

Appendix B – Summary of Theresa Street
Treatment System Process Information

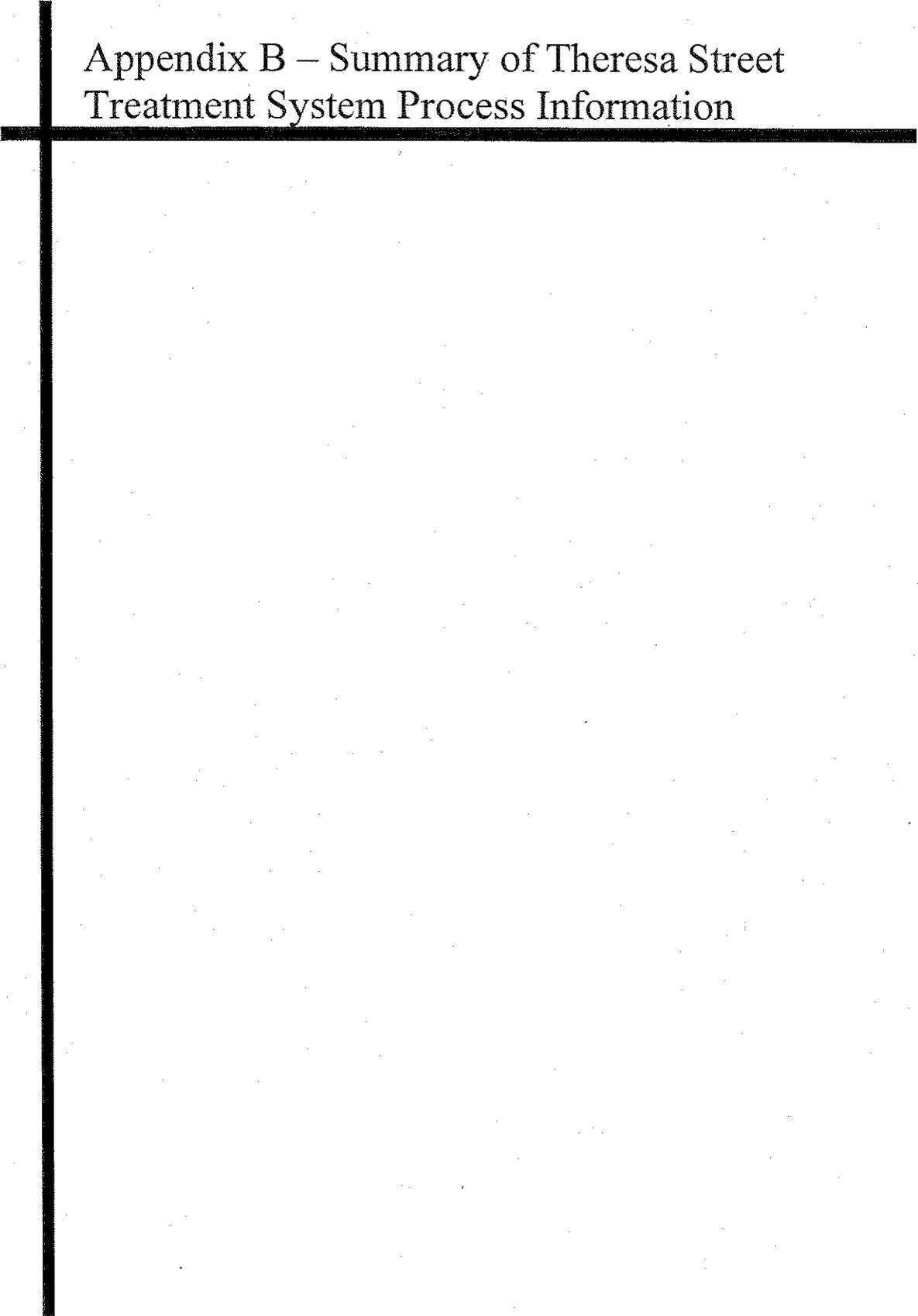


Table B-1 Theresa Street WWTP Liquid Stream Process Data

Existing Treatment Units	Design Data ^a
PRELIMINARY TREATMENT	
Bar Screens	
Number	4
Clear opening, inch	1/2
Raw Wastewater Pumping	
Number	3
Capacity, mgd	10
Number	3
Capacity, mgd	15
Number	1
Capacity, mgd	12
Number	1
Capacity, mgd	25
Aerated Grit Basins	
Number	6
Design flow per basin, mgd	5
Side water depth, ft	13.75
Detention time, min	24
Air flow per lin ft basin, cfm	3.1
Compressors	3
Number	3
Capacity, scfm	500
PRIMARY TREATMENT	
Primary Clarifiers	
Units 1 and 2	
Diameter, ft	70
Side water depth, ft	13.5
Weir loading rate, gpd per lin ft	11,368
Detention time, hr	3.7
Units 3 and 4	
Diameter, ft	100
Side water depth, ft	13.0
Weir loading rate, gpd per lin ft	15,915
Detention time, hr	3.7
Units 5 and 6	
Diameter, ft	125
Side water depth, ft	12.5
Weir loading rate, gpd per lin ft	10,150
Detention time, hr	3.7
SECONDARY TREATMENT	
Trickling Filters	
Number	8 0.625

Table B-1 Theresa Street WWTP Liquid Stream Process Data

Existing Treatment Units	Design Data ^a
Design flow per unit, mgd Diameter, ft Recirculation ratio	120 1.1
Trickling Filter Recirculation/Effluent Pumping Station Number of units Rated head, ft Rated capacity at rated head, mgd Motor size, hp	3 34 5.0 40
Unit 5 Final Clarifier Diameter, ft Side water depth, ft Weir loading rate, gpd per lin ft Detention time, hr	100 12.25 8,500 3.4
Aeration Basins West Side Design flow per unit, mgd Diameter, ft Depth, ft Detention time, hr Aerator type Blowers Number Capacity, each, scfm Number Capacity each, scfm	5 80 17 3.0 Fine Bubble Diffusion 3 3,000 1 5,000
Aeration Basins East Side (to be completed in 2003) Design flow per unit, mgd Unit size, ft Depth, ft Detention time, hr Number of aerators per basin Blowers Number Capacity, scfm	7.5 105 x 105 20 5.0 Fine Bubble Diffusion 2 19,000
