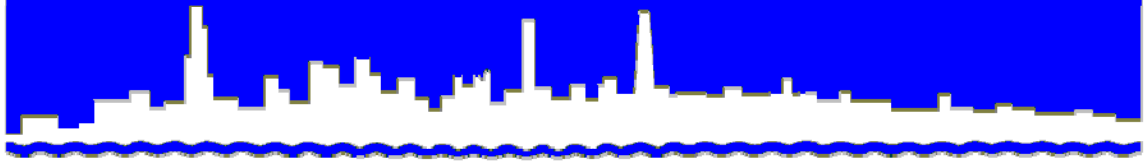


*Protecting Our Water Environment*



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

*MONITORING AND RESEARCH  
DEPARTMENT*

***REPORT NO. 13-48***

***CONTROLLED SOLIDS DISTRIBUTION REPORT***

***FOR THIRD QUARTER 2013***

***NOVEMBER 2013***

## Protecting Our Water Environment



### Metropolitan Water Reclamation District of Greater Chicago

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Chicago, Illinois 60611-3154

312.751.5190

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November 27, 2013

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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. 2010-SC-0200, Third Quarter (July – September 2013)

This letter transmits information and data for the Metropolitan Water Reclamation District of Greater Chicago - Controlled Solids Distribution Program for the third quarter (July – September 2013) as required by Illinois Environmental Protection Agency Permit No. 2010-SC-0200 and 2010-SC-0200-2.

Estimated sludge mass flow schematic diagrams for solids processed during July – September 2013 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 43 sites during the third quarter of 2013. The user information report for these sites is presented in Tables 1 and 2, and the analysis of biosolids delivered to these sites is presented in Tables 3 and 4.

Very truly yours,

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

TCG:OO:cm

Attachments

cc: Mr. V. Aistars (USEPA)  
Mr. J. Patel (IEPA)

TABLE 1: USER INFORMATION FOR THE STICKNEY WATER RECLAMATION PLANT'S AIR-DRIED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE THIRD QUARTER OF 2013

Site No.	Name and Address of User	Dates	Quantity, dry ton		Purpose	Application	
			3rd Quarter	Cumulative		Area (acre)	Rate (ton/acre) <sup>1</sup>
1	Evanston High School 1600 Dodge Ave. Evanston, IL 60201	7/2, 7/3, 8/13	122.6	122.6	Topdressing fertilizer for turf growth	7	17.5
2	Hinsdale Park District KLM Park S. County Line Rd. Hinsdale, IL 60521	7/2, 7/3	239.3	239.3	Topdressing fertilizer for turf growth	12	19.9
3	Turfcare Landscaping Inc. Emerson Square 1700 W. Foster St. Evanston, IL 60201	7/3	27.2	117.4	Soil amendment for turf establishment	3	39.1
4	Wauconda High School 555 N. Main St. Wauconda, IL 60084	7/12, 7/23	47.9	92.1	Topdressing fertilizer for turf growth	5	18.4
5	Bremen Township 15350 Oak Park Ave. Oak Forest, IL 60452	7/24	95.8	95.8	Soil amendment for turf establishment	3	31.9
6	Norridge Park District Norridge Park 4651 N. Overhill Ave. Norridge, IL 60706	7/24	15.3	15.3	Topdressing fertilizer for turf growth	1	15.3

TABLE 1 (Continued): USER INFORMATION FOR THE STICKNEY WATER RECLAMATION PLANT'S AIR-DRIED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE THIRD QUARTER OF 2013

