



# **SOUTHWEST FLUID PRODUCTS, INC.**

**SOUTHWEST FLUID PRODUCTS, INC**

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Montague County WWTP

Proposal # 24-073-MONT

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## Description:

Southwest Fluid Products, Inc (SWFP, Supplier) shall provide one fabricated Wastewater Water Treatment System (WWTP) complete and ready for installation and operation in accordance with the requirements as specified by Wasteline Engineering. The wastewater treatment system shall be of the activated sludge type, specifically known as "Complete Mix Activated Sludge", designed to treat domestic wastewater. The complete system shall include all necessary equipment required for a fully operational WWTP in accordance with provided design criteria.

**1. Technical Data**

<b>Parameters</b>	<b>Unit</b>	<b>Influent</b>	<b>Projected Effluent</b>
Average Daily Flow Rate	GPD	Per Spec	
Peak Hourly (2-hr) Flow Rate	GPD	Per Spec	
Influent Temp	°C	Per Spec	
Elevation	Feet	Per Spec	
Biochemical Oxygen Demand - BOD <sub>5</sub>	mg/L	Per Spec	Per Spec
Total Suspended Solids - TSS	mg/L	Per Spec	Per Spec
Total Kjeldahl Nitrogen - TKN	mg/L	Per Spec	
Ammonia – NH <sub>3</sub>	mg/L	Per Spec	Per Spec
Total Phosphorous - TP	mg/L	Per Spec	
Alkalinity	mg/L	Per Spec	
pH		Per Spec	

## 2. Scope of Supply- Wastewater Treatment Plant

### 2.1 Digester Tank

1	Sludge holding chamber (Air supplied from header pipe)
1	Supernatant decant assembly w/ swivel pipe
1	Galvanized pipe header
SET	304SS coarse bubble diffusers w/ SS drop assembly
1	12' wide x 12' tall x 4' long combo tank basin

### 2.2 Aeration Tank

1	Aeration chamber
1	Galvanized pipe header
SET	304SS coarse bubble diffuser w/ SS drop assembly
1	12' wide x 12' tall x 13'3" long combo tank basin

### 2.3 FPZ Regenerative Blowers

2	FPZ Regenerative Blowers- K07 - 10HP w/ 150cfm @ 5.5psi
SET	All apparatuses necessary with engineer approval
2	Nema3 single enclosures with disconnect and AC drives within eye site of blowers

### 2.4 Clarifier Chamber

1	Circular, mechanical clarifier chamber
1	Clarifier weir trough w/ SS weir plates
1	Stilling well, Torque Tube, Sludge Pump
1	Loading pipe (H.D.G)
1	Sludge return assembly, w/ complete mechanical scraping arm all (H.D.G.)
1	Scum return assembly, w/ complete mechanical raking arm (H.D.G.)
1	Grouting 14' dia clarifier
1	Clarifier mechanical drive unit – Bonfiglioli
1	0.5 HP SS clarifier drive control panel w/ HOA switch <i>Note- SWFP will wire gear drive to supplied panel. It is up to other to bring all wiring to panel located on bridge in center of clarifier.</i>
1	Clarifier Basin: 12' dia x 12' tall combo tank basin

*2.5 Disinfection System*

1	4' x 4' FRP chemical building
2	Stenner Pumps
1	Eye Wash Station
1	Double wall chemical storage *SWFP is not responsible for necessary conduit and pull string for the poly chemical line to dosing location. Power supplied to FRP building panel to be done by others.

*2.6 Effluent Tank*

1	Galvanized air header assembly
2	1" SS coarse bubble diffuser drop assembly
1	Weir box assembly
1	Flow meter and transducer
1	Honeywell chart recorder
SET	All necessary walkways and stairs
1	CL2 basin integrated into combo tank

*2.7 NPW System*

2	1/2hp submersible pumps
1	Nema 4X SS controls
1	80 gallon bladder tank
1	Float switches
1	All Piping on top of tanks for NPW system (any additional to be done by others)

*2.8 Service Walkway and Handrails*

	galvanized walkway grating and access stairway
1	19w4 1.5" x 3/16" smooth galvanized walkway 36" wide

*2.9 Interconnecting Carbon Yard Piping*

SET	All carbon steel yard piping between plant influent flange to effluent basin discharge flange and above ground is included in SWFP scope for installation and coating. This includes piping to filter. Others are responsible for all piping to the auger screen and from the supplied filter.
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**2.10 Corrosion Prevention**

1	Interior surface sandblast – See spec
1	Interior surface coating – See spec
1	Exterior surface sandblast – See spec
1	Exterior surface coating – See spec
1	Schedule 40 piping coating – See spec

**2.11 Manufacturers Service and Warranty**

1	One day of startup training on equipment and operations
1	One year (12 months) manufacturer warranty on material and equipment
	<i>*Warranty applies when equipment is used in accordance with O&amp;M Manual</i>
	<i>*Warranty not to exceed eighteen (18) months from ship date</i>

