



Water Pollution Control Project Needs Assessment (PNA) Form

Water Quality Control Division

1. Applicant Information:

Entity Name	East Alamosa Water and Sanitation District			Original ID:	_____
Facility Name:	East Alamosa Water and Sanitation District			County:	_____
Mailing Address 1:	10 Costilla Boulevard	Mailing Address 2:	_____	County:	_____
City:	Alamosa	State:	CO	Zip Code:	81101
Property Address 1:	10 Costilla Blvd	Property Address 2:	_____	County:	_____
City:	Alamosa	State:	CO	Zip Code:	81101
Latitude :	39.7517291	Longitude :	-104.992107		
Name of Project:	2023 Lift Station Improvements				

Type of Project (Check all that apply)

- New domestic wastewater treatment plant
- Construction project resulting in increase or decrease in design capacity of existing wastewater treatment plant
- Modification of wastewater treatment plant that will not result in a change to treatment capacity
- New or expansion of lift station
- Collection system (gravity sewer mains less than 24-inches in diameter)
- In-Kind Replacement (Replacement of any process or hydraulic treatment conveyance component with an identical or similar component. Usually in cases where equipment has reached end of life and replacement is necessary to maintain compliance)
- Stormwater
- Non-Point Source Discharge
- New or relocated wastewater treatment plant outfall
- New interceptor (24-inch diameter or larger pipeline)

Please enter the following information for your organization if you have it. Visit <http://fedgov.dnb.com/webform> and <https://www.sam.gov/portal/public/SAM/> for details. Note: you will be required to obtain both of these items prior to loan execution.

Owner Information:

First Name:	Jamie	Middle Name:	_____	Last Name:	Greeman
Phone Number:	719-589-2649				
Mailing Address1:	10 Costilla Blvd	Mailing Address2:	_____	Zip Code:	81101
City:	Alamosa	State:	CO	Zip Code:	81101
E-mail:	jamie@eastalamosaws.org				

Consulting Engineer Information:

First Name:	Ricardo	Middle Name:	_____	Last Name:	Gonçalves
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Phone Number: 303-293-8107

Mailing Address1: 4885 Ward Rd

Mailing Address2: Suite 100

City: Wheat Ridge

State: CO

Zip Code: 80033

E-mail: rickg@rgengineers.com

Self-Certification:

Yes No Does the system intend to self-certify all or a portion of the project?

If yes, please identify the portions of the project that the system will self-certify.

Collection system piping

Provide additional explanation, if necessary:

The system intends to self-certify the replacement of gravity sewer main lines downstream of Lift Stations No. 3 and No. 6. Lift station No. 3 has had overflows because the 6-inch gravity line from the downstream manhole into which the force main discharges is too small to handle the pumping of both pumps simultaneously. The upstream gravity line flowing into Lift Station No. 6 has a reverse grade, so the pipe does not allow for flow downstream until it becomes full. This upstream gravity-feed sanitary sewer line also has substantial root intrusion, which restricts flows into the lift station, causing the upstream manhole to overflow. This continual maintenance caused by the overflowing of the lift stations creates unnecessary upkeep for the District.

Streamlined Review:

Yes No Does the system intend to use the streamlined review process for all or a portion of the project?

If yes, please identify the portions of the project that the system will utilize streamlined review process.

Wastewater treatment new construction or modifications that do not include an alternative technology

Yes No Does the system intend to use the streamlined review process for all or a portion of the project?

2. Executive Summary

Lift Stations No. 3 and 6 are the most maintenance-intensive lift stations in the District with maintenance required every two (2) weeks. Lift station No. 3 has had overflows because the 6-inch gravity line from the downstream manhole into which the force main discharges is too small to handle the pumping of both pumps simultaneously. The existing wet-well for Lift Station No. 3 does not have adequate storage volume for one hour of peak flow, as required by Colorado Design Criteria for Domestic Wastewater Treatment Works. The location of Lift Station No. 3 is also a concern because it is in the middle of an intersection and does not have a traffic-rated access hatch.

Lift Station #6 is currently pumping at 92% of its design capacity. The existing pumps and ancillary equipment are nearing the end of their useful life and there is not adequate storage volume provided. The upstream gravity line flowing into Lift Station No. 6 has a reverse grade, so the pipe does not allow for flow downstream until it becomes full. This upstream gravity-feed sanitary sewer line also has substantial root intrusion, which restricts flows into the lift station, causing the upstream manhole to overflow. This continual maintenance caused by the overflowing of the lift stations creates unnecessary upkeep for the District.

Lift Station No. 3 will be relocated and replaced, by constructing a new lift station with new pumps, rails, chains, floats, wet-well, and control panel, creating an overflow manhole per CDPHE design criteria, and increasing the diameter of the downstream gravity line to manage the simultaneous pumping of both pumps.

Lift Station No. 6 will require an increase in pumping capacity as well as the addition of storage volume. The improvement of Lift Station No. 6 will consist of removing two (2) existing 75 GPM pumps, and installing two (2) new 100 GPM pumps with all ancillary equipment, including rails, chains, and floats.

3. System Structure and Operation

3.1 Legal Ownership of System (TMF: Managerial-1)

First Name: East Alamosa Water and Sanitation District

Mailing Address1: 10 Costilla Boulevard Mailing Address2: _____

City: Alamosa State: CO Zip Code: 81101

Phone Number: 719-589-2649 Fax: _____

3.2 Organizational Chart

Include an Organizational Chart as Attachment 2.

3.3 Current Operator in Responsible (ORC) Charge

First Name: Roy Middle Name: _____ Last Name: Sanchez

Certification Number: CWP-WA-00203-0509 Certification Expiration Date: 05/20/2024

Operator Certification Level (check one) Staff Operator Contract Operator

Treatment Class D Class C Class B Class A

Distribution Class 4 Class 3 Class 2 Class 1

Combined Treatment/Distribution Class S

3.4 Operator Certification

Yes No Do the system operators have adequate operator certification levels for the proposed project as defined by Regulation 100 Water and Wastewater Facility Operators Certification Requirements?

Explain the impact of the proposed project on the required operator in responsible charge (ORC) certification level and other predicted staffing changes.

This project will not impact the required ORC certification level or staffing requirements of the District.

3.5 20-year cash flow projection

Include a copy of the 20-year cash flow projection as Attachment 4.

4. Project Purpose and Need

Discuss the issue or concern that the proposed project will address. Specific issues are outlined below. All issues must be discussed in each sub section below even if they are not the project driver.

4.1 Compliance

Summarize the system's compliance status that necessitates the proposed project.

The status of the system's discharge permit compliance does not necessitate the proposed project. The system's future discharge permit compliance status will not be impacted by the proposed improvements project.

4.2 Existing facility limitations

Summarize existing water system facility(ies) limitations that necessitate the proposed project.

The East Alamosa Water and Sanitation District operates nine lift stations. The District is proposing the replacement of Lift Station No. 3 and Lift Station No. 6 due to a combination of factors. These factors include nearing the end of their useful service life, continued maintenance issues, insufficient overflow volume, and overall lift station capacity. These lift stations also have mechanical, electrical, and other maintenance problems on a regular basis.

4.3 Operations and Maintenance Issues

Summarize operational and maintenance (O&M) issues with the existing water facilities.

Maintenance is required approximately every two weeks to unclog the existing pumps in Lift Station No. 3. The configuration of the existing equipment in the wet-well requires operators to disassemble the pump rails before removing the pumps, creating unnecessary upkeep for operators. Lift Station No. 3 is located in the middle of an intersection, requiring maintenance personnel to install traffic control measures before they can address issues. Maintenance personnel has indicated the volume of the wet-well is a safety concern and should be upsized. This lift station has been known to overflow periodically because the diameter of the downstream gravity sewer line is too small.

Lift Station No. 6 requires maintenance approximately every two weeks as well. This hindrance in flows causes the upstream manhole to overflow at times. District maintenance personnel have reported other issues with Lift Station No. 6, including but not limited to, deteriorated/rusted pump rails, a shallow/narrow wet-well, the nearing of the maximum capacity of the lift station (Lift Station No. 6 is at 92% of its design capacity), and the pump wires need to be replaced and rerouted as they are a hindrance while operators work in the wet-well. Flows from the upstream manhole to Lift Station No. 6 are hindered due to root intrusion and a potential reverse grade in the existing gravity sanitary sewer line that conveys flows to the lift station.

5. Existing Facilities Analysis

5.1 Existing Source Water– Section required for treatment and supply projects

Not applicable (for collection system piping, lift stations, interceptors, only)

Existing Permitted Treatment Capacity: Flow: _____ MGD Loading: _____ Pounds per Day BOD5

5.1.1 Area Discharge Permits

Identify all other discharge permits for facilities discharging to the same stream segment as the existing treatment facilities.

5.1.2 Service Area

Describe the existing service area including residential, commercial and industrial users, as well as flows and loads from the service area.

5.1.3 Facilities Layout and Description

Describe existing facilities including design capabilities and conditions of existing treatment processes including treatment processes used and major design parameters (e.g. process capacities, unit loading rates, side stream flows, and solids handling).

5.1.4 Existing Process Flow Diagram

Provide a process flow diagram of the existing treatment system as Attachment 5.

5.1.5 Wastewater Flows

Please describe the existing wastewater flows and influent characteristics (including toxic pollutants), discharge permit limits, and overload conditions. Discuss and analyze the average, peak, dry, and wet weather flows. Describe flow contributions from residential, commercial, and industrial users, as well as infiltration and inflow.

5.1.6 Appropriateness of Treatment Technologies

Discuss if the existing treatment process(es) are appropriate to meet the current discharge permit considering existing influent quality and discharge permit limits.

5.1.7 Capacity of Treatment Technologies

Yes No Is the capacity of the existing wastewater treatment system appropriate to accommodate wastewater flows through the next 20 years?

Please explain:

5.1.8 Operational Controls

Describe if the existing treatment processes have appropriate operational controls.

5.2 Collection - Required for collection system, lift station, and interceptor projects only

Not applicable (for treatment and outfall projects, only)

5.2.1 Service Area

Describe the existing service area including residential, commercial and industrial users, as well as flows and loads from the service area.

Lift Station No. 3 receives gravity flows from single-family residences, commercial users, and Lift Station No. 4 effluent flows.

Approximately 76% (2,000 GPD) of flows into Lift Station No. 3 are from Lift Station No. 4, 22% (1,877 GPD) are from single-family residences, and 2% (123 GPD) are from commercial users.

Lift Station No. 6 receives flows only from single-family residences which equates to approximately 25,000 GPD.

