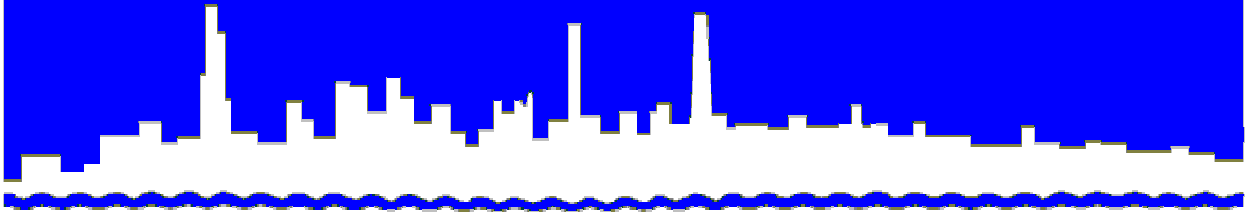


Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***MONITORING AND RESEARCH
DEPARTMENT***

REPORT NO. 17-40

CONTROLLED SOLIDS DISTRIBUTION REPORT

FOR SECOND QUARTER 2017

September 2017

Protecting Our Water Environment

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Edward W. Podczewinski, P.E.

Acting Director of Monitoring and Research

September 8, 2017

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. 2015-SC-59620, Second Quarter (April – June 2017)

This letter transmits information and data for the Metropolitan Water Reclamation District of Greater Chicago – Controlled Solids Distribution Program for the second quarter (April – June 2017), as required by Illinois Environmental Protection Agency Permit No. 2015-SC-59620.

Sludge flow schematic diagrams for solids processed during April – June 2017 are shown in Figure 1 – John E. Egan Water Reclamation Plant (WRP), Figure 2 – Calumet WRP, and Figure 3 – Stickney WRP.

Air-dried and composted biosolids were distributed to 63 sites during the second quarter of 2017. The user information reports for these sites are presented in Tables 1 and 2, and the analyses of biosolids delivered to these sites are presented in Tables 3 and 4.

Very truly yours,

Albert E. Cox, Ph.D.
Environmental Monitoring and Research Manager
Monitoring and Research Department

AC:OO:cm

Attachments

cc/att: Mr. J. Colletti (USEPA)/Mr. J. Patel (IEPA)
Mr. E. Podczewinski
Mr. J. Murray/Mr. B. Garelli/Mr. T. Conway
Mr. Ahmad Laban/Dr. H. Zhang/Dr. A. Cox
Dr. G. Tian/Dr. O. Oladeji

