand Filters	5	15' x 200' x 10'
Effluent Cloth Filters	10	82.5' X 16' X 6.32'
Cl2 Contact Basins	2	37' x 570' x 15'
SO2 Dechlorination	1	N/A
Gravity Belt Thickeners	4	2 Meters
Anaerobic Digesters	9	101' dia. X 30' depth
Sludge Holding Tanks	1	101' dia. X 30' depth
Sludge Blend Tank	1	32' dia. X 24' depth
Belt Filter Presses	12	2 Meters

# **DOMESTIC WASTEWATER PERMIT APPLICATION**

**TPDES PERMIT NO. 10137-033**

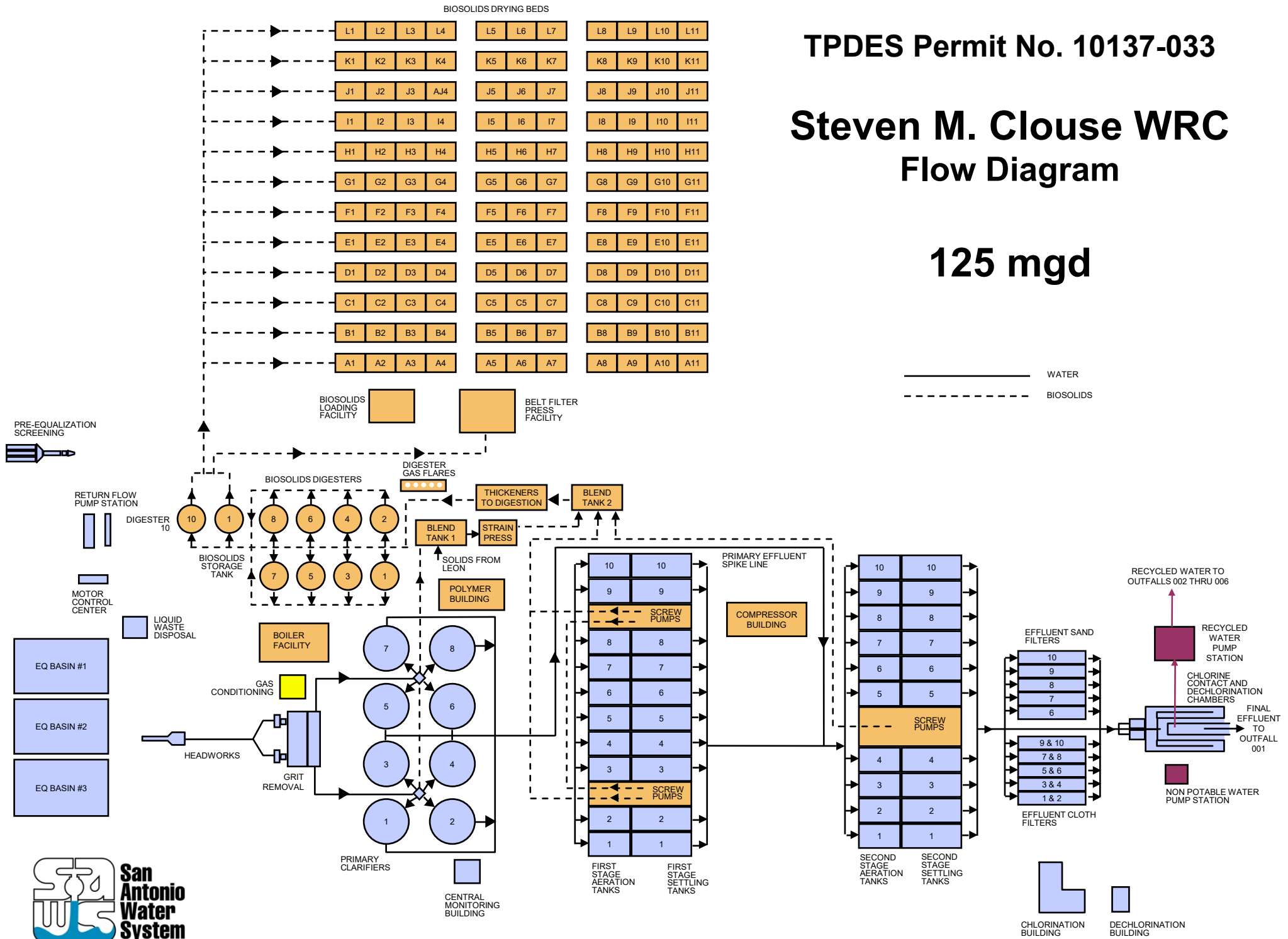
**ATTACHMENT 2**

**SMC PROCESS FLOW DIAGRAM**

TPDES Permit No. 10137-033

# Steven M. Clouse WRC Flow Diagram

125 mgd





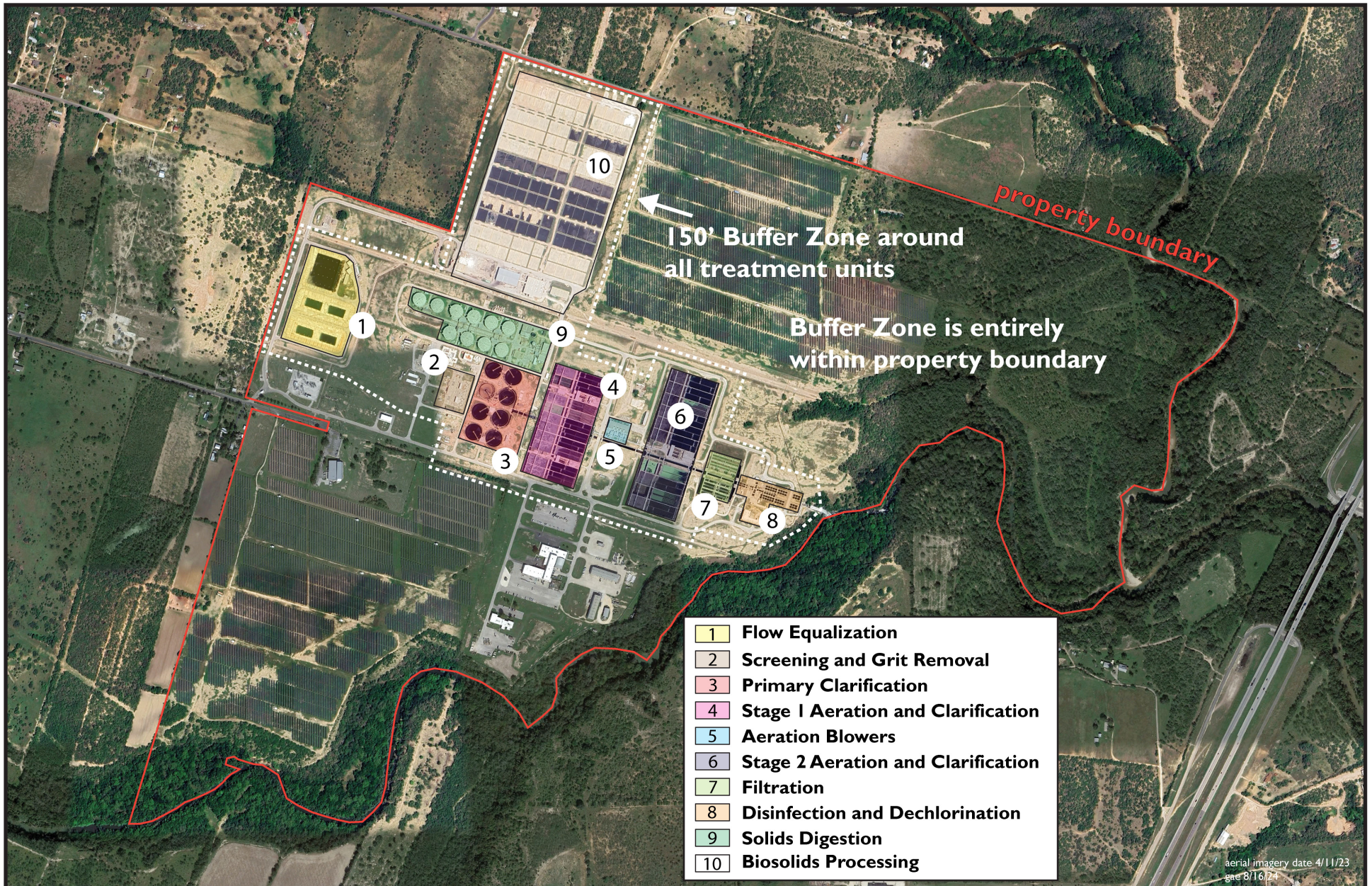
**DOMESTIC WASTEWATER PERMIT APPLICATION**

**TPDES PERMIT NO. 10137-033**

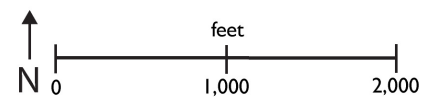
**ATTACHMENT 3**

**SMC FACILITY BOUNDARY MAP**





Buffer Zone Map  
Steven M. Clouse Water Recycling Center  
Permit ID TX007780 I





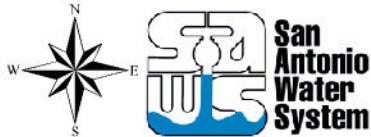
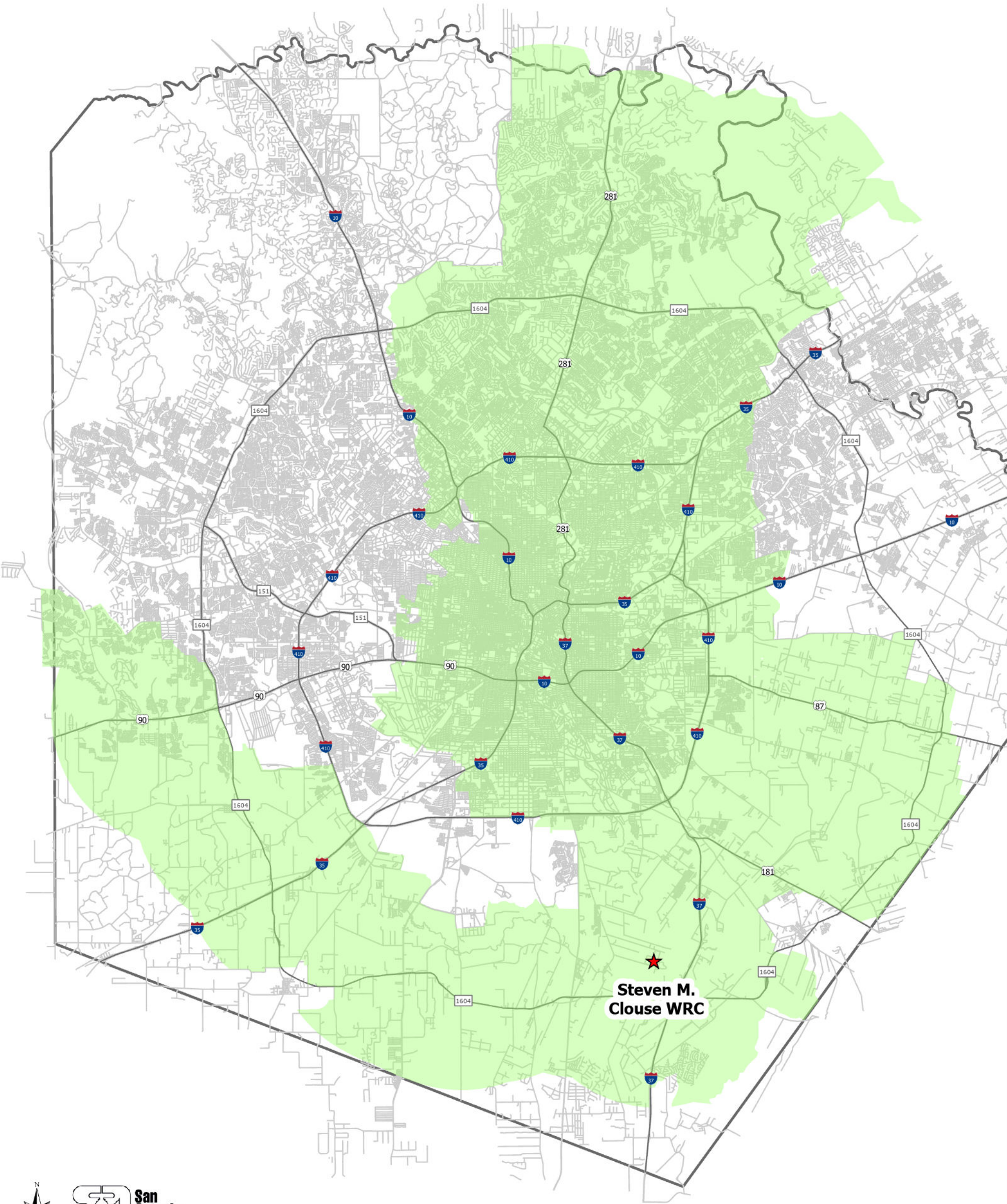
**DOMESTIC WASTEWATER PERMIT APPLICATION**

**TPDES PERMIT NO. 10137-033**

**ATTACHMENT 4**

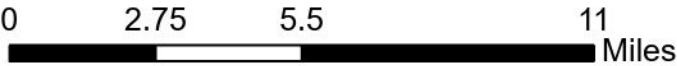
**SMC SERVICE AREA BOUNDARY MAP**

# Steven M. Clouse Service Boundary



June 10, 2024      Master Planning

This utility map is for reference only. The information may not represent what actually has been constructed. S.A.W.S. explicitly disclaims any representation of the accuracy of the information and assumes no liability for any errors, omissions, or inaccuracies in the map regardless of how caused. Field verification should be done as necessary. S.A.W.S. prohibits the reproduction or sale of this document. This utility map may not under any circumstances, be copied, reproduced or published in any form or media, or transferred to another without written permission of the San Antonio Water System.





**DOMESTIC WASTEWATER PERMIT APPLICATION**

**TPDES PERMIT NO. 10137-033**

**ATTACHMENT 5**

**SMC PERMIT 2020 APPROVAL LETTER**

Jon Niermann, *Chairman*  
Emily Lindley, *Commissioner*  
Bobby Janecka, *Commissioner*  
Toby Baker, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

June 25, 2020

Olga Galindo, Executive Administrative Assistant  
San Antonio Water System  
2800 U.S. Highway 281 North  
San Antonio, Texas 78212

RE: San Antonio Water System  
Permit No. WQ0010137033

This letter is your notice that the Texas Commission on Environmental Quality (TCEQ) executive director (ED) has acted on the above-named application. According to 30 Texas Administrative Code (TAC) Section 50.135 the ED's action became effective on the date the ED signed the permit or other action. A copy of the final action is enclosed and cites the effective date.

For certain matters, a **motion to overturn**, which is a request that the commission review the executive director's action on an application, may be filed with the chief clerk. Whether a motion to overturn is procedurally available for a specific matter is determined by Title 30 of the Texas Administrative Code Chapter 50. According to 30 TAC Section 50.139, an action by the ED is not affected by a motion to overturn filed under this section unless expressly ordered by the commission.

If a motion to overturn is filed, the motion must be received by the chief clerk within 23 days after the date of this letter. An original and 7 copies of a motion must be filed with the chief clerk in person or by mail. The Chief Clerk's mailing address is Office of the Chief Clerk (MC 105), TCEQ, P.O. Box 13087, Austin, Texas 78711-3087. On the same day the motion is transmitted to the chief clerk, please provide copies to Robert Martinez, Environmental Law Division Director (MC 173), and Vic McWherter, Public Interest Counsel (MC 103), both at the same TCEQ address listed above. If a motion is not acted on by the commission within 45 days after the date of this letter, then the motion shall be deemed overruled.

You may also request **judicial review** of the ED's action. The procedure and timelines for seeking judicial review of a commission or ED action are governed by Texas Water Code Section 5.351.

Individual members of the public may seek further information by calling the TCEQ Public Education Program, toll free, at 1-800-687-4040.

Sincerely,

A handwritten signature in cursive script that reads "Bridget C. Bohac".

Bridget C. Bohac  
Chief Clerk

BCB/lcr

cc: Vic McWherter, TCEQ Public Interest Counsel (MC 103)

Jon Niermann, *Chairman*  
Emily Lindley, *Commissioner*  
Bobby Janecka, *Commissioner*  
Toby Baker, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

June 25, 2020

Ms. Olga Galindo, Executive Administrative Assistant  
San Antonio Water System  
2800 U.S. Highway 281 North  
San Antonio, Texas 78212

Re: San Antonio Water System, TPDES Permit No. WQ0010137033  
(CN600529069; RN103119020)

Dear Ms. Galindo:

Enclosed is a copy of the above referenced water quality permit issued on behalf of the Executive Director pursuant to Chapter 26 of the Texas Water Code.

Self-reporting or Discharge Monitoring Forms and instructions will be forwarded to you from the Water Quality Management Information Systems Team so that you may comply with monitoring requirements. For existing facilities, revised forms will be forwarded if monitoring requirements have changed.

Enclosed is a "Notification of Completion of Wastewater Treatment Facilities" form. Use this form (if needed) when the facility begins to operate or goes into a new phase. The form notifies the agency when the proposed facility is completed or when it is placed in operation. This notification complies with the special provision incorporated into the permit, as applicable.

Should you have any questions, please contact Mr. Gordon R. Cooper of the Texas Commission on Environmental Quality's (TCEQ) Wastewater Permitting Section at (512) 239-4671 or if by correspondence, include (MC-148) in the letterhead address below.

Sincerely,

A handwritten signature in cursive script that reads "David W. Galindo".

David W. Galindo, Director  
Water Quality Division

DWG/GRC/kb

cc: Mr. Ken Diehl, R.E.M., Environmental Protection Specialist IV  
Resource Protection & Compliance Department, San Antonio Water System  
2800 U.S. Highway 281 North, San Antonio, Texas 78212  
Mr. Raymond Perez, R.E.M., Director/Production & Treatment Operations  
San Antonio Water System, 2800 U.S. Highway 281 North, San Antonio, Texas 78212



TPDES PERMIT NO.  
WQ0010137033  
*[For TCEQ office use only - EPA I.D.  
No. TX0077801]*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
P.O. Box 13087  
Austin, Texas 78711-3087

This is a renewal that replaces TPDES  
Permit No. WQ0010137033 issued on  
December 21, 2015.

**PERMIT TO DISCHARGE WASTES**  
under provisions of  
Section 402 of the Clean Water Act  
and Chapter 26 of the Texas Water Code

San Antonio Water System

whose mailing address is

2800 U.S. Highway 281 North  
San Antonio, Texas 78212

is authorized to treat and discharge wastes from the Steven M. Clouse Water Recycling Center,  
SIC Code 4952

located at 3495 Valley Road, San Antonio in Bexar County, Texas 78221

via Outfall 001 directly to the Medina River Below Medina Diversion Lake in Segment 1903; via  
pipeline to Outfall 004 and directly to Salado Creek in Segment No. 1910; and via separate  
pipelines to Outfalls 002, 003, 005, and 006 and directly to the Upper San Antonio River in  
Segment 1911 of the San Antonio River Basin

only according to effluent limitations, monitoring requirements, and other conditions set forth  
in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ),  
the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does  
not grant to the permittee the right to use private or public property for conveyance of  
wastewater along the discharge route described in this permit. This includes, but is not limited  
to, property belonging to any individual, partnership, corporation, or other entity. Neither does  
this permit authorize any invasion of personal rights nor any violation of federal, state, or local  
laws or regulations. It is the responsibility of the permittee to acquire property rights as may be  
necessary to use the discharge route.

This permit shall expire at midnight, **five years from the date of issuance.**

ISSUED DATE:

**June 18, 2020**

A handwritten signature in black ink, appearing to read "T. G. Bahr", written over a horizontal line.

For the Commission



**DOMESTIC WASTEWATER PERMIT APPLICATION**

**TPDES PERMIT NO. 10137-033**

**ATTACHMENT 6**

**SAN ANTONIO WIND ROSE**

[iastate.edu](http://iastate.edu)

[Index](#)

[Directory](#)

[Maps](#)

[Safety](#)

[Sign Ons](#)

# Iowa State University

## Iowa Environmental Mesonet

[MENU](#)


[SEARCH](#)

## Wind Roses

Scroll down this page for monthly climatologies!

Wind roses are an information packed plot providing frequencies of wind direction and wind speed. A wind rose can quickly indicate the dominant wind directions and the direction of strongest wind speeds. The IEM has generated these wind roses based on our archive. The archive does contain errors and non representative data, so please use care when using these plots. In general, data from the airports is of good quality and representative of the local surrounding area. These images and data are in the public domain, the disclaimer page contains more details.

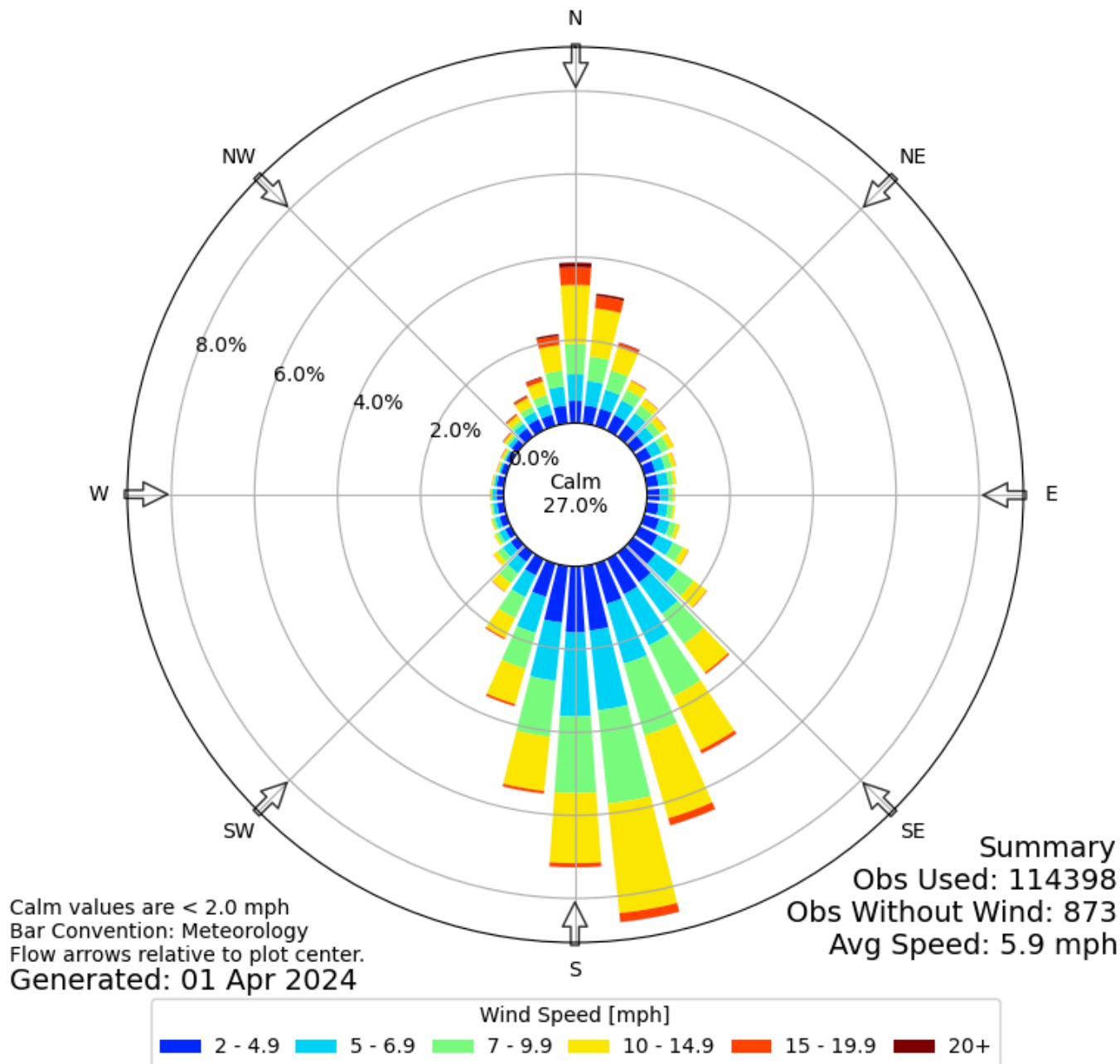
Yearly Climatology:

 [View raw data](#)



# Windrose Plot for [5C1] San Antonio

Obs Between: 17 Jun 2010 03:24 PM - 01 Apr 2024 03:55 AM America/Chicago



Monthly Climatology: (click thumbnail)

January

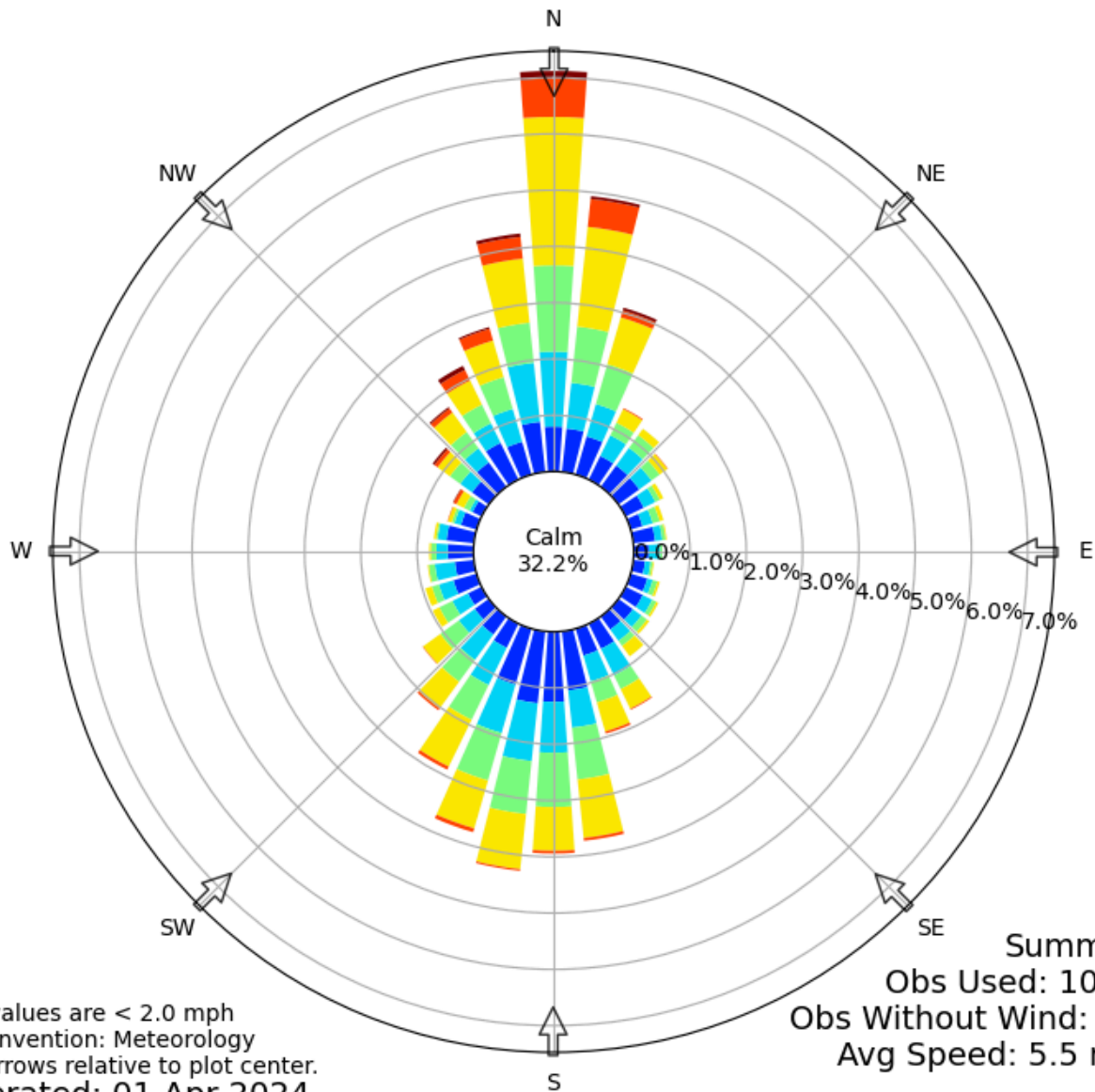
[View raw data](#)



# Windrose Plot for [5C1] San Antonio

Obs Between: 01 Jan 2011 12:43 AM - 31 Jan 2024 11:55 PM America/Chicago

↳ constraints: Jan



Calm values are < 2.0 mph  
Bar Convention: Meteorology  
Flow arrows relative to plot center.  
Generated: 01 Apr 2024

Summary  
Obs Used: 10269  
Obs Without Wind: 224  
Avg Speed: 5.5 mph

Wind Speed [mph]

2 - 4.9 5 - 6.9 7 - 9.9 10 - 14.9 15 - 19.9 20+

February

[View raw data](#)

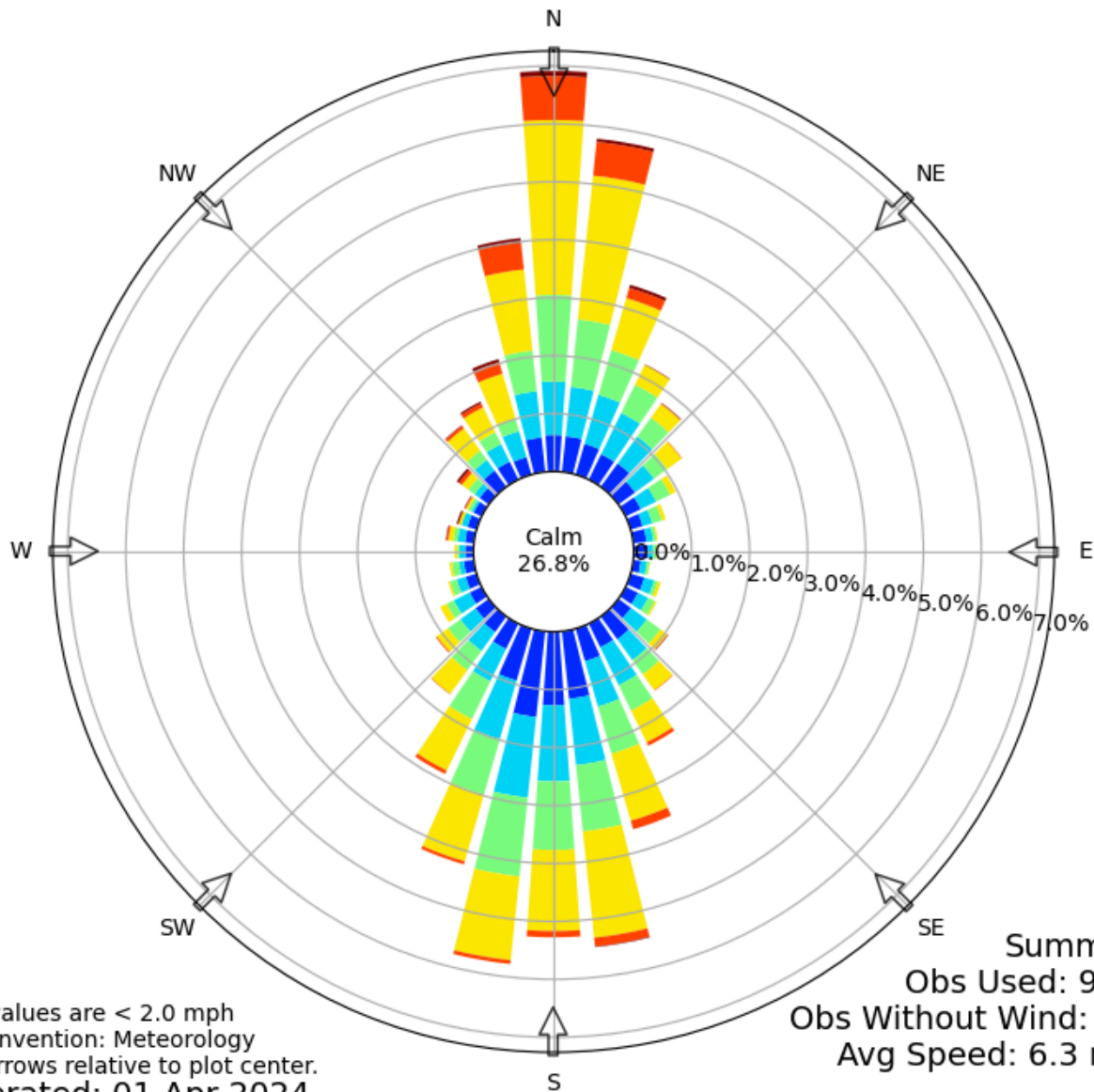




# Windrose Plot for [5C1] San Antonio

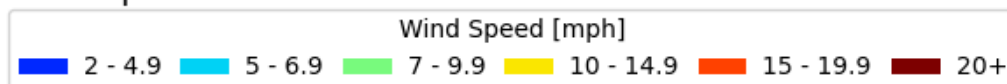
Obs Between: 01 Feb 2011 12:42 AM - 29 Feb 2024 11:55 PM America/Chicago

↳ constraints: Feb



Calm values are < 2.0 mph  
Bar Convention: Meteorology  
Flow arrows relative to plot center.  
Generated: 01 Apr 2024

Summary  
Obs Used: 9317  
Obs Without Wind: 103  
Avg Speed: 6.3 mph



March

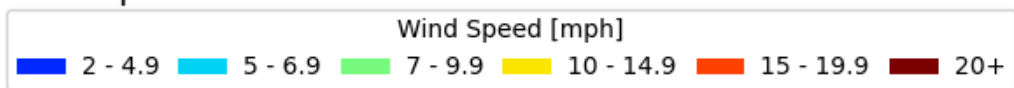
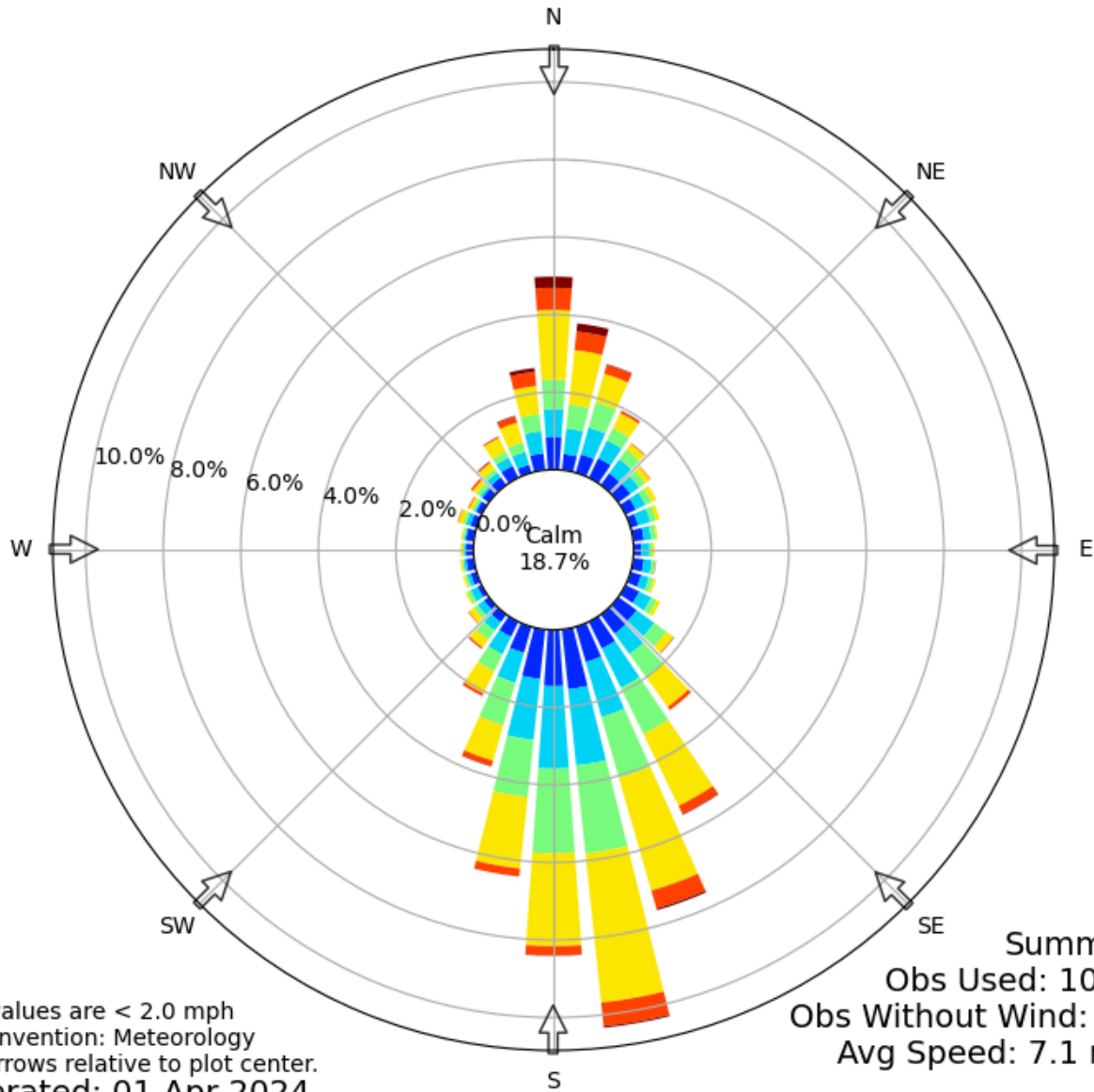
[View raw data](#)



# Windrose Plot for [5C1] San Antonio

Obs Between: 01 Mar 2011 12:55 AM - 31 Mar 2024 11:55 PM America/Chicago

↳ constraints: Mar



April

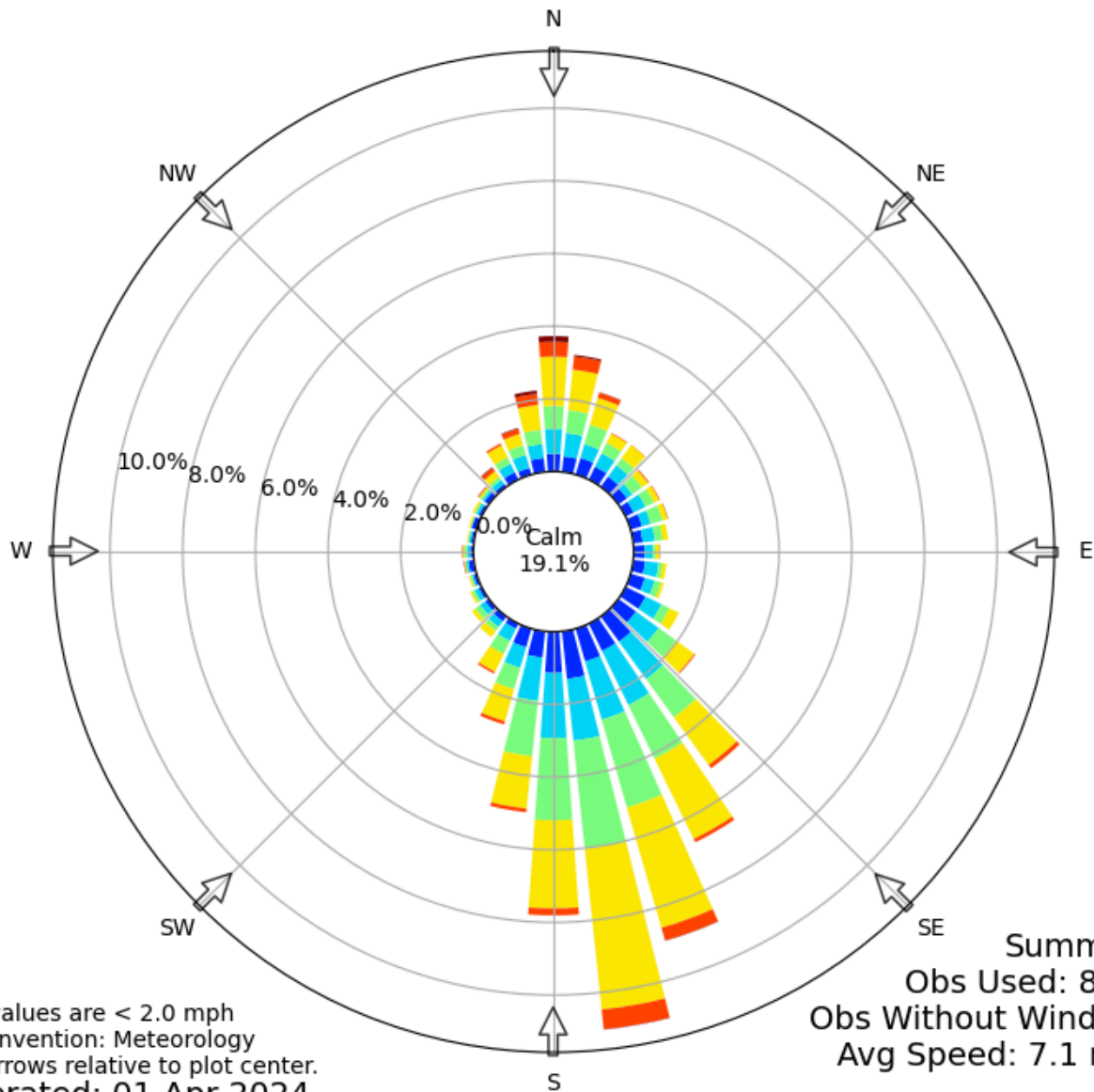
[View raw data](#)



# Windrose Plot for [5C1] San Antonio

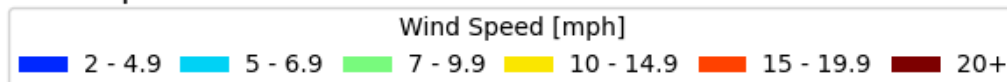
Obs Between: 01 Apr 2011 12:35 AM - 01 Apr 2024 03:55 AM America/Chicago

↳ constraints: Apr



Calm values are < 2.0 mph  
Bar Convention: Meteorology  
Flow arrows relative to plot center.  
Generated: 01 Apr 2024

Summary  
Obs Used: 8901  
Obs Without Wind: 74  
Avg Speed: 7.1 mph



May

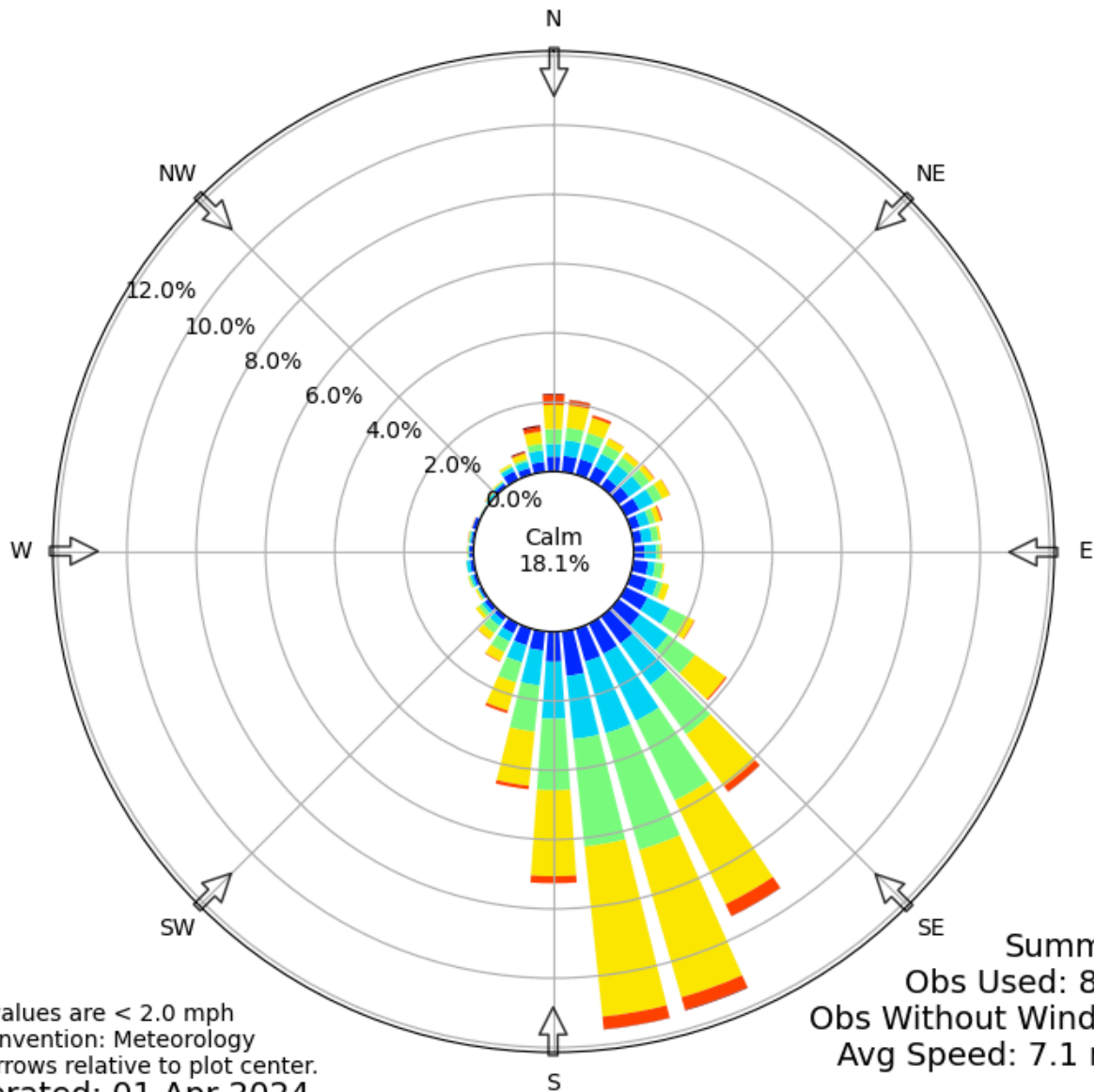
[View raw data](#)



# Windrose Plot for [5C1] San Antonio

Obs Between: 01 May 2011 12:55 AM - 31 May 2023 11:55 PM America/Chicago

↳ constraints: May



June

[View raw data](#)

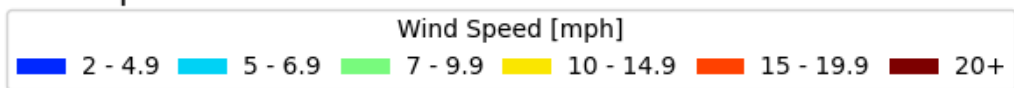
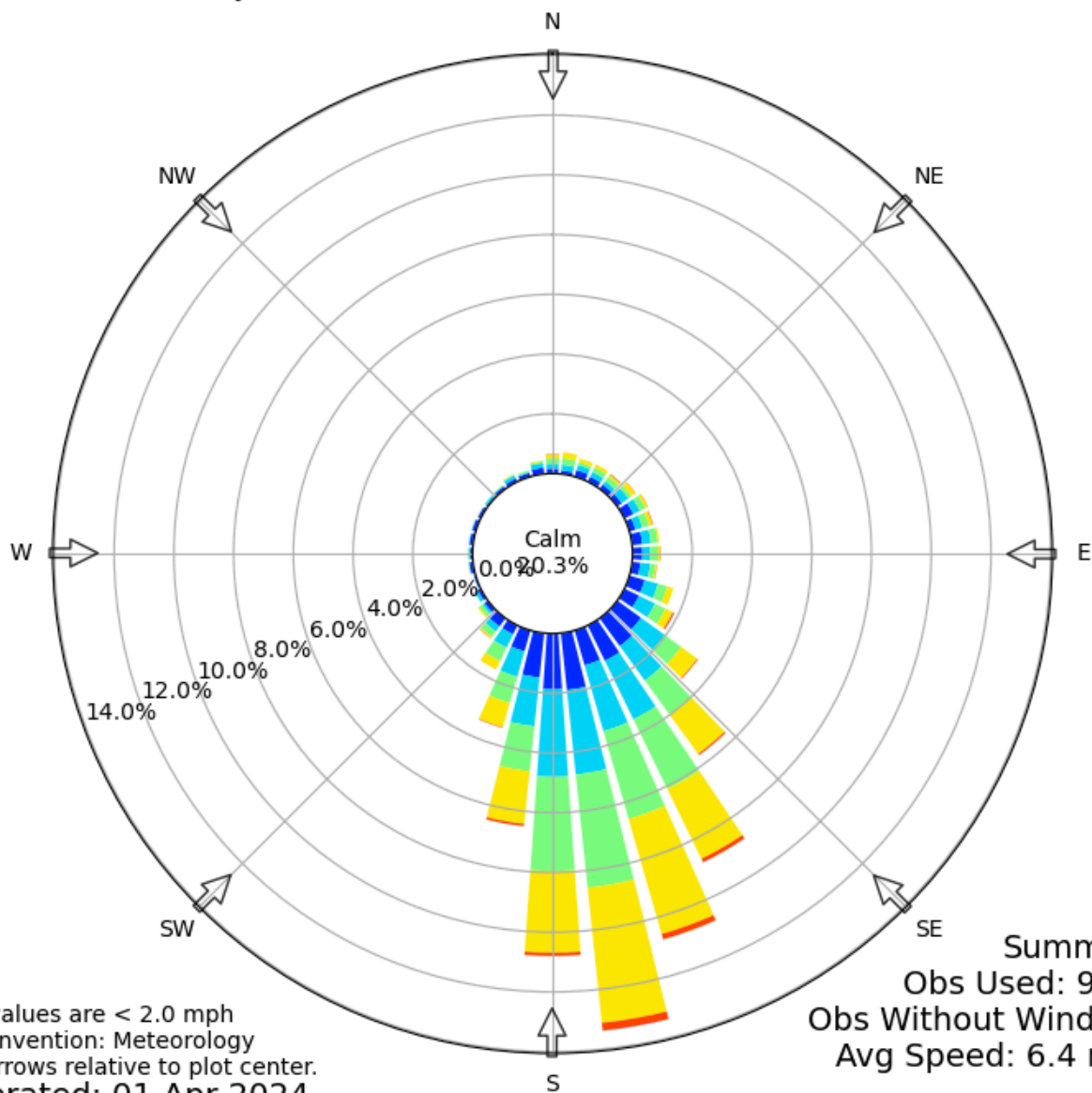




