cornerstone
PLLC

February 26, 2021

Mr. Greg MacLean
Regional Materials Management Engineer
New York State Department of Environmental Conservation
6274 East Avon-Lima Road
Avon, NY 14414

Re: SENECA MEADOWS LANDFILL 2020 ANNUAL REPORT
209-4213087

Dear Mr. MacLean:

In accordance with Seneca Meadows, Inc.'s 6 NYCRR Part 360 Solid Waste Management Permit, Condition 49, please find enclosed one copy of the 2020 Annual Report for the Seneca Meadows Landfill.

Should you have any questions or comments regarding this submission, please contact me at (585) 450-4010.

Sincerely,

CORNERSTONE ENGINEERING, GEOLOGY AND LAND SURVEYING, PLLC

Tyler R. Brown, P.E.
Project Manager

Enclosure: 2020 Annual Report Binder and CD with PDF of Report

cc: Mike Miles – NYSDEC (1 binder)
NYSDEC Bureau of Solid Waste, Central Office (2 CDs)
Kyle Black – SMI (3 binders/2 CDs)
File – 4213087 (1 binder)

Cornerstone Engineering, Geology and Land Surveying, PLLC
3136 South Winton Road, Suite 303, Rochester, NY 14623
Tel 877.294.9070 Fax 877.845.1456 tetratech.com

SENECA MEADOWS, INC.

Facility Number SOS08
Permit Number 8-4532-00023 /00001-0

SENECA MEADOWS LANDFILL
2020 ANNUAL REPORT

JOINTLY PREPARED BY:

CORNERSTONE ENGINEERING, GEOLOGY, AND LAND SURVEYING, PLLC

AND

SENECA MEADOWS ENGINEERING GROUP

1786 Salcman Road • Waterloo, NY 13165

315-539-5624 • 315-539-0653 (fax)

FEBRUARY 2021

cornerstone PLLC

3136 S. Winton Rd, Suite 303
Rochester, NY 14623

Aurora Acoustical Consultants Inc. 745 Warren Drive
East Aurora, NY 14052

KR Applin & Associates, 8806 Route 256
Dansville, NY 14437 585-335-5998

SENECA MEADOWS, INC.

2020 ANNUAL REPORT

1.0 INTRODUCTION/NYSDEC'S ANNUAL REPORT FORM

The SENECA MEADOWS, INC. (SMI) Annual Report for the landfill and the tire facility for the calendar year 2020 is prepared in accordance with the NYSDEC's Annual Reporting Form Requirements, SMI's 6 NYCRR Part 360 Operating Permit (Permit #8-4532-00023/00001-0), renewed October 31, 2017 and the SENECA MEADOWS Landfill Environmental Monitoring Plan (February 2007). This report will also serve as the 2020 Annual Report for the Waste Tire Handling & Recovery Facility. Table 1-1 summarizes the tire movement through the facility for 2020.

SMI also provides annual reports under separate cover to the NYSDEC as required by the following state regulated permits/registrations:

PERMIT	EFFECTIVE DATE
Title V Air Facility Permit (Permit #8-4532-00023/00041)	June 26, 2001 Modified: July 1, 2019
SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (Permit #GP-0-17-004, SMI Facility #NYR00A672)	March 1, 2018
6 NYCRR Part 360: Tire Processing Facility (TPF) (Permit #8-4532-00023/00001-0)	October 31, 2017
Article 24: Wetland Permit (Permit #8-4532-00023/00046)	October 5, 2006 Modified: November 26, 2008
Electronic Waste Collection Site Registration (Registration #00566)	September 12, 2011

The introductory section of this Report contains NYSDEC's completed Annual Report Form. Information and supporting data required by the Form is presented throughout this Annual Report and the attached appendices.

TABLE 1-1. TIRE MOVEMENT THROUGH FACILITY

2020 Annual Report
Seneca Meadows, Inc.
Tire Processing Facility
Tire Movement Through Facility
1/01/20-12/31/2020

	Starting Quantity Staged for Processing (Tons)	Starting Quantity in Storage (Tons)	Quantity of Incoming (Tons)	Quantity Sent Out for Processing or Waste to Hill (Tons)	*Quantity of Chipped Tires Used in Landfill Construction (Tons)	Ending Quantity of Tires Staged for Processing (Tons)	Ending estimated Quantity of Tires in Storage (Tons)
Whole Tires	1,152	624	11,863	0		390	528
Chipped Tires		16,032	4,343		14,337		*** 946
** Shredded Tires		0			0		*** 0

* Chipped tires are used in leachate / gas collection system construction or as a beneficial use daily cover.

