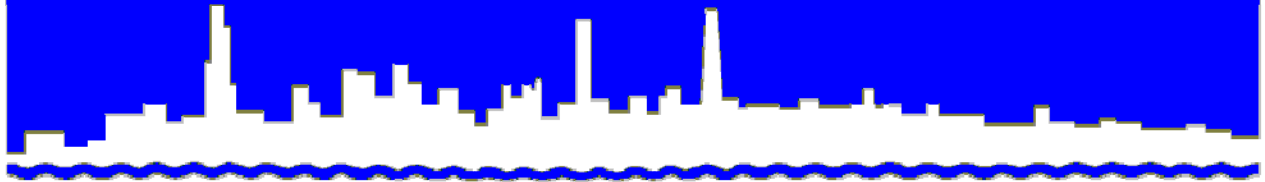


Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

*MONITORING AND RESEARCH
DEPARTMENT*

REPORT NO. 16-04

CONTROLLED SOLIDS DISTRIBUTION REPORT

FOR FOURTH QUARTER 2015

February 2016

Protecting Our Water Environment

BOARD OF COMMISSIONERS

Mariyana T. Spyropoulos
President
Barbara J. McGowan
Vice President
Frank Avila
Chairman of Finance
Michael A. Alvarez
Timothy Bradford
Cynthia M. Santos
Debra Shore
Kari K. Steele
David J. Walsh

Metropolitan Water Reclamation District of Greater Chicago

100 East Erie Street Chicago, Illinois 60611-3154 f: 312.751.5194 312.751.5190

THOMAS C. GRANATO, Ph.D., BCES

Director of Monitoring and Research

thomas.granato@mwrld.org

February 8, 2016

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 Nos. 2010-SC-0200 and 2015-SC-59620, Fourth Quarter (October – December 2015)

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 2015), as required by Illinois Environmental Protection Agency Permit Nos. 2010-SC-0200 and 2015-SC-59620.

Sludge flow schematic diagrams for solids processed during October – December 2015 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 29 sites from the Stickney WRP (and none from the Calumet WRP) during the fourth quarter of 2015. The user information reports for these sites are presented in Table 1, and the analyses of biosolids delivered to these sites are presented in Table 2.

Very truly yours,

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

TCG:HZ:OO:cm

Attachments

cc/att: Mr. V. Aistars (USEPA)/Mr. J. Patel (IEPA)
Ms. M. Sharma/Mr. B. Garelli/Mr. T. Conway
Mr. D. Collins/Dr. H. Zhang/Dr. A. Cox
Dr. L. Hundal/Dr. O. Oladeji

TABLE 1: USER INFORMATION FOR THE STICKNEY WATER RECLAMATION PLANT'S AIR-DRIED AND COMPOSTED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE FOURTH QUARTER OF 2015

Site No.	Name and Address of User	Dates	Quantity, dry ton		Application		
			4th Quarter	Cumulative ¹	Purpose	Area (acre)	Rate (ton/acre) ²
1	Twin Oaks Landscaping 997 Harvey Rd. Oswego, IL 60543	10/5	99.1	99.1	Soil amendment for turf and tree establishment	3	33.0
2	North Shore Country Club 1340 Glenview Rd. Glenview, IL 60025	10/6, 10/7	284.7	510.1	Soil amendment for turf and trees	9	31.6
3	Piper & Son Landscaping Co. 31 W. 320 Ramm Dr. Naperville, IL 60564	10/7	28.7	295.5	Soil amendment for turf and tree establishment	1	28.7
4	Luke Lobo 17525 S. Parker Rd. Homer Glen, IL 60491	10/7, 10/8, 10/9, 10/12	234.6	341.5	Soil amendment for turf and tree establishment	7	33.5
5	Oak Lawn Park District Memorial Park 102 nd & Major Ave. Oak Lawn, IL	10/8	14.4	14.4	Topdressing fertilizer for turf growth	1	14.4
6	Oak Lawn Park District Worthbrook Park 90 th & Ridgeland Ave. Oak Lawn, IL	10/8	13.5	13.5	Topdressing fertilizer for turf growth	1	13.5

TABLE 1 (Continued): USER INFORMATION FOR THE STICKNEY WATER RECLAMATION PLANT'S AIR-DRIED AND COMPOSTED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE FOURTH QUARTER OF 2015