# Windrose Plot for [5C1] San Antonio

Obs Between: 17 Jun 2010 03:24 PM - 30 Jun 2023 11:55 PM America/Chicago

↳ constraints: Jun



July

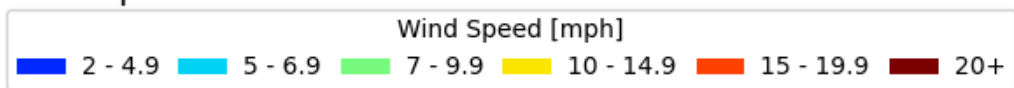
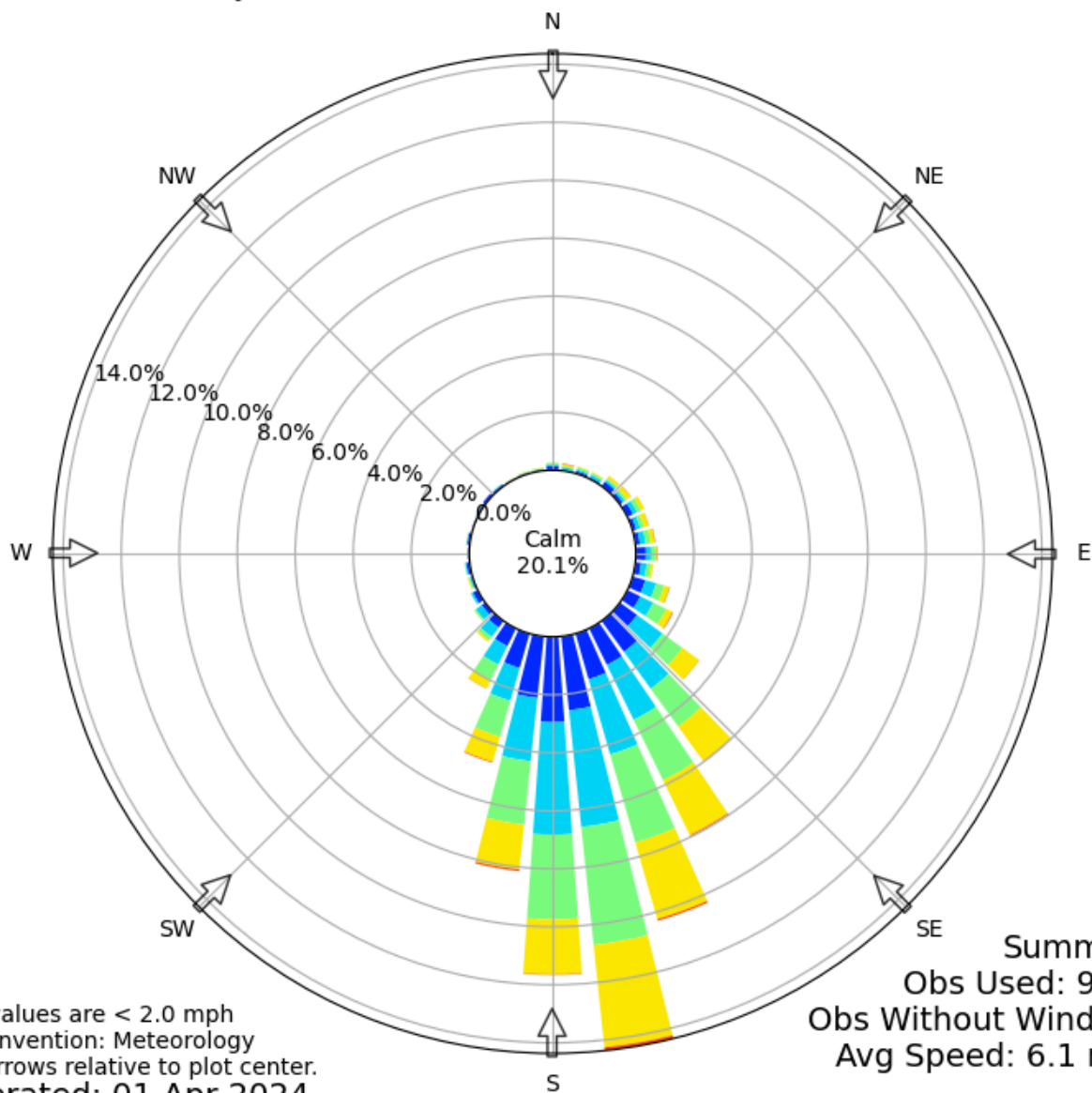
[View raw data](#)



# Windrose Plot for [5C1] San Antonio

Obs Between: 01 Jul 2010 12:24 AM - 31 Jul 2023 09:35 PM America/Chicago

↳ constraints: Jul



August

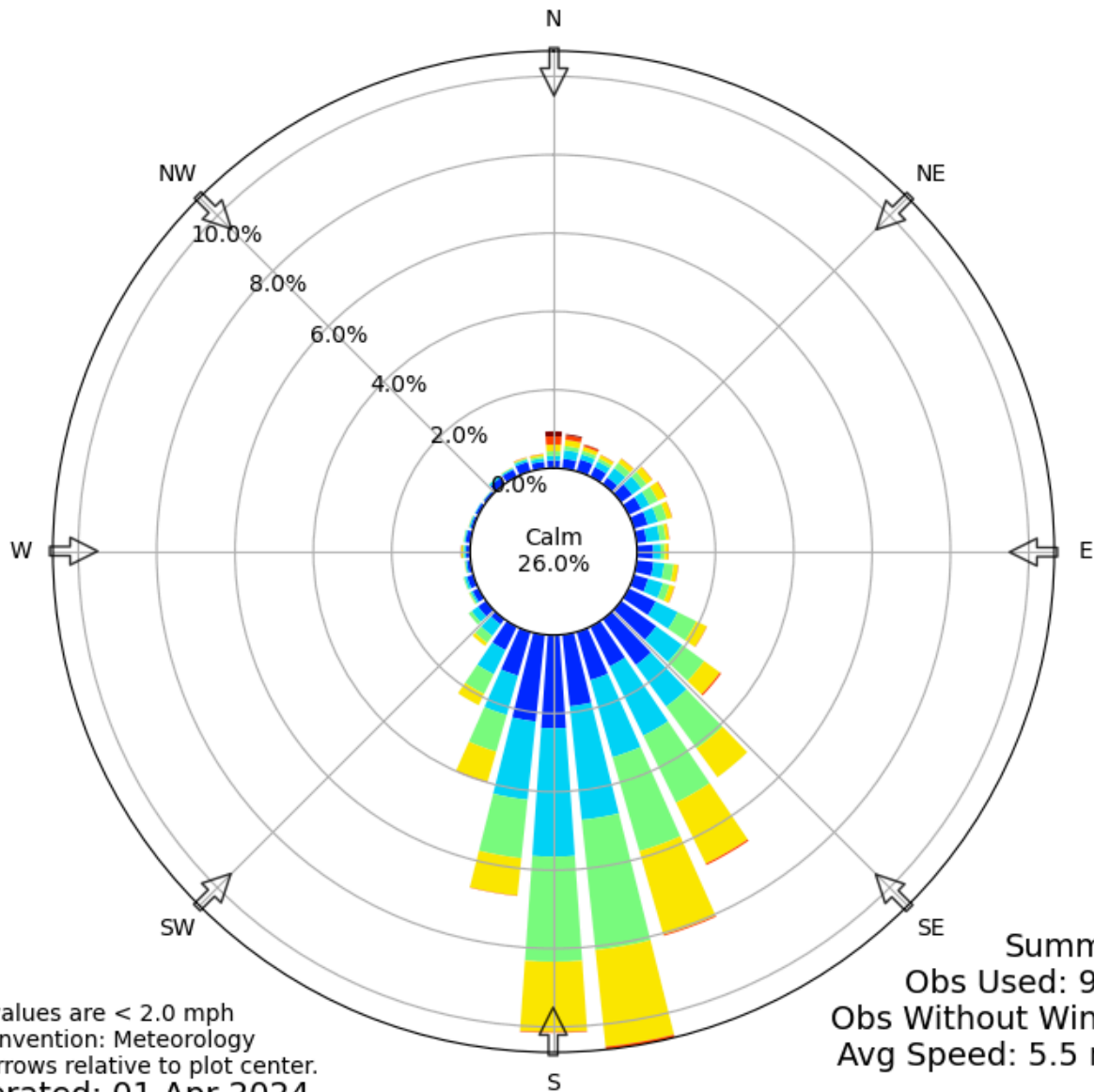
[View raw data](#)



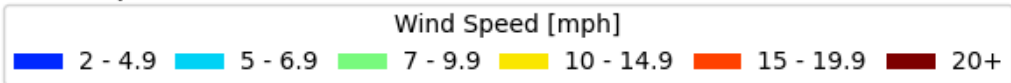
# Windrose Plot for [5C1] San Antonio

Obs Between: 01 Aug 2010 07:24 AM - 31 Aug 2023 11:55 PM America/Chicago

↳ constraints: Aug



Calm values are < 2.0 mph  
Bar Convention: Meteorology  
Flow arrows relative to plot center.  
Generated: 01 Apr 2024



September

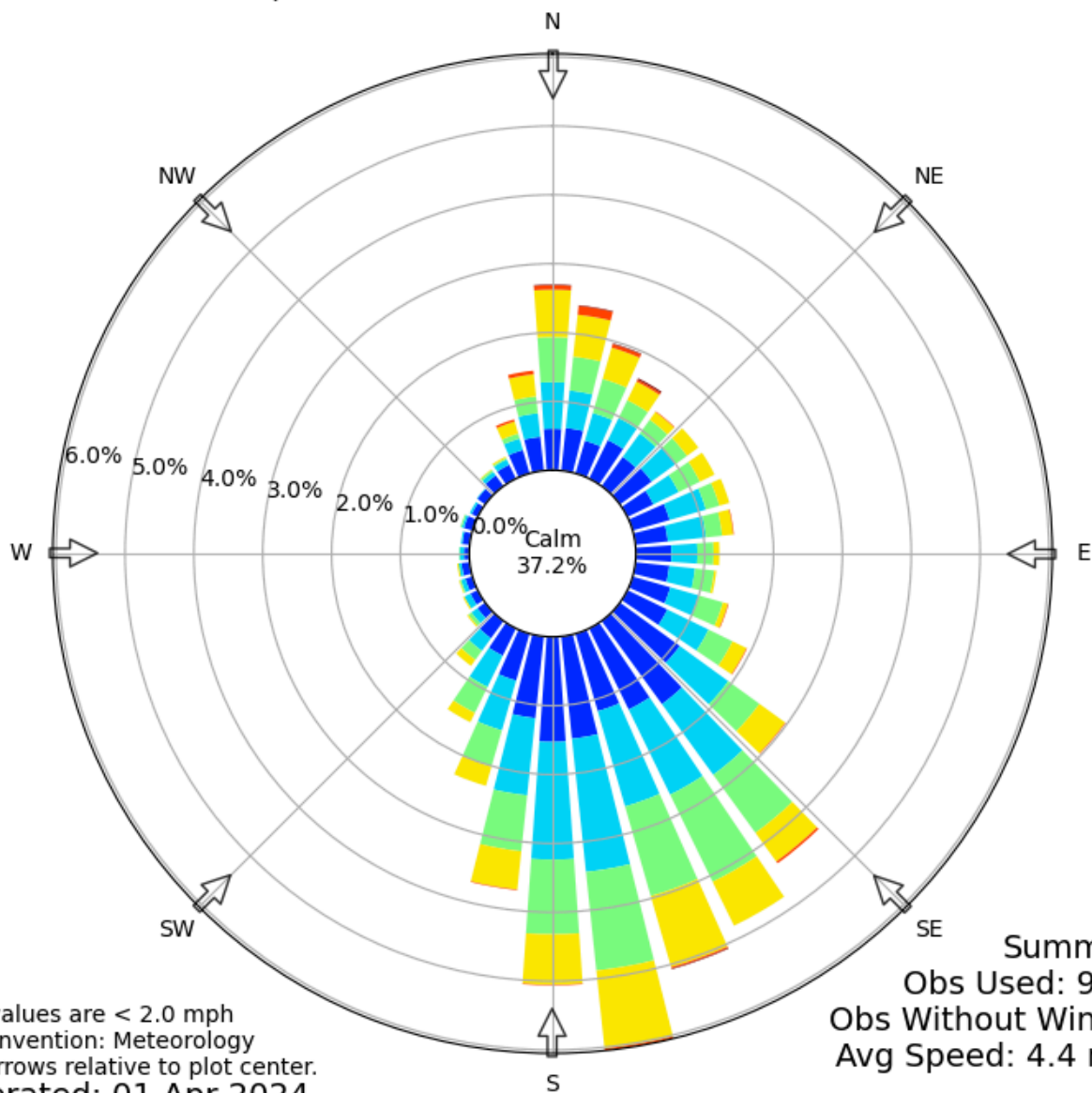
[View raw data](#)



# Windrose Plot for [5C1] San Antonio

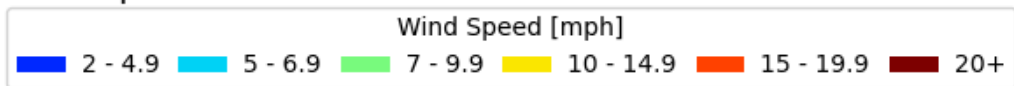
Obs Between: 01 Sep 2010 08:24 AM - 30 Sep 2023 11:55 PM America/Chicago

↳ constraints: Sep



Calm values are < 2.0 mph  
Bar Convention: Meteorology  
Flow arrows relative to plot center.  
Generated: 01 Apr 2024

Summary  
Obs Used: 9306  
Obs Without Wind: 0  
Avg Speed: 4.4 mph



October

[View raw data](#)

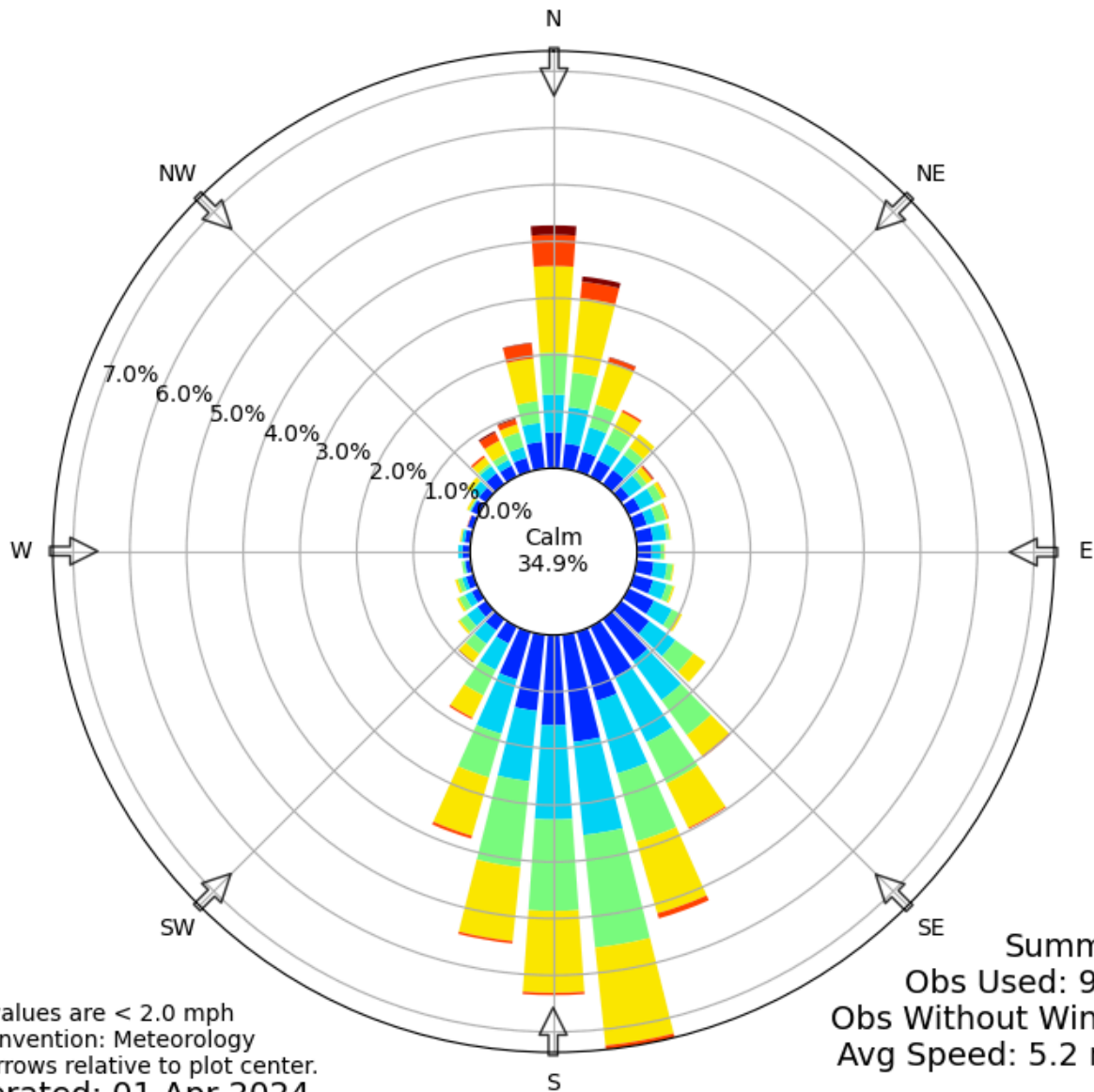




# Windrose Plot for [5C1] San Antonio

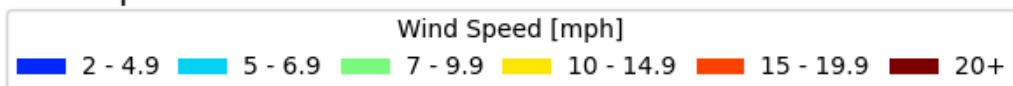
Obs Between: 22 Oct 2010 05:24 PM - 31 Oct 2023 11:55 PM America/Chicago

↳ constraints: Oct



Calm values are < 2.0 mph  
Bar Convention: Meteorology  
Flow arrows relative to plot center.  
Generated: 01 Apr 2024

Summary  
Obs Used: 9625  
Obs Without Wind: 4  
Avg Speed: 5.2 mph



November

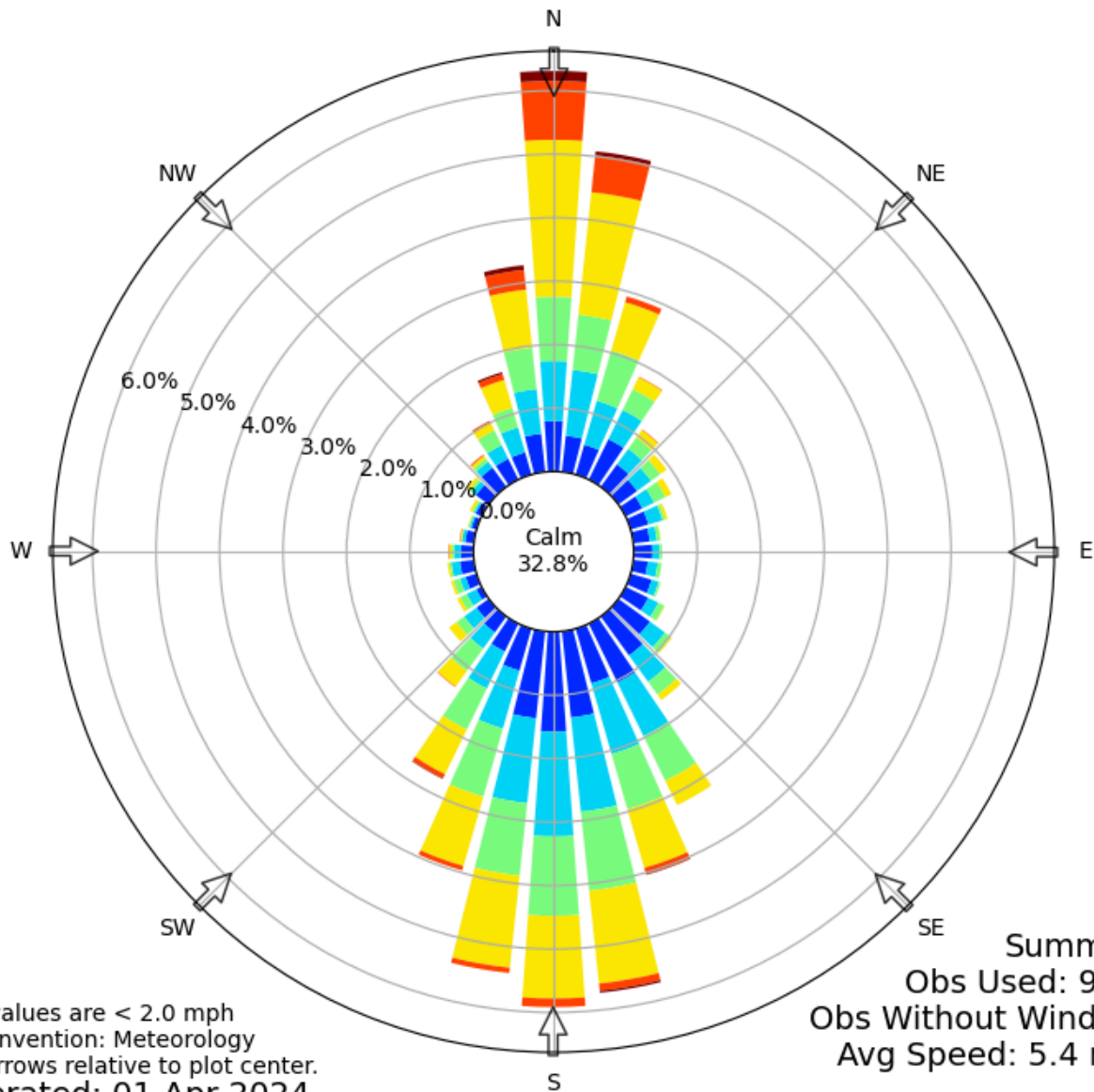
[View raw data](#)



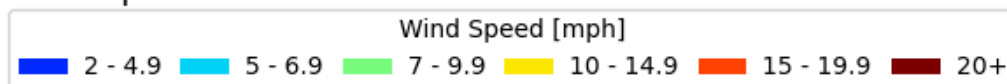
# Windrose Plot for [5C1] San Antonio

Obs Between: 01 Nov 2010 12:24 AM - 30 Nov 2023 11:55 PM America/Chicago

↳ constraints: Nov



Calm values are < 2.0 mph  
Bar Convention: Meteorology  
Flow arrows relative to plot center.  
Generated: 01 Apr 2024



December

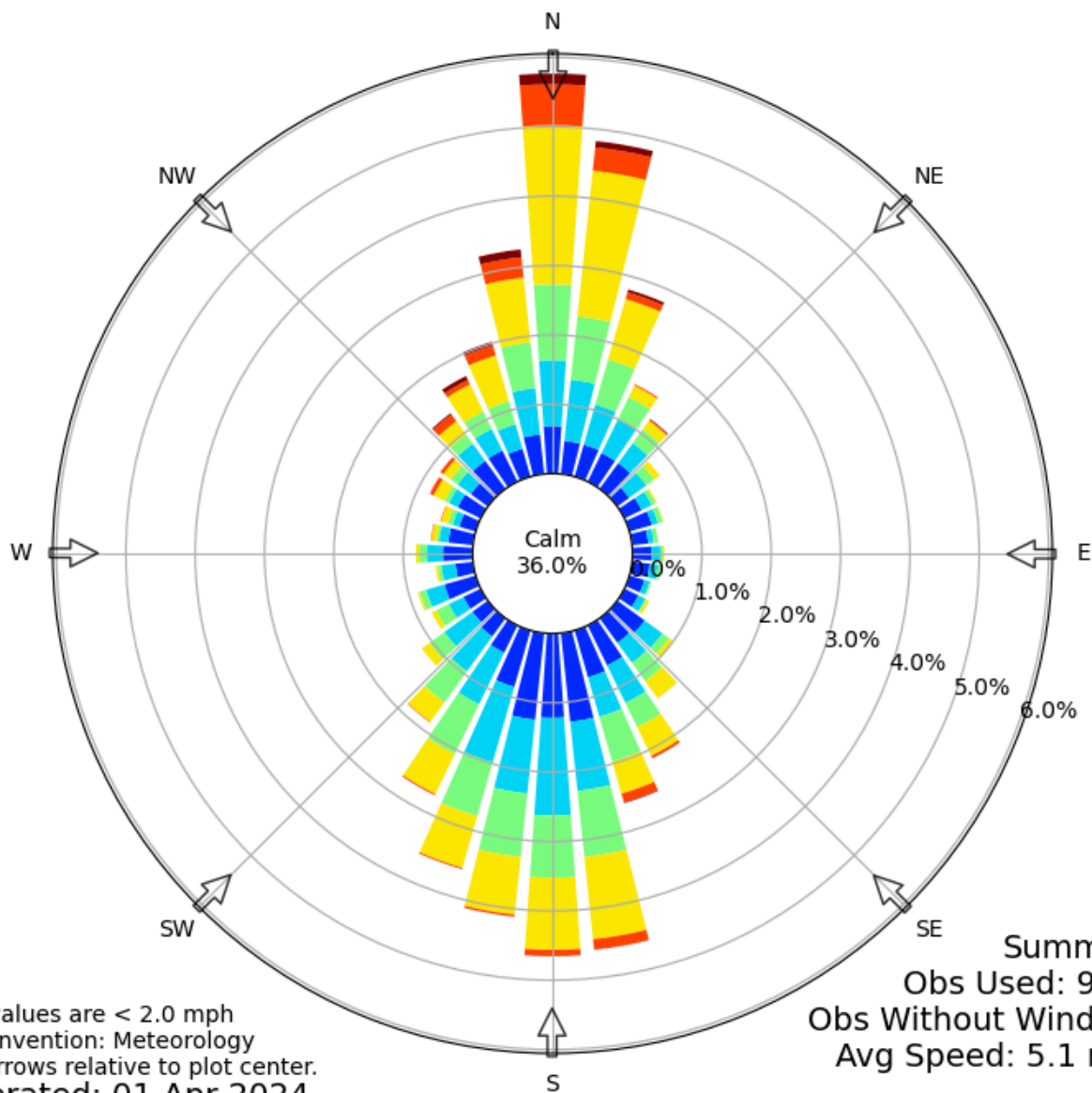
[View raw data](#)



# Windrose Plot for [5C1] San Antonio

Obs Between: 01 Dec 2010 12:24 AM - 31 Dec 2023 11:55 PM America/Chicago

↳ constraints: Dec



# IOWA STATE UNIVERSITY

College of Ag

Department of Agronomy

## **Department of Agronomy**

716 Farm House Ln

Ames, IA 50011

[akrherz@iastate.edu](mailto:akrherz@iastate.edu)



Facebook



Twitter



Github



YouTube



RSS

Copyright © 2001-2024

Iowa State University

of Science and Technology

All rights reserved.

[Non-discrimination Policy](#)

[Privacy Policy](#)

[Digital Access & Accessibility](#)



**DOMESTIC WASTEWATER PERMIT APPLICATION**

**TPDES PERMIT NO. 10137-033**

**ATTACHMENT 7**

**SMC BIOSOLIDS MANAGEMENT PLAN**

# **Steven M. Clouse Water Recycling Center Sewage Sludge Management Plan**

## **Introduction**

Sludges are generated through multiple treatment operations at the Steven M. Clouse WRC. These include both Primary and Waste Activated sludges from the processes outlined in the flow diagram attached. The Steven M. Clouse facility also treats all sludges generated at the Leon Creek and Medio Creek WRC's called Transfer sludge. These include the Primary and Waste Activated sludges from Leon Creek WRC and Waste Activated sludge from the Medio Creek WRC and is the centralized sludge processing facility for all the solids generated in San Antonio.

### **Primary Sludge/Skimmings**

Primary sludge is generated in the eight circular primary clarifiers at the Steven M. Clouse facility. These residues are thickened to approximately 3-4 % total solids in the primary tankage. From the primary's, the thickened sludge is pumped to a pre-strain blending tank.

### **Transfer Sludge**

Leon Creek and Medio Creek sludge are received and blended with Steven M. Clouse Primary sludge in the pre-strain blend tank. The sludge is pumped to the strain press where debris is removed from the sludge prior to additional blending, thickening and then they are anaerobically digested.

## **Waste Activated Sludge**

Waste activated sludges are generated in secondary treatment process. Typically the First Stage Activated Sludge process is optimized at about 3500 mg/l MLSS and 450,000 pounds under aeration. The Second Stage Activated Sludge process is optimized at about 2500 mg/l MLSS and 300,000 pounds under aeration. Operations personnel have found these to be the best levels to achieve the maximum removals of carbonaceous and nitrogenous demands.

Screw pumps are utilized to either return the solids to the Activated Sludge process or to be wasted to the thickening processes.

## **Sludge Blending**

Primary Sludge, Leon Creek, Medio Creek sludge that has been strained along with the Steven M. Clouse Waste Activated Sludge are sent to a large Blend Tank. In the Blend Tank, the sludge is then recirculated to ensure a uniform mixture has been achieved is then sent to the thickening process.

## **Sludge Thickening**

From the Sludge Blending Tank, all the sludge is then thickened to approximately 5% to 6% TS via 4 Gravity Belt Thickeners or 2 thickening Centrifuges.

## **Sludge Digestion**

All sludges are transferred from the Blend Tank to a series of nine Mesophilic Anaerobic Digesters. Temperatures are held at about 95 degrees F, and feed rates are set to achieve a hydraulic detention time of about 24 days. This has been found to be sufficient to achieve a Volatile Solids Reduction greater than 38%. Sludges are then sent to a holding tank until they are dewatered.

## **Sludge Dewatering**

All sludges are dewatered by either the use of Belt Filter Presses or by using Sand Drying Beds. Sludges are consistently dewatered to about 18 % total solids using the Belt Filter Presses. Sand Drying Beds are used as weather permits and can achieve a total solids content of greater than 85 % total solids concentration.

## **Final Disposal**

The final disposal options used are either Composting by New Earth at their permitted facility, Composting by TLM/GardenVille at the SARA Martinez facility or by disposal in a Sanitary Landfill. No Biosolids are disposed of via Land Application. Biosolids that are composted by New Earth and TLM/GardenVille are Marketed/Distributed by the contractor. Composting operations are summarized under the Steven M. Clouse WRC portion of this Permit Application. There are no proposed changes to this operation in SAWS' future.

**DOMESTIC WASTEWATER PERMIT APPLICATION**

**TPDES PERMIT NO. 10137-033**

**ATTACHMENT 8**

**SMC EFFLUENT TABLE 4.0 LABORATORY REPORTS**





# Analytical Results



Environmental Laboratory Services  
3610 Valley Road  
San Antonio, TX 78221

Certificate # T104704324-24-00023  
Report Date/Time: 7/22/2024 9:11:15AM

**REPORT TO:** Wastewater Compliance Monitoring  
San Antonio Water System  
2800 U.S. Hwy. 281 North  
San Antonio, Texas 78212

**Login Batch ID:** 24060165

**Log Number:**

**Sample ID:** AF72233      **RPC\_WC\_DR\_EFF\_TPDES\_T2-3**      **STEVEN M CLOUSE WRC, EFFLUENT, GRAB A**  
**Collected:** 06/09/2024 01:00      **Sampled By:** DOMINGO GRANADO      **License Number:**  
**Submitted:** 06/10/2024 08:24      **Workorder Number:**      **Field Comments:**  
**Matrix:** WASTE\_WATER      **Non-Conformance:**

Analyte	Results	RL	Units	Qual	Analyzed	Analyst	Method
Subcontract_Prep and Ship	Completed				6/10/24 12:00	GNM	
Total Cyanide	Subcontracted				6/18/24 20:55	PAC	See Report
Amenable Cyanide	Subcontracted				6/18/24 20:55	PAC	See Report
Phenolics	Subcontracted				6/18/24 20:55	PAC	See Report
Volatiles	Subcontracted				6/18/24 20:55	PAC	See Report
Fats Oil Grease_HEM	<5	5	mg/L		6/20/24 15:40	MRJ	EPA 1664A**

**Sample Comments:**



# Analytical Results



Environmental Laboratory Services  
3610 Valley Road  
San Antonio, TX 78221

Certificate # T104704324-24-00023  
Report Date/Time: 7/22/2024 9:11:15AM

**REPORT TO:** Wastewater Compliance Monitoring  
San Antonio Water System  
2800 U.S. Hwy. 281 North  
San Antonio, Texas 78212

**Login Batch ID:** 24060165

**Log Number:**

**Sample ID:** AF72237      **RPC\_WC\_DR\_EFF\_TPDES\_T2-3**      **STEVEN M CLOUSE WRC, EFFLUENT, COMPOSITE**  
**Collected:** 06/09/2024 23:05      **Sampled By:** DOMINGO GRANADO      **License Number:**  
**Submitted:** 06/10/2024 08:24      **Workorder Number:**      **Field Comments:**  
**Matrix:** WASTE\_WATER      **Non-Conformance:**

Analyte	Results	RL	Units	Qual	Analyzed	Analyst	Method
Sample Filtration	Completed				6/10/24 09:05	AYA	
Sample Split and Preservation	Completed				6/10/24 09:05	AYA	
Subcontract_Prep and Ship	Completed				6/10/24 12:00	GNM	
Hexachrome	Subcontracted				6/14/24 11:17	PAC	See Report
Hexachlorophene by EPA 604.1	Subcontracted				7/16/24 16:25	SPL	See Report
Pesticides	Subcontracted				7/16/24 16:25	PAC	See Report
Organophos Pest	Subcontracted				7/16/24 16:25	SPL	See Report
Herbicides	Subcontracted				7/16/24 16:25	SPL	See Report
Organohalide Pest	Subcontracted				7/16/24 16:25	SPL	See Report
Organophosphate Pesticides	Subcontracted				7/16/24 16:25	SPL	See Report
Semivolatiles	Subcontracted				7/16/24 16:25	PAC	See Report
Carbamates	Subcontracted				7/16/24 16:25	SPL	See Report
Nonyl Phenol	Subcontracted				7/16/24 16:25	SPL	See Report
Organic Extraction	Subcontracted				7/16/24 16:25	PAC	See Report
Digestion_ICPMS_Hot Plate	Completed				7/5/24 19:15	LAR	EPA 200.8
Fluoride	0.422	0.1	mg/L		6/10/24 19:06	MDA	EPA 300.0
Nitrate-N	26.4	0.5	mg/L		6/10/24 19:06	MDA	EPA 300.0
Aluminum	9.02	2.5	ug/L		7/9/24 20:07	LAR	EPA 200.8
Antimony	0.608	0.5	ug/L		7/5/24 23:48	LAR	EPA 200.8
Arsenic	<0.5	0.5	ug/L		7/5/24 23:48	LAR	EPA 200.8
Barium	27	0.5	ug/L		7/5/24 23:48	LAR	EPA 200.8
Beryllium	<0.5	0.5	ug/L		7/5/24 23:48	LAR	EPA 200.8
Cadmium	<0.5	0.5	ug/L		7/5/24 23:48	LAR	EPA 200.8
Chromium	1.55	1	ug/L		7/9/24 20:07	LAR	EPA 200.8
Copper	5.88	0.5	ug/L		7/9/24 20:07	LAR	EPA 200.8
Lead	<0.5	0.5	ug/L		7/9/24 20:07	LAR	EPA 200.8
Nickel	2.85	0.5	ug/L		7/5/24 23:48	LAR	EPA 200.8
Selenium	<2.5	2.5	ug/L		7/5/24 23:48	LAR	EPA 200.8
Silver	<0.5	0.5	ug/L		7/9/24 20:07	LAR	EPA 200.8
Thallium	<0.5	0.5	ug/L		7/9/24 20:07	LAR	EPA 200.8
Zinc	14.2	2.5	ug/L		7/5/24 23:48	LAR	EPA 200.8



# Analytical Results



Environmental Laboratory Services  
3610 Valley Road  
San Antonio, TX 78221

Certificate # T104704324-24-00023  
Report Date/Time: 7/22/2024 9:11:15AM

**REPORT TO:** Wastewater Compliance Monitoring  
San Antonio Water System  
2800 U.S. Hwy. 281 North  
San Antonio, Texas 78212

**Login Batch ID:** 24060165

**Log Number:**

## Sample Comments:

### Definitions:

RL = Reporting Limit  
--- = Not Applicable  
NC = Not Calculated

### Qualifiers:

H = Result is above Upper Specification  
L = Result is below Lower Specification  
J = Positive result below the Reporting Limit  
Q = Unacceptable Results due to QC Check failure  
X = The result is extrapolated  
T = Sample exceeded Hold Time  
CH = Calibration Verification High  
CL = Calibration Verification Low

E = Estimated Result  
B = Analyte detected in Blank  
S = Spike Recovery outside Recovery Limits  
D = Outside Duplicate Precision Limits  
M = Matrix or Chemical Interference  
LE = Laboratory Error  
SQ = Sample Quality  
LH = Laboratory Control Sample High

An asterisk (\*) appended to the method reference or analyte denotes that the laboratory is not accredited for the method or analyte.

A double asterisk (\*\*) appended to the method reference or analyte denotes that the analytical results meets accreditation requirements for non-potable matrix only.

### References:

EPA, Office of Water, Methods and Guidance for the Analysis of Water, Version 2  
Standard Methods for the Examination of Water and Wastewater, Online Edition, American Public Health Association  
EPA, Office of Solid Waste, Test Methods for Evaluating Solid Waste Physical/Chemical Methods, SW-846

Anna B. Polanco-Ramos or approved signatory  
Laboratory Manager  
SAWS Environmental Laboratory

This report provides results relating only to the referenced sample ID numbers and may not be reproduced except in its entirety without written approval of SAWS Laboratory. All samples were received in acceptable condition unless otherwise stated. For questions concerning this report, please contact Anna Ramos, SAWS Environmental Laboratory Manager, (210) 233-3210

June 14, 2024

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

## San Antonio Water Systems

Sample Delivery Group: L1745208

Samples Received: 06/11/2024

Project Number:

Description: TPDES Organics

Report To: San Antonio Water Systems  
PO Box 2449  
San Antonio, TX 78298

Entire Report Reviewed By:



Justin Carr  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

**Pace Analytical National**

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 [mydata.pacelabs.com](https://mydata.pacelabs.com)



TABLE OF CONTENTS

Cp: Cover Page	1	<sup>1</sup> Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	<sup>2</sup> Tc
Cn: Case Narrative	4	
Sr: Sample Results	5	<sup>3</sup> Ss
AF72232 SMC INF 24060165 L1745208-01	5	
AF72237 SMC EFF 24060165 L1745208-02	6	<sup>4</sup> Cn
Qc: Quality Control Summary	7	<sup>5</sup> Sr
Wet Chemistry by Method 218.6	7	
Gl: Glossary of Terms	8	<sup>6</sup> Qc
Al: Accreditations & Locations	9	<sup>7</sup> Gl
Sc: Sample Chain of Custody	10	<sup>8</sup> Al
		<sup>9</sup> Sc

# SAMPLE SUMMARY

AF72232 SMC INF 24060165 L1745208-01 WW

Collected by  
Giovanna Muzquiz

Collected date/time  
06/09/24 23:00

Received date/time  
06/11/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 218.6	WG2302818	1	06/13/24 05:16	06/13/24 05:16	SET	Mt. Juliet, TN

AF72237 SMC EFF 24060165 L1745208-02 WW

Collected by  
Giovanna Muzquiz

Collected date/time  
06/09/24 23:05

Received date/time  
06/11/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 218.6	WG2302818	1	06/13/24 05:27	06/13/24 05:27	SET	Mt. Juliet, TN

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

# CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Justin Carr  
Project Manager

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Wet Chemistry by Method 218.6

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.000568		0.000500	1	06/13/2024 05:27	<a href="#">WG2302818</a>

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



Method Blank (MB)

(MB) R4081336-1 06/13/24 02:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hexavalent Chromium	<0.000150		0.000150	0.000500

L1745174-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1745174-02 06/13/24 03:37 • (DUP) R4081336-3 06/13/24 03:48

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	<0.000500	<0.000500	1	0.000		20

L1745740-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1745740-01 06/13/24 07:28 • (DUP) R4081336-7 06/13/24 07:39

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	<0.000500	<0.000500	1	4.47		20

Laboratory Control Sample (LCS)

(LCS) R4081336-2 06/13/24 03:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	0.00200	0.00219	109	90.0-110	

L1745202-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1745202-02 06/13/24 04:21 • (MS) R4081336-4 06/13/24 04:32 • (MSD) R4081336-5 06/13/24 04:43

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	0.0500	0.000842	0.0508	0.0507	99.9	99.8	1	90.0-110			0.0678	20

L1745633-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1745633-01 06/13/24 06:33 • (MS) R4081336-6 06/13/24 06:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	0.0500	<0.000500	0.0505	101	1	90.0-110	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

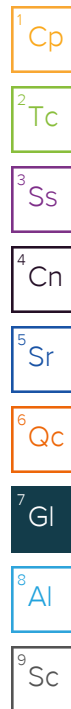
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

## Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

## Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



# ACCREDITATIONS & LOCATIONS

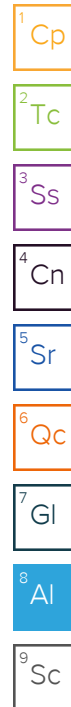
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1 6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1 4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



## San Antonio Water Systems

Sample Delivery Group: L1745253  
Samples Received: 06/11/2024  
Project Number: SMC TPDES  
Description: SMC TPDES

Report To: San Antonio Water Systems  
PO Box 2449  
San Antonio, TX 78298

Entire Report Reviewed By:



Justin Carr  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

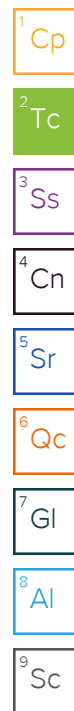
**Pace Analytical Services, LLC -Dallas**

400 W. Bethany Drive Suite 190 Allen, TX 75013 972-727-1123 800-767-5859 [mydata.pacelabs.com](http://mydata.pacelabs.com)



# TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	5
Sr: Sample Results	6
AF72228 INF GRAB A 24060165 L1745253-01	6
AF72229 INF GRAB B 24060165 L1745253-02	7
AF72230 INF GRAB C 24060165 L1745253-03	8
AF72231 INF GRAB D 24060165 L1745253-04	9
AF72233 EFF GRAB A 24060165 L1745253-05	10
AF72234 EFF GRAB B 24060165 L1745253-06	11
AF72235 EFF GRAB C 24060165 L1745253-07	12
AF72236 EFF GRAB D 24060165 L1745253-08	13
Qc: Quality Control Summary	14
Wet Chemistry by Method 420.1	14
Wet Chemistry by Method 4500CN-E	15
Volatile Organic Compounds (GC/MS) by Method 624.1	16
Gl: Glossary of Terms	19
Al: Accreditations & Locations	20
Sc: Sample Chain of Custody	21

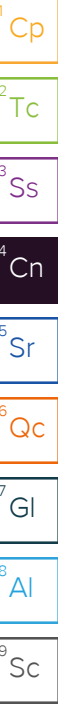


# CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Justin Carr  
Project Manager



## Wet Chemistry by Method 420.1

Analyte	Result mg/l	Qualifier	RD mg/l	Dilution	Analysis date / time	Batch
Total Phenols by 4AAP	<0.0100	<a href="#">J6</a>	0.0100	1	06/14/2024 12:07	<a href="#">WG2304313</a>

## Wet Chemistry by Method 4500CN-E

Analyte	Result mg/l	Qualifier	RD mg/l	Dilution	Analysis date / time	Batch
Cyanide	0.0155	<a href="#">J6</a>	0.0100	1	06/14/2024 18:57	<a href="#">WG2304679</a>

## Wet Chemistry by Method 4500CN-G

Analyte	Result mg/l	Qualifier	RD mg/l	Dilution	Analysis date / time	Batch
Cyanide,amenable	0.0155		0.0100	1	06/17/2024 17:17	WG2306481

## Volatile Organic Compounds (GC/MS) by Method 624.1

Analyte	Result mg/l	Qualifier	RD mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	<0.00500		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
1,1,2,2-Tetrachloroethane	<0.00500		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
1,1,2-Trichloroethane	<0.00500		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
1,1-Dichloroethane	<0.00500		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
1,1-Dichloroethene	<0.00500		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
1,2-Dichlorobenzene	<0.00200		0.00200	1	06/12/2024 15:44	<a href="#">WG2303484</a>
1,2-Dichloroethane	<0.00500		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
1,2-Dichloropropane	<0.00200		0.00200	1	06/12/2024 15:44	<a href="#">WG2303484</a>
1,3-Dichlorobenzene	<0.00500		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
1,4-Dichlorobenzene	<0.00200		0.00200	1	06/12/2024 15:44	<a href="#">WG2303484</a>
2-Chloroethyl vinyl ether	<0.0100		0.0100	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Acrolein	<0.0100		0.0100	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Acrylonitrile	<0.0100		0.0100	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Benzene	<0.00500		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Bromodichloromethane	0.00871		0.00200	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Bromoform	<0.0100		0.0100	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Bromomethane	<0.00500		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Carbon tetrachloride	<0.00200		0.00200	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Chlorobenzene	<0.0100		0.0100	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Chloroethane	<0.00500		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Chloroform	0.0202		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Chloromethane	<0.00500		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
cis-1,2-Dichloroethene	<0.00500		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
cis-1,3-Dichloropropene	<0.0100		0.0100	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Dibromochloromethane	<0.00500		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Ethylbenzene	<0.00200		0.00200	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Methylene Chloride	<0.0200		0.0200	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Tetrachloroethene	<0.0100		0.0100	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Toluene	<0.00500		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Total 1,3-Dichloropropene	<0.0100		0.0100	1	06/12/2024 15:44	<a href="#">WG2303484</a>
trans-1,2-Dichloroethene	<0.0100		0.0100	1	06/12/2024 15:44	<a href="#">WG2303484</a>
trans-1,3-Dichloropropene	<0.00500		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Trichloroethene	<0.00500		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
Vinyl chloride	<0.00500		0.00500	1	06/12/2024 15:44	<a href="#">WG2303484</a>
(S) 1,2-Dichloroethane-d4	93.3		70.0-130		06/12/2024 15:44	<a href="#">WG2303484</a>
(S) 4-Bromofluorobenzene	99.8		70.0-130		06/12/2024 15:44	<a href="#">WG2303484</a>
(S) Toluene-d8	98.4		70.0-130		06/12/2024 15:44	<a href="#">WG2303484</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4081788-1 06/14/24 12:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Total Phenols by 4AAP	<0.00550		0.00550	0.0100

Laboratory Control Sample (LCS)

(LCS) R4081788-2 06/14/24 12:07

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Phenols by 4AAP	0.133	0.127	95.7	80.0-120	

L1745253-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1745253-05 06/14/24 12:07 • (MS) R4081788-3 06/14/24 12:07 • (MSD) R4081788-4 06/14/24 12:07

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Total Phenols by 4AAP	0.133	<0.0100	0.0983	0.0952	73.9	71.6	1	80.0-120	J6	J6	3.16	20

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc



Method Blank (MB)

(MB) R4082008-1 06/14/24 18:57

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Cyanide	<0.00430		0.00430	0.0100

Laboratory Control Sample (LCS)

(LCS) R4082008-2 06/14/24 18:57

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Cyanide	0.100	0.0977	97.7	85.0-115	

L1745253-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1745253-05 06/14/24 18:57 • (MS) R4082008-3 06/14/24 18:57 • (MSD) R4082008-4 06/14/24 18:57

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	0.0155	0.0977	0.0945	82.1	78.9	1	85.0-115	J6	J6	3.32	20

L1745253-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1745253-08 06/14/24 18:57 • (MS) R4082008-5 06/14/24 18:57 • (MSD) R4082008-6 06/14/24 18:57

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	<0.0100	0.0871	0.0906	87.1	90.6	1	85.0-115			3.99	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4081102-2 06/12/24 12:19

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,1-Trichloroethane	<0.00335		0.00335	0.00500
1,1,2,2-Tetrachloroethane	<0.000596		0.000596	0.00500
1,1,2-Trichloroethane	<0.00145		0.00145	0.00500
1,1-Dichloroethane	<0.00292		0.00292	0.00500
1,1-Dichloroethene	<0.00367		0.00367	0.00500
1,2-Dichlorobenzene	<0.00172		0.00172	0.00200
1,2-Dichloroethane	<0.00195		0.00195	0.00500
1,2-Dichloropropane	<0.000804		0.000804	0.00200
1,3-Dichlorobenzene	<0.00419		0.00419	0.00500
1,4-Dichlorobenzene	<0.00173		0.00173	0.00200
2-Chloroethyl vinyl ether	<0.00652		0.00652	0.0100
Acrolein	<0.00544		0.00544	0.0100
Acrylonitrile	<0.00709		0.00709	0.0100
Benzene	<0.00207		0.00207	0.00500
Bromodichloromethane	<0.00179		0.00179	0.00200
Bromoform	<0.000960		0.000960	0.0100
Bromomethane	<0.00347		0.00347	0.00500
Carbon tetrachloride	<0.00159		0.00159	0.00200
Chlorobenzene	<0.00276		0.00276	0.0100
Chloroethane	<0.00296		0.00296	0.00500
Chloroform	<0.00212		0.00212	0.00500
Chloromethane	<0.00361		0.00361	0.00500
cis-1,2-Dichloroethene	<0.00113		0.00113	0.00500
cis-1,3-Dichloropropene	<0.00492		0.00492	0.0100
Dibromochloromethane	<0.00327		0.00327	0.00500
Ethylbenzene	<0.000401		0.000401	0.00200
Methylene Chloride	<0.0118		0.0118	0.0200
Tetrachloroethene	<0.00486		0.00486	0.0100
Toluene	<0.00219		0.00219	0.00500
Total 1,3-Dichloropropene	<0.00372		0.00372	0.0100
trans-1,2-Dichloroethene	<0.00501		0.00501	0.0100
trans-1,3-Dichloropropene	<0.00460		0.00460	0.00500
Trichloroethene	<0.00262		0.00262	0.00500
Vinyl chloride	<0.00466		0.00466	0.00500
(S) 1,2-Dichloroethane-d4	90.9			70.0-130
(S) 4-Bromofluorobenzene	98.9			70.0-130
(S) Toluene-d8	100			70.0-130

