DESIGN ANALYSIS REPORT FOR THE

TRUTH OR CONSEQUENCES VACUUM SEWER SYSTEM IMPROVEMENTS

JANUARY 2025

FOR THE:
CITY OF TRUTH OR CONSEQUENCES
505 SIMS STREET
TRUTH OR CONSEQUENCES, NM 87901

PREPARED BY:
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ENGINEERS AND ARCHITECTS
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LAS CRUCES, NM 88001



City of Truth or Consequences Vacuum Sewer Improvements Design Analysis Report

Project No. 20-600-919-00

I, Brian J. Ambrogi, PE, certify that I am a licensed Professional Engineer, NMPE# 17610, and that this report was prepared by me or under my direction.



Brian J. Ambrogi, PE

City of Truth or Consequences Vacuum Sewer Improvements Design Analysis Report

C	ONTEN	TS	
1	BAC	KGROUND	1
	1.1	Location	1
	1.2	Community	1
2	EXIS	TING FACILITIES	3
	2.1	Condition	4
	2.2	Population Served	5
3	NEE	D FOR PROJECT	5
	3.1	Problem	5
4	ALTE	ERNATIVES CONSIDERED	6
	4.1	Alternative 1: Full Replacement	6
	4.2	Alternative 2: System Rehabilitation	8
	4.3	Annual O&M Costs	11
	4.4	Life Cycle Cost Analysis	12
5	SELE	ECTION OF AN ALTERNATIVE1	14
6	CON	CLUSION AND RECOMMENDATION	14
	6.1	Project Schedule	14
L	IST OF	REPORT TABLES	
Т	able 1	City of Truth or Consequences Sewer Rates	5
T	able 2:	Alternative 1 Cost Estimate	7
		Alternative A2 Cost Estimate1	
		Estimated Annual O&M Cost	
		Summary of Alternative Costs and Net Present Values	
T	able 7:	Proposed Project Schedule	14
L	IST OF	FIGURES	
F	igure 1:	Project Location within the City	. 1
F	igure 2:	Project Location-State of New Mexico	3
L	IST OF	EXHIBITS	
		: Truth or Consequences Vacuum Sewer System Layout	2
_	ALLIWIT I	5. Stripoquerioso vadadiri Seriol System Layout	-



1 BACKGROUND

The City of Truth or Consequences vacuum sewer system currently serves approximately 167 residents and is approximately 2.95 miles long. The vacuum system is well over 24 years old and is beginning to deteriorate and mal function, causing manual start-up and experiencing pit overflow. Several components within the vacuum station building have failed including vacuum pumps, force main pumps, controls, valves and the exhaust filtration unit outside the building has not been maintained since being built.

This Design Analysis Report (DAR) is intended to identify, evaluate, and provide recommendations for improvements within the vacuum sewer collection network and pump station. This report was prepared in accordance with the requirements of NMED-CPB "Final Technical Memorandum General Outline".

1.1 Location

e City of Truth or Consequences (thereafter referred to as the City) is in Sierra County in the Southwestern part of New Mexico, about 72.4 miles northwest of Las Cruces. The system is

located on North Riverside
Drive, on the East side of
the City, and is directly
parallel to the Rio Grande
river (Figure 1). See Exhibit
A for a more detailed system
layout. North Riverside Drive
is approximately located at
Latitude 33.1358°N and
Longitude 107.227161°W
where the vacuum sewer
area is at an elevation of
approximately 4245 feet.

1.2 Community

The proposed project is within the existing system area and City limits. There are no national parks, landmarks, wilderness areas, wildlife refuges, or Native

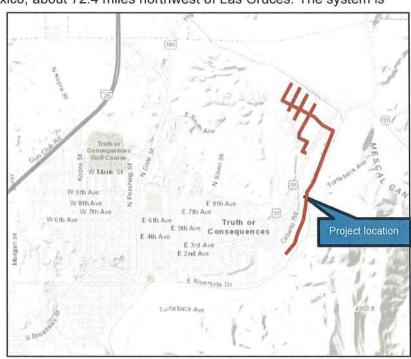
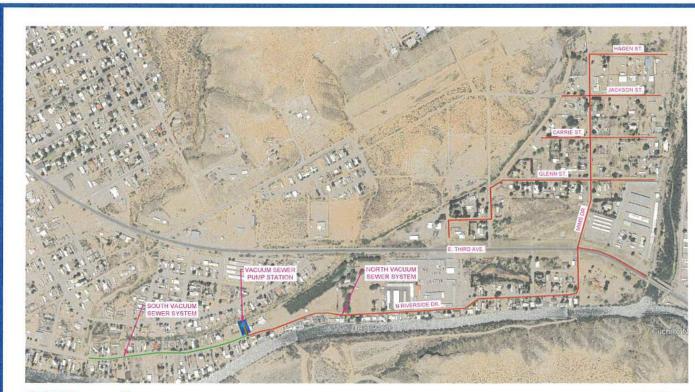


