

*Protecting Our Water Environment*



*Metropolitan Water Reclamation District of Greater Chicago*

***MONITORING AND RESEARCH  
DEPARTMENT***

*REPORT NO. 18-14*

*HANOVER PARK WATER RECLAMATION PLANT*

*FISCHER FARM MONITORING REPORT FOR*

*FIRST QUARTER 2018*

*May 2018*

**Metropolitan Water Reclamation District of Greater Chicago**

CECIL LUE-HING RESEARCH AND DEVELOPMENT COMPLEX  
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**Edward W. Podczerwinski, P.E.**

Director of Monitoring and Research

May 18, 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 January, February, and March 2018

The attached tables contain the monitoring data for the Hanover Park Water Reclamation Plant (WRP) Fischer Farm site for January, February, and March 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 January, February, and March 2018, and data for these samples are presented in Table 2. The volumes of drainage water returned to the WRP during the first quarter were estimated as 7.8, 5.2, and 15 million gallons in January, February, and March, respectively. No lagoon supernatant or biosolids were applied to Fischer Farm fields in January, February, or March. 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 stopped in December 2017 and resumed in March 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 March 27, 2018.

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

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

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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 MARCH 27, 2018

Parameter	Unit	Monitoring Well No.				
		W-3	W-5	W-6	W-7	W-8
pH <sup>1</sup>		7.7	7.7	7.8	7.4	8.0
EC	mS m <sup>-1</sup>	79	63	63	137	52
Cl <sup>-</sup>	mg L <sup>-1</sup>	16	18	31	44	10
SO <sub>4</sub> <sup>2-</sup>	"	355	178	120	275	69
Alkalinity as CaCO <sub>3</sub>	"	401	313	302	638	272
TKN	"	<1.0	<1.0	<1.0	65	<1.0
NH <sub>3</sub> -N	"	<0.10	0.35	0.31	63	0.47
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	0.19	0.87	<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	"	<0.004	<0.004	0.006	<0.004	<0.004
Fe	"	1.22	1.99	3.17	3.93	0.755
Mn	"	0.025	0.020	0.047	0.054	0.020
Ni	"	<0.005	<0.005	<0.005	<0.005	<0.005
Zn	"	0.033	<0.005	<0.005	0.176	<0.005

<sup>1</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 JANUARY, FEBRUARY, AND MARCH 2018

Date <sup>1</sup>	Sump	NH <sub>3</sub> -N	TSS <sup>2</sup>	BOD <sub>5</sub>
		----- mg L <sup>-1</sup> -----		
01/30/2018	East	36	64	28
01/30/2018	West	39	19	38
02/27/2018	East	166	22	12
02/27/2018	West	50	224	25
03/13/2018	East	13	26	7.0
03/13/2018	West	5.4	<4.0	<2.0
03/27/2018	East	6.2	17	12
03/27/2018	West	24	66	20

<sup>1</sup>Pump houses were inaccessible during parts of January and February.

<sup>2</sup>Total 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

