

*Protecting Our Water Environment*



*Metropolitan Water Reclamation District of Greater Chicago*

***MONITORING AND RESEARCH  
DEPARTMENT***

*REPORT NO. 19-11*

*HANOVER PARK WATER RECLAMATION PLANT*

*FISCHER FARM MONITORING REPORT FOR*

*FIRST QUARTER 2019*

*June 2019*

**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  
FIRST QUARTER 2019**

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

**June 2019**

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Director of Monitoring and Research

June 3, 2019

Mr. Roger Callaway  
Illinois Environmental Protection Agency  
Bureau of Water  
DWPC Compliance Section #19  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, IL 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 2019

The attached tables contain the monitoring data for the Hanover Park Water Reclamation Plant (WRP) Fischer Farm site for January, February, and March 2019 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 2019, 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 9.4, 28, and 38 million gallons in January, February, and March, respectively. During application of the lagoon supernatant, it was erroneously sampled and could not be summarized in this report. The volume of supernatant and associated dry weight of biosolids applied are shown in Table 3. 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 weekly from August 2017 to July 2018. During 2019, field operation activities will be evaluated, together with monitoring well data, to help determine the reason for the high NH<sub>3</sub> levels.

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 26, 2019.

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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 2019.

Table 3 Volumes and Dry Weights of Lagoon Supernatant Applied to Fields During March 2019 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

cc/att: Mr. J. Patel, Manager, IEPA – Des Plaines  
Mr. J. Colletti, USEPA, Region 5  
Mr. P. Kuefler, USEPA, Region 5  
Mr. J. Chavitz  
Dr. H. Zhang

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 26, 2019

Parameter	Unit	Monitoring Well No.				
		W-3	W-5	W-6	W-7	W-8
pH <sup>1</sup>		NRR <sup>2</sup>	7.6	7.6	7.2	8.2
EC	mS m <sup>-1</sup>	94	79	84	166	61
Cl <sup>-</sup>	mg L <sup>-1</sup>	13	18	31	45	10
SO <sub>4</sub> <sup>2-</sup>	"	137	101	119	290	59
Alkalinity as CaCO <sub>3</sub>	"	389	312	299	563	263
TKN	"	<1.0	<1.0	<1.0	55	<1.0
NH <sub>3</sub> -N	"	<0.30	0.36	0.37	55	0.46
NO <sub>2</sub> +NO <sub>3</sub> -N	"	<0.25	<0.25	<0.25	<0.25	<0.25
Total P	"	<0.15	<0.15	<0.15	0.98	<0.15
Cd	"	<0.001	<0.001	<0.001	<0.001	<0.001
Cr	"	<0.002	<0.002	<0.002	<0.002	<0.002
Cu	"	0.004	0.004	0.013	0.002	0.001
Fe	"	1.154	2.506	2.514	4.325	0.582
Mn	"	0.247	0.022	0.040	0.067	0.019
Ni	"	0.001	<0.001	<0.001	0.002	<0.001
Zn	"	0.045	<0.005	0.010	0.253	0.006

<sup>1</sup>pH analyzed beyond recommended holding time of 15 minutes.

<sup>2</sup>NRR=no reportable results; precision failure with lab probe.

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 2019

Date <sup>1</sup>	Sump	NH <sub>3</sub> -N	TSS <sup>2</sup>	BOD <sub>5</sub>
		----- mg L <sup>-1</sup> -----		
02/26/2019	East	16	8	9
02/26/2019	West	<0.50	<4	<2
03/26/2019	East	89	71	38
03/26/2019	West	0.81	4	<2
04/09/2019	East	219	121	136
04/09/2019	West	2.8	4	<2
04/23/2019	East	253	91	119
04/23/2019	West	0.33	<4	<2

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

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

TABLE 3: VOLUMES AND DRY WEIGHTS OF LAGOON SUPERNATANT APPLIED TO FIELDS DURING MARCH 2019 AT THE HANOVER PARK FISCHER FARM SITE

Field	Date	Biosolids Type	Volume (Gallons)	Dry Weight (Tons)
4	03/27/19	Supernatant	300,000	1.75
Total			300,000	1.75

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

