

Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***MONITORING AND RESEARCH
DEPARTMENT***

REPORT NO. 23-35

HANOVER PARK WATER RECLAMATION PLANT

FISCHER FARM MONITORING REPORT

FOR SECOND QUARTER 2023:

SPECIAL CONDITION 2

October 2023

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July 24, 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 April, May, and
June 2023

The attached table contains the monitoring data for the Hanover Park Water Reclamation Plant (WRP) Fischer Farm site for April, May, and June 2023, 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 ($\text{NH}_3\text{-N}$) plus nitrite+nitrate nitrogen ($\text{NO}_2\text{-}+\text{NO}_3\text{-N}$) 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 $\text{NH}_3\text{-N}$ levels. Since implementing management practices in 2019 to reduce the loading in adjacent lagoons and stop all applications of supernatant and biosolids in the closest farm field (Field 7), $\text{NH}_3\text{-N}$ plus $\text{NO}_2\text{-}+\text{NO}_3\text{-N}$ in Well 7 has shown a decreasing trend, but with some significant 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 June 2023.

[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, Ph.D.
Environmental Monitoring and Research Manager
Monitoring and Research Department

AC:BM: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
FISCHER FARM MONITORING REPORT
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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 JUNE 2023¹

| | Unit | W-5 | W-6 | W-7 | W-8 |
|---|--------------------|--------|--------|--------|--------|
| pH ² | | 7.8 | 7.9 | 8.0 | 8.3 |
| EC | mS m ⁻¹ | 77 | 78 | 74 | 56 |
| Cl ⁻ | mg L ⁻¹ | 18 | 16 | 50 | 10 |
| SO ₄ ²⁻ | " | 100 | 113 | 128 | 54.0 |
| Alkalinity as CaCO ₃ | " | 313 | 298 | 193 | 249 |
| TKN | " | <1.0 | <1.0 | 2.6 | <1.0 |
| NH ₃ -N | " | <0.30 | 0.33 | 0.83 | 0.44 |
| NO ₂ ⁻ +NO ₃ ⁻ -N | " | <0.50 | <0.50 | <0.50 | <0.50 |
| Total P | " | <0.15 | <0.15 | 0.48 | <0.15 |
| Cd | " | <0.002 | <0.002 | <0.002 | <0.002 |
| Cr | " | <0.004 | 0.005 | 0.006 | <0.004 |
| Cu | " | 0.017 | 0.046 | 0.012 | 0.003 |
| Fe | " | 9.88 | 11.8 | 15.2 | 1.23 |
| Mn | " | 0.093 | 0.093 | 0.520 | 0.018 |
| Ni | " | 0.003 | 0.004 | 0.011 | <0.002 |
| Zn | " | <0.010 | 0.014 | 0.237 | <0.010 |

¹Sampled on June 20, 2023.

²pH 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

