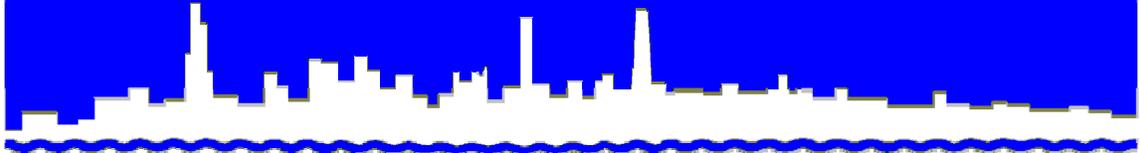


Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***MONITORING AND RESEARCH
DEPARTMENT***

REPORT NO. 09-24

MONTHLY CONTROLLED SOLIDS

DISTRIBUTION REPORT

NOVEMBER 2008

APRIL 2009

Metropolitan Water Reclamation District of Greater Chicago

100 EAST ERIE STREET CHICAGO, ILLINOIS 60611-3154 312.751.5190

Louis Kollias, P.E., BCEE
Director of Monitoring and Research
louis.kollias@mwr.org

April 7, 2009

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: Metropolitan Water Reclamation District of Greater Chicago – Controlled Solids Distribution Program, Illinois Environmental Protection Agency Permit No. 2005-SC-3793, November 2008

This letter transmits information and data for the Metropolitan Water Reclamation District of Greater Chicago - Controlled Solids Distribution Program for November 2008, as required by Illinois Environmental Protection Agency Permit No. 2005-SC-3793.

Sludge flow schematic diagrams for solids processed during November 2008 are shown in Figure 1 - John E. Egan Water Reclamation Plant (WRP), Figure 2 - Calumet WRP, and Figure 3 - Stickney WRP.

Biosolids were distributed to thirteen sites in November. The user information report for these thirteen sites is presented in Table 1, and the analyses of composited biosolids delivered to those sites are presented in Tables 2 – 14.

Very truly yours,

Louis Kollias
Director
Monitoring and Research

LK:KK:kq
Attachments
cc: Aistars (USEPA)
Sulski (IEPA)
Sobanski
Granato/O'Connor/Cox

TABLE 1: CONTROLLED SOLIDS DISTRIBUTION PROGRAM USER INFORMATION
 REPORT FOR AGITATION DRIED ANAEROBICALLY DIGESTED SOLIDS

No.	Name and Address of User	Source	Dates	Quantity (dry tons)		Biosolids Use	Application		Analysis
				November 2008	Cumulative 2008		Area (acres)	Rate (tons/acre)	
1.	Cypress Cove Park Woodridge Park District 2600 Center Dr. Woodridge, IL 60517	Calumet WRP- West Drying Area	3	16.9	74.8	Soil amendment for construction of golf course fairways.	1	16.9	Table 2
2.	Hildar Walker & Union Creek Parks Frankfort Square Park District 19900 S. 80 th Ave. Frankfort, IL 60423	Calumet WRP- West Drying Area	3	300	300	Nutrient source for turf growth on soccer fields.	15	20.0	Table 3
3.	Indian Lakes Resort 250 W. Schick Rd. Bloomington, IL 60108	Calumet WRP- West Drying Area	6	50.3	50.3	Top dressing as fertilizer for turf growth on golf course roughs.	5	10.1	Table 4
4.	Tinley Park High School 6111 W. 175th St. Tinley Park, IL 60477	Calumet WRP- West Drying Area	6	63.5	128	Nutrient source for turf growth on baseball, football and soccer fields.	5	12.7	Table 5
5.	West Leyden High School 1000 N. Wolf Rd. Northlake, IL 60164	Calumet WRP- West Drying Area	3, 5	83.5	144	Nutrient source for turf growth on soccer fields renovation.	8	10.4	Table 6
6.	East Leyden High School 3400 Rose St. Franklin Park, IL 60131	Calumet WRP- West Drying Area	5	48.8	48.8	Nutrient source for turf growth on athletic fields.	10	4.9	Table 7
		Stickney WRP- HASMA Drying Area	6	73	122	Nutrient source for turf growth on athletic fields.	10	7.3	Table 7
7.	Memorial Park Blue Island Park District 12804 S. Highland Ave. Blue Island, IL 60406	Calumet WRP- West Drying Area	17	50.3	96.1	Top dressing as fertilizer for turf on soccer and multi-purpose fields.	5	10	Table 8