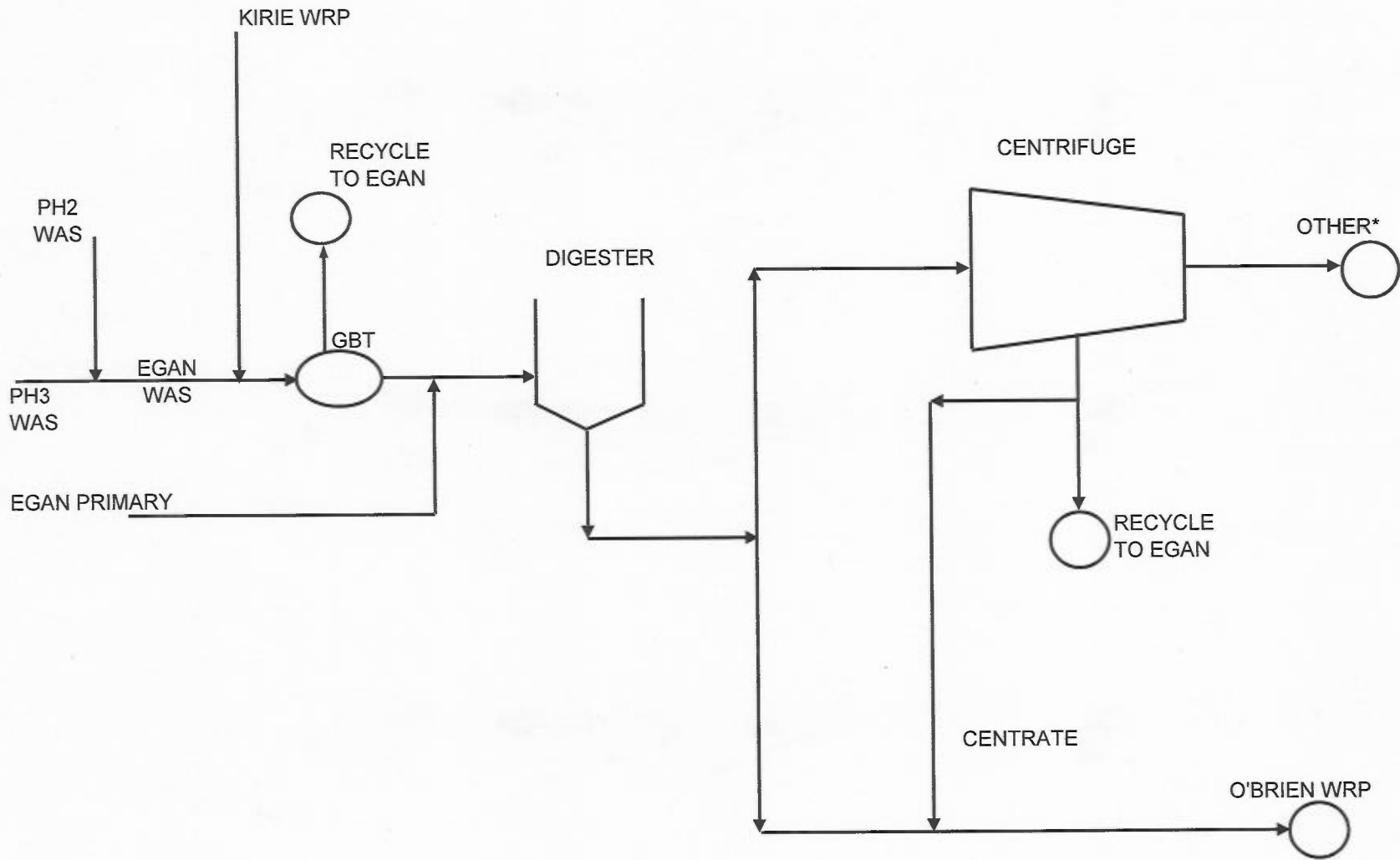
Metropolitan Water Reclamation District of Greater Chicago
100 East Erie Street Chicago, Illinois 60611-2803 312-751-5600