Site No.	Name and Address of User	Dates	Quantity, dry ton		Purpose	Application	
			3rd Quarter	Cumulative		Area (acre)	Rate (ton/acre) <sup>1</sup>
7	Christy Webber Landscaping Co. 2900 W. Ferdinand St. Chicago, IL 60612	7/31	21.4	21.4	Topdressing fertilizer for turf growth	1	21.4
8	North Shore Country Club 1340 Glenview Rd. Glenview, IL 60025	8/13, 8/14, 8/15	146.3	146.3	Topdressing fertilizer for turf growth	10	14.6
9	Lombard Park District Sunset Knoll Park Finley Rd. and Wilson Ave. Lombard, IL 60148	8/13	31.6	31.6	Topdressing fertilizer for turf growth	2	15.8
10	Lisle Park District Community Park 1825 Short St. Lisle, IL 60532	8/20	57.4	57.4	Topdressing fertilizer for turf growth	3	19.1
11	Hanover Park Park District Community Park 1919 Walnut Ave. Hanover Park, IL 60133	8/20	36.1	36.1	Topdressing fertilizer for turf growth	2	18.1
12	West Chicago Park District Pioneer Park 479 W. Forest Ave. West Chicago, IL 60185	8/21, 8/23	64.4	64.4	Topdressing fertilizer for turf growth	4	16.1

TABLE 1 (Continued): USER INFORMATION FOR THE STICKNEY WATER RECLAMATION PLANT'S AIR-DRIED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE THIRD QUARTER OF 2013

Site No.	Name and Address of User	Dates	Quantity, dry ton		Application		
			3rd Quarter	Cumulative	Purpose	Area (acre)	Rate (ton/acre) <sup>1</sup>
13	West Chicago Park District Reed-Keppler Park 129 W. National St. West Chicago, IL 60185	8/21	97.9	97.9	Topdressing fertilizer for turf growth	5	19.6
14	West Chicago Park District Cornerstone Lakes Park 2199 Smith Rd. West Chicago, IL 60185	8/23, 8/26	82.5	82.5	Topdressing fertilizer for turf growth	5	16.5
15	Lombard Park District Madison Meadow Park Madison St. & Ahrens Ave. Lombard, IL 60148	8/28	16.9	16.9	Topdressing fertilizer for turf growth	1	16.9
16	Frankfort Park District Michele Bingham Park S. Elsner Rd & Old Plank Rd. Trail Frankfort, IL 60423	8/29	30.0	30.0	Topdressing fertilizer for turf growth	2	15.0
17	Chicago Park District Midway Plaisance E. 59th & S. Stony Island Ave. Chicago, IL 60637	7/30, 7/31	212.3	212.3	Topdressing fertilizer for turf growth	13	16.3
18	Chicago Park District Washington Park 5531 S. King Dr. Chicago, IL 60615	7/2, 7/3, 7/5, 7/11	880.1	880.1	Topdressing fertilizer for turf growth	50	17.6

TABLE 1 (Continued): USER INFORMATION FOR THE STICKNEY WATER RECLAMATION PLANT'S AIR-DRIED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE THIRD QUARTER OF 2013

Site No.	Name and Address of User	Dates	Quantity, dry ton		Purpose	Application	
			3rd Quarter	Cumulative		Area (acre)	Rate (ton/acre) <sup>1</sup>
19	Chicago Park District Lincoln Park 2045 N. Lincoln Park West Chicago, IL 60614	8/1	60.4	60.4	Topdressing fertilizer for turf growth	4	15.1
20	Chicago Park District Lindbloom Park 6054 S. Damen Ave. Chicago, IL 60636	8/27	92.9	92.9	Topdressing fertilizer for turf growth	5	18.6
21	Chicago Park District Hamilton Park 513 W. 72nd St. Chicago, IL 60621	8/28	93.8	93.8	Topdressing fertilizer for turf growth	6	15.6
22	Chicago Park District W. Chatham Park 8223 S. Princeton Ave. Chicago, IL 60620	8/29	52.3	52.3	Topdressing fertilizer for turf growth	3	17.4
23	Chicago Park District Jackie Robinson Park 10540 S. Morgan St. Chicago, IL 60643	8/30	90.9	90.9	Topdressing fertilizer for turf growth	5	18.2
24	Chicago Park District Palmer Park 201 E. 111th St. Chicago, IL 60628	9/4	92.2	92.2	Topdressing fertilizer for turf growth	5	18.4

TABLE 1 (Continued): USER INFORMATION FOR THE STICKNEY WATER RECLAMATION PLANT'S AIR-DRIED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE THIRD QUARTER OF 2013

