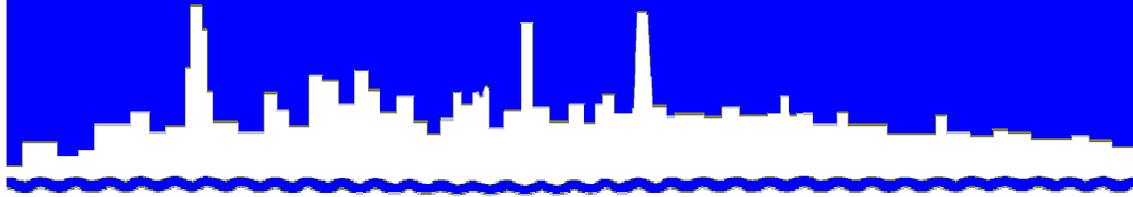


*Protecting Our Water Environment*



***Metropolitan Water Reclamation District of Greater Chicago***

***MONITORING AND RESEARCH  
DEPARTMENT***

***REPORT NO. 11-52***

***HANOVER PARK WATER RECLAMATION PLANT***

***FISCHER FARM MONITORING REPORT FOR***

***SECOND QUARTER 2011***

***AUGUST 2011***

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August 29, 2011

Mr. S. Alan Keller, P.E.  
Manager, Permit Section  
Illinois Environmental Protection Agency  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, IL 62794 – 9276

Dear Mr. Keller:

Subject: Hanover Park Water Reclamation Plant - Illinois Environmental Protection Agency Permit No. 2007-SC-2951-1, Monitoring Report for April, May, and June 2011

The attached report includes five tables of the monitoring results for the Hanover Park Fischer Farm site for the second quarter of 2011.

Very truly yours,

Thomas C. Granato, Ph.D.  
Acting Director  
Monitoring and Research

TCG:PL:cm  
Enclosures

cc: Mr. Jay Patel, Manager  
IEPA Region 2 - Des Plaines  
Mr. Valdis Aistars, USEPA Region 5  
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**HANOVER PARK WATER RECLAMATION PLANT  
FISCHER FARM MONITORING REPORT FOR**

**SECOND QUARTER 2011**

**Monitoring and Research Department  
Thomas C. Granato, Acting Director**

**August 2011**

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## FOREWORD

The data and information in this report fulfill the frequency of monitoring and the reporting requirements for the Hanover Park Fischer Farm Site as specified in the Illinois Environmental Protection Agency Permit No. 2007-SC-2951-1 for the second quarter of 2011.

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## ACKNOWLEDGEMENT

The assistance given by Ms. Minaxi Patel, Assistant Environmental Chemist, of the Environmental Monitoring and Research Division, and Mr. John Chavich, Supervisory Environmental Chemist, of the John E. Egan Analytical Laboratory Section, is greatly appreciated.

## DISCLAIMER

Mention of proprietary equipment and chemicals in this report does not constitute endorsement by the Metropolitan Water Reclamation District of Greater Chicago.

## HANOVER PARK WATER RECLAMATION PLANT FISCHER FARM REPORT FOR SECOND QUARTER OF 2011

During April, May, and June 2011, activities at the Hanover Park Water Reclamation Plant (WRP) Fischer Farm included well and field drainage water sampling, and flow measurements. These monitoring activities are required by the Illinois Environmental Protection Agency Operating Permit No. 2007-SC-2951-1. Fields and water monitoring locations are presented in Figure 1.

Analytical data for samples collected during the quarter are presented in Tables 1 and 2.

Drainage water (combined surface and subsurface) returned to the Hanover Park WRP from the farm fields was sampled twice per month in April, May, and June. Analytical data for these samples are presented in Table 3. The volumes of drainage water returned to the WRP during the months of April, May, and June were estimated as 18.00, 11.30, and 9.18 million gallons, respectively. The analytical data for the lagoon supernatant applied to Fischer Farm fields during the quarter are presented in Table 4. The volumes and dry weights applied are reported in Table 5.