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R4081102-1 06/12/24 10:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,1,1-Trichloroethane	0.0199	0.0186	93.5	70.0-130	
1,1,2,2-Tetrachloroethane	0.0201	0.0169	84.1	60.0-140	
1,1,2-Trichloroethane	0.0199	0.0178	89.4	70.0-130	
1,1-Dichloroethane	0.0200	0.0182	91.0	70.0-130	
1,1-Dichloroethene	0.0198	0.0170	85.9	50.0-150	
1,2-Dichlorobenzene	0.0200	0.0166	83.0	65.0-135	
1,2-Dichloroethane	0.0199	0.0167	83.9	70.0-130	
1,2-Dichloropropane	0.0199	0.0189	95.0	35.0-165	
1,3-Dichlorobenzene	0.0199	0.0175	87.9	70.0-130	
1,4-Dichlorobenzene	0.0200	0.0170	85.0	65.0-135	
2-Chloroethyl vinyl ether	0.100	0.0781	78.1	1.00-225	
Acrolein	0.100	0.0870	87.0	64.0-139	
Acrylonitrile	0.100	0.0905	90.5	67.0-136	
Benzene	0.0200	0.0190	95.0	65.0-135	
Bromodichloromethane	0.0199	0.0189	95.0	65.0-135	
Bromoform	0.0198	0.0180	90.9	70.0-130	
Bromomethane	0.0200	0.0204	102	15.0-185	
Carbon tetrachloride	0.0199	0.0182	91.5	70.0-130	
Chlorobenzene	0.0198	0.0182	91.9	65.0-135	
Chloroethane	0.0200	0.0185	92.5	40.0-160	
Chloroform	0.0198	0.0188	94.9	70.0-135	
Chloromethane	0.0200	0.0228	114	1.00-205	
cis-1,2-Dichloroethene	0.0200	0.0196	98.0	70.0-130	
cis-1,3-Dichloropropene	0.0200	0.0162	81.0	25.0-175	
Dibromochloromethane	0.0198	0.0177	89.4	70.0-135	
Ethylbenzene	0.0201	0.0183	91.0	60.0-140	
Methylene Chloride	0.0204	0.0177	86.8	60.0-140	
Tetrachloroethene	0.0199	0.0187	94.0	70.0-130	
Toluene	0.0200	0.0180	90.0	70.0-130	
Total 1,3-Dichloropropene	0.0401	0.0330	82.3	70.0-130	
trans-1,2-Dichloroethene	0.0200	0.0192	96.0	70.0-130	
trans-1,3-Dichloropropene	0.0201	0.0168	83.6	50.0-150	
Trichloroethene	0.0200	0.0200	100	65.0-135	
Vinyl chloride	0.0200	0.0177	88.5	5.00-195	
(S) 1,2-Dichloroethane-d4			91.9	70.0-130	
(S) 4-Bromofluorobenzene			96.9	70.0-130	
(S) Toluene-d8			99.2	70.0-130	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1745289-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1745289-08 06/12/24 19:47 • (MS) R4081102-3 06/12/24 13:18 • (MSD) R4081102-4 06/12/24 13:42

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,1-Trichloroethane	0.0199	<0.00500	0.0201	0.0208	101	105	1	52.0-162			3.42	36
1,1,2,2-Tetrachloroethane	0.0201	<0.00500	0.0173	0.0175	86.1	87.1	1	46.0-157			1.15	61
1,1,2-Trichloroethane	0.0199	<0.00500	0.0182	0.0195	91.5	98.0	1	52.0-150			6.90	45
1,1-Dichloroethane	0.0200	<0.00500	0.0193	0.0199	96.5	99.5	1	59.0-155			3.06	40
1,1-Dichloroethene	0.0198	<0.00500	0.0183	0.0186	92.4	93.9	1	1.00-234			1.63	32
1,2-Dichlorobenzene	0.0200	<0.00200	0.0181	0.0189	90.5	94.5	1	18.0-190			4.32	57
1,2-Dichloroethane	0.0199	<0.00500	0.0178	0.0185	89.4	93.0	1	49.0-155			3.86	49
1,2-Dichloropropane	0.0199	<0.00200	0.0205	0.0207	103	104	1	1.00-210			0.971	55
1,3-Dichlorobenzene	0.0199	<0.00500	0.0186	0.0196	93.5	98.5	1	59.0-156			5.24	43
1,4-Dichlorobenzene	0.0200	<0.00200	0.0184	0.0193	92.0	96.5	1	18.0-190			4.77	57
2-Chloroethyl vinyl ether	0.100	<0.0100	0.0835	0.0878	83.5	87.8	1	1.00-305			5.02	71
Acrolein	0.100	<0.0100	0.0538	0.0551	53.8	55.1	1	4.00-172			2.39	20
Acrylonitrile	0.100	<0.0100	0.0756	0.0800	75.6	80.0	1	22.0-189			5.66	20
Benzene	0.0200	<0.00500	0.0210	0.0211	105	105	1	37.0-151			0.475	61
Bromodichloromethane	0.0199	<0.00200	0.0193	0.0198	97.0	99.5	1	35.0-155			2.56	56
Bromoform	0.0198	<0.0100	0.0182	0.0189	91.9	95.5	1	70.0-130			3.77	42
Bromomethane	0.0200	<0.00500	0.0162	0.0159	81.0	79.5	1	15.0-185			1.87	61
Carbon tetrachloride	0.0199	<0.00200	0.0204	0.0204	103	103	1	70.0-140			0.000	41
Chlorobenzene	0.0198	<0.0100	0.0190	0.0201	96.0	102	1	37.0-160			5.63	53
Chloroethane	0.0200	<0.00500	0.0170	0.0160	85.0	80.0	1	14.0-230			6.06	78
Chloroform	0.0198	<0.00500	0.0202	0.0200	102	101	1	51.0-138			0.995	54
Chloromethane	0.0200	<0.00500	0.0211	0.0211	105	105	1	1.00-273			0.000	20
cis-1,2-Dichloroethene	0.0200	<0.00500	0.0213	0.0204	106	102	1	70.0-130			4.32	20
cis-1,3-Dichloropropene	0.0200	<0.0100	0.0158	0.0159	79.0	79.5	1	1.00-227			0.631	58
Dibromochloromethane	0.0198	<0.00500	0.0185	0.0195	93.4	98.5	1	53.0-149			5.26	50
Ethylbenzene	0.0201	<0.00200	0.0199	0.0205	99.0	102	1	37.0-162			2.97	63
Methylene Chloride	0.0204	<0.0200	<0.0200	<0.0200	89.2	92.6	1	1.00-221			3.77	28
Tetrachloroethene	0.0199	<0.0100	0.0206	0.0211	104	106	1	64.0-148			2.40	39
Toluene	0.0200	<0.00500	0.0198	0.0203	99.0	102	1	47.0-150			2.49	41
Total 1,3-Dichloropropene	0.0401	<0.0100	0.0329	0.0332	82.0	82.8	1	70.0-130			0.908	20
trans-1,2-Dichloroethene	0.0200	<0.0100	0.0201	0.0210	101	105	1	54.0-156			4.38	45
trans-1,3-Dichloropropene	0.0201	<0.00500	0.0171	0.0173	85.1	86.1	1	17.0-183			1.16	86
Trichloroethene	0.0200	<0.00500	0.0213	0.0215	106	108	1	70.0-157			0.935	48
Vinyl chloride	0.0200	<0.00500	0.0179	0.0177	89.5	88.5	1	1.00-251			1.12	66
(S) 1,2-Dichloroethane-d4					90.7	92.2		70.0-130				
(S) 4-Bromofluorobenzene					94.6	95.1		70.0-130				
(S) Toluene-d8					99.3	97.9		70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

### Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

### Qualifier Description

J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
----	---

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

# ACCREDITATIONS & LOCATIONS

## Pace Analytical Services, LLC -Dallas 400 W. Bethany Drive Suite 190 Allen, TX 75013

Arkansas	88-0647	Kansas	E10388
Florida	E871118	Texas	T104704232-23-39
Iowa	408	Oklahoma	8727
Louisiana	30686		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



# ANALYTICAL REPORT

July 16, 2024

Revised Report

## San Antonio Water Systems

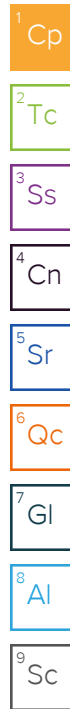
Sample Delivery Group: L1745280  
Samples Received: 06/11/2024  
Project Number: TPDES ORGANICS  
Description: TPDES ORGANICS

Report To: San Antonio Water Systems  
PO Box 2449  
San Antonio, TX 78298

Entire Report Reviewed By:

Justin Carr  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

# TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
AF72231 SMC INF 24060165 L1745280-01	5
AF72237 SMC EFF 24060165 L1745280-02	8
AF72269 EQPBLNK 24060170 L1745280-03	11
Qc: Quality Control Summary	13
Pesticides (GC) by Method EPA 608.3	13
Polychlorinated Biphenyls (GC) by Method EPA-608.3	16
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	17
Gl: Glossary of Terms	22
Al: Accreditations & Locations	23
Sc: Sample Chain of Custody	24

<sup>1</sup> Cp
<sup>2</sup> Tc
<sup>3</sup> Ss
<sup>4</sup> Cn
<sup>5</sup> Sr
<sup>6</sup> Qc
<sup>7</sup> Gl
<sup>8</sup> Al
<sup>9</sup> Sc

# SAMPLE SUMMARY

AF72231 SMC INF 24060165 L1745280-01 WW

Collected by  
Giovanna Muzquiz

Collected date/time  
06/09/24 23:00

Received date/time  
06/11/24 08:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Pesticides (GC) by Method EPA 608.3	WG2303227	1	06/12/24 20:30	06/13/24 00:30	MFM	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method EPA-608.3	WG2303227	1	06/12/24 20:30	06/13/24 00:30	RDH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	WG2305043	1	06/14/24 09:15	06/16/24 02:43	XLY	Allen, TX
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	WG2305043	10	06/14/24 09:15	06/18/24 14:50	XLY	Allen, TX
Subcontracted Analyses	WG2303044	1	07/15/24 00:00	07/15/24 00:00	JWW	Subcontract

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

AF72237 SMC EFF 24060165 L1745280-02 WW

Collected by  
Giovanna Muzquiz

Collected date/time  
06/09/24 23:05

Received date/time  
06/11/24 08:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Pesticides (GC) by Method EPA 608.3	WG2303227	1	06/12/24 20:30	06/13/24 01:14	MFM	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method EPA-608.3	WG2303227	1	06/12/24 20:30	06/13/24 01:14	MFM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	WG2305043	1	06/14/24 09:15	06/16/24 00:16	XLY	Allen, TX
Subcontracted Analyses	WG2303044	1	07/15/24 00:00	07/15/24 00:00	JWW	Subcontract

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

AF72269 EQPBLNK 24060170 L1745280-03 WW

Collected by  
Giovanna Muzquiz

Collected date/time  
06/10/24 08:30

Received date/time  
06/11/24 08:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 625.1	WG2305043	1	06/14/24 09:15	06/16/24 00:46	XLY	Allen, TX

<sup>9</sup> Sc



# CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Justin Carr  
Project Manager



## Report Revision History

Level II Report - Version 1: 07/15/24 23:06

## Project Narrative

units changed per client. JGC 7/16/24

L1745280 -01, -02 contains subout data that is included after the chain of custody.

## Sample Delivery Group (SDG) Narrative

An aliquot for analysis was taken from the original container received due to volume requirements of the laboratory's procedure. Rinsing of the original sample container for inclusion in the sample extraction was not performed.

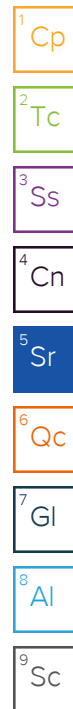
<u>Lab Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
<a href="#">L1745280-01</a>	<a href="#">AF72231 SMC INF 24060165</a>	EPA 608.3, EPA-608.3
<a href="#">L1745280-02</a>	<a href="#">AF72237 SMC EFF 24060165</a>	EPA 608.3, EPA-608.3

No extra volume received to perform Matrix Spike samples.

<u>Lab Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
<a href="#">L1745280-01</a>	<a href="#">AF72231 SMC INF 24060165</a>	625.1
<a href="#">L1745280-02</a>	<a href="#">AF72237 SMC EFF 24060165</a>	625.1
<a href="#">L1745280-03</a>	<a href="#">AF72269 EQPBLNK 24060170</a>	625.1

## Pesticides (GC) by Method EPA 608.3

Analyte	Result ug/l	Qualifier	RD ug/l	Dilution	Analysis date / time	Batch
Aldrin	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Alpha BHC	0.0694		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Beta BHC	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Delta BHC	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Gamma BHC	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Chlordane	ND		5.00	1	06/13/2024 01:14	<a href="#">WG2303227</a>
4,4-DDD	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
4,4-DDE	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
4,4-DDT	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Dieldrin	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Endosulfan I	0.0564		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Endosulfan II	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Endosulfan sulfate	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Endrin	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Endrin aldehyde	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Endrin ketone	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Heptachlor	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Heptachlor epoxide	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Hexachlorobenzene	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Methoxychlor	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Toxaphene	ND		0.500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
gamma-Chlordane	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
alpha-Chlordane	ND		0.0500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
(S) Decachlorobiphenyl	40.4		10.0-144		06/13/2024 01:14	<a href="#">WG2303227</a>
(S) Tetrachloro-m-xylene	80.2		10.0-135		06/13/2024 01:14	<a href="#">WG2303227</a>



## Polychlorinated Biphenyls (GC) by Method EPA-608.3

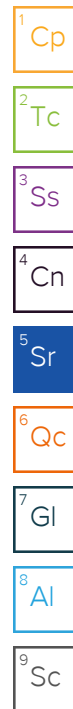
Analyte	Result ug/l	Qualifier	RD ug/l	Dilution	Analysis date / time	Batch
PCB 1016	ND		0.500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
PCB 1221	ND		0.500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
PCB 1232	ND		0.500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
PCB 1242	ND		0.500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
PCB 1248	ND		0.500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
PCB 1254	ND		0.500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
PCB 1260	ND		0.500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
Total PCBs	ND		0.500	1	06/13/2024 01:14	<a href="#">WG2303227</a>
(S) Decachlorobiphenyl	65.6		10.0-144		06/13/2024 01:14	<a href="#">WG2303227</a>
(S) Tetrachloro-m-xylene	74.1		10.0-135		06/13/2024 01:14	<a href="#">WG2303227</a>

## Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result ug/l	Qualifier	RD ug/l	Dilution	Analysis date / time	Batch
1,2,4,5-Tetrachlorobenzene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
1,2,4-Trichlorobenzene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
1,2-Dichlorobenzene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
1,3-Dichlorobenzene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
1,4-Dichlorobenzene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
2,2-Oxybis(1-Chloropropane)	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
2,4,5-Trichlorophenol	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
2,4,6-Trichlorophenol	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
2,4-Dichlorophenol	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
2,4-Dimethylphenol	ND		5.00	1	06/16/2024 00:16	<a href="#">WG2305043</a>
2,4-Dinitrophenol	ND		5.00	1	06/16/2024 00:16	<a href="#">WG2305043</a>
2,4-Dinitrotoluene	ND		5.00	1	06/16/2024 00:16	<a href="#">WG2305043</a>

## Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
2,6-Dichlorophenol	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
2,6-Dinitrotoluene	ND		5.00	1	06/16/2024 00:16	<a href="#">WG2305043</a>
2-Chloronaphthalene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
2-Chlorophenol	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
2-Methylphenol	ND		5.00	1	06/16/2024 00:16	<a href="#">WG2305043</a>
2-Nitrophenol	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
3&4-Methyl Phenol	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
3,3-Dichlorobenzidine	ND		5.00	1	06/16/2024 00:16	<a href="#">WG2305043</a>
4,6-Dinitro-2-methylphenol	ND		5.00	1	06/16/2024 00:16	<a href="#">WG2305043</a>
4-Bromophenyl-phenylether	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
4-Chloro-3-methylphenol	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
4-Chlorophenyl-phenylether	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
4-Nitrophenol	ND		5.00	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Acenaphthene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Acenaphthylene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Acetophenone	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Alpha-Terpineol	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Aniline	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Anthracene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Atrazine	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Benzidine	ND		10.0	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Benzo(a)anthracene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Benzo(a)pyrene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Benzo(b)fluoranthene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Benzo(g,h,i)perylene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Benzo(k)fluoranthene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Benzoic acid	ND		10.0	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Benzylbutyl phthalate	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Bis(2-chlorethoxy)methane	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Bis(2-chloroethyl)ether	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Bis(2-chloroisopropyl)ether	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Bis(2-Ethylhexyl)phthalate	ND		5.00	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Carbazole	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Chrysene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Di-n-butyl phthalate	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Di-n-octyl phthalate	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Dibenz(a,h)anthracene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Dibenzofuran	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Diethyl phthalate	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Dimethyl phthalate	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Fluoranthene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Fluorene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Hexachloro-1,3-butadiene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Hexachlorobenzene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Hexachlorocyclopentadiene	ND	<a href="#">C5</a>	10.0	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Hexachloroethane	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
1,2-Diphenylhydrazine	ND	<a href="#">N2</a>	2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Indeno(1,2,3-cd)pyrene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Isophorone	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
n-Decane	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
n-Nitrosodi-n-butylamine	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
n-Nitrosodi-n-propylamine	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
n-Nitrosodiethylamine	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
n-Nitrosodimethylamine	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
n-Nitrosodiphenylamine	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
n-Octadecane	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>



Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Naphthalene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Nitrobenzene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Nonylphenol	ND		5.00	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Pentachlorobenzene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Pentachlorophenol	ND		5.00	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Phenanthrene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Phenol	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Pyrene	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Pyridine	ND		2.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
Total Cresols	ND		7.50	1	06/16/2024 00:16	<a href="#">WG2305043</a>
(S) 2,4,6-Tribromophenol	61.6		29.0-132		06/16/2024 00:16	<a href="#">WG2305043</a>
(S) 2-Fluorobiphenyl	41.2		26.0-102		06/16/2024 00:16	<a href="#">WG2305043</a>
(S) 2-Fluorophenol	12.9		10.0-66.0		06/16/2024 00:16	<a href="#">WG2305043</a>
(S) Nitrobenzene-d5	38.7		15.0-106		06/16/2024 00:16	<a href="#">WG2305043</a>
(S) p-Terphenyl-d14	69.8		10.0-120		06/16/2024 00:16	<a href="#">WG2305043</a>
(S) Phenol-D6	9.25	<a href="#">J2</a>	10.0-54.0		06/16/2024 00:16	<a href="#">WG2305043</a>

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

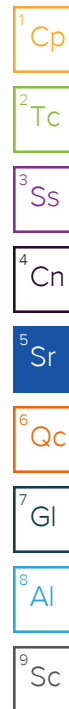
7Gl

8Al

9Sc

## Semi Volatile Organic Compounds (GC/MS) by Method 625.1

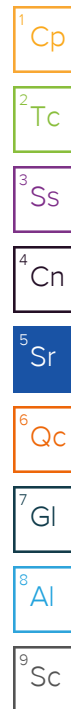
Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4,5-Tetrachlorobenzene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
1,2,4-Trichlorobenzene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
1,2-Dichlorobenzene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
1,3-Dichlorobenzene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
1,4-Dichlorobenzene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
2,2-Oxybis(1-Chloropropane)	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
2,4,5-Trichlorophenol	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
2,4,6-Trichlorophenol	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
2,4-Dichlorophenol	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
2,4-Dimethylphenol	ND		5.00	1	06/16/2024 00:46	<a href="#">WG2305043</a>
2,4-Dinitrophenol	ND		5.00	1	06/16/2024 00:46	<a href="#">WG2305043</a>
2,4-Dinitrotoluene	ND		5.00	1	06/16/2024 00:46	<a href="#">WG2305043</a>
2,6-Dichlorophenol	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
2,6-Dinitrotoluene	ND		5.00	1	06/16/2024 00:46	<a href="#">WG2305043</a>
2-Chloronaphthalene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
2-Chlorophenol	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
2-Methylphenol	ND		5.00	1	06/16/2024 00:46	<a href="#">WG2305043</a>
2-Nitrophenol	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
3&4-Methyl Phenol	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
3,3-Dichlorobenzidine	ND		5.00	1	06/16/2024 00:46	<a href="#">WG2305043</a>
4,6-Dinitro-2-methylphenol	ND		5.00	1	06/16/2024 00:46	<a href="#">WG2305043</a>
4-Bromophenyl-phenylether	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
4-Chloro-3-methylphenol	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
4-Chlorophenyl-phenylether	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
4-Nitrophenol	ND		5.00	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Acenaphthene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Acenaphthylene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Acetophenone	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Alpha-Terpineol	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Aniline	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Anthracene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Atrazine	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Benzidine	ND		10.0	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Benzo(a)anthracene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Benzo(a)pyrene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Benzo(b)fluoranthene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Benzo(g,h,i)perylene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Benzo(k)fluoranthene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Benzoic acid	ND		10.0	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Benzylbutyl phthalate	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Bis(2-chlorethoxy)methane	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Bis(2-chloroethyl)ether	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Bis(2-chloroisopropyl)ether	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Bis(2-Ethylhexyl)phthalate	ND		5.00	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Carbazole	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Chrysene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Di-n-butyl phthalate	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Di-n-octyl phthalate	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Dibenz(a,h)anthracene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Dibenzofuran	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Diethyl phthalate	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Dimethyl phthalate	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Fluoranthene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Fluorene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Hexachloro-1,3-butadiene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>
Hexachlorobenzene	ND		2.50	1	06/16/2024 00:46	<a href="#">WG2305043</a>





## Semi Volatile Organic Compounds (GC/MS) by Method 625.1

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Hexachlorocyclopentadiene	ND	C5	10.0	1	06/16/2024 00:46	WG2305043
Hexachloroethane	ND		2.50	1	06/16/2024 00:46	WG2305043
1,2-Diphenylhydrazine	ND	N2	2.50	1	06/16/2024 00:46	WG2305043
Indeno(1,2,3-cd)pyrene	ND		2.50	1	06/16/2024 00:46	WG2305043
Isophorone	ND		2.50	1	06/16/2024 00:46	WG2305043
n-Decane	ND		2.50	1	06/16/2024 00:46	WG2305043
n-Nitrosodi-n-butylamine	ND		2.50	1	06/16/2024 00:46	WG2305043
n-Nitrosodi-n-propylamine	ND		2.50	1	06/16/2024 00:46	WG2305043
n-Nitrosodiethylamine	ND		2.50	1	06/16/2024 00:46	WG2305043
n-Nitrosodimethylamine	ND		2.50	1	06/16/2024 00:46	WG2305043
n-Nitrosodiphenylamine	ND		2.50	1	06/16/2024 00:46	WG2305043
n-Octadecane	ND		2.50	1	06/16/2024 00:46	WG2305043
Naphthalene	ND		2.50	1	06/16/2024 00:46	WG2305043
Nitrobenzene	ND		2.50	1	06/16/2024 00:46	WG2305043
Nonylphenol	ND		5.00	1	06/16/2024 00:46	WG2305043
Pentachlorobenzene	ND		2.50	1	06/16/2024 00:46	WG2305043
Pentachlorophenol	ND		5.00	1	06/16/2024 00:46	WG2305043
Phenanthrene	ND		2.50	1	06/16/2024 00:46	WG2305043
Phenol	ND		2.50	1	06/16/2024 00:46	WG2305043
Pyrene	ND		2.50	1	06/16/2024 00:46	WG2305043
Pyridine	ND		2.50	1	06/16/2024 00:46	WG2305043
Total Cresols	ND		7.50	1	06/16/2024 00:46	WG2305043
(S) 2,4,6-Tribromophenol	42.3		29.0-132		06/16/2024 00:46	WG2305043
(S) 2-Fluorobiphenyl	69.0		26.0-102		06/16/2024 00:46	WG2305043
(S) 2-Fluorophenol	21.6		10.0-66.0		06/16/2024 00:46	WG2305043
(S) Nitrobenzene-d5	65.7		15.0-106		06/16/2024 00:46	WG2305043
(S) p-Terphenyl-d14	77.9		10.0-120		06/16/2024 00:46	WG2305043
(S) Phenol-D6	16.2		10.0-54.0		06/16/2024 00:46	WG2305043



Method Blank (MB)

(MB) R4082920-1 06/13/24 00:04

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Aldrin	U		0.0198	0.0500
Alpha BHC	U		0.0172	0.0500
Beta BHC	U		0.0208	0.0500
Delta BHC	U		0.0150	0.0500
Gamma BHC	U		0.0209	0.0500
Chlordane	U		0.0198	5.00
4,4-DDD	U		0.0177	0.0500
4,4-DDE	U		0.0154	0.0500
4,4-DDT	U		0.0198	0.0500
Dieldrin	U		0.0162	0.0500
Endosulfan I	U		0.0160	0.0500
Endosulfan II	U		0.0164	0.0500
Endosulfan sulfate	U		0.0217	0.0500
Endrin	U		0.0161	0.0500
Endrin aldehyde	U		0.0237	0.0500
Endrin ketone	U		0.0219	0.0500
Heptachlor	U		0.0148	0.0500
Heptachlor epoxide	U		0.0183	0.0500
Hexachlorobenzene	U		0.0176	0.0500
Methoxychlor	U		0.0193	0.0500
Toxaphene	U		0.168	0.500
gamma-Chlordane	U		0.0137	0.0500
alpha-Chlordane	U		0.0149	0.0500
(S) Decachlorobiphenyl	22.3			10.0-144
(S) Tetrachloro-m-xylene	68.4			10.0-135

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Laboratory Control Sample (LCS)

(LCS) R4082920-3 06/13/24 00:12

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	1.00	0.705	70.5	42.0-140	
Alpha BHC	1.00	0.977	97.7	37.0-140	
Beta BHC	1.00	0.938	93.8	17.0-147	
Delta BHC	1.00	0.890	89.0	19.0-140	
Gamma BHC	1.00	0.980	98.0	32.0-140	
4,4-DDD	1.00	0.774	77.4	31.0-141	
4,4-DDE	1.00	0.628	62.8	30.0-145	
4,4-DDT	1.00	0.649	64.9	25.0-160	

Laboratory Control Sample (LCS)

(LCS) R4082920-3 06/13/24 00:12

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Dieldrin	1.00	0.861	86.1	36.0-146	
Endosulfan I	1.00	0.875	87.5	45.0-153	
Endosulfan II	1.00	0.933	93.3	1.00-202	
Endosulfan sulfate	1.00	0.924	92.4	26.0-144	
Endrin	1.00	0.877	87.7	30.0-147	
Endrin aldehyde	1.00	0.933	93.3	56.0-128	
Endrin ketone	1.00	0.984	98.4	54.0-142	
Heptachlor	1.00	0.740	74.0	34.0-140	
Heptachlor epoxide	1.00	0.865	86.5	37.0-142	
Hexachlorobenzene	1.00	0.759	75.9	35.0-120	
Methoxychlor	1.00	0.774	77.4	44.0-160	
gamma-Chlordane	1.00	0.745	74.5	45.0-140	
alpha-Chlordane	1.00	0.744	74.4	45.0-140	
(S) Decachlorobiphenyl			29.2	10.0-144	
(S) Tetrachloro-m-xylene			68.9	10.0-135	

L1745280-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1745280-01 06/13/24 00:30 • (MS) R4082920-4 06/13/24 00:39 • (MSD) R4082920-5 06/13/24 00:48

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Aldrin	1.00	ND	0.0639	0.0942	6.39	9.42	1	42.0-140	J6	J3 J6 P	38.3	35
Alpha BHC	1.00	ND	0.775	0.788	77.5	78.8	1	37.0-140	P	P	1.66	36
Beta BHC	1.00	ND	0.926	0.976	92.6	97.6	1	17.0-147	P	P	5.26	44
Delta BHC	1.00	ND	0.760	0.775	76.0	77.5	1	19.0-140	P	P	1.95	52
Gamma BHC	1.00	ND	0.818	0.852	81.8	85.2	1	32.0-140	P	P	4.07	39
4,4-DDD	1.00	ND	0.545	0.592	54.5	59.2	1	31.0-141	P	P	8.27	39
4,4-DDE	1.00	ND	0.528	0.516	52.8	51.6	1	30.0-145	P	P	2.30	35
4,4-DDT	1.00	ND	0.493	0.452	49.3	45.2	1	25.0-160	P	P	8.68	42
Dieldrin	1.00	ND	0.538	0.630	53.8	63.0	1	36.0-146	P	P	15.8	49
Endosulfan I	1.00	ND	0.774	0.793	77.4	79.3	1	45.0-153	P	P	2.43	28
Endosulfan II	1.00	ND	0.602	0.671	60.2	67.1	1	1.00-202	P	P	10.8	53
Endosulfan sulfate	1.00	ND	0.708	0.824	70.8	82.4	1	26.0-144	P	P	15.1	38
Endrin	1.00	ND	0.627	0.700	62.7	70.0	1	30.0-147	P	P	11.0	48
Endrin aldehyde	1.00	ND	0.614	0.641	61.4	64.1	1	56.0-128	P	P	4.30	20
Endrin ketone	1.00	ND	0.670	0.740	67.0	74.0	1	54.0-142	P	P	9.93	20
Heptachlor	1.00	ND	0.618	0.727	61.8	72.7	1	34.0-140	P	P	16.2	43
Heptachlor epoxide	1.00	ND	0.701	0.766	70.1	76.6	1	37.0-142	P	P	8.86	26
Hexachlorobenzene	1.00	ND	0.649	0.866	64.9	86.6	1	35.0-120	P	J3 P	28.6	25

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1745280-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1745280-01 06/13/24 00:30 • (MS) R4082920-4 06/13/24 00:39 • (MSD) R4082920-5 06/13/24 00:48

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methoxychlor	1.00	ND	0.500	0.666	50.0	66.6	1	44.0-160	P	J3 P	28.5	22
gamma-Chlordane	1.00	ND	0.360	0.655	36.0	65.5	1	45.0-140	J6 P	J3 P	58.1	35
alpha-Chlordane	1.00	ND	0.542	0.576	54.2	57.6	1	45.0-140	P	P	6.08	35
(S) Decachlorobiphenyl					32.3	33.7		10.0-144				
(S) Tetrachloro-m-xylene					44.0	54.5		10.0-135				

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R4082920-1 06/13/24 00:04

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
PCB 1016	U		0.270	0.500
PCB 1221	U		0.270	0.500
PCB 1232	U		0.270	0.500
PCB 1242	U		0.270	0.500
PCB 1248	U		0.173	0.500
PCB 1254	U		0.173	0.500
PCB 1260	U		0.173	0.500
Total PCBs	U		0.173	0.500
(S) Decachlorobiphenyl	17.1			10.0-144
(S) Tetrachloro-m-xylene	62.0			10.0-135

Laboratory Control Sample (LCS)

(LCS) R4082920-2 06/13/24 00:21

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
PCB 1016	2.50	2.16	86.4	50.0-140	
PCB 1260	2.50	1.81	72.4	8.00-140	
(S) Decachlorobiphenyl			31.0	10.0-144	
(S) Tetrachloro-m-xylene			68.3	10.0-135	

L1745280-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1745280-01 06/13/24 00:30 • (MS) R4082920-6 06/13/24 00:57 • (MSD) R4082920-7 06/13/24 01:06

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
PCB 1016	2.50	ND	4.48	6.15	179	246	1	50.0-140	J5 P	J5 P	31.4	36
PCB 1260	2.50	ND	1.29	0.977	51.6	39.1	1	8.00-140	P	P	27.6	38
(S) Decachlorobiphenyl					5.44	30.0		10.0-144	J2			
(S) Tetrachloro-m-xylene					42.4	47.9		10.0-135				

Sample Narrative:

OS: Duplicate analysis was performed. TBA wash confirmed results.

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc



Method Blank (MB)

(MB) R4083235-2 06/15/24 20:17

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
1,2,4,5-Tetrachlorobenzene	U		1.32	2.50
1,2,4-Trichlorobenzene	U		1.59	2.50
1,2-Dichlorobenzene	U		1.68	2.50
1,3-Dichlorobenzene	U		1.70	2.50
1,4-Dichlorobenzene	U		1.84	2.50
2,2-Oxybis(1-Chloropropane)	U		1.16	2.50
2,4,5-Trichlorophenol	U		1.93	2.50
2,4,6-Trichlorophenol	U		1.79	2.50
2,4-Dichlorophenol	U		0.820	2.50
2,4-Dimethylphenol	U		1.42	5.00
2,4-Dinitrophenol	U		1.15	5.00
2,4-Dinitrotoluene	U		2.65	5.00
2,6-Dichlorophenol	U		1.07	2.50
2,6-Dinitrotoluene	U		1.81	5.00
2-Chloronaphthalene	U		1.43	2.50
2-Chlorophenol	U		0.820	2.50
2-Methylphenol	U		0.760	5.00
2-Nitrophenol	U		1.69	2.50
3&4-Methyl Phenol	U		0.767	2.50
3,3-Dichlorobenzidine	U		2.65	5.00
4,6-Dinitro-2-methylphenol	U		1.50	5.00
4-Bromophenyl-phenylether	U		1.04	2.50
4-Chloro-3-methylphenol	U		0.865	2.50
4-Chlorophenyl-phenylether	U		1.40	2.50
4-Nitrophenol	U		1.64	5.00
Acenaphthene	U		1.34	2.50
Acenaphthylene	U		1.34	2.50
Acetophenone	U		0.788	2.50
Alpha-Terpineol	U		0.696	2.50
Aniline	U		0.536	2.50
Anthracene	U		1.11	2.50
Atrazine	U		1.67	2.50
Benzidine	U		3.11	10.0
Benzo(a)anthracene	U		0.933	2.50
Benzo(a)pyrene	U		0.941	2.50
Benzo(b)fluoranthene	U		1.02	2.50
Benzo(g,h,i)perylene	U		1.01	2.50
Benzo(k)fluoranthene	U		0.934	2.50
Benzoic acid	U		6.57	10.0
Benzylbutyl phthalate	U		1.43	2.50

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R4083235-2 06/15/24 20:17

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Bis(2-chlorethoxy)methane	U		0.991	2.50
Bis(2-chloroethyl)ether	U		1.01	2.50
Bis(2-chloroisopropyl)ether	U		1.16	2.50
Bis(2-Ethylhexyl)phthalate	U		3.18	5.00
Carbazole	U		1.06	2.50
Chrysene	U		1.02	2.50
Di-n-butyl phthalate	U		1.20	2.50
Di-n-octyl phthalate	U		1.74	2.50
Dibenz(a,h)anthracene	U		1.10	2.50
Dibenzofuran	U		1.20	2.50
Diethyl phthalate	U		0.915	2.50
Dimethyl phthalate	U		0.878	2.50
Fluoranthene	U		1.14	2.50
Fluorene	U		1.31	2.50
Hexachloro-1,3-butadiene	U		1.76	2.50
Hexachlorobenzene	U		0.972	2.50
Hexachlorocyclopentadiene	U	C5	1.17	10.0
Hexachloroethane	U		1.88	2.50
1,2-Diphenylhydrazine	U	N2	1.24	2.50
Indeno(1,2,3-cd)pyrene	U		0.984	2.50
Isophorone	U		1.83	2.50
n-Decane	U		1.58	2.50
n-Nitrosodi-n-butylamine	U		0.735	2.50
n-Nitrosodi-n-propylamine	U		1.07	2.50
n-Nitrosodiethylamine	U		0.925	2.50
n-Nitrosodimethylamine	U		0.651	2.50
n-Nitrosodiphenylamine	U		0.829	2.50
n-Octadecane	U		1.28	2.50
Naphthalene	U		2.00	2.50
Nitrobenzene	U		1.24	2.50
Nonylphenol	U		2.86	5.00
Pentachlorobenzene	U		1.34	2.50
Pentachlorophenol	U		2.10	5.00
Phenanthrene	U		1.13	2.50
Phenol	U		0.967	2.50
Pyrene	U		1.15	2.50
Pyridine	U		1.17	2.50
Total Cresols	U		1.53	7.50
(S) 2,4,6-Tribromophenol	60.1			29.0-132
(S) 2-Fluorobiphenyl	58.3			26.0-102

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4083235-2 06/15/24 20:17

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
(S) 2-Fluorophenol	34.7			10.0-66.0
(S) Nitrobenzene-d5	62.6			15.0-106
(S) p-Terphenyl-d14	71.3			10.0-120
(S) Phenol-d6	24.9			10.0-54.0

Laboratory Control Sample (LCS)

(LCS) R4083235-1 06/15/24 19:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,2,4,5-Tetrachlorobenzene	50.0	35.4	70.8	31.0-120	
1,2,4-Trichlorobenzene	50.0	36.7	73.4	44.0-142	
1,2-Dichlorobenzene	50.0	35.0	70.0	27.0-120	
1,3-Dichlorobenzene	50.0	33.3	66.6	26.0-120	
1,4-Dichlorobenzene	50.0	31.7	63.4	26.0-120	
2,2-Oxybis(1-Chloropropane)	50.0	38.8	77.6	36.0-166	
2,4,5-Trichlorophenol	50.0	38.6	77.2	44.0-124	
2,4,6-Trichlorophenol	50.0	40.3	80.6	37.0-144	
2,4-Dichlorophenol	50.0	38.1	76.2	39.0-135	
2,4-Dimethylphenol	50.0	48.9	97.8	32.0-120	
2,4-Dinitrophenol	50.0	36.3	72.6	1.00-191	
2,4-Dinitrotoluene	50.0	52.4	105	39.0-139	
2,6-Dichlorophenol	50.0	36.9	73.8	26.0-120	
2,6-Dinitrotoluene	50.0	49.1	98.2	50.0-158	
2-Chloronaphthalene	50.0	40.2	80.4	60.0-120	
2-Chlorophenol	50.0	32.1	64.2	23.0-134	
2-Methylphenol	50.0	30.7	61.4	26.0-120	
2-Nitrophenol	50.0	40.6	81.2	29.0-182	
3&4-Methyl Phenol	50.0	29.1	58.2	27.0-120	
3,3-Dichlorobenzidine	100	69.8	69.8	1.00-262	
4,6-Dinitro-2-methylphenol	50.0	40.9	81.8	1.00-181	
4-Bromophenyl-phenylether	50.0	43.1	86.2	53.0-127	
4-Chloro-3-methylphenol	50.0	38.8	77.6	22.0-147	
4-Chlorophenyl-phenylether	50.0	40.3	80.6	25.0-158	
4-Nitrophenol	50.0	19.7	39.4	1.00-132	
Acenaphthene	50.0	40.3	80.6	47.0-145	
Acenaphthylene	50.0	40.5	81.0	33.0-145	
Acetophenone	50.0	39.8	79.6	28.0-120	
Alpha-Terpineol	50.0	40.9	81.8	30.0-120	

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

Laboratory Control Sample (LCS)

(LCS) R4083235-1 06/15/24 19:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Aniline	50.0	37.4	74.8	10.0-120	
Anthracene	50.0	43.6	87.2	27.0-133	
Atrazine	50.0	44.0	88.0	39.0-141	
Benzidine	100	73.4	73.4	1.00-120	
Benzo(a)anthracene	50.0	43.6	87.2	33.0-143	
Benzo(a)pyrene	50.0	47.1	94.2	17.0-163	
Benzo(b)fluoranthene	50.0	46.6	93.2	24.0-159	
Benzo(g,h,i)perylene	50.0	43.7	87.4	1.00-219	
Benzo(k)fluoranthene	50.0	44.6	89.2	11.0-162	
Benzoic acid	100	26.2	26.2	10.0-120	
Benzylbutyl phthalate	50.0	44.4	88.8	1.00-152	
Bis(2-chlorethoxy)methane	50.0	42.5	85.0	1.00-219	
Bis(2-chloroethyl)ether	50.0	36.0	72.0	33.0-185	
Bis(2-chloroisopropyl)ether	50.0	38.8	77.6	36.0-166	
Bis(2-Ethylhexyl)phthalate	50.0	43.8	87.6	8.00-158	
Carbazole	50.0	54.2	108	45.0-121	
Chrysene	50.0	45.0	90.0	17.0-168	
Di-n-butyl phthalate	50.0	46.8	93.6	1.00-120	
Di-n-octyl phthalate	50.0	42.8	85.6	4.00-146	
Dibenz(a,h)anthracene	50.0	44.1	88.2	1.00-227	
Dibenzofuran	50.0	41.5	83.0	42.0-120	
Diethyl phthalate	50.0	42.8	85.6	1.00-120	
Dimethyl phthalate	50.0	42.5	85.0	1.00-120	
Fluoranthene	50.0	46.3	92.6	26.0-137	
Fluorene	50.0	41.5	83.0	59.0-121	
Hexachloro-1,3-butadiene	50.0	37.5	75.0	24.0-120	
Hexachlorobenzene	50.0	44.0	88.0	1.00-152	
Hexachlorocyclopentadiene	50.0	42.0	84.0	10.0-120	C5
Hexachloroethane	50.0	33.7	67.4	40.0-120	
1,2-Diphenylhydrazine	50.0	41.7	83.4	37.0-125	N2
Indeno(1,2,3-cd)pyrene	50.0	41.2	82.4	1.00-171	
Isophorone	50.0	41.3	82.6	21.0-196	
n-Decane	50.0	27.1	54.2	10.0-127	
n-Nitrosodi-n-butylamine	50.0	40.7	81.4	39.0-127	
n-Nitrosodi-n-propylamine	50.0	42.9	85.8	1.00-230	
n-Nitrosodiethylamine	50.0	39.0	78.0	10.0-142	
n-Nitrosodimethylamine	50.0	23.0	46.0	10.0-120	
n-Nitrosodiphenylamine	50.0	40.5	81.0	44.0-120	
n-Octadecane	50.0	37.5	75.0	17.0-126	
Naphthalene	50.0	37.6	75.2	21.0-133	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R4083235-1 06/15/24 19:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Nitrobenzene	50.0	45.7	91.4	35.0-180	
Nonylphenol	50.0	43.6	87.2	57.0-136	
Pentachlorobenzene	50.0	41.8	83.6	10.0-151	
Pentachlorophenol	50.0	46.3	92.6	14.0-176	
Phenanthrene	50.0	43.6	87.2	54.0-120	
Phenol	50.0	18.2	36.4	5.00-120	
Pyrene	50.0	45.0	90.0	52.0-120	
Pyridine	50.0	16.4	32.8	10.0-120	
Total Cresols	100	59.8	59.8	36.0-110	
(S) 2,4,6-Tribromophenol			93.0	29.0-132	
(S) 2-Fluorobiphenyl			81.4	26.0-102	
(S) 2-Fluorophenol			42.4	10.0-66.0	
(S) Nitrobenzene-d5			82.3	15.0-106	
(S) p-Terphenyl-d14			85.1	10.0-120	
(S) Phenol-d6			32.6	10.0-54.0	

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

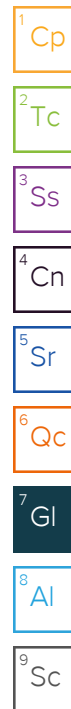
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

## Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
C5	The reported concentration is an estimate. The continuing calibration standard associated with this data responded high. Data is likely to show a high bias concerning the result.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
N2	Analyte reported using a calibration and validation based on Azobenzene (CAS 103-33-3). 1,2-Diphenylhydrazine decomposes into Azobenzene during the analysis.
P	RPD between the primary and confirmatory analysis exceeded 40%.