Secondary Clarifiers Units 1 and 2 Diameter, ft Side water depth, ft Weir loading rate, gpd per lin ft Detention time, hr	110 10 7,879 3.41
Unit 3 and 4 Diameter, ft Side water depth, ft	130 12.0

Table B-1 Theresa Street WWTP Liquid Stream Process Data

Existing Treatment Units	Design Data ^a
Weir loading rate, gpd per lin ft Detention time, hr	9,660 3.8
Return Sludge Pumps Secondary Clarifiers 1 and 2 Number Rated head, ft Rated capacity at rated head, mgd Motor size, hp	3 9 5.0 20
Secondary Clarifiers 3 and 4 Number Rated head, ft Rated capacity at rated head, mgd Motor size, hp	3 20 7.5 40
DISINFECTION Chlorine Contact Basin Number Design flow per unit, mgd Unit size, ft Depth, ft Detention time, min	2 15 100 x 50 10 35

Table B-2 Solids Handling and Disposal Facilities at Theresa Street WWTP

Existing unit process	Design data
Primary Sludge and Scum Pumps Primary Clarifiers 1 and 2 Number Rated capacity, gpm Motor size, hp	 2 85 5
Primary Clarifiers 3 and 4 Rated head, ft Rated capacity at rated head, gpm Motor size, hp	 2 80 5
Primary Clarifiers 5 and 6 Rated head, ft Rated capacity at rated head, gpm Motor size, hp	 3 100 125 15
Waste Activated Sludge Pumps Number Rated head, ft Rated capacity at rated head, gpm Motor size, hp	 5 14 200 2
Secondary Sludge and Scum Pumps Number Rated head, ft Rated capacity at rated head, gpm Motor size, hp	 4 23.5 100 2
Flotation Thickeners Number Size, ft Effective surface area per basin, sq ft	 3 11.5 x 41 400
Thickened Sludge Pumps Number Rated head, ft Rated capacity at rated head, gpm Motor size, hp	 2 100 50-125 10
Anaerobic Digesters Number Capacity, mg	 3 1.1
Sludge Dewatering Belt Filters Press Number Capacity, pounds per hour Size, meter	 3 3,300 3