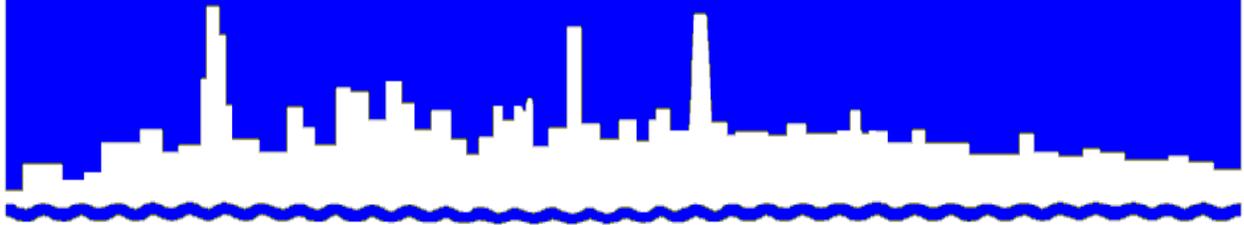


Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***MONITORING AND RESEARCH
DEPARTMENT***

REPORT NO. 17-35

HANOVER PARK WATER RECLAMATION PLANT

FISCHER FARM MONITORING REPORT FOR

SECOND QUARTER 2017

August 2017

Protecting Our Water Environment

BOARD OF COMMISSIONERS

Mariyana T. Spyropoulos
President
Barbara McGowan
Vice President
Frank Avila
Chairman of Finance
Timothy Bradford
Martin Durkin
Josita Morita
Debra Shore
Kari K. Steele
David J. Walsh

Metropolitan Water Reclamation District of Greater Chicago

CECIL LUE-HING RESEARCH AND DEVELOPMENT COMPLEX
6001 WEST PERSHING ROAD CICERO, ILLINOIS 60804-4112

Edward W. Podczerwinski, P.E.
Acting Director of Monitoring and Research

August 17, 2017

Mr. S. Alan Keller, P.E.
Manager, Permit Section
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794 - 9276

Dear Mr. Keller:

Subject: Hanover Park Water Reclamation Plant - Illinois Environmental Protection Agency Permit No. 2016-SC-61315, Monitoring Report for April, May, and June 2017

The attached tables contain the monitoring data for the Hanover Park Water Reclamation Plant (WRP) Fischer Farm site for April, May, and June 2017 as required by Illinois Environmental Protection Agency (IEPA) Operating Permit No. 2016-SC-61315. Analytical data for well water samples collected during the quarter are presented in Table 1.

Drainage water (combined surface and subsurface) returned to the Hanover Park WRP from the farm fields was sampled in April, May, and June 2017, and data for these samples are presented in Table 2. The volumes of drainage water returned to the WRP during the second quarter were estimated as 17, 22, and 2.5 million gallons in April, May, and June, respectively. No lagoon supernatant or liquid biosolids were applied to Fischer Farm fields in April, May, or June. Field and water monitoring locations are presented in Figure 1.

An investigation of Well 7 was conducted in November 2016 to determine the reason for high NH₃ levels observed in the well. Additional sampling after purging the well indicated a potential persistent source of NH₃. Three temporary monitoring wells were installed in July 2017 to monitor groundwater and determine the source of NH₃.

The data reported are as follows:

Table 1 Analysis of Water From Monitoring Wells W-3, W-5, W-6, W-7, and W-8 at the Hanover Park Fischer Farm Site Sampled on April 4, 2017.

Subject: Hanover Park Water Reclamation Plant - Illinois Environmental Protection Agency Permit No. 2016-SC-61315, Monitoring Report for April, May, and June 2017

Table 2 Analysis of Combined Surface and Subsurface Drainage From the Fischer Farm Site Returned to the Hanover Park Water Reclamation Plant During April, May, and June 2017.

Figure 1 Map of Fields and Wells at the Hanover Park Fischer Farm Site of the Metropolitan Water Reclamation District of Greater Chicago.

Very truly yours,

Albert E. Cox
Environmental Monitoring and Research Manager
Monitoring and Research Department

AC:DB:cm

Attachments

cc/att: Mr. J. Patel, Manager, IEPA – Des Plaines

Mr. J. Colletti, USEPA, Region 5

Mr. P. Kuefler, USEPA, Region 5

Ms. D. Coolidge

Dr. H. Zhang

Dr. D. Brose

Metropolitan Water Reclamation District of Greater Chicago
100 East Erie Street Chicago, Illinois 60611-2803 312-751-5600

**HANOVER PARK WATER RECLAMATION PLANT
FISCHER FARM MONITORING REPORT FOR
SECOND QUARTER 2017**

**Monitoring and Research Department
Edward W. Podczerwinski, Acting Director**

August 2017

TABLE 1: ANALYSIS OF WATER FROM MONITORING WELLS W-3, W-5, W-6, W-7,
AND W-8 AT THE HANOVER PARK FISCHER FARM SITE SAMPLED
ON APRIL 4, 2017

Parameter	Unit	Monitoring Well No.				
		W-3	W-5	W-6	W-7	W-8
pH ¹		7.8	7.8	7.7	7.5	8.2
EC	mS m ⁻¹	85	69	76	169	61
Cl ⁻	mg L ⁻¹	14	16	30	44	8.0
SO ₄ ²⁻	"	163	95	110	240	62
Alkalinity as CaCO ₃	"	394	315	307	751	280
TKN	"	<1.0	<1.0	<1.0	74	<1.0
NH ₃ -N	"	<0.10	0.42	0.29	72	0.34
NO ₂ +NO ₃ -N	"	<0.15	<0.15	<0.15	<0.15	<0.15
Total P	"	0.11	<0.10	0.10	0.81	<0.10
Cd	"	<0.001	<0.001	<0.001	<0.001	<0.001
Cr	"	0.003	<0.003	<0.003	<0.003	<0.003
Cu	"	0.009	0.009	0.005	<0.004	<0.004
Fe	"	2.3	3.2	2.5	3.6	0.71
Mn	"	0.043	0.034	0.042	0.059	0.024
Ni	"	<0.005	<0.005	<0.005	<0.005	<0.005
Zn	"	0.030	0.006	<0.005	0.117	<0.005

¹pH analyzed beyond recommended holding time of 15 minutes.

TABLE 2: ANALYSIS OF COMBINED SURFACE AND SUBSURFACE DRAINAGE FROM THE FISCHER FARM SITE RETURNED TO THE HANOVER PARK WATER RECLAMATION PLANT DURING APRIL, MAY, AND JUNE 2017

Date	Sump	NH ₃ -N	TSS ¹	BOD ₅
		----- mg L ⁻¹ -----		
4/04/2017	East	6.4	12	4.0
4/04/2017	West	3.5	12	5.0
4/18/2017	East	2.3	11	5.0
4/18/2017	West	0.66	<4.0	3.0
5/02/2017	East	59	16	28
5/02/2017	West	0.57	14	5.0
5/30/2017	East	79	22	26
5/30/2017	West	0.32	7.0	2.0
6/13/2017	East	1.4	12	6.0
6/13/2017	West	<0.10	4.0	<2.0
6/20/2017	East	0.42	<4.0	<2.0
6/20/2017	West	0.11	5.0	<2.0

¹Total suspended solids.

FIGURE 1 MAP OF FIELDS AND WELLS AT THE HANOVER PARK FISCHER FARM SITE OF THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

