



EBENSBURG, PA

The Ebensburg WWTP facility located near Altoona, PA is a biological nutrient removal facility utilizing a four- (4) basin SBR-NDN process. This facility's preliminary treatments consist of screening and grit removal with sludge handling facilities and chlorine disinfection downstream of the ICEAS-NDN process. The plant consistently achieved 98 percent BOD, TSS & TN removal and biological phosphorus to less than 4 mg/l from greater than 13 mg/l in the influent.

Design parameter for the existing system are as follows:

Influent Conditions

Average Dry Flow
Peak Dry Weather Flow
Peak Wet Weather Flow
BOD₅
TSS
Ammonia Nitrogen
TP:

Plant Influent

1.50 mgd
1.67 mgd
4.0 mgd
205 mg/l
205 mg/l
20 mg/l
12 mg/l

Effluent Conditions

BOD₅
TSS
Ammonia Nitrogen
TP

30 mg/l
30 mg/l
1 mg/l
5 mg/l

ICEAS® Process Design Criteria

F:M
SVI (after 60 min. settling)
Normal Cycle Time
Storm Cycle Time
Number of ICEAS Basins
Basin Length
Basin Width
TSP Water Level
Bottom Water Level

0.03 lb. BOD/lb. MLSS/day
150 ml/gm
4-6 hour/cycle/day
8-3 hour/cycle/day
4
120 ft.
37 ft.
15 ft.
11.24 ft.

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