Site No.	Name and Address of User	Dates	Quantity, dry ton		Application		
			4th Quarter	Cumulative ¹	Purpose	Area (acre)	Rate (ton/acre) ²
7	Cinder Ridge Golf Course 24801 Lakepoint Dr. Wilmington, IL 60481	10/8, 10/9, 10/12, 10/13	779.7	1876.1	Soil amendment for turf and tree establishment	20	39.0
8	Canal Shores Golf Course 1030 Central St. Evanston, IL 60201	10/12 - 10/15	476.3	476.3	Topdressing fertilizer for turf growth	32	14.9
9	Lyons Park District Smith Park 4200 Lawndale Ave. Lyons, IL 60534	10/14	83.2	83.2	Topdressing fertilizer for turf growth	6	13.9
10	Burbank Park District MacArthur Park 83 rd & McVicker Burbank, IL 60459	10/15	28.6	28.6	Topdressing fertilizer for turf growth	2	14.3
11	Burbank Park District Michaelony Park Burbank, IL 60460	10/15	30.5	30.5	Topdressing fertilizer for turf growth	2	15.2
12	Village Green of Woodridge 1575 W. 75th St. Woodridge, IL 60517	10/16, 10/19, 11/05, 11/06,	254.5	254.5	Topdressing fertilizer for turf growth	18	14.1

TABLE 1 (Continued): USER INFORMATION FOR THE STICKNEY WATER RECLAMATION PLANT'S AIR-DRIED AND COMPOSTED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE FOURTH QUARTER OF 2015

Site No.	Name and Address of User	Dates	Quantity, dry ton		Application		
			4th Quarter	Cumulative ¹	Purpose	Area (acre)	Rate (ton/acre) ²
13	Oak Lawn Park District Westside Baseball 9400 S Oak Park Ave. Oak Lawn, IL 60453	10/16	125.7	125.7	Topdressing fertilizer for turf growth	9	14.0
14	Village of Richton Park 4455 Sauk Trail Richton Park, IL 60471	10/19, 10/20	287.8	287.8	Topdressing fertilizer for turf growth	20	14.4
15	Tinley Park Park District Vogt Woods Park 6527 W 171 st St. Tinley Park, IL 60477	10/20	62.3	62.3	Topdressing fertilizer for turf growth	5	12.5
16	Franklin Park Park District Birch Park 2952 Birch St. Franklin Park, IL 60131	10/20	17.1	17.1	Topdressing fertilizer for turf growth	1	17.1
17	Franklin Park Park District North Park 10040 Addison Ave. Franklin Park, IL 60131	10/21	15.0	15.0	Topdressing fertilizer for turf growth	1	15.0
18	Mid Iron Golf Club 12680 Bell Rd. Lemont, IL 60439	10/20, 10/21, 10/22	59.5	640.8	Topdressing fertilizer for turf growth	4	14.9

TABLE 1 (Continued): USER INFORMATION FOR THE STICKNEY WATER RECLAMATION PLANT'S AIR-DRIED AND COMPOSTED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE FOURTH QUARTER OF 2015

Site No.	Name and Address of User	Dates	Quantity, dry ton		Application		
			4th Quarter	Cumulative ¹	Purpose	Area (acre)	Rate (ton/acre) ²
19	Lemont Park District Centennial Park 16028 W. 127 th St. Lemont, IL 60439	10/21, 10/22	72.9	72.9	Topdressing fertilizer for turf growth	5	14.6
20	Summit Park District Summit Park 5700 S. Archer Ave. Summit, IL	10/21, 10/22	147.8	147.8	Topdressing fertilizer for turf growth	10	14.8
21	City of Northlake Centerpoint Preserve 400 N. Wolf Rd. Northlake, IL 60164	10/21	177.4	177.4	Topdressing fertilizer for turf growth	13	13.6
22	Gleneagles Golf Course 13070 McCarthy Rd. Lemont, IL 60439	10/22, 10/23	164.0	268.6	Topdressing fertilizer for turf growth	12	13.7
23	Coyote Run Golf Course 720 Kedzie Ave. Flossmoor, IL 60422	10/27	73.2	73.2	Topdressing fertilizer for turf growth	5	14.6
24	Park Forest Park District Central Park 350 Victory Dr. Park Forest, IL 60466	10/27	88.7	88.7	Topdressing fertilizer for turf growth	6	14.8

TABLE 1 (Continued): USER INFORMATION FOR THE STICKNEY WATER RECLAMATION PLANT'S AIR-DRIED AND COMPOSTED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE FOURTH QUARTER OF 2015