**CONTROLLED SOLIDS DISTRIBUTION REPORT
FOR SECOND QUARTER 2017**

Monitoring and Research Department
Edward W. Podczerwinski, Acting Director

September 2017

FIGURE 1: JOHN E. EGAN WATER RECLAMATION PLANT OPERATIONAL FLOW CHART FOR SECOND QUARTER 2017



*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 SECOND QUARTER 2017

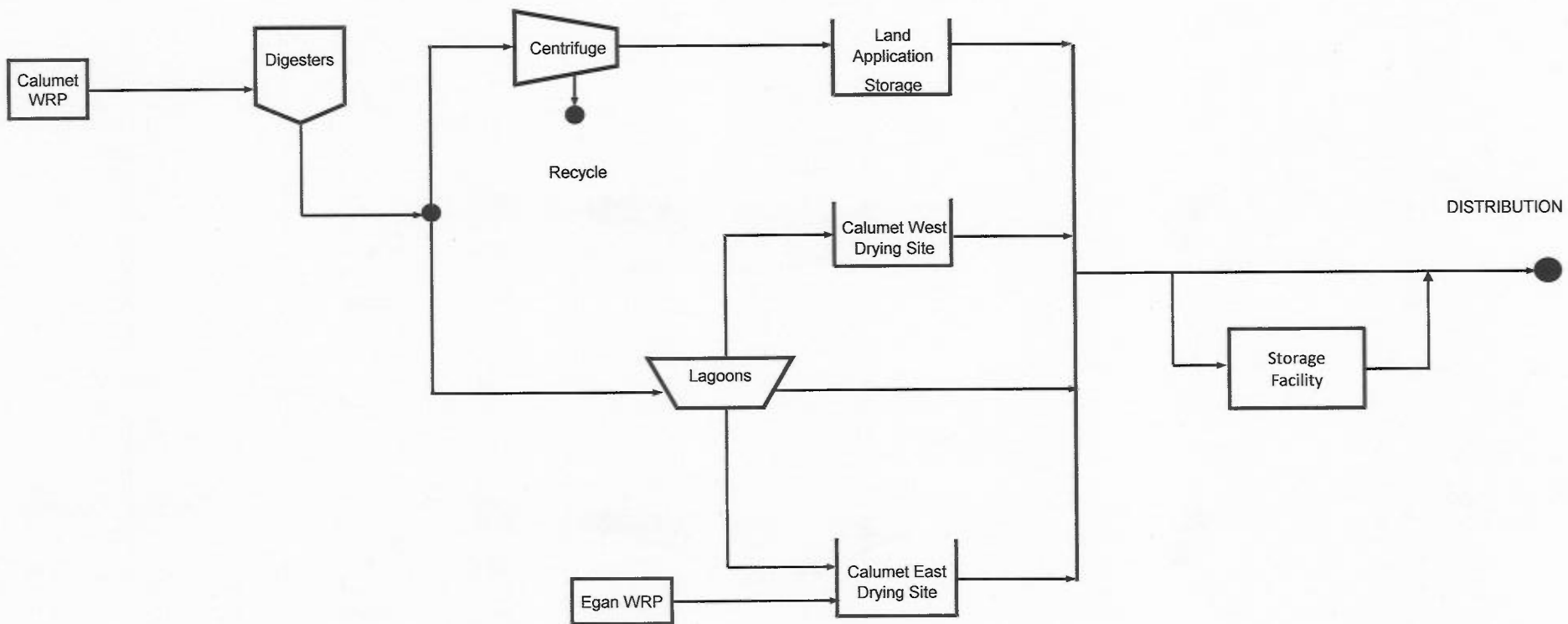


FIGURE 3: STICKNEY WATER RECLAMATION PLANT OPERATIONAL FLOW CHART FOR SECOND QUARTER 2017

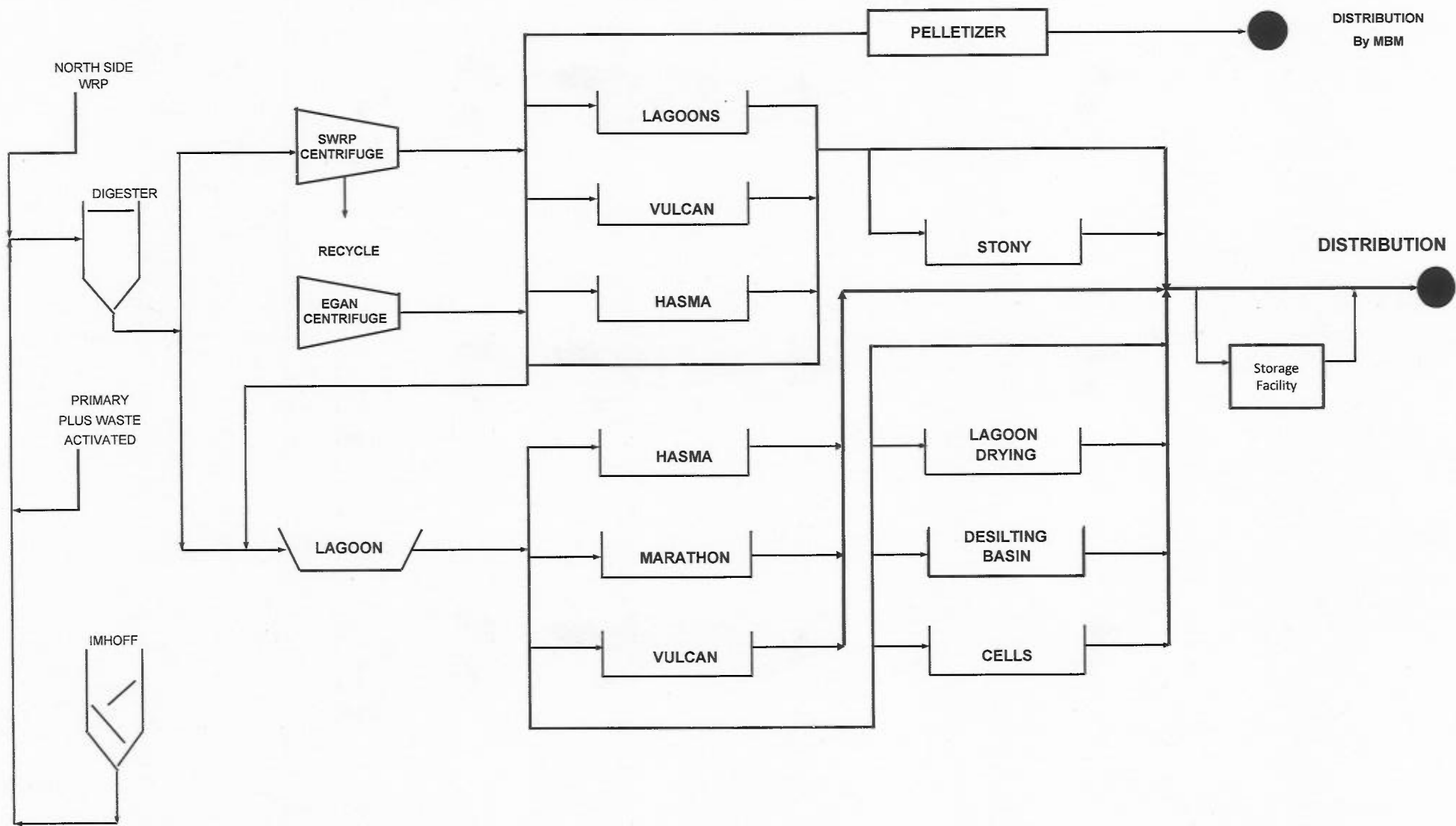


TABLE 1: USER INFORMATION FOR THE STICKNEY WATER RECLAMATION PLANT'S AIR-DRIED AND COMPOSTED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE SECOND QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Purpose	Application	Area (acre)	Rate (ton/acre)
			Second Quarter	Cumulative				
Composted Biosolids								
1	Village of Oak Forest 15601 S. Central Ave. Oak Forest, IL 60452	4/18, 4/24	14.2	14.2	Compost as soil amendment for trees	NA ¹	NA	
2	Beary Landscaping, Inc. 15001 W 159 th St. Lockport, IL 60491	4/25	4.0	4.0	Compost as soil amendment for trees	NA	NA	
3	Chicago Urban Farms (South Peoria) 6113 South Peoria Chicago, IL 60637	4/18, 6/2	7.9	7.9	Compost as soil amendment for garden	NA	NA	
4	Chicago Urban Farms (South Shore) 7260 South Shore Dr. Chicago, IL 60649	4/18	3.8	3.8	Compost as soil amendment for garden	NA	NA	
5	Chicago Urban Farms (South Escanaba) 24 South Escanaba Chicago, IL 60617	4/18, 6/2	6.4	6.4	Compost as soil amendment for garden	NA	NA	