* Chipped tired not reported in the category waste report were beneficially used in construction as stated in previous quarterly reports.

** Shredded tires utilized for daily cover as Beneficial Use Material & reported in Part 360 Incoming Waste Report on a quarterly basis

*** Based on an actual field survey Dated 01/20/21

Note: Rims removed from incoming whole tires are subtracted from the "Quantity of Incoming Tires" in the quarter in which a full roll-off box of rims are weighed, and taken off-site.

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

MSW, INDUSTRIAL OR ASH LANDFILL ANNUAL/QUARTERLY REPORT

Submit the Annual Report no later than March 1, 2021.

A. This annual/quarterly report is for the year of operation from January 01, 2020 to December 31, 2020

B. Quarterly Report for: ☐ Quarter 1 ☐ Quarter 2 ☐ Quarter 3 ☐ Quarter 4

SECTION 1 – FACILITY INFORMATION

FACILITY INFORMATION

FACILITY NAME: Seneca Meadows Landfill			
FACILITY LOCATION ADDRESS: 1786 Salcman Road	**FACILITY CITY:** Waterloo	**STATE:** NY	**ZIP CODE:** 13165
FACILITY TOWN: Seneca Falls	**FACILITY COUNTY:** Seneca	**FACILITY PHONE NUMBER:** 315-539-5624	
FACILITY NYS PLANNING UNIT: (A list of NYS Planning Units can be found at the end of this report). Western Finger Lakes SWMA (WFLSWMA)		**NYSDEC REGION #:** 8	

360 PERMIT #: 8-4532-00023/00001-0	**DATE ISSUED:** 04/13/99 renewed 10/31/17	**DATE EXPIRES:** 12/31/2025	**NYS DEC ACTIVITY CODE OR REGISTRATION NUMBER:** 50S08

FACILITY CONTACT: Kyle Black	☐ **public** ☒ **private**	**CONTACT PHONE NUMBER:** 315-539-5624	**CONTACT FAX NUMBER:** 315-539-0653
CONTACT EMAIL ADDRESS: kyle.black@wasteconnections.com			

OWNER INFORMATION

OWNER NAME: Seneca Meadows, Inc.	**OWNER PHONE NUMBER:** 315-539-5624	**OWNER FAX NUMBER:** 315-539-0653	
OWNER ADDRESS: 1786 Salcman Road	**OWNER CITY:** Waterloo	**STATE:** NY	**ZIP CODE:** 13165
OWNER CONTACT: Kyle Black	**OWNER CONTACT EMAIL ADDRESS:** kyle.black@wasteconnections.com		

OPERATOR INFORMATION

OPERATOR NAME: ☒ *same as owner*	☐ **public** ☒ **private**

PREFERENCES

Preferred address to receive correspondence:	☒ *Facility location address*	☐ *Owner address*
☐ *Other (provide):*		
Preferred email address:	☒ *Facility Contact*	☐ *Owner Contact*
☐ *Other (provide):*		
Preferred individual to receive correspondence:	☒ *Facility Contact*	☐ *Owner Contact*
☐ *Other (provide):*		

Did you operate in 2020? ☒ Yes; Complete this form.

☐ No; Complete and submit Sections 1 and 23. If you no longer plan to operate and wish to relinquish your permit/registration associated with this solid waste management activity, also complete the "Inactive Solid Waste Management Facility or Activity Notification Form" located at: http://www.dec.ny.gov/chemical/52706.html .

SECTION 2 - SITE LIFE

1. Landfill Capacity Utilized Last Year (reporting year).

   a. What is the estimated landfill capacity that was utilized during the reporting year?

   2,434,071 Cubic Yards of Airspace

   b. What is the estimated in-situ waste density for the reporting year?

   Please do not report units as pounds per cubic yard.

   0.85 Tons/Cubic Yard

2. Remaining Constructed Capacity

   a. What is the remaining capacity of the landfill that is already constructed?