Site No.	Name and Address of User	Dates	Quantity, dry ton		Application		
			4th Quarter	Cumulative ¹	Purpose	Area (acre)	Rate (ton/acre) ²
25	Beary Landscaping 15001 W. 159 th St. Lockport, IL 60491	10/27, 11/02	6.9	6.9	Soil amendment for turf and tree establishment	0.2	34.5
26	Metropolitan Water Reclamation District of Greater Chicago (Mainstream Pumping Station) 6100 River Rd. Hodgkins, IL 60525	10/29, 11/03, 11/05	120.1	120.1	Soil amendment for turf and tree establishment	4	30.0
27	Bakool Amin 1500 Buttitta Dr. Streamwood, IL 60107	11/03	8.0	8.0	Soil amendment for turf and tree establishment	0.2	40.0
28	Metropolitan Water Reclamation District of Greater Chicago (Lane Project) 6001 W. Pershing Rd. Cicero, IL 60804	11/06, 11/10, 11/16, 12/10, 12/11, 12/15	142.6	2323.9	Soil amendment for turf and tree establishment	4	35.7

TABLE 1 (Continued): USER INFORMATION FOR THE STICKNEY WATER RECLAMATION PLANT'S AIR-DRIED AND COMPOSTED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE FOURTH QUARTER OF 2015

Site No.	Name and Address of User	Dates	Quantity, dry ton		Application		
			4th Quarter	Cumulative ¹	Purpose	Area (acre)	Rate (ton/acre) ²
29	Tinley Park Park District McCarthy Park 16801 S. 80 th Ave. Tinley Park, IL 60477	11/16	44.1	44.1	Soil amendment for turf and tree establishment	1	44.1

¹Sum of air-dried and composted biosolids from Calumet and Stickney Water Reclamation Plants.

²Application rate is based on quantity of biosolids distributed during the fourth quarter.

TABLE 2: ANALYSIS OF AIR-DRIED AND COMPOSTED BIOSOLIDS APPLIED TO LAND FROM THE STICKNEY WATER RECLAMATION PLANT'S SOLIDS DRYING AREAS DURING THE FOURTH QUARTER OF 2015

Sampling Date	7-Oct ²	13-Oct ²	13-Oct	13-Oct	13-Oct	20-Oct	20-Oct	28-Oct	3-Nov	3-Nov ²	17-Nov ²	24-Nov ²	
Site No. ¹	1, 2, 3, 4, 5	1	1	2, 3	4, 5, 6, 7	4, 7, 8	8, 9, 10, 11, 12, 13	14, 15, 16, 17, 18, 19, 20, 21, 22	23, 24	25, 26, 27, 28	28	28, 29	
Constituent	Unit												
pH		6.6	6.0	6.6	6.5	6.5	6.9	6.9	7.0	7.2	5.9	5.8	5.8
Total Solids	%	54.1	50.1	86.6	74.8	69.2	71.9	70.8	66.4	67.4	53.4	49.0	53.5
Total Volatile Solids	"	53.5	53.2	39.7	40.3	40.9	39.9	42.2	45.5	45.0	52.7	56.0	55.6
Volatile Acids as Acetic Acid	mg/kg	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7
Total Kjeldahl Nitrogen	"	30,733	27,635	27,172	29,653	33,885	36,090	28,015	36,790	38,527	24,358	23,027	29,456
NH ₃ -N	"	3,057	2,051	3,298	3,778	4,861	6,122	5,144	6,508	8,258	357	877	877
Total P	"	27,820	28,181	24,535	24,828	27,781	26,085	18,580	26,390	26,712	24,192	23,748	32,217
As	"	<5	<5	<5	5	5	<5	5	<5	<5	<5	<5	<5
Cd	"	2	2	8	8	8	8	8	8	7	2	2	2