5.2.2 Overall Collection System Description

Discuss the existing collection system including: gravity collection pipelines, facility age, material type, condition of materials, and amount of AC pipe. Describe the location and capacities of all relevant lift stations and interceptor sewers and their relation to the proposed project. Provide a map of the existing collection system as Attachment 6.

The District's gravity collection system consists of 6-inch, 8-inch, and 10-inch diameter pipes. The pipe is constructed of varying materials including PVC and vitrified clay pipe (VCP) of which there are a number of areas of concern. Several of the areas of concern within the District are gravity sewer pipes with severe root issues. The District's operators have several stretches of sanitary sewer line which must be routinely jetted and root cut to remove tree roots and other debris to combat sewage backups. There is no AC pipe in the existing collection system.

Lift Station No. 3, at McKinney and McQuery, was rehabilitated in 1995 and consists of a precast concrete wet-well, two (2) submersible non-clog pumps rated at 130 GPM, and a pump control panel. The lift station picks-up flows from Lift Station No. 4 to the north and residential gravity flows from Lift Station No. 3 Service Area. It then discharges into a manhole through a 4-inch diameter force main approximately 40 feet to the south. A 6-inch diameter gravity sanitary line comes out of that manhole to the south and flows towards the manhole at Lift Station No. 2, bypassing Lift Station No. 9.

Lift Station No. 6, at Rodeo Lane, was rehabilitated in 1995 and consists of a precast concrete wet-well, two (2) submersible non-clog pumps rated at 75 GPM, and a pump control panel. The lift station picks up residential gravity flows from Lift Station No. 6 Service Area. It then discharges into a manhole approximately 925 feet to the west through a 4-inch diameter force main. A 6-inch diameter gravity sanitary line emerges from that manhole to the west and flows through three additional manholes along Santa Fe before flowing into Lift Station No. 5.

Provide information on current infiltration and inflow.

An additional concern with root contact with VCP is increased inflow and infiltration. In the older areas of the District the pipe has outlived its useful lifespan and may be deteriorating and allowing significant inflow and infiltration. Inflow and infiltration calculations have not been performed on the collection system.

6.Facility Planning Analysis

6.1 Planning Area Description

6.1.1 Project Area Map

Provide a map or maps showing the current and projected service area for the 20-year planning period; identify environmental features such as streams, lakes, wetlands, and floodplains for the entire planning area. On the map, identify the locations of municipal and industrial treatment plants, sludge management areas and facilities, pretreatment plants, lift station sites and any significantly developed areas served by onsite or unconventional systems. Include the map as Attachment 7.

6.1.2 208 Plan Coordination

Yes No Is the project within or near the boundaries of a 208 Agency or regional council of governments (COG)?

[Empty rectangular box for providing details on 208 Plan Coordination]

6.1.3 Local and Regional Issues

Yes No Were local and regional planning efforts considered?

Please describe.

The district has a mutual intergovernmental agreement (IGA) where the city treats the water and wastewater for the district and provides operating staff to the district for operation and maintenance of the district's distribution and collection facilities.

Yes No Was consolidation with another wastewater system / treatment facility considered?

Please describe.

Yes, there has been some discussion regarding consolidation with the City of Alamosa. Consolidation is not considered mutually beneficial at this time.

6.2 Population and Water Demand Projections (TMF: Technical-2)

For a 20 year planning period, forecast the population growth, projected increase in Equivalent Residential Taps (ERT), and projected drinking water demands.

Current SFEs - As Calculated in the Prequalification Form: 666

Population and Demand Projections - The department generally accepts two methodologies for projecting water flows over the 20 year planning period. Other methodologies are acceptable with a clear explanation and all assumptions and parameters listed:

- Method 1: Population based projections. Recommended for primarily residential systems and/or for systems without potable water meter data.
- Method 2: Equivalent Residential Unit (EQR) Analysis. Recommended for systems with a high multifamily, commercial, and industrial users.

Method 1 and 2 templates can be found at the end of this form.
Attach the population projection as Attachment 8.

Discuss supporting data and reasons for projected future growth during the 20 year planning period.
Note: Projects designed solely to serve future development or population growth are not eligible for State Revolving Fund financing.

Population growth projection is based on average population growth in the EAWSD from 2017 to 2022 based on population data from DOLA.

20-year projected BOD is approximately 214 lb/day assuming a 0.25% population increase per year and an average loading of 250 mg/L.

20-year projected TSS is approximately 214 lb/day assuming a 0.25% population increase per year and an average loading of 250 mg/L.

Identify waste load projections for major effluent parameters such as BOD, TSS, ammonia, phosphorus, metals, etc.

BOD: 250 mg/L
TSS: 250 mg/L

7.Assessment of Alternatives

This section should contain a description of the reasonable alternatives that were considered in planning a solution to meet the identified needs. If the proposed project includes new technology then the please discuss whether or not the technology is covered in the CDPHE Design Criteria.

7.1 Alternatives

For each alternative, please provide:

1. A description of the alternative addressing the issues identified in Section 4: Project Purpose and Need. (TMF: Technical-7)
2. Capital cost estimates and annual operation and maintenance costs.
3. Advantages and Disadvantages of each alternative.

Alternative 1 Title : No Action

Alternative 1 Description (2000 character limit):

No Action would be taken to repair or replace any of the collection system infrastructure.

Alternative 1 Capital and Operation and Maintenance Costs (2000 character limit):

This alternative would not require any capital, but there would likely be additional operation and maintenance costs associated with future lift station backups, issues with infiltration and inflow, and emergency replacement of one or both lift stations, as the volumes of both lift stations are less than storage volumes required by the CDPHE Design Criteria.

Alternative 1 Advantages and Disadvantages (2000 character limit):

This option would cost nothing in capital costs but would be more expensive in operations and maintenance costs.

Alternative 2 Title : Temporary Improvements

Alternative 2 Description (2000 character limit):

Temporary improvements would consist of replacing pumps, rails, pipes, and ancillary equipment inside both lift stations and replacing electrical wires and equipment.

Alternative 2 Capital and Operation and Maintenance Costs (2000 character limit):

The capital would be less than a total replacement but operation and maintenance costs would be about the same as if no action was taken.

Alternative 2 Advantages and Disadvantages (2000 character limit):

The advantages are maintenance costs would slightly decrease with the installation of new pump rails and a redesign of the ancillary equipment inside the wet wells. The disadvantages are that capital costs would be higher due to the inevitability of a total replacement in the near future.

Alternative 3 Title : Total Replacement

Alternative 3 Description (2000 character limit):

Total replacement of Lift Station No. 3 would consist of removing the existing wet-well and ancillary equipment, converting the existing manhole to the north into a collection manhole, the installation of a 6-foot diameter precast concrete wet-well, overflow manhole, traffic-rated access hatch, two (2) new pumps, rails, chains, floats, force main, and ancillary piping. It would also include the removal and replacement of the existing control panel and associated electrical equipment. The existing 6-inch VCP sanitary sewer pipe to the south would also be removed and replaced with 8-inch SDR35 PVC.

Total replacement of Lift Station No. 6 would consist of installing a new concrete wet-well, overflow manhole, traffic-rated access hatch, two (2) new 100 GPM pumps, rails, chains, floats, and ancillary equipment, and a connection to the existing force main. It would also include the removal and replacement of the existing control panel and associated electrical equipment. The existing 6-inch VCP sanitary sewer pipe to the north would also be removed and replaced with 8-inch SDR35 PVC.

Alternative 3 Capital and Operation and Maintenance Costs (2000 character limit):

The capital would be high but the operation and maintenance costs would be much lower for several decades compared to what they would be without the proposed improvements.

Alternative 3 Advantages and Disadvantages (2000 character limit):

The advantages are the maintenance costs would be lower, infiltration and inflow would be reduced, and the District would be in a better position to combine with the City of Alamosa, if that is mutually advantageous, CDPHE design requirements for storage volume would be addressed. The disadvantages are the capital cost of the project and the inconvenience for affected residents of construction.

Provide discussions of additional alternatives as Attachment 19.

8. Selected Alternative

8.1 Justification of Selected Alternative

Please demonstrate why the selected alternative best meets system needs based on both monetary and non-monetary considerations.

Alternative 3 is the selected alternative. The existing lift stations, their associated pumping equipment, and sanitary sewer lines are at the end of their useful life, and the amount of time required to maintain them will ultimately save the District in costs for maintenance and upkeep, and free up operators to focus their energy on other responsibilities.

8.2 Technical Description and Design Parameters

For the selected alternative, please describe all proposed project components and assumed design parameters.

The replacement of Lift Station No. 3 will consist of flow-filling a new manhole base in the existing wet-well and grouting in channels, converting it to a manhole that will collect all flows from Lift Stations No. 3 and No. 4 contributing areas. These flows will be conveyed to a new, 6-foot diameter precast concrete wet-well with an adequate depth to maintain desirable pump-run times and an additional manhole to provide overflow storage. Additionally, a 30-inch by 48-inch traffic-rated access hatch will be installed for easier system maintenance, two (2) new pumps and all ancillary equipment including rails, chains, and floats, and a new control panel installed in the same location as the old lift station. Lastly, the gravity collection pipes downstream from the new lift station will be replaced with 8-inch SDR35 PVC pipe.

The improvement of Lift Station No. 6 will consist of installing two (2) new 100 GPM pumps with all ancillary equipment, including rails, chains, and floats. These pumps will provide 33% more pumping capacity for Lift Station No. 6 and provide a greater factor of safety for the lift station. A new overflow wet-well will also be installed adjacent to the existing wet-well providing additional storage for the system. A new control panel adjacent to the lift station will also be included. The wet-well will be constructed to an adequate depth to maintain desirable pump-run times, and the pipes upstream will be corrected and upsized.

8.3 Proposed Process Flow Diagram

Include a proposed treatment facility process flow diagram or map of the collection system, lift station, or interceptor, as applicable as Attachment 10.

8.4 Appropriateness of Treatment Technologies

Discuss appropriateness of the proposed treatment process(es) to meet proposed discharge limits considering anticipated influent wastewater quality.

There is no wastewater water treatment component to the project which would affect wastewater quality.

8.5 Environmental Impacts

Describe direct and indirect impacts on floodplains, wetlands, wildlife habitat, historical and archaeological properties, etc., including any projected permits and certifications. Indicate the need for a stormwater permit application, 401/404 permit applications, and CDOT and railroad permit applications.

There are no anticipated direct or indirect impacts on any floodplains, wetlands, wildlife habitat, historical or archaeological properties. This project is replacing existing wastewater infrastructure in areas that are already developed.

8.6 Land Requirements

Identify all necessary sites and easements, permits and certifications, and specify if the properties are currently owned, to be acquired, or leased by the applicant.

Either land is within the public right-of-way or the district owns easements to the land. A CDOT construction permit and an Alamosa County construction permit will be required.

