

*Protecting Our Water Environment*



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

*MONITORING AND RESEARCH  
DEPARTMENT*

***REPORT NO. 14-02***

***CONTROLLED SOLIDS DISTRIBUTION REPORT***

***FOR FOURTH QUARTER 2013***

***February 2014***

## Protecting Our Water Environment

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February 18, 2014

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, Fourth Quarter (October – December 2013)

This letter transmits information and data for the Metropolitan Water Reclamation District of Greater Chicago – Controlled Solids Distribution Program for the fourth quarter (October – December 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 October – December 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 15 sites during the fourth 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 FOURTH QUARTER OF 2013

Site No.	Name and Address of User	Dates	Quantity, dry ton		Purpose	Application	
			4th Quarter	2013 Cumulative		Area (acre)	Rate (ton/acre) <sup>1</sup>
1	Village of Lyons Veterans Park 4200 Lawndale Ave. Lyons, IL 60534	10/21	27.9	27.9	Topdressing fertilizer for turf growth	2	13.9

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

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

Site No.	Name and Address of User	Dates	Quantity, dry ton		Purpose	Application	
			4th Quarter	2013 Cumulative		Area (acre)	Rate (ton/acre) <sup>1</sup>
1	Village of Romeoville Volunteer Park 1100 Murphy Dr. Romeoville, IL 60446	10/1	57.0	57.0	Topdressing fertilizer for turf growth	3	19.0
2	Burbank Park District Newcastle Park 8050 S. Newcastle Rd. Burbank, IL 60459	10/2	13.8	13.8	Topdressing fertilizer for turf growth	1	13.8
3	Hanover Park Park District Heritage Park W. Arlington Dr. and Mallard Lake Trail Hanover Park, IL 60133	10/15	15.7	15.7	Topdressing fertilizer for turf growth	1	15.7
4	Village of Lyons Smith Park 4200 Lawndale Ave. Lyons, IL 60534	10/21	40.9	40.9	Topdressing fertilizer for turf growth	2	20.4
5	Village of Lyons Veterans Park 4200 Lawndale Ave. Lyons, IL 60534	10/21	13.7	41.6 <sup>2</sup>	Topdressing fertilizer for turf growth	1	13.7

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

Site No.	Name and Address of User	Dates	Quantity, dry ton		Purpose	Application	
			4th Quarter	2013 Cumulative		Area (acre)	Rate (ton/acre) <sup>1</sup>
6	Burbank Park District Fitzgerald Park 83 <sup>rd</sup> St. and Nashville Rd. Burbank, IL 60459	10/21, 10/24	28.6	28.6	Topdressing fertilizer for turf growth	2	14.3
7	Burbank Park District Macarthur Park 83 <sup>rd</sup> St. and McVicker Rd. Burbank, IL 60459	10/22	28.7	28.7	Topdressing fertilizer for turf growth	2	14.4
8	Burbank Park District Harr Park 83 <sup>rd</sup> St. and Laramie Rd. Burbank, IL 60459	10/24	15.2	15.2	Topdressing fertilizer for turf growth	1	15.2
9	Burbank Park District Michael Looney Park 77 <sup>th</sup> St. and Narragansett (East) Rd. Burbank, IL 60459	10/25	28.0	28.0	Topdressing fertilizer for turf growth	2	14.0
10	Burbank Park District Commissioners Park 79 <sup>th</sup> St. and Newland Rd. Burbank, IL 60459	10/28, 10/29	59.2	59.2	Topdressing fertilizer for turf growth	3	19.7

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

Site No.	Name and Address of User	Dates	Quantity, dry ton		Purpose	Application	
			4th Quarter	2013 Cumulative		Area (acre)	Rate (ton/acre) <sup>1</sup>
11	Burbank Park District Narragansett Park 77 <sup>th</sup> St. and Narragansett Rd. Burbank, IL 60459	10/28	31.3	31.3	Topdressing fertilizer for turf growth	2	15.6
12	Cinder Ridge Golf Course 24801 Lakepoint Dr. Wilmington, IL 60481	10/30	406.5	406.5	Topdressing fertilizer for turf growth	30	13.5
13	Frankfort Park District Main Park 200 S. Locust St. Frankfort, IL 60423	11/4	41.7	41.7	Topdressing fertilizer for turf growth	3	13.9
14	Midlothian Park District Memorial Park 3220 W. 145 <sup>th</sup> St. Midlothian, IL 60445	11/4	79.6	108.9	Topdressing fertilizer for turf growth	5	15.9
15	Glenview Park District Community Park 1001 Zenith Drive Glenview, IL 60025	11/5	13.4	13.4	Topdressing fertilizer for turf growth	1	13.4

<sup>1</sup>Application rate is based on quantity of biosolids distributed in the fourth 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 FOURTH QUARTER OF 2013

