

Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***MONITORING AND RESEARCH
DEPARTMENT***

REPORT NO. 20-03

LAWNDALE AVENUE SOLIDS MANAGEMENT AREA

MONITORING REPORT FOR

FOURTH QUARTER 2019

May 2020

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Director of Monitoring and Research

May 21, 2020

Mr. Roger Callaway
Illinois Environmental Protection Agency
Bureau of Water
DWPC Compliance Section #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9274
roger.callaway@illinois.gov

Dear Mr. Callaway:

Subject: Lawndale Avenue Solids Management Area - Stickney Water Reclamation Plant, Illinois Environmental Protection Agency Permit No. 2015-AO-59623, Monitoring Report for October, November, and December 2019

The attached tables contain the monitoring data for the Lawndale Avenue Solids Management Area for October, November, and December 2019, as required by Illinois Environmental Protection Agency (IEPA) Operating Permit No. 2015-AO-59623. Biosolids were placed in the solids drying area in October, November, and December.

- Table 1 Analysis of Water from Monitoring Wells M-11 through M-15 at the Lawndale Avenue Solids Management Area Sampled on October 30, 2019.
- Table 2 Analysis of Water from Lysimeters L-1N through L-9N at the Lawndale Avenue Solids Management Area Sampled in November and December 2019.
- Table 3 Analysis of Biosolids Placed in the Lawndale Avenue Solids Management Area During October, November, and December 2019.

Very truly yours,

Albert Cox

Albert E. Cox
Environmental Monitoring and Research Manager
Monitoring and Research Department

AC:BM:cm
Attachments
cc/att: Mr. J. Patel, IEPA
Records Unit, IEPA
Dr. H. Zhang

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**LAWNDALE AVENUE SOLIDS MANAGEMENT AREA
MONITORING REPORT FOR
FOURTH QUARTER 2019**

Monitoring and Research Department
Edward W. Podczewinski, Director

May 2020

TABLE 1: ANALYSIS OF WATER FROM MONITORING WELLS M-11 THROUGH M-15
 AT THE LAWNSDALE AVENUE SOLIDS MANAGEMENT AREA
 SAMPLED ON OCTOBER 30, 2019

Parameter	Monitoring Well No.				
	M-11	M-12	M-13	M-14	M-15
pH	6.6	7.3	7.6	7.3	7.3
	----- mg L ⁻¹ -----				
Cl ⁻	24	15	11	10	9
SO ₄ ²⁻	205	347	653	129	841
NO ₂ ⁻ +NO ₃ ⁻ -N	<0.25	<0.25	<0.25	<0.25	<0.25

TABLE 2: ANALYSIS OF WATER FROM LYSIMETERS L-1N THROUGH L-9N
 AT THE LAWNDALE AVENUE SOLIDS MANAGEMENT AREA
 SAMPLED IN NOVEMBER AND DECEMBER, 2019¹

Parameter	Lysimeter No.								
	L-1N	L-2N	L-3N	L-4N	L-5N	L-6N	L-7N ²	L-8N	L-9N
pH	7.7	7.6	7.0	7.3	7.1	6.9	8.6	7.5	NS ³
	----- mg L ⁻¹ -----								
Cl ⁻	17	151	149	27	631	82	NS	377	NS
SO ₄ ²⁻	818	130	66	1,538	1,671	1,422	NS	128	NS
NO ₂ ⁻ +NO ₃ ⁻ -N	1.08	1.95	NRR ⁴	0.53	0.90	0.46	1.19	0.92	NS

¹All lysimeters were sampled on November 14, 2019, except lysimeter L-7N, sampled on December 20, 2019.

²Sampling at lysimeter L-7N was suspended after the first quarter of 2017 because biosolids were no longer being dried at the adjacent site (Illinois Environmental Protection Agency Supplemental Permit 2015-AO-59623-1). Biosolids drying at the site has resumed and the lysimeter was inspected and deemed to be functional in December 2019.

³No sample could be submitted for analysis because freezing conditions limited sample volume. Lysimeter L-7N produced enough sample for field measurement of pH and limited laboratory analysis.

⁴No reportable result because samples did not meet acid preservation requirements when received by the laboratory.

TABLE 3: ANALYSIS OF BIOSOLIDS PLACED IN THE LAWNSDALE AVENUE SOLIDS MANAGEMENT AREA DURING OCTOBER, NOVEMBER, AND DECEMBER 2019

Parameter	October	November	December
pH	7.9	7.5	7.8
	----- % -----		
Total Solids	13.8	15.5	10.2
Total Volatile Solids ¹	46.0	43.0	43.9

¹Total volatile solids as a percentage of total solids.