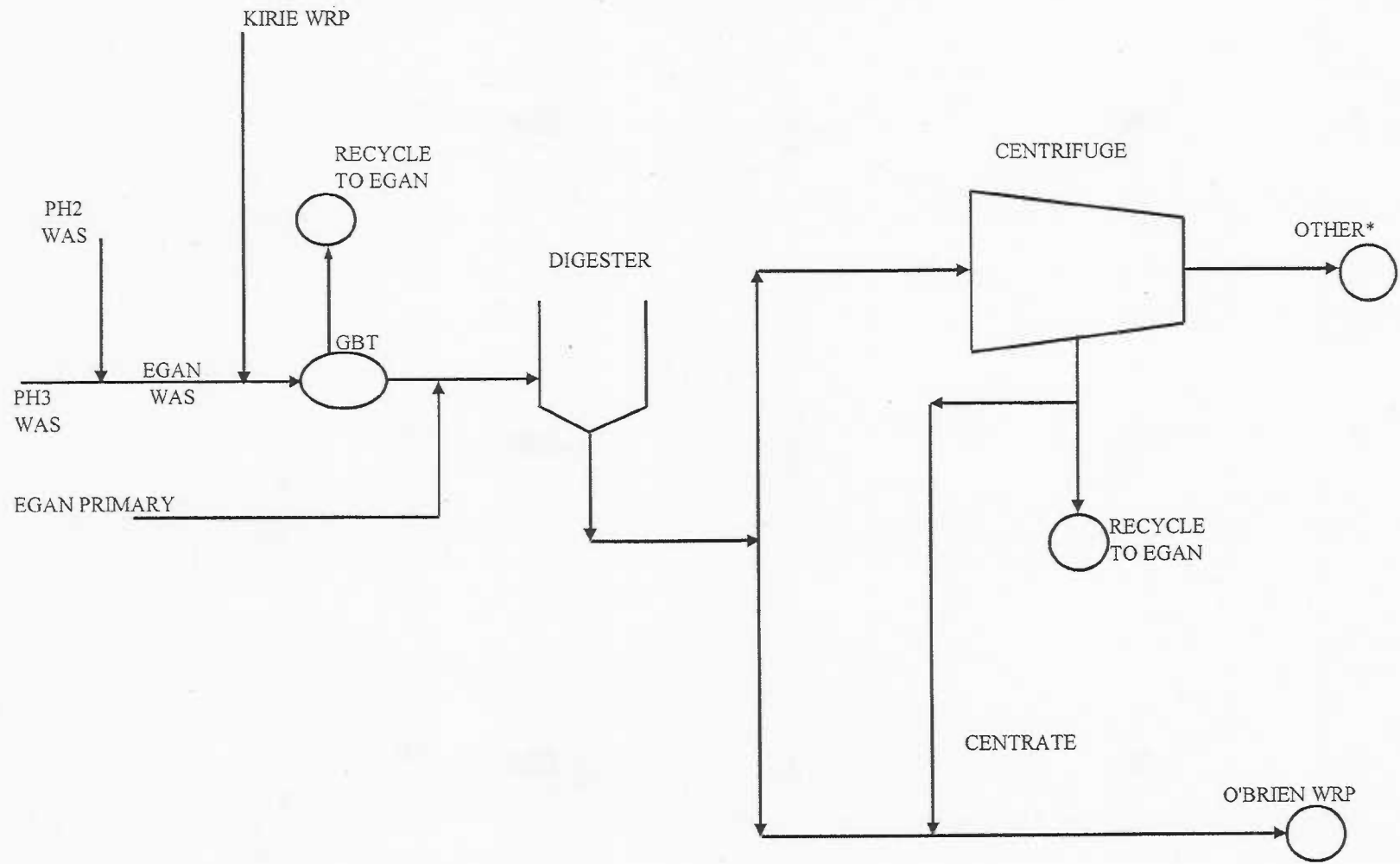
TABLE 2 (Continued): ANALYSIS OF AIR-DRIED AND COMPOSTED BIOSOLIDS APPLIED TO LAND FROM THE STICKNEY WATER RECLAMATION PLANT'S SOLIDS DRYING AREAS DURING THE FOURTH QUARTER OF 2015

Sampling Date	7-Oct ²	13-Oct ²	13-Oct	13-Oct	13-Oct	20-Oct	20-Oct	28-Oct	3-Nov	3-Nov ²	17-Nov ²	24-Nov ²	
Site No. ¹	1, 2, 3, 4, 5	1	1	2, 3	4, 5, 6, 7	4, 7, 8	8, 9, 10, 11, 12, 13	14, 15, 16, 17, 18, 19, 20, 21, 22	23, 24	25, 26, 27, 28	28	28, 29	
<u>Constituent</u>	<u>Unit</u>												
Cr	"	85	87	170	176	177	174	178	190	171	100	86	77
Cu	"	566	540	469	491	484	473	469	494	466	612	557	540
Hg	"	0.8	0.8	0.8	0.8	0.7	<0.3	0.6	0.7	0.5	1.0	0.6	0.8
K	"	2,633	2,863	4,870	4,297	5,351	4,974	5,384	5,519	3,381	2,844	2,809	2,653
Mn	"	566	574	501	515	512	508	513	548	525	682	552	528
Mo	"	5	4	11	12	13	14	13	14	11	6	7	7
Ni	"	63	59	46	49	49	49	48	52	47	68	61	58
Pb	"	41	41	91	96	93	93	92	96	92	49	41	40
Se	"	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Zn	"	637	619	850	883	881	873	880	948	873	740	634	598

¹Batches of air-dried and composted biosolids applied to sites are listed in Table 1.

