

Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***MONITORING AND RESEARCH
DEPARTMENT***

REPORT NO. 19-02

HANOVER PARK WATER RECLAMATION PLANT

FISCHER FARM MONITORING REPORT FOR

FOURTH QUARTER 2018

March 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
FOURTH QUARTER 2018**

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

March 2019

Kari K. Steele
President
Barbara J. McGowan
Vice President
Frank Avila
Chairman of Finance
Cameron Davis
Kimberly Du Buclet
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Josina Morita
Debra Shore
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Metropolitan Water Reclamation District of Greater Chicago

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6001 WEST PERSHING ROAD CICERO, ILLINOIS 60804-4112

Edward W. Podczewinski, P.E.
Director of Monitoring and Research

February 26, 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, Illinois 62794-9274

Dear Mr. Callaway:

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

The attached tables contain the monitoring data for the Hanover Park Water Reclamation Plant (WRP) Fischer Farm site for October, November, and December 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 October, November, and December 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 7.5, 2.0, and 3.6 million gallons in October, November, and December, respectively. No lagoon supernatant or liquid biosolids were applied to Fischer Farm fields in October, November, or December. Field and water monitoring locations are presented in Figure 1.

An investigation of Well 7 is ongoing to help determine the reason for high ammonia (NH₃-N) levels observed in the well. Three supplemental monitoring wells were installed in July 2017 to monitor groundwater and determine the source of NH₃-N.

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 November 6, 2018.

Mr. Roger Callaway

2

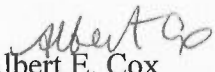
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Table 2 Analysis of Combined Surface and Subsurface Drainage From the Fischer Farm Site Returned to the Hanover Park Water Reclamation Plant During October, November, and December 2018.

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
Mr. J. Chavich
Dr. H. Zhang
Dr. G. Tian
Dr. D. Brose

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 NOVEMBER 6, 2018

Parameter	Unit	Monitoring Well No.				
		W-3	W-5	W-6	W-7	W-8
pH		7.5	7.8	7.8	7.8	8.2
EC	mS m ⁻¹	97	74	76	99	60
Cl ⁻	mg L ⁻¹	14	17	22	41	9.0
SO ₄ ²⁻	"	163	99	118	126	66
Alkalinity as CaCO ₃	"	416	313	301	380	279
TKN	"	<1.0	<1.0	<1.0	30	<1.0
NH ₃ -N	"	<0.50	<0.50	<0.50	31	0.52
NO ₂ +NO ₃ -N	"	<0.25	<0.25	<0.25	<0.25	<0.25
Total P	"	<0.10	<0.10	0.144	0.46	<0.10
Cd	"	<0.001	<0.001	<0.001	<0.001	<0.001
Cr	"	<0.002	<0.002	<0.002	<0.002	<0.002
Cu	"	0.001	<0.001	0.001	0.001	<0.001
Fe	"	0.157	NRR ¹	0.651	2.59	0.340
Mn	"	0.040	NRR	0.012	0.067	0.015
Ni	"	<0.001	<0.001	<0.001	0.001	<0.001
Zn	"	<0.005	<0.005	<0.005	0.34	<0.005

¹NRR=no reportable results. Sample was re-digested and analyzed, but results could not be quantified, likely due to matrix interference.