Sampling Date		21-Oct
Site No. <sup>1</sup>		1
<u>Constituent</u>	<u>Unit</u>	
pH		6.2
Total Solids	%	58.9
Total Volatile Solids	"	38.6
Volatile Acids as Acetic Acid	mg/kg	36
Total Kjeldahl Nitrogen	"	21,826
NH <sub>3</sub> -N	"	275
Total P	"	21,818
As	"	9.0
Cd	"	4
Cr	"	162
Cu	"	465
Hg	"	1.2
K	"	1,843
Mn	"	606
Mo	"	11.0
Ni	"	45.0
Pb	"	150
Se	"	<5
Zn	"	950

<sup>1</sup>Batch of biosolids applied to site listed in Table 1.

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

Sampling Date		10-Oct	24-Oct	29-Oct	7-Nov	14-Nov
Site No. <sup>1</sup>		1, 2	3, 4, 5, 6	7, 8, 9, 10, 11	12, 13	14, 15
<u>Constituent</u>	<u>Unit</u>					
pH		7.0	7.2	6.8	6.8	6.9
Total Solids	%	64.8	71.3	64.6	63.5	60.4
Total Volatile Solids	"	45.7	44.3	44.0	43.8	43.5
Volatile Acids as Acetic Acid	mg/kg	62	81	36	74	109
Total Kjeldahl Nitrogen	"	31,021	26,323	26,934	23,643	28,683
NH <sub>3</sub> -N	"	2,866	2,390	1,637	1,976	2,680
Total P	"	26,773	24,950	26,675	26,106	28,493
As	"	6.0	8.0	6.0	7.0	<5.0
Cd	"	2.0	2.0	2.0	2.0	1.0
Cr	"	51	53	52	50	49
Cu	"	388	422	402	404	406
Hg	"	0.9	0.8	0.8	0.6	1
K	"	3,294	3,874	3,150	4,139	3,980
Mn	"	991	1,010	946	998	911
Mo	"	12.0	12.0	10.0	11.0	11

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

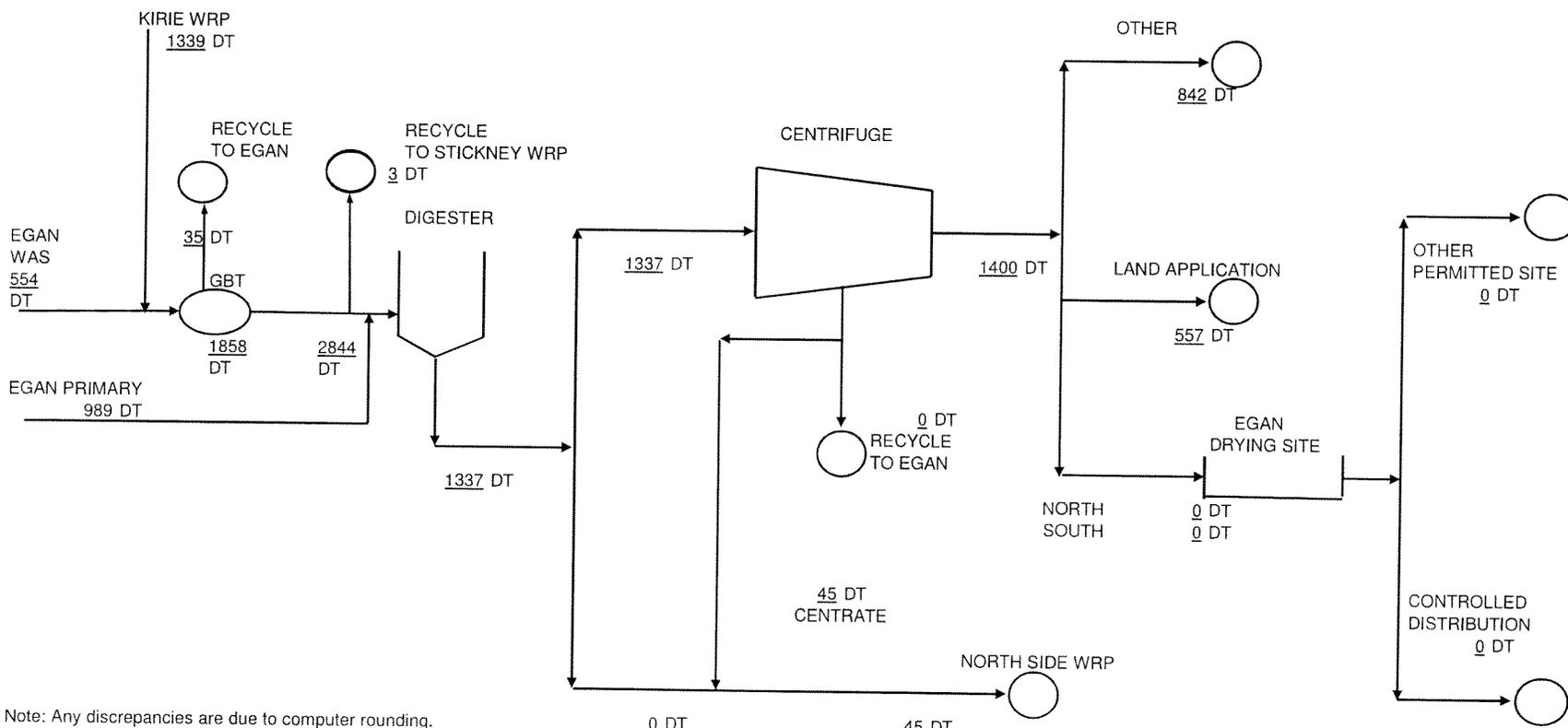
Sampling Date		10-Oct	24-Oct	29-Oct	7-Nov	14-Nov
Site No. <sup>1</sup>		1, 2	3, 4, 5, 6	7, 8, 9, 10, 11	12, 13	14, 15
<u>Constituent</u>	<u>Unit</u>					
Ni	"	28.0	27.0	27.0	25.0	25
Pb	"	82	85	80	81	80
Se	"	<5.0	<5.0	<5.0	<5.0	<5.0
Zn	"	1,086	1,102	1,075	1,078	960

