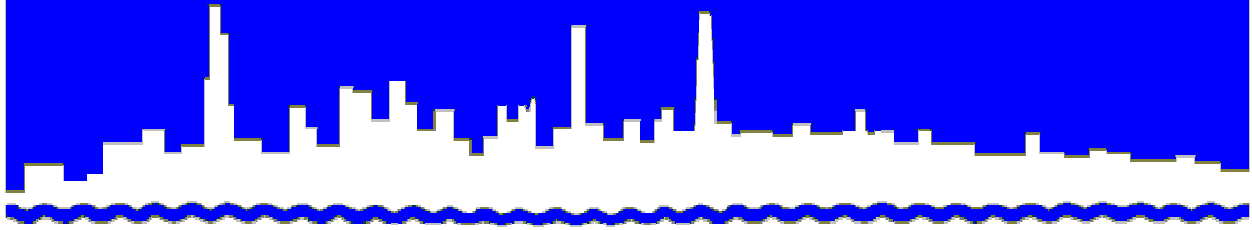


*Protecting Our Water Environment*



***Metropolitan Water Reclamation District of Greater Chicago***

***MONITORING AND RESEARCH  
DEPARTMENT***

***REPORT NO. 18-26***

***HANOVER PARK WATER RECLAMATION PLANT***

***FISCHER FARM MONITORING REPORT FOR***

***SECOND QUARTER 2018***

***October 2018***

**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.**

Director of Monitoring and Research

August 27, 2018

Mr. Roger Callaway  
Illinois Environmental Protection Agency  
Bureau of Water  
DWPC Compliance Section #19  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, Illinois 62794-9274

Dear Mr. Callaway:

Subject: Hanover Park Water Reclamation Plant - Illinois Environmental Protection Agency Permit No. 2016-SC-61315, Monitoring Report for April, May, and June 2018

The attached tables contain the monitoring data for the Hanover Park Water Reclamation Plant (WRP) Fischer Farm site for April, May, and June 2018 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 2018, 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 3.2, 24, and 13 million gallons in April, May, and June, respectively. The analytical data for lagoon supernatant applied to Fischer Farm fields in May are presented in Table 3. The volume of supernatant and associated dry weight of biosolids applied are shown in Table 4. Field and water monitoring locations are presented in Figure 1.

An investigation of Well 7 is ongoing to help determine the reason for high NH<sub>3</sub> levels observed in the well. Three supplemental monitoring wells were installed in July 2017 to monitor groundwater and determine the source of NH<sub>3</sub>. Sampling from the supplemental monitoring wells occurred in April, May, and June 2018.

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 July 10, 2018.

Subject: Hanover Park Water Reclamation Plant - Illinois Environmental Protection Agency Permit No. 2016-SC-61315, Monitoring Report for April, May, and June 2018

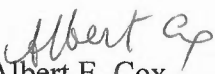
Table 2 Analysis of Combined Surface and Subsurface Drainage From the Fischer Farm Site Returned to the Hanover Park Water Reclamation Plant During April and May 2018.

Table 3 Analysis of Lagoon Supernatant Applied to Fields at the Hanover Park Fischer Farm Site During May 2018.

Table 4 Volumes and Dry Weights of Lagoon Supernatant Applied to Fields During May 2018 at the Hanover Park Fischer Farm Site.

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

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**HANOVER PARK WATER RECLAMATION PLANT  
FISCHER FARM MONITORING REPORT FOR  
SECOND QUARTER 2018**

**Monitoring and Research Department  
Edward W. Podczewinski, Director**

**October 2018**

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 JULY 10, 2018<sup>1</sup>

Parameter	Unit	Monitoring Well No.				
		W-3	W-5	W-6	W-7	W-8
pH <sup>2</sup>		7.7	7.7	7.8	7.7	8.3
EC	mS m <sup>-1</sup>	76	68	69	79	53
Cl <sup>-</sup>	mg L <sup>-1</sup>	12	16	18	45	9.0
SO <sub>4</sub> <sup>2-</sup>	"	110	96	112	90	65
Alkalinity as CaCO <sub>3</sub>	"	395	311	302	314	270
TKN	"	<1.0	<1.0	<1.0	24	3.0
NH <sub>3</sub> -N	"	0.29	0.34	0.27	22	0.43
NO <sub>2</sub> +NO <sub>3</sub> -N	"	<0.15	<0.15	<0.15	<0.15	<0.15
Total P	"	<0.10	<0.10	0.13	0.38	<0.10
Cd	"	<0.001	<0.001	<0.001	<0.001	<0.001
Cr	"	<0.002	<0.002	<0.002	0.003	<0.002
Cu	"	0.003	0.002	0.007	0.007	0.002
Fe	"	7.03	1.57	1.55	4.60	0.761
Mn	"	0.313	0.015	0.031	0.113	0.027
Ni	"	0.001	<0.001	<0.001	0.003	<0.001
Zn	"	0.021	<0.005	<0.005	<0.005	<0.005

<sup>1</sup>Wet weather and field conditions prevented sampling until July 10, 2018.

<sup>2</sup>pH 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 AND MAY 2018

Date <sup>1</sup>	Sump	NH <sub>3</sub> -N	TSS <sup>2</sup>	BOD <sub>5</sub>
		----- mg L <sup>-1</sup> -----		
04/10/2018	East	23	8.0	8.0
04/10/2018	West	7.7	4.0	6.0
04/24/2018	East	11	<4.0	<2.0
04/24/2018	West	1.9	5.0	5.0
05/22/2018	East	57	32	NRR <sup>3</sup>
05/22/2018	West	7.4	25	NRR
05/29/2018	East	5.3	5.0	4.0
05/29/2018	West	1.6	9.0	4.0

<sup>1</sup>Pump houses were inaccessible during June.

<sup>2</sup>Total suspended solids.

<sup>3</sup>NRR= no reportable results; failed laboratory control sample.

TABLE 3: ANALYSIS OF LAGOON SUPERNATANT APPLIED TO FIELDS AT THE HANOVER PARK FISCHER FARM SITE DURING MAY 2018

Constituent	Unit	Concentration <sup>1</sup>
pH		8.0
Total Solids	%	0.16
Total Volatile Solids <sup>2</sup>	"	64
Volatile Acids <sup>3</sup>	mg L <sup>-1</sup>	6.0
TKN	"	710
NH <sub>3</sub> -N	"	646
Total P	"	63
Cd	"	<0.005
Cr	"	0.007
Cu	"	0.227
Mn	"	0.244
Ni	"	0.030
Pb	"	<0.030
Zn	"	0.328

<sup>1</sup>One sample.

<sup>2</sup>Total volatile solids as a percentage of total solids.

<sup>3</sup>As acetic acid.

TABLE 4: VOLUMES AND DRY WEIGHTS OF LAGOON SUPERNATANT APPLIED TO FIELDS DURING MAY 2018 AT THE HANOVER PARK FISCHER FARM SITE

Field	Date	Biosolids Type	Volume (Gallons)	Dry Weight (Tons)
2	05/01/18	Supernatant	140,000	0.99
Total			140,000	0.99



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