Figure 1: Project Location within the City

American-owned lands in or immediately adjacent to the planning area. Important land resources withing the project area include the Rio Grande river that runs parallel to the existing line.



A1 PLAN VIEW

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EXHIBIT A TRUTH OR CONSEQUENCES VACUUM SEWER SYSTEM LAYOUT

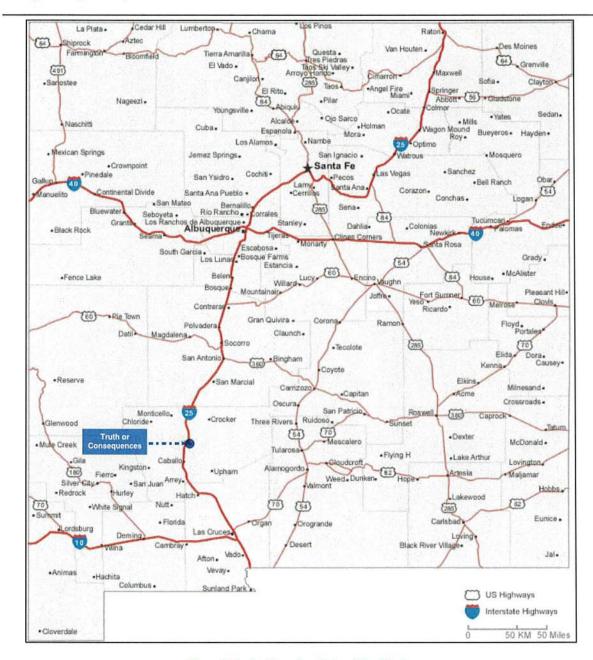


Figure 2: Project Location-State of New Mexico

2 EXISTING FACILITIES

The vacuum system was first constructed in 1995, followed by a second phase in 1997, making the collection and vacuum system well over 20 years old. The overall condition of the vacuum sewer system is functional, but because of the aging infrastructure, lack of regular inspections and proactive maintenance, several components need upgrades, repairs or even replacement based on reports from the City staff. According to records, components within the vacuum station

have not been replaced since the year 1997 and typical service life for pumps range from 10-15 years

2.1 Condition

2.1.1 Vacuum Station

The City of Truth or Consequences uses a single vacuum station in its vacuum sewer infrastructure originally constructed in 1995, located at 900 North Riverside Drive. Over the years components in the vacuum station have been repaired by the City crew as issues arise, but there is no official documentation of these inspections or repairs except for the new control panel replaced in 2020. The control panel for the station has been replaced by I&C Solutions with local visual alarms, new probes on the tank, and remote terminal units and telemetry equipment compatible with the current City of Truth or Consequences SCADA system to notify them of an issue to dispatch operators to the site.

Structurally the vacuum station building is in good condition in need of minor repairs. The existing building is equipped with louvers and an exhaust fan for ventilation, Thru-wall cooling unit, and a space heater to prevent freezing. The exhaust fan and eye wash station are visibly worn, and the rolling door does not function very smoothly. Some recent repairs in the last three years include lighting replacements and new paint. The electrical service and current breaker currently drop off a couple times throughout the day, leaving the operators unable to do anything during that time.

The vacuum station is setup with two sewage and two vacuum pumps, only one of each is functioning. All the vacuum piping from the tank to the vacuum pumps have cracks at joints and flanges with the City utilizing vinyl tape for sealing. The tank and corresponding shell manway are in good condition with no visible pitting or scarring but can collect a good amount of debris. There are two ball valves on the South side of the tank, one is not fully functioning without manual opening and closing from the City crew.