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

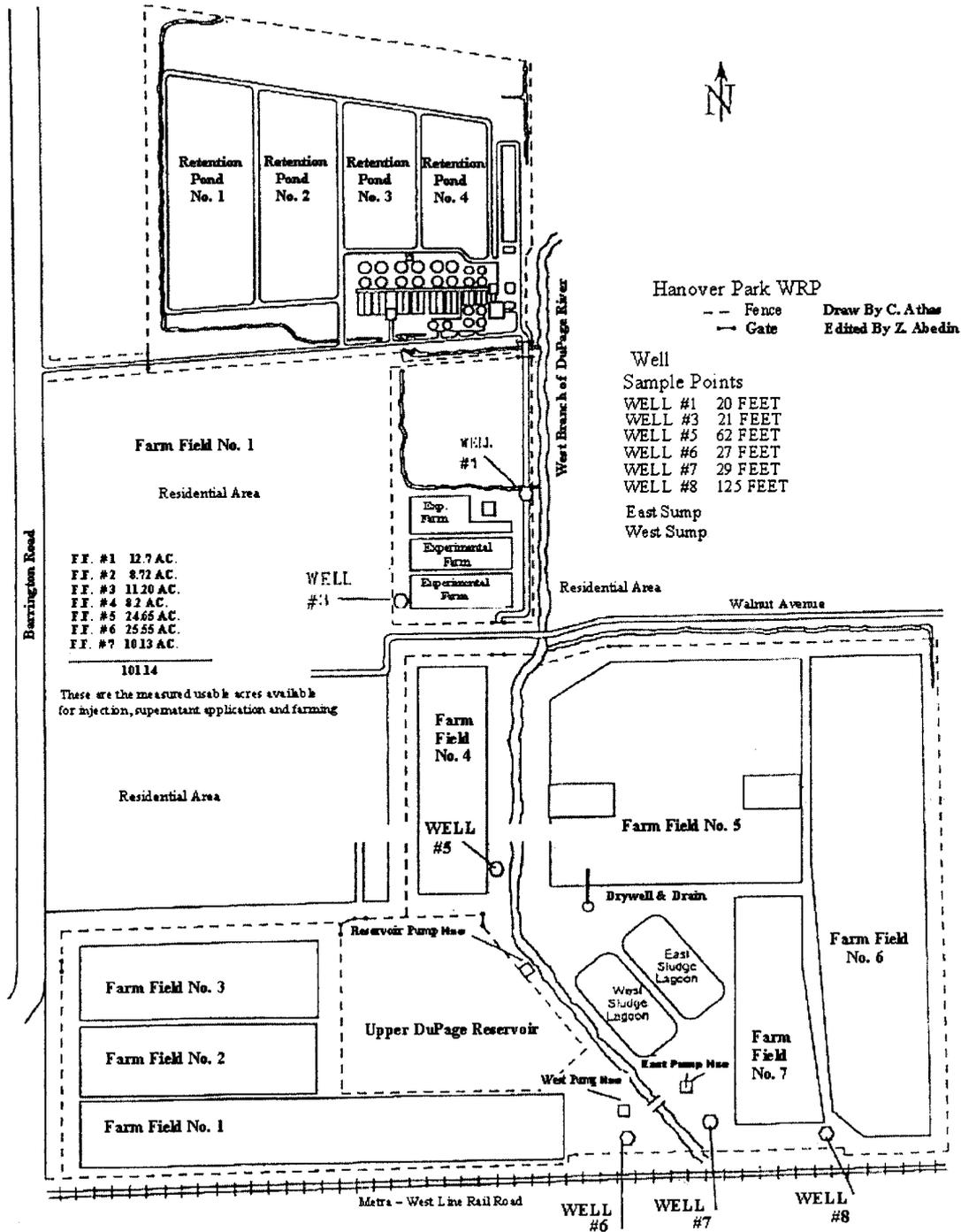


TABLE 1: ANALYSIS OF WATER FROM MONITORING WELL W-7  
 AT THE HANOVER PARK FISCHER FARM SITE  
 SAMPLED DURING APRIL, MAY, AND JUNE 2011

Parameter	Unit	Date Sampled			
		04/05/11	04/19/11	05/03/11	05/31/11
pH <sup>1</sup>		7.3	7.1	7.2	7.0
EC	mS/m	155	141	151	132
Cl <sup>-</sup>	mg/L	53	56	59	60
SO <sub>4</sub> <sup>=</sup>	"	229	223	215	215
Alkalinity as CaCO <sub>3</sub>	"	618	612	621	575
TKN	"	16	15	18	18
NH <sub>3</sub> -N	"	16	14	16	16
NO <sub>2</sub> + NO <sub>3</sub> -N	"	< 0.135	< 0.135	< 0.135	< 0.135
Total P	"	< 0.1	< 0.1	< 0.1	< 0.1
Cd	"	< 0.001	< 0.001	< 0.001	< 0.001
Cr	"	< 0.01	< 0.01	< 0.01	< 0.01
Cu	"	< 0.004	< 0.004	< 0.004	< 0.004
Fe	"	5.2	5.8	5.2	5.1
Mn	"	0.05	0.06	0.06	0.06
Ni	"	< 0.004	< 0.004	< 0.004	< 0.004
Zn	"	0.05	0.11	0.06	0.12
Fecal coliform	MPN <sup>2</sup>	< 1	< 1	< 1	110

TABLE 1 (Continued): ANALYSIS OF WATER FROM MONITORING WELL W-7  
 AT THE HANOVER PARK FISCHER FARM SITE  
 SAMPLED DURING APRIL, MAY, AND JUNE 2011

