

TABLE 9-7

**INVENTORY OF EXISTING AND PROPOSED
FACILITIES AND PROCESS EQUIPMENT
(All equipment is NEW unless identified as "existing")**

COMPONENT	PRELIMINARY DESIGN PHASE 1
PRELIMINARY FACILITIES	
<i>Pre-Engineered System</i>	
Number of Units	1
Location	Influent Building
Capacity (Peak)	2.8 MGD
Screen Spacing	6-mm (1/4-inch)
Grit Removal Efficiency	80% removal for 65 mesh
<i>Dewatered Screenings and Grit Conveyor</i>	
Number of Units	1
Location	Influent Building
Approximate Length	40 feet
<i>Manual Bar Rack</i>	
Number of Units	1
Location	Influent Building
Screen Spacing	1-inch
<i>Influent Sampler</i>	
Number of Units	1
Location	Influent Building
SECONDARY TREATMENT FACILITIES	
<i>Reactor Flow Distribution</i>	
Type	Slide/Sluice Gates
Number of Units	4
Location	Reactor Junction Box
<i>Oxidation Ditch Reactor</i>	
Process Type	Orbal® Process (Nitrification-Denitrification)
Number of Channels	3
MLSS	4,000 mg/L (max month)
Overall Dimensions	170 ft (L) x 118 ft (W) x 11.5 ft (D)
<i>Oxidation Ditch Aeration System</i>	
Type	Horizontal Rotary Disc Aerators
Location	Oxidation Ditch
Number of Units	2 - 50 HP serving inner and middle channels
Number of Units	2 - 75 HP serving all channels
<i>Oxidation Ditch Nitrate Recycle Pump</i>	
Type	Submersible In-Line Propeller
Location	Inner Channel (Orbal® Oxidation Ditch)
Number of Units	1

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SECONDARY TREATMENT FACILITIES (CONT.)	
<i>Reactor Scum Pump</i> Type Location Number of Units Capacity, each	Submersible Centrifugal Chopper Pump Reactor scum box 1 150 gpm
<i>Secondary Clarifier Flow Distribution Slide Gate</i> Type Location Number of Units	Slide Gates Clarifier Distribution Box 2
<i>Secondary Clarifier</i> Type Number of Units Tank Diameter Side Water Depth Surface Overflow Rate (Peak)	Circular, Center Feed with EDI, Peripheral Overflow 2 55 feet 13 feet 800 gpd/sf (all units in service)
<i>Return Activated Sludge Pump</i> Type Location Number of Units Capacity, each	Centrifugal Non-Clog RAS/WAS Pump Building 3 (including 1 installed spare) On VFD; 860 gpm
<i>Return Activated Sludge Flow Meter</i> Type Location Number of Units Size	Magnetic Type RAS/WAS Pump Building 3 6-inch
<i>Waste Activated Sludge Pump</i> Type Location Number of Units Capacity, each	Centrifugal Non-Clog RAS/WAS Pump Building 2 (including 1 installed spare) 150 gpm
<i>Waste Activated Sludge Flow Meter</i> Type Location Number of Units Size	Magnetic Type RAS/WAS Pump Building 2 3-inch

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SECONDARY TREATMENT FACILITIES (CONT)	
<i>Secondary Clarifier Scum Pump</i> Type Location Number of Units Capacity, each	Submersible Centrifugal Chopper Pump Secondary Scum Box 2 150 gpm
METHANOL FACILITIES	
<i>Methanol Storage Tank</i> Type Location Capacity <i>Methanol Feed Pump</i> Type Location Number of Units Flow Range	Aboveground Concrete Encased Steel Methanol Facility 6,000 gallons Peristaltic, on VFD Methanol Facility 2 (plus an uninstalled spare) 0.002 to 34.8 gph
FILTRATION	
<i>Denitrification Filters</i> Type Location Capacity Number of Cells Number of Modules per Cell Filtration Area Per Cell Total Filtration Area Loading Rate (all cells in service) Compressed Air Required <i>Air Compressor</i> Type Location Number of Units Motor HP	Continuous Backwashing Sand Filters Effluent Sand Filter Building Plan 3.7 mgd 12 2 100 sq. feet 700 sq. feet 3.94 gpm/ft ² 42 scfm Reciprocating Chemical and Blower Building 1 20