2.1.2 Collection Lines

The collection system is made up of approximately 2.95 miles of 4 inch PVC and older cast iron. The only existing records for this system are from 1995 when the system itself was built and in 1997 when an expansion was recorded. Other than the Mims Drive expansion from 1997, there are no further records of any system inspections or repairs to the vacuum sewer collection lines since the system was built.

The collection lines with the respective valves are predominantly functioning in good condition with a new 4-inch sleeve in the bridge area on Mims Drive crossing Third Street, according to the system operator. Nevertheless, the vacuum sewer system experiences frequent backups from waterlogging leading to several issues including a large loss of pressure at the end of the system line.

2.1.3 Valve Pits

In the City collection system there are 81 pits, 15 of those constructed in 1997 with the Mims Street expansion. Among these 81 pits, there are 3 different types of valves with 3 different controllers. The 25 pits in the South portion of the system are in fair condition and functioning.

The 56 pits North of the vacuum station need rehabilitation, they currently have unreliable rubber connections and cracks.

2.2 Population Served

There are approximately 167 active vacuum sewer connections in Truth or Consequences. Of those sewer connections 162 are residential and 5 are commercial, with an estimated 2 users per residential connection. Commercial connections are currently categorized under the same rate as residential connections. The City of Truth or Consequences billing system is based on the water consumption by customer. The sewer rate structure is listed below in **Table 1: City of Truth or Consequences Sewer Rates.**

Table 1: City of Truth or Consequences Sewer Rates

	2020
Monthly	\$11.32
Volume/1000 gal.	\$3.83

3 NEED FOR PROJECT

3.1 Problem

The City of Truth or Consequences has an immediate concern regarding the failure of the components in the vacuum station, leaving the area without a proper working sewer. The vacuum sewer system experiences frequent backups from waterlogging. Issues include frequent flooding within the pits, unreliable rubber connections that need replacement, several cracks with slight leaking in the division plates, and overall, a large loss of pressure at the end of the system line. This lack of pressure going into the tank requires to manually use a check valve in order to release this pressure to facilitate movement and reduce the amount of backups.

Aging infrastructure poses a risk of problems such as overflow and backup of raw sewage that can possibly spread dangerous bacteria, parasites and viruses. With proximity to the Rio Grande, the aged sewer lines have the potential of leaching into the groundwater and making its way to the river. This area lies within the flood zone, presenting a risk associated with raw sewage entering the nearby river through runoff or through the shallow groundwater table. The Rio Grande is used heavily for agriculture, crops would be greatly compromised, impacting the local and state economy.

In addition to these concerns, the system does not have an odor control system. Without proper odor control, odors drift to the surrounding community and reduce a person's quality of life with this pollution.

4 ALTERNATIVES CONSIDERED

4.1 Alternative 1: Full Replacement

The Full Replacement alternative is concerned with constructing a new station and completely replacing all the station equipment. This includes a new building, cooling unit, eye wash station, maintenance rolling door, all pumps (sewer and vacuum), electrical panels, control panel, collection tank, and all corresponding valves and isolators. Additionally, this alternative includes rehabilitation of 56 vacuum valve pits along the north vacuum sewer system branch by replacing rubber pipe connections that are cracked and leaking and installing valve pit extension collars to reduce inflow of runoff into the valve pits.

This option eliminates the issues caused by aging infrastructure such as cracks in the piping, valves, flanges, and tank. It also improves the redundancy of the system with the additional two pumps that would be working and increase effectiveness with the new control panel. As well as overall improving the work and safety conditions when inside the station by replacing the eye wash station, rolling door and cooling unit. Not only is full replacement costly, it will additionally have extra yearly electricity costs due to the cooling unit.

4.1.1 Design Criteria

The design criteria considered for this alternative includes storage and pump sizing to meet peak design flows, state regulations and ensuring compatibility with existing infrastructure. Ten States Standards – Recommended Standards for Wastewater Facilities (2014), guides that materials selected are appropriate under the conditions to exposure to hydrogen sulfide and other corrosive gasses, greases, oils and other constituents present in wastewater. Professional engineering services for design, bidding, and construction phases will also be required to meet regulatory requirements.

4.1.2 Land Requirements

Does not require land acquisition.

4.1.3 Potential Construction Problems

There is a potential for temporary interruption of service during the integration of the components.

4.1.4 Permits Required

No permits are required, all work is being completed within City property.

4.1.5 Cost Estimate

The project cost estimate for Alternative 1 is shown in **Table 2**.