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 SECOND QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Application Purpose	Area (acre)	Rate (ton/acre)
			Second Quarter	Cumulative			
Composted Biosolids							
6	Chicago Urban Farms (South Morgan) 5155 South Morgan Chicago, IL 60652	4/18, 6/28	14.0	14.0	Compost as soil amendment for garden	NA	NA
7	Chicago Urban Farms (South Prairie) 4237 South Prairie Chicago, IL 60652	4/24	3.7	3.7	Compost as soil amendment for garden	NA	NA
8	Chicago Urban Farms (East 83 rd) 2622 E. 83 rd St. Chicago, IL 60617	4/24	3.6	3.6	Compost as soil amendment for garden	NA	NA
9	Chicago Urban Farms (South Wallace) 9024 South Wallace Chicago, IL 60620	4/24	3.4	3.4	Compost as soil amendment for garden	NA	NA
10	Chicago Urban Farms (104th Street) 407 West 104th St. Chicago, IL 60628	4/25	3.8	3.8	Compost as soil amendment for garden	NA	NA

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 SECOND QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Application	Area (acre)	Rate (ton/acre)
			Second Quarter	Cumulative	Purpose		
Composted Biosolids							
11	Chicago Urban Farms (South Brandon) 8933 South Brandon Chicago, IL 60617	4/25, 5/10	8.0	8.0	Compost as soil amendment for garden	NA	NA
12	Chicago Urban Farms (South Escanaba 2) 8450 S Escanaba St. Chicago, IL 60617	5/3, 5/10, 5/15	17.9	17.9	Compost as soil amendment for garden	NA	NA
13	Chicago Urban Farms (South Chicago) 8586 S. Chicago Ave. Chicago, IL 60617	5/15	4.6	4.6	Compost as soil amendment for garden	NA	NA
14	Chicago Urban Farms (South Mackinaw) 10654 S Mackinaw Ave. Chicago, IL 60617	6/2	3.5	3.5	Compost as soil amendment for garden	NA	NA
15	Chicago Urban Farms (Stony Island) 351 S. Stony Island Ave. Chicago, IL 60649	6/6	9.4	9.4	Compost as soil amendment for garden	NA	NA

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 SECOND QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Application Purpose	Area (acre)	Rate (ton/acre)
			Second Quarter	Cumulative			
Composted Biosolids							
16	Chicago Urban Farms (Morgan) 8347 S. Morgan Chicago, IL 60620	6/8	9.0	9.0	Compost as soil amendment for garden	NA	NA
17	Chicago Urban Farms (South Wallace) 10105 South Wallace Chicago, IL 60628	6/8	3.0	3.0	Compost as soil amendment for garden	NA	NA
18	Chicago Urban Farms (Ellis) 6342 S Ellis Ave. Chicago, IL 60637	6/13	3.9	3.9	Compost as soil amendment for garden	NA	NA
19	Chicago Urban Farms (95th) 423 W. 95th St. Chicago, IL 60628	6/13	7.4	7.4	Compost as soil amendment for garden	NA	NA
20	Chicago Urban Farms (South Buffalo) 8501 S. Buffalo St. Chicago, IL 60628	6/21	7.5	7.5	Compost as soil amendment for garden	NA	NA

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 SECOND QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Purpose	Application	
			Second Quarter	Cumulative		Area (acre)	Rate (ton/acre)
Composted Biosolids							
21	Chicago Urban Farms (Wabash) 4934 S. Wabash St. Chicago, IL 60628	6/21, 6/22	16.0	16.0	Compost as soil amendment for garden	NA	NA
22	Chicago Urban Farms (South Everett) 5513 S. Everett Chicago, IL 60620	6/28	3.3	3.3	Compost as soil amendment for garden	NA	NA
23	Kautz Farm Cooperative Organization 2700 International Dr. West Chicago, IL 60185	4/24, 5/16	40.0	40.0	Compost as soil amendment for trees	NA	NA
24	Village of Park Forest 350 Victory Dr. Park Forest, IL 60466	5/12, 5/15	4.9	4.9	Compost as soil amendment for trees	NA	NA
25	City Colleges of Chicago (Daley College) 7500 S. Pulaski Rd. Chicago, IL 60652	5/15	18.7	18.7	Compost as soil amendment for trees	NA	NA