### 3. Scope of Supply- Lift Station

#### 3.1 Fiberglass Wet Well and Vault Box

1	Halliday aluminum vault box lid
1	Holliday aluminum wet well Lid
1	5' diameter x 12' deep fiber glass wet well basin with anti-float flange
1	4' wide x 4' long x 3' deep fiber glass vault box

#### 3.2 Pumps and Guide Rail System

2	1HP Liberty grinder pumps
2	Base elbows w/ quick connects
SET	Stainless steel guide rails with guide mounts
SET	Stainless steel lift chains

#### 3.3 Controls and Switches

1	Stainless steel duplex control panel
SET	Float switches

#### 3.4 Piping and Valves

SET	Sch 80 discharge piping
2	Check valves
2	Gate valves
2	Slip coupling

#### 3.5 Manufacturers Service and Warranty

1	One day of startup training on equipment and operations
1	One year (12 months) manufacturer warranty on material and equipment
	<i>*Warranty applies when equipment is used in accordance with O&amp;M Manual</i>
	<i>*Warranty not to exceed eighteen (18) months from ship date</i>

## 4. Specifications

### 4.1 SWFP WWTP Fabricated Footprint and Structure Detail

- SWFP will provide materials, labor, tools, and supervision to shop fabricate or field erect one 12' dia. x 12' ht. tanks. Both inner & outer tanks will have 6"x4"x5/16" eave angles.
- Includes:
  - Fabrication Drawings
  - ¼" plate for tank floor w/ Fiber Board
  - ¼" plate for tank shells and divider walls
  - 6" x 4" x 5/16" eave angles for both tanks
  - 4 - 3" x 3" x 1/4" support angle on outside of tank wall

### 4.2 Materials / Structure

- Structural grade steel plated
- ASTM A-36 1/4in and 3/8in minimal thickness
- Joins by arc weld / walls to be continuous watertight welds
- Water containing tanks shall have maximum spacing of 36" bracing on end and partition walls utilizing stitch weld.
- Fabrication and erection shall conform to appropriate requirements of AISC – Building Specification

### 4.3 Coatings / Corrosion Control

- Painted surfaces to be properly prepared prior to coating – smooth, clean, and dry
  - Rust, dust, and mill scale to be removed by means of sandblast
  - Interior (immersion) surfaces will receive near white blast cleaning SSPC-SP10
  - Exterior (non-immersion) surfaces shall receive commercial blast cleaning SSPC-SP6
  - Surfaces shall be painted with appropriate and acceptable mils of total dry thickness with Hempel High Solid Epoxy, Induron Polyurethane, or acceptable equivalent
  - Field coating cannot be performed in inclement weather conditions or in temperatures less than 47°F.

### 4.4 Foundation

- Foundation Slab NOT provided by Supplier
  - Suggested: reinforced concrete slab, properly prepared rock, or caliche pad
  - Slab / pad should be level with no more than ¼" of tolerance per 10' width and length

### 4.5 Clarifier Components

- 36" wide plant access bridge and handrail assembly: construction with 12" x 6" x 1/4" thick rectangular tubing bridge beams, 2-rail 1½" diameter sch 40 galvanized handrails on both sides with 4" x ¼" galvanized toeplates, and 3/16" x 1" galvanized grating.
- Effluent weir trough assembly: 12"W x 12"D with a 6" baffle trough made with galvanized steel with 10" pipe drop-box assembly. Weir will be 1/8" SS adjustable plates.
- Clarifier fixed stilling well assembly: 4'W. x 4'D ¼" galvanized on C12x20.7 support bracing
- Sludge scraper arm assembly: Fabricated from 1/4" thick channel and angle truss type assembly with PVC sludge scraper blades.

- Clarifier surface skimmer arm assembly: Full diameter type, fabricated from 6" 8.2wt channel with surface skimmer rubber blades.
- Clarifier full surface scum removal trough w / valve assembly: scum collection trough with a 4" sch 40 steel discharge airlift pump per SWFP design and manufacturing. Airlift will discharge into Aeration Zone. Airlift will operate by valve assembly on trough actuated by scum arm.
- Clarifier drive shaft assembly: 6" diameter sch. 40 galvanized steel pipe construction.
- Plant air supply distribution 6" pipe blower manifold w/ reducer to 4" header pipe along tops of basins.
- Clarifier effluent line: 6" dia. sch. 40 coated pipe to connect at T before going in ground.
- Clarifier influent pipe assembly: 4" diameter, sch. 40 coated pipe.
- 1/2 hp, 230/460 volt, 3 phase, 60 hertz, 1750 RPM, centrifugal drive with motor and clutch assembly. Clarifier drive controls will be bridge mounted on handrail system.