Site No.	Name and Address of User	Dates	Quantity, dry ton		Purpose	Application	
			3rd Quarter	Cumulative		Area (acre)	Rate (ton/acre) <sup>1</sup>
25	Chicago Park District Gately Park 810 E. 103rd St. Chicago, IL 60628	9/5	60.9	60.9	Topdressing fertilizer for turf growth	4	15.2
26	Chicago Park District Trumbull Park 2400 E. 105th St. Chicago, IL 60617	9/6	60.3	60.3	Topdressing fertilizer for turf growth	4	15.1
27	Chicago Park District Calumet Park 9801 S. Ave. G Chicago, IL 60617	9/9, 9/10, 9/11	343.3	343.3	Topdressing fertilizer for turf growth	20	17.2
28	Twin Orchard Golf Club 22353 Old McHenry Rd. Long Grove, IL 60047	9/5	62.7	62.7	Topdressing fertilizer for turf growth	4	15.7
29	Stickney WRP Metropolitan Water Reclamation District of Greater Chicago 6001 W. Pershing Rd. Cicero, IL 60804	8/30, 9/3, 9/11, 9/12, 9/13, 9/17, 9/23, 9/24, 9/25, 9/26	664.6	664.6	Soil amendment for turf establishment	11	60.4

TABLE 1 (Continued): USER INFORMATION FOR THE STICKNEY WATER RECLAMATION PLANT'S AIR-DRIED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE THIRD QUARTER OF 2013

Site No.	Name and Address of User	Dates	Quantity, dry ton		Purpose	Application	
			3rd Quarter	Cumulative		Area (acre)	Rate (ton/acre) <sup>1</sup>
30	Oak Lawn High School 9400 Southwest Hwy. Oak Lawn, IL 60453	9/10	47.7	47.7	Topdressing fertilizer for turf growth	3	15.9
31	Evanston-Wilmette Golf Course 1030 Central St. Evanston, IL 60201	9/12, 9/13, 9/17	252.9	252.9	Topdressing fertilizer for turf growth	16	15.8
32	Schaumburg Park District Olympic Park 1675 E. Old Schaumburg Rd. Schaumburg, IL 60193	9/17	16.6	16.6	Topdressing fertilizer for turf growth	1	16.6
33	North Shore Country Club 1340 Glenview Rd. Glenview, IL 60025	9/25	51.2	51.2	Topdressing fertilizer for turf growth	3	17.1
34	Midlothian Park District Memorial Park 3220 W. 145th St. Midlothian, IL 60445	9/26	29.3	29.3	Topdressing fertilizer for turf growth	2	14.7

<sup>1</sup>Application rate is based on quantity of biosolids distributed in the third quarter.



TABLE 2: USER INFORMATION FOR THE CALUMET WATER RECLAMATION PLANT'S AIR-DRIED BIOSOLIDS  
DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE THIRD  
QUARTER OF 2013

Site No.	Name and Address of User	Dates	Quantity, dry ton		Purpose	Application	
			3rd Quarter	Cumulative		Area (acre)	Rate (ton/acre) <sup>1</sup>
1	Chicago Park District Washington Park 5531 S. King Dr. Chicago, IL 60615	7/12	63.4	943.5 <sup>2</sup>	Topdressing fertilizer for turf growth	4	15.8
2	Harvey Park District Gloria Taylor Park 148th and Broadway Ave. Harvey, IL 60426	8/19	72.6	72.6	Topdressing fertilizer for turf growth	4	18.2
3	Harvey Park District Taft Park 162nd & Emerland Ave. Harvey, IL 60426	8/20	90.5	90.5	Topdressing fertilizer for turf growth	5	18.1
4	Frankfort Square Park District Dr. Julian Rogus School Park 20027 S. 88th Ave. Frankfort, IL 60423	8/26	38.3	38.3	Topdressing fertilizer for turf growth	2	19.1
5	Frankfort Square Park District Kiwanis Park 8230 Pine Hill Rd. Frankfort, IL 60423	8/27	38.0	38.0	Topdressing fertilizer for turf growth	2	19.0