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 SECOND QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Purpose	Application	
			Second Quarter	Cumulative		Area (acre)	Rate (ton/acre)
Composted Biosolids							
26	City Colleges of Chicago (Dawson Tech) 3901 S. State St. Chicago, IL 60609	5/15	7.1	7.1	Compost as soil amendment for trees	NA	NA
27	City Colleges of Chicago (Olive-Harvey Learning Center) 10001 S. Woodlawn Ave. Chicago, IL 60628	5/15, 5/16	33.4	33.4	Compost as soil amendment for trees	NA	NA
28	City Colleges of Chicago (South) Chicago Learning Center 3055 E. 9Second St. Chicago, IL 60617	5/15	7.1	7.1	Compost as soil amendment for trees	NA	NA
29	City Colleges of Chicago West Side Learning Center 4624 W. Madison St. Chicago, IL 60644	5/16	5.5	5.5	Compost as soil amendment for trees	NA	NA

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 SECOND QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Application Purpose	Area (acre)	Rate (ton/acre)
			Second Quarter	Cumulative			
Composted Biosolids							
30	Northeastern Illinois University 5500 N. St. Louis Ave. Chicago, IL 60625	5/16	21.6	21.6	Compost as soil amendment for trees	NA	NA
31	Ford Heights Park District 1200 12 th St. Ford Heights, IL 60411	5/16, 5/17, 6/22, 6/23, 6/29	84.9	84.9	Compost as soil amendment for trees	NA	NA
32	Village of Hanover Park 2041 Lake St. Hanover Park, IL 60133	5/17	13.3	13.3	Compost as soil amendment for trees	NA	NA
33	Midlothian Park District 14500 S. Kedzie Ave. Midlothian, IL 60445	5/17, 5/18	14.6	14.6	Compost as soil amendment for trees	NA	NA
34	Naperville Park District 731 S. West St. Naperville, IL 60540	5/23, 5/31	32.2	32.2	Compost as soil amendment for trees	NA	NA

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 SECOND QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Application Purpose	Area (acre)	Rate (ton/acre)
			Second Quarter	Cumulative			
Composted Biosolids							
35	Village of Midlothian 14801 Pulaski Ave. Midlothian, IL 60445	5/18	7.1	7.1	Compost as soil amendment for trees	NA	NA
36	Coyote Run Golf Course 800 Kedzie Ave. Floosmoor, IL 60442	5/18	6.8	6.8	Compost as soil amendment for trees	NA	NA
37	Village of Oak Lawn 5532 W. 98 th St. Oak Lawn, IL 60453	5/18, 5/31	18.3	18.3	Compost as soil amendment for trees	NA	NA
38	Gould Landscaping 7785 Wolf Rd. Burr Ridge, IL 60527	6/1	8.7	8.7	Compost as soil amendment for trees	NA	NA
39	Cog Hill Golf Course 12294 Archer Ave. Lemont, IL 60439	6/2	7.5	7.5	Compost as soil amendment for trees	NA	NA