# ACCREDITATIONS & LOCATIONS

## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1 6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1 4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

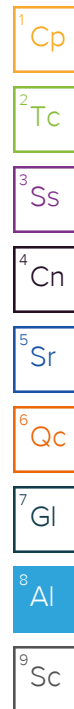
## Pace Analytical Services, LLC -Dallas 400 W. Bethany Drive Suite 190 Allen, TX 75013

Arkansas	88-0647	Kansas	E10388
Florida	E871118	Texas	T104704232-23-39
Iowa	408	Oklahoma	8727
Louisiana	30686		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Project  
1106948

**PABA-N**  
  
Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Printed 07/15/2024  
13:14

**TABLE OF CONTENTS**  
**WG2303044**

This report consists of this Table of Contents and the following pages:

Report Name	Description	Pages
1106948_r02_01_ProjectSamples	SPL Kilgore Project P:1106948 C:PABA Project Sample Cross Reference t:304	2
1106948_r03_03_ProjectResults	SPL Kilgore Project P:1106948 C:PABA Project Results t:304 PO: L1745280	8
1106948_r10_05_ProjectQC	SPL Kilgore Project P:1106948 C:PABA Project Quality Control Groups	7
1106948_r99_09_CoC__1_of_1	SPL Kilgore CoC PABA 1106948_1_of_1	7
Total Pages:		24



SAMPLE CROSS REFERENCE

Project

1106948

Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Printed7/15/2024Page 1 of 2

WG2303044

Sample	Sample ID	Taken	Time	Received
2307673	L1745280-01	06/09/2024	23:00:00	06/13/2024

Bottle 01 Client Supplied Amber Glass  
Bottle 02 Client Supplied Amber Glass  
Bottle 03 Client Supplied Amber Glass  
Bottle 04 Client Supplied Amber Glass  
Bottle 05 Client Supplied Amber Glass  
Bottle 06 Client Supplied Amber Glass  
Bottle 07 Client Supplied Amber Glass  
Bottle 08 Client Supplied Amber Glass  
Bottle 09 Client Supplied Amber Glass  
Bottle 10 Client Supplied Amber Glass  
Bottle 11 Client Supplied Amber Glass  
Bottle 12 Client Supplied Amber Glass  
Bottle 13 Client Supplied Amber Glass  
Bottle 14 Prepared Bottle: 2 mL Autosampler Vial (Batch 1124207) Volume: 5.00000 mL <== Derived from 01 ( 1008 ml )  
Bottle 15 Prepared Bottle: 632L\632S 2 mL Autosampler Vial (Batch 1124220) Volume: 1.00000 mL <== Derived from 02 ( 1008 ml )  
Bottle 16 Prepared Bottle: GCXL\GCXS 2 mL Autosampler Vial (Batch 1124221) Volume: 1.00000 mL <== Derived from 02 ( 1008 ml )  
Bottle 17 Prepared Bottle: OPXL\OPXS 2 mL Autosampler Vial (Batch 1124222) Volume: 1.00000 mL <== Derived from 02 ( 1008 ml )  
Bottle 18 Prepared Bottle: 2 mL Autosampler Vial (Batch 1124282) Volume: 10.00000 mL <== Derived from 04 ( 1027 ml )  
Bottle 19 Prepared Bottle: 2 mL Autosampler Vial (Batch 1124341) Volume: 1.00000 mL <== Derived from 12 ( 1010 ml )

Method	Bottle	PrepSet	Preparation	QcGroup	Analytical
EPA 615	18	1124282	06/16/2024	1125942	06/27/2024
EPA 632	15	1124220	06/16/2024	1126471	06/28/2024
EPA 604.1	14	1124207	06/16/2024	1126285	06/19/2024
EPA 617	16	1124221	06/16/2024	1125089	06/26/2024
EPA 614	17	1124222	06/16/2024	1124944	06/19/2024
ASTM D7065-11	19	1124341	06/17/2024	1124948	06/19/2024
EPA 622	17	1124222	06/16/2024	1124934	06/19/2024

Sample	Sample ID	Taken	Time	Received
2307685	L1745280-02	06/09/2024	23:05:00	06/13/2024

Email: Kilgore.ProjectManagement@spllabs.com

SAMPLE CROSS REFERENCE

Project

1106948

Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Printed7/15/2024Page 2 of 2

WG2303044

- Bottle 01 Client Supplied Amber Glass  
Bottle 02 Client Supplied Amber Glass  
Bottle 03 Client Supplied Amber Glass  
Bottle 04 Client Supplied Amber Glass  
Bottle 05 Client Supplied Amber Glass  
Bottle 06 Client Supplied Amber Glass  
Bottle 07 Client Supplied Amber Glass  
Bottle 08 Client Supplied Amber Glass  
Bottle 09 Client Supplied Amber Glass  
Bottle 10 Client Supplied Amber Glass  
Bottle 11 Client Supplied Amber Glass  
Bottle 12 Client Supplied Amber Glass  
Bottle 13 Client Supplied Amber Glass  
Bottle 14 Prepared Bottle: 2 mL Autosampler Vial (Batch 1124207) Volume: 5.00000 mL <== Derived from 01 ( 1029 ml )  
Bottle 15 Prepared Bottle: 632L\632S 2 mL Autosampler Vial (Batch 1124220) Volume: 1.00000 mL <== Derived from 02 ( 997 ml )  
Bottle 16 Prepared Bottle: GCXL\GCXS 2 mL Autosampler Vial (Batch 1124221) Volume: 1.00000 mL <== Derived from 02 ( 997 ml )  
Bottle 17 Prepared Bottle: OPXL\OPXS 2 mL Autosampler Vial (Batch 1124222) Volume: 1.00000 mL <== Derived from 02 ( 997 ml )  
Bottle 18 Prepared Bottle: 2 mL Autosampler Vial (Batch 1124282) Volume: 10.00000 mL <== Derived from 04 ( 973 ml )  
Bottle 19 Prepared Bottle: 2 mL Autosampler Vial (Batch 1124341) Volume: 1.00000 mL <== Derived from 12 ( 963 ml )

Method	Bottle	PrepSet	Preparation	QcGroup	Analytical
EPA 615	18	1124282	06/16/2024	1125942	06/27/2024
EPA 632	15	1124220	06/16/2024	1126471	06/28/2024
EPA 604.1	14	1124207	06/16/2024	1126285	06/19/2024
EPA 617	16	1124221	06/16/2024	1125089	06/26/2024
EPA 614	17	1124222	06/16/2024	1124944	06/19/2024
ASTM D7065-11	19	1124341	06/17/2024	1124948	06/19/2024
EPA 622	17	1124222	06/16/2024	1124934	06/19/2024

Email: Kilgore.ProjectManagement@spllabs.com



## PABA-N

Page 1 of 8

Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Project  
**1106948**

Printed: 07/15/2024

WG2303044

## RESULTS

### Sample Results

**2307673** L1745280-01

Received: 06/13/2024

Non-Potable Water

Collected by: Client  
Taken: 06/09/2024

SPL Kilgore  
23:00:00

PO: L1745280

		Prepared:	07/01/2024	16:36:00	Analyzed	07/01/2024	16:36:00	WJP		
	Parameter	Results	Units	RL	Flags	CAS	Bottle			
z	Check Limits	Completed								
ASTM D7065-11		Prepared:	1124341	06/18/2024	14:00:00	Analyzed	1124948	06/19/2024	22:19:00	DWL
	Parameter	Results	Units	RL	Flags	CAS	Bottle			
z	Nonylphenol	29.7	ug/L	29.7	SD	25154-52-3	19			
EPA 604.1		Prepared:	1124207	06/28/2024	10:09:00	Analyzed	1126285	06/19/2024	20:42:00	BRU
	Parameter	Results	Units	RL	Flags	CAS	Bottle			
z	Hexachlorophene	<2.48	ug/L	2.48		70-30-4	14			
EPA 614		Prepared:	1124222	06/16/2024	16:30:00	Analyzed	1124944	06/19/2024	22:00:00	KAP
	Parameter	Results	Units	RL	Flags	CAS	Bottle			
NELAC	Azinphos-methyl (Guthion)	<0.0496	ug/L	0.0496		86-50-0	17			
NELAC	Demeton	<0.0496	ug/L	0.0496		8065-48-3	17			
NELAC	Diazinon	<0.0496	ug/L	0.0496		333-41-5	17			
NELAC	Malathion	<0.0496	ug/L	0.0496		121-75-5	17			
NELAC	Parathion, ethyl	<0.0496	ug/L	0.0496		56-38-2	17			
NELAC	Parathion, methyl	<0.0496	ug/L	0.0496		298-00-0	17			
EPA 615		Prepared:	1124282	06/16/2024	16:45:00	Analyzed	1125942	06/27/2024	13:43:17	KAP
	Parameter	Results	Units	RL	Flags	CAS	Bottle			
NELAC	2,4 Dichlorophenoxyacetic acid	<0.487	ug/L	0.487		94-75-7	18			
NELAC	2,4,5-T	<0.487	ug/L	0.487		93-76-5	18			
NELAC	2,4,5-TP (Silvex)	<0.292	ug/L	0.292		93-72-1	18			
NELAC	Dalapon (dichloropropionic acid)	<1.75	ug/L	1.75		75-99-0	18			



Report Page 4 of 25

## PABA-N

Page 2 of 8

Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Project  
**1106948**

Printed: 07/15/2024

**2307673** L1745280-01

Received: 06/13/2024

Non-Potable Water

Collected by: Client  
Taken: 06/09/2024

SPL Kilgore  
23:00:00

PO: L1745280

EPA 615 Prepared: 1124282 06/16/2024 16:45:00 Analyzed 1125942 06/27/2024 13:43:17 KAP

Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC Dicamba	<0.487	ug/L	0.487		1918-00-9	18

EPA 617 Prepared: 1124221 06/16/2024 16:30:00 Analyzed 1125089 06/26/2024 05:06:35 KAP

Parameter	Results	Units	RL	Flags	CAS	Bottle
z Kelthane (Dicofol)	<0.0496	ug/L	0.0496		115-32-2	16
z Methoxychlor	<0.00992	ug/L	0.00992		72-43-5	16
z Mirex	<0.00992	ug/L	0.00992		2385-85-5	16

EPA 622 Prepared: 1124222 06/16/2024 16:30:00 Analyzed 1124934 06/19/2024 22:00:00 KAP

Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC Chlorpyrifos	<0.0496	ug/L	0.0496		2921-88-2	17

EPA 632 Prepared: 1124220 06/16/2024 14:30:00 Analyzed 1126471 06/28/2024 19:04:00 BRU

Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC Carbaryl (Sevin)	<2.48	ug/L	2.48		63-25-2	15
z Diuron	<0.0446	ug/L	0.0446		330-54-1	15

**2307685** L1745280-02

Received: 06/13/2024

Non-Potable Water

Collected by: Client  
Taken: 06/09/2024

Pace Analytical Dall  
23:05:00

PO: L1745280

Prepared: 07/01/2024 16:36:00 Analyzed 07/01/2024 16:36:00 WJP

Parameter	Results	Units	RL	Flags	CAS	Bottle
z Check Limits	Completed					

ASTM D7065-11 Prepared: 1124341 06/18/2024 14:00:00 Analyzed 1124948 06/19/2024 21:46:00 DWL

Parameter	Results	Units	RL	Flags	CAS	Bottle
-----------	---------	-------	----	-------	-----	--------



Report Page 5 of 25

## PABA-N

Page 3 of 8

Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Project  
**1106948**

Printed: 07/15/2024

**2307685** L1745280-02

Received: 06/13/2024

Non-Potable Water

Collected by: Client  
Taken: 06/09/2024

Pace Analytical Dall  
23:05:00

PO: L1745280

ASTM D7065-11 Prepared: 1124341 06/18/2024 14:00:00 Analyzed 1124948 06/19/2024 21:46:00 DWL

Parameter	Results	Units	RL	Flags	CAS	Bottle
Nonylphenol	<31.2	ug/L	31.2	SD	25154-52-3	19

EPA 604.1 Prepared: 1124207 06/28/2024 10:09:00 Analyzed 1126285 06/19/2024 21:15:00 BRU

Parameter	Results	Units	RL	Flags	CAS	Bottle
Hexachlorophene	<2.43	ug/L	2.43		70-30-4	14

EPA 614 Prepared: 1124222 06/16/2024 16:30:00 Analyzed 1124944 06/19/2024 22:27:00 KAP

Parameter	Results	Units	RL	Flags	CAS	Bottle
Azinphos-methyl (Guthion)	<0.0502	ug/L	0.0502		86-50-0	17
Demeton	<0.0502	ug/L	0.0502		8065-48-3	17
Diazinon	<0.0502	ug/L	0.0502		333-41-5	17
Malathion	<0.0502	ug/L	0.0502		121-75-5	17
Parathion, ethyl	<0.0502	ug/L	0.0502		56-38-2	17
Parathion, methyl	<0.050	ug/L	0.050		298-00-0	17

EPA 615 Prepared: 1124282 06/16/2024 16:45:00 Analyzed 1125942 06/27/2024 13:43:17 KAP

Parameter	Results	Units	RL	Flags	CAS	Bottle
2,4 Dichlorophenoxyacetic acid	<0.514	ug/L	0.514		94-75-7	18
2,4,5-T	<0.514	ug/L	0.514		93-76-5	18
2,4,5-TP (Silvex)	<0.300	ug/L	0.300		93-72-1	18
Dalapon (dichloropropionic acid)	<1.85	ug/L	1.85		75-99-0	18
Dicamba	<0.514	ug/L	0.514	D	1918-00-9	18

EPA 617 Prepared: 1124221 06/16/2024 16:30:00 Analyzed 1125089 06/26/2024 05:06:35 KAP

Parameter	Results	Units	RL	Flags	CAS	Bottle
Kelthane (Dicofol)	<0.0502	ug/L	0.0502	X	115-32-2	16

EPA 617 Prepared: 1124221 06/16/2024 16:30:00 Analyzed 1125089 06/26/2024 05:06:36 KAP

Parameter	Results	Units	RL	Flags	CAS	Bottle
Methoxychlor	<0.010	ug/L	0.010		72-43-5	16
Mirex	<0.010	ug/L	0.010		2385-85-5	16



Report Page 6 of 25

## PABA-N

Page 4 of 8

Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Project  
**1106948**

Printed: 07/15/2024

**2307685** L1745280-02

Received: 06/13/2024

Non-Potable Water

Collected by: Client  
Taken: 06/09/2024

Pace Analytical Dall  
23:05:00

PO: L1745280

EPA 622 Prepared: 1124222 06/16/2024 16:30:00 Analyzed 1124934 06/19/2024 22:27:00 KAP

Parameter	Results	Units	RL	Flags	CAS	Bottle
Chlorpyrifos	<0.050	ug/L	0.050		2921-88-2	17

EPA 632 Prepared: 1124220 06/16/2024 14:30:00 Analyzed 1126471 06/28/2024 20:02:00 BRU

Parameter	Results	Units	RL	Flags	CAS	Bottle
Carbaryl (Sevin)	<2.51	ug/L	2.51		63-25-2	15
Diuron	<0.0451	ug/L	0.0451		330-54-1	15

### Sample Preparation

**2307673** L1745280-01

Received: 06/13/2024

L1745280

06/09/2024

Prepared: 12/31/1899 11:39:04 Calculated 11:39:04 CAL

Environmental Fee (per Project) Verified

ASTM D7065-11 Prepared: 1124341 06/18/2024 14:00:00 Analyzed 1124948 06/19/2024 22:19:00 DWL

Nonyl Phenol Expansion Entered 19

EPA 604.1 Prepared: 1124207 06/28/2024 10:09:00 Analyzed 1126285 06/19/2024 20:42:00 BRU

Hexachlorophene Expansion Entered 70-30-4 14

EPA 604.1 Prepared: 1124207 06/28/2024 10:09:00 Analyzed 1124207 06/28/2024 10:09:00 MCC

Hexachlorophene Extraction 5/1008 ml 01



Report Page 7 of 25

**PABA-N**

Page 5 of 8

Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Project  
**1106948**

Printed: 07/15/2024

**2307673** L1745280-01

Received: 06/13/2024

L1745280

06/09/2024

EPA 608.3		Prepared:	1124221	06/16/2024	16:30:00	Analyzed	1124221	06/16/2024	16:30:00	MCC
Liquid-Liquid Extr. W/Hex Ex		1/1008	ml							02
EPA 608.3		Prepared:	1124222	06/16/2024	16:30:00	Analyzed	1124222	06/16/2024	16:30:00	MCC
Solvent Extraction		1/1008	ml							02
EPA 614		Prepared:	1124222	06/16/2024	16:30:00	Analyzed	1124944	06/19/2024	22:00:00	KAP
z	Permit Organophos. Pesticides	Entered								17
EPA 615		Prepared:	1124282	06/16/2024	16:45:00	Analyzed	1124282	06/16/2024	16:45:00	MCC
NELAC	ESRL Extract w/ 1 ml of 515 Spik	10/1027	ml							04
EPA 615		Prepared:	1124282	06/16/2024	16:45:00	Analyzed	1125942	06/27/2024	13:43:17	KAP
z	Herbicides 40 CFR 122 Table V	Entered								18
EPA 617		Prepared:	1124221	06/16/2024	16:30:00	Analyzed	1125089	06/26/2024	05:06:35	KAP
z	Dicofol/Methoxychlor/Mirex	Entered								16
EPA 622		Prepared:	1124222	06/16/2024	16:30:00	Analyzed	1124934	06/19/2024	22:00:00	KAP
NELAC	For use with EXP !CPP only	Entered								17
EPA 625.1		Prepared:	1124341	06/18/2024	14:00:00	Analyzed	1124341	06/18/2024	14:00:00	MCC
Nonylphenol Liq-Liq Extract		1/1010	ml							12





**PABA-N**

Page 6 of 8

Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Project  
**1106948**

Printed: 07/15/2024

**2307673** L1745280-01

Received: 06/13/2024

L1745280

06/09/2024

EPA 632 Prepared: 1124220 06/16/2024 14:30:00 Analyzed 1124220 06/16/2024 14:30:00 MCC

Liquid-Liquid Extr. W/Hex Ex 1/1008 ml 02

EPA 632 Prepared: 1124220 06/16/2024 14:30:00 Analyzed 1126471 06/28/2024 19:04:00 BRU

NELAC Carbaryl/Diuron Entered 15

**2307685** L1745280-02

Received: 06/13/2024

L1745280

06/09/2024

ASTM D7065-11 Prepared: 1124341 06/18/2024 14:00:00 Analyzed 1124948 06/19/2024 21:46:00 DWL

z Nonyl Phenol Expansion Entered 19

EPA 604.1 Prepared: 1124207 06/28/2024 10:09:00 Analyzed 1126285 06/19/2024 21:15:00 BRU

Hexachlorophene Expansion Entered 70-30-4 14

EPA 604.1 Prepared: 1124207 06/28/2024 10:09:00 Analyzed 1124207 06/28/2024 10:09:00 MCC

Hexachlorophene Extraction 5/1029 ml 01

EPA 608.3 Prepared: 1124221 06/16/2024 16:30:00 Analyzed 1124221 06/16/2024 16:30:00 MCC

Liquid-Liquid Extr. W/Hex Ex 1/997 ml 02

EPA 608.3 Prepared: 1124222 06/16/2024 16:30:00 Analyzed 1124222 06/16/2024 16:30:00 MCC

Solvent Extraction 1/997 ml 02



Report Page 9 of 25

## PABA-N

Page 7 of 8

Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Project  
**1106948**

Printed: 07/15/2024

2307685 L1745280-02

Received: 06/13/2024

L1745280

06/09/2024

EPA 614		Prepared: 1124222	06/16/2024	16:30:00	Analyzed 1124944	06/19/2024	22:27:00	KAP
z	Permit Organophos. Pesticides	Entered						17
EPA 615		Prepared: 1124282	06/16/2024	16:45:00	Analyzed 1124282	06/16/2024	16:45:00	MCC
NELAC	ESRL Extract w/ 1 ml of 515 Spik	10/973	ml					04
EPA 615		Prepared: 1124282	06/16/2024	16:45:00	Analyzed 1125942	06/27/2024	13:43:17	KAP
z	Herbicides 40 CFR 122 Table V	Entered						18
EPA 617		Prepared: 1124221	06/16/2024	16:30:00	Analyzed 1125089	06/26/2024	05:06:35	KAP
z	Dicofol/Methoxychlor/Mirex	Entered						16
EPA 622		Prepared: 1124222	06/16/2024	16:30:00	Analyzed 1124934	06/19/2024	22:27:00	KAP
NELAC	For use with EXP !CPP only	Entered						17
EPA 625.1		Prepared: 1124341	06/18/2024	14:00:00	Analyzed 1124341	06/18/2024	14:00:00	MCC
	Nonylphenol Liq-Liq Extract	1/963	ml					12
EPA 632		Prepared: 1124220	06/16/2024	14:30:00	Analyzed 1124220	06/16/2024	14:30:00	MCC
	Liquid-Liquid Extr. W/Hex Ex	1/997	ml					02
EPA 632		Prepared: 1124220	06/16/2024	14:30:00	Analyzed 1126471	06/28/2024	20:02:00	BRU
NELAC	Carbaryl/Diuron	Entered						15



## PABA-N

Page 8 of 8

Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Project  
**1106948**

Printed: 07/15/2024

### Qualifiers:

D - Duplicate RPD was higher than expected      X - Standard reads higher than desired.  
S - Standard reads lower than desired

We report results on an As Received (or Wet) basis unless marked Dry Weight.

Unless otherwise noted, testing was performed at SPL, Inc.- Kilgore laboratory which holds International, Federal, and state accreditations. Please see our Websites for details.

(N)ELAC - Covered in our NELAC scope of accreditation

z -- Not covered by our NELAC scope of accreditation

These analytical results relate to the sample tested. This report may NOT be reproduced EXCEPT in FULL without written approval of SPL Kilgore. Unless otherwise specified, these test results meet the requirements of NELAC.

RL is the Reporting Limit (sample specific quantitation limit) and is at or above the Method Detection Limit (MDL). CAS is Chemical Abstract Service number. RL is our Reporting Limit, or Minimum Quantitation Level. The RL takes into account the Instrument Detection Limit (IDL), Method Detection Limit (MDL), and Practical Quantitation Limit (PQL), and any dilutions and/or concentrations performed during sample preparation (EQL). Our analytical result must be above this RL before we report a value in the 'Results' column of our report (without a 'J' flag). Otherwise, we report ND (Not Detected above RL), because the result is "<" (less than) the number in the RL column. MAL is Minimum Analytical Level and is typically from regulatory agencies. Unless we report a result in the result column, or interferences prevent it, we work to have our RL at or below the MAL.



Bill Peery, MS, VP Technical Services



# QUALITY CONTROL



Page 1 of 7

## PABA-N

Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Project  
1106948

Printed 07/15/2024

Analytical Set 1124934

EPA 622

### Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Chlorpyrifos	1124222	ND	0.0904	50.0	ug/L	126470716

### CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Chlorpyrifos	1040	1000	ug/L	104	48.0 - 150	126470714
Chlorpyrifos	1120	1000	ug/L	112	48.0 - 150	126470715
Chlorpyrifos	1220	1000	ug/L	122	48.0 - 150	126470721
Chlorpyrifos	1210	1000	ug/L	121	48.0 - 150	126470724

### LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Chlorpyrifos	1124222	705	666	1000	0.100 - 128	70.5	66.6	ug/L	5.69	30.0

### Surrogate

Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
Tributylphosphate		CCV	1030	1000	ug/L	103	0.100 - 115	126470714
Tributylphosphate		CCV	1110	1000	ug/L	111	0.100 - 115	126470715
Tributylphosphate		CCV	1180	1000	ug/L	118 *	0.100 - 115	126470721
Tributylphosphate		CCV	1170	1000	ug/L	117 *	0.100 - 115	126470724
Triphenylphosphate		CCV	1030	1000	ug/L	103	0.100 - 115	126470714
Triphenylphosphate		CCV	1190	1000	ug/L	119 *	0.100 - 115	126470715
Triphenylphosphate		CCV	1270	1000	ug/L	127 *	0.100 - 115	126470721
Triphenylphosphate		CCV	1350	1000	ug/L	135 *	0.100 - 115	126470724
Tributylphosphate	1124222	Blank	537	1000	ug/L	53.7	0.100 - 115	126470716
Tributylphosphate	1124222	LCS	723	1000	ug/L	72.3	0.100 - 115	126470717
Tributylphosphate	1124222	LCS Dup	693	1000	ug/L	69.3	0.100 - 115	126470718
Triphenylphosphate	1124222	Blank	547	1000	ug/L	54.7	0.100 - 115	126470716
Triphenylphosphate	1124222	LCS	708	1000	ug/L	70.8	0.100 - 115	126470717
Triphenylphosphate	1124222	LCS Dup	690	1000	ug/L	69.0	0.100 - 115	126470718

Analytical Set 1124944

EPA 614

### Blank

Parameter	PrepSet	Reading	MDL	MQL	Units	File
Azinphos-methyl (Guthion)	1124222	ND	41.4	50.0	ug/L	126470887
Demeton	1124222	ND	31.9	50.0	ug/L	126470887
Diazinon	1124222	ND	19.7	50.0	ug/L	126470887
Malathion	1124222	ND	24.8	50.0	ug/L	126470887
Parathion, ethyl	1124222	ND	23.9	50.0	ug/L	126470887
Parathion, methyl	1124222	ND	27.4	50.0	ug/L	126470887

### CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Azinphos-methyl (Guthion)	1060	1000	ug/L	106	37.5 - 164	126470885
Azinphos-methyl (Guthion)	1040	1000	ug/L	104	37.5 - 164	126470886

Email: [Kilgore.ProjectManagement@spllabs.com](mailto:Kilgore.ProjectManagement@spllabs.com)



Report Page 12 of 25

# QUALITY CONTROL



Page 2 of 7

## PABA-N

Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Project  
1106948

Printed 07/15/2024

### CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Azinphos-methyl (Guthion)	980	1000	ug/L	98.0	37.5 - 164	126470892
Azinphos-methyl (Guthion)	971	1000	ug/L	97.1	37.5 - 164	126470895
Demeton	1020	1000	ug/L	102	58.6 - 150	126470885
Demeton	1130	1000	ug/L	113	58.6 - 150	126470886
Demeton	1160	1000	ug/L	116	58.6 - 150	126470892
Demeton	1120	1000	ug/L	112	58.6 - 150	126470895
Diazinon	1030	1000	ug/L	103	65.4 - 138	126470885
Diazinon	1130	1000	ug/L	113	65.4 - 138	126470886
Diazinon	1310	1000	ug/L	131	65.4 - 138	126470892
Diazinon	1270	1000	ug/L	127	65.4 - 138	126470895
Malathion	1040	1000	ug/L	104	49.5 - 160	126470885
Malathion	1170	1000	ug/L	117	49.5 - 160	126470886
Malathion	1120	1000	ug/L	112	49.5 - 160	126470892
Malathion	1090	1000	ug/L	109	49.5 - 160	126470895
Parathion, ethyl	1030	1000	ug/L	103	56.0 - 142	126470885
Parathion, ethyl	1080	1000	ug/L	108	56.0 - 142	126470886
Parathion, ethyl	956	1000	ug/L	95.6	56.0 - 142	126470892
Parathion, ethyl	912	1000	ug/L	91.2	56.0 - 142	126470895
Parathion, methyl	1050	1000	ug/L	105	12.6 - 194	126470885
Parathion, methyl	1140	1000	ug/L	114	12.6 - 194	126470886
Parathion, methyl	1070	1000	ug/L	107	12.6 - 194	126470892
Parathion, methyl	1020	1000	ug/L	102	12.6 - 194	126470895

### LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Azinphos-methyl (Guthion)	1124222	609	627	1000	0.100 - 155	60.9	62.7	ug/L	2.91	30.0
Demeton	1124222	571	554	1000	0.100 - 109	57.1	55.4	ug/L	3.02	30.0
Diazinon	1124222	544	523	1000	0.100 - 125	54.4	52.3	ug/L	3.94	30.0
Malathion	1124222	667	634	1000	0.100 - 130	66.7	63.4	ug/L	5.07	30.0
Parathion, ethyl	1124222	733	688	1000	0.100 - 122	73.3	68.8	ug/L	6.33	30.0
Parathion, methyl	1124222	367	336	1000	0.100 - 131	36.7	33.6	ug/L	8.82	30.0

### Surrogate

Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
Tributylphosphate		CCV	1030	2000	ug/L	51.5	0.100 - 106	126470885
Tributylphosphate		CCV	1110	2000	ug/L	55.5	0.100 - 106	126470886
Tributylphosphate		CCV	1180	2000	ug/L	59.0	0.100 - 106	126470892
Tributylphosphate		CCV	1170	2000	ug/L	58.5	0.100 - 106	126470895
Triphenylphosphate		CCV	1030	2000	ug/L	51.5	0.100 - 172	126470885
Triphenylphosphate		CCV	1190	2000	ug/L	59.5	0.100 - 172	126470886
Triphenylphosphate		CCV	1270	2000	ug/L	63.5	0.100 - 172	126470892
Triphenylphosphate		CCV	1350	2000	ug/L	67.5	0.100 - 172	126470895
Tributylphosphate	1124222	Blank	537	2000	ug/L	26.8	0.100 - 106	126470887
Tributylphosphate	1124222	LCS	723	2000	ug/L	36.2	0.100 - 106	126470888
Tributylphosphate	1124222	LCS Dup	693	2000	ug/L	34.6	0.100 - 106	126470889

Email: [Kilgore.ProjectManagement@spllabs.com](mailto:Kilgore.ProjectManagement@spllabs.com)



Report Page 13 of 25



# QUALITY CONTROL



Page 3 of 7

## PABA-N

Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Project  
1106948

Printed 07/15/2024

Surrogate								
Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
Triphenylphosphate	1124222	Blank	547	2000	ug/L	27.4	0.100 - 172	126470887
Triphenylphosphate	1124222	LCS	708	2000	ug/L	35.4	0.100 - 172	126470888
Triphenylphosphate	1124222	LCS Dup	690	2000	ug/L	34.5	0.100 - 172	126470889
Tributylphosphate	2307673	Unknown	0.0075	1.98	ug/L	0.379	0.100 - 106	126470890
Triphenylphosphate	2307673	Unknown	0.382	1.98	ug/L	19.3	0.100 - 172	126470890
Tributylphosphate	2307685	Unknown	0.689	2.01	ug/L	34.3	0.100 - 106	126470891
Triphenylphosphate	2307685	Unknown	0.620	2.01	ug/L	30.8	0.100 - 172	126470891

Analytical Set

1124948

ASTM D7065-11

Blank						
Parameter	PrepSet	Reading	MDL	MQL	Units	File
Nonylphenol	1124341	ND	5.00	30.0	ug/L	126470972

CCV						
Parameter	Reading	Known	Units	Recover%	Limits%	File
Nonylphenol	150000	150000	ug/L	99.8	70.0 - 130	126470971
Nonylphenol	164000	150000	ug/L	110	70.0 - 130	126470983

IS Areas								
Parameter	Sample	Type	Reading	CCVISM	Low	High	File	PrepSet
Acenaphthene-d10-ISTD	624841	CCV	669900	669900	335000	1005000	126470971	624841
Acenaphthene-d10-ISTD	624841	CCV	645200	669900	335000	1005000	126470983	624841
Phenanthrene-d10-ISTD	624841	CCV	892600	892600	446300	1339000	126470971	624841
Phenanthrene-d10-ISTD	624841	CCV	934700	892600	446300	1339000	126470983	624841
Acenaphthene-d10-ISTD	1124341	Blank	1550000	669900	335000	1005000	*	126470972
Acenaphthene-d10-ISTD	1124341	LCS	1124000	669900	335000	1005000	*	126470973
Acenaphthene-d10-ISTD	1124341	LCS Dup	1144000	669900	335000	1005000	*	126470974
Phenanthrene-d10-ISTD	1124341	Blank	1577000	892600	446300	1339000	*	126470972
Phenanthrene-d10-ISTD	1124341	LCS	1107000	892600	446300	1339000		126470973
Phenanthrene-d10-ISTD	1124341	LCS Dup	1139000	892600	446300	1339000		126470974
Acenaphthene-d10-ISTD	2307673	Unknown	746800	669900	335000	1005000		126470982
Phenanthrene-d10-ISTD	2307673	Unknown	952100	892600	446300	1339000		126470982
Acenaphthene-d10-ISTD	2307685	Unknown	827200	669900	335000	1005000		126470981
Phenanthrene-d10-ISTD	2307685	Unknown	739700	892600	446300	1339000		126470981

IS RetTime								
Parameter	Sample	Type	Reading	CCVISM	Low	High	File	PrepSet
Acenaphthene-d10-ISTD	624841	CCV	7.217	7.217	7.157	7.277	126470971	624841
Acenaphthene-d10-ISTD	624841	CCV	7.211	7.217	7.157	7.277	126470983	624841
Phenanthrene-d10-ISTD	624841	CCV	8.450	8.450	8.390	8.510	126470971	624841
Phenanthrene-d10-ISTD	624841	CCV	8.450	8.450	8.390	8.510	126470983	624841
Acenaphthene-d10-ISTD	1124341	Blank	7.211	7.217	7.157	7.277	126470972	1124341
Acenaphthene-d10-ISTD	1124341	LCS	7.211	7.217	7.157	7.277	126470973	1124341
Acenaphthene-d10-ISTD	1124341	LCS Dup	7.211	7.217	7.157	7.277	126470974	1124341
Phenanthrene-d10-ISTD	1124341	Blank	8.450	8.450	8.390	8.510	126470972	1124341
Phenanthrene-d10-ISTD	1124341	LCS	8.455	8.450	8.390	8.510	126470973	1124341

Email: [Kilgore.ProjectManagement@spllabs.com](mailto:Kilgore.ProjectManagement@spllabs.com)



Report Page 14 of 25

# QUALITY CONTROL



Page 4 of 7

## PABA-N

Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Project  
1106948

Printed 07/15/2024

### IS RetTime

Parameter	Sample	Type	Reading	CCVISM	Low	High	File	PrepSet
Phenanthrene-d10-ISTD	1124341	LCS Dup	8.456	8.450	8.390	8.510	126470974	1124341
Acenaphthene-d10-ISTD	2307673	Unknown	7.211	7.217	7.157	7.277	126470982	1124341
Phenanthrene-d10-ISTD	2307673	Unknown	8.462	8.450	8.390	8.510	126470982	1124341
Acenaphthene-d10-ISTD	2307685	Unknown	7.205	7.217	7.157	7.277	126470981	1124341
Phenanthrene-d10-ISTD	2307685	Unknown	8.450	8.450	8.390	8.510	126470981	1124341

### LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Nonylphenol	1124341	49.1	72.7	150	56.0 - 112	32.7 *	48.5 *	ug/L	38.9 *	30.0

### Surrogate

Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
4-Nonylphenol-SURR	624841	CCV	28300	25000	ug/L	113	50.0 - 130	126470971
4-Nonylphenol-SURR	624841	CCV	29600	25000	ug/L	118	50.0 - 130	126470983
4-Nonylphenol-SURR	1124341	Blank	14700	25000	ug/L	58.8	50.0 - 130	126470972
4-Nonylphenol-SURR	1124341	LCS	16200	25000	ug/L	64.8	50.0 - 130	126470973
4-Nonylphenol-SURR	1124341	LCS Dup	24000	25000	ug/L	96.0	50.0 - 130	126470974
4-Nonylphenol-SURR	2307673	Unknown	13.9	24.8	ug/L	56.0	50.0 - 130	126470982
4-Nonylphenol-SURR	2307685	Unknown	21.6	26.0	ug/L	83.1	50.0 - 130	126470981

Analytical Set

1125089

EPA 617

### Blank

Parameter	PrepSet	Reading	MDL	MDL	Units	File
Kelthane (Dicofol)	1124221	ND	3.52	5.00	ug/L	126474708
Methoxychlor	1124221	ND	0.897	1.00	ug/L	126474708
Mirex	1124221	ND	0.905	1.00	ug/L	126474708

### CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Kelthane (Dicofol)	103	100	ug/L	103	70.0 - 130	126474707
Kelthane (Dicofol)	82.1	100	ug/L	82.1	70.0 - 130	126474713
Methoxychlor	52.4	50.0	ug/L	105	70.0 - 130	126474707
Methoxychlor	43.6	50.0	ug/L	87.1	70.0 - 130	126474713
Mirex	54.2	50.0	ug/L	108	70.0 - 130	126474707
Mirex	46.2	50.0	ug/L	92.4	70.0 - 130	126474713

### LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Kelthane (Dicofol)	1124221	167	141	100	0.100 - 137	167 *	141 *	ug/L	16.9	30.0
Methoxychlor	1124221	120	98.5	100	21.5 - 151	120	98.5	ug/L	19.7	30.0
Mirex	1124221	84.6	87.0	100	11.6 - 140	84.6	87.0	ug/L	2.80	30.0

### Surrogate

Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
Decachlorobiphenyl	625249	CCV	45.3	100	ug/L	45.3	10.0 - 150	126474707
Decachlorobiphenyl	625249	CCV	45.4	100	ug/L	45.4	10.0 - 150	126474713

Email: Kilgore.ProjectManagement@spllabs.com



Report Page 15 of 25

# QUALITY CONTROL



Page 5 of 7

## PABA-N

Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Project  
1106948

Printed 07/15/2024

Surrogate								
Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
Tetrachloro-m-Xylene (Surr)	625249	CCV	45.3	100	ug/L	45.3	10.0 - 150	126474707
Tetrachloro-m-Xylene (Surr)	625249	CCV	43.7	100	ug/L	43.7	10.0 - 150	126474713
Decachlorobiphenyl	1124221	Blank	57.1	100	ug/L	57.1	10.0 - 150	126474708
Decachlorobiphenyl	1124221	LCS	50.3	100	ug/L	50.3	10.0 - 150	126474709
Decachlorobiphenyl	1124221	LCS Dup	70.4	100	ug/L	70.4	10.0 - 150	126474710
Tetrachloro-m-Xylene (Surr)	1124221	Blank	54.4	100	ug/L	54.4	10.0 - 150	126474708
Tetrachloro-m-Xylene (Surr)	1124221	LCS	61.4	100	ug/L	61.4	10.0 - 150	126474709
Tetrachloro-m-Xylene (Surr)	1124221	LCS Dup	58.0	100	ug/L	58.0	10.0 - 150	126474710
Decachlorobiphenyl	2307673	Unknown	0.0106	0.0992	ug/L	10.7	10.0 - 150	126474711
Tetrachloro-m-Xylene (Surr)	2307673	Unknown	0.0214	0.0992	ug/L	21.6	10.0 - 150	126474711
Decachlorobiphenyl	2307685	Unknown	0.0352	0.100	ug/L	35.2	10.0 - 150	126474712
Tetrachloro-m-Xylene (Surr)	2307685	Unknown	0.0587	0.100	ug/L	58.7	10.0 - 150	126474712

Analytical Set

1125628

EPA 632

Blank										
<i>Parameter</i>	<i>PrepSet</i>	<i>Reading</i>	<i>MDL</i>	<i>MQL</i>	<i>Units</i>	<i>File</i>				
Carbaryl (Sevin)	1124220	ND	66.1	2500	ug/L	126488364				
Diuron	1124220	260	44.4	45.0	ug/L	126488364				
LCS Dup										
<i>Parameter</i>	<i>PrepSet</i>	<i>LCS</i>	<i>LCSD</i>	<i>Known</i>	<i>Limits%</i>	<i>LCS%</i>	<i>LCSD%</i>	<i>Units</i>	<i>RPD</i>	<i>Limit%</i>
Carbaryl (Sevin)	1124220	906	762	1000	17.1 - 131	90.6	76.2	ug/L	17.3	30.0
Diuron	1124220	151	43.0	1000	0.100 - 138	15.1	4.30	ug/L	111 *	30.0

Analytical Set

1125942

EPA 615

Blank						
Parameter	PrepSet	Reading	MDL	MQL	Units	File
2,4 Dichlorophenoxyacetic acid	1124282	0.217	0.159	0.500	ug/L	126496035
2,4,5-T	1124282	ND	0.00274	0.500	ug/L	126496035
2,4,5-TP (Silvex)	1124282	ND	0.0893	0.300	ug/L	126496035
Dalapon (dichloropropionic acid)	1124282	0.176	0.0134	1.80	ug/L	126496035
Dicamba	1124282	0.129	0.0643	0.500	ug/L	126496035
CCV						
Parameter	Reading	Known	Units	Recover%	Limits%	File
2,4 Dichlorophenoxyacetic acid	152	150	ug/L	102	80.0 - 115	126496034
2,4 Dichlorophenoxyacetic acid	140	150	ug/L	93.1	80.0 - 115	126496040
2,4,5-T	147	150	ug/L	98.0	80.0 - 115	126496034
2,4,5-T	136	150	ug/L	90.8	80.0 - 115	126496040
2,4,5-TP (Silvex)	155	150	ug/L	104	80.0 - 115	126496034
2,4,5-TP (Silvex)	145	150	ug/L	96.6	80.0 - 115	126496040
Dalapon (dichloropropionic acid)	153	150	ug/L	102	80.0 - 115	126496034
Dalapon (dichloropropionic acid)	149	150	ug/L	99.5	80.0 - 115	126496040
Dicamba	153	150	ug/L	102	80.0 - 115	126496034
Dicamba	146	150	ug/L	97.4	80.0 - 115	126496040

Email: [Kilgore.ProjectManagement@spllabs.com](mailto:Kilgore.ProjectManagement@spllabs.com)



Report Page 16 of 25

# QUALITY CONTROL



Page 6 of 7

## PABA-N

Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Project  
1106948

Printed 07/15/2024

### LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
2,4 Dichlorophenoxyacetic acid	1124282	0.691	1.02	1.00	0.100 - 319	69.1	102	ug/L	38.5 *	30.0
2,4,5-T	1124282	1.12	1.56	1.00	2.63 - 202	112	156	ug/L	32.8 *	30.0
2,4,5-TP (Silvex)	1124282	0.690	1.05	1.00	0.100 - 244	69.0	105	ug/L	41.4 *	30.0
Dalapon (dichloropropionic acid)	1124282	0.229	0.384	1.00	1.00 - 289	22.9	38.4	ug/L	50.6 *	30.0
Dicamba	1124282	0.720	1.05	1.00	8.32 - 176	72.0	105	ug/L	37.3 *	30.0

### Surrogate

Parameter	Sample	Type	Reading	Known	Units	Recover%	Limits%	File
2,4-Dichlorophenylacetic Acid		CCV	154	200	ug/L	77.0	0.100 - 313	126496034
2,4-Dichlorophenylacetic Acid		CCV	151	200	ug/L	75.5	0.100 - 313	126496040
2,4-Dichlorophenylacetic Acid	1124282	Blank	143	200	ug/L	71.5	0.100 - 313	126496035
2,4-Dichlorophenylacetic Acid	1124282	LCS	103	200	ug/L	51.5	0.100 - 313	126496036
2,4-Dichlorophenylacetic Acid	1124282	LCS Dup	148	200	ug/L	74.0	0.100 - 313	126496037
2,4-Dichlorophenylacetic Acid	2307673	Unknown	1.91	1.95	ug/L	97.9	0.100 - 313	126496038
2,4-Dichlorophenylacetic Acid	2307685	Unknown	1.83	2.06	ug/L	88.8	0.100 - 313	126496039

Analytical Set

1126285

EPA 604.1

### Blank

Parameter	PrepSet	Reading	MDL	MDL	Units	File
Hexachlorophene	1124207	ND	0.890	2.50	ug/L	126502957

### CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Hexachlorophene	4580	5000	ug/L	91.6	70.0 - 130	126502956
Hexachlorophene	4890	5000	ug/L	97.8	70.0 - 130	126502963
Hexachlorophene	5040	5000	ug/L	101	70.0 - 130	126502965
Hexachlorophene	5060	5000	ug/L	101	70.0 - 130	126502968
Hexachlorophene	5170	5000	ug/L	103	70.0 - 130	126502971

### LCS Dup

Parameter	PrepSet	LCS	LCSD	Known	Limits%	LCS%	LCSD%	Units	RPD	Limit%
Hexachlorophene	1124207	50.5	54.4	50.0	25.5 - 145	101	109	ug/L	7.62	50.0

Analytical Set

1126471

EPA 632

### CCV

Parameter	Reading	Known	Units	Recover%	Limits%	File
Carbaryl (Sevin)	1180	1000	ug/L	118	70.0 - 130	126507049
Carbaryl (Sevin)	1180	1000	ug/L	118	70.0 - 130	126507052
Carbaryl (Sevin)	1210	1000	ug/L	121	70.0 - 130	126507056
Diuron	1250	1000	ug/L	125	70.0 - 130	126507049
Diuron	1260	1000	ug/L	126	70.0 - 130	126507052
Diuron	1270	1000	ug/L	127	70.0 - 130	126507056

\* Out RPD is Relative Percent Difference:  $\text{abs}(r_1 - r_2) / \text{mean}(r_1, r_2) * 100\%$

Recover% is Recovery Percent:  $\text{result} / \text{known} * 100\%$

Email: [Kilgore.ProjectManagement@spllabs.com](mailto:Kilgore.ProjectManagement@spllabs.com)



Report Page 17 of 25

# QUALITY CONTROL



## PABA-N

Pace Analytical Dallas  
Jeremy Watkins  
400 West Bethany Drive  
Suite 190  
Allen, TX 75013

Page 7 of 7

*Project*  
**1106948**

Printed 07/15/2024

Blank - Method Blank (reagent water or other blank matrices that contains all reagents except standard(s) and is processed simultaneously with and under the same conditions as samples; carried through preparation and analytical procedures exactly like a sample; monitors); CCV - Continuing Calibration Verification (same standard used to prepare the curve; typically a mid-range concentration; verifies the continued validity of the calibration curve); LCS Dup - Laboratory Control Sample Duplicate (replicate LCS; analyzed when there is insufficient sample for duplicate or MSD; quantifies accuracy and precision.); Surrogate - Surrogate (mimics the analyte of interest but is unlikely to be found in environmental samples; added to analytical samples for QC purposes. \*\*ANSI/ASQC E4 1994 Ref #4 TRADE QA Resources Guide.); IS Areas - Internal Standard Area (The area of the internal standard relative to a check standard. Internal Standard is a known concentration of an analyte(s) that is not a sample component or standard that is added to the sample and standard and is used to measure the relative responses of other analytes in the same sample or standard.); IS RetTime - Internal Standard Retention Time (the time the internal standard comes off the column. Internal Standard is a known concentration of an analyte(s) that is not a sample component or standard that is added to the sample and standard and is used to measure the relative responses of other analytes in the same sample or standard.)

Email: [Kilgore.ProjectManagement@spllabs.com](mailto:Kilgore.ProjectManagement@spllabs.com)



Report Page 18 of 25



**DOMESTIC WASTEWATER PERMIT APPLICATION**

**TPDES PERMIT NO. 10137-033**

**ATTACHMENT 9**

**SMC WHOLE EFFLUENT TOXICITY (WET) TABLES**

# **REGULATORY AGENCY TABLES**

## **Appendix E**

Table 2 (Sheet 1 of 2)  
BIOMONITORING REPORT

*Daphnia pulex* SURVIVAL TEST

Permittee: San Antonio Water System - Dos Rios WRC  
 Permit No.: WQ0010137033  
 Outfall No.: 001

Dates and times  
 Composites were collected: FROM: 7/19/2020 @07:00 TO: 7/20/2020 @ 07:00

Test Initiation: Time: 16:48 Date: 7/21/2020

Dilution Water Used: ☐ Receiving Water ☒ Synthetic Dilution Water

DATA TABLE FOR SURVIVAL OF *Daphnia pulex*

TIME	REPLICATE	EFFLUENT CONC. (%)	
		0%	100 %
24 HOUR	A	100	100
	B	100	100
	C	100	100
	D	100	100
	E	100	100
MEAN		100	100

Is the mean survival at 24 hours in the 100% effluent greater than 50%?

CRITICAL DILUTION ( 100 % ) : X YES NO

If yes is checked enter a '0' for Parameter TIE3D, otherwise enter '1'.

Enter the percent effluent corresponding to LC50 below:

24 Hour LC50 (*Daphnia pulex*) = >100 % Effluent

95 % Confidence Interval : \*Q

Method of LC50 Calculation: Visual Inspection

Q\* refers to a value that is not calculable

Table 2 (Sheet 2 of 2 )  
BIOMONITORING REPORT

*Pimephales promelas* SURVIVAL TEST

Permittee: San Antonio Water System - Dos Rios WRC  
 Permit No.: WQ0010137033  
 Outfall No.: 001

Dates and times Composites were collected: FROM: 7/19/2020 @07:00 TO: 7/20/2020 @ 07:00

Test Initiation: Time: 17:25 Date: 7/21/2020

Dilution Water Used: ☐ Receiving Water ☒ Synthetic Dilution Water

DATA TABLE FOR SURVIVAL OF *Pimephales promelas*

TIME	REPLICATE	EFFLUENT CONC. (%)	
		0%	100 %
24 HOUR	A	100	100
	B	100	100
	C	100	100
	D	100	100
	E	100	100
MEAN		100	100

Is the mean survival at 24 hours in the 100% effluent greater than 50%?

CRITICAL DILUTION ( 100 % ) : X YES NO

If yes is checked enter a '0' for Parameter TIE6C, otherwise enter '1'.

Enter the percent effluent corresponding to LC50 below:

24 Hour LC50 (*Pimephales promelas*) = >100 % Effluent

95 % Confidence Interval : \*Q

Method of LC50 Calculation: Visual Inspection

Q\* refers to a value that is not calculable

# **REGULATORY AGENCY TABLES**

## **Appendix E**



## Table 1 (Sheet 1 of 4 )

## BIOMONITORING REPORT

*Ceriodaphnia dubia* SURVIVAL AND REPRODUCTION TESTPermittee: San Antonio Water System - Dos Rios WRCPermit No.: WQ0010137033Outfall No.: 001

		Date/Time		Date/Time
Dates and times	FROM:	<u>7/19/2020 @07:00</u>	TO:	<u>7/20/2020@ 07:00</u>
Composites were collected:	FROM:	<u>7/21/2020 @07:00</u>	TO:	<u>7/22/2020@ 07:00</u>
	FROM:	<u>7/23/2020 @07:00</u>	TO:	<u>7/24/2020@ 07:00</u>

Test Initiation: Time: 11:34 Date: 7/21/2020Dilution Water Used: ☐ Receiving Water☒ Synthetic Dilution WaterNUMBER OF YOUNG PRODUCED PER ADULT AT TEST TERMINATION

REPLICATE	EFFLUENT CONCENTRATION (%)					
	0%	30 %	40 %	53 %	71 %	95
A	24	33	20	28	29	27
B	27	30	22	33	17	19
C	34	27	20	31	19	24
D	27	27	33	23	21	21
E	33	27	35	28	30	27
F	34	31	35	24	31	30
G	33	24	25	31	25	30
H	30	27	24	32	30	33
I	25	35	34	24	28	31
J	24	27	28	35	33	35
Surv. MEAN	29.1	28.8	27.6	28.9	26.3	27.7
Total MEAN	29.1	28.8	27.6	28.9	26.3	27.7
CV % <sup>1</sup>	14.3	11.6	22.4	14.4	20.9	18.5
PMSD	Acceptable Range 47 or Less					17.2 %

<sup>1</sup> Coefficient of Variation = (standard deviation/mean) x 100) Calculations are based on young of the surviving females. Males are designated (M), and dead females are designated (D) along with the number of neonates released prior to death. (E) anomalous value, spilled cup, or technician error.

Table 1 (Sheet 2 of 4 )

## BIOMONITORING REPORT

*Ceriodaphnia dubia* SURVIVAL AND REPRODUCTION TESTPermittee: San Antonio Water System - Dos Rios WRCPermit No.: WQ0010137033Outfall No.: 001PERCENT SURVIVAL

Time of Reading	EFFLUENT CONCENTRATION (%)					
	0%	30 %	40 %	53 %	71 %	95 %
24 HOURS	100.0	100.0	100.0	100.0	100.0	100.0
48 HOURS	100.0	100.0	100.0	100.0	100.0	100.0
7-DAY	100.0	100.0	100.0	100.0	100.0	100.0

## 1. DUNNETT'S PROCEDURE OR STEEL'S MANY-ONE RANK TEST OR WILCOXON RANK SUM TEST

(with Bonferroni adjustment as appropriate for Sub-Lethality)

Is the mean number of young produced per adult significantly less ( $p=0.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant non-lethal effects?CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ ☒ NOIf you report NO, enter a '0' on the DMR form for Parameter **TWP3B**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Ceriodaphnia* Sub-Lethal Pass/Fail.

## 2. FISHER'S EXACT TEST (as appropriate for Lethality)

Is the mean survival at test end significantly less ( $p=0.05$ ) than the control's survival for the % effluent corresponding to lethality?CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ ☒ NOIf you report NO, enter a '0' on the DMR form for Parameter **TLP3B**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Ceriodaphnia* Lethal Pass/Fail.

## 3. Enter the percent effluent corresponding to each NOEC/LOEC below:

a. NOEC Survival = 95 % Effluent (Parameter TOP3B)b. LOEC Survival = Q\* % Effluent (Parameter TXP3B)c. NOEC Reproduction = 95 % Effluent (Parameter TPP3B)d. LOEC Reproduction = Q\* % Effluent (Parameter TYP3B)

Q\* refers to a value that is not calculable

Table 1 (Sheet 3 of 4 )  
BIOMONITORING REPORT

*Pimephales promelas* SURVIVAL AND GROWTH TEST

Permittee: San Antonio Water System - Dos Rios WRC  
Permit No.: WQ0010137033  
Outfall No.: 001

	Date/Time		Date/Time
Dates and times	FROM: <u>7/19/2020 @ 07:00</u>	TO: <u>7/20/2020 @ 07:00</u>	
Composites were collected:	FROM: <u>7/21/2020 @ 07:00</u>	TO: <u>7/22/2020 @ 07:00</u>	
	FROM: <u>7/23/2020 @ 07:00</u>	TO: <u>7/24/2020 @ 07:00</u>	

Test Initiation: Time: 16:43 Date: 7/21/2020  
Dilution Water Used: ☐ Receiving Water ☒ Synthetic Dilution Water

DATA TABLE FOR GROWTH OF *Pimephales promelas*

Effluent Concentration	Average Dry Weight in milligrams (mg) per replicate					Mean Dry Weight (mg)	CV % <sup>1</sup>
	A	B	C	D	E		
0%	0.468	0.521	0.477	0.484	0.441	0.478	6.08
30 %	0.532	0.359	0.555	0.457	0.497	0.480	16.02
40 %	0.531	0.600	0.476	0.453	0.466	0.505	12.01
53 %	0.488	0.285	0.577	0.437	0.461	0.450	23.57
71 %	0.456	0.618	0.493	0.477	0.542	0.517	12.48
95 %	0.558	0.525	0.609	0.655	0.440	0.557	14.73
PMSD	Acceptable Range 30 or Less					23.0 %	

<sup>1</sup> Coefficient of Variation = (standard deviation/mean) x 100

?= cannot be calculated due to 100% mortality or lab exception

DATA TABLE FOR SURVIVAL OF *Pimephales promelas*

Effluent Concentration	Percent Survival per replicate					Average % Survival			CV % <sup>1</sup>
	A	B	C	D	E	24 Hours	48 Hours	7-Day	
0%	100	100	100	87.5	100	100	100	97.5	5.73
30 %	100	100	100	100	100	100	100	100	0.00
40 %	87.5	100	100	100	100	100	100	97.5	5.73
53 %	100	37.5	100	100	100	100	100	87.5	31.94
71 %	100	100	87.5	100	100	100	100	97.5	5.73
95 %	75	100	87.5	87.5	75	100	97.5	85	12.30

Table 1 (Sheet 4 of 4 )  
BIOMONITORING REPORT

*Pimephales promelas* SURVIVAL AND GROWTH TEST

Permittee: San Antonio Water System - Dos Rios WRC  
Permit No.: WQ0010137033  
Outfall No.: 001

1. DUNNETT'S PROCEDURE OR STEEL'S MANY-ONE RANK TEST OR WILCOXON RANK SUM TEST  
(with Bonferroni adjustment as appropriate for Sub-Lethality)

Is the mean dry weight at 7 days significantly less ( $p=0.05$ ) than the control's mean dry weight for the % effluent corresponding to significant non-lethal effects?

CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NO

If you report NO, enter a '0' on the DMR form for Parameter **TWP6C**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Pimephales* Sub-Lethal Pass/Fail.

2. DUNNETT'S PROCEDURE OR STEEL'S MANY-ONE RANK TEST OR WILCOXON RANK SUM TEST  
(as appropriate for Lethality) Is the survival at 7 days significantly less ( $p=0.05$ ) than the control's survival for % effluent corresponding to lethality?

CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NO

If you report NO, enter a '0' on the DMR form for Parameter **TLP6C**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Pimephales* Lethal Pass/Fail.