²Composted biosolids.

FIGURE 1: JOHN E. EGAN WATER RECLAMATION PLANT OPERATIONAL FLOW CHART FOR THIRD QUARTER 2015



*Sent to either Stickney or Calumet drying sites for further processing or storage prior to farmland application.

FIGURE 2: CALUMET WATER RECLAMATION PLANT OPERATIONAL FLOW CHART FOR THIRD QUARTER 2015

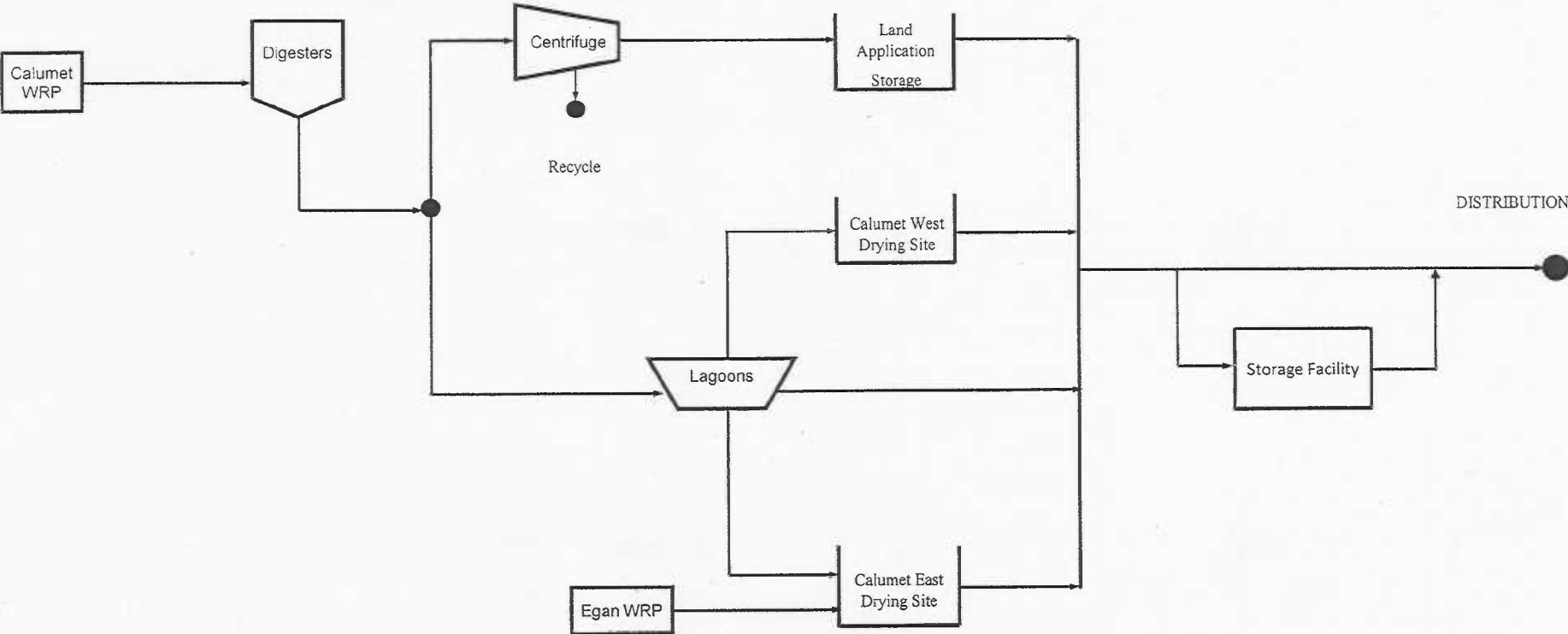


FIGURE 3: STICKNEY WATER RECLAMATION PLANT OPERATIONAL FLOW CHART FOR THIRD QUARTER 2015