TABLE 2 (Continued): USER INFORMATION FOR THE CALUMET WATER RECLAMATION PLANT'S AIR-DRIED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE THIRD QUARTER OF 2013

Site No.	Name and Address of User	Dates	Quantity, dry ton		Application		
			3rd Quarter	Cumulative	Purpose	Area (acre)	Rate (ton/acre) <sup>1</sup>
6	Frankfort Square Park District Community Park 290 Graceland Ln. Frankfort, IL 60423	8/28	34.9	34.9	Topdressing fertilizer for turf growth	2	17.4
7	Frankfort Square Park District Champion Park 20130 Rosewood Dr. Frankfort, IL 60423	8/29	17.7	17.7	Topdressing fertilizer for turf growth	1	17.7
8	Frankfort Square Park District Hunter Prairie Park North Ave. & Oak Ln. Frankfort, IL 60423	8/29	16.9	16.9	Topdressing fertilizer for turf growth	1	16.9
9	Frankfort Square Park District Square Link Golf Course 7861 W. St. Francis Rd. Frankfort, IL 60423	8/30	18.2	18.2	Topdressing fertilizer for turf growth	1	18.2
10	Blue Island Park District Centennial Park 1732 Vermont St. Blue Island, IL 60406	9/18	19.2	19.2	Topdressing fertilizer for turf growth	1	19.2

<sup>1</sup>Application rate is based on quantity of biosolids distributed in the third quarter.

<sup>2</sup>Sum of biosolids received from Calumet and Stickney Water Reclamation Plants.

TABLE 3: ANALYSIS OF AIR-DRIED BIOSOLIDS APPLIED TO LAND FROM THE STICKNEY WATER RECLAMATION PLANT'S SOLIDS DRYING AREAS DURING THE THIRD QUARTER OF 2013

Sampling Date		2-Jul	11-Jul	23-Jul	30-Jul	1-Aug	13-Aug	20-Aug	21-Aug	21-Aug	26-Aug
Site No. <sup>1</sup>		1, 2, 3, 18	18	4, 5, 6,	7, 17	19	8, 9	10, 11	12, 13, 14,	13,	14, 15, 20, 21
Constituent	Unit										
pH		6.2	6.3	6.8	6.6	6.5	6.4	6.6	6.5	6.5	6.7
Total Solids	%	65.0	65.8	76.6	82.8	73.5	73.1	81.6	80.5	82.1	80.2
Total Volatile Solids	"	44.4	34.6	43.5	45.8	44.2	43.1	42.2	38.3	44.6	40.6
Volatile Acids as Acetic Acid	mg/kg	97	128	40	97	125	306	12	34	50	37
Total Kjeldahl Nitrogen	"	25,913	23,699	20,537	17,548	21,996	16,255	20,191	26,031	25,232	30,588
NH <sub>3</sub> -N	"	515	552	3,232	2,094	1,900	1,421	2,009	3,626	2,032	4,299
Total P	"	25,790	22,149	17,986	14,918	19,378	13,303	17,416	19,860	22,378	23,512
As	"	9.0	10.0	8.0	10.0	9.0	9.0	8.0	9.0	8.0	8.0
Cd	"	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Cr	"	140	147	151	149	145	147	144	158	144	158
Cu	"	400	391	414	413	414	418	417	419	426	428
Hg	"	1.1	1.2	1.1	1.2	0.9	0.9	1.1	1.2	0.9	1.2
K	"	2,799	4,002	2,988	3,100	3,121	3,240	3,207	3,033	2,988	2,825
Mn	"	511	532	552	692	540	562	557	576	559	576
Mo	"	8.0	7.0	11.0	10.0	10.0	11.0	11.0	10.0	11.0	11.0
Ni	"	39.0	39.0	41.0	40.0	41.0	41.0	41.0	42.0	42.0	43.0
Pb	"	121	138	135	114	120	118	114	136	117	141
Se	"	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Zn	"	795	894	857	794	807	836	812	851	825	864