8.7 Construction Challenges

Discuss construction challenges such as subsurface rock, high water table, limited access, or other conditions that may affect cost of construction or operation of a facility.

Construction concerns include high water table, which is as high as 36" below ground surface in some areas of the project. Dewatering requirements are anticipated.

8.8 Operational Aspects

Discuss the operator staffing requirements, operator certification level requirements, the expected basic operating configuration and process control complexities, and the operational controls and equipment that allows operational personnel to respond to routine and unanticipated treatment challenges, such as flow rate, fluctuations in influent quality, process monitoring and chemical feed dosing.

The proposed project will not affect staffing requirements, operator certification level requirements, the basic operating configuration and process control complexities, or the operational controls and equipment. Reductions in measured flow rate are anticipated in response to removing inflow and infiltration in damaged sewer lines.

8.9 Costs

Summarize the capital costs associated with the selected alternative. The 20 year cash flow projection included in Attachment 4 must reflect the capital and operation and maintenance costs associated with the selected alternative.

The total capital cost associated with the selected alternative is \$675,000.00

Cost Category Selection (Assign a percent to each applicable category)

Secondary Treatment (Category I)	0
Advanced Treatment (Category II)	0
Infiltration/Inflow (Category IIIA)	4.5
Sewer System Rehabilitation (Category IIIB)	3.5
New Collector Sewers (Category IVA)	0
New Interceptors (Category IVB)	92
CSO Correction (Category V)	0
Storm Sewers (Category VI)	0
Recycle Water Distribution (Category X)	0
Nonpoint Source Pollution Control Activities (Category VII)	0
Total: (must equal 100%)	100

Please include an estimate of the projected increase in and total average monthly user charges. Does the user charge system allow for billing, collection, and enforcement?

8.10 Green Project Reserve

Check one or more green category that applies to the project:

- Green Infrastructure
- Water Efficiency
- Energy Efficiency
- Environmentally Innovative

Describe any green components incorporated into the selected alternative.

Not applicable.

The system must reference the most recent copy of the EPA Green Project Reserve guidance and procedures. These references are available on the CDPHE WQCD GLU website under "Green Project Reserve": <https://www.colorado.gov/pacific/cdphe/wq-green-project-reserve>
Include a business case for the project as Attachment 11, if applicable.

8.11 Environmental Checklist

Include the Environmental Checklist for the Selected Alternative as Attachment 12.

8.12 Project Implementation

8.12.1 Proposed Schedule

Request for WQPTs/PELs _____	Site Application Submittal Date	11/04/2022
Process Design Report/Basis of Design Report Submittal Date _____	08/01/2023	_____
Final Plans and Specifications Submittal Date (for Non-Streamlined Review only) _____	10/01/2023	_____
Discharge Permit 10/01/2023 _____	Miscellaneous Permits	10/01/2023
Public Meeting Date 07/15/2023 _____	Loan Application Submittal Date	10/15/2023
Advertisement for Bids Publication Date 12/01/2023 _____	Construction Contract Award Date	01/29/2024
Construction Start Date 02/01/2024 _____	Construction Completion Date	07/30/2024

8.12.2 Public Meeting

Provide documentation of a public meeting held or describe when and where the meeting will be held. The meeting must be noticed for 30 days. Provide the public notice, proof of publication, sign in sheet, and agenda as Attachment 14 or provide to your project manager in the Grants and Loans Unit after the meeting has taken place.

- Include the public meeting documentation as Attachment 14.

Or, will be provided to the Grants and Loans Unit project manager after the meeting takes place.

9. Projecting Water Flows Method 1: Population based projections

Assumptions/Data

Current System Population	1700	People
Current Service Area Population (If providing water to neighboring community)	_____	People

Information Source

EAWS	_____
_____	_____

Population Growth Rates	.25	% increase/year	EAWSD
Average Daily per Capita Flow Rate	57	Gallons per capita day	Calculated from EAWSD Flow Records
Average Day Maximum Month per Capita Flow Rate	78	Gallons per capita day	Calculated from EAWSD Flow Records
Maximum Daily per Capita Flow Rate	105	Gallons per capita day	Calculated from EAWSD Flow Records
Peak Hour Factor	4		Calculated
Average Influent BOD5 Concentration	250	mg/L	Assumption
Average Day Maximum Month Influent BOD5 Concentration	275	mg/L	Assumption

Year	System Population	Service Area Population (if different)	Average Daily Flow	Maximum Daily Flow	Peak Hour Flow	Average BOD5 Loading (pounds per day)
+0	0	0	96900	178500	16150	204
+5	1721		98097	180705	16350	206
+10	1743		99351	183015	16559	209
+15	1764		100548	185220	16758	211
+20	1785		101745	187425	16956	214

10. Projecting Water Flow Method 2: Equivalent Residential Taps (ERT)

Current Equivalent Residential Taps (ERT)			
A	Number of active residential taps:	0	Units
B	Total Annual Potable Water Use less Irrigation Usage (gallons per year) – Residential	0	
C	Estimated equivalent residential potable water usage Annual flow per EQR = A/B	0	Gallons per SFE
D	Wastewater flow from commercial users	0	Gallons per ft2
E	Equivalent EQRs per 1000 ft2 of commercial space EQRs per 1000 ft2=D*1000/C	0	SFEs per 1000 ft2
F	Commercial space in service area	0	1000 ft2
G	Commercial EQRs Commercial EQRs = F*E	0	SFEs
H	Wastewater flow from industrial users	0	1000 ft2
I	Equivalent EQRs per 1000 ft2 of industrial space EQRs per 1000 ft2 = H*1000/C	0	1000 ft2
J	Industrial space in service area	0	1000 ft2
K	Industrial EQRs Industrial EQRs = H*J	0	1000 ft2
L	Length of sewer pipe in collection system	0	1000 ft2
M	Infiltration/Inflow contribution per 1000 feet of sewer pipe	0	1000 ft2

N	Equivalent EQRs per 1000 feet of sewer pipe EQRs per 1000 LF=M/C	0	1000 ft2
O	Infiltration/Inflow EQRs Infiltration/Inflow EQRs = L/1000*N	0	1000 ft2
P	Total EQR = A + G + K + N	0	1000 ft2

Population and Flow Assumptions / Data

Information Source

Current System Population	_____	People	_____
Current Service Area Population (If providing water to neighboring community)	_____	People	_____
Population Growth Rates	_____	% increase/year	_____
Average daily flow per ERT	_____	Gallons per capita day	_____
Maximum daily flow per ERT	_____	Gallons per capita day	_____
Peak Hour Factor	_____	Gallons per capita day	_____

Year	System Population	Service Area Population (if different)	Residential Taps (ERTs)	Multifamily Residential Taps (ERTs)	Commercial/ Industrial Taps (ERTs)	Irrigation Taps (ERTs)	Total Taps (ERTs)	Average Daily Flow	Maximum Daily Flow	Peak Hour Flow
+0										
+5										
+10										
+15										
+20										

East Alamosa Water and Sanitation District

2023 Lift Station Replacement

Project Needs Assessment

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Attachment 2 – Organizational Chart

Attachment 3 – Delegation of Duties

Attachment 4 – 20-Year Cash Flow

Attachment 5 – Existing Process Flow Diagram

Attachment 6 – Map of Existing Collection System

Attachment 7 – Project Area Map

Attachment 8 – Population Projection (Optional)

Attachment 9 – Discussions of additional alternatives (Optional)

Attachment 10 – Map of the distribution system

Attachment 11 – Green Business Case for the project (if applicable)

Attachment 12 – Environmental Checklist for the Selected Alternative

Attachment 13 – Project Schedule

Attachment 14 – Public Meeting (Optional)

Attachment 15 – Cost and Effectiveness Evaluation Certification

Attachment 16 – Supporting Document(s) (Optional)

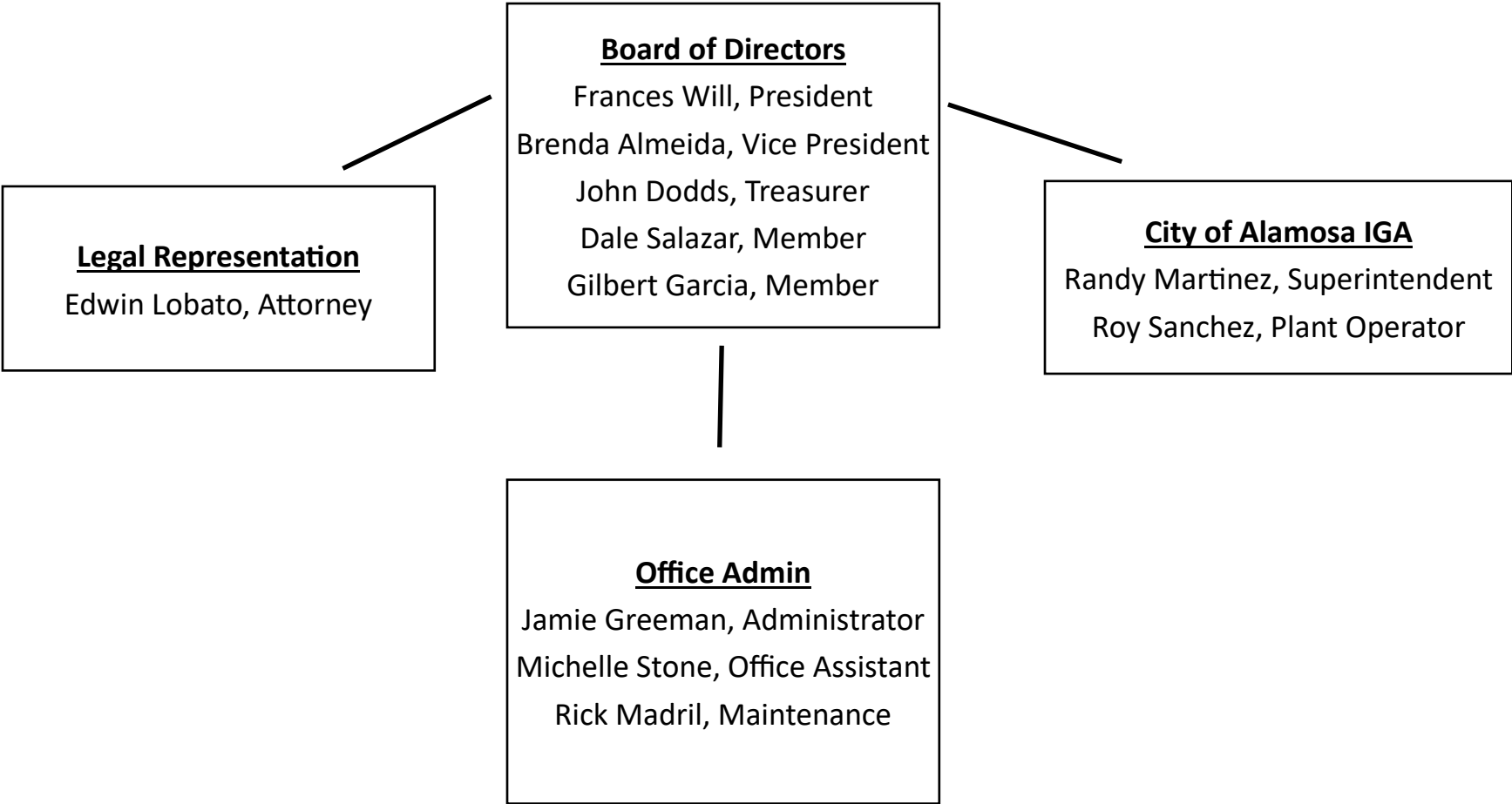
ATTACHMENT 1 - ENGINEER'S SEAL



ATTACHMENT 2 - ORGANIZATIONAL CHART

East Alamosa Water & Sanitation District

Organizational Chart



ATTACHMENT 3 - WRITTEN DELEGATION OF OPERATOR DUTIES (TO BE REPLACED WITH SANITARY COLLECTION DELEGATION OF DUTIES)

East Alamosa Water and Sanitation Dist.