Parameter	Unit	Date Sampled	
		06/07/11	06/14/11
pH <sup>1</sup>		7.2	6.8
EC	mS/m	140	145
Cl <sup>-</sup>	mg/L	61	62
SO <sub>4</sub> <sup>=</sup>	"	222	228
Alkalinity as CaCO <sub>3</sub>	"	549	542
TKN	"	18	17
NH <sub>3</sub> -N	"	17	17
NO <sub>2</sub> + NO <sub>3</sub> -N	"	< 0.135	< 0.135
Total P	"	< 0.1	< 0.1
Cd	"	< 0.001	< 0.001
Cr	"	< 0.01	< 0.01
Cu	"	< 0.004	< 0.004
Fe	"	4.8	4.7
Mn	"	0.05	0.06
Ni	"	< 0.004	< 0.004
Zn	"	0.05	0.07
Fecal coliform	MPN <sup>2</sup>	1	8

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

<sup>2</sup>Most probable number per 100 mL.

TABLE 2: ANALYSIS OF WATER FROM MONITORING WELLS W-3  
THROUGH W-8 AT THE HANOVER PARK FISCHER FARM SITE  
SAMPLED ON JUNE 7, 2011

Parameter	Unit	Monitoring Well No.			
		W-3	W-5	W-6	W-8
pH <sup>1</sup>		7.6	7.7	7.6	8.2
EC	mS/m	92	75	82	57
Cl <sup>-</sup>	mg/L	15	14	22	6
SO <sub>4</sub> <sup>=</sup>	"	179	99	129	46
Alkalinity as CaCO <sub>3</sub>	"	343	314	308	260
TKN	"	0.5	0.4	0.4	1
NH <sub>3</sub> -N	"	0.21	0.32	0.32	0.40
NO <sub>2</sub> + NO <sub>3</sub> -N	"	< 0.135	< 0.135	< 0.135	< 0.135
Total P	"	< 0.1	< 0.1	< 0.1	< 0.1
Cd	"	< 0.001	< 0.001	< 0.001	< 0.001
Cr	"	< 0.01	< 0.01	< 0.01	< 0.01
Cu	"	< 0.004	0.007	0.006	0.006
Fe	"	6.5	2.1	3.2	0.54
Mn	"	0.33	< 0.03	< 0.03	< 0.03
Ni	"	< 0.004	< 0.004	< 0.004	< 0.004
Zn	"	0.02	< 0.01	< 0.01	< 0.01
Fecal coliform	MPN <sup>2</sup>	1	< 1	< 1	< 1

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

<sup>2</sup>Most probable number per 100 mL.

TABLE 3: ANALYSIS OF COMBINED SURFACE AND SUBSURFACE DRAINAGE FROM THE FISCHER FARM SITE RETURNED TO THE HANOVER PARK WATER RECLAMATION PLANT DURING APRIL, MAY, AND JUNE 2011

Date	Sump	NH <sub>3</sub> -N	TSS <sup>1</sup>	BOD <sub>5</sub>
..... mg/L .....				
04/05/11	East	4.9	7	5
04/05/11	West	13	5	10
04/19/11	East	4.7	30	4
04/19/11	West	5.6	5	4
05/03/11	East	3.6	41	12
05/03/11	West	3.4	4	8
05/31/11	East	32	39	32
05/31/11	West	2.9	20	9
06/07/11	East	23	19	14
06/07/11	West	2.1	3	<2
06/14/11	East	30	44	26
06/14/11	West	3.0	7	5

<sup>1</sup>Total suspended solids.

TABLE 4: ANALYSIS OF LAGOON SUPERNATANT APPLIED TO FIELDS  
AT THE HANOVER PARK FISCHER FARM SITE  
DURING JUNE 2011

Parameter	Unit	Concentration <sup>1</sup>
pH		7.9
Total Solids	%	0.1
Total Volatile Solids <sup>2</sup>	"	57.9
Volatile Acids <sup>3</sup>	mg/kg	13,962
TKN	"	369,994
NH <sub>3</sub> -N	"	341,347
Total P	"	30,218
As	"	19
Cd	"	< 0.001
Cr	"	< 0.01
Cu	"	99
Hg	"	< 0.25
Mn	"	198
Mo	"	2.40
Ni	"	15
Pb	"	< 0.02
Se	"	< 5
Zn	"	124

<sup>1</sup> Values are the means of five samples.

<sup>2</sup> Total volatile solids as a percentage of total solids.

<sup>3</sup> As acetic acid.

TABLE 5: VOLUMES AND DRY WEIGHTS OF LAGOON SUPERNATANT  
 APPLIED TO FIELDS AT THE HANOVER PARK FISCHER FARM SITE  
 DURING APRIL, MAY, AND JUNE 2011

Field	Date	Biosolids Type	Volume (Gallons)	Dry Weight (Tons)
1	05/03/11	Supernatant	170,000	0.99
2	04/05/11	"	200,000	1.17
2	06/15/11	"	270,000	1.46
5	04/12/11	"	590,000	3.44
5	05/04/11	"	800,000	5.00
5	06/30/11	"	820,000	4.79
Total			2,850,000	16.85