TABLE 1 (Continued): CONTROLLED SOLIDS DISTRIBUTION PROGRAM USER INFORMATION
REPORT FOR AGITATION DRIED ANAEROBICALLY DIGESTED SOLIDS

No.	Name and Address of User	Source	Dates	Quantity (dry tons)		Biosolids Use	Application		Analysis
				November 2008	Cumulative 2008		Area (acres)	Rate (tons/acre)	
8.	Metropolitan Water Reclamation District of Greater Chicago 6001 W. Pershing Rd. Stickney, IL 60804	Calumet WRP- West Drying Area	17, 31	16.5	16.5	Soil amendment and nutrient source for plants in courtyard of Engineering Center and median planters.	0.1	165	Table 9
9.	Reavis High School 6034 W. 77 th St. Burbank, IL 60459	Stickney WRP- LASMA Drying Area	4	137	219	Nutrient source for enhancing turf growth on soccer fields.	8	17.1	Table 10
10.	Hickory Creek Middle School 10482 W. Nebraska St. Frankfort, IL 60423	Stickney WRP- HASMA Drying Area	6	73	73	Nutrient source for turf growth on baseball fields.	2.5	29.2	Table 11
11.	Memorial Park Midlothian Park District 14500 S. Kostner Ave. Midlothian, IL 60445	Stickney WRP- HASMA Drying Area	6	286	315	Nutrient source for turf growth on Memorial Park.	10	28.6	Table 12
12.	St. Xavier University 3700 W. 103 rd St. Chicago, IL 60655	Stickney WRP- HASMA Drying Area	6	70	70	Nutrient source for turf growth on practice football fields.	2	35.0	Table 13
13.	Legion Park Summit Park District 60 th Pl. and 74 th Ave. Summit, IL 60501	Stickney WRP- HASMA Drying Area	6	29	355	Top dressing as fertilizer for turf growth on baseball fields renovation.	1	29.0	Table 14

TABLE 2: ANALYSIS¹ OF DIGESTED BIOSOLIDS APPLIED TO LAND AT CYPRESS COVE PARK LOCATED AT 8325 S. JANES AVE., WOODRIDGE, IL, FROM THE CALUMET WEST DRYING AREA DURING NOVEMBER 2008

Constituent	Units	Concentration
pH		7.5
Total Solids	%	71.3
Total Volatile Solids	"	41.7
Volatile Acids as Acetic Acid	mg/dry kg	143
Total Kjeldahl-N	"	21,121
NH ₃ -N	"	4,135
Total P	"	18,531
K	"	4,709
Cd	"	4.2
Cr	"	113
Cu	"	481
Pb	"	129
Hg	"	1.18
Mo	"	16.5
As	"	11.1
Mn	"	1,118
Ni	"	42.3
Se	"	5.0
Zn	"	1,224

¹Results based on one sample.

TABLE 3: ANALYSIS¹ OF DIGESTED BIOSOLIDS APPLIED TO LAND AT HILDAR WALKER AND UNION CREEK PARKS LOCATED AT 19900 S. 80TH AVE., FRANKFORT, IL, FROM THE CALUMET WEST DRYING AREA DURING NOVEMBER 2008

Constituent	Units	Concentration
pH		7.5
Total Solids	%	71.3
Total Volatile Solids	"	41.7
Volatile Acids as Acetic Acid	mg/dry kg	143
Total Kjeldahl-N	"	21,121
NH ₃ -N	"	4,135
Total P	"	18,531
K	"	4,709
Cd	"	4.2
Cr	"	113
Cu	"	481
Pb	"	129
Hg	"	1.18
Mo	"	16.5
As	"	11.1
Mn	"	1,118
Ni	"	42.3
Se	"	5.0
Zn	"	1,224

¹Results based on one sample.

TABLE 4: ANALYSIS¹ OF DIGESTED BIOSOLIDS APPLIED TO LAND AT INDIAN LAKES RESORT LOCATED AT 250 W. SCHICK RD., BLOOMINGDALE, IL, FROM THE CALUMET WEST DRYING AREA DURING NOVEMBER 2008

Constituent	Units	Concentration
pH		7.5
Total Solids	%	71.3
Total Volatile Solids	"	41.7
Volatile Acids as Acetic Acid	mg/dry kg	143
Total Kjeldahl-N	"	21,121
NH ₃ -N	"	4,135
Total P	"	18,531
K	"	4,709
Cd	"	4.2
Cr	"	113
Cu	"	481
Pb	"	129
Hg	"	1.18
Mo	"	16.5
As	"	11.1
Mn	"	1,118
Ni	"	42.3
Se	"	5.0
Zn	"	1,224

¹Results based on one sample.