TABLE 3 (Continued): ANALYSIS OF AIR-DRIED BIOSOLIDS FROM THE STICKNEY WATER RECLAMATION PLANT'S SOLIDS DRYING AREAS APPLIED TO LAND DURING THE THIRD QUARTER OF 2013

Sampling Date		29-Aug	30-Aug	30-Aug	4-Sep	9-Sep	13-Sep	11-Sep	17-Sep	25-Sep
Site No. <sup>1</sup>		16, 22	23	29	24, 25, 26, 28	27, 30, 31	29	29	32	33, 34
Constituent	Unit									
pH		6.5	6.4	7.6	6.5	6.3	6.9	7.1	6.3	5.9
Total Solids	%	65.5	70.3	66.1	69.7	74.0	69.4	71.7	72.6	71.6
Total Volatile Solids	"	42.2	39.9	42.0	39.1	40.8	44.0	43.5	40.2	38.4
Volatile Acids as Acetic Acid	mg/kg	72	21	NRR	7	35	35	NRR	57	24
Total Kjeldahl Nitrogen	"	31,758	15,925	28,595	19,572	18,495	22,883	21,066	21,496	23,646
NH <sub>3</sub> -N	"	2,728	2,325	7,458	2,753	1,854	3,609	4,486	1,601	459
Total P	"	25,221	12,938	20,978	17,508	14,348	15,696	14,591	18,576	20,708
As	"	8.0	7.0	6.0	8.0	8.0	6.0	7.0	10.0	7.0
Cd	"	3.0	3.0	3.0	3.0	4.0	3.0	3.0	3.0	3.0
Cr	"	154	150	144	161	164	150	148	153	157
Cu	"	424	434	438	425	476	449	448	416	441
Hg	"	1.1	1.2	1.2	1.2	1.2	1.4	1.2	1.0	1.4
K	"	2,908	1,498	3,592	3,154	1,670	4,087	4,248	3,250	1,920
Mn	"	557	572	522	606	631	532	537	579	583
Mo	"	11.0	11.0	14.0	12.0	11.0	13.0	13.0	10.0	11.0
Ni	"	42.0	42.0	47.0	43.0	46.0	49.0	58.0	41.0	43.0
Pb	"	136	138	114	139	153	119	118	125	143
Se	"	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Zn	"	859	874	872	919	946	887	870	837	931

<sup>1</sup>Batches of biosolids applied to sites listed in [Table 1](#).

<sup>2</sup>Not reportable result.