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 SECOND QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Application Purpose	Area (acre)	Rate (ton/acre)
			Second Quarter	Cumulative			
Composted Biosolids							
40	Alliance Brewery 10215 S. Harlem Ave. Chicago Ridge, IL 60415	6/6	3.2	3.2	Compost as soil amendment for trees	NA	NA
41	Glen Oaks Country Club 21 W. 451 Hill Ave. Glen Ellyn, IL 60137	6/6	8.4	8.4	Compost as soil amendment for trees	NA	NA
42	Hinsdale Adventist Academy 631 E. Hickory St. Hinsdale, IL 60521	6/6	3.0	3.0	Compost as soil amendment for trees	NA	NA
43	GMI Packaging Co. 1600 E. 122 nd Street, Chicago, IL 60633	6/9	7.4	7.4	Compost as soil amendment for trees	NA	NA
44	RR Landscape Supply 3900 W. 167 th St. Markham, IL 60428	6/28	2.5	2.5	Compost as soil amendment for trees	NA	NA
45	Des Plaines Park District 2222 Birch St. Des Plaines, IL 60018	6/30	8.5	8.5	Compost as soil amendment for trees	NA	NA

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 SECOND QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Application		
			Second Quarter	Cumulative	Purpose	Area (acre)	Rate (ton/acre)
Air-Dried Biosolids							
46	East Leyden High School 3400 Rose St. Franklin Park, IL 60131	5/19	61.0	61.0	Topdressing fertilizer for turf growth	5	12.2
47	Stanley Janik 17120 W. 151 st Lockport, IL 60441	5/19, 6/7	513.3	513.3	Topdressing fertilizer for turf growth	15	34.2
48	Stony Creek Golf Course 5850 W 103 rd St. Oak Lawn, IL 60453	6/7, 6/8	319.6	319.6	Topdressing fertilizer for turf growth	25	12.8
49	Fairway Custom Landscaping, Inc. 2110 Division St. Melrose Park, IL 60160	6/7, 6/8	24.4	24.4	Topdressing fertilizer for turf growth	2	12.2
50	Oak Lawn High School 4400 93 rd St. Oak Lawn, IL 60453	6/13	63.2	63.2	Topdressing fertilizer for turf growth	5	12.6

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 SECOND QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Application Purpose	Area (acre)	Rate (ton/acre)
			Second Quarter	Cumulative			
Air-Dried Biosolids							
51	Chicago Park District Kelvyn Park 4438 W. Wrightwood Ave. Chicago, IL 60639	6/22	235.3	235.3	Topdressing fertilizer for turf growth	18	13.1
52	Chicago Park District Humboldt Park 1400 N. Sacramento Ave. Chicago, IL 60622	6/26, 6/27	407.3	407.3	Topdressing fertilizer for turf growth	30	13.6
53	Chicago Park District Garfield Park 100 N Central Park Dr. Chicago, IL 60624	6/28	192.1	192.1	Topdressing fertilizer for turf growth	15	12.8
54	Wilmette Golf Course 3900 Fairway Dr. Wilmette, IL 60091	6/30	13.4	13.4	Topdressing fertilizer for turf growth	1	13.4

¹Not applicable

TABLE 2: USER INFORMATION FOR THE CALUMET WATER RECLAMATION PLANT'S AIR-DRIED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE SECOND QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Application		
			Second Quarter	Cumulative	Purpose	Area (acre)	Rate (ton/acre)
1	Chicago Park District Oriole Park 5430 N. Olcott Ave, Chicago, IL 60656	6/5	86.4	86.4	Topdressing fertilizer for turf growth	6	14.4
2	Chicago Park District 6566 N. Avondale Ave. Chicago, IL 60631	6/6	101.7	101.6	Topdressing fertilizer for turf growth	9.0	11.3
3	Chicago Park District Norwood Park 5801 N. Natoma Ave. Chicago, IL 60630	6/7	97.1	97.1	Topdressing fertilizer for turf growth	8	12.1
4	Chicago Park District Warren Park 6601 N Western Ave. Chicago, IL 60645	6/8, 6/9	441.7	441.7	Topdressing fertilizer for turf growth	34	13.0
5	Chicago Park District Pottawatamie Park 8 North Ave. St. Charles, IL 60174	6/7	68.8	68.8	Topdressing fertilizer for turf growth	5	13.8