TABLE 5: ANALYSIS¹ OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE TINLEY PARK HIGH SCHOOL ATHLETIC FIELDS LOCATED AT 6111 W. 175TH ST., TINLEY PARK, IL, FROM THE CALUMET WEST DRYING AREA DURING NOVEMBER 2008

Constituent	Units	Concentration
pH		7.5
Total Solids	%	71.3
Total Volatile Solids	"	41.7
Volatile Acids as Acetic Acid	mg/dry kg	143
Total Kjeldahl-N	"	21,121
NH ₃ -N	"	4,135
Total P	"	18,531
K	"	4,709
Cd	"	4.2
Cr	"	113
Cu	"	481
Pb	"	129
Hg	"	1.18
Mo	"	16.5
As	"	11.1
Mn	"	1,118
Ni	"	42.3
Se	"	5.0
Zn	"	1,224

¹Results based on one sample.

TABLE 6: ANALYSIS¹ OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE WEST LEYDEN HIGH SCHOOL SOCCER FIELDS LOCATED AT 1000 N. WOLF RD., NORTHLAKE, IL, FROM THE CALUMET WEST DRYING AREA DURING NOVEMBER 2008

Constituent	Units	Concentration
pH		7.0
Total Solids	%	67.2
Total Volatile Solids	"	40.3
Volatile Acids as Acetic Acid	mg/dry kg	196
Total Kjeldahl-N	"	22,666
NH ₃ -N	"	3,325
Total P	"	20,473
K	"	3,849
Cd	"	4.1
Cr	"	134
Cu	"	456
Pb	"	135
Hg	"	1.18
Mo	"	15.7
As	"	11.0
Mn	"	929
Ni	"	45.0
Se	"	8.5
Zn	"	1,107

¹Results based on three samples.

TABLE 7: ANALYSIS¹ OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE EAST LEYDEN HIGH SCHOOL ATHLETIC FIELDS LOCATED AT 3400 ROSE ST., NORTHLAKE, IL, FROM THE CALUMET WEST AND STICKNEY HASMA DRYING AREAS DURING NOVEMBER 2008

Constituent	Units	Concentration
pH		6.8
Total Solids	%	65.2
Total Volatile Solids	"	39.6
Volatile Acids as Acetic Acid	mg/dry kg	222
Total Kjeldahl-N	"	23,439
NH ₃ -N	"	2,920
Total P	"	21,444
K	"	3,419
Cd	"	4.1
Cr	"	145
Cu	"	444
Pb	"	138
Hg	"	1.19
Mo	"	15.2
As	"	11.0
Mn	"	835
Ni	"	46.4
Se	"	10.2
Zn	"	1,048

¹Results based on two samples.

TABLE 8: ANALYSIS¹ OF DIGESTED BIOSOLIDS APPLIED TO LAND AT
MEMORIAL PARK LOCATED AT 12804 S. HIGHLAND AVE.,
BLUE ISLAND, IL, FROM THE CALUMET WEST DRYING AREA
DURING NOVEMBER 2008

Constituent	Units	Concentration
pH		7.5
Total Solids	%	65.6
Total Volatile Solids	"	39.2
Volatile Acids as Acetic Acid	mg/dry kg	172
Total Kjeldahl-N	"	25,289
NH ₃ -N	"	4,153
Total P	"	22,565
K	"	4,037
Cd	"	4.6
Cr	"	110
Cu	"	478
Pb	"	127
Hg	"	1.19
Mo	"	16.3
As	"	11.0
Mn	"	1,101
Ni	"	43.5
Se	"	6.2
Zn	"	1,198

¹Results based on one sample.

TABLE 9: ANALYSIS¹ OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO ENGINEERING BLDG. LOCATED AT 6001 W. PERSHING RD., STICKNEY, IL, FROM THE CALUMET WEST DRYING AREA DURING NOVEMBER 2008

Constituent	Units	Concentration
pH		7.5
Total Solids	%	65.6
Total Volatile Solids	"	39.2
Volatile Acids as Acetic Acid	mg/dry kg	172.3
Total Kjeldahl-N	"	25,289
NH ₃ -N	"	4,153
Total P	"	22,565
K	"	4,037
Cd	"	4.6
Cr	"	110
Cu	"	478
Pb	"	127
Hg	"	1.19
Mo	"	16.3
As	"	11.0
Mn	"	1,101
Ni	"	43.5
Se	"	6.2
Zn	"	1,198

¹Results based on one sample.