Delegation of Duties

CO – 102200

The East Alamosa Water and Sanitation District water system works in conjunction with the City of Alamosa's water system. Alamosa City receives water from East Alamosa, treats the water, then returns the drinking water back to the district. East Alamosa District uses the same operators that Alamosa City employees. Therefore the Operator in Responsible Charge (ORC) for Alamosa City serves the same for East Alamosa Water and Sanitation Dist.

The ORC's Responsibilities are as follows:

- 1) Protect the public water supply system
- 2) Provide Clean and Safe drinking water to the District.
- 3) Act as liaison to the District.
- 4) Take required water samples pertaining to the monitoring schedule.
- 5) Respond to the District's customers concerning water quality.
- 6) Delegate to water tech's tasks and oversee work.

*The ORC has the responsibility to make sure the water tech is qualified to perform the work given and has the proper license. The ORC is responsible for the water tech's work.

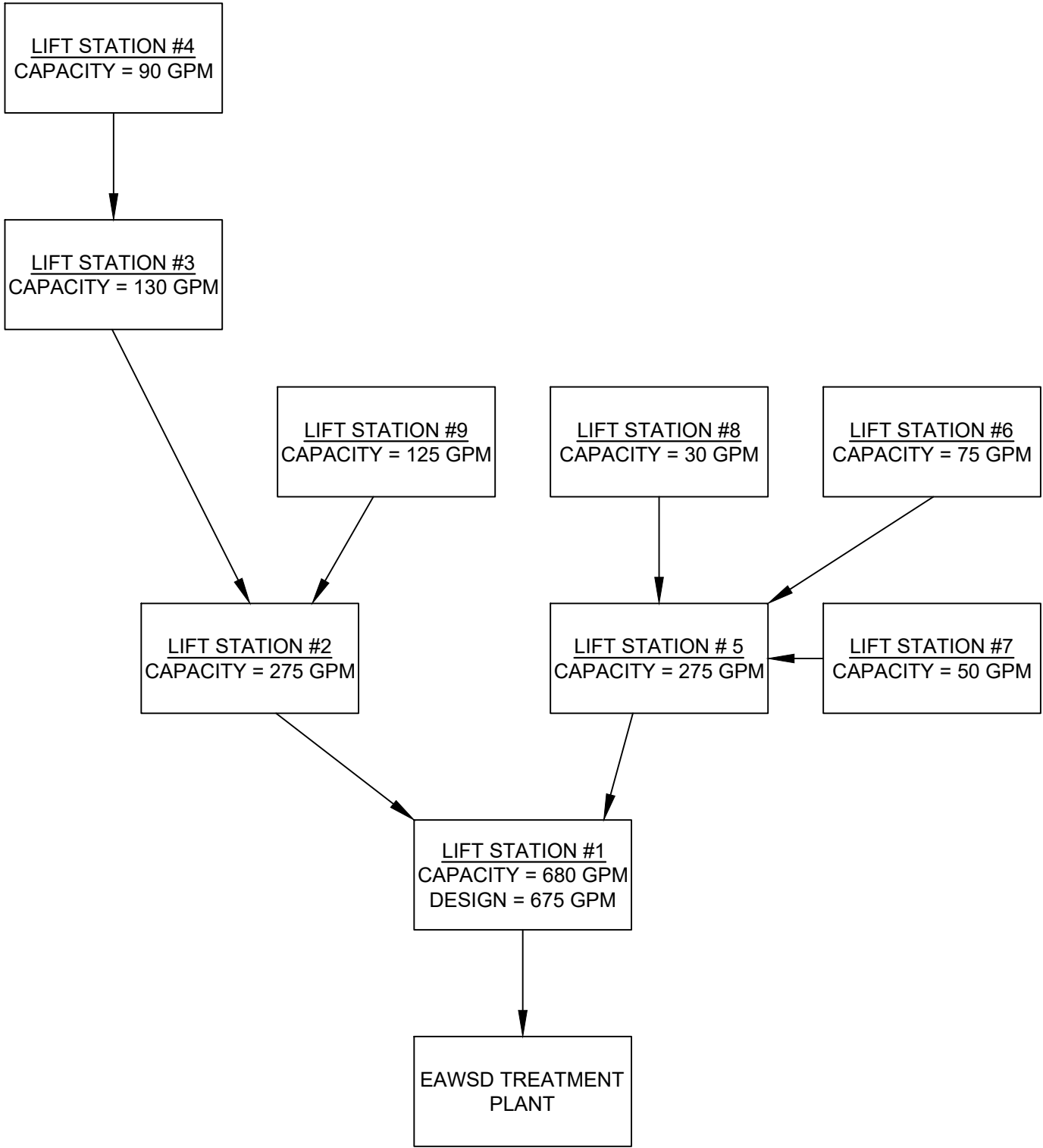
ATTACHMENT 4 - 30-YEAR CASH FLOW PROJECTIONS

30 Year Cash Flow Projection

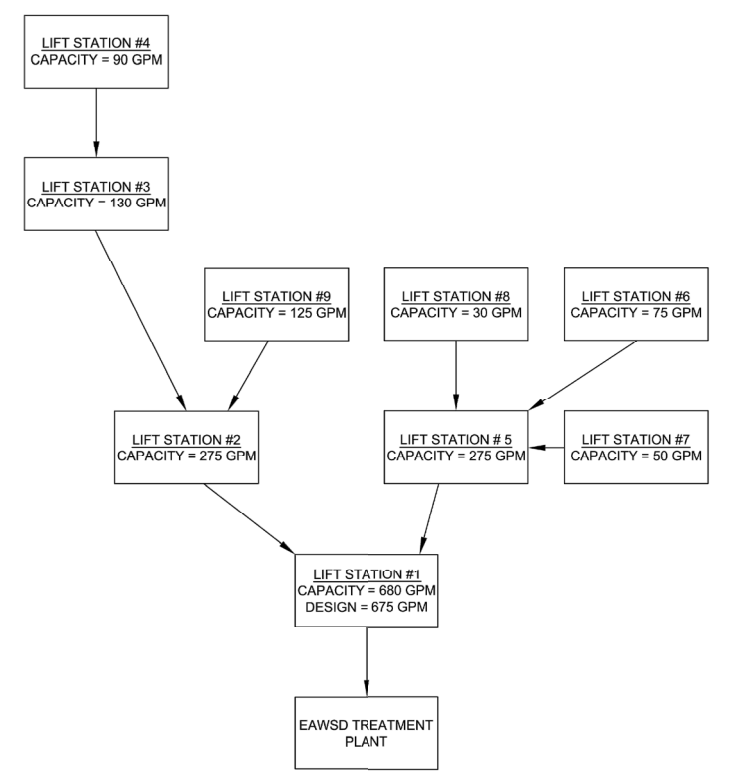
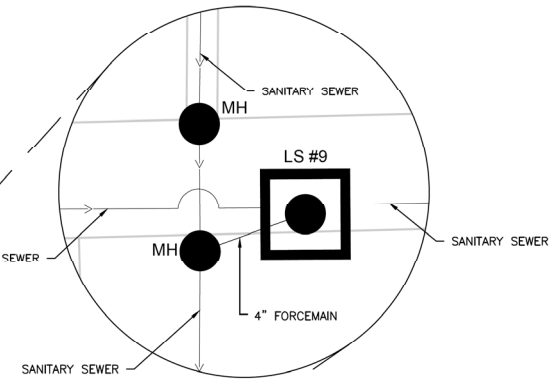
Year	Revenues	Expenses	Loan Payments	
2021	1,777,302.00	3,344,700.00	109,667.00	
2022	533,350.00	344,700.00	109,667.00	Expenses calculated at 2% increase per year
2023	534,350.00	351,594.00	109,667.00	
2024	534,350.00	358,625.88	109,667.00	Substantial expenses based on Capital Improvement Plan
2025	544,350.00	365,798.40	109,667.00	
2026	544,350.00	373,114.37	109,667.00	
*2027	629,350.00	380,576.65	109,667.00	*Revenue Increase based on historical rate
2028	629,350.00	388,188.19	109,667.00	increases every 6-7 years
2029	629,350.00	1,395,951.95	109,667.00	
2030	629,350.00	403,570.99	109,667.00	
2031	629,350.00	411,948.41	109,667.00	
2032	629,350.00	420,187.38	109,667.00	
2033	719,350.00	428,591.13	109,667.00	
2034	719,350.00	437,162.95	109,667.00	
2035	719,350.00	445,906.21	109,667.00	
2036	719,350.00	454,824.33	109,667.00	
2037	719,350.00	1,963,920.82	109,667.00	
2038	719,350.00	473,199.24	76,334.00	
2039	809,350.00	482,663.22	43,001.00	
2040	809,350.00	492,316.49	43,001.00	
2041	809,350.00	502,162.82	43,001.00	
2042	809,350.00	512,206.07	43,001.00	
2043	809,350.00	522,450.19	43,001.00	
2044	809,350.00	532,899.20	43,001.00	
2045	909,350.00	2,543,557.18	43,001.00	
2046	909,350.00	555,448.32	43,001.00	
2047	909,350.00	566,557.29	43,001.00	
2048	909,350.00	577,888.44	43,001.00	
2049	909,350.00	589,446.20	43,001.00	
2050	909,350.00	601,235.13	43,001.00	
2051	909,350.00	613,259.83	43,001.00	