#### *4.6 Aeration / Sludge Holding Components*

- 1" Coarse bubble diffusers – manufactured by SWFP controlled by 304SS ball valve
- 4" dia. Sch. 40 galvanized Supernatant Decant Airlift Assembly with swing arm and mechanical winch.
- Manual bar screen A36 ¼ galvanized steel fabricated with bar screen and drip plate. Screening is fabricated with ½ openings.
- RAS / WAS airlift pump assembly fabricated and manufactured by SWFP and air controlled by 1" 304SS ball valve

#### *4.7 Accessibility*

- 30"x36" flanged manways located near bottom of tanks
- 36" wide access stairway assembly with intermediate landing: Constructed of galvanized steel, 2-rail 1½" diameter sch.40 galvanized pipe handrails on both sides galvanized bar grating steps with nosing
- Three (3) - 3" Sch. 40 tank drain nozzles with a flanged connection to extend 12" beyond outer wall.

#### *4.8 Inlet Connections*

- Inlet connections per engineer spec

#### *4.9 Transport components and shipment*

- Plant will ship in estimated 20 truck loads

#### *4.10 Power Requirements*

- 460 Volt, 3 Phase, 60 Cycle Service, 250+ Amp



## 5. Clarifications and Exceptions

### 5.1 General contractor / customer to provide:

- All weather site access for delivery including tree trimming and fence removal
- Subgrade Stabilization / Foundation Pad / Grouting / Concrete / Wall Spools
- Fencing and site security including theft protection and prevention
- External plant plumbing and piping beyond exterior walls (yard, underground, mains, etc.)
- Electrical work including service to panels, conduit, lighting, etc.
- Emergency power supply (Generators, transformers, etc)
- Trash / debris receptacle and removal
- Filling of tanks for testing / seeding
- Geotechnical report, site survey, boring, etc. (where applicable)
- Freeze protection, heat tracing, insulation
- Field coating overspray surrounding protection
- Planting lighting and associated brackets

### 5.2 Exceptions:

- Cost of performance testing and analytical work is excluded from the above proposal.
- Performance and payment bonds not provided by Supplier.
- Local, state, and federal taxes not provided by Supplier

### 5.3 Notes:

- Generally, this proposal includes the treatment plant internal equipment, including all fabricated steel, components, piping etc., on and inside the treatment plant.
- **Total price includes installation.**
- Our air piping begins at plant outer wall.
- Inlet and outlet piping will end at first fitting outside of wall.
- All equipment to be factory built.
- All piping to be HDG and per specification do not require color coding.
- Excavation and all concrete work to be furnished by the customer.
- This proposal includes all drawings, electronic operation manual, and one day startup service.
- Additional charges will be added if SWFP cannot readily access and fabricate the tank with our standard erection and painting equipment. 25' of working room is required around perimeter of tank until completed by SWFP. Bid is based on information provided; any changes will be at additional cost. Prior to mobilization SWFP will require that foundation is ready, all back fill in place, no open ditches or holes and site access road is clear and must remain clear for equipment and materials access during construction and painting of the tank or back charges for equipment and field crew downtime may be applied.

## 6. Commercial

### 6.1 Budgetary Selling Pricing

- **Montague County WWTP Total -** \$393,745
- **Montague County Lift Station Total-** \$61,170
- Total price FOB jobsite / excludes any taxes or fees that may apply.

### 6.2 Equipment Manufacturing / Delivery Lead Time

- Estimated 22-34 weeks from initial payment and firm purchase order with approved submittals
- SWFP will not be responsible for project delays due to weather conditions or outside contractors.

### 6.3 Submittal Drawings

- Submittal drawings will be submitted within four (4) weeks of firm purchase order

### 6.4 Proposal Acceptance:

- Labor and equipment prices are valid for 60 days after bid date provided, given we receive a letter of intent within 15 days of bid.

### 6.5 Payment Terms:

- 5% with issued acceptance and firm purchase order
- 15% upon approved submittal
- 60% billed monthly during fabrication (80% billed upon tank delivery)
- 10% billed during installation
- 5% at completion
- 5% at start-up or four (4) months from initial delivery, whichever occurs first.

### 6.6 Standard Terms and Conditions

- Southwest Fluid Products, Inc. specifically reserves the right to invoice for partial shipment. Invoicing for work performed on a monthly draw for materials and work performed shall be expected to occur.
- The proposal includes all equipment, installation, startup by factory personnel, and training of operators in plant operation and servicing of equipment.
- "As Built" drawings, and operations/ electronic service manuals included.
- Cancellation of the order will include a fee of 10% of total contract value.
- Should Customer request additional services, SWFP standard per diem and travel rates will apply.

### 6.7 Qualifications

- SWFP was founded in 1977 and has over 45 years of experience in wastewater treatment plant manufacturing, installation, and commissioning.
- Certified equipment operators, welders, and fabricators

*6.8 Comparable SWFP Projects*

- Godley WWTP (Completed 2024)
- Cresson (Completed 2024)
- Millican Reserve (Completed 2024)
- Caddo Mills WWTP (Completed 2023)
- El Paso WWTP (Completed 2023)
- Sunset Oaks (Completed 2022)