Table 2:Alternative 1 Cost Estimate

ITEM DESCRIPTION	UNIT	QTY.	UNIT	TOTAL
TI EWI DESCRIPTION	OIVII	QII.	PRICE	PRICE
Construction Costs				
Pre-construction and post-construction Video Documentation	LS	1	\$ 1,500.00	\$ 1,500.00
Traffic Control	LS	1	\$ 45,000.00	\$ 45,000.00
Mobilization	LS	1	\$ 51,000.00	\$ 51,000.00
Construction Survey to include staking, layout and identifying project boundaries.	LS	1	\$ 4,500.00	\$ 4,500.00
Material Testing Allowance	Allow	1	\$ 3,500.00	\$ 3,500.00
Install new EAAC-Kit5 Remote Mount Solar EAAC Kit	EA	0	\$ 22,000.00	\$ -
Sewage Pump Equipment (includes two-vertical coupled sewage pumps with 5HP motors.)	LS	2	\$ 69,310.00	\$ 138,620.00
Vacuum Pump Equipment (includes two-cobra vacuum pumps as modified for AIRVAC 383 cfm, complete with 20 HP motors, two-inlet filter canisters with falnges and accessories, two-3"butterfly valves, cast iron body, stainless steel disc, complete with levers, two-3" flanged cast iron check valves fitted with 20 durometer rubber flappers, two- 3" in-line 316 SS check valves, one condesate header assembly, one complete NEMA 12 enclosure).	LS	1	\$ 281,750.00	\$ 281,750.00
Control Panel- to operate vacuum pumps and sewage pumps	LS	1	\$ 19,435.00	\$ 19,435.00
New electrical LP, surge protection, transformer, and connection to service drop	LS	1	\$ 22,500.00	\$ 22,500.00
Econo Pac-125 Skid Unit	EA	1	\$ 8,595.00	\$ 8,595.00
12000 BTU Through-the-Wall AC 10,600 BTU Supplemental Heat Remote Sleep Mode 24H Timer for Rooms up to 550sq. Ft.	EA	1	\$ 1,057.05	\$ 1,057.05
Global Industriul Emergency Combiation Shower with Eyewash Station, Floor Mounted	EA	1	\$ 797.43	\$ 797.43
Face Mount White Sheet door, opening heigh:8ft, Opening Width:10ft, Insulated No.	EA	1	\$ 2,784.24	\$ 2,784.24
24" Shell Manway	EA	1	\$ 1,497.10	\$ 1,497.10
2400 Gallon Sewage Collection Tank	EA	1	\$ 33,000.00	\$ 33,000.00
Existing Pump Removal & Replacement (incl. control, connection to electrical)	EA	4	\$ 218,730.00	\$ 874,920.00
4" Vibration Isolator	EA	1	\$ 119.98	\$ 119.98
6" Vibration Isolator	EA	1	\$ 138.82	\$ 138.82
Level Sensing Probes	LS	1	\$ 5,859.00	\$ 5,859.00
4" Plug Valve	EA	2	\$ 1,063.84	\$ 2,127.68
6" Plug Valve w/Chainwheel	EA	4	\$ 1,181.84	\$ 4,727.36
Valve pit rehabilitation - replacement of rubber pipe connections and installation of valve pit extension collars.	EA	51	\$ 2,000.00	\$ 102,000.00

Total Project Amount	\$ 2,276,235.70
Non-Construction Total	\$ 362,364.06
Legal Total (w/ NMGRT)	\$ 34,797.67
Legal NMGRT at 8.375%	\$ 2,689.09
Bond Counsel Services	\$ 16,054.29
Project Attorney Services	\$ 16,054.29
Engineering Services Total (w/ NMGRT)	\$ 327,566.39
NMGRT for Engineering Services @ 8.375%	\$ 25,313.67
Engineering Services Subtotal (excl. NMGRT)	\$ 302,252.73
Engineering - Construction Management	\$ 24,081.43
Engineering - Construction Inspection	\$ 80,271.43
Engineering - Bid Phase	\$ 8,000.00
Engineering - Design	\$ 160,542.87
Pre-Engineering - Data Collection	\$ 29,357.00
Non-Construction Costs	
Construction Total	\$ 1,913,871.64
NMGRT for T or C at 8.375%	\$ 147,900.12
Construction Contingency @ 10 % of Construction Subtotal	\$ 160,542.87
Construction Subtotal	\$ 1,605,428.66