3. Enter the percent effluent corresponding to each NOEC/LOEC below:

- For DMR Form:
- a. NOEC Survival = 95 % Effluent (Parameter TOP6C)  
b. LOEC Survival = Q\* % Effluent (Parameter TXP6C)  
c. NOEC Growth = 95 % Effluent (Parameter TPP6C)  
d. LOEC Growth = Q\* % Effluent (Parameter TYP6C)

Q\* refers to a value that is not calculable

# **REGULATORY AGENCY TABLES**

## **Appendix E**



Table 1 (Sheet 1 of 4 )

## BIOMONITORING REPORT

*Ceriodaphnia dubia* SURVIVAL AND REPRODUCTION TESTPermittee: San Antonio Water System - Dos Rios WRCPermit No.: WQ0010137033Outfall No.: 001

	Date/Time	Date/Time
Dates and times	FROM: <u>10/11/2020 @07:00</u>	TO: <u>10/12/2020@ 07:00</u>
Composites were collected:	FROM: <u>10/13/2020 @07:00</u>	TO: <u>10/14/2020@ 07:00</u>
	FROM: <u>10/15/2020 @07:00</u>	TO: <u>10/16/2020@ 07:00</u>

Test Initiation: Time: 15:19 Date: 10/13/2020Dilution Water Used: ☐ Receiving Water☒ Synthetic Dilution WaterNUMBER OF YOUNG PRODUCED PER ADULT AT TEST TERMINATION

REPLICATE	EFFLUENT CONCENTRATION (%)					
	0%	30 %	40 %	53 %	71 %	95
A	15	13	15	8	20	18
B	17	13	20	22	23	19
C	16	19	20	21	21	12
D	14	17	22	D- 3	19	19
E	13	17	23	E	16	15
F	19	21	21	20	23	19
G	16	12	22	11	12	19
H	13	24	23	21	20	12
I	12	16	18	18	19	18
J	22	17	26	17	3	22
Surv. MEAN	15.7	16.9	21.0	17.2	17.6	17.3
Total MEAN	15.7	16.9	21.0	15.7	17.6	17.3
CV % <sup>1</sup>	19.4	22.2	14.3	29.7	34.5	18.8
PMSD	Acceptable Range 47 or Less					31.0 %

<sup>1</sup> Coefficient of Variation = (standard deviation/mean) x 100) Calculations are based on young of the surviving females. Males are designated (M), and dead females are designated (D) along with the number of neonates released prior to death. (E) anomalous value, spilled cup, or technician error.

Table 1 (Sheet 2 of 4 )

## BIOMONITORING REPORT

*Ceriodaphnia dubia* SURVIVAL AND REPRODUCTION TESTPermittee: San Antonio Water System - Dos Rios WRCPermit No.: WQ0010137033Outfall No.: 001PERCENT SURVIVAL

Time of Reading	EFFLUENT CONCENTRATION (%)					
	0%	30 %	40 %	53 %	71 %	95 %
24 HOURS	100.0	100.0	100.0	100.0	100.0	100.0
48 HOURS	100.0	100.0	100.0	100.0	100.0	100.0
7-DAY	100.0	100.0	100.0	88.9	100.0	100.0

## 1. DUNNETT'S PROCEDURE OR STEEL'S MANY-ONE RANK TEST OR WILCOXON RANK SUM TEST

(with Bonferroni adjustment as appropriate for Sub-Lethality)

Is the mean number of young produced per adult significantly less ( $p=0.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant non-lethal effects?

CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NO

If you report NO, enter a '0' on the DMR form for Parameter **TWP3B**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Ceriodaphnia* Sub-Lethal Pass/Fail.

## 2. FISHER'S EXACT TEST (as appropriate for Lethality)

Is the mean survival at test end significantly less ( $p=0.05$ ) than the control's survival for the % effluent corresponding to lethality?

CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NO

If you report NO, enter a '0' on the DMR form for Parameter **TLP3B**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Ceriodaphnia* Lethal Pass/Fail.

## 3. Enter the percent effluent corresponding to each NOEC/LOEC below:

a. NOEC Survival = 95 % Effluent (Parameter TOP3B)b. LOEC Survival = Q\* % Effluent (Parameter TXP3B)c. NOEC Reproduction = 95 % Effluent (Parameter TPP3B)d. LOEC Reproduction = Q\* % Effluent (Parameter TYP3B)

Q\* refers to a value that is not calculable

Table 1 (Sheet 3 of 4 )  
BIOMONITORING REPORT

*Pimephales promelas* SURVIVAL AND GROWTH TEST

Permittee: San Antonio Water System - Dos Rios WRC  
Permit No.: WQ0010137033  
Outfall No.: 001

	Date/Time	Date/Time
Dates and times	FROM: <u>10/11/2020 @07:00</u>	TO: <u>10/12/2020@ 07:00</u>
Composites were collected:	FROM: <u>10/13/2020 @07:00</u>	TO: <u>10/14/2020@ 07:00</u>
	FROM: <u>10/15/2020 @07:00</u>	TO: <u>10/16/2020@ 07:00</u>

Test Initiation: Time: 17:10 Date: 10/13/2020  
Dilution Water Used: ☐ Receiving Water ☒ Synthetic Dilution Water

DATA TABLE FOR GROWTH OF *Pimephales promelas*

Effluent Concentration	Average Dry Weight in milligrams (mg) per replicate					Mean Dry Weight (mg)	CV % <sup>1</sup>
	A	B	C	D	E		
0%	0.588	0.611	0.615	0.565	0.603	0.597	3.44
30 %	0.493	0.480	0.498	0.402	0.442	0.463	8.79
40 %	0.496	0.428	0.436	0.507	0.555	0.484	10.90
53 %	0.613	0.507	0.484	0.493	0.574	0.534	10.62
71 %	0.555	0.596	0.612	0.531	0.558	0.570	5.75
95 %	0.699	0.679	0.715	0.615	0.593	0.660	8.09
PMSD	Acceptable Range 30 or Less					11.2 %	

<sup>1</sup> Coefficient of Variation = (standard deviation/mean) x 100

?= cannot be calculated due to 100% mortality or lab exception

DATA TABLE FOR SURVIVAL OF *Pimephales promelas*

Effluent Concentration	Percent Survival per replicate					Average % Survival			CV % <sup>1</sup>
	A	B	C	D	E	24 Hours	48 Hours	7-Day	
0%	100	100	100	75	100	100	100	95	11.77
30 %	75	87.5	100	50	87.5	100	100	80	23.70
40 %	75	87.5	75	100	100	100	100	87.5	14.29
53 %	100	100	87.5	87.5	100	100	100	95	7.21
71 %	100	100	87.5	100	87.5	100	100	95	7.21
95 %	87.5	100	100	100	100	100	100	97.5	5.73

## BIOMONITORING REPORT

*Pimephales promelas* SURVIVAL AND GROWTH TEST

Permittee: San Antonio Water System - Dos Rios WRC  
 Permit No.: WQ0010137033  
 Outfall No.: 001

1. DUNNETT'S PROCEDURE OR STEEL'S MANY-ONE RANK TEST OR WILCOXON RANK SUM TEST  
 (with Bonferroni adjustment as appropriate for Sub-Lethality)

Is the mean dry weight at 7 days significantly less ( $p=0.05$ ) than the control's mean dry weight for the % effluent corresponding to significant non-lethal effects?

CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X NO

If you report NO, enter a '0' on the DMR form for Parameter **TWP6C**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Pimephales* Sub-Lethal Pass/Fail.

2. DUNNETT'S PROCEDURE OR STEEL'S MANY-ONE RANK TEST OR WILCOXON RANK SUM TEST  
 (as appropriate for Lethality) Is the survival at 7 days significantly less ( $p=0.05$ ) than the control's survival for % effluent corresponding to lethality?

CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X NO

If you report NO, enter a '0' on the DMR form for Parameter **TLP6C**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Pimephales* Lethal Pass/Fail.

3. Enter the percent effluent corresponding to each NOEC/LOEC below:

For DMR Form:

a. NOEC Survival =	<u>95</u>	% Effluent	(Parameter TOP6C)
b. LOEC Survival =	<u>Q*</u>	% Effluent	(Parameter TXP6C)
c. NOEC Growth =	<u>95**</u>	% Effluent	(Parameter TPP6C)
d. LOEC Growth =	<u>Q**</u>	% Effluent	(Parameter TYP6C)

Q\* refers to a value that is not calculable

\*\*Using ANOVA and Dunnett's test on *Pimephales promelas* growth data demonstrated statistically significant differences between the control and the 30% and 40% effluent concentrations tested. A review of the test conditions, within treatment variability, and the concentration response relationship has shown this result to be anomalous.

# **REGULATORY AGENCY TABLES**

## **Appendix E**



Table 2 (Sheet 1 of 2)  
BIOMONITORING REPORT

*Daphnia pulex* SURVIVAL TEST

Permittee: San Antonio Water System - Dos Rios WRC  
 Permit No.: WQ0010137033  
 Outfall No.: 001

Dates and times  
 Composites were collected: FROM: 7/19/2020 @07:00 TO: 7/20/2020@07:00

Test Initiation: Time: 16:48 Date: 7/21/2020

Dilution Water Used: ☐ Receiving Water ☒ Synthetic Dilution Water

DATA TABLE FOR SURVIVAL OF *Daphnia pulex*

TIME	REPLICATE	EFFLUENT CONC. (%)	
		0%	100 %
24 HOUR	A	100	100
	B	100	100
	C	100	100
	D	100	100
	E	100	100
MEAN		100	100

Is the mean survival at 24 hours in the 100% effluent greater than 50%?

CRITICAL DILUTION ( 100 % ) : X YES                      NO

*If yes is checked enter a '0' for Parameter TIE3D, otherwise enter '1'.*

Enter the percent effluent corresponding to LC50 below:

24 Hour LC50 (*Daphnia pulex*) = >100 % Effluent  
 95 % Confidence Interval : \*Q  
 Method of LC50 Calculation: Visual Inspection

Q\* refers to a value that is not calculable

Table 2 (Sheet 2 of 2 )  
BIOMONITORING REPORT

*Pimephales promelas* SURVIVAL TEST

Permittee: San Antonio Water System - Dos Rios WRC  
 Permit No.: WQ0010137033  
 Outfall No.: 001

Dates and times FROM: 7/19/2020 @07:00 TO: 7/20/2020 @ 07:00  
 Composites were collected:

Test Initiation: Time: 17:25 Date: 7/21/2020

Dilution Water Used: ☐ Receiving Water ☒ Synthetic Dilution Water

DATA TABLE FOR SURVIVAL OF *Pimephales promelas*

TIME	REPLICATE	EFFLUENT CONC. (%)	
		0%	100 %
24 HOUR	A	100	100
	B	100	100
	C	100	100
	D	100	100
	E	100	100
MEAN		100	100

Is the mean survival at 24 hours in the 100% effluent greater than 50%?

CRITICAL DILUTION ( 100 % ) : X YES                      NO

If yes is checked enter a '0' for Parameter TIE6C, otherwise enter '1'.

Enter the percent effluent corresponding to LC50 below:

24 Hour LC50 (*Pimephales promelas*) = >100 % Effluent

95 % Confidence Interval : \*Q

Method of LC50 Calculation: Visual Inspection

Q\* refers to a value that is not calculable

# **REGULATORY AGENCY TABLES**

## Appendix E

Table 2 (Sheet 1 of 2)  
BIOMONITORING REPORT

*Daphnia pulex* SURVIVAL TEST

Permittee: San Antonio Water System - Steven M Clouse WRC  
 Permit No.: WQ0010137033  
 Outfall No.: 001

Dates and times  
 Composites were collected: FROM: 1/10/2021 @07:00 TO: 1/11/2021 @ 07:00

Test Initiation: Time: 16:02 Date: 1/12/2021

Dilution Water Used: ☐ Receiving Water ☒ Synthetic Dilution Water

DATA TABLE FOR SURVIVAL OF *Daphnia pulex*

TIME	REPLICATE	EFFLUENT CONC. (%)	
		0%	100 %
24 HOUR	A	100	100
	B	100	100
	C	100	100
	D	100	100
	E	100	100
MEAN		100	100

Is the mean survival at 24 hours in the 100% effluent greater than 50%?

CRITICAL DILUTION ( 100 % ): X YES NO

*If yes is checked enter a '0' for Parameter TIE3D, otherwise enter '1'.*

Enter the percent effluent corresponding to LC50 below:

24 Hour LC50 (*Daphnia pulex*) = >100 % Effluent

95 % Confidence Interval : \*Q

Method of LC50 Calculation: Visual Inspection

Q\* refers to a value that is not calculable

Table 2 (Sheet 2 of 2 )  
BIOMONITORING REPORT

*Pimephales promelas* SURVIVAL TEST

Permittee: San Antonio Water System - Steven M Clouse WRC

Permit No.: WQ0010137033

Outfall No.: 001

Dates and times                      Date/Time                      Date/Time  
FROM: 1/10/2021 @07:00 TO: 1/11/2021 @ 07:00  
Composites were collected:

Test Initiation: Time: 16:49 Date: 1/12/2021

Dilution Water Used: ☐ Receiving Water ☒ Synthetic Dilution Water

DATA TABLE FOR SURVIVAL OF *Pimephales promelas*

TIME	REPLICATE	EFFLUENT CONC. (%)	
		0%	100 %
24 HOUR	A	100	100
	B	100	100
	C	100	100
	D	100	100
	E	100	100
MEAN		100	100

Is the mean survival at 24 hours in the 100% effluent greater than 50%?

CRITICAL DILUTION ( 100 % ) : X YES NO

If yes is checked enter a '0' for Parameter TIE6C, otherwise enter '1'.

Enter the percent effluent corresponding to LC50 below:

24 Hour LC50 (*Pimephales promelas*) = >100 % Effluent

95 % Confidence Interval : \*Q

Method of LC50 Calculation: Visual Inspection

Q\* refers to a value that is not calculable



# **REGULATORY AGENCY TABLES**

## **Appendix E**

Table 1 (Sheet 1 of 4 )

## BIOMONITORING REPORT

*Ceriodaphnia dubia* SURVIVAL AND REPRODUCTION TEST

Permittee: San Antonio Water System - Steven M Clouse WRC  
 Permit No.: WQ0010137033  
 Outfall No.: 001

	FROM:	Date/Time	TO:	Date/Time
Dates and times	FROM:	1/10/2021 @07:00	TO:	1/11/2021@07:00
Composites were collected:	FROM:	1/12/2021 @07:00	TO:	1/13/2021@07:00
	FROM:	1/14/2021 @07:00	TO:	1/15/2021@07:00

Test Initiation: Time: 12:22 Date: 1/12/2021

Dilution Water Used: ☐ Receiving Water ☒ Synthetic Dilution Water

NUMBER OF YOUNG PRODUCED PER ADULT AT TEST TERMINATION

REPLICATE	EFFLUENT CONCENTRATION (%)					
	0%	30 %	40 %	53 %	71 %	95
A	E	30	18	30	29	33
B	32	23	32	23	29	32
C	28	22	30	27	29	29
D	32	24	27	26	26	E
E	20	20	32	30	28	30
F	31	31	31	26	30	25
G	26	35	30	36	35	31
H	31	31	33	27	30	29
I	28	36	34	25	37	31
J	26	34	28	25	26	27
Surv. MEAN	28.2	28.6	29.5	27.5	29.9	29.6
Total MEAN	28.2	28.6	29.5	27.5	29.9	29.7
CV % <sup>1</sup>	13.8	20.4	15.5	13.4	11.8	8.4
PMSD	Acceptable Range 47 or Less					16.3 %

<sup>1</sup> Coefficient of Variation = (standard deviation/mean) x 100. Calculations are based on young of the surviving females. Males are designated (M), and dead females are designated (D) along with the number of neonates released prior to death. (E) anomalous value, spilled cup, or technician error.

## Table 1 (Sheet 2 of 4)

## BIOMONITORING REPORT

*Ceriodaphnia dubia* SURVIVAL AND REPRODUCTION TESTPermittee: San Antonio Water System - Steven M Clouse WRCPermit No.: WQ0010137033Outfall No.: 001PERCENT SURVIVAL

Time of Reading	EFFLUENT CONCENTRATION (%)					
	0%	30 %	40 %	53 %	71 %	95 %
24 HOURS	100.0	100.0	100.0	100.0	100.0	100.0
48 HOURS	100.0	100.0	100.0	100.0	100.0	100.0
7-DAY	100.0	100.0	100.0	100.0	100.0	100.0

## 1. DUNNETT'S PROCEDURE OR STEEL'S MANY-ONE RANK TEST OR WILCOXON RANK SUM TEST

(with Bonferroni adjustment as appropriate for Sub-Lethality)

Is the mean number of young produced per adult significantly less ( $p=0.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant non-lethal effects?

CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NO

If you report NO, enter a '0' on the DMR form for Parameter **TWP3B**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Ceriodaphnia* Sub-Lethal Pass/Fail.

## 2. FISHER'S EXACT TEST (as appropriate for Lethality)

Is the mean survival at test end significantly less ( $p=0.05$ ) than the control's survival for the % effluent corresponding to lethality?

CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NO

If you report NO, enter a '0' on the DMR form for Parameter **TLP3B**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Ceriodaphnia* Lethal Pass/Fail.

## 3. Enter the percent effluent corresponding to each NOEC/LOEC below:

a. NOEC Survival = 95 % Effluent (Parameter TOP3B)b. LOEC Survival = Q\* % Effluent (Parameter TXP3B)c. NOEC Reproduction = 95 % Effluent (Parameter TPP3B)d. LOEC Reproduction = Q\* % Effluent (Parameter TYP3B)

Q\* refers to a value that is not calculable

Table 1 (Sheet 3 of 4)  
BIOMONITORING REPORT

*Pimephales promelas* SURVIVAL AND GROWTH TEST

Permittee: San Antonio Water System - Steven M Clouse WRC  
 Permit No.: WQ0010137033  
 Outfall No.: 001

	Date/Time	Date/Time
Dates and times	FROM: <u>1/10/2021 @ 07:00</u>	TO: <u>1/11/2021 @ 07:00</u>
Composites were collected:	FROM: <u>1/12/2021 @ 07:00</u>	TO: <u>1/13/2021 @ 07:00</u>
	FROM: <u>1/14/2021 @ 07:00</u>	TO: <u>1/15/2021 @ 07:00</u>

Test Initiation: Time: 16:00 Date: 1/12/2021  
 Dilution Water Used: ☐ Receiving Water ☒ Synthetic Dilution Water

DATA TABLE FOR GROWTH OF *Pimephales promelas*

Effluent Concentration	Average Dry Weight in milligrams (mg) per replicate					Mean Dry Weight (mg)	CV % <sup>1</sup>
	A	B	C	D	E		
0%	0.694	0.589	0.771	0.649	0.759	0.692	11.00
30 %	0.566	0.718	0.692	0.517	0.618	0.622	13.50
40 %	0.528	0.295	0.649	0.662	0.549	0.537	27.47
53 %	0.523	0.615	0.677	0.648	0.694	0.632	10.70
71 %	0.897	0.885	0.850	0.729	0.504	0.773	21.27
95 %	0.780	0.825	0.699	0.659	0.817	0.756	9.75
PMSD	Acceptable Range 30 or Less					23.6 %	

<sup>1</sup> Coefficient of Variation = (standard deviation/mean) x 100

?? cannot be calculated due to 100% mortality or lab exception

DATA TABLE FOR SURVIVAL OF *Pimephales promelas*

Effluent Concentration	Percent Survival per replicate					Average % Survival			CV % <sup>1</sup>
	A	B	C	D	E	24 Hours	48 Hours	7-Day	
0%	75	75	87.5	100	100	100	100	87.5	14.29
30 %	62.5	100	87.5	75	87.5	100	100	82.5	17.28
40 %	75	37.5	100	100	75	100	100	77.5	33.05
53 %	87.5	87.5	87.5	100	75	100	97.5	87.5	10.10
71 %	100	87.5	100	87.5	87.5	100	100	92.5	7.40
95 %	100	100	100	100	100	100	100	100	0.00

Table 1 (Sheet 4 of 4)  
BIOMONITORING REPORT

*Pimephales promelas* SURVIVAL AND GROWTH TEST

Permittee: San Antonio Water System - Steven M Clouse WRC  
Permit No.: WQ0010137033  
Outfall No.: 001

1. DUNNETT'S PROCEDURE OR STEEL'S MANY-ONE RANK TEST OR WILCOXON RANK SUM TEST  
(with Bonferroni adjustment as appropriate for Sub-Lethality)

Is the mean dry weight at 7 days significantly less ( $p=0.05$ ) than the control's mean dry weight for the % effluent corresponding to significant non-lethal effects?

CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NO

If you report NO, enter a '0' on the DMR form for Parameter **TWP6C**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Pimephales* Sub-Lethal Pass/Fail.

2. DUNNETT'S PROCEDURE OR STEEL'S MANY-ONE RANK TEST OR WILCOXON RANK SUM TEST  
(as appropriate for Lethality) Is the survival at 7 days significantly less ( $p=0.05$ ) than the control's survival for % effluent corresponding to lethality?

CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NO

If you report NO, enter a '0' on the DMR form for Parameter **TLP6C**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Pimephales* Lethal Pass/Fail.

3. Enter the percent effluent corresponding to each NOEC/LOEC below:

- For DMR Form:
- a. NOEC Survival = 95 % Effluent (Parameter TOP6C)
- b. LOEC Survival = Q\* % Effluent (Parameter TXP6C)
- c. NOEC Growth = 95 % Effluent (Parameter TPP6C)
- d. LOEC Growth = Q\* % Effluent (Parameter TYP6C)

Q\* refers to a value that is not calculable



# **REGULATORY AGENCY TABLES**

## **Appendix E**

Table 1 (Sheet 1 of 4 )

## BIOMONITORING REPORT

*Ceriodaphnia dubia* SURVIVAL AND REPRODUCTION TESTPermittee: San Antonio Water System - Steven M Clouse WRCPermit No.: WQ0010137033Outfall No.: 001

	FROM:	Date/Time	TO:	Date/Time
Dates and times	FROM:	4/11/2021 @07:30	TO:	4/12/2021 @07:30
Composites were collected:	FROM:	4/13/2021 @07:00	TO:	4/14/2021 @07:00
	FROM:	4/15/2021 @07:00	TO:	4/16/2021 @07:00

Test Initiation: Time: 13:25 Date: 4/13/2021Dilution Water Used: ☐ Receiving Water☒ Synthetic Dilution WaterNUMBER OF YOUNG PRODUCED PER ADULT AT TEST TERMINATION

REPLICATE	EFFLUENT CONCENTRATION (%)					
	0%	30 %	40 %	53 %	71 %	95
A	34	35	36	36	21	21
B	22	27	37	D- 9	14	D- 20
C	36	38	40	34	34	20
D	34	31	33	30	36	31
E	32	36	37	34	27	23
F	33	34	33	25	35	22
G	37	38	30	35	40	36
H	36	19	33	36	24	23
I	32	39	36	35	40	37
J	40	35	36	32	22	41
Surv. MEAN	33.6	33.2	35.1	33.0	29.3	28.2
Total MEAN	33.6	33.2	35.1	30.6	29.3	27.4
CV % <sup>1</sup>	14.1	18.5	8.1	10.8	30.4	28.6
PMSD	Acceptable Range 47 or Less					21.1 %

<sup>1</sup> Coefficient of Variation = (standard deviation/mean) x 100. Calculations are based on young of the surviving females. Males are designated (M), and dead females are designated (D) along with the number of neonates released prior to death. (E) anomalous value, spilled cup, or technician error.

## Table 1 (Sheet 2 of 4 )

## BIOMONITORING REPORT

*Ceriodaphnia dubia* SURVIVAL AND REPRODUCTION TESTPermittee: San Antonio Water System - Steven M Clouse WRCPermit No.: WQ0010137033Outfall No.: 001PERCENT SURVIVAL

Time of Reading	EFFLUENT CONCENTRATION (%)					
	0%	30 %	40 %	53 %	71 %	95 %
24 HOURS	100.0	100.0	100.0	100.0	100.0	100.0
48 HOURS	100.0	100.0	100.0	100.0	100.0	100.0
7-DAY	100.0	100.0	100.0	90.0	100.0	90.0

## 1. DUNNETT'S PROCEDURE OR STEEL'S MANY-ONE RANK TEST OR WILCOXON RANK SUM TEST

(with Bonferroni adjustment as appropriate for Sub-Lethality)

Is the mean number of young produced per adult significantly less ( $p=0.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant non-lethal effects?CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NOIf you report NO, enter a '0' on the DMR form for Parameter **TWP3B**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Ceriodaphnia* Sub-Lethal Pass/Fail.

## 2. FISHER'S EXACT TEST (as appropriate for Lethality)

Is the mean survival at test end significantly less ( $p=0.05$ ) than the control's survival for the % effluent corresponding to lethality?CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NOIf you report NO, enter a '0' on the DMR form for Parameter **TLP3B**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Ceriodaphnia* Lethal Pass/Fail.

## 3. Enter the percent effluent corresponding to each NOEC/LOEC below:

a. NOEC Survival = 95 % Effluent (Parameter TOP3B)b. LOEC Survival = Q\* % Effluent (Parameter TXP3B)c. NOEC Reproduction = 95 % Effluent (Parameter TPP3B)d. LOEC Reproduction = Q\* % Effluent (Parameter TYP3B)

Q\* refers to a value that is not calculable

Table 1 (Sheet 3 of 4)  
BIOMONITORING REPORT

*Pimephales promelas* SURVIVAL AND GROWTH TEST

Permittee: San Antonio Water System - Steven M Clouse WRC  
 Permit No.: WQ0010137033  
 Outfall No.: 001

	Date/Time	Date/Time
Dates and times	FROM: <u>4/11/2021 @ 07:30</u>	TO: <u>4/12/2021 @ 07:30</u>
Composites were collected:	FROM: <u>4/13/2021 @ 07:00</u>	TO: <u>4/14/2021 @ 07:00</u>
	FROM: <u>4/15/2021 @ 07:00</u>	TO: <u>4/16/2021 @ 07:00</u>

Test Initiation: Time: 16:33 Date: 4/13/2021  
 Dilution Water Used: ☐ Receiving Water ☒ Synthetic Dilution Water

DATA TABLE FOR GROWTH OF *Pimephales promelas*

Effluent Concentration	Average Dry Weight in milligrams (mg) per replicate					Mean Dry Weight (mg)	CV % <sup>1</sup>
	A	B	C	D	E		
0%	0.414	0.479	0.429	0.325	0.301	0.390	19.13
30 %	0.458	0.405	0.429	0.364	0.314	0.394	14.30
40 %	0.422	0.440	0.301	0.299	0.344	0.361	18.37
53 %	0.280	0.413	0.345	0.359	0.365	0.352	13.60
71 %	0.333	0.418	0.428	0.251	0.300	0.346	22.05
95 %	0.672	0.566	0.670	0.438	0.417	0.552	22.08
PMSD	Acceptable Range 30 or Less					29.8 %	

<sup>1</sup> Coefficient of Variation = (standard deviation/mean) x 100

?= cannot be calculated due to 100% mortality or lab exception

DATA TABLE FOR SURVIVAL OF *Pimephales promelas*

Effluent Concentration	Percent Survival per replicate					Average % Survival			CV % <sup>1</sup>
	A	B	C	D	E	24 Hours	48 Hours	7-Day	
0%	87.5	100	100	75	62.5	100	97.5	85	19.17
30 %	75	87.5	75	50	37.5	100	100	65	31.60
40 %	87.5	100	75	87.5	87.5	100	100	87.5	10.10
53 %	75	100	62.5	100	100	100	100	87.5	20.20
71 %	87.5	87.5	100	50	87.5	100	100	82.5	22.98
95 %	100	87.5	100	100	100	100	100	97.5	5.73

## BIOMONITORING REPORT

*Pimephales promelas* SURVIVAL AND GROWTH TESTPermittee: San Antonio Water System - Steven M Clouse WRCPermit No.: WQ0010137033Outfall No.: 001

1. DUNNETT'S PROCEDURE OR STEEL'S MANY-ONE RANK TEST OR WILCOXON RANK SUM TEST  
(with Bonferroni adjustment as appropriate for Sub-Lethality)

Is the mean dry weight at 7 days significantly less ( $p=0.05$ ) than the control's mean dry weight for the % effluent corresponding to significant non-lethal effects?

CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NO

If you report NO, enter a '0' on the DMR form for Parameter **TWP6C**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Pimephales* Sub-Lethal Pass/Fail.

2. DUNNETT'S PROCEDURE OR STEEL'S MANY-ONE RANK TEST OR WILCOXON RANK SUM TEST  
(as appropriate for Lethality) Is the survival at 7 days significantly less ( $p=0.05$ ) than the control's survival for % effluent corresponding to lethality?

CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NO

If you report NO, enter a '0' on the DMR form for Parameter **TLP6C**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Pimephales* Lethal Pass/Fail.

3. Enter the percent effluent corresponding to each NOEC/LOEC below:

For DMR Form:

a. NOEC Survival = 95 % Effluent (Parameter TOP6C)

b. LOEC Survival = Q\* % Effluent (Parameter TXP6C)

c. NOEC Growth = 95 % Effluent (Parameter TPP6C)

d. LOEC Growth = Q\* % Effluent (Parameter TYP6C)

Q\* refers to a value that is not calculable



# **REGULATORY AGENCY TABLES**

## Appendix E

Table 2 (Sheet 1 of 2)  
BIOMONITORING REPORT

*Daphnia pulex* SURVIVAL TEST

Permittee: San Antonio Water System - Steven M Clouse WRC  
 Permit No.: WQ0010137033  
 Outfall No.: 001

Dates and times  
 Composites were collected: FROM: 8/1/2021 @07:00 TO: 8/2/2021 @07:00

Test Initiation: Time: 14:11 Date: 8/3/2021

Dilution Water Used: ☐ Receiving Water ☒ Synthetic Dilution Water

DATA TABLE FOR SURVIVAL OF *Daphnia pulex*

TIME	REPLICATE	EFFLUENT CONC. (%)	
		0%	100 %
24 HOUR	A	100	100
	B	100	100
	C	100	100
	D	100	100
	E	100	100
MEAN		100	100

Is the mean survival at 24 hours in the 100% effluent greater than 50%?

CRITICAL DILUTION ( 100 % ) : X YES NO

*If yes is checked enter a '0' for Parameter TIE3D, otherwise enter '1'.*

Enter the percent effluent corresponding to LC50 below:

24 Hour LC50 (*Daphnia pulex*) = >100 % Effluent

95 % Confidence Interval : \*Q

Method of LC50 Calculation: Visual Inspection

Q\* refers to a value that is not calculable

Table 2 (Sheet 2 of 2 )  
BIOMONITORING REPORT

*Pimephales promelas* SURVIVAL TEST

Permittee: San Antonio Water System - Steven M Clouse WRC  
 Permit No.: WQ0010137033  
 Outfall No.: 001

Dates and times FROM: 8/1/2021 @07:00 TO: 8/2/2021@ 07:00  
 Composites were collected:

Test Initiation: Time: 13:50 Date: 8/3/2021

Dilution Water Used: ☐ Receiving Water ☒ Synthetic Dilution Water

DATA TABLE FOR SURVIVAL OF *Pimephales promelas*

TIME	REPLICATE	EFFLUENT CONC. (%)	
		0%	100 %
24 HOUR	A	100	100
	B	100	75
	C	100	75
	D	100	75
	E	100	87.5
MEAN		100	82.5

Is the mean survival at 24 hours in the 100% effluent greater than 50%?

CRITICAL DILUTION ( 100 % ) : X YES        NO

If yes is checked enter a '0' for Parameter TIE6C, otherwise enter '1'.

Enter the percent effluent corresponding to LC50 below:

24 Hour LC50 (*Pimephales promelas*) = >100 % Effluent

95 % Confidence Interval : \*Q

Method of LC50 Calculation: Visual Inspection

Q\* refers to a value that is not calculable

# **REGULATORY AGENCY TABLES**

## Appendix E

Table 1 (Sheet 1 of 4 )

## BIOMONITORING REPORT

*Ceriodaphnia dubia* SURVIVAL AND REPRODUCTION TESTPermittee: San Antonio Water System - Steven M Clouse WRCPermit No.: WQ0010137033Outfall No.: 001

	FROM:	Date/Time	TO:	Date/Time
Dates and times	FROM:	8/1/2021 @07:00	TO:	8/2/2021 @07:00
Composites were collected:	FROM:	8/3/2021 @07:00	TO:	8/4/2021 @07:00
	FROM:	8/5/2021 @07:00	TO:	8/6/2021 @07:00

Test Initiation: Time: 10:55 Date: 8/3/2021Dilution Water Used: ☐ Receiving Water ☒ Synthetic Dilution WaterNUMBER OF YOUNG PRODUCED PER ADULT AT TEST TERMINATION

REPLICATE	EFFLUENT CONCENTRATION (%)					
	0%	30 %	40 %	53 %	71 %	95 %
A	23	36	32	34	32	30
B	31	37	33	33	32	30
C	30	32	33	29	31	26
D	28	32	31	30	31	31
E	30	32	34	31	29	28
F	36	32	32	28	32	35
G	29	28	28	30	29	29
H	35	24	28	35	30	32
I	28	30	33	32	30	23
J	34	30	33	27	31	28
Surv. MEAN	30.4	31.3	31.7	30.9	30.7	29.2
Total MEAN	30.4	31.3	31.7	30.9	30.7	29.2
CV % <sup>1</sup>	12.7	11.8	6.6	8.4	3.7	11.2
PMSD	Acceptable Range 47 or Less					10.0 %

<sup>1</sup> Coefficient of Variation = (standard deviation/mean) x 100. Calculations are based on young of the surviving females. Males are designated (M), and dead females are designated (D) along with the number of neonates released prior to death. (E) anomalous value, spilled cup, or technician error.



## Table 1 (Sheet 2 of 4 )

## BIOMONITORING REPORT

*Ceriodaphnia dubia* SURVIVAL AND REPRODUCTION TESTPermittee: San Antonio Water System - Steven M Clouse WRCPermit No.: WQ0010137033Outfall No.: 001PERCENT SURVIVAL

Time of Reading	EFFLUENT CONCENTRATION (%)					
	0%	30 %	40 %	53 %	71 %	95 %
24 HOURS	100.0	100.0	100.0	100.0	100.0	100.0
48 HOURS	100.0	100.0	100.0	100.0	100.0	100.0
7-DAY	100.0	100.0	100.0	100.0	100.0	100.0

## 1. DUNNETT'S PROCEDURE OR STEEL'S MANY-ONE RANK TEST OR WILCOXON RANK SUM TEST

(with Bonferroni adjustment as appropriate for Sub-Lethality)

Is the mean number of young produced per adult significantly less ( $p=0.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant non-lethal effects?

CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NO

If you report NO, enter a '0' on the DMR form for Parameter **TWP3B**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Ceriodaphnia* Sub-Lethal Pass/Fail.

## 2. FISHER'S EXACT TEST (as appropriate for Lethality)

Is the mean survival at test end significantly less ( $p=0.05$ ) than the control's survival for the % effluent corresponding to lethality?

CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NO

If you report NO, enter a '0' on the DMR form for Parameter **TLP3B**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Ceriodaphnia* Lethal Pass/Fail.

## 3. Enter the percent effluent corresponding to each NOEC/LOEC below:

a. NOEC Survival = 95 % Effluent (Parameter TOP3B)b. LOEC Survival = Q\* % Effluent (Parameter TXP3B)c. NOEC Reproduction = 95 % Effluent (Parameter TPP3B)d. LOEC Reproduction = Q\* % Effluent (Parameter TYP3B)

Q\* refers to a value that is not calculable

Table 1 (Sheet 3 of 4 )  
BIOMONITORING REPORT

*Pimephales promelas* SURVIVAL AND GROWTH TEST

Permittee: San Antonio Water System - Steven M Clouse WRC  
Permit No.: WQ0010137033  
Outfall No.: 001

	Date/Time	Date/Time
Dates and times	FROM: <u>8/1/2021 @ 07:00</u>	TO: <u>8/2/2021 @ 07:00</u>
Composites were collected:	FROM: <u>8/3/2021 @ 07:00</u>	TO: <u>8/4/2021 @ 07:00</u>
	FROM: <u>8/5/2021 @ 07:00</u>	TO: <u>8/6/2021 @ 07:00</u>

Test Initiation: Time: 13:00 Date: 8/3/2021  
Dilution Water Used: ☐ Receiving Water ☒ Synthetic Dilution Water

DATA TABLE FOR GROWTH OF *Pimephales promelas*

Effluent Concentration	Average Dry Weight in milligrams (mg) per replicate					Mean Dry Weight (mg)	CV % <sup>1</sup>
	A	B	C	D	E		
0%	0.524	0.435	0.627	0.526	0.638	0.550	15.3
30 %	0.430	0.499	0.512	0.547	0.496	0.497	8.6
40 %	0.398	0.496	0.555	0.490	0.518	0.491	11.9
53 %	0.465	0.502	0.409	0.487	0.446	0.462	7.8
71 %	0.472	0.651	0.523	0.641	0.450	0.547	17.2
95 %	0.647	0.664	0.587	0.482	0.487	0.573	15.0
PMSD	Acceptable Range 30 or Less					19.1 %	

<sup>1</sup> Coefficient of Variation = (standard deviation/mean) x 100

?= cannot be calculated due to 100% mortality or lab exception

DATA TABLE FOR SURVIVAL OF *Pimephales promelas*

Effluent Concentration	Percent Survival per replicate					Average % Survival			CV % <sup>1</sup>
	A	B	C	D	E	24 Hours	48 Hours	7-Day	
0%	87.5	100	100	100	100	100	97.5	97.5	5.7
30 %	100	87.5	87.5	100	100	100	100	95	7.2
40 %	87.5	100	100	100	100	100	100	97.5	5.7
53 %	100	100	100	100	100	100	100	100	0.0
71 %	100	100	75	100	100	100	100	95	11.8
95 %	100	87.5	100	100	100	100	100	97.5	5.7

Table 1 (Sheet 4 of 4)  
BIOMONITORING REPORT

*Pimephales promelas* SURVIVAL AND GROWTH TEST

Permittee: San Antonio Water System - Steven M Clouse WRC  
Permit No.: WQ0010137033  
Outfall No.: 001

1. DUNNETT'S PROCEDURE OR STEEL'S MANY-ONE RANK TEST OR WILCOXON RANK SUM TEST  
(with Bonferroni adjustment as appropriate for Sub-Lethality)

Is the mean dry weight at 7 days significantly less ( $p=0.05$ ) than the control's mean dry weight for the % effluent corresponding to significant non-lethal effects?

CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NO

If you report NO, enter a '0' on the DMR form for Parameter **TWP6C**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Pimephales* Sub-Lethal Pass/Fail.

2. DUNNETT'S PROCEDURE OR STEEL'S MANY-ONE RANK TEST OR WILCOXON RANK SUM TEST  
(as appropriate for Lethality) Is the survival at 7 days significantly less ( $p=0.05$ ) than the control's survival for % effluent corresponding to lethality?

CRITICAL DILUTION ( 71 ): \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NO

If you report NO, enter a '0' on the DMR form for Parameter **TLP6C**, other wise enter a '1'. This parameter is also referred to as the 7-DAY *Pimephales* Lethal Pass/Fail.

3. Enter the percent effluent corresponding to each NOEC/LOEC below:

- For DMR Form:
- a. NOEC Survival = 95 % Effluent (Parameter TOP6C)
- b. LOEC Survival = Q\* % Effluent (Parameter TXP6C)
- c. NOEC Growth = 95 % Effluent (Parameter TPP6C)
- d. LOEC Growth = Q\* % Effluent (Parameter TYP6C)

Q\* refers to a value that is not calculable

## **APPENDIX E**

### **AGENCY FORMS**

Permittee: San Antonio Water System- Clouse TPDES Permit No.: WQ0010137033

**TABLE 1 (SHEET 1 OF 4)**  
**BIOMONITORING REPORTING, COMBINED OUTFALLS 001-006**  
**CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
Composite 1 Collected From	0700	10/05/21	To	0700	10/06/21
Composite 2 Collected From	0700	10/07/21	To	0700	10/08/21
Composite 3 Collected From	0700	10/10/21	To	0700	10/11/21

Test initiated:	1322	am/pm	10/07/21	Date
Dilution water used:	Receiving	X	Reconstituted	

**NUMBER OF YOUNG PRODUCED PER ADULT @ END OF TEST**

	Percent Effluent					
Rep	0	30.0	40.0	53.0	71.0	95.0
A	18	23	D 4	23	25	26
B	23	30	21	22	19	24
C	21	23	25	27	22	18
D	24	28	27	21	21	26
E	24	27	25	22	24	28
F	26	25	28	21	25	22
G	27	26	23	21	18	D10
H	32	27	26	23	27	20
I	22	22	19	24	19	D3
J	26	19	27	29	23	18
Surviv.Mean	24.0	25.0	25.0	23.0	22.0	20.0
Total Mean	24.0	25.0	22.0	23.0	22.0	17.0
CV%*	15.65	13.06	12.24	11.63	13.54	16.90
PMSD= 21.28	Acceptable Range 13 – 47					

\*coefficient of variation = standard deviation x 100/mean (based on young of surviving adults)  
Designate males (M), and dead females (D), along with number of neonates (x) released prior to death.



Permittee: San Antonio Water System- Clouse TPDES Permit No.: WQ0010137033

TABLE 1 (SHEET 2 OF 4)

BIOMONITORING REPORTING, COMBINED OUTFALLS 001-006

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less ( $p=.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%)    X    YES                      NO

Percent Survival

Time of Reading	Percent Effluent					
	0	30.0	40.0	53.0	71.0	95.0
24h	100.0	100.0	100.0	100.0	100.0	100.0
48h	100.0	100.0	100.0	100.0	100.0	100.0
End of test	100.0	100.0	90.0	100.0	100.0	80.0

2. Fisher's Exact Test:

Is the mean survival at test end significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION ( 71.0%)            YES    X    NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

- a) NOEC survival =            95.0% effluent
- b) LOEC survival=            >95.0% effluent
- c) NOEC reproduction =    95.0% effluent
- d) LOEC reproduction =    >95.0% effluent

Permittee: San Antonio Water System- Clouse TPDES Permit No.: WQ0010137033

**TABLE 1 (SHEET 3 OF 4)**  
**BIOMONITORING REPORTING, COMBINED OUTFALLS 001-006**  
**FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
Composite 1 Collected from:	0700	10/05/21	To	0700	10/06/21
Composite 2 Collected from:	0700	10/07/21	To	0700	10/08/21
Composite 3 Collected from:	0700	10/10/21	To	0700	10/11/21

Test initiated: 1322 am/pm 10/07/21 Date  
Dilution water used: Receiving X Reconstituted

**FATHEAD MINNOW GROWTH DATA**

Effluent Conc. %	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight mg	CV%*
	A	B	C	D	E		
0	0.610	0.480	0.840	0.660	0.690	0.650	19.97
30.0	0.620	0.460	0.410	0.620	0.380	0.500	23.65
40.0	0.590	0.620	0.610	0.700	0.310	0.570	26.18
53.0	0.580	0.320	0.610	0.440	0.350	0.460	28.20
71.0	0.380	0.650	0.760	0.500	0.550	0.570	25.95
95.0	0.430	0.550	0.620	0.710	0.500	0.560	19.75
PMSD=30.0	Acceptable Range 12 - 30						

\*coefficient of variation = standard deviation x 100/mean.

1. **Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

Is the mean dry weight (growth) at 7 days significantly less (p=.05) than the control's dry weight for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%) YES X NO

Permittee: San Antonio Water System- Clouse TPDES Permit No.: WQ0010137033

TABLE 1 (SHEET 4 OF 4)

BIOMONITORING REPORTING, COMBINED OUTFALLS 001-006

FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Conc. %	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0	100.0	100.0	75.0	75.0	88.0	100.0	100.0	88.0	14.29
30.0	88.0	88.0	100.0	100.0	88.0	97.5	97.5	92.0	7.40
40.0	100.0	100.0	100.0	88.0	62.0	90.0	90.0	90.0	18.11
53.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00
71.0	88.0	100.0	100.0	100.0	100.0	100.0	100.0	98.0	5.73
95.0	88.0	100.0	100.0	100.0	100.0	100.0	100.0	98.0	5.73

\*coefficient of variation = standard deviation x 100/mean.

2. **Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

Is the mean survival at 7 days significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (71.0%):      YES    X    NO

3. **Enter percent effluent corresponding to each NOEC below:**

- a) NOEC survival =    95.0 % effluent
- b) NOEC growth =    95.0 % effluent
- c) LOEC survival =    > 95.0 % effluent
- d) LOEC growth=    > 95.0 % effluent

## Bio-Analytical Laboratories' Executive Summary

**Permittee:** San Antonio Water System- Steven M. Clouse Recycling Center  
3495 Valley Road  
Bexar County, TX

**Project #:** X8196

**Outfall(s):** 001-006

**Permit #:** WQ0010137033/TX0077801

**Test Dates:** February 15 -22, 2022

**Test Type:** Chronic Static Renewal Survival and Growth Test using *Pimephales promelas* (EPA 1000.0)  
Chronic Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia* (EPA Method 1002.0).

### Results:

#### For *Ceriodaphnia dubia*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP3B – 0- **Pass**.
2. Report the NOEC value for survival, Parameter TOP3B – 95.0%.
3. Report the LOEC value for survival, Parameter TXP3B – >95.0%
4. If the NOEC for reproduction is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP3B – 0- **Pass**.
5. Report the NOEC value for reproduction, Parameter TPP3B - 95.0%
6. Report the LOEC value for reproduction, Parameter TYP3B- >95.0%
7. Report Lethal WET Limit for Parameter 51710 – 95.0%
8. PMSD reproduction value = 40.46% (13.0-47.0) – sensitive enough for passing test

#### For *Pimephales promelas*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP6C – 0 - **Pass**.
2. Report the NOEC value for survival, Parameter TOP6C – 95.0%.
3. Report the LOEC value for survival, Parameter TXP6C – >95.0%
4. If the NOEC for growth is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP6C – 0- **Pass**.
5. Report the NOEC value for growth, Parameter TPP6C - 95.0%
6. Report the LOEC value for growth, Parameter TYP6C- >95.0%
7. Report the Lethal WET Limit for Parameter 51714 – 95.0%
8. PMSD growth value = 40.62 (12.0 – 30.0)- test lacks sensitivity. See Results and Discussion.

This report contains a total of 52 pages. The information within complies with the 2009 TNI standard and applies only to the samples listed in the enclosed chain of custody documents. The chemical data in this report is for monitoring purposes only and should not be reported on discharge monitoring reports.

**APPENDIX E**  
**AGENCY FORMS**



Permittee: San Antonio Water System- Clouse      TPDES Permit No.: WQ0010137033

**TABLE 1 (SHEET 1 OF 4)**  
**BIOMONITORING REPORTING, COMBINED OUTFALLS 001-006**  
**CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
Composite 1 Collected From	0700	02/13/22	To	0700	02/14/22
Composite 2 Collected From	0700	02/15/22	To	0700	02/16/22
Composite 3 Collected From	0700	02/17/22	To	0700	02/18/22

Test initiated:	1345	am/pm	02/15/22	Date
Dilution water used:	Receiving	X	Reconstituted	

**NUMBER OF YOUNG PRODUCED PER ADULT @ END OF TEST**

	Percent Effluent					
Rep	0	30.0	40.0	53.0	71.0	95.0
A	22	24	27	28	29	27
B	26	23	16	29	31	25
C	D	30	27	32	26	28
D	25	30	33	33	34	23
E	25	26	31	31	26	25
F	30	D	28	D	13	32
G	32	D	29	31	33	29
H	29	27	27	29	28	D3
I	27	30	36	24	28	27
J	28	28	D	29	27	D4
Surviv.Mean	27.0	27.0	28.0	30.0	28.0	27.0
Total Mean	24.0	22.0	25.0	27.0	28.0	22.0
CV%*	11.13	10.15	19.63	8.97	21.08	10.29
PMSD= 40.46	Acceptable Range 13 – 47					

\*coefficient of variation = standard deviation x 100/mean (based on young of surviving adults)  
Designate males (M), and dead females (D), along with number of neonates (x) released prior to death.

Permittee: San Antonio Water System- Clouse TPDES Permit No.: WQ0010137033

TABLE 1 (SHEET 2 OF 4)

BIOMONITORING REPORTING, COMBINED OUTFALLS 001-006

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less ( $p=.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%) YES X NO

Percent Survival

Time of Reading	Percent Effluent					
	0	30.0	40.0	53.0	71.0	95.0
24h	100.0	100.0	100.0	100.0	100.0	100.0
48h	100.0	100.0	100.0	100.0	100.0	100.0
End of test	100.0	100.0	90.0	100.0	100.0	80.0

2. Fisher's Exact Test:

Is the mean survival at test end significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION ( 71.0%) YES X NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

- a) NOEC survival = 95.0% effluent
- b) LOEC survival= >95.0% effluent
- c) NOEC reproduction = 95.0% effluent
- d) LOEC reproduction = >95.0% effluent

Permittee: San Antonio Water System- Clouse TPDES Permit No.: WQ0010137033

**TABLE 1 (SHEET 3 OF 4)**  
**BIOMONITORING REPORTING, COMBINED OUTFALLS 001-006**  
**FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
Composite 1 Collected from:	0700	02/13/22	To	0700	02/14/22
Composite 2 Collected from:	0700	02/15/22	To	0700	02/16/22
Composite 3 Collected from:	0700	02/17/22	To	0700	02/18/22

Test initiated: 1322 am/pm 02/15/22 Date  
Dilution water used: Receiving X Reconstituted

**FATHEAD MINNOW GROWTH DATA**

Effluent Conc. %	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight mg	CV%*
	A	B	C	D	E		
0	0.210	0.300	0.540	0.300	0.260	0.320	38.90
30.0	0.510	0.380	0.440	0.450	0.340	0.420	16.12
40.0	0.500	0.410	0.600	0.500	0.410	0.480	16.03
53.0	0.660	0.570	0.500	0.460	0.560	0.550	13.89
71.0	0.610	0.590	0.650	0.590	0.530	0.590	7.69
95.0	0.550	0.600	0.350	0.380	0.450	0.460	23.31
PMSD=40.62	Acceptable Range 12 - 30						

\*coefficient of variation = standard deviation x 100/mean.