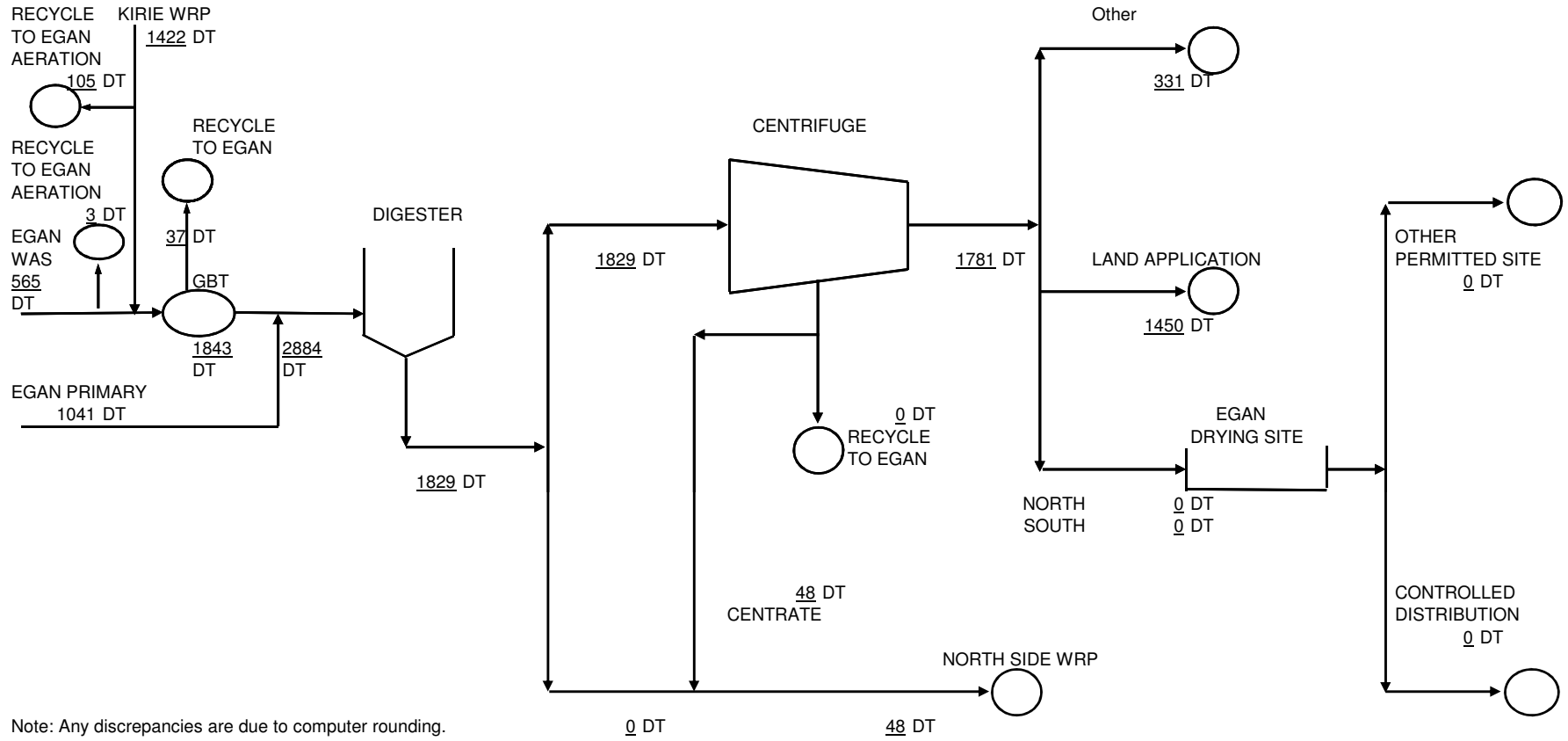
TABLE 4: ANALYSIS OF AIR-DRIED BIOSOLIDS APPLIED TO LAND FROM THE CALUMET WATER RECLAMATION PLANT'S SOLIDS DRYING AREAS DURING THE THIRD QUARTER OF 2013

Sampling Date		12-Jul	19-Aug	30-Aug	18-Sep
Site No. <sup>1</sup>		1	2, 3	4, 5, 6, 7, 8, 9	10
<u>Constituent</u>	<u>Unit</u>				
pH		6.6	7.1	7.4	7.0
Total Solids	%	62.0	84.2	78.7	82.0
Total Volatile Solids	"	43.7	45.1	44.6	43.2
Volatile Acids as Acetic Acid	mg/kg	171	24	86	27
Total Kjeldahl Nitrogen	"	22,694	29,459	29,335	26,731
NH <sub>3</sub> -N	"	722	3,444	2,525	2,788
Total P	"	26,557	23,337	23,757	24,075
As	"	6.0	5.0	5.0	7.0
Cd	"	2	2	2	2
Cr	"	52	51	49	59
Cu	"	395	390	401	407
Hg	"	1.1	1.0	1.1	1.2
K	"	2,400	2,874	2,100	3,584
Mn	"	920	879	885	930
Mo	"	7.0	12.0	13.0	11.0
Ni	"	26.0	28.0	28.0	29.0
Pb	"	80	78	79	84
Se	"	<5.0	<5.0	<5.0	<5.0
Zn	"	1,078	1,130	1,171	1,214

<sup>1</sup>Batches of biosolids applied to sites listed in [Table 2](#).