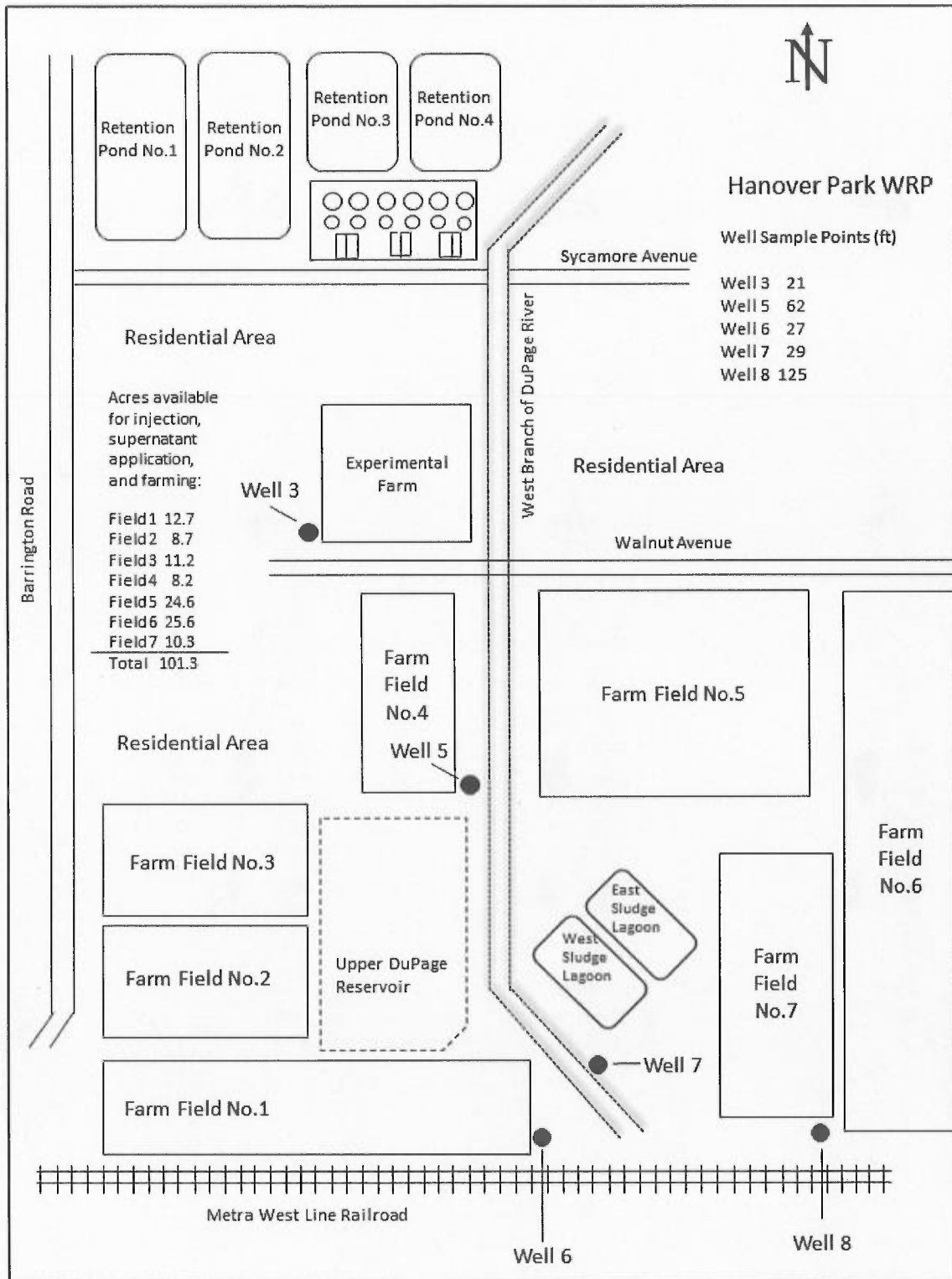
TABLE 2: ANALYSIS OF COMBINED SURFACE AND SUBSURFACE DRAINAGE FROM THE FISCHER FARM SITE RETURNED TO THE HANOVER PARK WATER RECLAMATION PLANT DURING OCTOBER, NOVEMBER, AND DECEMBER 2018

Date ¹	Sump	NH ₃ -N	TSS ²	BOD ₅
----- mg L ⁻¹ -----				
10/16/2018	East	12	10	3.0
10/16/2018	West	2.6	8.0	8.0
10/23/2018	East	33	13	11
10/23/2018	West	0.77	4.0	2.0
11/06/2018	East	5.2	11	6.0
11/06/2018	West	3.1	21	9.0
11/20/2018	East	0.65	12	4.0
11/20/2018	West	28	5.8	8.0
12/11/2018	East	9.8	11	5.0
12/11/2018	West	<0.50	5.0	<2.0

¹Pump houses were inaccessible for the second sampling in December due to weather.

²Total 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



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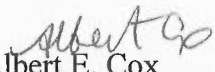
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