1. **Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

Is the mean dry weight (growth) at 7 days significantly less ( $p=.05$ ) than the control's dry weight for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%) YES X NO

Permittee: San Antonio Water System- Clouse TPDES Permit No.: WQ0010137033

TABLE 1 (SHEET 4 OF 4)

BIOMONITORING REPORTING, COMBINED OUTFALLS 001-006

FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Conc. %	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0	100.0	88.0	100.0	88.0	50.0	100.0	100.0	85.0	24.16
30.0	100.0	75.0	88.0	100.0	100.0	100.0	100.0	92.0	12.09
40.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00
53.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00
71.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00
95.0	100.0	100.0	75.0	62.0	75.0	100.0	100.0	82.0	20.33

\*coefficient of variation = standard deviation x 100/mean.

2. **Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

Is the mean survival at 7 days significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (71.0%): YES X NO

3. Enter percent effluent corresponding to each NOEC below:

- a) NOEC survival = 95.0 % effluent
- b) NOEC growth = 95.0 % effluent
- c) LOEC survival = > 95.0 % effluent
- d) LOEC growth = > 95.0 % effluent

## Bio-Analytical Laboratories' Executive Summary

**Permittee:** San Antonio Water System- Steven M. Clouse Recycling Center  
3495 Valley Road  
Bexar County, TX

**Project #:** X8280

**Outfall(s):** 001-006

**Permit #:** WQ0010137033/TX0077801

**Test Dates:** April 12 – 19, 2022

**Test Type:** Chronic Static Renewal Survival and Growth Test using *Pimephales promelas* (EPA Method 1000.0)  
Chronic Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia* (EPA Method 1002.0).  
24-hour Acute Survival Test using *Pimephales promelas* (EPA Method 2000.0)  
24-hour Acute Survival Test using *Daphnia pulex* (EPA Method 2021.0)

### Results:

#### For *Ceriodaphnia dubia*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP3B – 0- Pass.
2. Report the NOEC value for survival, Parameter TOP3B – 95.0%.
3. Report the LOEC value for survival, Parameter TXP3B – >95.0%
4. If the NOEC for reproduction is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP3B – 0- Pass.
5. Report the NOEC value for reproduction, Parameter TPP3B - 95.0%
6. Report the LOEC value for reproduction, Parameter TYP3B- >95.0%
7. Report Lethal WET Limit for Parameter 51710 – 95.0%
8. PMSD reproduction value = 31.45% (13.0-47.0) – moderate sensitivity, acceptable for passing test
9. If the mean survival at 24 hours is greater than 50% in the 100.0% test concentration, enter a "0"; otherwise, enter a "1" for Parameter TIE3D – 0 – Pass.

#### For *Pimephales promelas*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP6C – 0 - Pass.
2. Report the NOEC value for survival, Parameter TOP6C – 95.0%.
3. Report the LOEC value for survival, Parameter TXP6C – >95.0%
4. If the NOEC for growth is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP6C – 0- Pass.
5. Report the NOEC value for growth, Parameter TPP6C - 95.0%
6. Report the LOEC value for growth, Parameter TYP6C- >95.0%
7. Report the Lethal WET Limit for Parameter 51714 – 95.0%
8. PMSD growth value = 42.22% (12.0 – 30.0)- test lacks sensitivity. See Results and Discussion.
9. If the mean survival at 24 hours is greater than 50% in the 100.0% test concentration, enter a "0"; otherwise, enter a "1" for Parameter TIE6C – 0 – Pass.

This report contains a total of 67 pages. The information within complies with the 2009 TNI standard and applies only to the samples listed in the enclosed chain of custody documents. The chemical data in this report is for monitoring purposes only and should not be reported on discharge monitoring reports.



## **APPENDIX E AGENCY FORMS**

Permittee: San Antonio Water System      TPDES Permit No. WQ0010137033  
Clouse Water Recycling Ctr.

**TABLE 1 (SHEET 1 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
Composite 1 Collected From	0700	04/11/22	To	0700	04/11/22
Composite 2 Collected From	0700	04/12/22	To	0700	04/13/22
Composite 3 Collected From	0710	04/14/22	To	0710	04/15/22

Test initiated:	1734	am/pm	04/12/22	Date
Test terminated:	1745	am/pm	04/19/22	Date
Dilution water used:	Receiving		X	Reconstituted

**NUMBER OF YOUNG PRODUCED PER ADULT @ END OF TEST**

	Percent Effluent					
Rep	0	30.0	40.0	53.0	71.0	95.0
A	21	27	22	24	22	23
B	24	3	25	21	24	3
C	26	31	25	25	22	22
D	26	D	D	22	22	26
E	22	22	23	22	24	22
F	26	12	21	23	27	D
G	30	21	22	20	21	24
H	24	29	26	27	16	16
I	20	22	24	22	15	20
J	10	21	23	25	16	18
Surviv.Mean	23.0	23.0	23.0	23.0	21.0	21.0
Total Mean	23.0	19.0	21.0	23.0	21.0	17.0
CV%*	23.51	25.68	7.11	9.23	19.07	15.20
PMSD	31.45%					

\*coefficient of variation = standard deviation x 100/mean. D=dead adult

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No. WQ0010137033

TABLE 1 (SHEET 2 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less ( $p=.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%) YES X NO

Percent Survival

Time of Reading	Percent Effluent					
	0	30.0	40.0	53.0	71.0	95.0
24h	100.0	100.0	100.0	100.0	100.0	100.0
48h	100.0	100.0	100.0	100.0	100.0	100.0
End of test	100.0	80.0	90.0	100.0	100.0	80.0

2. Fisher's Exact Test:

Is the mean survival at test end significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (71%) YES X NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

- a) NOEC survival = 95%      effluent
- b) LOEC survival= >95%      effluent
- c) NOEC reproduction = 95%      effluent
- d) LOEC reproduction = >95      effluent

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

NPDES Permit No.: WQ0010137033

**TABLE 1 (SHEET 3 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
Composite 1 Collected from:	0700	04/11/22	To	0700	04/11/22
Composite 2 Collected from:	0700	04/12/22	To	0700	04/13/22
Composite 3 Collected from:	0710	04/14/22	To	0710	04/15/22

Test initiated:	1547	am/pm	04/12/22	Date
Test terminated:	1053	am/pm	04/19/22	Date
Dilution water used:	Receiving		X Reconstituted	

**FATHEAD MINNOW GROWTH DATA**

Effluent Conc. %	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight mg	CV%*
	A	B	C	D	E		
0	0.390	0.340	0.430	0.200	0.190	0.310	35.27
30.0	0.280	0.360	0.390	0.420	0.400	0.370	15.59
40.0	0.340	0.290	0.360	0.290	0.360	0.330	11.58
53.0	0.360	0.290	0.480	0.410	0.350	0.380	18.64
71.0	0.290	0.350	0.390	0.590	0.350	0.390	29.24
95.0	0.520	0.490	0.400	0.280	0.340	0.410	25.51
<b>PMSD</b>	42.22						

\*coefficient of variation = standard deviation x 100/mean.

1. **Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

Is the mean dry weight (growth) at 7 days significantly less (p=.05) than the control's dry weight for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%)      YES      X NO

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

NPDES Permit No.: WQ0010137033

**TABLE 1 (SHEET 4 OF 4)**

**BIOMONITORING REPORTING, OUTFALL 001-006**

**FATHEAD MINNOW GROWTH AND SURVIVAL TEST**

**FATHEAD MINNOW SURVIVAL DATA**

Effluent Conc. %	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0	100.0	100.0	100.0	75.0	88.0	100.0	100.0	92.0	12.09
30.0	88.0	100.0	100.0	100.0	100.0	100.0	100.0	98.0	5.73
40.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00
53.0	100.0	75.0	88.0	88.0	100.0	100.0	100.0	90.0	11.62
71.0	88.0	100.0	88.0	88.0	88.0	97.5	95.0	90.0	6.21
95.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00

\*coefficient of variation = standard deviation x 100/mean.

2. **Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

**Is the mean survival at 7 days significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?**

**CRITICAL DILUTION ( 71%):                      YES        X    NO**

3. **Enter percent effluent corresponding to each NOEC below:**

- a) NOEC survival = 95                      % effluent
- b) NOEC growth = 95                      % effluent
- c) LOEC survival = >95                      % effluent
- d) LOEC growth = >95                      % effluent



Permittee: San Antonio Water Sys.

NPDES Permit No.:  
WQ0010137033/TX0077801

Clause Water Recycling Ctr.

TABLE 2 (SHEET 1 OF 2)

WATER FLEA SURVIVAL, OUTFALL 001-006

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected	0700	04/12/22 – 04/13/22
Test Initiated	1256	04/12/22

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	100%				
24h	A	100.0	100.0				
	B	100.0	100.0				
	C	100.0	100.0				
	D	100.0	100.0				
	E	100.0	100.0				
	MEAN*	100.0	100.0				

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (Daphnia)      NA % effluent

95% confidence limits: NA

Method of LC50 calculation: NA

\*If 24-hour survivorship data from the chronic Ceriodaphnia dubia test is being used, the mean survival per dilution for all 10 replicates shall be reported on this row.

Permittee: San Antonio Water System      NPDES Permit No.: WQ0010137003/  
Clouse Water Recycling Ctr.                      TX0077801

**TABLE 2 (SHEET 2 OF 2)**

**FATHEAD MINNOW SURVIVAL, OUTFALL 001-006**

**GENERAL INFORMATION**

	<b>Time (am/pm)</b>	<b>Date</b>
<b>Composite Sample Collected</b>	0700	04/12/22-04/13/22
<b>Test Initiated</b>	1547	04/14/22

**PERCENT SURVIVAL**

Time	Rep	Percent effluent (%)					
		0%	100.0				
24h	A	100.0	100.0				
	B	100.0	100.0				
	C	100.0	100.0				
	D	100.0	100.0				
	E	100.0	100.0				
	MEAN*	100.0	100.0				

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (Pimephales) =      NA      % effluent

95% confidence limits: NA

Method of LC50 calculation: NA

## Bio-Analytical Laboratories' Executive Summary

**Permittee:** San Antonio Water System- Steven M. Clouse Recycling Center  
3495 Valley Road  
Bexar County, TX

**Project #:** X8465

**Outfall(s):** 001-006

**Permit #:** WQ0010137033/TX0077801

**Test Dates:** September 13 - 20, 2022

**Test Type:** Chronic Static Renewal Survival and Growth Test using *Pimephales promelas*  
(EPA Method 1000.0)  
Chronic Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia*  
(EPA Method 1002.0).

### Results:

#### For *Ceriodaphnia dubia*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP3B – 0- Pass.
2. Report the NOEC value for survival, Parameter TOP3B – 95.0%.
3. Report the LOEC value for survival, Parameter TXP3B – >95.0%
4. If the NOEC for reproduction is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP3B – 0- Pass.
5. Report the NOEC value for reproduction, Parameter TPP3B - 95.0%
6. Report the LOEC value for reproduction, Parameter TYP3B- 40.0% **Report in comment section "due to non-true dose response, see report attached"**
7. Report Lethal WET Limit for Parameter 51710 – 95.0%
8. PMSD reproduction value = 32.19% (13.0-47.0) – moderate sensitivity, acceptable for passing test

#### For *Pimephales promelas*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP6C – 0 - Pass.
2. Report the NOEC value for survival, Parameter TOP6C – 95.0%.
3. Report the LOEC value for survival, Parameter TXP6C – >95.0%
4. If the NOEC for growth is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP6C – 0- Pass.
5. Report the NOEC value for growth, Parameter TPP6C - 95.0%
6. Report the LOEC value for growth, Parameter TYP6C- >95.0%
7. Report the Lethal WET Limit for Parameter 51714 – 95.0%
8. PMSD growth value = 40.04% (12.0 – 30.0)- test lacks sensitivity. See Results and Discussion.

**This report contains a total of 52 pages. The information within complies with the 2009 TNI standard and applies only to the samples listed in the enclosed chain of custody documents. The chemical data in this report is for monitoring purposes only and should not be reported on discharge monitoring reports.**

## **APPENDIX E**

### **AGENCY FORMS**

Permittee: San Antonio Water System      TPDES Permit No. WQ0010137033  
Clouse Water Recycling Ctr.

**TABLE 1 (SHEET 1 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
Composite 1 Collected From	0700	09/11/22	To	0700	09/12/22
Composite 2 Collected From	0700	09/13/22	To	0700	09/14/22
Composite 3 Collected From	0700	09/15/22	To	0700	09/16/22

Test initiated:	1630	am/pm	09/13/22	Date
Test terminated:	1353	am/pm	09/20/22	Date
Dilution water used:	Receiving		X	Reconstituted

**NUMBER OF YOUNG PRODUCED PER ADULT @ END OF TEST**

	Percent Effluent					
Rep	0	30.0	40.0	53.0	71.0	95.0
A	24	24	9	22	24	22
B	27	25	17	11	D	25
C	26	27	13	25	20	25
D	27	19	23	D	D22	26
E	29	D	24	14	D	22
F	28	26	19	10	27	26
G	23	23	18	27	21	19
H	23	20	18	23	25	20
I	18	25	19	11	25	12
J	12	12	19	22	D2	23
Surviv.Mean	24.0	22.0	18.0	18.0	24.0	22.0
Total Mean	24.0	20.0	18.0	16.0	17.0	22.0
CV%*	21.97	21.00	24.34	36.79	11.23	19.40
PMSD	32.19%					

\*coefficient of variation = standard deviation x 100/mean. D=dead adult



Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No. WQ0010137033

TABLE 1 (SHEET 2 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less ( $p=.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%)      YES   X   NO

Percent Survival

Time of Reading	Percent Effluent					
	0	30.0	40.0	53.0	71.0	95.0
24h	100.0	90.0	100.0	100.0	100.0	100.0
48h	100.0	90.0	100.0	100.0	100.0	100.0
End of test	100.0	90.0	100.0	90.0	60.0	100.0

2. Fisher's Exact Test:

Is the mean survival at test end significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (71%)   YES      X   NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

- a) NOEC survival = 95%      effluent
- b) LOEC survival= >95%      effluent
- c) NOEC reproduction = 95%      effluent
- d) LOEC reproduction = 40%      effluent

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

NPDES Permit No.: WQ0010137033

**TABLE 1 (SHEET 3 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
Composite 1 Collected from:	0700	09/11/22	To	0700	09/12/22
Composite 2 Collected from:	0700	09/13/22	To	0700	09/14/22
Composite 3 Collected from:	0700	09/15/22	To	0700	09/16/22

Test initiated:	1755	am/pm	09/13/22	Date
Test terminated:	1028	am/pm	09/20/22	Date
Dilution water used:	Receiving		X Reconstituted	

**FATHEAD MINNOW GROWTH DATA**

Effluent Conc. %	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight mg	CV%*
	A	B	C	D	E		
0	0.410	0.450	0.450	0.280	0.240	0.370	27.76
30.0	0.340	0.290	0.300	0.400	0.510	0.370	25.06
40.0	0.290	0.400	0.390	0.450	0.460	0.400	17.42
53.0	0.480	0.390	0.440	0.390	0.370	0.410	10.28
71.0	0.260	0.410	0.380	0.600	0.280	0.390	35.37
95.0	0.460	0.650	0.410	0.390	0.600	0.500	23.16
PMSD	40.04%						

\*coefficient of variation = standard deviation x 100/mean.

1. **Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

Is the mean dry weight (growth) at 7 days significantly less ( $p=.05$ ) than the control's dry weight for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%)      YES      X NO

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

NPDES Permit No.: WQ0010137033

**TABLE 1 (SHEET 4 OF 4)**

**BIOMONITORING REPORTING, OUTFALL 001-006**

**FATHEAD MINNOW GROWTH AND SURVIVAL TEST**

**FATHEAD MINNOW SURVIVAL DATA**

Effluent Conc. %	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
<b>0</b>	75.0	100.0	100.0	100.0	100.0	100.0	100.0	95.0	11.68
<b>30.0</b>	88.0	100.0	88.0	100.0	100.0	100.0	100.0	95.0	7.62
<b>40.0</b>	62.0	100.0	75.0	100.0	88.0	97.5	97.5	85.0	17.85
<b>53.0</b>	100.0	100.0	100.0	88.0	88.0	97.5	97.5	95.0	7.62
<b>71.0</b>	75.0	100.0	100.0	100.0	100.0	100.0	100.0	95.0	11.68
<b>95.0</b>	100.0	100.0	88.0	100.0	100.0	100.0	100.0	98.0	6.06

\*coefficient of variation = standard deviation x 100/mean.

2. **Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

**Is the mean survival at 7 days significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?**

**CRITICAL DILUTION ( 71%):                      YES        X    NO**

3. **Enter percent effluent corresponding to each NOEC below:**

- a) NOEC survival = 95.0        % effluent
- b) NOEC growth = 95.0        % effluent
- c) LOEC survival = >95.0    % effluent
- d) LOEC growth = >95.0    % effluent

## Bio-Analytical Laboratories' Executive Summary

**Permittee:** San Antonio Water System- Steven M. Clouse Recycling Center  
3495 Valley Road  
Bexar County, TX

**Project #:** X8491

**Outfall(s):** 001-006

**Permit #:** WQ0010137033/TX0077801

**Test Dates:** October 4 - 11, 2022

**Test Type:** Chronic Static Renewal Survival and Growth Test using *Pimephales promelas*  
(EPA Method 1000.0)  
Chronic Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia*  
(EPA Method 1002.0).  
24-hour Acute Survival Test using *Pimephales promelas* (EPA Method 2000.0)  
24-hour Acute Survival Test using *Daphnia pulex* (EPA Method 2021.0)

### Results:

#### For *Ceriodaphnia dubia*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP3B – 0- **Pass**.
2. Report the NOEC value for survival, Parameter TOP3B – 95.0%.
3. Report the LOEC value for survival, Parameter TXP3B – >95.0%
4. If the NOEC for reproduction is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP3B – 0- **Pass**.
5. Report the NOEC value for reproduction, Parameter TPP3B - 95.0%
6. Report the LOEC value for reproduction, Parameter TYP3B- >95.0%
7. Report Lethal WET Limit for Parameter 51710 – 95.0%
8. PMSD reproduction value = 38.01% (13.0-47.0) – moderate sensitivity, acceptable for passing test
9. If the mean survival at 24 hours is greater than 50% in the 100.0% test concentration, enter a "0"; otherwise, enter a "1" for Parameter TIE3D – 0 – **Pass**.

#### For *Pimephales promelas*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP6C – 0 - **Pass**.
2. Report the NOEC value for survival, Parameter TOP6C – 95.0%.
3. Report the LOEC value for survival, Parameter TXP6C – >95.0%
4. If the NOEC for growth is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP6C – 0- **Pass**.
5. Report the NOEC value for growth, Parameter TPP6C - 95.0%
6. Report the LOEC value for growth, Parameter TYP6C- >95.0%
7. Report the Lethal WET Limit for Parameter 51714 – 95.0%
8. PMSD growth value = 14.91% (12.0 – 30.0)- moderate sensitivity, acceptable for passing test.
9. If the mean survival at 24 hours is greater than 50% in the 100.0% test concentration, enter a "0"; otherwise, enter a "1" for Parameter TIE6C – 0 – **Pass**.

This report contains a total of 60 pages. The information within complies with the 2009 TNI standard and applies only to the samples listed in the enclosed chain of custody documents. The chemical data in this report is for monitoring purposes only and should not be reported on discharge monitoring reports.

## **APPENDIX E**

### **AGENCY FORMS**



Permittee: San Antonio Water System      TPDES Permit No. WQ0010137033  
Clouse Water Recycling Ctr.

**TABLE 1 (SHEET 1 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
Composite 1 Collected From	0700	10/02/22	To	0700	10/03/22
Composite 2 Collected From	0700	10/04/22	To	0700	10/05/22
Composite 3 Collected From	0700	10/06/22	To	0700	10/07/22

Test initiated:	1630	am/pm	10/04/22	Date
Test terminated:	1350	am/pm	10/11/22	Date
Dilution water used:	Receiving		X Reconstituted	

**NUMBER OF YOUNG PRODUCED PER ADULT @ END OF TEST**

	Percent Effluent					
Rep	0	30.0	40.0	53.0	71.0	95.0
A	20	22	26	21	23	25
B	16	22	18	D4	18	25
C	20	19	15	19	21	20
D	17	16	D5	21	17	24
E	23	15	17	D	20	16
F	19	D3	18	14	20	19
G	21	17	21	21	18	20
H	20	D3	21	19	22	18
I	14	D2	26	28	23	22
J	D4	21	D4	27	20	25
Surviv.Mean	19.0	19.0	20.0	21.0	20.0	21.0
Total Mean	17.0	14.0	17.0	17.0	20.0	21.0
CV%*	14.61	15.44	20.06	21.16	10.38	15.29
PMSD	38.01%					

\*coefficient of variation = standard deviation x 100/mean. D=dead adult

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No. WQ0010137033

TABLE 1 (SHEET 2 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less ( $p=.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%) YES X NO

Percent Survival

Time of Reading	Percent Effluent					
	0	30.0	40.0	53.0	71.0	95.0
24h	100.0	100.0	100.0	100.0	100.0	100.0
48h	100.0	100.0	100.0	100.0	100.0	100.0
End of test	90.0	70.0	80.0	80.0	100.0	100.0

2. Fisher's Exact Test:

Is the mean survival at test end significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (71%) YES X NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

- a) NOEC survival = 95% effluent
- b) LOEC survival= >95% effluent
- c) NOEC reproduction = 95% effluent
- d) LOEC reproduction = 95% effluent

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

NPDES Permit No.: WQ0010137033

**TABLE 1 (SHEET 3 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
Composite 1 Collected from:	0700	10/02/22	To	0700	10/03/22
Composite 2 Collected from:	0700	10/04/22	To	0700	10/05/22
Composite 3 Collected from:	0700	10/06/22	To	0700	10/07/22

Test initiated:	1600	am/pm	10/04/22	Date
Test terminated:	0906	am/pm	10/11/22	Date
Dilution water used:	Receiving		X Reconstituted	

**FATHEAD MINNOW GROWTH DATA**

Effluent Conc. %	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight mg	CV%*
	A	B	C	D	E		
<b>0</b>	0.790	0.830	0.880	0.680	0.710	0.780	10.51
<b>30.0</b>	0.790	0.810	0.860	0.880	0.790	0.820	5.02
<b>40.0</b>	0.760	0.660	0.820	0.710	0.750	0.740	8.13
<b>53.0</b>	0.990	0.800	0.760	0.890	“+”	0.860	11.66
<b>71.0</b>	0.710	0.710	0.930	0.820	0.740	0.780	11.77
<b>95.0</b>	0.810	0.770	0.850	0.890	0.760	0.820	6.36
<b>PMSD</b>	14.91						

\*coefficient of variation = standard deviation x 100/mean.

“+” beaker dropped. Fish lost.

1. **Dunnett’s Procedure or Steel’s Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

**Is the mean dry weight (growth) at 7 days significantly less (p=.05) than the control’s dry weight for the % effluent corresponding to significant nonlethal effects?**

**CRITICAL DILUTION ( 71.0%)                      YES                      X NO**

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

NPDES Permit No.: WQ0010137033

TABLE 1 (SHEET 4 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Conc. %	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00
30.0	88.0	100.0	100.0	100.0	100.0	100.0	97.5	98.0	6.06
40.0	88.0	100.0	88.0	100.0	100.0	97.5	97.5	95.0	7.62
53.0	100.0	100.0	88.0	100.0	“+”	100.0	100.0	97.0	6.82
71.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00
95.0	100.0	100.0	100.0	100.0	88.0	100.0	100.0	98.0	6.06

\*coefficient of variation = standard deviation x 100/mean.

“+” beaker dropped. Fish lost.

2. **Dunnett’s Procedure or Steel’s Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

Is the mean survival at 7 days significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION ( 71%):                      YES      X      NO

3. **Enter percent effluent corresponding to each NOEC below:**

- a) NOEC survival = 95.0      % effluent
- b) NOEC growth = 95.0      % effluent
- c) LOEC survival = >95.0      % effluent
- d) LOEC growth= >95.0      % effluent

Permittee: San Antonio Water Sys.

NPDES Permit No.:  
WQ0010137033/TX0077801

Clause Water Recycling Ctr.

TABLE 2 (SHEET 1 OF 2)

WATER FLEA SURVIVAL, OUTFALL 001-006

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected	0700	10/07/22
Test Initiated	1600	10/08/22

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	100%				
24h	A	100.0	100.0				
	B	100.0	100.0				
	C	100.0	100.0				
	D	100.0	100.0				
	E	100.0	100.0				
	MEAN*	100.0	100.0				

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (Daphnia)      NA % effluent

95% confidence limits: NA

Method of LC50 calculation: NA

\*If 24-hour survivorship data from the chronic Ceriodaphnia dubia test is being used, the mean survival per dilution for all 10 replicates shall be reported on this row.



Permittee: San Antonio Water System      NPDES Permit No.: WQ0010137003/  
Clouse Water Recycling Ctr.                      TX0077801

**TABLE 2 (SHEET 2 OF 2)**

**FATHEAD MINNOW SURVIVAL, OUTFALL 001-006**

**GENERAL INFORMATION**

	Time (am/pm)	Date
Composite Sample Collected	0700	10/07/22
Test Initiated	1545	10/08/22

**PERCENT SURVIVAL**

Time	Rep	Percent effluent (%)					
		0%	100.0				
24h	A	100.0	100.0				
	B	100.0	100.0				
	C	100.0	100.0				
	D	100.0	100.0				
	E	100.0	100.0				
	MEAN*	100.0	100.0				

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (Pimephales) =      NA      % effluent

95% confidence limits: NA

Method of LC50 calculation: NA

## Bio-Analytical Laboratories' Executive Summary

**Permittee:** San Antonio Water System- Steven M. Clouse Recycling Center  
3495 Valley Road  
Bexar County, TX

**Project #:** X8689

**Outfall(s):** 001-006

**Permit #:** WQ0010137033/TX0077801

**Test Dates:** March 7 – 14, 2023

**Test Type:** Chronic Static Renewal Survival and Growth Test using *Pimephales promelas* (EPA Method 1000.0)  
Chronic Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia* (EPA Method 1002.0).

### Results:

#### For *Ceriodaphnia dubia*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP3B – 0- **Pass**.
2. Report the NOEC value for survival, Parameter TOP3B – 95.0%.
3. Report the LOEC value for survival, Parameter TXP3B – >95.0%
4. If the NOEC for reproduction is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP3B – 0- **Pass**.
5. Report the NOEC value for reproduction, Parameter TPP3B - 95.0%
6. Report the LOEC value for reproduction, Parameter TYP3B- >95.0%
7. Report Lethal WET Limit for Parameter 51710 – 95.0%
8. PMSD reproduction value = 28.60%(13.0-47.0)–moderate sensitivity, acceptable for passing test

#### For *Pimephales promelas*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP6C – 0 - **Pass**.
2. Report the NOEC value for survival, Parameter TOP6C – 95.0%.
3. Report the LOEC value for survival, Parameter TXP6C – >95.0%
4. If the NOEC for growth is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP6C – 0- **Pass**.
5. Report the NOEC value for growth, Parameter TPP6C - 95.0%
6. Report the LOEC value for growth, Parameter TYP6C- >95.0%
7. Report the Lethal WET Limit for Parameter 51714 – 95.0%
8. PMSD growth value = 28.40% (12.0 –30.0)-moderate sensitivity, acceptable for passing test.

This report contains a total of 51 pages. The information within complies with the 2009 TNI standard and applies only to the samples listed in the enclosed chain of custody documents. The chemical data in this report is for monitoring purposes only and should not be reported on discharge monitoring reports.

**APPENDIX E**  
**AGENCY FORMS**

Permittee: San Antonio Water System      TPDES Permit No. WQ0010137033  
Clouse Water Recycling Ctr.

**TABLE 1 (SHEET 1 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
<b>Composite 1 Collected From</b>	0500	03/05/23	<b>To</b>	2300	03/06/23
<b>Composite 2 Collected From</b>	0700	03/07/23	<b>To</b>	0700	03/08/23
<b>Composite 3 Collected From</b>	0700	03/09/23	<b>To</b>	0700	03/10/23

<b>Test initiated:</b>	1350	<b>am/pm</b>	03/07/23	<b>Date</b>
<b>Test terminated:</b>	1130	<b>am/pm</b>	03/14/23	<b>Date</b>
<b>Dilution water used:</b>	Receiving		X	<b>Reconstituted</b>

**NUMBER OF YOUNG PRODUCED PER ADULT @ END OF TEST**

	Percent Effluent					
Rep	0	30.0	40.0	53.0	71.0	95.0
A	27	13	18	24	24	19
B	27	26	11	25	24	20
C	25	24	19	20	24	19
D	14	21	22	11	11	19
E	8	16	9	22	11	12
F	30	21	14	D	14	24
G	24	17	22	27	18	23
H	27	13	20	23	24	24
I	26	15	24	15	24	11
J	15	26	20	22	11	12
Surviv.Mean	22	19	18	21	18	18
Total Mean	22	19	18	19	18	18
CV%*	32.62	26.42	27.80	24.05	33.25	27.27
PMSD	28.60%					

\*coefficient of variation = standard deviation x 100/mean. D=dead adult

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No. WQ0010137033

TABLE 1 (SHEET 2 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less ( $p=.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%) YES X NO

Percent Survival

Time of Reading	Percent Effluent					
	0	30.0	40.0	53.0	71.0	95.0
24h	100.0	100.0	100.0	100.0	100.0	100.0
48h	100.0	100.0	100.0	100.0	100.0	100.0
End of test	100.0	100.0	100.0	90.0	100.0	100.0

2. Fisher's Exact Test:

Is the mean survival at test end significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (71%) YES X NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

a) NOEC survival = 95% effluent  
b) LOEC survival= >95% effluent  
c) NOEC reproduction = 95% effluent  
d) LOEC reproduction = 95% effluent



Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

NPDES Permit No.: WQ0010137033

**TABLE 1 (SHEET 3 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
<b>Composite 1 Collected from:</b>	0500	03/05/23	<b>To</b>	2300	03/06/23
<b>Composite 2 Collected from:</b>	0700	03/07/23	<b>To</b>	0700	03/08/23
<b>Composite 3 Collected from:</b>	0700	03/09/23	<b>To</b>	0700	03/10/23

<b>Test initiated:</b>	1415 am/pm	03/07/23	<b>Date</b>
<b>Test terminated:</b>	1120 am/pm	03/14/23	<b>Date</b>
<b>Dilution water used:</b>	Receiving	X Reconstituted	

**FATHEAD MINNOW GROWTH DATA**

Effluent Conc. %	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight mg	CV%*
	A	B	C	D	E		
0	0.660	1.400	0.730	0.750	0.590	0.820	38.05
30.0	0.880	0.710	0.640	0.740	0.790	0.750	11.79
40.0	0.990	0.730	0.880	0.710	0.890	0.840	13.96
53.0	0.690	0.920	0.750	0.730	0.640	0.750	14.66
71.0	0.850	0.670	0.880	0.640	0.810	0.770	13.90
95.0	0.890	0.740	0.850	0.850	0.860	0.840	6.92
PMSD	28.40						

\*coefficient of variation = standard deviation x 100/mean.

1. **Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

Is the mean dry weight (growth) at 7 days significantly less (p=.05) than the control's dry weight for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%)      YES      X NO

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

NPDES Permit No.: WQ0010137033

TABLE 1 (SHEET 4 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Conc. %	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0	87.5	87.5	100.0	87.5	75.0	100.0	100.0	88.0	10.09
30.0	87.5	87.5	75.0	87.5	100.0	100.0	100.0	88.0	10.09
40.0	100.0	100.0	100.0	75.0	100.0	100.0	100.0	95.0	11.68
53.0	87.5	100.0	100.0	100.0	75.0	100.0	100.0	92.0	12.12
71.0	100.0	75.0	100.0	100.0	100.0	100.0	100.0	95.0	11.68
95.0	100.0	100.0	87.5	87.5	100.0	100.0	100.0	95.0	7.62

\*coefficient of variation = standard deviation x 100/mean.

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean survival at 7 days significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION ( 71%):                      YES        X    NO

3. Enter percent effluent corresponding to each NOEC below:

- a) NOEC survival = 95.0        % effluent
- b) NOEC growth = 95.0        % effluent
- c) LOEC survival = >95.0    % effluent
- d) LOEC growth = >95.0    % effluent

## **APPENDIX E AGENCY FORMS**

Permittee: San Antonio Water System      TPDES Permit No. WQ0010137033  
Clouse Water Recycling Ctr.

**TABLE 1 (SHEET 1 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
<b>Composite 1 Collected From</b>	0700	06/11/23	<b>To</b>	0700	06/12/23
<b>Composite 2 Collected From</b>	0705	06/13/23	<b>To</b>	0705	06/14/23
<b>Composite 3 Collected From</b>	0700	06/15/23	<b>To</b>	0700	06/16/23

<b>Test initiated:</b>	1418	<b>am/pm</b>	06/13/23	<b>Date</b>
<b>Test terminated:</b>	1715	<b>am/pm</b>	06/21/23	<b>Date</b>
<b>Dilution water used:</b>	Receiving		X	Reconstituted

**NUMBER OF YOUNG PRODUCED PER ADULT @ END OF TEST**

Rep	Percent Effluent					
	0	30.0	40.0	53.0	71.0	95.0
A	14	D5	0	11	13	18
B	6	13	10	8	D3	18
C	20	9	13	D	D3	26
D	14	D	19	6	18	24
E	11	12	18	17	22	23
F	14	5	16	19	16	15
G	22	9	12	10	17	21
H	15	6	19	13	13	13
I	21	14	6	D13	D2	20
J	19	17	17	8	13	15
Surviv.Mean	15.6	10.62	13.0	11.5	16.0	19.3
Total Mean	15.6	9.0	13.0	10.5	12.0	19.3
CV%*	31.87	38.62	47.97	39.71	21.04	22.12
<b>PMSD=36.66%</b>	Acceptable Range 13 - 47					

\*coefficient of variation = standard deviation x 100/mean. D=dead adult

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No. WQ0010137033

TABLE 1 (SHEET 2 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less ( $p=.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%) YES X NO

Percent Survival

Time of Reading	Percent Effluent					
	0	30.0	40.0	53.0	71.0	95.0
24h	100.0	100.0	100.0	100.0	100.0	100.0
48h	100.0	100.0	100.0	100.0	100.0	100.0
End of test	100.0	80.0	100.0	80.0	70.0	100.0

2. Fisher's Exact Test:

Is the mean survival at test end significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (71%) YES X NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

- a) NOEC survival = 95% effluent
- b) LOEC survival= >95% effluent
- c) NOEC reproduction = 95% effluent
- d) LOEC reproduction = 95% effluent



Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No.: WQ0010137033

**TABLE 1 (SHEET 3 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
<b>Composite 1 Collected from:</b>	0700	06/11/23	<b>To</b>	0700	06/12/23
<b>Composite 2 Collected from:</b>	0705	06/13/23	<b>To</b>	0705	06/14/23
<b>Composite 3 Collected from:</b>	0700	06/15/23	<b>To</b>	0700	06/16/23

<b>Test initiated:</b>	1400 am/pm	06/13/23	<b>Date</b>
<b>Test terminated:</b>	1310 am/pm	06/20/23	<b>Date</b>
<b>Dilution water used:</b>	Receiving	X Reconstituted	

**FATHEAD MINNOW GROWTH DATA**

Effluent Conc. %	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight mg	CV%*
	A	B	C	D	E		
0	0.625	0.613	0.688	0.488	0.675	0.618	12.85
30.0	0.538	0.650	0.613	0.525	0.700	0.605	12.28
40.0	0.563	0.425	0.375	0.513	0.525	0.480	16.12
53.0	0.463	0.688	0.313	0.450	0.513	0.485	27.90
71.0	0.625	0.575	0.688	0.588	0.663	0.628	7.64
95.0	0.588	0.775	0.700	0.738	0.550	0.670	14.49
<b>PMSD=21.60</b>	Acceptable Range 12 - 20						

\*coefficient of variation = standard deviation x 100/mean.

1. **Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

**Is the mean dry weight (growth) at 7 days significantly less (p=.05) than the control's dry weight for the % effluent corresponding to significant nonlethal effects?**

**CRITICAL DILUTION ( 71.0%)      YES      X NO**

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No.: WQ0010137033

TABLE 1 (SHEET 4 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Conc. %	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00
30.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00
40.0	87.5	87.5	87.5	100.0	100.0	75.0	75.0	92.5	7.84
53.0	100.0	100.0	62.5	75.0	87.5	100.0	100.0	85.0	17.85
71.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00
95.0	100.0	100.0	100.0	100.0	87.5	100.0	100.0	97.5	6.06

\*coefficient of variation = standard deviation x 100/mean.

2. **Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

Is the mean survival at 7 days significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION ( 71%):                      YES        X    NO

3. **Enter percent effluent corresponding to each NOEC below:**

- a) NOEC survival = 95.0        % effluent
- b) NOEC growth = 95.0        % effluent
- c) LOEC survival = >95.0    % effluent
- d) LOEC growth = >95.0    % effluent

Permittee: San Antonio Water Sys.

TPDES Permit No.: WQ0010137033/TX0077801

Clouse Water Recycling Ctr.

TABLE 2 (SHEET 1 OF 2)

*Ceriodaphnia dubia* SURVIVAL, OUTFALL 001-006

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected	0700	06/12/23
Test Initiated	1501	06/13/23

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	100%				
24h	A	100.0	100.0				
	B	100.0	100.0				
	C	100.0	100.0				
	D	100.0	100.0				
	E	100.0	100.0				
	MEAN*	100.0	100.0				

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (*Ceriodaphnia dubia* )

NA % effluent

95% confidence limits: NA

Method of LC50 calculation: NA

\*If 24-hour survivorship data from the chronic *Ceriodaphnia dubia* test is being used, the mean survival per dilution for all 10 replicates shall be reported on this row.

Permittee: San Antonio Water System      TPDES Permit No.: WQ0010137003/  
Clouse Water Recycling Ctr.                      TX0077801

**TABLE 2 (SHEET 2 OF 2)**

**FATHEAD MINNOW SURVIVAL, OUTFALL 001-006**

**GENERAL INFORMATION**

	Time (am/pm)	Date
Composite Sample Collected	0700	06/12/23
Test Initiated	1533	06/13/23

**PERCENT SURVIVAL**

Time	Rep	Percent effluent (%)					
		0%	100.0				
24h	A	100.0	100.0				
	B	100.0	100.0				
	C	100.0	100.0				
	D	100.0	100.0				
	E	100.0	100.0				
	MEAN*	100.0	100.0				

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (Pimephales) =      NA      % effluent

95% confidence limits: NA

Method of LC50 calculation: NA

### Bio-Analytical Laboratories' Executive Summary

**Permittee:** San Antonio Water System- Steven M. Clouse Water Recycling Center  
2800 US Highway 281 North  
San Antonio, TX 78212

**Project #:** X8890

**Outfall:** 001-006

**Permit #:** WQ0010137033/TX0077801

**Test Dates:** August 8 - 9, 2023

**Test Type:** 24-hour acute test using *Daphnia pulex* (EPA Method 2021.0).  
24-hour acute test using *Pimephales promelas* (EPA Method 2000.0).

**Results:**

**For *Daphnia pulex*:**

Enter a "1" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution, enter a "0"; if the mean survival is less than or equal to 50%, enter a "0" for Parameter TIE3D – 0 – Pass.

**For *Pimephales promelas*:**

Enter a "1" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution, enter a "0"; if the mean survival is less than or equal to 50%, enter a "0" for Parameter TIE6C – 0 – Pass.

This document contains a total of 30 pages. The results of the tests relate only to the samples listed on the enclosed chain of custody documents. The test results comply with the 2009 TNI standard, unless stated otherwise. The chemical data in this report is for monitoring purposes only and should not be reported on discharge monitoring reports.

**APPENDIX E**  
**AGENCY FORMS**



Permittee: San Antonio Water Sys. TPDES Permit No.: WQ0010137033

Clouse Water Recycling Ctr.

TABLE 2 (SHEET 1 OF 2)

*Ceriodaphnia dubia* SURVIVAL, OUTFALL 001-006

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected	0750	08/07/23
Test Initiated	1522	08/08/23

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	100%				
24h	A	100.0	100.0				
	B	87.5	100.0				
	C	100.0	100.0				
	D	100.0	100.0				
	E	100.0	87.5				
	MEAN*	97.5	97.5				

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (Daphnia pulex) NA % effluent

95% confidence limits: NA

Method of LC50 calculation: NA

\*If 24-hour survivorship data from the chronic Ceriodaphnia dubia test is being used, the mean survival per dilution for all 10 replicates shall be reported on this row.

Permittee: San Antonio Water System      TPDES Permit No.: WQ0010137003  
Clouse Water Recycling Ctr.

**TABLE 2 (SHEET 2 OF 2)**

**FATHEAD MINNOW SURVIVAL, OUTFALL 001-006**

**GENERAL INFORMATION**

	Time (am/pm)	Date
Composite Sample Collected	0750	08/07/23
Test Initiated	1525	08/08/23

**PERCENT SURVIVAL**

Time	Rep	Percent effluent (%)					
		0%	100.0				
24h	A	100.0	100.0				
	B	100.0	100.0				
	C	100.0	100.0				
	D	100.0	100.0				
	E	100.0	100.0				
	MEAN*	100.0	100.0				

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (Pimephales) =      NA      % effluent

95% confidence limits: NA

Method of LC50 calculation: NA

## Bio-Analytical Laboratories' Executive Summary

**Permittee:** San Antonio Water System- Steven M. Clouse Recycling Center  
3495 Valley Road  
Bexar County, TX

**Project #:** X8926

**Outfall(s):** 001-006

**Permit #:** WQ0010137033/TX0077801

**Test Dates:** September 7 - 14, 2023

**Test Type:** Chronic Static Renewal Survival and Growth Test using *Pimephales promelas* (EPA Method 1000.0)  
Chronic Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia* (EPA Method 1002.0).

### Results:

#### For *Ceriodaphnia dubia*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP3B – 0- Pass.
2. Report the NOEC value for survival, Parameter TOP3B – 95.0%.
3. Report the LOEC value for survival, Parameter TXP3B – >95.0%
4. If the NOEC for reproduction is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP3B – 0- Pass.
5. Report the NOEC value for reproduction, Parameter TPP3B - 95.0%
6. Report the LOEC value for reproduction, Parameter TYP3B- >95.0%
7. Report Lethal WET Limit for Parameter 51710 – 95.0%
8. PMSD reproduction value=45.43%(13.0-47.0)moderate sensitivity, acceptable for passing test

#### For *Pimephales promelas*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP6C – 0 - Pass.
2. Report the NOEC value for survival, Parameter TOP6C – 95.0%.
3. Report the LOEC value for survival, Parameter TXP6C – >95.0%
4. If the NOEC for growth is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP6C – 0- Pass.
5. Report the NOEC value for growth, Parameter TPP6C - 71.0%
6. Report the LOEC value for growth, Parameter TYP6C- 95.0%
7. Report the Lethal WET Limit for Parameter 51714 – 71.0%
8. PMSD growth value =32.33% (12.0 –30.0)-moderate sensitivity, acceptable for passing test at 71.0%.

This report contains a total of 53 pages. The information within complies with the 2009 TNI standard and applies only to the samples listed in the enclosed chain of custody documents. The chemical data in this report is for monitoring purposes only and should not be reported on discharge monitoring reports.

**APPENDIX E**  
**AGENCY FORMS**

Permittee: San Antonio Water System      TPDES Permit No. WQ0010137033  
Clouse Water Recycling Ctr.

**TABLE 1 (SHEET 1 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
<b>Composite 1 Collected From</b>	0500	09/05/23	<b>To</b>	0730	09/06/23
<b>Composite 2 Collected From</b>	0500	09/07/23	<b>To</b>	0705	09/08/23
<b>Composite 3 Collected From</b>	0500	09/10/23	<b>To</b>	0700	09/11/23

<b>Test initiated:</b>	1638	<b>am/pm</b>	09/07/23	<b>Date</b>
<b>Test terminated:</b>	1800	<b>am/pm</b>	09/14/23	<b>Date</b>
<b>Dilution water used:</b>	Receiving		X	<b>Reconstituted</b>

**NUMBER OF YOUNG PRODUCED PER ADULT @ END OF TEST**

Rep	Percent Effluent					
	0	30.0	40.0	53.0	71.0	95.0
A	14	20	D3	27	20	23
B	11	16	D5	24	MA	26
C	20	15	20	17	20	9
D	19	11	11	19	21	22
E	16	19	18	12	12	19
F	D2	21	23	24	21	9
G	15	21	13	20	22	6
H	19	24	18	17	9	6
I	12	22	22	13	18	8
J	17	19	22	31	22	7
Surviv.Mean	15.9	18.8	18.4	20.4	18.3	13.5
Total Mean	14.5	18.8	15.5	20.4	16.5	13.5
CV%*	20.01	20.34	23.80	29.79	24.44	59.18
<b>PMSD=45.43%</b>	Acceptable Range 13 - 47					

\*coefficient of variation = standard deviation x 100/mean. D=dead adult. MA=missing adult.

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No. WQ0010137033

TABLE 1 (SHEET 2 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less ( $p=.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%)      YES   X   NO

Percent Survival

Time of Reading	Percent Effluent					
	0	30.0	40.0	53.0	71.0	95.0
24h	100.0	100.0	100.0	100.0	100.0	100.0
48h	100.0	100.0	100.0	100.0	90.0	100.0
End of test	90.0	100.0	80.0	100.0	90.0	100.0

2. Fisher's Exact Test:

Is the mean survival at test end significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (71%)   YES      X      NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

a) NOEC survival =      95%      effluent  
b) LOEC survival=      >95%      effluent  
c) NOEC reproduction =      95%      effluent  
d) LOEC reproduction =      95%      effluent



Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No.: WQ0010137033

**TABLE 1 (SHEET 3 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
Composite 1 Collected from:	0500	09/05/23	To	0730	09/06/23
Composite 2 Collected from:	0500	09/07/23	To	0705	09/08/23
Composite 3 Collected from:	0500	09/10/23	To	0700	09/11/23

Test initiated:	1535 am/pm	09/07/23	<b>Date</b>
Test terminated:	1145 am/pm	09/14/23	<b>Date</b>
Dilution water used:	Receiving	X Reconstituted	

**FATHEAD MINNOW GROWTH DATA**

Effluent Conc. %	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight mg	CV%*
	A	B	C	D	E		
0	0.213	0.513	0.625	0.413	0.613	0.475	35.79
30.0	0.338	0.375	0.300	0.250	0.063	0.265	46.14
40.0	0.363	0.263	0.325	0.325	0.213	0.298	20.02
53.0	0.275	0.288	0.388	0.375	0.425	0.350	18.73
71.0	0.313	0.288	0.363	0.375	0.400	0.348	13.31
95.0	0.400	0.188	0.175	0.338	0.313	0.283	34.64
PMSD=32.33	Acceptable Range 12 - 20						

\*coefficient of variation = standard deviation x 100/mean.

1. **Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

Is the mean dry weight (growth) at 7 days significantly less (p=.05) than the control's dry weight for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%)    X    YES                      NO

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No.: WQ0010137033

TABLE 1 (SHEET 4 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Conc. %	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0	100.0	62.5	100.0	50.0	87.5	100.0	100.0	80.0	24.48
30.0	87.5	100.0	87.5	62.5	25.0	100.0	100.0	72.5	32.48
40.0	87.5	100.0	87.5	87.5	50.0	100.0	100.0	82.5	19.35
53.0	62.5	100.0	87.5	100.0	75.0	100.0	100.0	85.0	17.85
71.0	50.0	87.5	87.5	87.5	75.0	100.0	100.0	77.5	16.97
95.0	62.5	100.0	50.0	75.0	87.5	100.0	100.0	75.0	22.44

\*coefficient of variation = standard deviation x 100/mean.

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean survival at 7 days significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION ( 71%):                      YES        X    NO

3. Enter percent effluent corresponding to each NOEC below:

- a) NOEC survival = 95.0 % effluent
- b) NOEC growth = 71.0 % effluent
- c) LOEC survival = >95.0 % effluent
- d) LOEC growth = 95.0 % effluent

## Bio-Analytical Laboratories' Executive Summary

**Permittee:** San Antonio Water System- Steven M. Clouse Recycling Center  
3495 Valley Road  
Bexar County, TX

**Project #:** X8964

**Outfall(s):** 001-006

**Permit #:** WQ0010137033/TX0077801

**Test Dates:** October 3 - 10, 2023

**Test Type:** Chronic Static Renewal Survival and Growth Test using *Pimephales promelas*  
(EPA Method 1000.0)  
Chronic Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia* (EPA Method 1002.0).

### Results:

#### For *Ceriodaphnia dubia*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP3B – 0- **Pass**.
2. Report the NOEC value for survival, Parameter TOP3B – 95.0%.
3. Report the LOEC value for survival, Parameter TXP3B – >95.0%
4. If the NOEC for reproduction is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP3B – 0- **Pass**.
5. Report the NOEC value for reproduction, Parameter TPP3B - 95.0%
6. Report the LOEC value for reproduction, Parameter TYP3B- >95.0%
7. Report Lethal WET Limit for Parameter 51710 – 95.0%
8. PMSD reproduction value-15.67%(13.0-47.0)moderate sensitivity, acceptable for passing test

#### For *Pimephales promelas*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP6C – 0 - **Pass**.
2. Report the NOEC value for survival, Parameter TOP6C – 95.0%.
3. Report the LOEC value for survival, Parameter TXP6C – >95.0%
4. If the NOEC for growth is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP6C – 0- **Pass**.
5. Report the NOEC value for growth, Parameter TPP6C - 95.0%
6. Report the LOEC value for growth, Parameter TYP6C- >95.0%
7. Report the Lethal WET Limit for Parameter 51714 – 95.0%
8. PMSD growth value =43.35% (12.0 –30.0)-high due to poor performance in 40.0% dilution.

This report contains a total of 49 pages. The information within complies with the 2009 TNI standard and applies only to the samples listed in the enclosed chain of custody documents. The chemical data in this report is for monitoring purposes only and should not be reported on discharge monitoring reports.

## **APPENDIX E AGENCY FORMS**

Permittee: San Antonio Water System      TPDES Permit No. WQ0010137033  
Clouse Water Recycling Ctr.

