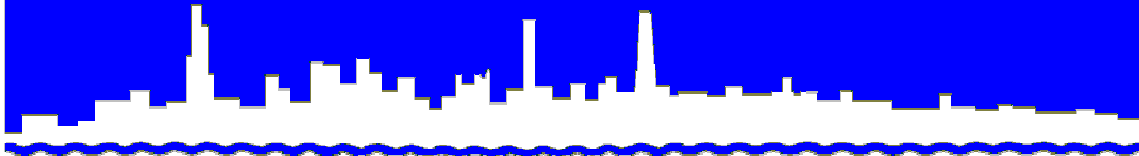


Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***MONITORING AND RESEARCH
DEPARTMENT***

REPORT NO. 11-34

HANOVER PARK WATER RECLAMATION PLANT

FISCHER FARM MONITORING REPORT FOR

FIRST QUARTER 2011

JUNE 2011

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June 6, 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 January, February, and March 2011

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

Very truly yours,

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

TCG:PL:cm
Attachments

cc: Mr. Jay Patel, Manager,
IEPA Region 2 - Des Plaines
Mr. Valdis Aistars, USEPA Region 5
Mr. Ash Sajjad, USEPA Region 5
Granato/Liston/O'Connor

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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 first 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 Chayich, 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 FIRST QUARTER OF 2011

During January, February, and March 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 January, February, and March. Analytical data for these samples are presented in Table 3. The volumes of drainage water returned to the WRP during the first quarter were estimated as 0.414, 10.31, and 12.65 million gallons in January, February, and March, 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

