

Appendix D – Summary of Northeast Treatment
System Process Information

Table D-1 Northeast WWTP Design Data Summary

Existing treatment units	Design data ^a
PRELIMINARY TREATMENT	
Bar Screens	
Number	2
Clear opening, inch	0.75
Influent Pumping	
Number	3
Capacity, mgd	8
Aerated Grit Basins	
Number	2
Design flow per unit, mgd	5
Unit size, ft	15W x 25L x 13.25SWD
PRIMARY TREATMENT	
Primary Settling Tanks	
Number	2
Diameter, ft	90
Side water depth, ft	11.9
Weir loading rate, gpd per lin ft	7,717
Redwood Towers	
Number	2
Total media area, sf	3,630
Media depth, ft	14
Average daily biological loading lb/1000cf	154
SECONDARY TREATMENT	
Aeration Basins	
Number	2
Diameter, ft	79
Side water depth, ft	16
Detention time:	
One basin in operation	1.75
Two basins in operation	3.50
Aerator type	Fine Bubble Diffusion
Blower Building (Compressed Air System)	
Aeration	3
Capacity per unit, scfm	1.325
Motor size, hp	125
Final Settling Tanks	
Number	2
Diameter, ft	90
Side water depth, ft	10
Total weir perimeter, lin ft	264
Weir loading, gpd/lin ft	15,158

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Existing treatment units	Design data ^a
Recirculation Pumping Station	
Number	3
Rated head, ft	33
Rated capacity at rated head, mgd	10.0
Motor size, hp	100
Return Sludge Pumps	
Number	3
Rated head, ft	9
Rated capacity at rated head, mgd	5.0
Motor size, hp	20
DISINFECTION	
Chlorine Contact Basin	
Number	2
Design flow per unit, mgd	6
Depth, ft	10
Volume, cu ft	23,040
Rapid mixers	2
Motor, hp	5
SOLIDS PROCESSING EQUIPMENT	
Primary Sludge and Scum Pumps	
Number	3
Rated capacity, gpm	50
Motor size, hp	5
Sludge Grinders	
Number	2
Line size connection, inch	6
Motor size, hp	7.5
Waste Activated Sludge Pumps	
Number	4
Rated head, ft	14.5
Rated capacity at rated head, gpm	350
Motor size, hp	3
WAS Storage	
Number	1
Volume	284,300 gal
Thickener Feed Pumps	
Number	2
Type	Progressive Cavity
Rated capacity at rated head, gpm	400
Max speed	250
WAS Thickeners	
Number	2

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Type Rated capacity, gpm	Rotary Drum 400
TWAS Storage Number Volume	1 71,100 gal
Anaerobic Digesters Primary digester, number Diameter, ft Sidewall depth, ft Normal sidewater depth, ft Cover type	2 55 23'-1" 25 submerged fixed cover
Sludge Mixing Number Total (1 ea digester) Motor Mixer type Rotation speed, rpm	2 20 HP, explosion proof slow speed turbine 17, reversible
Sludge Heat Heating Sludge HEX Number Type Capacity, BTU/hr Rotation speed, rpm Boilers Number Type Capacity, BTU/hr	2 concentric tube 700,000 17, reversible 2 1,260,000
Digested Sludge Pumps Number Type Rated total head, ft Capacity at rated head, gpm Operating speed, rpm Motor size, hp	4 progressing cavity 92 275 175 20
Digested Gas Storage Number Type Capacity	1 double membrane 35,000
Sludge Injector Tractor Fuel Rated power (drawbar), hp Track width, inch	diesel 60 30

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Plow-Injector Number	14
Injection Field Size, acres (ha) Number of field connections	440 (178) 30
Sludge Holding Basin Number Diameter, ft Sidewall depth, ft Usable sidewall depth, ft Usable volume, gal	1 60 16 13 289,080
Sludge Storage Lagoon Area, sq ft Max operating liquid depth, ft Capacity, mil gal	107,400 12.5 8
Sludge Injection Pump Number Rated total head, ft Capacity at rated head, gpm Motor size, hp	1 162 700 50
Dredge Pump Number Type Rated total head, ft Capacity at rated head, gpm Motor size, hp	1 vertical centrifugal 20 1,100 25

Red indicates capacities to be verified.