4.2 Alternative 2: System Rehabilitation

This alternative includes the installation of new vacuum pump equipment, sewage pump equipment, an odor control drum, and an electric air admission control (EAAC) to alleviate waterlog issues. This option will utilize equipment provided by AirVac, the original manufacturers of the existing equipment to be compatible with components within the system that are not being replaced. Existing equipment, piping, fitting, and appurtenances listed within the vacuum sewer station would be replaced within the existing building. Additionally, this alternative includes rehabilitation of 56 vacuum valve pits along the north vacuum sewer system branch by replacing rubber pipe connections that are cracked and leaking and installing valve pit extension collars to reduce inflow of runoff into the valve pits.

The Electronic Air Admission Control (EAAC) admits air into the vacuum main independently of the controller. It acts on a preset time interval and vacuum levels in the main. The EAAC will assist in propelling the sewage along the vacuum main rather than replacing various valve pits in hopes of mitigating the frequent backups. Its location is up to the operator. This alternative also includes an odor control system through an odor control drum, which is easy to install and is cost effective.

4.2.1 Design Criteria

The design criteria considered for this alternative includes storage and pump sizing to meet peak design flows, state regulations and ensuring compatibility with existing infrastructure. Ten States Standards – Recommended Standards for Wastewater Facilities (2014) guides that materials selected are appropriate under the conditions to exposure to hydrogen sulfide and other corrosive gasses, greases, oils and other constituents present in wastewater. Professional engineering services for design, bidding, and construction phases will also be required to meet regulatory requirements.

4.2.2 Land Requirements

Does not require land acquisition.

4.2.3 Potential Construction Problems

There is a potential for temporary interruption of service during the integration of the components, and the lack of equipment from manufacturers.

4.2.4 Permits Required

No permits are required, all work is being completed within City property.

4.2.5 Cost Estimate

The project cost estimate for Alternative 2 is shown in Table 3.



Table 3: Alternative A2 Cost Estimate

ITEM DESCRIPTION	UNIT	OTV	UNIT		TOTAL
ITEM DESCRIPTION	UNIT	QTY.	PRICE		PRICE
Construction Costs				Dark.	
Pre-construction and post-construction Video	LS	1	e 1500.00	d.	1 500 00
Documentation	Lo	1	\$ 1,500.00	\$	1,500.00
Traffic Control	LS	1	\$ 45,000.00	\$	45,000.00
Mobilization	LS	1	\$ 51,000.00	\$	51,000.00
Construction Survey to include staking, layout and	LS	1	\$ 4,500.00	\$	4,500.00
identifying project boundaries.	LO		\$ 4,500.00		4,300.00
Material Testing Allowance	Allow	1	\$ 3,500.00	\$	3,500.00
Install new EAAC-Kit5 Remote Mount Solar EAAC Kit	EA	1	\$ 22,000.00	\$	22,000.00
Sewage Pump Equipment (includes two-vertical	LS	1	\$ 69,310.00	\$	69,310.00
coupled sewage pumps with 5HP motors.)	LS	2.0	\$ 69,310.00	Φ	09,310.00
Vacuum Pump Equipment (includes two-cobra vacuum pumps as modified for AIRVAC 383 cfm, complete with 20 HP motors, two-inlet filter canisters with falnges and accessories, two-3"butterfly valves, two-3" flanged cast iron check valves with 20 durometer rubber flappers, two- 3" in-line 316 SS check valves, 3-120V AC digital inputs to the PLC.	LS	1	\$ 281,750.00	\$	281,750.00
Can-Lite Active Odor Control Drum Filter	EA	1	\$ 651.05	\$	651.05
Existing Pump Removal & Replacement (incl. control, connection to electrical)	EA	2	\$ 13,750.00	\$	27,500.00
Replacement of existing electrical LP	LS	1	\$ 9,000.00	\$	9,000.00
Valve pit rehabilitation - replacement of rubber pipe connections and installation of valve pit extension collars.	EA	51	\$ 2,000.00	\$	102,000.00
		Const	ruction Subtotal	\$	617,711.05
Construction Contingency @	10 %				61,771.11
			or C at 8.375%		56,906.63
	(2-11-10000-813		struction Total		736,388.79
Non-Construction Costs				SAFAY	
Pr	e-Engin	eerina -	Data Collection	\$	29,348.50
			eering - Design		61,771.11
	F	and the latest and th	ing - Bid Phase		8,000.00
Engine			ction Inspection		30,885.55
			on Management		9,265.67
			(excl. NMGRT)	\$	139,270.82
NMGRT for E		11,663.93			
Engineer	\$	150,934.75			
Engineer			torney Services		6,177.11
			ounsel Services		6,177.11
			IGRT at 8.375%		1,034.67
			tal (w/ NMGRT)		
			struction Total		13,388.89 164,323.64
Total Project Amount	IN	on-con	su ucuon Total		
Total Froject Amount	HEE ST		ALVA PERSONAL PROPERTY.	\$	900,712.43

