

**COSENTINO WINERY TREATMENT SYSTEM DESIGN CRITERIA**

**SANITARY WASTEWATER SYSTEM**

**FLOW RATE**

Annual	100,000 gallons per year
Peak	1,000 gallons per day
Average	275 gallons per day

**DESIGN INFLUENT AND EFFLUENT CONCENTRATIONS**

	Influent	Effluent
Biochemical Oxygen Demand (BOD <sub>5</sub> )	500 mg/l	<30 mg/l
Total Suspended Solids (TSS)	200 mg/l	<30 mg/l
Nitrogen (N)	55 mg/l	<20 mg/l
pH	7.5	7.5
Total Coliform	10 <sup>7</sup> MPN/100 mL	230 MPN/100 mL

**ADVANTEX SYSTEM (N) (S1)**

Flow Rate (avg/max)	275 / 1,000 gallons per day
Filter Pads	
Manufacturer	Drenco AX20, 3,800 GPM System
Number	4
Size	7'-6" x 3'-3" x 2'-7" deep
Capacity	250 gallons per day each
Material	Fiberglass
Processing/Recirculation	Soil Tank
Number	1
Type	Dual Compartment
Volume	5,000 gallons
Size	18' x 10' x 6' deep
Material	Precast Concrete
Sanitary Recirculation Pumps	
Manufacturer	
Number	2
Type	Submersible
Pump Capacity	51 gpm @ 22 ft. TDH
Motor	3/4 hp

**TABLET CHLORINATOR (N) (S2)**

**EFFLUENT HOLDING TANK (N) (S3)**

Number	1
Volume	3,000 gallons
Size	13'-4" x 9'-4" x 7'-4" deep
Location	Buried
Sanitary Effluent Pump	
Location	Effluent Holding Tank
Number	2
Type	Submersible
Capacity	38 gpm @ 77 ft. TDH
Motor	1.5 hp
SCALE INHIBITOR (N)(S4)	
Number	1
Chemical	Polyphosphate Blend
Dosage	1 mg/l per 20 mg/l hardness
Use	0.42 pounds per week at 10 mg/l
Frequency	Weekly or as needed
Feed Method	Manual Feed Into Effluent Tank

**MICROSTRAINER (N)(S5)**

Number	1
Flow Rate	50 gallons per minute $\Delta$
Filter Size	80 microns

**DISPOSAL SYSTEM (N)(S6)**

Manufacturer	Geoflow Waateflow Drip System
Flow Rate	430 gallons per day
Loading Rate	0.1 gallons per day per square foot
Pressure	20 psi
Area	4,300 square feet
Manifolds	
Size	2 inch diameter
Type	Schedule 40 PVC
Cover	18 inches minimum
Driplines	
Spacing	12 inches on center

**WINERY PROCESS WATER**

**FLOW RATE**

Annual	250,000 gallons per year
Peak	
Crush	4,000 gallons per day
Non-Crush	2,000 gallons per day
Average	
Crush	1,000 gallons per day
Non-Crush	600 gallons per day

**DESIGN INFLUENT AND EFFLUENT CONCENTRATIONS**

	Influent		Effluent
	Crush	Non-Crush	
Biochemical Oxygen Demand (BOD <sub>5</sub> )	8,000 mg/l	4,000 mg/l	<40 mg/l
Total Suspended Solids (TSS)	500 mg/l	200 mg/l	<40 mg/l
Nitrogen (N)	50 mg/l	20 mg/l	<10 mg/l
pH	4	4	7.5

**PROCESS LIFT STATION (R) (P1)**

Number	1
Volume	1,500 gallons
Size	10'-0" x 4'-11" x 5'-7" deep
Location	Buried
Material	Precast Concrete
Process Lift Station Pump (E)	
Manufacturer	Goulds
Number	2
Type	Submersible
Capacity	58 gpm @ 42 ft. TDH
Motor	1 hp

**AERATION POND 1 (R) (P2)**

Volume	372,000 gallons @ 8 feet water depth
Top Dimensions:	140 feet x 70 feet
Bottom Dimensions:	100 feet x 25 feet
Water Depth	8 feet