

New Philadelphia WWTP  
Fact Sheet

Average Daily Design Flow (ADDF): 4.5 MGD

Actual Flow: 2.95 MGD daily avg

Peak Hourly Design Flow (PHDF): 10.5 MGD

Primary Clarifier:

(2) 40 Ft. Diameter tanks	Surface Overflow, gpd/sqft	Weir Overflow, gpd/sqft
Volume, gallons: 120,250 each	@ADDF 1,006	@ADDF 5,694
Detention Time Hours: 2.28	@PHF 2,100	@PHF 11,881

(1) 60 Ft Diameter tank	Surface Over flow. gpd/sqft	Weir Overflow, gpd/sqft
Volume, gallons: 120,250 each	@ADDF 1,006	@ADDF 5,694
Detention Time Hours: 2.28	@PHF 2,100	@PHF 11,881

Aeration Tanks

(4) Aeration Tanks

Volume, gallons: 318,092 each

Four Hoffman Blowers (1 running) deliver air to (462) fine diffusers each tank

MLSS concentration: 2020 mg/L

Final Clarifiers

(2) 55 Ft. Diameter tanks	Surface Overflow, gpd/sqft	Weir Overflow, gpd/ft
Volume, gallons: 191,267 each	@ADDF 532	@ADDF 7319
Detention Time Hours: 2.63	@PHF 1,111	@PHF 15,272

Feed gpm:

@ADDF 877.7

@PHF 1822.9

(1) 75 Ft. Diameter tanks	Surface Overflow, gpd/sqft	Weir Overflow, gpd/ft
Volume, gallons: 405,003 each	@ADDF 572	@ADDF 5643
Detention Time Hours: 3.85	@PHF 1,195	@PHF 11,775

Feed gpm:

@ADDF 1755.5

@PHF 3645.8

Aerobic Digesters

Tank	Volume Gallons	Relative Air Requirements
(1)	188,244	60%
(2)	172,056	30%
(3)	131,657	10%

Sources are; Primary Sludge from clarifiers 3-5% solids containing 85% volatile solids. Scum from primary clarifiers, secondary waste or activated sludge from both WAS holding tank and thickened sludge which can be piped to the digesters.

Ultraviolet Disinfection:

(8) modules in two parallel banks

Each channel is designed for a flow rate up to 5.25 MGD