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

# J.E. EGAN WRP SOLIDS DISTRIBUTION-

**FIGURE 1**

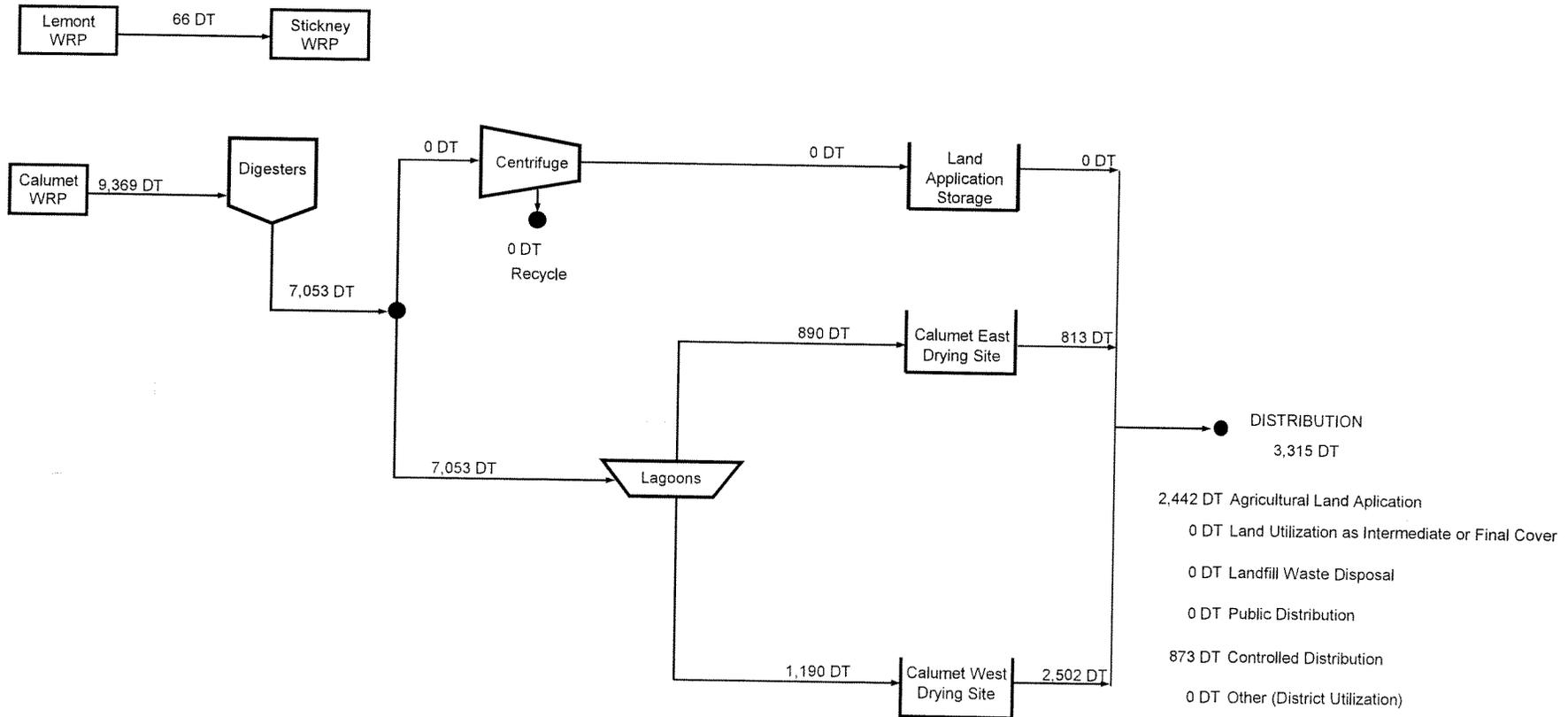
October - December 2013



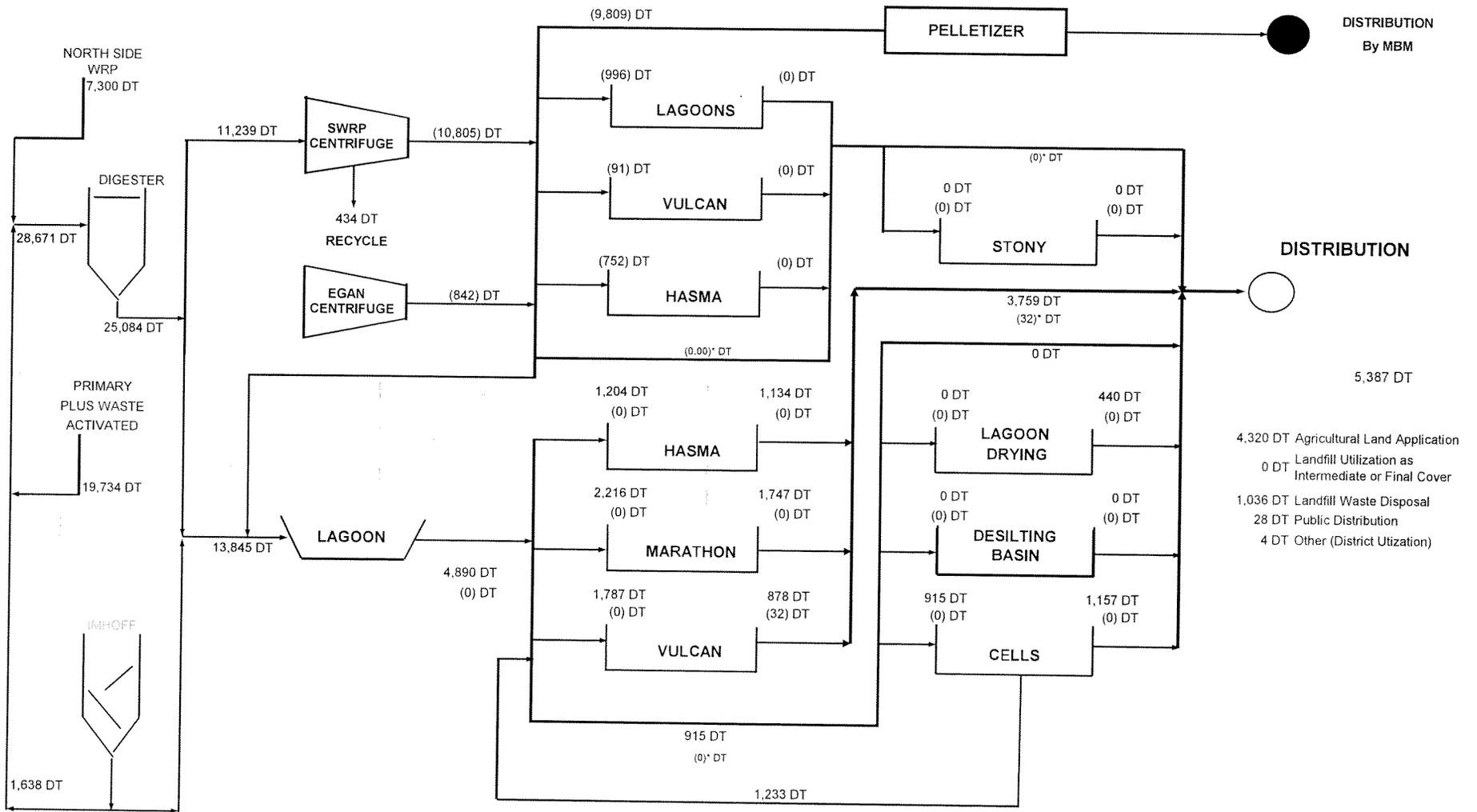
Note: Any discrepancies are due to computer rounding.  
 Centrifuge draw DT exceeds Centrifuge feed DT by 63 DT because of sample anomalies. Centrate DT are estimated to be approximately 45 DT.

# CALUMET WATER RECLAMATION PLANT SOLIDS DISTRIBUTION - Fourth Quarter 2013

Figure 2



**STICKNEY WATER RECLAMATION PLANT SOLIDS DISTRIBUTION - 4th Quarter 2013**  
**FIGURE 3**



(CENTRIFUGE CAKE)\*