**TABLE 1 (SHEET 1 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
<b>Composite 1 Collected From</b>	0700	10/01/23	<b>To</b>	0705	10/02/23
<b>Composite 2 Collected From</b>	0700	10/03/23	<b>To</b>	0720	10/04/23
<b>Composite 3 Collected From</b>	0700	10/05/23	<b>To</b>	0715	10/06/23

<b>Test initiated:</b>	1720	<b>am/pm</b>	10/03/23	<b>Date</b>
<b>Test terminated:</b>	1700	<b>am/pm</b>	10/10/23	<b>Date</b>
<b>Dilution water used:</b>	Receiving		X	<b>Reconstituted</b>

**NUMBER OF YOUNG PRODUCED PER ADULT @ END OF TEST**

	Percent Effluent					
Rep	0	30.0	40.0	53.0	71.0	95.0
A	23	23	26	24	28	28
B	28	21	26	22	24	21
C	26	22	19	22	26	20
D	29	23	22	24	26	16
E	27	28	22	25	21	23
F	24	31	18	27	24	22
G	26	25	24	25	22	23
H	23	25	D3	28	25	20
I	25	22	25	20	22	25
J	21	20	24	24	20	27
Surviv.Mean	25.2	24.0	22.9	24.1	23.8	22.5
Total Mean	25.2	24.0	20.9	24.1	23.8	22.5
CV%*	9.86	14.03	12.63	9.87	10.63	15.85
<b>PMSD=15.67%</b>	Acceptable Range 13 - 47					

\*coefficient of variation = standard deviation x 100/mean. D=dead adult. MA=missing adult.

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No. WQ0010137033

TABLE 1 (SHEET 2 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less ( $p=.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%)      YES   X   NO

Percent Survival

Time of Reading	Percent Effluent					
	0	30.0	40.0	53.0	71.0	95.0
24h	100.0	100.0	100.0	100.0	100.0	100.0
48h	100.0	100.0	100.0	100.0	100.0	100.0
End of test	100.0	100.0	90.0	100.0	100.0	100.0

2. Fisher's Exact Test:

Is the mean survival at test end significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (71%)   YES      X      NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

a) NOEC survival =      95%      effluent  
b) LOEC survival=      >95%      effluent  
c) NOEC reproduction =      95%      effluent  
d) LOEC reproduction =      95%      effluent



Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No.: WQ0010137033

**TABLE 1 (SHEET 3 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
<b>Composite 1 Collected from:</b>	0700	10/01/23	<b>To</b>	0705	10/02/23
<b>Composite 2 Collected from:</b>	0700	10/03/23	<b>To</b>	0720	10/04/23
<b>Composite 3 Collected from:</b>	0700	10/05/23	<b>To</b>	0715	10/06/23

<b>Test initiated:</b>	1710 am/pm	10/03/23	<b>Date</b>
<b>Test terminated:</b>	1030 am/pm	10/10/23	<b>Date</b>
<b>Dilution water used:</b>	Receiving	X Reconstituted	

**FATHEAD MINNOW GROWTH DATA**

Effluent Conc. %	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight mg	CV%*
	A	B	C	D	E		
0	0.450	0.438	0.488	0.425	0.213	0.403	27.02
30.0	0.538	0.388	0.375	0.413	0.538	0.450	18.00
40.0	0.475	0.250	0.125	0.363	0.313	0.305	42.65
53.0	0.300	0.563	0.488	0.100	0.213	0.333	57.54
71.0	0.463	0.588	0.500	0.550	0.425	0.505	12.93
95.0	0.338	0.488	0.375	0.500	0.488	0.438	17.26
PMSD=43.35	Acceptable Range 12 - 20						

\*coefficient of variation = standard deviation x 100/mean.

- Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

Is the mean dry weight (growth) at 7 days significantly less ( $p=.05$ ) than the control's dry weight for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%)      YES    X    NO

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No.: WQ0010137033

TABLE 1 (SHEET 4 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Conc. %	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0	87.5	100.0	62.5	75.0	87.5	100.0	100.0	82.5	15.82
30.0	100.0	75.0	75.0	87.5	100.0	100.0	87.5	87.5	14.20
40.0	75.0	50.0	25.0	75.0	62.5	100.0	100.0	57.5	25.35
53.0	62.5	100.0	87.5	75.0	50.0	100.0	87.5	75.0	22.44
71.0	62.5	100.0	100.0	100.0	100.0	100.0	100.0	92.5	16.60
95.0	75.0	87.5	50.0	87.5	100.0	100.0	100.0	80.0	20.17

\*coefficient of variation = standard deviation x 100/mean.

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean survival at 7 days significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION ( 71%):                      YES        X    NO

3. Enter percent effluent corresponding to each NOEC below:

- a) NOEC survival = 95.0 % effluent
- b) NOEC growth = 95.0 % effluent
- c) LOEC survival = >95.0 % effluent
- d) LOEC growth = > 95.0 % effluent

## **APPENDIX E AGENCY FORMS**

Permittee: San Antonio Water System      TPDES Permit No. WQ0010137033  
Clouse Water Recycling Ctr.

**TABLE 1 (SHEET 1 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
<b>Composite 1 Collected From</b>	0700	02/11/24	<b>To</b>	0700	02/12/24
<b>Composite 2 Collected From</b>	0700	02/13/24	<b>To</b>	0700	02/14/24
<b>Composite 3 Collected From</b>	0700	02/15/24	<b>To</b>	0700	02/16/24

<b>Test initiated:</b>	1249	<b>am/pm</b>	02/13/24	<b>Date</b>
<b>Test terminated:</b>	1650	<b>am/pm</b>	02/20/24	<b>Date</b>
<b>Dilution water used:</b>	<b>Receiving</b>	<b>X</b>	<b>Reconstituted</b>	

**NUMBER OF YOUNG PRODUCED PER ADULT @ END OF TEST**

	Percent Effluent					
Rep	0	30.0	40.0	53.0	71.0	95.0
A	11	27	26	19	24	19
B	22	21	23	27	27	18
C	21	25	26	24	D3	D2
D	19	22	31	33	MA	20
E	24	27	30	28	21	11
F	23	25	12	13	24	22
G	26	21	24	18	20	18
H	20	26	26	13	18	16
I	24	25	15	19	27	17
J	32	11	24	24	21	10
Surviv.Mean	22.2	23.0	23.7	21.8	22.8	16.8
Total Mean	22.2	23.0	23.7	21.8	20.6	15.3
CV%*	24.19	20.80	25.24	30.03	14.44	23.61
<b>PMSD=29.07%</b>	Acceptable Range 13 - 47					

\*coefficient of variation = standard deviation x 100/mean. D=dead adult. MA=missing adult.

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No. WQ0010137033

TABLE 1 (SHEET 2 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less ( $p=.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%)      YES   X   NO

Percent Survival

Time of Reading	Percent Effluent					
	0	30.0	40.0	53.0	71.0	95.0
24h	100.0	100.0	100.0	100.0	100.0	100.0
48h	100.0	100.0	100.0	100.0	100.0	100.0
End of test	100.0	100.0	100.0	100.0	89.0	90.0

2. Fisher's Exact Test:

Is the mean survival at test end significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (71%)   YES      X      NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

a) NOEC survival =      95%      effluent  
b) LOEC survival=      >95%      effluent  
c) NOEC reproduction =      71%      effluent  
d) LOEC reproduction =      95%      effluent

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No.: WQ0010137033

**TABLE 1 (SHEET 3 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
<b>Composite 1 Collected from:</b>	0700	02/11/24	<b>To</b>	0700	02/12/24
<b>Composite 2 Collected from:</b>	0700	02/13/24	<b>To</b>	0700	02/14/24
<b>Composite 3 Collected from:</b>	0700	02/15/24	<b>To</b>	0700	02/16/24

<b>Test initiated:</b>	1300	<b>am/pm</b>	02/13/24	<b>Date</b>
<b>Test terminated:</b>	1325	<b>am/pm</b>	02/20/24	<b>Date</b>
<b>Dilution water used:</b>		<b>Receiving</b>	<b>X Reconstituted</b>	

**FATHEAD MINNOW GROWTH DATA**

Effluent Conc. %	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight mg	CV%*
	A	B	C	D	E		
<b>0</b>	0.338	0.438	0.463	0.425	0.288	0.390	19.02
<b>30.0</b>	0.225	0.413	0.325	0.238	0.250	0.290	27.16
<b>40.0</b>	0.325	0.350	0.300	0.363	0.213	0.310	19.21
<b>53.0</b>	0.463	0.500	0.438	0.238	0.288	0.385	29.97
<b>71.0</b>	0.375	0.338	0.325	0.400	0.375	0.363	8.45
<b>95.0</b>	0.450	0.425	0.388	0.238	0.413	0.383	21.99
<b>PMSD=29.90</b>	Acceptable Range 12 - 20						

\*coefficient of variation = standard deviation x 100/mean.

- Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

**Is the mean dry weight (growth) at 7 days significantly less (p=.05) than the control's dry weight for the % effluent corresponding to significant nonlethal effects?**

**CRITICAL DILUTION ( 71.0%)      YES    X    NO**



Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No.: WQ0010137033

TABLE 1 (SHEET 4 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Conc. %	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00
30.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00
40.0	100.0	87.5	87.5	100.0	87.5	100.0	100.0	92.5	7.84
53.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00
71.0	87.5	100.0	100.0	100.0	100.0	100.0	100.0	97.5	6.06
95.0	100.0	100.0	100.0	50.0	100.0	100.0	100.0	90.0	21.37

\*coefficient of variation = standard deviation x 100/mean.

2. **Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

Is the mean survival at 7 days significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION ( 71%):                      YES        X    NO

3. **Enter percent effluent corresponding to each NOEC below:**

- a) NOEC survival = 95.0 % effluent
- b) LOEC survival = >95.0% effluent
- c) NOEC growth = 95.0% effluent
- d) LOEC growth= > 95.0 % effluent

Permittee: San Antonio Water Sys. TPDES Permit No.: WQ0010137033

Clouse Water Recycling Ctr.

TABLE 2 (SHEET 1 OF 2)

*Daphnia pulex* SURVIVAL, OUTFALL 001-006

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected	0700-0700	02/13/24-02/14/24
Test Initiated	1345	02/15/24

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	100%				
24h	A	100.0	100.0				
	B	100.0	100.0				
	C	100.0	100.0				
	D	100.0	100.0				
	E	100.0	100.0				
	MEAN*	100.0	100.0				

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (*Daphnia pulex*) NA % effluent

95% confidence limits: NA

Method of LC50 calculation: NA

\*If 24-hour survivorship data from the chronic *Ceriodaphnia dubia* test is being used, the mean survival per dilution for all 10 replicates shall be reported on this row.

Permittee: San Antonio Water System      TPDES Permit No.: WQ0010137003  
Clouse Water Recycling Ctr.

TABLE 2 (SHEET 2 OF 2)

FATHEAD MINNOW SURVIVAL, OUTFALL 001-006

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected	0700	02/13/24-02/14/24
Test Initiated	1350	02/15/24

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	100.0				
24h	A	100.0	100.0				
	B	100.0	100.0				
	C	100.0	100.0				
	D	100.0	100.0				
	E	100.0	87.5				
	MEAN*	100.0	97.5				

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (Pimephales) =      NA      % effluent

95% confidence limits: NA

Method of LC50 calculation: NA

## Bio-Analytical Laboratories' Executive Summary

**Permittee:** San Antonio Water System- Steven M. Clouse Recycling Center  
3495 Valley Road  
Bexar County, TX

**Project #:** X9096

**Outfall(s):** 001-006

**Permit #:** WQ0010137033/TX0077801

**Test Dates:** February 13 – 20, 2024

**Test Type:** Chronic Static Renewal Survival and Growth Test using *Pimephales promelas* (EPA Method 1000.0)  
Chronic Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia* (EPA Method 1002.0).  
24-hour acute screening tests using *Pimephales promelas* and *Daphnia pulex* (EPA Methods 2000.0 and 2020.0)

### Results:

#### For *Ceriodaphnia dubia*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP3B – 0- **Pass**.
2. Report the NOEC value for survival, Parameter TOP3B – 95.0%.
3. Report the LOEC value for survival, Parameter TXP3B – >95.0%
4. If the NOEC for reproduction is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP3B – 0- **Pass**.
5. Report the NOEC value for reproduction, Parameter TPP3B - 71.0%
6. Report the LOEC value for reproduction, Parameter TYP3B- 95.0%
7. Report Lethal WET Limit for Parameter 51710 – 95.0%
8. PMSD reproduction value=29.07%(13.0-47.0)moderate sensitivity, acceptable for passing test
9. Enter a "1" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution, enter a "0"; if the mean survival is less than or equal to 50%, enter a "0" for Parameter TIE3D – 0 – **Pass**.

#### For *Pimephales promelas*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP6C – 0 - **Pass**.
2. Report the NOEC value for survival, Parameter TOP6C – 95.0%.
3. Report the LOEC value for survival, Parameter TXP6C – >95.0%
4. If the NOEC for growth is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP6C – 0- **Pass**.
5. Report the NOEC value for growth, Parameter TPP6C - 95.0%
6. Report the LOEC value for growth, Parameter TYP6C- >95.0%
7. Report the Lethal WET Limit for Parameter 51714 – 95.0%
8. PMSD growth value =29.90% (12.0 –30.0)-moderate sensitivity, acceptable for passing test.
9. Enter a "1" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution, enter a "0"; if the mean survival is less than or equal to 50%, enter a "0" for Parameter TIE6C – 0 – **Pass**.

This report contains a total of 60 pages. The information within complies with the 2016 TNI standard and applies only to the samples listed in the enclosed chain of custody documents. The chemical data in this report is for monitoring purposes only and should not be reported on discharge monitoring reports.

## Bio-Analytical Laboratories' Executive Summary

**Permittee:** San Antonio Water System- Steven M. Clouse Recycling Center  
3495 Valley Road  
Bexar County, TX

**Project #:** X9239

**Outfall(s):** 001-006

**Permit #:** WQ0010137033/TX0077801

**Test Dates:** June 6 - 13, 2024

**Test Type:** Chronic Static Renewal Survival and Growth Test using *Pimephales promelas* (EPA Method 1000.0)  
Chronic Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia* (EPA Method 1002.0).

### Results:

#### For *Ceriodaphnia dubia*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP3B – 0- **Pass**.
2. Report the NOEC value for survival, Parameter TOP3B – 95.0%.
3. Report the LOEC value for survival, Parameter TXP3B – >95.0%
4. If the NOEC for reproduction is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP3B – 0- **Pass**.
5. Report the NOEC value for reproduction, Parameter TPP3B - 95.0%
6. Report the LOEC value for reproduction, Parameter TYP3B- >95.0%
7. Report Lethal WET Limit for Parameter 51710 – 95.0%
8. PMSD reproduction value=31.42%(13.0-47.0)moderate sensitivity, acceptable for passing test

#### For *Pimephales promelas*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP6C – 0 - **Pass**.
2. Report the NOEC value for survival, Parameter TOP6C – 95.0%.
3. Report the LOEC value for survival, Parameter TXP6C – >95.0%
4. If the NOEC for growth is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP6C – 0- **Pass**.
5. Report the NOEC value for growth, Parameter TPP6C - 95.0%
6. Report the LOEC value for growth, Parameter TYP6C- >95.0%
7. Report the Lethal WET Limit for Parameter 51714 – 95.0%
8. PMSD growth value =30.11% (12.0 –30.0)-moderate sensitivity, acceptable for passing test.

This report contains a total of 49 pages. The information within complies with the 2016 TNI standard and applies only to the samples listed in the enclosed chain of custody documents. The chemical data in this report is for monitoring purposes only and should not be reported on discharge monitoring reports.

**APPENDIX E**  
**AGENCY FORMS**



Permittee: San Antonio Water System      TPDES Permit No. WQ0010137033  
Clouse Water Recycling Ctr.

**TABLE 1 (SHEET 1 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
Composite 1 Collected From	0700	06/04/24	To	0700	06/05/24
Composite 2 Collected From	0700	06/06/24	To	0700	06/07/24
Composite 3 Collected From	0700	06/09/24	To	0700	06/10/24

Test initiated:	1700	am/pm	06/06/24	Date
Test terminated:	1556	am/pm	06/13/24	Date
Dilution water used:	Receiving		X	Reconstituted

**NUMBER OF YOUNG PRODUCED PER ADULT @ END OF TEST**

	Percent Effluent					
Rep	0	30.0	40.0	53.0	71.0	95.0
A	24	25	27	24	19	17
B	24	18	24	25	24	23
C	25	21	27	19	18	23
D	23	24	11	23	12	20
E	25	D12	21	29	14	23
F	24	29	23	22	24	12
G	D	21	22	27	15	25
H	25	8	25	25	27	D
I	21	24	26	22	28	D
J	22	25	20	24	22	26
Surviv.Mean	23.7	21.7	22.6	24.0	20.3	21.1
Total Mean	21.3	20.7	22.6	24.0	20.3	16.9
CV%*	5.98	27.69	20.98	11.62	27.38	21.98
PMSD=31.42%	Acceptable Range 13 - 47					

\*coefficient of variation = standard deviation x 100/mean. D=dead adult. MA=missing adult.

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No. WQ0010137033

TABLE 1 (SHEET 2 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less ( $p=.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%)      YES   X   NO

Percent Survival

Time of Reading	Percent Effluent					
	0	30.0	40.0	53.0	71.0	95.0
24h	100.0	100.0	100.0	100.0	100.0	100.0
48h	90.0	100.0	100.0	100.0	100.0	90.0
End of test	90.0	90.0	100.0	100.0	100.0	80.0

2. Fisher's Exact Test:

Is the mean survival at test end significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (71.0%)      YES      X      NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

a) NOEC survival =      95.0%      effluent  
b) LOEC survival=      >95.0%      effluent  
c) NOEC reproduction =      95.0%      effluent  
d) LOEC reproduction =      >95.0%      effluent

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No.: WQ0010137033

**TABLE 1 (SHEET 3 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
Composite 1 Collected from:	0700	06/04/24	To	0700	06/05/24
Composite 2 Collected from:	0700	06/06/24	To	0700	06/07/24
Composite 3 Collected from:	0700	06/09/24	To	0700	06/10/24

Test initiated:	1645	am/pm	06/06/24	Date
Test terminated:	1230	am/pm	06/13/24	Date
Dilution water used:	Receiving		X Reconstituted	

**FATHEAD MINNOW GROWTH DATA**

Effluent Conc. %	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight mg	CV%*
	A	B	C	D	E		
<b>0</b>	0.200	0.325	0.238	0.200	0.288	0.250	22.08
<b>30.0</b>	0.200	0.188	0.150	0.175	0.238	0.190	17.03
<b>40.0</b>	0.200	0.263	0.075	0.175	0.175	0.178	38.05
<b>53.0</b>	0.188	0.225	0.263	0.263	0.175	0.223	18.38
<b>71.0</b>	0.213	0.163	0.200	0.200	0.300	0.215	23.76
<b>95.0</b>	0.288	0.338	0.300	0.250	0.213	0.278	17.27
<b>PMSD=30%</b>	Acceptable Range 12 - 30						

\*coefficient of variation = standard deviation x 100/mean.

- Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

Is the mean dry weight (growth) at 7 days significantly less ( $p=.05$ ) than the control's dry weight for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%)      YES    X    NO



Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No.: WQ0010137033

TABLE 1 (SHEET 4 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Conc. %	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0	100.0	100.0	87.5	75.0	87.5	97.5	97.5	90.0	11.68
30.0	87.5	100.0	100.0	87.5	100.0	100.0	100.0	95.0	7.62
40.0	100.0	100.0	100.0	87.5	100.0	100.0	100.0	97.5	6.06
53.0	100.0	87.5	100.0	100.0	100.0	100.0	100.0	97.5	6.06
71.0	100.0	100.0	100.0	100.0	87.5	100.0	100.0	97.5	6.06
95.0	100.0	87.5	100.0	100.0	87.5	100.0	100.0	95.0	7.62

\*coefficient of variation = standard deviation x 100/mean.

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean survival at 7 days significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION ( 71%): YES X NO

3. Enter percent effluent corresponding to each NOEC below:

- a) NOEC survival = 95.0% effluent
- b) LOEC survival = >95.0% effluent
- c) NOEC growth = 95.0% effluent
- d) LOEC growth = > 95.0% effluent

### Bio-Analytical Laboratories' Executive Summary

**Permittee:** San Antonio Water System- Steven M. Clouse Recycling Center  
3495 Valley Road  
Bexar County, TX

**Project #:** X9329

**Outfall(s):** 001-006

**Permit #:** WQ0010137033/TX0077801

**Test Dates:** August 15 - 22, 2024

**Test Type:** Chronic Static Renewal Survival and Growth Test using *Pimephales promelas* (EPA Method 1000.0)  
Chronic Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia* (EPA Method 1002.0).

**Results:**

**For *Ceriodaphnia dubia*:**

Test invalid

**For *Pimephales promelas*:**

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP6C – 0 - **Pass**.
2. Report the NOEC value for survival, Parameter TOP6C – 95.0%.
3. Report the LOEC value for survival, Parameter TXP6C – >95.0%
4. If the NOEC for growth is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP6C – 0- **Pass**.
5. Report the NOEC value for growth, Parameter TPP6C - 95.0%
6. Report the LOEC value for growth, Parameter TYP6C- >95.0%
7. Report the Lethal WET Limit for Parameter 51714 – 95.0%
8. PMSD growth value- 17.0% (12.0 –30.0)-moderate sensitivity, acceptable for passing test.

This report contains a total of 40 pages. The information within complies with the 2016 TNI standard and applies only to the samples listed in the enclosed chain of custody documents. The chemical data in this report is for monitoring purposes only and should not be reported on discharge monitoring reports.

**APPENDIX E**  
**AGENCY FORMS**



Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No.: WQ0010137033

**TABLE 1 (SHEET 3 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
Composite 1 Collected from:	0500	08/13/24	To	0704	08/14/24
Composite 2 Collected from:	0500	08/15/24	To	0700	08/16/24
Composite 3 Collected from:	0500	08/18/24	To	0700	08/19/24

Test initiated:	1455	am/pm	08/15/24	Date
Test terminated:	1635	am/pm	08/22/24	Date
Dilution water used:	Receiving		X	Reconstituted

**FATHEAD MINNOW GROWTH DATA**

Effluent Conc. %	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight mg	CV%*
	A	B	C	D	E		
0.0	0.400	0.413	0.375	0.375	0.363	0.385	5.34
30.0	0.413	0.500	0.450	0.500	0.438	0.460	8.46
40.0	0.538	0.438	0.338	0.450	0.450	0.443	16.06
53.0	0.388	0.400	0.450	0.450	0.338	0.405	11.67
71.0	0.413	0.450	0.488	0.475	0.475	0.460	6.49
95.0	0.438	0.425	0.500	0.400	0.438	0.440	8.38
PMSD=16.96%	Acceptable Range 12 - 30						

\*coefficient of variation = standard deviation x 100/mean.

1. **Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

**Is the mean dry weight (growth) at 7 days significantly less (p=.05) than the control's dry weight for the % effluent corresponding to significant nonlethal effects?**

**CRITICAL DILUTION ( 71.0%)                      YES    X    NO**

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No.: WQ0010137033

TABLE 1 (SHEET 4 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Conc. %	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00
30.0	75.0	100.0	100.0	100.0	100.0	100.0	97.5	95.0	11.68
40.0	100.0	87.5	100.0	100.0	100.0	100.0	100.0	97.5	6.06
53.0	100.0	100.0	75.0	100.0	100.0	100.0	100.0	95.0	11.68
71.0	87.5	100.0	100.0	100.0	100.0	100.0	100.0	97.5	6.06
95.0	100.0	100.0	87.5	87.5	100.0	100.0	97.5	95.0	7.62

\*coefficient of variation = standard deviation x 100/mean.

2. **Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

Is the mean survival at 7 days significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION ( 71%):                      YES        X    NO

3. **Enter percent effluent corresponding to each NOEC below:**

- a) NOEC survival =        95.0% effluent
- b) LOEC survival =        >95.0% effluent
- c) NOEC growth =        95.0% effluent
- d) LOEC growth=        > 95.0 % effluent

## Bio-Analytical Laboratories' Executive Summary

**Permittee:** San Antonio Water System- Steven M. Clouse Recycling Center  
3495 Valley Road  
Bexar County, TX  
**Project #:** X9371  
**Outfall(s):** 001-006  
**Permit #:** WQ0010137033/TX0077801  
**Test Dates:** September 17 - 24, 2024  
**Test Type:** Chronic Static Renewal Survival and Reproduction Test using  
*Ceriodaphnia dubia* (EPA Method 1002.0).

### Results:

#### For *Ceriodaphnia dubia*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP3B – 0- **Pass**.
2. Report the NOEC value for survival, Parameter TOP3B – 95.0%.
3. Report the LOEC value for survival, Parameter TXP3B – >95.0%
4. If the NOEC for reproduction is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP3B – 0- **Pass**.
5. Report the NOEC value for reproduction, Parameter TPP3B - 95.0%
6. Report the LOEC value for reproduction, Parameter TYP3B- >95.0%
7. Report Lethal WET Limit for Parameter 51710 – 95.0%
8. PMSD reproduction value-44.0%(13.0-47.0)moderate sensitivity, acceptable for passing test

This report contains a total of 34 pages. The information within complies with the 2016 TNI standard and applies only to the samples listed in the enclosed chain of custody documents. The chemical data in this report is for monitoring purposes only and should not be reported on discharge monitoring reports.

**APPENDIX E**  
**AGENCY FORMS**

Permittee: San Antonio Water System      TPDES Permit No. WQ0010137033  
Clouse Water Recycling Ctr.

**TABLE 1 (SHEET 1 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
Composite 1 Collected From	0700	09/14/24	To	0700	09/15/24
Composite 2 Collected From	0700	09/17/24	To	0700	09/18/24
Composite 3 Collected From	0700	09/19/24	To	0700	09/20/24

Test initiated:	1425	am/pm	09/17/24	Date
Test terminated:	1644	am/pm	09/24/24	Date
Dilution water used:	Receiving		X	Reconstituted

**NUMBER OF YOUNG PRODUCED PER ADULT @ END OF TEST**

	Percent Effluent					
Rep	0	30.0	40.0	53.0	71.0	95.0
A	18	19	D26	D	35	25
B	17	27	26	29	17	19
C	20	32	19	25	34	9
D	D	18	18	35	27	9
E	21	15	20	31	34	19
F	19	20	33	23	16	21
G	28	29	26	26	23	32
H	24	22	32	29	13	27
I	D11	30	17	34	20	32
J	24	31	29	22	23	20
Surviv.Mean	21.4	24.3	24.4	28.2	24.2	21.3
Total Mean	18.2	24.3	24.6	25.4	24.2	21.3
CV%*	17.31	25.45	25.14	16.31	33.22	38.02
PMSD=44.0%	Acceptable Range 13 - 47					

\*coefficient of variation = standard deviation x 100/mean. D=dead adult. MA=missing adult.

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No. WQ0010137033

TABLE 1 (SHEET 2 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less ( $p=.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%)      YES   X   NO

Percent Survival

Time of Reading	Percent Effluent					
	0	30.0	40.0	53.0	71.0	95.0
24h	100.0	100.0	100.0	100.0	100.0	100.0
48h	90.0	100.0	100.0	90.0	100.0	100.0
End of test	80.0	100.0	90.0	90.0	100.0	100.0

2. Fisher's Exact Test:

Is the mean survival at test end significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (71.0%)      YES   X   NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

a) NOEC survival =	95.0%	effluent
b) LOEC survival=	>95.0%	effluent
c) NOEC reproduction =	95.0%	effluent
d) LOEC reproduction =	>95.0%	effluent



**APPENDIX F**  
**REPORT QUALITY ASSURANCE FORM**

## Bio-Analytical Laboratories' Executive Summary

**Permittee:** San Antonio Water System- Steven M. Clouse Recycling Center  
3495 Valley Road  
Bexar County, TX

**Project #:** X9414

**Outfall(s):** 001-006

**Permit #:** WQ0010137033/TX0077801

**Test Dates:** October 22 - 29, 2024

**Test Type:** Chronic Static Renewal Survival and Growth Test using *Pimephales promelas* (EPA Method 1000.0)  
Chronic Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia* (EPA Method 1002.0).  
24-hour acute screening tests using *Pimephales promelas* and *Daphnia pulex* (EPA Methods 2000.0 and 2020.0)

### Results:

#### For *Ceriodaphnia dubia*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP3B – 0- Pass.
2. Report the NOEC value for survival, Parameter TOP3B – 95.0%.
3. Report the LOEC value for survival, Parameter TXP3B – >95.0%
4. If the NOEC for reproduction is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP3B – 0- Pass.
5. Report the NOEC value for reproduction, Parameter TPP3B - 95.0%
6. Report the LOEC value for reproduction, Parameter TYP3B- 95.0%
7. Report Lethal WET Limit for Parameter 51710 – 95.0%
8. PMSD reproduction value-24.0%(13.0-47.0)moderate sensitivity, acceptable for passing test
9. Enter a "1" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution, enter a "0"; if the mean survival is less than or equal to 50%, enter a "0" for Parameter TIE3D – 0 – Pass.

#### For *Pimephales promelas*:

1. If the NOEC for survival is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TLP6C – 0 - Pass.
2. Report the NOEC value for survival, Parameter TOP6C – 95.0%.
3. Report the LOEC value for survival, Parameter TXP6C – >95.0%
4. If the NOEC for growth is less than the critical dilution (71.0%), enter a "1"; otherwise, enter a "0" for Parameter TWP6C – 0- Pass.
5. Report the NOEC value for growth, Parameter TPP6C - 95.0%
6. Report the LOEC value for growth, Parameter TYP6C- >95.0%
7. Report the Lethal WET Limit for Parameter 51714 – 95.0%
8. PMSD growth value =29.0% (12.0 –30.0)-moderate sensitivity, acceptable for passing test.
9. Enter a "1" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution, enter a "0"; if the mean survival is less than or equal to 50%, enter a "0" for Parameter TIE6C – 0 – Pass.

This report contains a total of 63 pages. The information within complies with the 2016 TNI standard and applies only to the samples listed in the enclosed chain of custody documents. The chemical data in this report is for monitoring purposes only and should not be reported on discharge monitoring reports.

## **APPENDIX E AGENCY FORMS**

Permittee: San Antonio Water System      TPDES Permit No. WQ0010137033  
Clouse Water Recycling Ctr.

**TABLE 1 (SHEET 1 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
Composite 1 Collected From	0500	10/20/24	To	0700	10/21/24
Composite 2 Collected From	0700	10/22/24	To	0700	10/23/24
Composite 3 Collected From	0700	10/24/24	To	0700	10/25/24

Test initiated:	1340	am/pm	10/22/24	Date
Test terminated:	1255	am/pm	10/29/24	Date
Dilution water used:	Receiving		X	Reconstituted

**NUMBER OF YOUNG PRODUCED PER ADULT @ END OF TEST**

	Percent Effluent					
Rep	0	30.0	40.0	53.0	71.0	95.0
A	17	19	20	14	20	21
B	19	18	19	18	21	24
C	22	23	22	23	14	20
D	20	21	20	16	18	22
E	25	22	21	18	20	25
F	12	21	20	15	19	25
G	21	20	23	9	23	17
H	16	22	16	18	22	10
I	18	17	19	19	D	23
J	25	16	22	18	19	23
Surviv.Mean	19.5	19.9	20.2	16.8	19.6	21.0
Total Mean	19.5	19.9	20.2	16.8	17.6	21.0
CV%*	20.69	11.71	9.85	21.88	13.31	21.76
PMSD=22.0%	Acceptable Range 13 - 47					

\*coefficient of variation = standard deviation x 100/mean. D=dead adult. MA=missing adult.

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No. WQ0010137033

TABLE 1 (SHEET 2 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less ( $p=.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%)      YES   X   NO

Percent Survival

Time of Reading	Percent Effluent					
	0	30.0	40.0	53.0	71.0	95.0
24h	100.0	100.0	100.0	100.0	90.0	100.0
48h	100.0	100.0	100.0	100.0	90.0	100.0
End of test	100.0	100.0	100.0	100.0	90.0	100.0

2. Fisher's Exact Test:

Is the mean survival at test end significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (71.0%)      YES      X      NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

a) NOEC survival =	95.0%	effluent
b) LOEC survival=	>95.0%	effluent
c) NOEC reproduction =	95.0%	effluent
d) LOEC reproduction =	>95.0%	effluent

Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No.: WQ0010137033

**TABLE 1 (SHEET 3 OF 4)**  
**BIOMONITORING REPORTING, OUTFALL 001-006**  
**FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL**

	<b>Time</b>	<b>Date</b>		<b>Time</b>	<b>Date</b>
Composite 1 Collected from:	0500	10/20/24	To	0700	10/21/24
Composite 2 Collected from:	0700	10/22/24	To	0700	10/23/24
Composite 3 Collected from:	0700	10/24/24	To	0700	10/25/24

Test initiated:	1425	am/pm	10/22/24	Date
Test terminated:	0920	am/pm	10/29/24	Date
Dilution water used:	Receiving		X Reconstituted	

**FATHEAD MINNOW GROWTH DATA**

Effluent Conc. %	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight mg	CV%*
	A	B	C	D	E		
0.0	0.675	0.725	1.088	0.763	0.663	0.783	22.38
30.0	0.663	0.463	0.863	0.450	0.213	0.530	46.21
40.0	0.588	0.375	0.588	0.638	0.675	0.573	20.33
53.0	0.675	0.888	0.975	0.625	0.838	0.800	18.32
71.0	0.500	0.625	0.500	0.638	0.600	0.573	11.80
95.0	0.863	0.763	0.738	0.600	0.875	0.768	14.50
PMSD=29%	Acceptable Range 12 - 30						

\*coefficient of variation = standard deviation x 100/mean.

1. **Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

Is the mean dry weight (growth) at 7 days significantly less ( $p=.05$ ) than the control's dry weight for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION ( 71.0%)      YES    X    NO



Permittee: San Antonio Water System  
Clouse Water Recycling Ctr.

TPDES Permit No.: WQ0010137033

TABLE 1 (SHEET 4 OF 4)

BIOMONITORING REPORTING, OUTFALL 001-006

FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Conc. %	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0.0	87.5	87.5	100.0	75.0	75.0	100.0	100.0	85.0	12.15
30.0	100.0	87.5	100.0	62.5	50.0	100.0	100.0	80.0	24.48
40.0	87.5	100.0	100.0	75.0	100.0	100.0	100.0	92.5	12.12
53.0	100.0	100.0	100.0	100.0	87.5	100.0	100.0	97.5	6.06
71.0	62.5	100.0	87.5	75.0	87.5	100.0	100.0	8.25	15.82
95.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.00

\*coefficient of variation = standard deviation x 100/mean.

2. **Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:**

Is the mean survival at 7 days significantly less ( $p=.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION ( 71%):                      YES        X    NO

3. **Enter percent effluent corresponding to each NOEC below:**

- a) NOEC survival =        95.0% effluent
- b) LOEC survival =        >95.0% effluent
- c) NOEC growth =        95.0% effluent
- d) LOEC growth =        > 95.0 % effluent

Permittee: San Antonio Water Sys. TPDES Permit No.: WQ0010137033

Clouse Water Recycling Ctr.

TABLE 2 (SHEET 1 OF 2)

*Daphnia pulex* SURVIVAL, OUTFALL 001-006

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected	0700-0700	10/22/24-10/23/24
Test Initiated	1143	10/24/24

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	100%				
24h	A	100.0	100.0				
	B	100.0	100.0				
	C	100.0	100.0				
	D	100.0	100.0				
	E	100.0	100.0				
	MEAN*	100.0	100.0				

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (*Daphnia pulex*) NA % effluent

95% confidence limits: NA

Method of LC50 calculation: NA

\*If 24-hour survivorship data from the chronic *Ceriodaphnia dubia* test is being used, the mean survival per dilution for all 10 replicates shall be reported on this row.

Permittee: San Antonio Water System      TPDES Permit No.: WQ0010137003  
Clouse Water Recycling Ctr.

TABLE 2 (SHEET 2 OF 2)

FATHEAD MINNOW SURVIVAL, OUTFALL 001-006

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected	0700-0700	10/22/24 – 10/23/24
Test Initiated	1130	10/24/24

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	100.0				
24h	A	100.0	100.0				
	B	100.0	100.0				
	C	100.0	100.0				
	D	100.0	100.0				
	E	100.0	100.0				
	MEAN*	100.0	100.0				

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (Pimephales) =      NA      % effluent

95% confidence limits: NA

Method of LC50 calculation: NA

**DOMESTIC WASTEWATER PERMIT APPLICATION**

**TPDES PERMIT NO. 10137-033**

**ATTACHMENT 10**

**SMC SIGNIFICANT INDUSTRIAL USERS (SIUs)**

License Number	Industrial User Name	NAICS Code	Categorical Determination	CIU	ZERO	SIU		Avg daily Flow - usage	Discharge GPD	CAT Avg daily Flow - usage	CAT Discharge GPD	ZERO Avg daily Flow - usage	Zero Discharge GPD		Discharge GPD	
SIU-110169	ALSCO Inc...	812320	Noncategorical SIU			1		81,368	69,163						69,163	
SIU-96567	AZZ Galvanizing	332812	Noncategorical SIU - Zero Discharger		1							6,952	73		73	
SIU-17463	Baptist Medical Center	622110	Noncategorical SIU			1		28,442	18,772						18,772	
SIU-16783	Berridge Manufacturing	332812	Coil Coating Point Source Category 40 CFR 465. 25 Subpart B - Galvanized Basis Material Subcategory	1						11,121	8,185				8,185	
SIU-17703	Bill Miller Bar-B-Q	311615	Noncategorical SIU			1		77,829	70,462						70,462	
SIU-85381	Carbon Free Chemicals, LLC	325132	Noncategorical SIU			1			212,123						212,123	
SIU-16583	Central Texas Laundry	812331	Noncategorical SIU			1		62,020	48,065						48,065	
SIU-17123	CHRISTUS SANTA ROSA HEALTH CARE	622110	Noncategorical SIU			1		162,705	120,727						120,727	
SIU-134566	Chromalloy Component Service, Inc.	488190	Metal finishing Point Source Category 40 CFR 433. 17 Subpart A - Metal Finishing Subcategory	1						30108						
SIU-16604	Cintas Corporation	812332	Noncategorical SIU			1		106,180	94,564		28,000				28,000	
SIU-17524	City Plating Company, Inc.	332813	Metal finishing Point Source Category 40 CFR 433. 17 Subpart A - Metal Finishing Subcategory	1						2,192	1,223				1,223	
SIU-17424	Clarios, LLC	335911	Battery Manufacturer Point Source Category 40 CFR 461. 35 Subpart C - Lead Subcategory	1						90,244	53,491				53,491	
SIU-16607	Coca-Cola Southwest Beverages LLC	312111	Noncategorical SIU			1		261,195	59,814						59,814	
SIU-135371	Cuisine Solutions	311615	Noncategorical SIU			1		152,259	126,379						126,379	
SIU-17223	DEANSTEEL MANUFACTURING	332321	Metal finishing Point Source Category 40 CFR 433. 15 Subpart A - Metal Finishing Subcategory	1						4,613	4,500				4,500	
SIU-108589	Direct Source Meats	311611	Noncategorical SIU			1		49,881	49,132						49,132	
SIU-16823	DPT Laboratories, Inc.	325412	Pharmaceutical Manufacturing Point Source Category 40 CFR 439. 47 Subpart D - Mixing / Compounding & Formulation	1						51,729	31,916				31,916	
SIU-17503	FGF, LLC	311813	Noncategorical SIU			1		53,906	10,781						10,781	
	FlowPak Inc					1		68,000	37,120						37,120	
SIU-16585	Flowers Baking Company of San Antonio	311812	Noncategorical SIU			1		37,823	29,880						29,880	
SIU-90292	FRESH FROM TEXAS	311991	Noncategorical SIU			1		54,038	49,175						49,175	
SIU-16723	Frito Lay, Inc.	311919	Noncategorical SIU			1		199,799	162,436						162,436	
SIU-102427	GLOBAL RECYCLING MANAGEMENT	311613	Noncategorical SIU			1		4,668	3,781						3,781	
SIU-85251	GoodHeart Specialty	311615	Noncategorical SIU			1		86,397	86,446						86,446	
SIU-16586	HEB Grocery Company, LP Snack Food Plant	311919	Noncategorical SIU			1		190,423	182,806						182,806	
SIU-15057	HEB, LP Fresh Plant	311991	Noncategorical SIU			1		16,613	11,629						6,702	
SIU-17730	HEB LP SARSC	311812	Noncategorical SIU			1		1,435,412	1,243,067						1,243,067	

SIU-16904	Higuchi Manufacturing America	332813	Metal finishing Point Source Category 40 CFR 433. 17 Subpart A - Metal Finishing Subcategory	1						3,364	3,320					3,320	
SIU-17308	HOLT CAT	333120	Noncategorical SIU			1		43,087	42,656							42,656	
SIU-138853	Indo-MIM, Inc.	333511	Metal finishing Point Source Category 40 CFR 433. 17 Subpart A - Metal Finishing subcategory	1													
										7,260	3,410					3,410	
SIU-17924	JBSA Fort Sam Houston	928110	Noncategorical SIU			1		3,026,028	1,664,315							1,664,315	
17605	JBSA Lackland AFB	928110	Noncategorical SIU			1											
SIU-17444	Jeff Bonner R&D Inc.	336413	Noncategorical SIU - Zero Discharger		1								1,297	1,200		1,200	
SIU-17483	Johnson Controls, Inc.	333415	Noncategorical SIU			1		9,927	9,331							9,331	
SIU-17423	Jordan Plating, Inc.	332813	Noncategorical SIU - Zero Discharger		1								205	25		25	
SIU-152910	Kiolbassa Provision Company LLC (SM)	311612	Noncategorical SIU			1		47,589	24,270							24,270	
SIU-17704	Kiolbassa Provision Company, Inc. (B)	311612	Noncategorical SIU			1		37,351	35,932							35,932	
SIU-105433	Mantaine Corporation	326291	Rubber Manufacturing Point Source Category 40 CFR 428. 56 Subpart E - Small-Sized General Molded, Extruded, Fabricated Rubber Plants Subcategory	1													
										2,712	2,700					2,700	
SIU-86978	Maruchan Texas, Inc.	311999	Noncategorical SIU			1		161,738	105,130							105,130	
SIU-82859	METHODIST STONE OAK HOSPITAL	622310	Noncategorical SIU			1											
								104,113	99,074							99,074	
SIU-110548	Metropolitan Methodist Hospital	622110	Noncategorical SIU			1		99,453	73,794							73,794	
SIU-19122	Mission Trail Baptist Hospital	622110	Noncategorical SIU			1		51,846	46,532							46,532	
SIU-17045	MT Texas, LLC	336412	Metal finishing Point Source Category 40 CFR 433. 17 Subpart A - Metal Finishing Subcategory	1													
										3,817	2,290					2,290	
SIU-163668	National Construction Rentals	562991	Waste Hauler			1			1,900							1900	
SIU-100343	Nestle Health Science	325412	Pharmaceutical Manufacturing Point Source Category 40 CFR 439. 47 Subpart D - Mixing/Compounding and Formulation	1													
										41,578	3,290					3,290	
SIU-16923	NORTH CENTRAL BAPTIST HOSPITAL	622110	Noncategorical SIU			1		90,252	66,787							66,787	
SIU-17744	NORTHEAST BAPTIST HOSPITAL	622110	Noncategorical SIU			1											
								95,811	71,858							71,858	
SIU-131066	NUEVO GARCIA FOODS LLC	311612	Noncategorical SIU			1		12,552	12,552							12,552	
SIU-17732	Oak Farms Dairy	311511	Noncategorical SIU			1		164,373	154,675							154,675	
SIU-17284	PEPSI COLA BOTTLING COMPANY	312111	Noncategorical SIU			1											
								227,319	95,474							95,474	
SIU-17303	PREMIER METAL PLATING, INC.	332813	Noncategorical SIU - Zero Discharger		1								381	176		176	
SIU-16843	Refresco US Holding Inc.	312111	Noncategorical SIU			1		451,981	189,832							189,832	
SIU-16863	San Antonio Packing Company	311612	Noncategorical SIU			1		8,527	6,140							6,140	
SIU-17864	San Antonio State Hospital	622110	Noncategorical SIU			1		90,485	81,527							81,527	
SIU-17523	Southern Folger Detention Equipment Co.	332312	Metal finishing Point Source Category 40 CFR 433. 17 Subpart A - Metal Finishing Subcategory	1													
										2,521	2,521					2,521	



SIU-105709	StandardAero Inc.	332912	Noncategorical SIU - Zero Discharger	1						10,073.00	6346		6,346	
SIU-158333	Surlean Foods Inc.	311612	Noncategorical SIU		1		138,209	127,982					127,982	
SIU-16606	Texas Center for Infectious Disease	622310	Noncategorical SIU		1		60,623	58,198					58,198	
SIU-17728	Texas Department of Criminal Justice	922140	Noncategorical SIU		1		307,332	301,186					301,186	
SIU-156663	The Boeing Company - North Campus	336411	Noncategorical SIU		1		2,888	2,850					2,850	
SIU-16743	The Boeing Company	336411												
SIU-17383	The Nugget Company, Inc.	316110	Leather Tanning & Finishing Point Source Category 40 CFR 425.75 Subpart G - Shearling Subcategory	1					5165	4132			4132	
SIU-80354	The San Antonio Refinery, LLC	324110	Petroleum Refining Point Source Category 40 CFR 419.17 Subpart A - Topping Subcategory	1					243210	145926			145926	
SIU-17733	UniFirst Holding L.P.	812332	Noncategorical SIU		1		47,943	39,793					39,793	
SIU-89344	Vestis Services, LLC.	812332	Noncategorical SIU		1		68,403	62,691					62,691	
SIU-17769	VIA Metropolitan Transit	485119	Noncategorical SIU		1		28,821	26,300					26,300	
SIU-17745	VT Aerospace San Antonio, Inc.	336411	Metal finishing Point Source Category 40 CFR 433.17 Subpart A - Metal Finishing Subcategory	1					3208	3134			3134	
SIU-17583	Waste Management of Texas Covel Gardens Landfill	562212	Noncategorical SIU		1			89,286					89,286	
SIU-17735	West Texas By-Products, L.P.	311613	Noncategorical SIU		1		1573	1070					1070	
SIU-94828	Weston Solutions INC.	332813	Metal finishing Point Source Category 40 CFR 433.17 Subpart A - Metal Finishing Subcategory	1						5			5	
				16	5	48			6,177,457.5	298,043.0	7,820.0	6,478,393.0		