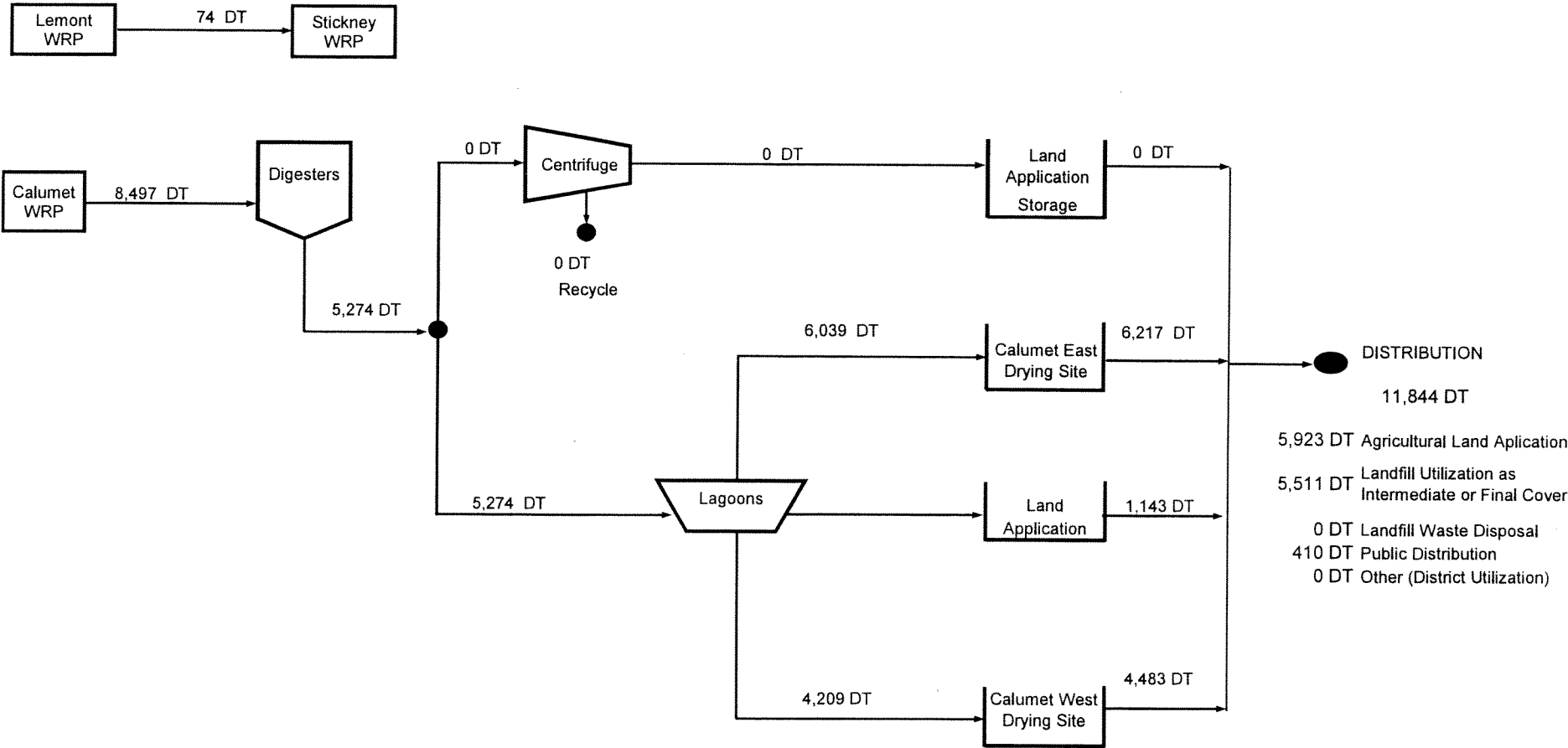
**J.E. EGAN WRP SOLIDS DISTRIBUTION-  
FIGURE 1**