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COMPONENT	PRELIMINARY DESIGN PHASE 1
ODOR CONTROL	
<i>Activated Carbon Odor Control System</i>	
Type	Radial Flow
Location	Adjacent to Sludge Dewatering Building
Media	High Capacity Activated Carbon
Capacity	20,000 cfm
Fan HP	50
Fan Note	Fan provided with weather protection enclosure
SLUDGE TREATMENT FACILITIES	
<i>Waste Activated Sludge Holding Tank</i>	
Note	Reuse Existing
Number of Units	2
Dimensions, each	37 feet x 37 feet x 10.2 feet side water depth
<i>Waste Activated Sludge Holding Tank Aeration System</i>	
Type	Removable Coarse Bubble Diffusers
Location	Waste Activated Sludge Holding Tanks
Design Air Flow	425 scfm for each tank
<i>Waste Activated Sludge Holding Tank Blower</i>	
Type	Positive Displacement, Tri-Lobe with Sound Enclosure
Location	Chemical and Blower Building
Number of Units	2 (including 1 installed spare)
Capacity, each	On VFD
<i>Belt Filter Press Feed Pump</i>	
Type	Double Disc
Location	Control Building
Number of Units	2 (including 1 installed spare)
Capacity, each	On VFD; 370 gpm
<i>Belt Filter Press Feed Flow Meter</i>	
Type	Magnetic Type
Location	Control Building
Number of Units	2
Size	4-inch
<i>Sludge Dewatering Equipment</i>	
Type	Belt Filter Press
Location	Sludge Dewatering Building
Number of Units	1 new + 1 existing

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COMPONENT	PRELIMINARY DESIGN PHASE 1
SLUDGE TREATMENT FACILITIES (CONT.)	
<i>Water Booster Pump</i> Size Location Number of Units Capacity, each	New: 1-meter; Existing: 1-meter Sludge Dewatering Building 1 90 gpm @ 120 psi
<i>Dewatered Sludge Conveyor</i> Type Location Number of Units Approximate Length	Belt Conveyor Sludge Dewatering Building 1 22 feet
OTHER FACILITIES	
<i>Plant Water Pumps</i> Type Location Number of Units	Skid-Mounted RAS/WAS Pump Building 3
<i>Plant Water Hydropneumatic Tank</i> Number of Units Location	1 RAS/WAS Pump Building
<i>Recycle Flow Pumps</i> Type Location Number of Units	Submersible Non-Clog Centrifugal Recycle Flow Pump Station 2
<i>Parshall Flume</i> Type Number of Units Location Size (Throat Width) Capacity	FRP 1 UV and Parshall Flume Structure 12-inches 320 gpm
<i>Influent Sampler</i> Number of Units Location	1 Outside of the Influent Building
<i>Effluent Sampler</i> Number of Units Location	1 UV and Parshall Flume Structure

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OTHER FACILITIES (CONT.)	
<i>Sodium Hypochlorite Storage Tank</i>	
Type	FRP Cylindrical
Location	Chemical and Blower Building
Number of Units	1
Capacity	6,000 gallons
Tank Diameter	10 feet
<i>Sodium Hypochlorite Feed Pumps</i>	
Type	Peristaltic
Location	Chemical and Blower Building
Number of Units	3 (including 1 installed spare)
<i>Sodium Hydroxide Storage Tank</i>	
Type	FRP Cylindrical
Location	Chemical and Blower Building
Number of Units	1
Capacity	6,000 gallons
Tank Diameter	10 feet
<i>Sodium Hydroxide Feed Pumps</i>	
Type	Peristaltic
Location	Chemical and Blower Building
Number of Units	2 (including 1 installed spare)
TREATED WATER RECHARGE FACILITIES	
Sand Beds	
Number of Existing Sand Beds	2
Area (sf) each	30,000
Area (sf) total	60,000
Capacity, total (30 gpd/sf)	1.8 mgd
Number of New Sand Beds	4
Area (sf) total	148,000
Capacity, total (30 gpd/sf)	4.4 mgd
Total Capacity	6.2 mgd
Capacity with 50% beds resting	3.1 mgd