TABLE 10: ANALYSIS¹ OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE REAVIS HIGH SCHOOL SOCCER FIELDS LOCATED AT 6034 W. 77TH ST., BURBANK, IL, FROM THE STICKNEY LASMA DRYING AREA DURING NOVEMBER 2008

Constituent	Units	Concentration
pH		6.5
Total Solids	%	65.2
Total Volatile Solids	"	40.5
Volatile Acids as Acetic Acid	mg/dry kg	368
Total Kjeldahl-N	"	26,040
NH ₃ -N	"	3,343
Total P	"	21,293
K	"	2,928
Cd	"	3.5
Cr	"	172
Cu	"	412
Pb	"	143
Hg	"	1.19
Mo	"	15.7
As	"	<10.0
Mn	"	534
Ni	"	47.9
Se	"	16.4
Zn	"	902

¹Results based on one sample.

TABLE 11: ANALYSIS¹ OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE HICKORY CREEK MIDDLE SCHOOL BASEBALL FIELD LOCATED AT 10482 W. NEBRASKA ST, FRANKFORT, IL, FROM THE STICKNEY HASMA DRYING AREA DURING NOVEMBER 2008

Constituent	Units	Concentration
pH		6.2
Total Solids	%	64.7
Total Volatile Solids	"	40.1
Volatile Acids as Acetic Acid	mg/dry kg	272
Total Kjeldahl-N	"	21,589
NH ₃ -N	"	1,686
Total P	"	20,324
K	"	2,802
Cd	"	3.6
Cr	"	179
Cu	"	410
Pb	"	149
Hg	"	1.18
Mo	"	14.1
As	"	<10.0
Mn	"	568
Ni	"	49.4
Se	"	14.1
Zn	"	897

¹Results based on one sample.

TABLE 12: ANALYSIS¹ OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE MEMORIAL PARK LOCATED AT 14500 S. KOSTNER AVE., MIDLOTHIAN, IL, FROM THE STICKNEY HASMA DRYING AREA DURING NOVEMBER 2008

Constituent	Units	Concentration
pH		6.2
Total Solids	%	64.7
Total Volatile Solids	"	40.1
Volatile Acids as Acetic Acid	mg/dry kg	272
Total Kjeldahl-N	"	21,589
NH ₃ -N	"	1,686
Total P	"	20,324
K	"	2,802
Cd	"	3.6
Cr	"	179
Cu	"	410
Pb	"	149
Hg	"	1.18
Mo	"	14.1
As	"	<10.0
Mn	"	568
Ni	"	49.4
Se	"	14.1
Zn	"	897

¹Results based on one sample.

TABLE 13: ANALYSIS¹ OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE ST. XAVIER UNIVERSITY FOOTBALL FIELD LOCATED AT 3700 W. 103RD ST., CHICAGO, IL, FROM THE STICKNEY HASMA DRYING AREA DURING NOVEMBER 2008

Constituent	Units	Concentration
pH		6.2
Total Solids	%	64.7
Total Volatile Solids	"	40.1
Volatile Acids as Acetic Acid	mg/dry kg	272
Total Kjeldahl-N	"	21,589
NH ₃ -N	"	1,686
Total P	"	20,324
K	"	2,802
Cd	"	3.6
Cr	"	179
Cu	"	410
Pb	"	149
Hg	"	1.18
Mo	"	14.1
As	"	<10.0
Mn	"	568
Ni	"	49.4
Se	"	14.1
Zn	"	897

¹Results based on one sample.

TABLE 14: ANALYSIS¹ OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE
 LEGION PARK BASEBALL FIELD LOCATED AT 60TH PL. AND 74TH AVE.,
 SUMMIT, IL, FROM THE STICKNEY HASMA DRYING AREA
 DURING NOVEMBER 2008

Constituent	Units	Concentration
pH		6.2
Total Solids	%	64.7
Total Volatile Solids	"	40.1
Volatile Acids as Acetic Acid	mg/dry kg	272
Total Kjeldahl-N	"	21,589
NH ₃ -N	"	1,686
Total P	"	20,324
K	"	2,802
Cd	"	3.6
Cr	"	179
Cu	"	410
Pb	"	149
Hg	"	1.18
Mo	"	14.1
As	"	<10.0
Mn	"	568
Ni	"	49.4
Se	"	14.1
Zn	"	897

¹Results based on one sample.