ATTACHMENT 5 - EXISTING PROCESS FLOW DIAGRAM

S:\1017.0010 - E Alamosa Lift Station Upgrades\DWG\Exhibits\Lift Station Pump Capacities.dwg, Pump Capacities, 7/25/2022 12:32:00 PM, jschneider, 1:1

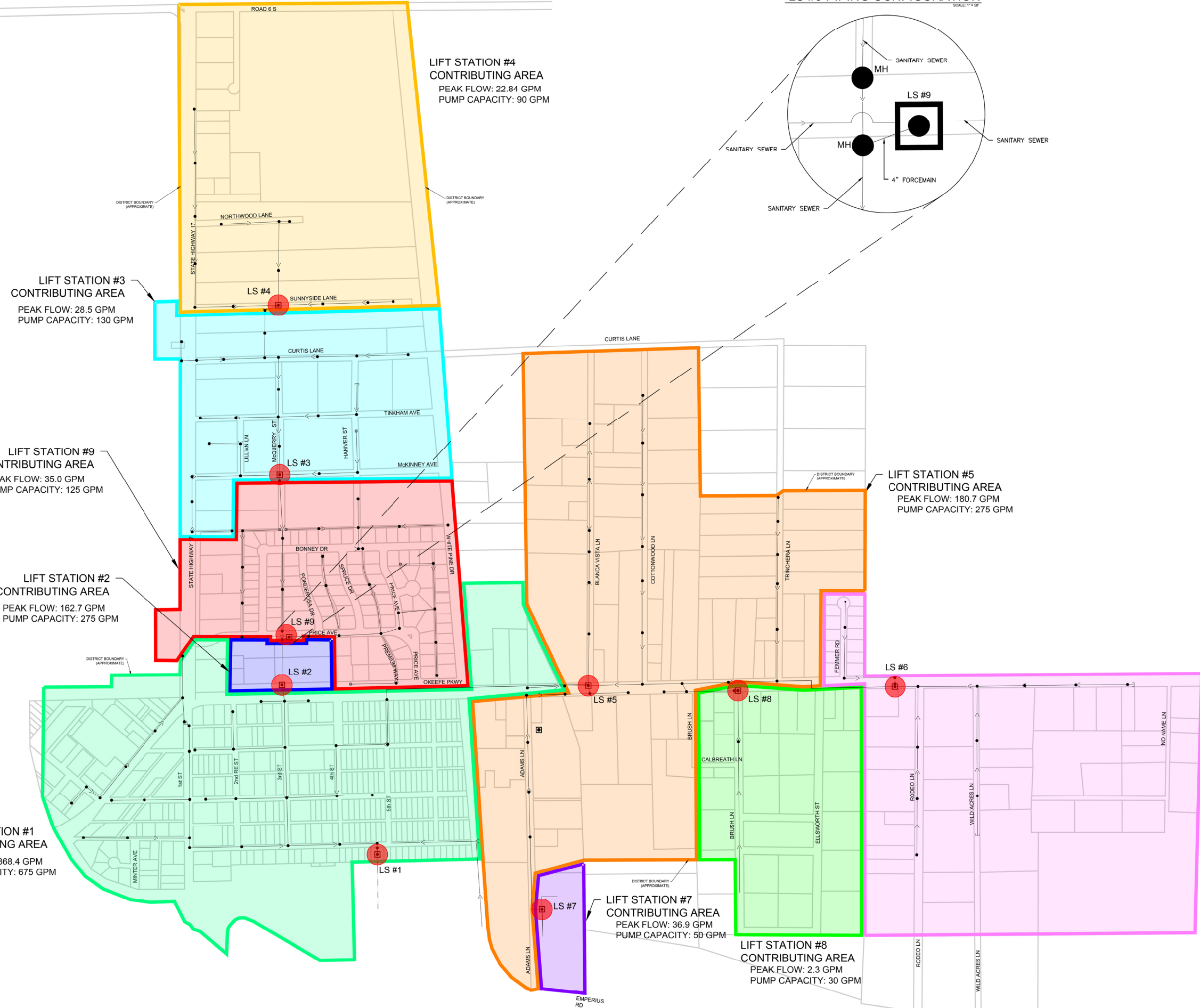


LS #9 PIPING CONFIGURATION

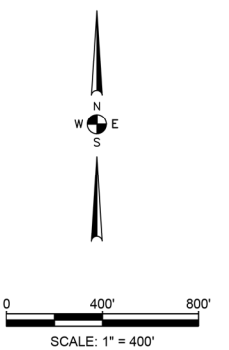


EAWSD LIFT STATIONS FLOW DIAGRAM

LIFT STATION REPLACEMENT PRIORITIES		
PRIORITY	LIFT STATION #	LOCATION
1	3	MCKINNEY & MCQUERY
2	6	RODEO LANE
3	5	BLANCA VISTA LANE
4	4	SUNNY SIDE LANE
5	8	BRUSH LANE
6	9	PRICE AVENUE
7	7	ADAMS LANE



LIFT STATION #6 CONTRIBUTING AREA
 PEAK FLOW: 69.0 GPM
 PUMP CAPACITY: 75 GPM

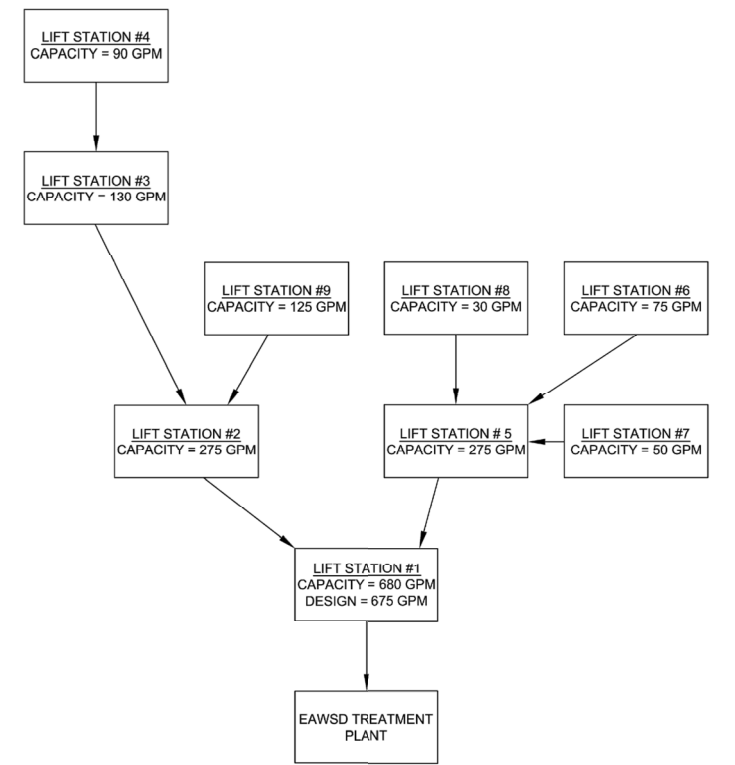
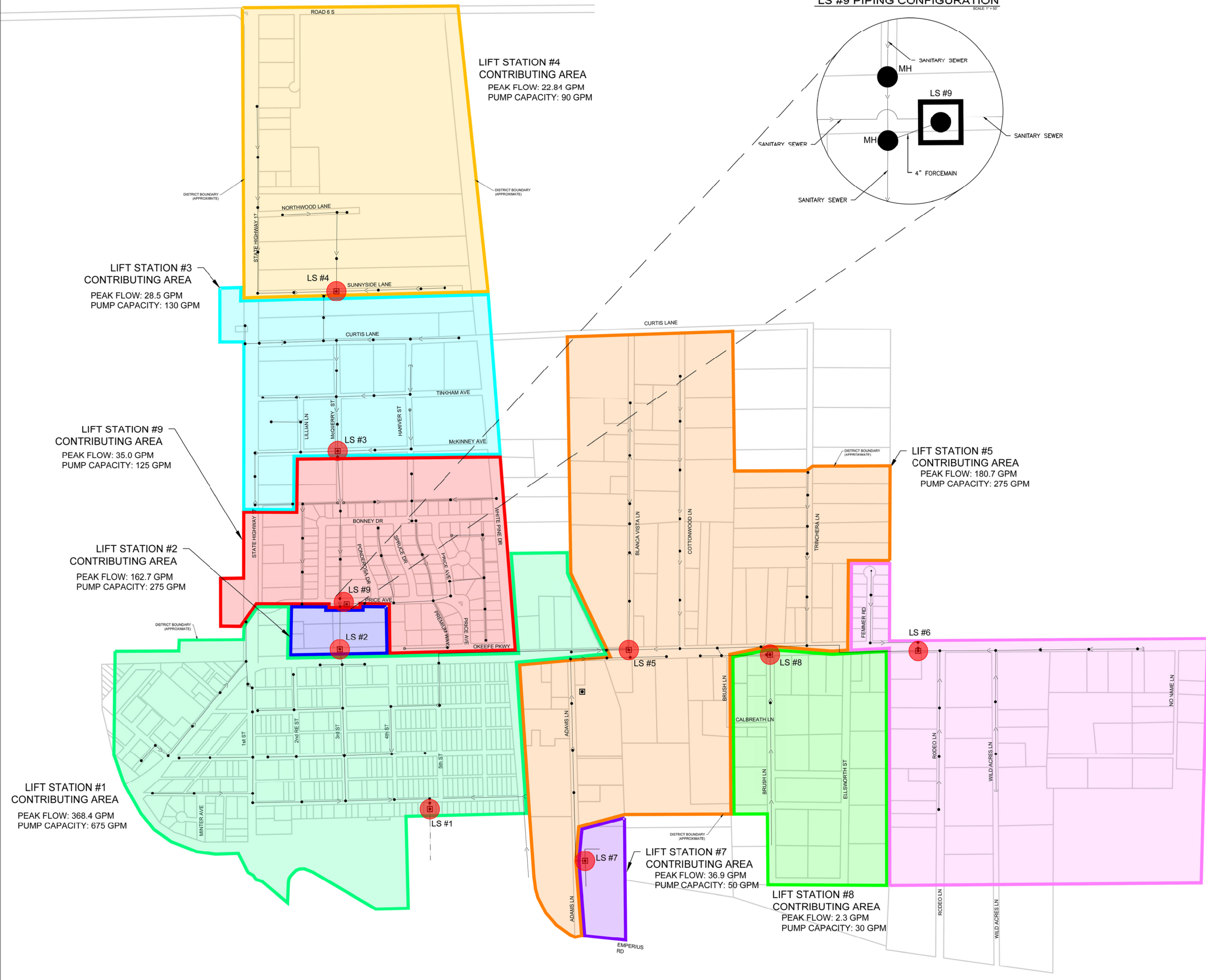


EAST ALAMOSA WATER AND SANITATION DISTRICT
 2022 LIFT STATION ANALYSIS

RG AND ASSOCIATES, LLC
 4885 Ward Road, Suite 100 • Wheat Ridge, CO • 80033
 303-293-8107 • 303-293-8106 (fax) • www.rgengineers.com

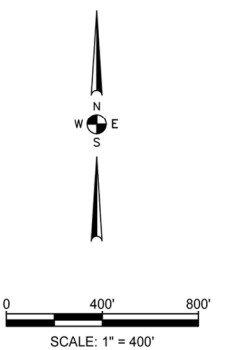
LIFT STATIONS - CONTRIBUTING AREAS	
JOB NUMBER:	1017.0010
DATE:	AUGUST 2022
SCALE:	1" = 400'
SHEET NO.:	1 of 1

ATTACHMENT 7A - COLLECTION SYSTEM



EAWS LIFT STATIONS FLOW DIAGRAM
SCALE: N.T.S.

