Protecting Our Water Environment

Metropolitan Water Reclamation District of Greater Chicago

MONITORING AND RESEARCH DEPARTMENT

REPORT NO. 23-02

HANOVER PARK WATER RECLAMATION PLANT

FISCHER FARM MONITORING REPORT

FOR FOURTH QUARTER 2022:

SPECIAL CONDITION 2

January 2023

Protecting Our Water Environment

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

January 18, 2023

Ms. Catherine Siders
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 Ms. Siders:

Subject: Hanover Park Water Reclamation Plant - Illinois Environmental Protection Agency Permit No. 2022-SC-66896, Special Condition 2 Monitoring Report for October, November, and December 2022

The attached table contains the monitoring data for the Hanover Park Water Reclamation Plant (WRP) Fischer Farm site for October, November, and December 2022, as required by Illinois Environmental Protection Agency (IEPA) Operating Permit No. 2022-SC-66896, Special Condition 2. Analytical data for well water samples collected during the quarter are presented in Table 1.

Based on the investigation of historical high levels of ammonia nitrogen (NH_3-N) plus nitrite + nitrate nitrogen (NO_2^-+NO_3^--N) in Well 7 during past monitoring, it appears that the source of these high levels is seepage from adjacent lagoons and subsurface drainage associated with supernatant application, both of which have high NH_3-N levels. Since implementing management practices to reduce the loading in adjacent lagoons and stop all applications of supernatant and biosolids in the closest farm field (Field 7), NH_3-N plus NO_2^-+NO_3^--N in Well 7 has shown a decreasing trend, but with some fluctuation. We will continue to implement these practices and evaluate this trend.

The data reported are as follows:

Table 1: Analysis of Water From Monitoring Wells W-5, W-6, W-7, and W-8 at the Hanover Park Fischer Farm Site Sampled in November 2022.

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 Cox

Albert E. Cox, Ph.D.
Environmental Monitoring and Research Manager
Monitoring and Research Department

AC:lf
Attachment
cc: Mr. J. Patel, Manager, IEPA – Des Plaines
Mr. T. Bennett, IEPA
Mr. B. Fleming, IEPA
Mr. K. Middleton, USEPA, Region 5
Mr. J. Chavich/Mr. B. Kaunelis
Mr. P. Desai/Dr. H. Zhang

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HANOVER PARK WATER RECLAMATION PLANT
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Monitoring and Research Department
Edward W. Podczerwinski, Director

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TABLE 1: ANALYSIS OF WATER FROM MONITORING WELLS W-5, W-6, W-7, AND W-8 AT THE HANOVER PARK FISCHER FARM SITE SAMPLED IN NOVEMBER 2022[1]

	Unit	W-5	W-6	W-7	W-8
pH[2]		7.8	7.8	8.0	8.3
EC	mS m^{-1}	76	79	111	60
Cl^-	mg L^{-1}	25	18	30	10
SO_4^{2-}	"	115	99	184	63
Alkalinity as $CaCO_3$	"	309	293	414	266
TKN	"	<1.00	<1.00	19.4	<1.00
NH_3-N	"	0.31	0.32	19.5	0.39
NO_2^-+NO_3^--N	"	<0.25	<0.25	<0.25	<0.25
Total P	"	<0.15	<0.15	0.259	<0.15
Cd	"	<0.002	<0.002	<0.002	<0.002
Cr	"	<0.004	<0.004	<0.004	<0.004
Cu	"	0.007	0.024	0.008	0.004
Fe	"	2.2	10.7	11.1	0.75
Mn	"	0.020	0.087	0.485	0.023
Ni	"	<0.002	<0.002	0.006	<0.002
Zn	"	<0.010	<0.010	0.090	<0.010

[1]Sampled on November 29, 2022.
[2]pH was measured beyond 15-minute holding time.

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