

X-6619 Sewage Treatment Plant

Equipment Available

- 1. Collection System Lift Stations:**
 - **X-614A: 3 Pumps @ 300 GPM Each**
 - **X-614B: 2 Pumps @ 200 GPM Each**
 - **X-614D: 2 Pumps @ 150 GPM Each**
 - **X-614P: 2 Pumps @ 100 GPM Each**
 - **X-6614G: 2 Pumps @ 400 GPM Each**
 - **X-6614H: 2 Pumps @ 500 GPM Each**
 - **X-6614J: 2 Pumps @ 600 GPM Each**
 - **X-6614E: 3 Pumps @ 500 GPM Each**

- 2. Hydrosieve Unit: For Solids Screening**

- 3. Grit Collector: 1.5 MGD Capacity**

- 3. Aeration Basins: 4 Units Available**
 - **110,000 Gallons Capacity Each**
 - **4 System Blowers @ 660 SCFM Each**
 - **2 Return/Waste Sludge Pumps**

- 4. Clarifiers: 2 Units @ 50,000 Gallons Capacity Each**

- 5. Effluent Filtration:**
 - **3 Units Available**
 - **400,000 Gallon Per Day Maximum Capacity**
 - **Chlorination/Dechlorination Feed And Monitoring Equipment**

- 6. Aerobic Sludge Digestors:**
 - **2 Units Available**
 - **72,000 Gallons Capacity Each**

- 7. Sludge Drying Beds:**
 - **5 Units Available**
 - **140,000 Pounds Per Year Capacity**

X-6619 WASTEWATER TREATMENT PLANT DESIGN

ACTIVATED SLUDGE TREATMENT PROCESS

PRIMARY TREATMENT

ROUGHING – SCREEING AND GRIT REMOVAL

SECONDARY TREATMENT

MICROBIOLOGICAL – EXTENDED AERATION

TERTIARY

FILTRATION – FINAL EFFLUENT POLISHING

PLANT FLOW CAPACITY

DESIGN

PEAK 1,200,000 GPD

NORMAL 700,000 GPD

CURRENT OPERATING

AVERAGE 350,000 GPD

AEROBIC SLUDGE DIGESTION / DEWATERING

SLUDGE HANDLING

AEROBIC SLUDGE DIGESTION

TWO 72,000 GALLON DIGESTERS

BATCH MODE

SOLIDS CONCENTRATION

SUPERNATANT RETURNED TO PLANT INFLUENT

250,000 - 300,000 GALLONS PER YEAR

SLUDGE DEWATERING

SLOW SAND FILTERS - DRYING BEDS

FILTRATE RETURNED TO PLANT INFLUENT

DISCHARGE LIMITATIONS

NPDES PERMIT LIMITS (OHIO EPA)

ESTABLISHED BY OHIO EPA
SAME REQUIREMENT AS FOR MUNICIPALITIES

PARAMETER DISCHARGE LIMITS

	<u>DAILY</u>	<u>MONTHLY</u>
SUSPENDED SOLIDS	18 mg/L	12 mg/L
CBOD	15 mg/L	10 mg/L
CHLORINE RESIDUAL*	0.038 mg/L	
FECAL COLIFORM	2000 PER 100 ml	1000 PER 100 ml
pH	6.5 TO 9.0	

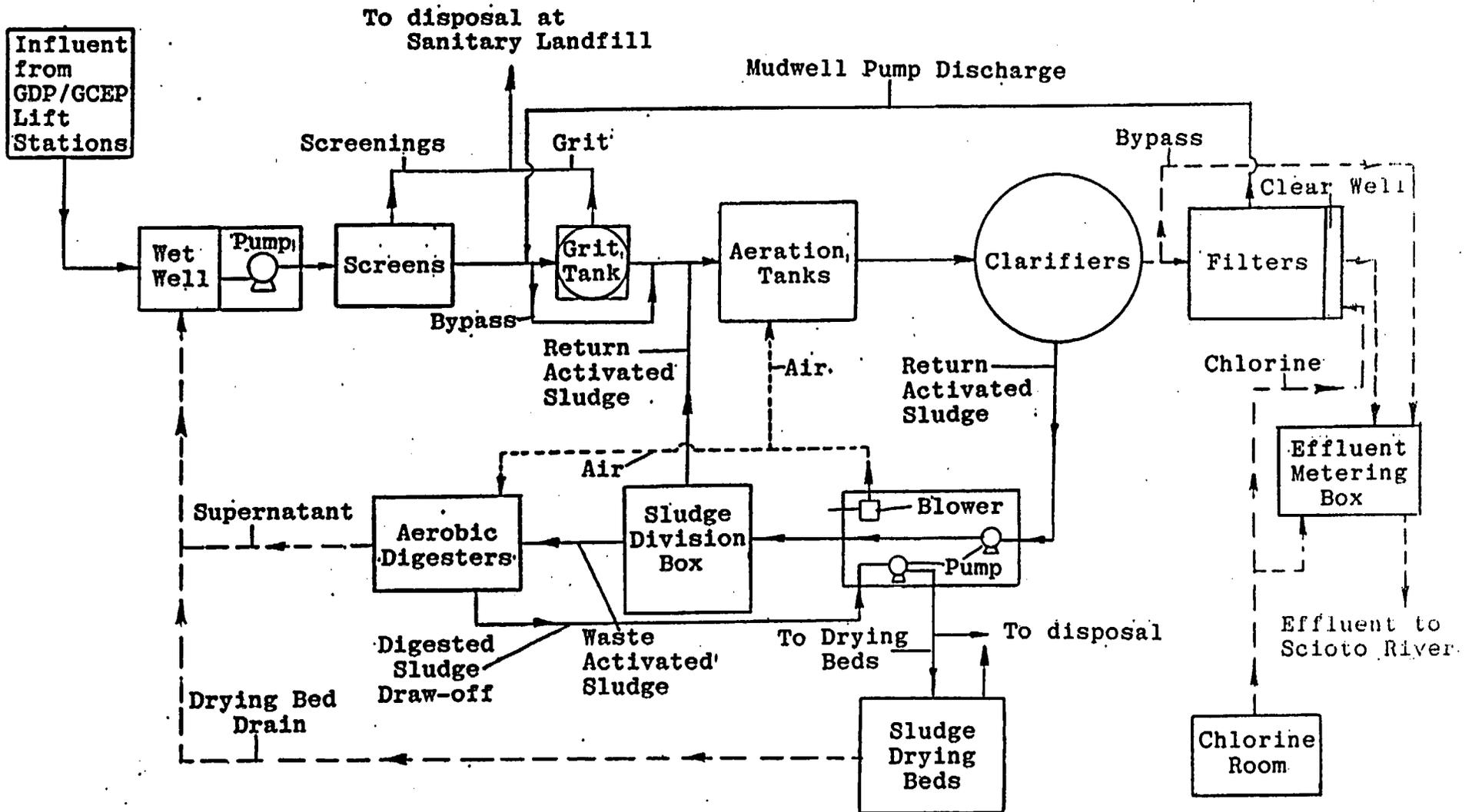


Figure 2.1.2.2 SIMPLIFIED SEWAGE TREATMENT FLOW DIAGRAM