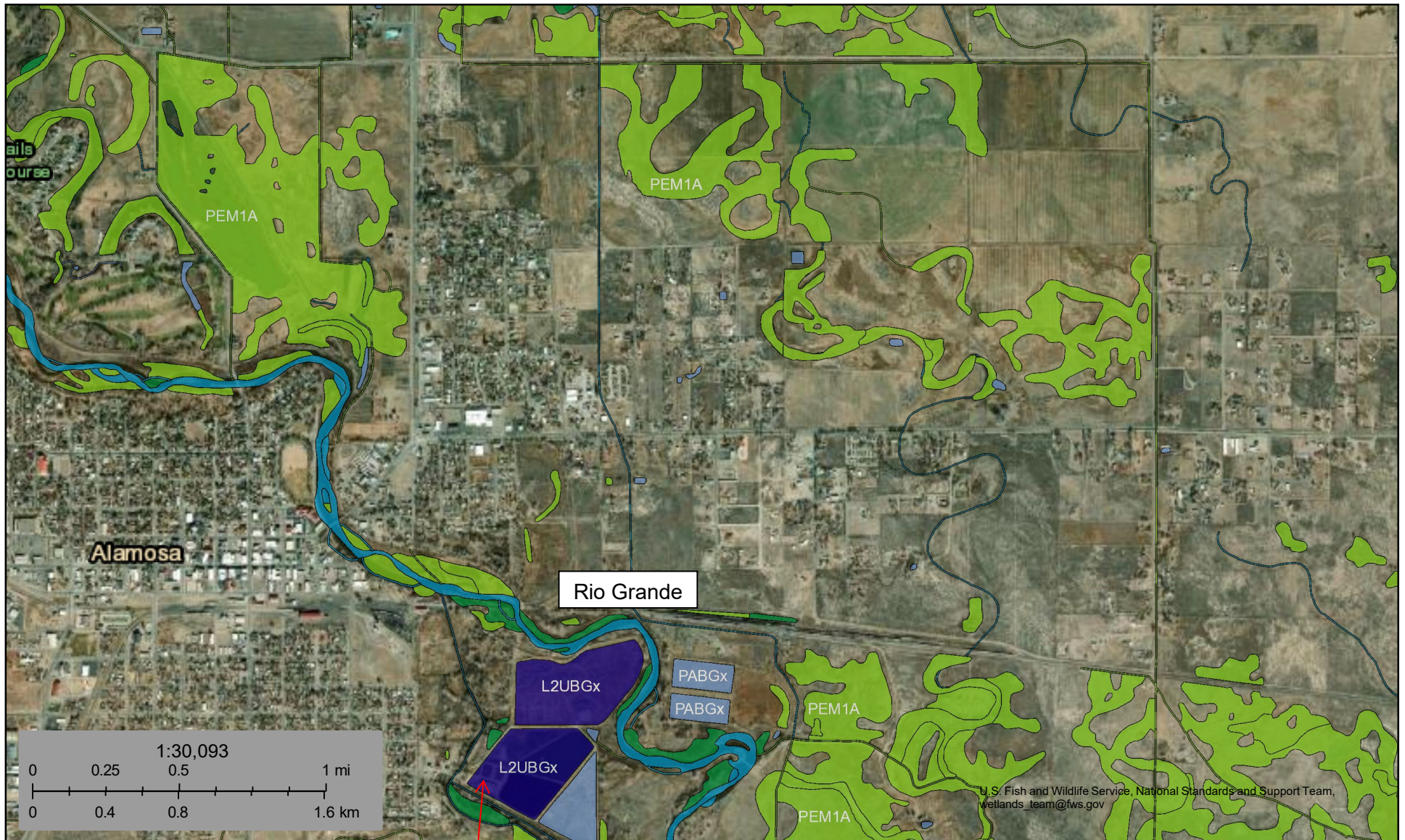
LIFT STATION REPLACEMENT PRIORITIES		
PRIORITY	LIFT STATION #	LOCATION
1	3	MCKINNEY & MCQUERY
2	6	RODEO LANE
3	5	BLANCA VISTA LANE
4	4	SUNNY SIDE LANE
5	8	BRUSH LANE
6	9	PRICE AVENUE
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4885 Ward Road, Suite 100 • Wheat Ridge, CO • 80033
303-293-8107 • 303-293-8106 (fax) • www.rgengineers.com

LIFT STATIONS - CONTRIBUTING AREAS	
JOB NUMBER:	1017.0010
DATE:	AUGUST 2022
SCALE:	1" = 400'
SHEET NO.:	1 of 1











U.S. Fish and Wildlife Service, National Standards and Support Team,
wetlands_team@fws.gov

March 3, 2023

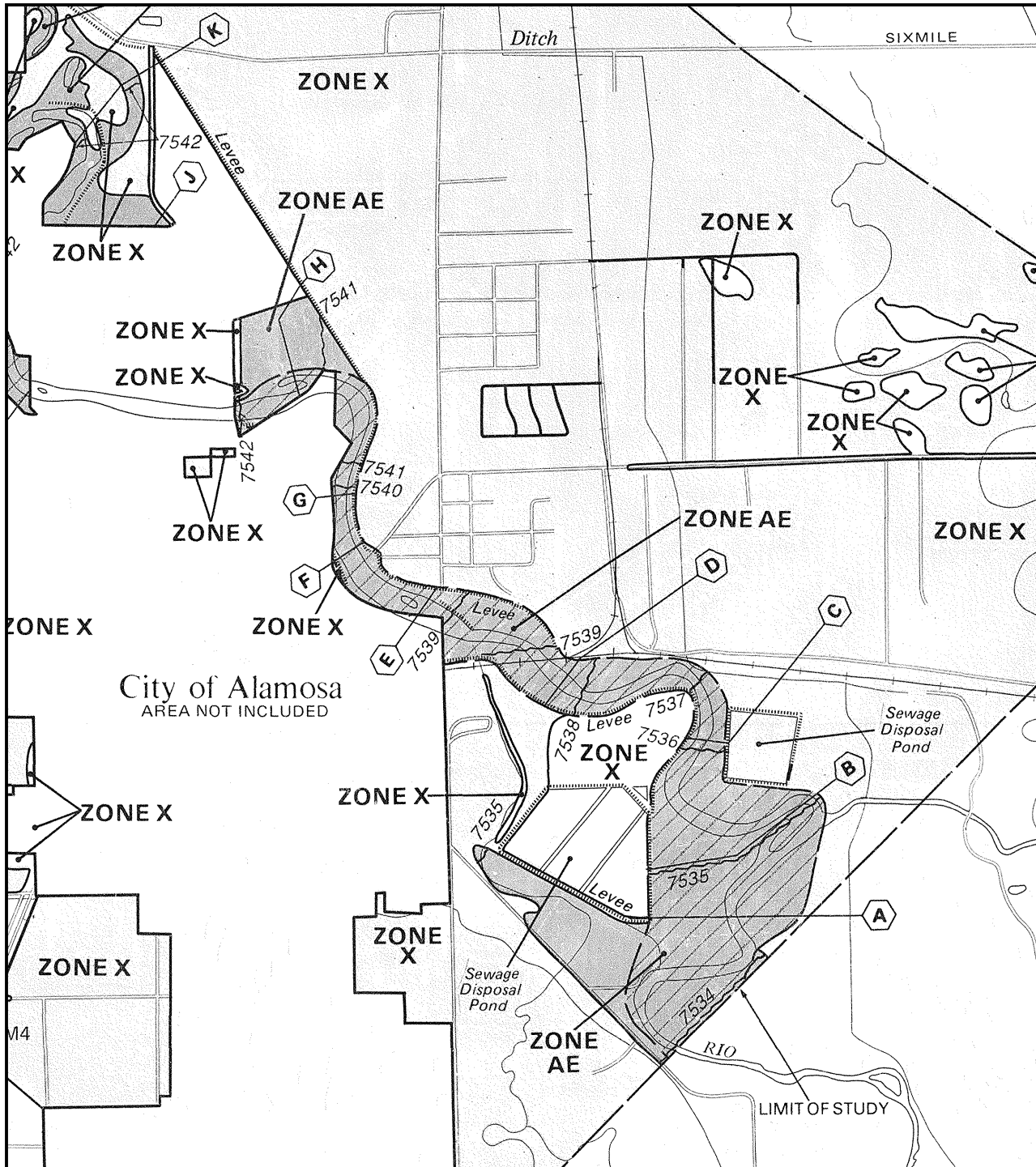
Alamosa Waste Water Treatment Facility

Wetlands

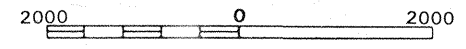
- | | | |
|--|---|--|
|  Estuarine and Marine Deepwater |  Freshwater Emergent Wetland |  Lake |
|  Estuarine and Marine Wetland |  Freshwater Forested/Shrub Wetland |  Other |
| |  Freshwater Pond |  Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

ATTACHMENT 7C - FIRM MAP



APPROXIMATE SCALE IN FEET



NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP ALAMOSA COUNTY, COLORADO (UNINCORPORATED AREAS)

(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER

080009 0045 B

MAP REVISED:

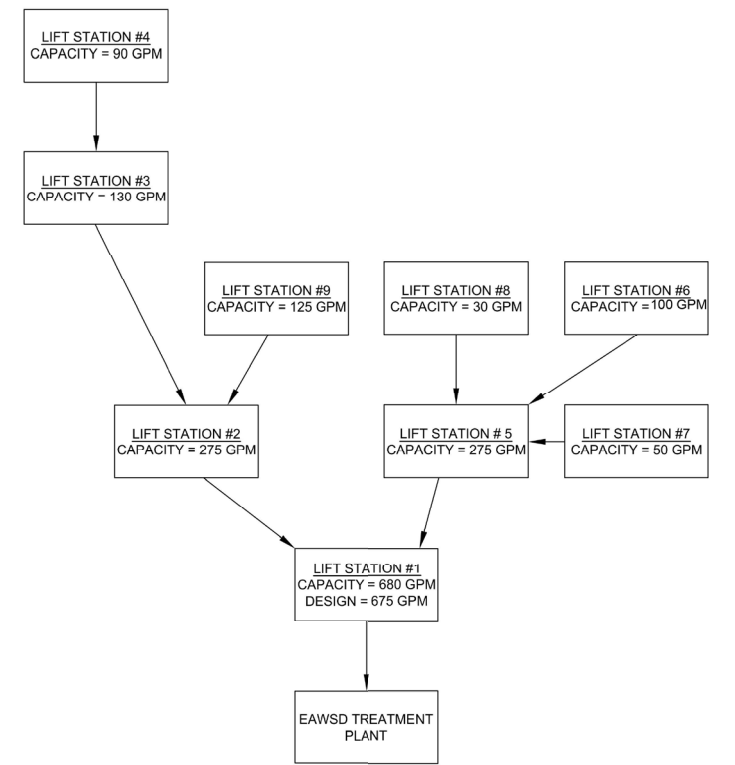
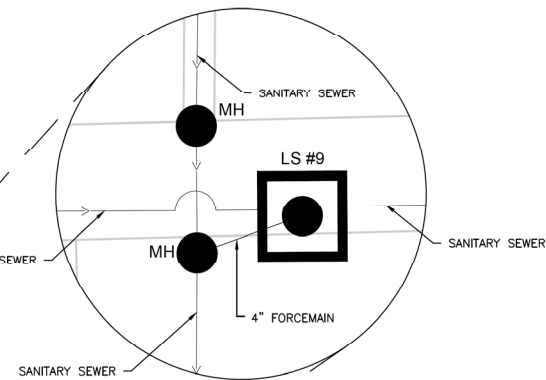
APRIL 21, 1999



Federal Emergency Management Agency

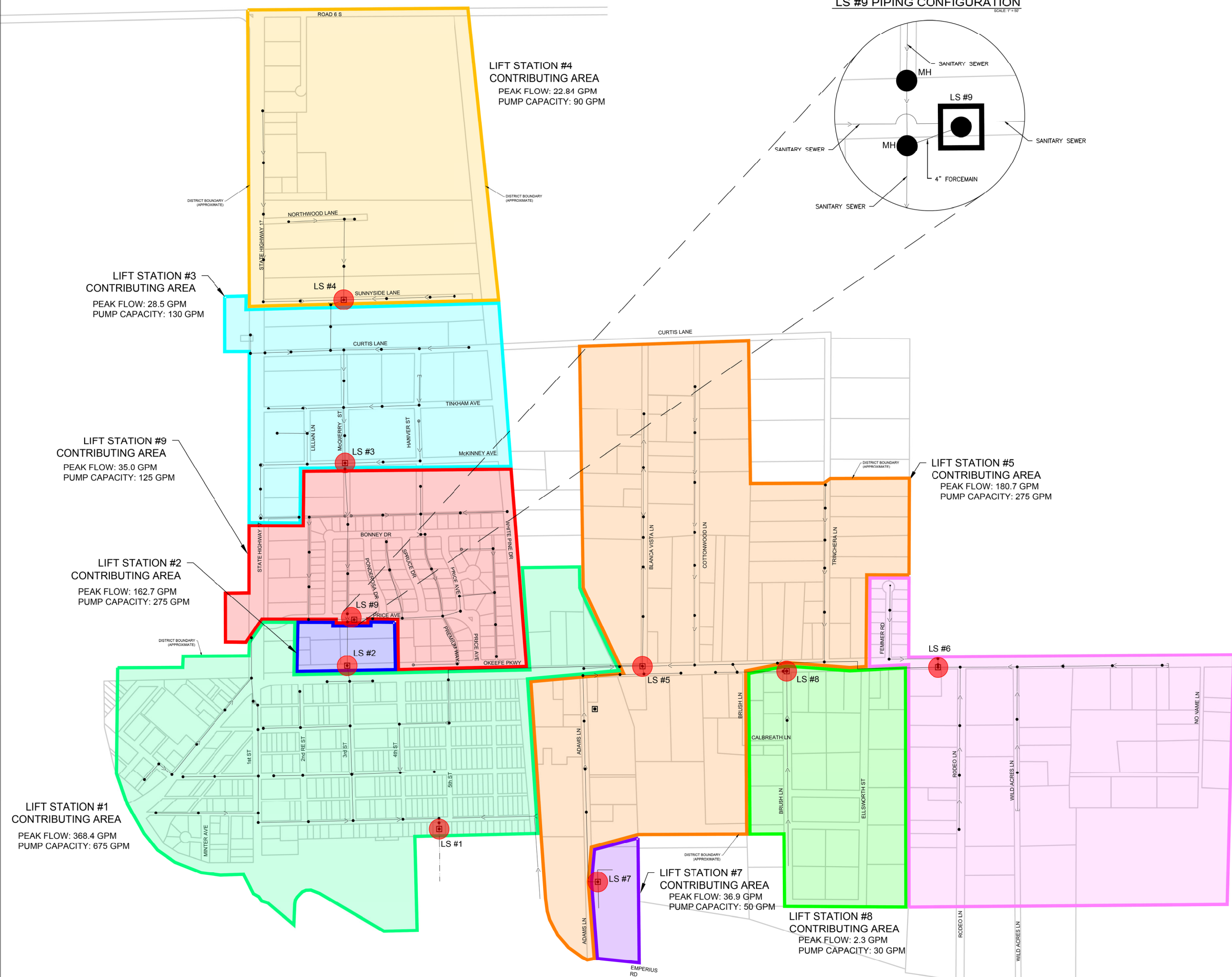
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

LS #9 PIPING CONFIGURATION

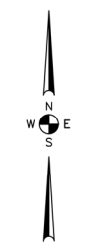


EAWSD LIFT STATIONS FLOW DIAGRAM

LIFT STATION REPLACEMENT PRIORITIES		
PRIORITY	LIFT STATION #	LOCATION
1	3	MCKINNEY & MCQUERY
2	6	RODEO LANE
3	5	BLANCA VISTA LANE
4	4	SUNNY SIDE LANE
5	8	BRUSH LANE
6	9	PRICE AVENUE
7	7	ADAMS LANE



LIFT STATION #6 CONTRIBUTING AREA
PEAK FLOW: 69.0 GPM
PUMP CAPACITY: 100 GPM



0 400' 800'
SCALE: 1" = 400'

EAST ALAMOSA WATER AND SANITATION DISTRICT
2022 LIFT STATION ANALYSIS



4885 Ward Road, Suite 100 • Wheat Ridge, CO • 80033
303-293-8107 • 303-293-8106 (fax) • www.rgengineers.com

LIFT STATIONS - CONTRIBUTING AREAS	
JOB NUMBER:	1017.0010
DATE:	AUGUST 2022
SCALE:	1" = 400'
SHEET NO.:	1 of 1

ATTCHMENT 12 - ENVIRONMENTAL CHECKLIST

ENVIRONMENTAL ASSESSMENT CHECKLIST

Use the Discussion and References space at the end of each section to document your responses. For example, explain how you determined the level of impact and document the reasoning if checking PA (possible adverse) for any resource. Attach additional pages if necessary.

1. Brief project description, including identification of selected alternative:

The East Alamosa Water and Sanitation District operates nine lift stations. The District is proposing the replacement of Lift Station No. 3 and Lift Station No. 6 due to a combination of factors. These factors include the nearing end of useful service life, continued maintenance issues, insufficient overflow volume, and overall lift station capacity. These lift stations also have mechanical, electrical and other maintenance problems on a regular basis.

2. Describe if the project will improve or maintain water quality, and if the project addresses a TMDL, and/or Watershed Management Plan.

The proposed project will does not impact water quality, address a TMDL, or a Watershed Management Plan.

3. Provide latitude and longitude of the proposed project (if a transmission / distribution / collection line identifies the center point not the whole line):

Latitude: 37.474130°
Longitude: -105.848645°

4. Provide discharge information: N/A

Lift Station No. 3 will contribute a periodic peak flow of 29 GPM to the system.

Lift Station No. 6 will contribute a periodic peak flow of 69 GPM to the system.

5. Provide NPDES/PWSID number:

PWSID # CO0044458

6. Provide primary waterbody name and waterbody ID, secondary name (if available), and State designated surface water use:

Rio Grande
Waterbody ID: CORGRG12

ATTCHMENT 12 - ENVIRONMENTAL CHECKLIST

7. Did your analysis consider how this project impacts community planning efforts in other areas (i.e. transportation, housing, etc.)?

The proposed project would be replacing two aging lift stations leading to less maintenance for the operations crew and less disruptions for nearby residents from overflowing lift stations.

Y = Yes N = No PA = Possible Adverse

1. Physical Aspects - Topography, Geology and Soils

- Y ___ N X PA ___ a. Are there physical conditions (e.g., steep slopes, shrink-swells soils, etc.) that might be adversely affected by or might affect construction of the WWTF facilities?
- Y ___ N X PA ___ b. Are there similar limiting physical conditions in the planning area that might make development unsuitable?
- Y ___ N X PA ___ c. Are there any unusual or unique geological features that might be affected?
- Y ___ N X PA ___ d. Are there any hazardous areas (slides, faults, etc.) that might affect construction or development?

Discussion and References:

2. Climate

- Y ___ N X PA ___ a. Are there any unusual or special meteorological constraints in the planning area that might result in an air quality problem?
- Y ___ N X PA ___ b. Are there any unusual or special meteorological constraints in the planning area that might affect the feasibility of the proposed wastewater treatment alternative?

Discussion and References:

3. Population

- Y ___ N X PA ___ a. Are the proposed growth rates excessive (exceeding State projections, greater than 6% per annum for the 20 year planning period)?
- Y ___ N X PA ___ b. Will additional growth be induced or growth in new areas encouraged as a result of facilities construction?
- Y ___ N X PA ___ c. Will the facilities serve areas which are largely undeveloped areas at present?

Discussion and References:

ATTCHMENT 12 - ENVIRONMENTAL CHECKLIST

4. Housing, Industrial and Commercial Development and Utilities

- Y ___ N X PA ___ a. Will existing homes or business be displaced as a result of construction of this property?
- Y ___ N X PA ___ b. Will new housing serviced by this facility affect existing facilities, transportation patterns, environmentally sensitive areas, or be in special hazard or danger zones?
- Y ___ N X PA ___ c. Will new housing create strains on other utilities and services - policies, power, water supply, schools, hospital care, etc.?

