

Clarifier

A Newsletter for and by Members of the Illinois Water Environment Association

PLANT PROFILE



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The 2016 Golf Outing was a blast! See page 10 for more pictures.

2016 IWEA Golf Outing

By John Lamb, IWEA Golf Committee Chair

The 2016 IWEA Golf Outing was held on June 3 at the Links at Carillon in Plainfield. The outing raises money for the IWEA Scholarship and Charitable Giving Fund. The event was very successful again this year, raising a total of \$6,850 for the fund. The Golf Committee and IWEA want to thank the 27 sponsors of the outing for their support of this great cause and event. Sponsors are listed on the back cover of this issue and on the IWEA website.

There were 68 golfers in attendance that enjoyed a beautiful day on the course and some friendly competition in numerous contests including a new hole-in-one contest. The committee also initiated a putting contest at the beginning of the day which raised \$100 for the fund.

After the day on the course, golfers gathered at the clubhouse for drinks and appetizers and the day's awards. The winning foursome this year was Derek

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Plant Profile

By Lynn Kohlhaas, Plant Operations Committee Member

Location

Chicago, Illinois
Hanover Park Water Reclamation Plant

Plant Operator in Charge

John Lazicki

Operations Manager

Al Eswani

Treatment Plant Operator (head operator)

Dan Mikso



The Hanover Park Water Reclamation Plant (HPWRP) is one of seven water reclamation facilities owned and operated by the Metropolitan Water Reclamation District of Greater Chicago (MWRD). In service since 1963, HPWRP serves 56,532 people within an 11.2 mile area that includes the communities of Hanover Park, Bartlett, Schaumburg and Hoffman Estates. Twelve treatment plant operators monitor the plant 24 hours per day, 365 days per year. HPWRP treats an average of 12 MGD, with a design maximum capacity of 22 MGD, and has received the prestigious NACWA Platinum Award since 2012. HPWRP was the nation's first major tertiary treatment facility. On Feb. 6, 1970, President Richard M. Nixon visited and toured HPWRP to promote the Clean Water Act.

In 1969, the MWRD purchased the Fischer Farm (200 acres adjacent to the HPWRP) and built the Upper DuPage Reservoir which holds approximately 75 million gallons of stormwater overflow. The farmland also includes 100 acres for growing corn, oats and soybeans. All of the biosolids produced at the HPWRP are recycled as soil conditioner for the farm fields. The harvested corn and soybeans are used for feedstock, ethanol and biodiesel. Though stormwater management and resource recovery are at the forefront of our industry today, the Fischer Farms at HPWRP have been active in this role for decades.

HPWRP is a single stage nitrification and tertiary filtration plant. Flow is pumped into the plant by up to four centrifugal pumps, each with a maximum output of 5,000gpm. Four additional centrifugal pumps (ranging from 2,000-3,600gpm) route excess flows to a series of on-site equalization ponds, with a capacity of 40MG during storm conditions. Four secondary treatment batteries consist of a set of two double-pass aeration tanks and two final settling tanks. One set of final settling tanks is ring fed, with the remaining three sets configured for center feed operation. Secondary effluent is distributed to eight rapid sand filters, ranging in size from 50 feet by 12.5 feet to 110 feet by 16 feet. Flow is then routed into two post-aeration tanks. The post-aeration tanks have a dual purpose. The first is to add dissolved oxygen to the plant effluent, and the second is to provide adequate contact time for disinfection. Three positive displacement peristaltic pumps provide disinfection, and two addition pumps inject sodium bisulfite for dechlorination. The treated effluent is discharged into the west branch of the DuPage River.

Sludge from the secondary treatment train is thickened using two 250gpm gravity belt thickeners. It is then mixed with the incoming primary sludge and sent to six 40ft diameter mesophilic digesters. The bio-gas that is generated from the digesters is used in the plant to reduce energy costs. After digestion, the HPWRP biosolids are stored in lagoons before being used to fertilize the adjacent farm fields.

Influent Design

Design average flow 12 MGD

Design Peak Flow 22 MGD

Discharge Limits

	Monthly Avg	Daily Avg
CBOD5	10	20
TSS	12	24
Ammonia (Apr - Oct)	1.5	6.5
Ammonia (Nov - Feb)	3.9	13.0
Ammonia (Mar -Oct)	2.9	13.3
Copper	0.022	0.035
Dissolved Oxygen	Not less than 6.0 mg/L	
Fecal Coliform	Monthly Geo. Mean not to exceed 200 per 100mL	
Chlorine Residual	0.05 (daily maximum)	