TABLE 2 (Continued): USER INFORMATION FOR THE CALUMET WATER RECLAMATION PLANT'S AIR-DRIED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE SECOND QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Application		
			Second Quarter	Cumulative	Purpose	Area (acre)	Rate (ton/acre)
6	Chicago Park District Welles Park 2333 W. Sunnyside Ave. Chicago, IL 60625	6/12	121.3	121.3	Topdressing fertilizer for turf growth	9	13.5
7	Chicago Park District Horner Park 2741 W Montrose Ave. Chicago, IL 60618	6/12, 6/13	272.9	272.8	Topdressing fertilizer for turf growth	20	13.6
8	Thornton Fractional South High School 18500 Burnham Ave. Lansing, IL 60438	6/7	47.2	47.2	Topdressing fertilizer for turf growth	4	11.8
9	Rich Central High School 3600 203rd St. Olympia Fields, IL 60461	6/29	14.3	14.3	Topdressing fertilizer for turf growth	1	14.3

TABLE 3: ANALYSIS OF AIR-DRIED AND COMPOSTED BIOSOLIDS APPLIED TO SOILS FROM THE STICKNEY WATER RECLAMATION PLANT'S SOLIDS DRYING AREAS DURING THE SECOND QUARTER OF 2017

Sampling Date		18-Apr	24-Apr	3-May	16-May	19-May	13-Jun	26-Jun	
Site No. ¹		1, 3, 4, 5, 6	1, 2, 7, 8, 9, 10, 11	12	12, 13, 23 – 45	46, 47, 48, 49	50, 51	52, 53, 54	
Constituent	Unit	Composted Biosolids				Air-Dried Biosolids			
pH		6.8	6.8	6.8	6.9	5.6	5.7	5.6	
Total Solids	%	45.5	38.5	46.2	51.8	65.0	80.6	71.4	
Total Volatile Solids	"	58.0	61.7	49.2	59.2	37.0	35.5	37.2	
Volatile Acids as Acetic Acid	mg/kg	40	57	26	83	72	24	62	
Total Kjeldahl Nitrogen	"	14,403	17,690	16,128	16,115	16,446	12,034	5,592	
NH ₃ -N	"	41	25	25	21	72	676	5	
Total P	"	9,444	10,113	9,904	11,833	20,423	13,294	6,462	
As	"	<5	<5	<5	<5	9	9	11	
Cd	"	2	2	2	2	5	6	6	
Cr	"	58	54	56	52	191	195	205	
Cu	"	226	184	212	203	463	464	478	
Hg	"	< 0.3	0.3	0.3	0.3	< 0.3	1.0	0.5	
K	"	3,738	3,224	3,876	3,533	2,050	1,788	1,841	
Mn	"	366	409	412	365	566	567	571	
Mo	"	1	1	1	1	7	5	5	
Ni	"	23	19	24	22	46	47	48	
Pb	"	64	65	75	64	131	115	119	
Se	"	<5	<5	<5	<5	<5	<5	<5	
Zn	"	449	405	429	406	1,037	971	1,015	

¹Batches of air-dried and composted biosolids applied to sites are 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 SECOND QUARTER OF 2017

Sampling Date	9-Jun	
Site No. ¹	1, 2, 3, 4, 5, 6, 7, 8, 9	
<u>Constituent</u>	<u>Unit</u>	
pH		6.1
Total Solids	%	81.3
Total Volatile Solids	"	34.5
Volatile Acids as Acetic Acid	mg/kg	64
Total Kjeldahl Nitrogen	"	17,542
NH ₃ -N	"	605
Total P	"	17,998
As	"	10
Cd	"	3
Cr	"	56
Cu	"	435
Hg	"	0.8
K	"	1,308
Mn	"	1,173
Mo	"	3
Ni	"	29
Pb	"	81
Se	"	<5
Zn	"	1,235

¹Batch of biosolids applied to sites listed in Table 2.