**July - August 2013**

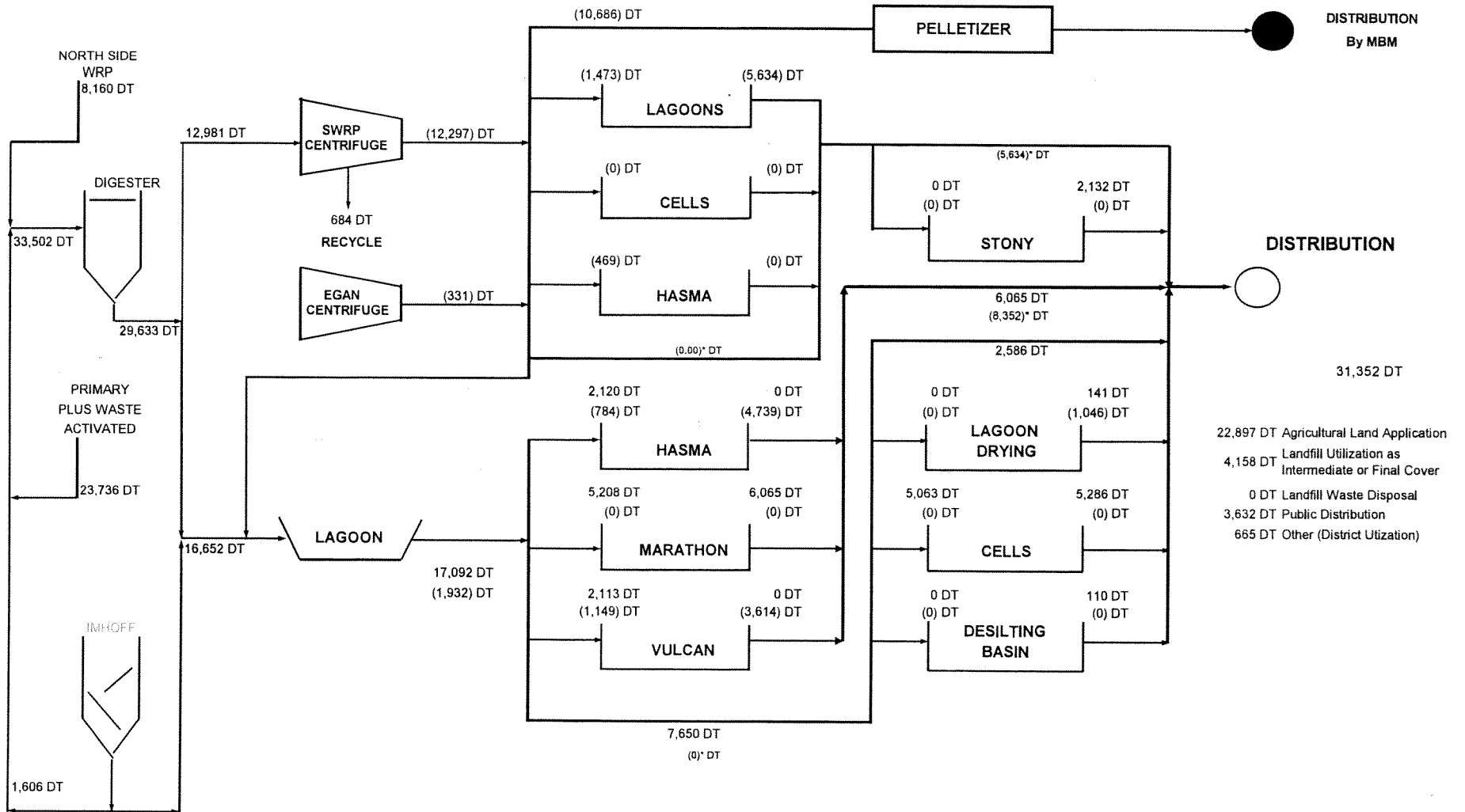


# CALUMET WATER RECLAMATION PLANT SOLIDS DISTRIBUTION - Third Quarter 2013

Figure 2



**STICKNEY WATER RECLAMATION PLANT SOLIDS DISTRIBUTION - 3rd Quarter 2013**  
**FIGURE 3**



(CENTRIFUGE CAKE)\*