4.3 Annual O&M Costs

Costs are based on AirVac Company estimations and current city operating and maintenance costs of the proposed improvements. A summary of the O&M costs can be found below in **Tables 4a and 4b**.

Table 4a: Alternative 1 - Estimated Annual O&M Cost

ITEM DESCRIPTION	UNIT	OTV	UNIT		TOTAL				
TEMDESCRIPTION	UNIT	QTY.	F	PRICE	PRICE				
Normal and Preventative Maintenance									
Vacuum Station	HRS	155	\$	75.00	\$	11,625.00			
Exercise division valves-vacuum mians	HRS	16.5	\$	75.00	\$	1,237.50			
vacuum valves and controllers inspection	HRS	101.5	\$	75.00	\$	7,612.50			
Emergen	cy Mainter	nance							
Emergency funds for vacuum mains, vacuum station, and vaum valves.	HRS	45	\$	75.00	\$	3,375.00			
	Power								
Vacuum Pumps	KWHR	43000	\$	0.11	\$	4,730.00			
Sewage Pumps	KWHR	18000	\$	0.11	\$	1,980.00			
Ventilation/Lighting/Misc Power:	KWHR	2000	\$	0.11	\$	220.00			
Odor Control	KWHR	19597	\$	0.11	\$	2,155.67			
Cooling System	MONTH	12	\$	150.00	\$	1,800.00			
Flat Fee	MONTH	12	\$	100.00	\$	1,200.00			
				Total=	\$	37,732.45			

Table 5b: Alternative 2 - Estimated Annual O&M Cost

ITEM DESCRIPTION	UNIT	QTY.	UNIT		TOTAL	
TIEWDESCRIPTION	UNIT	QII.	F	PRICE	PRICE	
Normal and Prev						
Vacuum Station	HRS	155	\$	75.00	\$	11,625.00
Exercise division valves-vacuum mians	HRS	16.5	\$	75.00	\$	1,237.50
vacuum valves and controllers inspection	HRS	101.5	\$	75.00	\$	7,612.50
Emergeno	y Mainten	ance				
Emergency funds for vacuum mains, vacuum station, and vaum valves.	HRS	45	\$	75.00	\$	3,375.00
	Power	5 J				
Vacuum Pumps	KWHR	43000	\$	0.11	\$	4,730.00
Sewage Pumps	KWHR	18000	\$	0.11	\$	1,980.00
Ventilation/lighting/etc.	KWHR	5000	\$	0.11	\$	550.00
Odor Control	KWHR	19597	\$	0.11	\$	2,155.67
Cooling System	MONTH	12	\$	150.00	\$	1,800.00
Flat Fee	MONTH	12	\$	100.00	\$	1,200.00
Alternat	ive 2 Tota	l Annua	10&	M Cost =	\$	38,078.95

4.4 Life Cycle Cost Analysis

A life cycle cost analysis was calculated for the two alternatives. The 20-YR Net Present Value (NPV) for each alternative included capital costs, and O&M costs, as well as short lived assets as described under the Cost Estimates section for each alternative. The real discount rate used for evaluation of annual costs over a 20-year period was 3% as taken from OMB circular A-94. As presented below, the NPV for each alternative has been included for comparison purposes.

Table 6: Summary of Alternative Costs and Net Present Values

ALTERNATIVE	DESCRIPTION	PROJECT COST	O&M PRESENT WORTH	Salvage Value PW	NET PRESENT VALUE	
A1	Complete Replacement	\$ 2,272,715.53	\$37,732.45	\$57,552	\$2,949,901.59	
A2	System Rehabilitation	\$899,343.63	\$38,078.95	\$22,144.07	\$1,616,595.39	

The salvage value for each alternative was estimated using the anticipated life expectancy of the constructed items and then calculated as a straight-line depreciation at the end of the planning period of 20 years. The salvage value was then converted to present day dollars and included in the net present value calculation according to RUS Bulletin 1780-2.