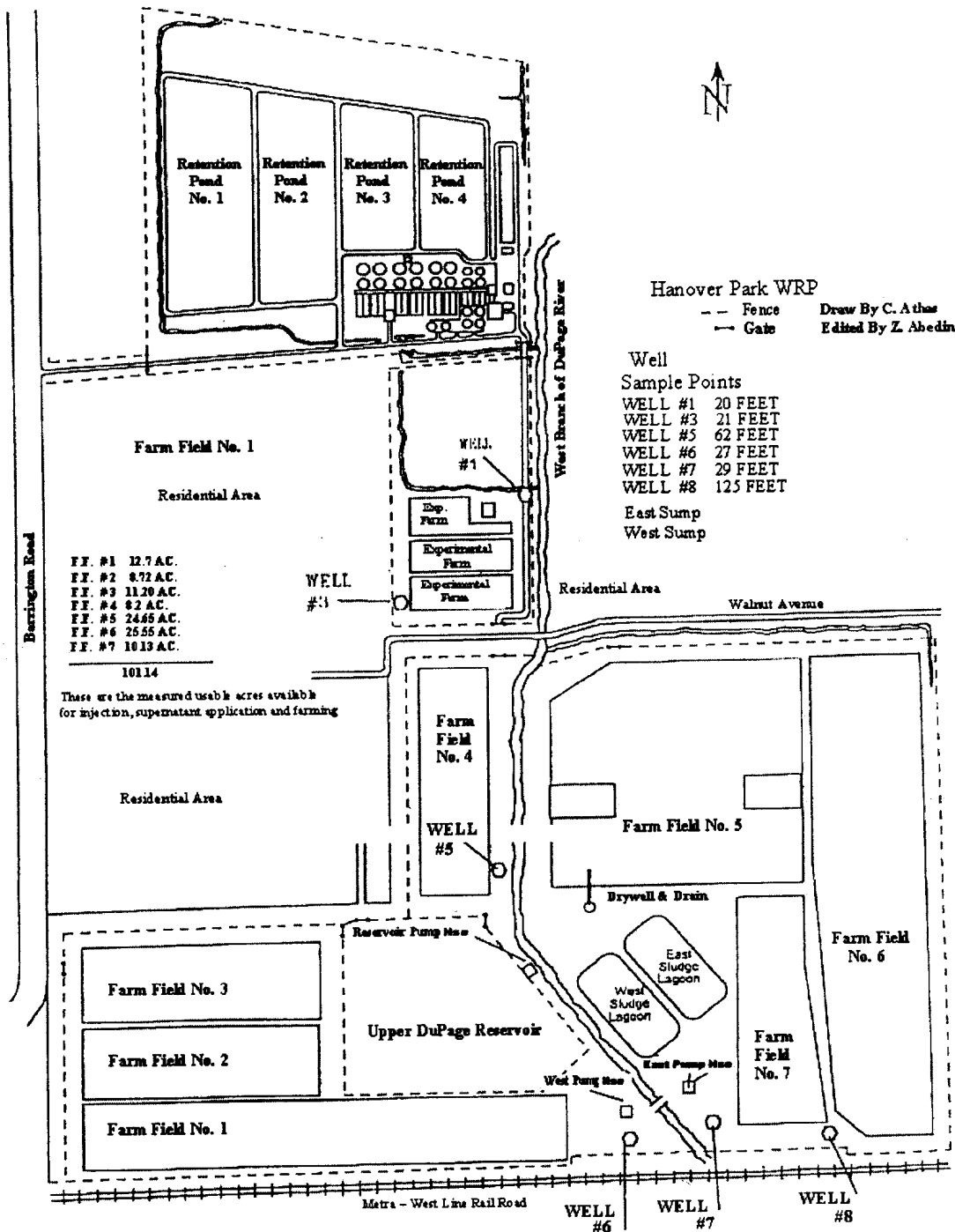


TABLE 1: ANALYSIS OF WATER FROM MONITORING WELL W-7
 AT THE HANOVER PARK FISCHER FARM SITE
 SAMPLED DURING JANUARY, FEBRUARY, AND MARCH 2011

Parameter	Unit	Date Sampled			
		01/18/11	02/15/11	03/15/11	03/29/11
pH ¹				7.2	
EC	mS/m			169	
Cl ⁻	mg/L			49	
SO ₄ ⁼	"			235	
Alkalinity as CaCO ₃	"	W	W	696	W
TKN	"	E	E	22	E
		L	L		L
NH ₃ -N	"	L	L	19	L
NO ₂ + NO ₃ -N	"			< 0.135	
Total P	"	F	F	< 0.1	F
Cd	"	R	R	< 0.001	R
Cr	"	O	O	< 0.010	O
		Z	Z		Z
Cu	"	E	E	0.008	E
Fe	"	N	N	5.6	N
Mn	"			0.06	
Ni	"			< 0.004	
Zn	"			0.10	
Fecal coliform	MPN ²			< 1	

¹pH analyzed beyond recommended holding time of 15 minutes.

²Most 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 MARCH 15, 2011

Parameter	Unit	Monitoring Well No.			
		W-3	W-5	W-6	W-8
pH ¹		7.1	7.4	7.4	8.2
EC	mS/m	112	78	95	58
Cl ⁻	mg/L	20	15	50	7
SO ₄ ⁼	"	314	99	149	41
Alkalinity as CaCO ₃	"	327	319	312	268
TKN	"	0.4	0.5	0.5	0.6
NH ₃ -N	"	< 0.10	0.31	0.29	0.43
NO ₂ + NO ₃ -N	"	0.423	< 0.135	< 0.135	< 0.135
Total P	"	< 0.1	< 0.1	0.2	< 0.1
Cd	"	< 0.001	< 0.001	< 0.001	< 0.001
Cr	"	< 0.010	< 0.010	< 0.010	< 0.010
Cu	"	0.031	0.021	0.023	0.012
Fe	"	5.5	3.0	3.4	0.51
Mn	"	0.05	< 0.03	0.06	< 0.03
Ni	"	< 0.004	< 0.004	< 0.004	< 0.004
Zn	"	0.03	< 0.01	< 0.01	< 0.01
Fecal coliform	MPN ²	< 1	< 1	< 1	< 1

¹pH analyzed beyond recommended holding time of 15 minutes.

²Most 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 JANUARY, FEBRUARY, AND MARCH 2011

Date	Sump	NH ₃ -N	TSS ¹	BOD ₅
	 mg/L		
01/04/11	East	94	64	13
01/04/11	West	0.62	71	8
01/25/11	East	195	13	38
01/25/11	West	2.4	58	6
02/15/11	East	151	17	117
02/15/11	West	5.7	65	52
02/22/11	East	38	29	103
02/22/11	West	<0.10	45	4
03/08/11	East	32	29	89
03/08/11	West	0.13	42	7
03/15/11	East	27	29	70
03/15/11	West	1.7	41	6

¹Total suspended solids.

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

Parameter	Unit	Concentration ¹
pH		8.0
Total Solids	%	0.1
Total Volatile Solids ²	"	59.7
Volatile Acids ³	mg/kg	14,167
TKN	"	425,667
NH ₃ -N	"	384,125
Total P	"	41,917
As	"	24
Cd	"	<2
Cr	"	8
Cu	"	93
Hg	"	<0.25
Mn	"	176
Mo	"	4
Ni	"	22
Pb	"	17
Se	"	<5
Zn	"	130

¹Values are for one sample.

²Total volatile solids as a percentage of total solids.

³As acetic acid.

**TABLE 5: VOLUMES AND DRY WEIGHTS OF LAGOON SUPERNATANT
 APPLIED TO FIELDS AT THE HANOVER PARK FISCHER FARM SITE
 DURING MARCH 2011**

Field	Date	Biosolids Type	Volume (Gallons)	Dry Weight (Tons)
1	03/28/11	Supernatant	190,000	1.03
2	03/21/11	"	240,000	1.3
5	03/28/11	"	160,000	0.87
Total			590,000	3.2