

HYDRO-CLEAR® FILTER HELPS WHEATON SANITARY DISTRICT TREAT WASTEWATER



HELPING OUT IN WET AND DRY WEATHER

The Wheaton Sanitary District required tertiary treatment that could handle 8.9 million gallons per day (mgd) in dry weather. It also needed primary treatment during wet weather, when storm water can inundate the District with more than 20 million gallons per day (mgd). The storm water had to be treated to keep the plant in compliance with discharge regulations.

The Solution

Hydro-Clear® sand filters from USFilter, Zimpro Products were installed to provide both tertiary treatment during normal flows (up to 14.5 mgd) and primary effluent treatment during high flows (up to 29 mgd).

The filters consist of six cells in concrete tanks. To deal with the influx of storm water, secondary effluent is bypassed around the filters, and as much as 5.7 mgd of primary clarified effluent is applied directly to the filters. Filter effluent is then combined with the bypassed secondary effluent and discharged.

The Results

In operation since 1985, the Hydro-Clear filters typically reduce Biochemical Oxygen Demand (BOD₅) from 27 mg/l to 6.1 mg/l, and suspended solids from more than 50 mg/l to 6.5 mg/l. Today, the suspended solids level in the filter effluent averages 1.04 mg/l. The filters treat approximately 98 percent of the plant flow, with the remaining being blended storm water.

During drier periods, the plant pipes up to one mgd of filtered tertiary effluent to a golf course for green and fairway irrigation. This was designed to offset costs at the sanitary district while providing the golf course with an

alternative to pumping well water from a diminishing groundwater supply.

In 2003, the Wheaton Sanitary District received the Illinois Association of Water Pollution Control Operators Best Operated Group I Plant Award.

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