License Number	Industrial User Name	NAICS Code	Phone	Contact name	Email	Address	Industrial Process	Product and service	Total discharge GPD	Discharge type - batch or continuous	Categorical Determination	Industrial User Interruptions	POTW	TBLL	Categorical Sids
SIU-110169	ALSCO	812332	210-533-9111	Mark Lewis, General Manager	<a href="mailto:mlewis@alco.com">mlewis@alco.com</a>	3323 E. Commerce, San Antonio TX 78220	Industrial Laundry	Supplies work uniforms, clean room apparel, laundered mats and rugs	69,163	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-96567	AZZ Galvanizing	332812	(210) 661-8574	Maurice Glasson, Plant Manager	<a href="mailto:mauriceglasson@azz.com">mauriceglasson@azz.com</a>	05731 FM 1346, San Antonio TX 78220	Hot dipped zing galvanizing by caustic cleaning and acid pickling.	Galvanized steel parts	73	Continuous	Noncategorical SIU - Zero Discharger		SMC WRC	Yes	No
SIU-17463	Baptist Medical Center	311612	(210) 297-7000	Kory Browning, Chief Operating Officer	<a href="mailto:Kory.Browning@baptisthealthsystem.com">Kory.Browning@baptisthealthsystem.com</a>	111 Dallas St., San Antonio TX 78205	General Medical and Surgical Hospital	Medical services	18,772	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-16783	Berridge Manufacturing	332812	(210) 650-3050	Derek Moczysgemba, IC Mgr.	<a href="mailto:dmoczysgemba@berridge.com">dmoczysgemba@berridge.com</a>	6515 Fratt Road, San Antonio Tx 78218	Coating of sheetmetal.	Sheet metal roofing	8,185	Categorical is 2000 gallon Batch, rest is continuous	Coil Coating Point Source Category 40 CFR 465. 25 Subpart B - Galvanized Basis Material Subcategory		SMC WRC	Yes	Yes
SIU-17703	Bill Miller Bar-B-Q	311999	(210) 225-4461	Dale Sims, Director Plant Operations	<a href="mailto:tdsims@billmillerbbq.com">tdsims@billmillerbbq.com</a>	430 S. Santa Rosa, San Antonio Texas 78207	Food commissary	Centralized cooking for area restaurants	70,462	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-85381	Carbon Free Chemicals, LLC	325180	(210) 476-5708	James E Richardson, General Manager		11503 Bulverde Rd., San Antonio TX 78217	Inorganic Chemical Manf.	Baking soda, Bleach, Hydrochloric acid	212,123	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-16583	Central Texas Laundry	812331	(210) 359-7525	Richard Shipp, Gen. Mgr.	<a href="mailto:richard.shipp@codexo.com">richard.shipp@codexo.com</a>	4255 Profit, San Antonio Texas 78219	Industrial Laundry	Hospital, sheets, uniforms	47,563	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-17123	CHRISTUS SANTA ROSA HEALTH CARE	311612	(210) 704-3917	Ronnie Zitelman	<a href="mailto:ronnie.zitelman@chr.com">ronnie.zitelman@chr.com</a>	333 N. Santa Rosa, San Antonio TX 78207	General Medical and Surgical Hospital	Medical services	120,727	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-134566	Chromalloy Component Service, Inc.	488190	(830)822-3958	Damon Shodrock, HSE Manager	<a href="mailto:dshodrock@chrmetalloy.com">dshodrock@chrmetalloy.com</a>	303 Industrial Park Rd, Port San Antonio TX	Establishment provides specialized service for air transportation	Engine rebuilding and resurfacing of aircraft parts	28,000		Metal finishing Point Source Category 40 CFR 433. 17 Subpart A - Metal Finishing Subcategory		SMC WRC	Yes	Yes
SIU-16604	Cintas Corporation	812332	(210) 224-6321	Joshua Home, Gen. Mgr.	<a href="mailto:Homej@cintas.com">Homej@cintas.com</a>	3349 Southeast Loop 410, San Antonio TX 78222	Industrial Laundry	Uniform rentals and cleaning	94,564	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-17524	City Plating and Metal Finishing	332813	(210) 341-0772	Weylan Arnold, President/CEO	<a href="mailto:weylan@cityplating.com">weylan@cityplating.com</a>	11511 Reverie Lane, San Antonio TX 78216	Metal plating	Aircraft parts; typically nickel plating, some decorative chrome plating	1,223	Continuous	Metal finishing Point Source Category 40 CFR 433. 17 Subpart A - Metal Finishing Subcategory		SMC WRC	Yes	Yes
SIU-17424	Clarios, LLC	335911	(419) 266-2269	Ernesto Cisneros, Plant Manager,	<a href="mailto:ernesto.n.cisneros@clarios.com">ernesto.n.cisneros@clarios.com</a>	12915 Wetmore Rd., San Antonio TX 78247	Automotive Battery Assembly & Distribution	Assemble of batteries from components	53,491	Continuous	Battery Manufacturer Point Source Category 40 CFR 461. 35 Subpart C - Lead Subcategory		SMC WRC	Yes	Yes
SIU-16607	Coca-Cola Southwest Beverages LLC	312111	210-500-7600	Oscar Castillo Rangel, Management Systems Facilitator	<a href="mailto:Oscar.Castillo@cocacolaswb.com">Oscar.Castillo@cocacolaswb.com</a>	1 Coca Cola Place, San Antonio TX 78219	Soda Manufacturing	Soda	59,814	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-135371	Cuisine Solutions	311615	(210) 791-0519	J.R. Malena V.P. of Operations	<a href="mailto:jmalena@cuisinesolutions.com">jmalena@cuisinesolutions.com</a>	8339 Aviation Landing San Antonio, Texas 78235	Cooked Protein and egg products	Processing of various protein products with Sous Vide	126,379	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-17223	Deansteel Manufacturing	332321	(210) 226-8271	Nick Valentine, VP Engineering	<a href="mailto:nvalinting@deansteel.com">nvalinting@deansteel.com</a>	931 S Flores St., San Antonio TX 78204	Coating of metal products for corrosion control	Metal doors, windows, marine applications	4,500	Continuous	Metal finishing Point Source Category 40 CFR 433. 15 Subpart A - Metal Finishing Subcategory		SMC WRC	Yes	Yes
SIU-108589	Direct Source Meats	311812	(210) 661-8127	Craig Witten, Director		4411 Director Dr., San Antonio TX 78219	Meat Packing and Cook Food Manufacturing	Beef products for commercial usage	49,132	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-16823	DPT Laboratories, Inc.	325412	(210) 396-5115	Michael Holmes, Head of Site Operations San Antonio .	<a href="mailto:Michael.Holmes@viatris.com">Michael.Holmes@viatris.com</a>	307 E. Josephine, 318 McCullough, 5303 Distribution, 330 Research Blvd., San Antonio TX 78296	mixing and packaging medication and personal health care products	Pharmaceutical products such as creams, lotions, gels, ointments and oral liquids	31,916	Continuous	Pharmaceutical Manufacturing Point Source Category 40 CFR 439. 47 Subpart D - Mixing / Compounding & Formulation		SMC WRC	Yes	Yes
SIU-17503	FGF, LLC	311813	(210) 606-5886	Juan Valdez - Sanitation Manager	<a href="mailto:juan.valdez@fgfpanels.com">juan.valdez@fgfpanels.com</a>	122 Stribling, San Antonio TX 78204	Industrial Bakery	Frozen cakes and deserts	10,781	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-161288	FlowPak Inc	311999	(661) 904-7911	Wyatt Banko, Logostic Manager	<a href="mailto:wbanko@flopak.com">wbanko@flopak.com</a>	6674 Cal Turner Dr, San Antonio TX	Manufacturing aseptic plant based beverages	Almond, Oat, Coconut Milk	37,120	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-16585	Flowers Baking Company of San Antonio	311812	(210) 608-4165	Jaime Santacruz, Plant Manager	<a href="mailto:jaime.santacruz@flocorp.com">jaime.santacruz@flocorp.com</a>	6000 NE Loop 410, San Antonio TX 78218	Commercial Bakery and Tortilla Manufacturing	Hamburger buns, hot dog buns and tortillas for retail sale	29,880	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-90292	Fresh From Texas	311991	(210) 654-3963	Phil Huebner, Chief Operations Officer	<a href="mailto:phil@freshfromtexas.net">phil@freshfromtexas.net</a>	3602 Highpoint, San Antonio TX 78217	Food Manufacturing	Fresh fruit, vegetables for retail marketing.	49,175	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-16723	Frito Lay, Inc.	311919	(210) 662-2121	Brian Angus, Site Director		4855 Greatland Dr., San Antonio TX 78218	Food Manufacturing	Chip manufacturing	162,436	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-102427	Global Recycling Management LLC	311613	(214) 629-6409	Billy Limmer, Managing Partner	<a href="mailto:blimmer@globalrecyclingmngmt.com">blimmer@globalrecyclingmngmt.com</a>	4318 Director Dr., San Antonio, TX 78219	Processing of used cooking oil from food preparation	Used cooking oil processing	3,781	Batch	Noncategorical SIU - Zero Discharger		SMC WRC	Yes	No
SIU-85251	Bluebonnet Foods DBA: Good Heart Brand	311615	(707) 226-5587	Christian Palmaz, Partner	<a href="mailto:cpalmaz@goodheart.com">cpalmaz@goodheart.com</a>	11122 Nacogdoches Rd., San Antonio, TX 78217	Food Manufacturing	Producing cooked chicken for restaurants to serve.	86,446	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-17730	HEB Grocery Company, LP SARSC	811310	(210) 938-6504	Cimber Mabe, Environmental Compliance Manager	<a href="mailto:Mabe.Cimber@heb.com">Mabe.Cimber@heb.com</a>	4710 Pan Am Expwy., San Antonio Texas 78218	Food Manufacturing	Milk, ice cream, meat products, warehouse	182,806	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-165601	HEB, LP Fresh Plant	311991	(210) 938-6504	Cimber Mabe, Environmental Compliance Manager	<a href="mailto:Mabe.Cimber@heb.com">Mabe.Cimber@heb.com</a>	711 S Foster Rd San antonio TX	Food Manufacturing	Repackaging "Ready to Eat" Meals	6,702	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-16586	HEB Grocery Company, LP Snack Food Plant	311919	(210) 938-6504	Cimber Mabe, Environmental Compliance Manager	<a href="mailto:Mabe.Cimber@heb.com">Mabe.Cimber@heb.com</a>	5311 Rittiman Rd., San Antonio TX 78218	Food Manufacturing	Chip manufacturing	1,243,067	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-16904	Higuchi Manufacturing America	332813	(210) 633-2877	Veronica Garcia, President	<a href="mailto:veronica.garcia@hig-us.net">veronica.garcia@hig-us.net</a>	14901 Southton Road, San Antonio Tx 78112	Metal stamping & plating, Ecoating	Seat belt components for automobiles	3,320	Continuous	Metal finishing Point Source Category 40 CFR 433. 17 Subpart A - Metal Finishing Subcategory		SMC WRC	Yes	Yes

SIU-17308	HOLT CAT	423810 / 811310	(210) 648-1111	Jeff Stewart, Director of Safety	jeffery.stewart@holtcat.com	3302 South WW White Rd., San Antonio TX 78222	washing of industrial equipment, painting, cleaning.	Off Road Construction Equipment Sales & maintenance	42,656	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-138853	Indo-MIM, Inc.	333511	(609) 580-9745	Sreenivasulu Suri, General Manager - Operations	sreenivasulu.s.indo-mim.com	3902 SW 36th Bldg 1537 Port SA TX 78226	Metal Injection Molding Process, Passivation, wet debur	Parts for the firearm Industry and Medical field	3,410	Continuous	Metal finishing Point Source Category 40 CFR 433.17 Subpart A - Metal Finishing Subcategory		SMC WRC	Yes	Yes
SIU-17924	JBSA Fort Sam Houston	928110	(210) 671-2977	Keith Kellner, Director, 802d Civil Engineer Squadron	keith.kellner@us.af.mil	2080 Wilson Way, Ft Sam Houston TX 78234-5007	Military Base & Hospital	Military Base & Hospital	1,664,315	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-17605	JBSA Lackland Air Force Base	928110	(210) 671-2977	Keith Kellner, Director, 802d Civil Engineer Squadron	keith.kellner@us.af.mil	37/CES/CC, 1555 Gott Street, JBSA, Lackland AFB, Texas 78236-5646	Military Base & Clinic	Military Base & Clinic		Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-17444	Jeff Bonner R&D Inc.	336413	(210) 590-3133 # 247	Dean Wilkins, Quality Assurance Manager	Dwilkins@jbrnd.com	10525 Mopac Dr., San Antonio TX 78217	Aircraft - phosphating	Custom aircraft renovations	1,200	Continuous	Noncategorical SIU - Zero Discharger		SMC WRC	Yes	No
SIU-17483	Johnson Controls, Inc.	333415	(210) 632-5228	Christopher Drevyanko, Plant Manager	Christopher.Drevyanko@jci.com	5680 E. Houston St., San Antonio TX 78220	Assembly including welding of copper and zinc, testing of vessels for water tightness	Boiler & Chiller Manufacturing	9,331	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-17423	Jordan Plating, Inc.	332813	(210) 344-3065	Gary Jordan, President	jordprop@netxpress.com	103 West Rhapsody, San Antonio TX 78216	Metal Finishing / Aviation	Zinc and Cadmium Electroplating, Chromate Chemical Conversion, Phosphating Chemical Conversion, Passivation, Chemical Conversion, and Chromic Acid Anodizing of parts for the aircraft industry	206	Continuous	Noncategorical SIU - Zero Discharger		SMC WRC	Yes	No
SIU-152910	Kiobassa Provision Company LLC (SM)	311612	(210) 226-8127	Michael Kiobassa, President	rkenney@kiobassa.com	1545 San Marcos St., San Antonio TX 78207	Food Manufacturing	Sausage, Bacon	24,270	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-17704	Kiobassa Provision Company, Inc.	311612	(210) 226-8127	Michael Kiobassa, President	rkenney@kiobassa.com	1325 S Brazos St. San Antonio TX 78207	Food Manufacturing	Sausage, Bacon	35,932	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-105433	Mantaine Corporation	326291	(330) 221-4793	Ivan Romo, Director of Operations	iromo@mantaine.com	04267 Dividend Dr., San Antonio TX 78219	Rubber Manufacturing - automotive parts	Rubber trim and component parts for automobiles	2,700	Continuous	Rubber Manufacturing 40 CFR 428.56, Subpart E		SMC WRC	Yes	Yes
SIU-13445	Maruchan Texas, Inc	311999	(210) 536-2200	Koji Matsumoto, Plant Manager	kmatsumoto@maruchaninc.com	11000 Fischer Road, Von Ormy, Texas 78073	Food Manufacturing	Noodles for soup, packaging.	105,130	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-82859	Methodist Stone Oak Hospital	622310	(210) 439-3384	Paul Topinko, Facilities Director	Paul.Topinko@mhshealth.com	1139 E. Sonterra Blvd., San Antonio TX 78258	General Medical and Surgical Hospital	Medical services	99,074	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-110548	Metropolitan Methodist Hospital	622110	(210) 389-6054	Abram Buchta, Director of Facility Mgmt.	abram.buchta@mhshealth.com	01310 McCullough Ave., San Antonio TX 78212	General Medical and Surgical Hospital	Medical services	73,794	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-19122	Mission Trail Baptist Hospital	622110	(210) 297-3600	Michael Cline, President/CEO	mccline@baptisthealthsystem.com	3333 Research Plaza, San Antonio TX 78235	General Medical and Surgical Hospital	Medical services	46,532	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-17045	MT Texas, LLC	336412	(207) 415-0245	Steve Mongiat Director of MRO	steven.mongiat@mt-repairoverhaul.com	3614 Highpoint, San Antonio TX 78217	Aircraft - metal finishing	Aircraft part repairs	2,290	Continuous	Metal finishing Point Source Category 40 CFR 433.17 Subpart A - Metal Finishing Subcategory		SMC WRC	Yes	Yes
SIU-163668	National Construction Rentals	562991	(210) 566-8644	Robert Martinez, Regional Manager	rwechsler@rentnational.com	5523 Dietrich Rd San Antonio TX 78219	Waste Hauler	Pumping and rental of portable toilets	1,900	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-100343	Nestle Health Science	325412	(210) 337-5566	George "Sonny" Wright, Production Director	sonny.wright@us.nestle.com	4266 Dividend Rd., San Antonio TX 78219	Manufacture of gummie vitamins	Gummie vitamins	3,290	Continuous	Pharmaceutical Manufacturing Point Source Category 40 CFR 439.47 Subpart D - Mixing / Compounding & Formulation		SMC WRC	Yes	Yes
SIU-16923	North Central Baptist Hospital	622110	(210) 867-2046	Aaron Edwards, Plant Operations Manager	awedward@baptisthealthsystem.com	520 Madison Oak Dr., San Antonio TX 78258	General Medical and Surgical Hospital	Medical services	66,787	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-17744	Northeast Baptist Hospital	622110	(210) 297-2693	Silver Vasquez, Facilities Director	silvestre.vasquez@baptisthealthsystem.com	8811 Village Drive, San Antonio Texas 78217	General Medical and Surgical Hospital	Medical services	71,858	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-131066	NUEVO GARCIA FOODS LLC	311612	(319) 621-5312	Michael Gonzalez	michael.gonzalez@nuevogarcia.com	1802 Jackson Keller, San Antonio TX 78213	Food Manufacturing	Beef and Pork products for retail sale	12,552	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-17732	Oak Farms Dairy	311511	(210) 732-1111	Mark Heinsohn, Plant Manager	mark.heinsohn@dfamilk.com	1314 Fredericksburg Road, San Antonio Texas 78201	Fluid Milk Processor and Packing	Milk processing and packaging	154,675	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-17284	Pepsi Beverages Company San Antonio (PBC San Antonio)	312111	(210) 797-1686	Brandon Hall, Plant Director	brandon.hall@pepsico.com	6100 N.E. Loop 410, San Antonio TX 78218	Soda Manufacturing	Soda	95,474	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-17303	Premier Metal Plating, INC.	332813	(210) 736-3400	Bruce Rubenstein Plant Manager	bruce@premiermetalplating.com	2103 Blanco Rd., San Antonio TX 78212	Metal Finishing	Precious metal, chrome, and nickel on metal parts for customers - 90% interior aviation parts and 10% small antique car parts.	176	Continuous	Noncategorical SIU - Zero Discharger		SMC WRC	Yes	No
SIU-16843	Refresco US Holding Inc.	312111	(916) 580-4446	David Austin Plant Manager	david.austin@refresco.com	4238 Director Drive, San Antonio TX 78219	Soda Manufacturing	Soda	189,832	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-16863	San Antonio Packing Company	311612	(210) 224-5441	Thomas J Roe	sjpc.roe@sbrcglobal.net	1922 S. Laredo St., San Antonio TX 78207	Food Manufacturing	Ham and sausage	6,140	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-17864	San Antonio State Hospital	622310	210-834-7537	Bobby Bustillos, Assistant (Acting) Maintenance Director	Bobby.Bustillos@hhs.texas.gov	2303 S.E. Military Drive ,San Antonio TX 78223	Psychiatric and Tuberculosis Hospitals	Medical services	81,527	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-17523	Southern Folger Detention Equipment Co.	332999	(210) 531-4118	John Legros, Director of Safety	jlegros@southernfolger.com	4634 S. Presa St., San Antonio TX 78223	Detention Equipment / coating	Components to build jail cells	2,521	Batch discharge of process water.	Metal finishing Point Source Category 40 CFR 433.17 Subpart A - Metal Finishing Subcategory		SMC WRC	Yes	Yes
SIU-105709	StandardAero Inc.	336412	(210) 344-6238	Rick Pataky, Vice President	Rick.Pataky@StandardAero.com	3523 General Hudnell, Building 360, San Antonio TX 78226	Metal Finishing / Aviation	Aircraft engine repairs	6,346	Continuous	Noncategorical SIU - Zero Discharger		SMC WRC	Yes	No
SIU-158333	Surlean Foods Inc.	311612	(210) 532-3241	Pablo Hernandez, VP of production operations		2001 Laredo St San Antonio TX 78207	Food Manufacturing	Hamburger patties and premium wet dog food	127,982	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-16606	Texas Center for Infectious Disease	622310	210-531-0558	Julian Hernandez, Facilities Maintenance and Operations Director	Julian.Hernandez@dshs.texas.gov	2303 SE Military Dr San Antonio TX	Specialty Hospital	Hospital Care	58,198	Continuous	Noncategorical SIU		SMC WRC	Yes	No
SIU-17728	Texas Department of Criminal Justice - Fabien Dominguez State Jail	922140	(936) 437-7247	Jason Pierce, Environmental Mgr	Jason.Pierce@tdcjr.texas.gov	6535 Cagnon Road, San Antonio Texas 78252	State Jail facility / Industrial laundry / Medical clinic	Incarcerate the bad boys	301,186	Continuous	Noncategorical SIU		SMC WRC	Yes	No

[illegible]

# SMC Water Recycling Center WQ00010137033

## Design Calculations

Influent Quality Characteristics - The raw sewage characteristics used for design purposes are as follows:

<u>Parameter</u>	<u>Concentration</u>
BOD <sub>5</sub>	360 mg/L
TSS	254 mg/L

Influent Flow Characteristics - The hydraulic design of the facility must ensure that the facility will operate under the most extreme conditions anticipated. The facility process and hydraulic design for this facility are as follows:

**Table EX4(1) - Design Calculations**

<b>Flow</b>	<b>Gallons Per Day</b>	<b>Gallons Per Minute</b>
Average Daily Flow ( $Q_{ave}$ )	125,000,000	86,806
Peak 2-Hour Flow ( $Q_{pk}$ )	250,000,000	173,611

<b>Loading</b>	<b>Pounds Per Day</b>
BOD <sub>5</sub>	375,525
TSS	529,590

Process Design - The treatment facility was designed to produce an effluent quality in compliance with the current permitted monthly average limits of:

CBOD<sub>5</sub> = 5 mg/L; TSS = 12 mg/L; NH<sub>3</sub>-N = 2 mg/L

DO: 6.0 mg/L (minimum of all daily values)

Cl<sub>2</sub> Residual = 1.0 mg/L after 20 minutes detention time at peak flow

In order to achieve the required removal efficiencies, the plant is a two stage activated sludge process operated in the conventional mode with CBOD removal in first stage and nitrification in second stage. Operating ranges for MLSS and RAS in first stage have been 3,000 mg/L and 12,000 mg/L, respectively, and in second stage have been 2,000 mg/L and 5,500 mg/L, respectively.

Note that the original design of the two stage activated sludge process for the plant has not changed substantially since initial operation in 1987.

# **Steven M. Clouse Water Recycling Center Sewage Sludge Management Plan**

## **Introduction**

Sludges are generated through multiple treatment operations at the Steven M. Clouse WRC. These include both Primary and Waste Activated sludges from the processes outlined in the flow diagram attached. The Steven M. Clouse facility also treats all sludges generated at the Leon Creek and Medio Creek WRC's called Transfer sludge. These include the Primary and Waste Activated sludges from Leon Creek WRC and Waste Activated sludge from the Medio Creek WRC and is the centralized sludge processing facility for all the solids generated in San Antonio.

### **Primary Sludge/Skimmings**

Primary sludge is generated in the eight circular primary clarifiers at the Steven M. Clouse facility. These residues are thickened to approximately 3-4 % total solids in the primary tankage. From the primary's, the thickened sludge is pumped to a pre-strain blending tank.

### **Transfer Sludge**

Leon Creek and Medio Creek sludge are received and blended with Steven M. Clouse Primary sludge in the pre-strain blend tank. The sludge is pumped to the strain press where debris is removed from the sludge prior to additional blending, thickening and then they are anaerobically digested.

## **Waste Activated Sludge**

Waste activated sludges are generated in secondary treatment process. Typically the First Stage Activated Sludge process is optimized at about 3500 mg/l MLSS and 450,000 pounds under aeration. The Second Stage Activated Sludge process is optimized at about 2500 mg/l MLSS and 300,000 pounds under aeration. Operations personnel have found these to be the best levels to achieve the maximum removals of carbonaceous and nitrogenous demands.

Screw pumps are utilized to either return the solids to the Activated Sludge process or to be wasted to the thickening processes.

## **Sludge Blending**

Primary Sludge, Leon Creek, Medio Creek sludge that has been strained along with the Steven M. Clouse Waste Activated Sludge are sent to a large Blend Tank. In the Blend Tank, the sludge is then recirculated to ensure a uniform mixture has been achieved is then sent to the thickening process.

## **Sludge Thickening**

From the Sludge Blending Tank, all the sludge is then thickened to approximately 5% to 6% TS via 4 Gravity Belt Thickeners or 2 thickening Centrifuges.



## **Sludge Digestion**

All sludges are transferred from the Blend Tank to a series of nine Mesophilic Anaerobic Digesters. Temperatures are held at about 95 degrees F, and feed rates are set to achieve a hydraulic detention time of about 24 days. This has been found to be sufficient to achieve a Volatile Solids Reduction greater than 38%. Sludges are then sent to a holding tank until they are dewatered.

## **Sludge Dewatering**

All sludges are dewatered by either the use of Belt Filter Presses or by using Sand Drying Beds. Sludges are consistently dewatered to about 18 % total solids using the Belt Filter Presses. Sand Drying Beds are used as weather permits and can achieve a total solids content of greater than 85 % total solids concentration.

## **Final Disposal**

The final disposal options used are either Composting by New Earth at their permitted facility, Composting by TLM/GardenVille at the SARA Martinez facility or by disposal in a Sanitary Landfill. No Biosolids are disposed of via Land Application. Biosolids that are composted by New Earth and TLM/GardenVille are Marketed/Distributed by the contractor. Composting operations are summarized under the Steven M. Clouse WRC portion of this Permit Application. There are no proposed changes to this operation in SAWS' future.

## EXAMPLE 9 – Water Balance and Storage Calculation

Explanation of Tables 1 and 2

### Table EX9(1)

#### Columns

**1** Month (example calculations for each column are given for the month of January)

**2** Average rainfall for previous 25 years: Data for Corsicana was obtained from the *Texas Water Oriented Data Bank* for the years 1968 through 1992. January: Average rainfall = 2.39 in

**3** Average runoff: Method used to determine average runoff is found in *Soil Conservation Service Technical Note No. 210-18-TX5*. A curve number (N) of 78 is appropriate for Crockett soils (Hydrologic Group D) with continuous grass. The antecedent moisture condition for Navarro County is Type II.

$Q = (I - 0.2S)^2 / (I + 0.8S)$ , and  $S = 1000/N - 10$  where  $Q$  = runoff in inches

$I$  = average rainfall in inches (from Column 2); and  $S$  = potential maximum retention after runoff begins. January:  $S = 1000/78 - 10 = 2.82$  in.  $Q = [2.39 - 0.2(2.82)]^2 / [2.39 + 0.8(2.82)] = 0.72$  in

**4** Average Infiltrated Rainfall ( $R_i$ ): Obtained by subtracting the average runoff from the average rainfall

January:  $R_i$  (avg) = (2.39 in) - (0.72 in) = 1.67 in

**5** Evapotranspiration (ET); Data obtained from the *Texas Board of Water Engineers, Bulletin 6019: Consumptive Use of Water by Major Crops in Texas, Table 5*. For Coastal Bermuda Grass, applied 90% of the listed values for alfalfa as noted on the table. January:  $(905)(1.0 \text{ in}) = 0.90$  in.

**6** Required leaching to avoid salinity buildup in soil ( $L$ ): Equation is from *30 TAC 309.20, Table 1*.

$L = [C_e / (C_i - C_e)](E - R_i)$ , where  $C_e$  = electrical conductivity of effluent (provided by applicant); and

$C_i$  = maximum allowable conductivity of soil solution obtained from *30 TAC 309.20, Table 3*.

If  $(E - R_i)$  is less than zero ( $<0$ ), then  $L = 0$

January:  $L = [(5.4 \text{ mg/L}) / (12.0 \text{ mg/L} - 5.4 \text{ mg/L})](0.9 \text{ in} - 1.67 \text{ in})$  ( $E - R_i < 0$ , therefore  $L = 0$ ).

**7** Total Water Needs: Obtained by adding Evapotranspiration ("E," Column 5) and Required Leaching ("L," Column 6). January:  $0.90 \text{ in} + 0.0 \text{ in} = 0.90 \text{ in}$

**8** Effluent needed in root zone: Obtained by subtracting the average infiltrated rainfall ( $R_i$ , Column 4) from Total Water Needs (Column 7). If value is less than zero, then a value of zero is assumed.

January:  $0.90 \text{ in} - 1.67 \text{ in} = -0.77$  and  $-0.77 < 0$ , therefore the amount of effluent needed in the root zone = 0.0 in

**9** Net evaporation from reservoir surface: Average evaporation data was obtained from

the *Texas Water Oriented Data Bank* for the years 1966 through 1990. Values were multiplied by the ratio of the surface area of the lagoons (5.5 acres) to the irrigation surface area (58 acres). For this example, the ratio is  $5.5/58 = 0.09$ . January:  $\text{Evap.} = (0.05 \text{ feet})(12 \text{ in/ft})(0.09) = 0.06 \text{ in}$

**10** Effluent to be applied to land: Obtained by dividing the effluent need in root zone (Column 8) by the irrigation efficiency, K (assumed to be 0.85, or 85%). June:  $8.8/0.85 = 10.3 \text{ in}$

**11** Consumption from reservoir: Obtained by adding the net evaporation from the reservoir surface (Column 9) and the effluent to be applied to the land (Column 10). This is the maximum hydraulic application rate that can be applied over the irrigated area.

June:  $0.39 \text{ in} + 10.3 \text{ in} = 10.69 \text{ inches/acre}$

Total annual application is 59.96 in per irrigated acre (59.96 in/ac/yr).

## Table EX9(2)

### Columns

**12** Month

**13** Effluent received for application or storage: A daily average flow to the irrigation field of 38,000 gallons was requested by the applicant and converted to inches per acre. The average application rate must be less than or equal to the consumption from reservoir (Column 11). Therefore, the maximum monthly average application rate is  $(59.7 \text{ in/yr})/(12 \text{ mo/yr}) = 4.97 \text{ in/mo}$

Annual:  $= (38,000 \text{ gal/day})(365 \text{ days/yr})(12 \text{ in/ft})(1 \text{ ac}/43,560 \text{ ft}^2)(1 \text{ ft}^3/7.48 \text{ gal})/(58 \text{ ac})$   
 $= 8.76 \text{ in/yr}$

January:  $= (8.76 \text{ in/yr})(1 \text{ yr}/12 \text{ mo})$

$= 0.73 \text{ in/mo}$ , which is less than 4.97 in/mo calculated in Column 13.

**14** Worst rainfall year in the past 25 years distributed proportional to monthly averages: Rainfall data for Corsicana was obtained from the *Texas Water Oriented Data Bank* for the years 1968 through 1992 and distributed proportional to the monthly averages. The worst annual rainfall was 51.9 in which occurred in 1968.

January:  $(51.9 \text{ in})(6.4\%) = 3.32 \text{ in}$

**15** Worst runoff year in the past 25 years (Q): Used the rainfall figures in Column 14 and calculating worst runoff similar to average runoff as in Column 3.

January:  $Q = [3.32 \text{ in} - 0.2(2.82)]^2/[3.32 + 0.8(2.82)] = 1.36 \text{ in}$

**16** Infiltrated rainfall ( $R_i$ ): Obtained by subtracting the worst runoff year (Column 15) from the worst rainfall year (Column 14).

January:  $R_i \text{ (worst)} = 3.32 \text{ in} - 1.36 \text{ in} = 1.96 \text{ in}$

**17** Available water: Obtained by adding the amount of effluent received for application or storage (Column 13) and the infiltrated rainfall (Column 16).

January:  $0.73 \text{ in} + 1.96 \text{ in} = 2.69 \text{ in}$

**18** Lowest annual net evaporation in the past 25 years from the reservoir surface: Minimum annual net evaporation data was obtained from the Texas Water Oriented Data

Bank for the years 1966 through 1990 and distributed proportional to monthly averages. Values were then multiplied by the ratio of the surface area of the lagoons (5.5 acres) to the irrigation surface area (58 acres). For this example, the ratio is  $5.5/58 = 0.09$

**19** Storage: Obtained by calculating according to *30 TAC 309.20, Table 2*.

$\text{Storage} = [(\text{Column 13} - \text{Column 18B}) - [(\text{Column 7} - \text{Column 16})/k]$

If  $[(\text{Column 7} - \text{Column 16})/k] < 0$ , it is entered as zero, and  $\text{Storage} = (\text{Column 13} - \text{Column 18})$

January:  $\text{Storage} = (0.73 - 0.04) - [(0.9 - 1.96)/0.85] = 0.69 \text{ in}$

**20** Accumulated Storage: To allow for the worst condition, the summation of storage was obtained by adding the values obtained in Column 19, beginning with the first consecutive month of positive values. In this case, the summation was started in November. The maximum accumulated storage requirement occurred in February.

Annual:  $(0.62 \text{ in}) + (0.67 \text{ in}) + (0.69 \text{ in}) + (0.71 \text{ in}) = 2.69 \text{ in-ac/ac}$

**Table EX9(1) - Monthly Water Balance\***

(Units in inches unless otherwise specified)

1	2	3	4	5	6	7	8	9	10	11
	Avg Rain	Avg Run-off	Avg $R_i^{**}$	ET**	L**	TWN**	Effluent Required in Root Zone	EFRS**	Effluent Applied to Land	CFR**
JAN	2.39	0.72	1.67	0.9	0.0	0.9	0.0	0.06	0.0	0.06
FEB	2.80	0.99	1.81	1.3	0.0	1.3	0.0	0.03	0.0	0.03
MAR	2.95	1.09	1.86	3.0	0.9	3.9	2.1	0.15	2.5	2.6
APR	4.04	1.92	2.12	3.5	1.1	4.6	2.5	0.11	3.0	3.1
MAY	5.10	2.80	2.30	6.5	3.4	9.9	7.6	0.16	9.0	9.1
JUN	3.04	1.16	1.88	6.7	3.9	10.6	8.8	0.39	10.3	10.7
JUL	2.24	0.62	1.62	7.4	4.7	12.1	10.5	0.64	12.4	13.0
AUG	2.21	0.61	1.60	5.1	2.9	8.0	6.4	0.66	7.5	8.1
SEP	2.97	1.11	1.86	5.3	2.8	8.1	6.3	0.42	7.4	7.8
OCT	3.43	1.44	1.99	4.2	1.8	6.0	4.0	0.31	4.7	5.0
NOV	2.97	1.11	1.86	1.7	0.0	1.70	0.0	0.16	0.0	0.16
DEC	3.31	1.35	1.96	0.72	0.0	0.72	0.0	0.08	0.0	0.08
TOTAL	37.45	14.92	22.53	46.3	21.5	67.8	48.2	3.16	56.8	59.7

**\*Table EX9(1) was completed in accordance with Table 1 of 30 TAC 309.20. Refer to Appendix C for detailed explanation of calculations.**

**\*\* $R_i$  = Infiltrated Rainfall, ET = Evapotranspiration, L = Required Leaching, TWN = Total Water Needs, EFRS = Evaporation From Reservoir Surface, RC = Consumption From Reservoir.**

**EX9(2) - Storage Volume Calculation\***

(Units in inches unless otherwise specified)

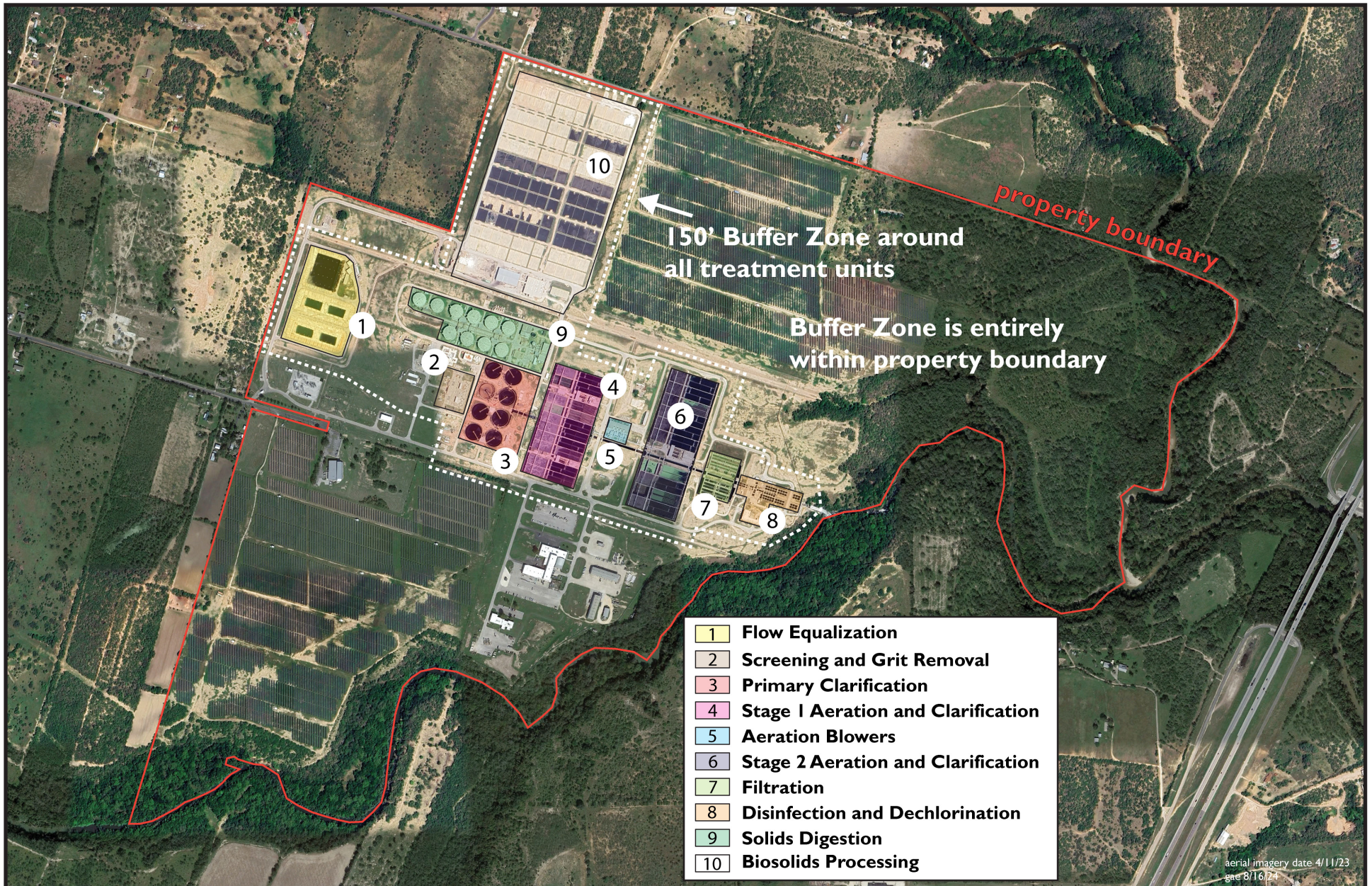
12	13	14A	14B	15	16	17	18A	18B	19	20
	Effluent Applied To Land	MRD**(%)	Rainfall (MAX)	Runoff (MAX)	R <sub>i</sub> **	Total Avail. H <sub>2</sub> O	DoM** (%)	Net E (MIN)	Storage (in- ac/ac)	AS (in- ac/ac)
JAN	0.73	6.4	3.32	1.36	1.96	2.69	1.8 %	0.04	0.69	1.98
FEB	0.73	7.5	3.89	1.80	2.09	2.82	1.1%	0.02	0.71	2.69
MAR	0.73	7.9	4.10	1.97	2.16	2.86	4.7 %	0.10	-1.4	1.27
APR	0.73	10.8	5.61	3.23	2.37	3.10	3.6 %	0.08	-2.0	-0.73
MAY	0.73	13.6	7.06	4.53	2.53	3.26	4.9 %	0.11	-8.1	-8.83
JUN	0.73	8.1	4.20	2.05	2.15	2.88	12.4 %	0.27	-9.5	-18.33
JUL	0.73	6.0	3.11	1.21	1.90	2.63	20.0 %	0.44	-11.7	-30.13
AUG	0.73	5.9	3.06	1.17	1.89	2.62	20.8 %	0.45	-6.9	-37.03
SEP	0.73	7.9	4.10	1.97	2.13	2.86	13.2 %	0.29	-6.6	-43.63
OCT	0.73	9.2	4.77	2.52	2.25	2.98	9.6 %	0.21	-3.9	-47.53
NOV	0.73	7.9	4.10	1.97	2.13	2.86	5.1 %	0.11	0.62	0.62
DEC	0.73	8.8	4.57	2.35	2.22	2.95	2.6 %	0.06	0.67	1.29
TOTAL	8.76	100.0	51.9	26.1	25.8	34.5	100	2.18	-----	2.69***

**\*Table EX9(2) was completed in accordance with Table 2 of 30 TAC 309.20. Refer to Appendix C for detailed explanation of calculations.**

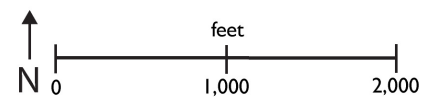
**\*\*MRD = Mean Rainfall Distribution, R<sub>i</sub> = Infiltrated Rainfall, DoM = Distribution of Mean, Net E = Net Evaporation, AS = Accumulated Storage.**

**\*\*\*Storage volume requirement = 2.69 in-ac/ac, or (2.69 in-ac/ac)(58 ac)(1 ft/12 in)= 13 ac-f**





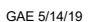
Buffer Zone Map  
Steven M. Clouse Water Recycling Center  
Permit ID TX007780 I





# Steven M. Clouse WRC Flow Diagram

\_\_\_\_\_ WATER  
- - - - - BIOSOLIDS



**External Sender**

Do not click links or attachments unless you trust the sender and know the content is safe.

[Report Suspicious](#)

Dear Ms. Welch,

The attached Notice of Deficiency letter sent on December 30, 2024, requests additional information needed to declare the application administratively complete. Please send the complete response to my attention by January 13, 2025.

Regards,

**Rainee Trevino**

Water Quality Division | ARP Team

Texas Commission on Environmental Quality

512-239-4324



---

**From:** Floramie Welch <[Floramie.Welch@saws.org](mailto:Floramie.Welch@saws.org)>

**Sent:** Friday, January 3, 2025 10:19 AM

**To:** Rainee Trevino <[Rainee.Trevino@tceq.texas.gov](mailto:Rainee.Trevino@tceq.texas.gov)>

**Subject:** RE: Application to Renew Permit No. WQ0010137033- Notice of Deficiency Letter

Happy Friday Ms. Trevino,

The following are our responses to the NORI.

1. Electronic Signature:

The electronic signature does not match the individual who is listed as the Responsible Authority Contact in the application. Please provide the electronic signature of the Responsible Authority Contact.

**Andrea Beymer, P.E., Executive Vice President-Chief Operating Officer**

2. Technical Report 1.0, Section 1: Please list the flows for all phases.

A. Existing/Interim I Phase

Design Flow (MGD): 125

2-Hr Peak Flow (MGD): 250

Estimated construction start date: N/A

Estimated waste disposal start date: Existing

**B. Interim II Phase**

**Design Flow (MGD): 125**

**2-Hr Peak Flow (MGD): 250**

**Estimated construction start date: N/A**

**Estimated waste disposal start date: Existing**

**C. Final Phase**

**Design Flow (MGD): 125**

**2-Hr Peak Flow (MGD): 250**

**Estimated construction start date: N/A**

**Estimated waste disposal start date: Existing**

**D. Current Operating Phase**

**Provide the startup date of the facility: 1987**

3. Plain Language Summary (PLS) or New Form 20972:

Please remove the portion in the PLS that states "We need a brief description of the process and NO Fancy words". – **(Attached)**

4. The following is a portion of the NORI which contains information relevant to your application. Please read it carefully and indicate if it contains any errors or omissions. The complete notice will be sent to you once the application is declared administratively complete.

**APPLICATION. NO CHANGE(S)**

San Antonio Water System, 2800 U.S. Highway 281 North, San Antonio, Texas 78221, has applied to the Texas Commission on Environmental Quality (TCEQ) to renew Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0010137033 (EPA I.D. No. TX0077801) to authorize the discharge of treated wastewater at a volume not to exceed a combined daily average flow of 125,000,000 gallons per day via Outfalls 001, 002, 003, 004, 005, and 006. The domestic wastewater treatment facility is located at 3495 Valley Road, near the city of San Antonio, Texas 78221, in Bexar County, Texas 78221. The discharge route is from the plant site via outfall 001 directly to Medina River Below Medina Diversion Lake, via pipeline to Outfall 004 and directly to Salado Creek, and via separate pipelines to Outfalls 002, 003, 005, and 006 and directly to the Upper San Antonio River. TCEQ received this application on December 20, 2024. The permit application will be available for viewing and copying at San Antonio Water System Administrative Building, First Floor, 2800

**B. Interim II Phase**

**Design Flow (MGD): 125**

**2-Hr Peak Flow (MGD): 250**

**Estimated construction start date: N/A**

**Estimated waste disposal start date: Existing**

**C. Final Phase**

**Design Flow (MGD): 125**

**2-Hr Peak Flow (MGD): 250**

**Estimated construction start date: N/A**

**Estimated waste disposal start date: Existing**

**D. Current Operating Phase**

**Provide the startup date of the facility: 1987**

3. Plain Language Summary (PLS) or New Form 20972:

Please remove the portion in the PLS that states "We need a brief description of the process and NO Fancy words". – **(Attached)**

4. The following is a portion of the NORI which contains information relevant to your application. Please read it carefully and indicate if it contains any errors or omissions. The complete notice will be sent to you once the application is declared administratively complete.

**APPLICATION. NO CHANGE(S)**

San Antonio Water System, 2800 U.S. Highway 281 North, San Antonio, Texas 78221, has applied to the Texas Commission on Environmental Quality (TCEQ) to renew Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0010137033 (EPA I.D. No. TX0077801) to authorize the discharge of treated wastewater at a volume not to exceed a combined daily average flow of 125,000,000 gallons per day via Outfalls 001, 002, 003, 004, 005, and 006. The domestic wastewater treatment facility is located at 3495 Valley Road, near the city of San Antonio, Texas 78221, in Bexar County, Texas 78221. The discharge route is from the plant site via outfall 001 directly to Medina River Below Medina Diversion Lake, via pipeline to Outfall 004 and directly to Salado Creek, and via separate pipelines to Outfalls 002, 003, 005, and 006 and directly to the Upper San Antonio River. TCEQ received this application on December 20, 2024. The permit application will be available for viewing and copying at San Antonio Water System Administrative Building, First Floor, 2800 U.S. Highway 281 North, San Antonio, in Bexar County, Texas prior to the date this notice is published in the newspaper. The application, including any updates, and associated notices are available electronically at the following webpage: <https://www.tceq.texas.gov/permitting/wastewater/pending-permits/tpdes-applications>.

This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For the exact location, refer to the application.

<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-98.430555,29.238611&level=18>

Further information may also be obtained from San Antonio Water System at the address stated above or by calling Ms. Olga Galindo, Executive Administrative Assistant, at 210-233-3830.

Sincerely,

Floramie Welch

---

**From:** Raine Trevino <[Raine.Trevino@tceq.texas.gov](mailto:Raine.Trevino@tceq.texas.gov)>

**Sent:** Monday, December 30, 2024 4:06 PM

**To:** Floramie Welch <[Floramie.Welch@saws.org](mailto:Floramie.Welch@saws.org)>

**Subject:** Application to Renew Permit No. WQ0010137033- Notice of Deficiency Letter

*The following summary is provided for this pending water quality permit application being reviewed by the Texas Commission on Environmental Quality as required by 30 TAC Chapter 39. The information provided in this summary may change during the technical review of the application and are not federal enforceable representations of the permit application.*

San Antonio Water System (CN600529069) operates the Steven M. Clouse Water Recycling Center (SMCWRC) (RN103119020), a wastewater treatment facility. SMCWRC is a subdivision of its own within the city limits. The facility is located at 3495 Valley Road in the city of San Antonio, Bexar County, Texas 78221. This permit application is for renewal to discharge treated domestic wastewater at the following Outfalls:

- Outfall 001 = 125 million gallons per day
- Outfall 002 = 10 million gallons per day
- Outfall 003 = 10 million gallons per day
- Outfall 004 = 3 million gallons per day
- Outfall 005 = 2.6 million gallons per day
- Outfall 006 = 46 million gallons per day

The pollutants from these discharges are Carbonaceous Biochemical Oxygen Demand, Total Suspended Solids, Ammonia and Escherichia coli (E. coli). The discharges also contain chlorine residual less than 0.1 part per million and are required to have a potential of hydrogen (pH) between 6.0 and 9.0, or between 6.5 and 9.0, depending on discharge location, measured as standard units. Additional potential pollutants are included in the Domestic Wastewater Application Technical Report, Worksheet 2.0.

The Steven M. Clouse Water Recycling Center is a two-stage, conventional activated sludge plant that employs physical, biological, and chemical principles to remove contaminants from wastewater. First, influent wastewater is routed through screens to remove large solids. Next, the wastewater flows through grit removal chambers to remove inorganic particles like sand or gravel. The wastewater then flows through primary clarifiers where solids settle to the bottom and oils and fats rise to the top, which are removed and processed in anaerobic digesters.

From the primary clarifiers, the wastewater flows through aeration basins where the biological treatment occurs as microorganisms consume the organic materials. Flow from the aeration basins enters the final clarifiers where remaining solids settle to the bottom and are directed to the anaerobic digesters. Following the final clarifiers, flows pass through the filters where any remaining particles are filtered out. Finally, the water is treated with chlorine and flows through chlorine contact basins to ensure destruction of pathogenic organisms and dechlorinated with sulfur dioxide to safeguard the receiving stream. For biosolids processing, the facility includes screening, thickening, anaerobic digestion, holding tanks, mechanical dewatering, and drying beds.



## Rainee Trevino

---

**From:** Rainee Trevino  
**Sent:** Tuesday, January 7, 2025 4:12 PM  
**To:** Floramie Welch  
**Subject:** RE: Application to Renew Permit No. WQ0010137033- Notice of Deficiency Letter

Hi Floramie,

The signature for the Responsible Authority Contact will actually need to be notarized. This is my error and should have been noted in the original NOD. Please use the signature page located in for number 10053 to provide the notarized signature.

Regards,

**Rainee Trevino**

Water Quality Division | ARP Team  
Texas Commission on Environmental Quality  
512-239-4324



---

**From:** Floramie Welch <Floramie.Welch@saws.org>  
**Sent:** Friday, January 3, 2025 10:19 AM  
**To:** Rainee Trevino <Rainee.Trevino@tceq.texas.gov>  
**Subject:** RE: Application to Renew Permit No. WQ0010137033- Notice of Deficiency Letter

Happy Friday Ms. Trevino,  
The following are our responses to the NORI.

1. Electronic Signature:  
The electronic signature does not match the individual who is listed as the Responsible Authority Contact in the application. Please provide the electronic signature of the Responsible Authority Contact.  
**Andrea Beymer, P.E., Executive Vice President-Chief Operating Officer**
2. Technical Report 1.0, Section 1: Please list the flows for all phases.
  - A. Existing/Interim I Phase
    - Design Flow (MGD): 125
    - 2-Hr Peak Flow (MGD): 250
    - Estimated construction start date: N/A
    - Estimated waste disposal start date: Existing

## Section 14. Signature Page (Instructions Page 34)

*If co-applicants are necessary, each entity must submit an original, separate signature page.*

Permit Number: WQ00137033

Applicant: San Antonio Water System

Certification:

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.

I further certify that I am authorized under 30 Texas Administrative Code § 305.44 to sign and submit this document, and can provide documentation in proof of such authorization upon request.

Signatory name (typed or printed): Andrea L.H. Beymer, P.E.

Signatory title: Executive Vice President/Chief Operating Officer

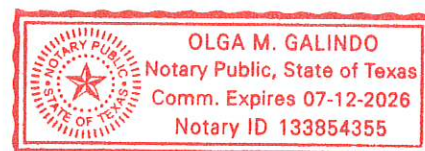
Signature: Andrea L. H. Beymer Date: 1/8/2025  
(Use blue ink)

Subscribed and Sworn to before me by the said Andrea L. H. Beymer, P.E.  
on this 8th day of January, 2025.  
My commission expires on the 12th day of July, 2026.

Olga M. Galindo  
Notary Public

[SEAL]

Bexar  
County, Texas



## Rainee Trevino

---

**From:** Floramie Welch <Floramie.Welch@saws.org>  
**Sent:** Thursday, January 9, 2025 9:01 AM  
**To:** Rainee Trevino  
**Subject:** RE: Application to Renew Permit No. WQ0010137033- Notice of Deficiency Letter

Hi Rainee,  
YES, we would like to continue and there's no change.

Sincerely,  
Floramie

---

**From:** Rainee Trevino <Rainee.Trevino@tceq.texas.gov>  
**Sent:** Wednesday, January 8, 2025 11:10 AM  
**To:** Floramie Welch <Floramie.Welch@saws.org>  
**Subject:** RE: Application to Renew Permit No. WQ0010137033- Notice of Deficiency Letter

### External Sender

Do not click links or attachments unless you trust the sender and know the content is safe.

Report Suspicious

Good morning Floramie,

We received paperwork requesting a permit for composted sewage sludge. We found that this was previously included in the previous permit from 2015. I want to confirm that you all want to continue this and if there are any changes.

Regards,

**Rainee Trevino**  
Water Quality Division | ARP Team  
Texas Commission on Environmental Quality  
512-239-4324



---

**From:** Rainee Trevino  
**Sent:** Tuesday, January 7, 2025 4:12 PM  
**To:** Floramie Welch <[Floramie.Welch@saws.org](mailto:Floramie.Welch@saws.org)>  
**Subject:** RE: Application to Renew Permit No. WQ0010137033- Notice of Deficiency Letter