Discussion and References:

5. Economics and Social Profile

- Y ___ N X PA ___ a. Will certain landowners benefit substantially from the development of land due to interceptor routing or WWTP location and size?
- Y ___ N X PA ___ b. Will the facilities adversely affect land values?
- Y ___ N X PA ___ c. Are any poor or disadvantaged groups especially affected by this project?

Discussion and References:

6. Land Use

- Y ___ N X PA ___ a. Will projected growth defeat the purpose of local land use controls (if any)?
- Y ___ N X PA ___ b. Is the location of the WWTP or other facilities incompatible with local land use plans?
- Y ___ N X PA ___ c. Will inhabited areas be adversely impacted by the project site?
- Y ___ N X PA ___ d. Will new development have adverse effects on older existing land uses (agriculture, forest land, etc.)?
- Y ___ N X PA ___ e. Will this project contribute to changes in land use in association with recreation (skiing, parks, etc.), mining or other large industrial or energy developments?

Discussion and References:

ATTCHMENT 12 - ENVIRONMENTAL CHECKLIST

7. Floodplain Development

- Y ___ N X PA ___ a. Does the planning area contain 100 year floodplains?
If yes -
- Y ___ N X PA ___ b. Will the project be constructed in a 100 year floodplain?
- Y ___ N X PA ___ c. Will the project serve direct or indirect development in a 100 year floodplain anywhere in the planning area?

Discussion and References:

8. Wetlands

- Y ___ N X PA ___ a. Does the planning area contain wetlands as defined by the U.S. Fish and Wildlife Service?
If yes -
- Y ___ N X PA ___ b. Will any major part of the treatment works be located on wetlands?
- Y ___ N X PA ___ c. Will the project serve growth and development which will directly or indirectly affect wetlands?

Discussion and References:

9. Wild and Scenic Rivers

- Y ___ N X PA ___ a. Does the planning area contain a designated or proposed wild and scenic river?
If yes -
- Y ___ N X PA ___ b. Will the project be constructed near the river?
- Y ___ N X PA ___ c. Will projected growth and development take place contiguous to or upstream from the river segment?
- Y ___ N X PA ___ d. Will the river segment be used for disposal of effluent?

Discussion and References:

10. Cultural Resources (Archeological/Historical)

- Y ___ N X PA ___ a. Are there any properties (historic, architectural, archeological) in the planning area which are listed on or eligible for listing on the National Register of Historic Places?
If yes -
- Y ___ N X PA ___ b. Will the project have direct or indirect adverse impacts on any listed or eligible property?

Discussion and References:

ATTCHMENT 12 - ENVIRONMENTAL CHECKLIST

11. Flora and Fauna (including endangered species)

- Y ___ N X PA ___ a. Are there any designated threatened or endangered species or their habitat in the planning area?
- Y ___ N X PA ___ b. Will the project have direct or indirect adverse impacts on any such designated species?
- Y ___ N X PA ___ c. Will the project have direct or indirect adverse impacts on fish, wildlife or their habitat including migratory routes, wintering or calving areas?
- Y ___ N X PA ___ d. Does the planning area include a sensitive habitat area designed by a local, State or Federal wildlife agency?

Discussion and References:

12. Recreation and Open Space

- Y ___ N X PA ___ a. Will the project eliminate or modify recreational open space, parks or areas of recognized scenic or recreational value?
- Y ___ N X PA ___ b. Is it feasible to combine the project with parks, bicycle paths, hiking trails, waterway access and other recreational uses?

Discussion and References:

13. Agricultural Lands

- Y ___ N X PA ___ a. Does the planning area contain any environmentally significant agricultural lands (prime, unique, statewide importance, local importance, etc.) as defined in the EPA Policy to Protect Environmentally Significant Agricultural Lands dated September 8, 1978?
- Y ___ N X PA ___ b. Will the project directly or indirectly encourage the irreversible conversion of Environmentally Significant Agricultural Lands to uses which result in the loss of these lands as an environmental or essential food production resource?

Discussion and References:

ATTCHMENT 12 - ENVIRONMENTAL CHECKLIST

14. Air Quality

- Y ___ N PA ___ a. Are there any direct air emissions from the project (e.g., odor controls, sludge incinerator) which do not meet Federal and State emission standards contained in the State Air Quality Implementation Plan (SIP)?
- Y ___ N PA ___ b. Is the project service area located in an area without an approved or conditionally approved SIP?
- Y ___ N PA ___ c. Is the increased capacity of the project greater than 1 mgd?
- Y ___ N PA ___ d. Do the population projections used in the facilities plan exceed the State or areawide projections in the SIP by more than 5%?
- Y N ___ PA ___ e. Does the project conform with the requirements of the SIP? (See EPA regulations under Section 316 of the Clean Air Act.)
- Y N ___ PA ___ f. Is the project inconsistent with the SIP of an adjoining State that may be impacted by the Project?
- Y ___ N PA ___ g. Does the project violate national ambient Air Quality Standards in an attainment or unclassified area?
- Y ___ N PA ___ h. Will the facilities create an odor nuisance problem?

Discussion and References:

15. Water Quality and Quantity (Surface/Groundwater)

- Y ___ N PA ___ a. Are present stream classifications in the receiving stream being challenged as too low to protect present or recent uses?
- Y ___ N PA ___ b. Is there a substantial risk that the proposed discharge will not meet existing stream standards or will not be of sufficient quality to protect present or recent stream uses?
- Y ___ N PA ___ c. Will construction of the project and development to be served by the project result in non-point water quality problems (sedimentation, urban stormwater, etc.)?
- Y ___ N PA ___ d. Will water rights be adversely affected by the project?
- Y ___ N PA ___ e. Will the project cause a significant amount of water to be transferred from one sub-basin to another (relative to the 7-day, 10 year flow of the diverted basin)?
- Y ___ N PA ___ f. Will stream habitat be affected as a result of the change in flow or stream bank modification?
- Y ___ N PA ___ g. Are stream conditions needed for deciding upon the required limitations inadequately specified in the 208 Plan? If so, have the wasteload allocations calculations been performed and approved by the State and EPA?
- Y ___ N PA ___ h. Is an Antidegradation Review required?
- Y ___ N PA ___ i. Will the project adversely affect the quantity or quality of a groundwater resource?

ATTCHMENT 12 - ENVIRONMENTAL CHECKLIST

- Y ___ N X PA ___ j. Does the project adversely affect an aquifer used as a potable drinking water supply?
- Y ___ N X PA ___ k. Are there additional cost effective water conservation measures that could be adopted by community to reduce sewage generation?

Discussion and References:

16. Public Health

- Y ___ N X PA ___ a. Will there be adverse direct or indirect noise impacts from the project?
- Y ___ N X PA ___ b. Will there be a vector problem (e.g., mosquito) from the project?
- Y ___ N X PA ___ c. Will there be any unique public health problems as a result of the project (e.g., increased disease risks)?

Discussion and References:

17. Solid Waste (Sludge Management)

- Y ___ N X PA ___ a. Will sludge disposal occur in an area with inadequate sanitary landfills or on land unsuitable for land application?
- Y ___ N X PA ___ b. Are there special problems with the sludge that makes disposal difficult (hazardous, difficult to treat)?
- Y ___ N X PA ___ c. Is the technology selected for sludge disposal controversial?

Discussion and References:

18. Energy

- Y ___ N X PA ___ a. Are there additional cost effective measures to reduce energy consumption or increase energy recovery which could be included in this project?

Discussion and References:

19. Land Application

- Y ___ N X PA ___ a. Has a new or unproven technique been selected?
- Y ___ N X PA ___ b. Is there considerable public controversy about the project?

ATTCHMENT 12 - ENVIRONMENTAL CHECKLIST

- Y ___ N X PA ___ c. Will the project require additional water rights or impact existing water Rights?
- Y X N ___ PA ___ d. Is the project multi-purpose?

Discussion and References:

20. Regionalization

- Y ___ N X PA ___ a. Are there jurisdictional disputes or controversy over the project?
- Y ___ N X PA ___ b. Is conformance with the 208 plan in question?
- Y ___ N X PA ___ c. Is the proliferation of small treatment plants and septic systems creating a significant health problem?
- Y X N ___ PA ___ d. Have inter-jurisdictional agreements been signed?

Discussion and References:

21. Public Participation

- Y ___ N X PA ___ a. Is there a substantial level of public controversy?
- Y ___ N X PA ___ b. Is there adequate evidence of public participation in the project?

Discussion and References:

22. Environmental Laws

- Y ___ N X PA ___ a. Does the project threaten to violate any State, Federal or local law or requirement imposed to protect the environment?

Discussion and References:

Prepared By: Jordan Schneider, P.E., RG & Associates
Name, Title, and Affiliation

Date: 03/08/2023

Reviewed By (WQCD): _____
Name and Title

Date: _____

Environmental Determination: (Circle One) CE EA EIS

ATTACHMENT 13 - PROPOSED PROJECT SCHEDULE

	Date
Site Application	11/4/2022
Basis of Design Report	8/1/2023
Final Plans and Specifications	10/1/2023
Discharge Permit	10/1/2023
Miscellaneous Permit	10/1/2023
Public Meeting	7/15/2023
Loan Application	10/15/2023
Advertisement for Bids	12/1/2023
Construction Contract Award	1/29/2024
Construction Start	2/1/2024
Construction Completion	7/30/2024



ATTACHMENT 15 - COST AND EFFECTIVENESS CERTIFICATION

Cost and Effectiveness Certification

Project Name: 2023 Lift Station Replacement
Borrower: East Alamosa Water and Sanitation District

As a condition for receiving assistance through the Colorado Water Pollution Control Revolving Fund (WPCRF), I certify that the cost and effectiveness evaluation has been performed per Section 602(b)(13) of the Water Resources Reform and Development Act of 2014 (WRRDA).

This cost and effectiveness evaluation included the following.

- A. The borrower has studied and evaluated the cost and effectiveness of the processes, materials, techniques, and technologies for carrying out the proposed project or activity for which assistance is sought under this title; and
- B. The borrower has selected, to the maximum extent practicable, a project or activity that maximizes the potential for efficient water use, reuse, recapture, and conservation; and energy conservation, taking into account:
 - a. the cost of constructing the project or activity;
 - b. the cost of operating and maintaining the project or activity over the life of the project or activity; and
 - c. the cost of replacing the project or activity.

Ricardo Goncalves

Licensed Professional Engineer (Printed)

Signature and Stamp of Licensed Professional Engineer

03/09/2023

Date