Table 7: Net Present Value Analysis

Year	Alt	ernative 1		rnative 1 &M Cost	Alt	ernative 2		ernative 2 &M Cost	
0	\$	2,272,716			\$	899,344			
1	\$		\$	37,732	\$	-	\$	38,079	
2	\$		\$	37,846	\$		\$	38,193	
3	\$		\$	37,959	\$		\$	38,308	
4	\$		\$	38,073	\$		\$	38,423	
5	\$	2.5	\$	38,187	\$	-	\$	38,538	
6	\$		\$	38,302	\$		\$	38,654	
7	\$	-	\$	38,417	\$		\$	38,770	
8	\$		\$	38,532	\$		\$	38,886	
9	\$		\$	38,648	\$	-	\$	39,003	
10	\$		\$	38,764	\$		\$	39,120	
11	\$		\$	38,880	\$		\$	39,237	
12	\$	_	\$	38,996	\$	4	\$	39,355	
13	\$	27	\$	39,113	\$		\$	39,473	
14	\$		\$	39,231	\$	(1) - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	\$	39,591	
15	\$		\$	39,348	\$		\$	39,710	
16	\$		\$	39,467	\$		\$	39,829	
17	\$		\$	39,585	\$	_	\$	39,948	
18	\$		\$	39,704	\$		\$	40,068	
19	\$		\$	39,823	\$		\$	40,189	
20	\$		\$	39,942	\$		\$	40,309	
Future Worth (per category):	\$	2,413,036	\$	776,549	\$	954,870	\$	783,680	
Present Worth (per Alternative or Option):		\$2,272,716		\$731,392		\$899,344		\$738,108	
Net Present Worth (per Alternative or Option):		\$3,00)7	\$1,637,4 <mark>5</mark> 2					
Salvage Value Present Worth (SPPW (S))	4 書	\$54,206				\$20,856			
Net Present Value (NPV) (NPV=C+USPW (O&M)-SPPW(S))		\$2,94	49,90)2	\$1,616,595				

Notes:

- 1. Project Cost is the addition of construction and non-construction items
- 2. O&M Escalation per year (i.e., geometric gradient=3%
- 3. Planning Period is assumed to be 20 years
- 4. Project Costs are assumed to realize 0 year
- 5. O&M costs are assumed to realize in 1 year

5 SELECTION OF AN ALTERNATIVE

The proposed alternatives outlined in this report seek to address the ongoing issue with the system as part of the concerted effort to continue to provide reliable service to residents. The vacuum sewer improvements are necessary to address the issues of backups and the aging system. The full replacement of all components would require the system to be offline for an extended period and is not the most cost-effective choice. Although it would improve the overall efficiency it would add complexity to the system as well as increased costs with operations and maintenance of new components. Downtime is the number one criterion.

6 CONCLUSION AND RECOMMENDATION

Final Completion/Operation

The recommended project consists of Alternative 2, which includes the replacements of specific equipment within the vacuum station. This recommendation addresses the need to mitigate the backups occurring, installation of an odor control system and increases the overall system reliability from the worn equipment. The inclusion of the EAAC would assist in the waterlogging issue while maintaining cost effectiveness and time efficiency. Alternative 2 can be completed while keeping the system online without extended downtimes. The disadvantage with this recommendation is the possibility of the manufacturer not having the required equipment. The only other considered alternative would have to utilize many different manufacturers.

As detailed in **Table 3**, the total recommended project cost was calculated to be \$900,712.43.

6.1 Project Schedule

The anticipated project timeline is shown below and is contingent on agency and permit review timeframes which are subject to change.

DESCRIPTION **START FINISH DAR Revision** Jul-24 Dec-24 **DAR Approval** Jan-25 Jan-25 Design Phase AES Amendment Jan-25 Feb-25 **Data Collection** Feb-25 Feb-25 Design Phase Feb-25 May-25 Design Review by NMED May-25 Jul-25 Jul-25 Approval to Bid Jul-25 **Bidding Phase** Jul-25 Aug-25 Construction Phase Nov-25 Aug-25

Nov-25

Dec-25

Table 8: Proposed Project Schedule