   2,186,480 Cubic Yards of Airspace

   b. What is the estimated remaining life of the constructed capacity?

   0 Years 10 Months

   at 2,180,000 Tons/Year.*

   * Please note that this tonnage rate must include all materials placed in the landfill, i.e., waste, soil, cover, alternative daily covers, etc.

   c. The tonnage rate reported under 2.b. is based on (select one):

   _____ The amount of materials placed in the landfill in the reporting year

   X Estimated future disposal

   _____ Permit limit

   Other (explain): _____

3. Permitted Capacity Still to be Constructed

   a. What is the remaining but not yet constructed landfill capacity that is authorized by a Part 360 permit?

   7,837,558 Cubic Yards of Airspace

   b. What is the projected life of capacity reported in 3.a?

   3 Years 1 Months

   at 2,180,000 Tons/Year.*

   * Please note that this tonnage rate must include all materials disposed in the landfill, i.e., waste, and soil and alternative daily covers.

   c. The tonnage rate reported under 3.b. is based on (select one):

   _____ The amount of materials placed in the landfill in the reporting year

   X Estimated future disposal

   _____ Permit limit

   Other (explain):

   _____ Reprinted

   (12/20)

4. Capacity Proposed in a Part 360 Permit Application

What is the capacity of any expansion proposed in a Part 360 permit application that has been submitted to the Department but not authorized by a permit as of the end of the reporting period?

Not Applicable _____ Cubic Yards of Airspace

5. Estimated Potential Future Capacity Not Permitted or in an Application (optional)

What is the estimated capacity of any potential future expansion at the facility that is not yet authorized by a permit or proposed in a Part 360 permit application that has been submitted to the Department?

Not Applicable _____ Cubic Yards of Airspace

SECTION 3 - PRIMARY LEACHATE

Name of off-site leachate treatment facility(s) utilized: _____

Does the landfill have a constructed liner and a leachate collection system? ☐ Yes ☐ No

Enter the quantity of primary leachate that was collected, removed for on-site and off-site treatment, and recirculated each month, and the corresponding **Acreage, by Cell**:
(Note: For double-lined landfills this should not include the volume of leachate collected from secondary leachate collection and removal systems.)

Refer to Tables 3-1, 3-2, and Appendix B of Leachate and Gas Condensate Report in Section 3.0

For **each cell**, please report the **acreage** and the **primary leachate** amount.

	PRIMARY LEACHATE COLLECTED (GALLONS)						PRIMARY LEACHATE TREATED OFF SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January	Refer to Tables 3-1, 3-2, and Appendix B of Leachate and Gas Condensate Report in Section 3.0						Refer to Table 3-2 of this report.					
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
ANNUAL												

	PRIMARY LEACHATE RECIRCULATED (GALLONS)						PRIMARY LEACHATE TREATED ON SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January	Refer to Table 3-1 of this report.									Not Applicable		
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
ANNUAL												

Submit (attached to this form) a copy of the maintenance logs which document compliance with the Operation and Maintenance Manual's schedule for the routine annual flushing and inspection of the primary leachate collection and removal system. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

Refer to the SMI Daily Cleaning included in Section 3.0 (Leachate Wastewater Management).

Submit (attached to this form) a tabulated compilation of the semi-annual primary leachate quality data collected throughout the year including a summary comparing this year's data with the previous year's data and a summary discussion of results. This list should identify sample location(s) and method of analysis. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

Refer to the Leachate and Gas Condensate Report in Section 3.0 (Leachate Wastewater Management).

SECTION 4 - SECONDARY LEACHATE

Does landfill have a double liner system with a secondary leachate collection and removal system? ☒ Yes ☐ No

Submit (attached to this form) a tabulated compilation of the semi-annual secondary leachate quality data collected throughout the year including a summary comparing this year's data with all previous years' data and a summary discussion of results. This list should identify sample location(s) and methods of analysis. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

Refer to Leachate and Gas Condensate Report in Section 3.0 (Leachate Wastewater Management).

Please report total cost for the year, not cost/gal.

Leachate Cost: (including transportation if appropriate) during the calendar year for leachate treatment: $ $12,600,420

Total quantity treated: 70,291,205 gal

Enter the quantity of secondary leachate that was collected, removed for on-site and off-site treatment, and recirculated each month, and the corresponding **Acreage, by Cell**:

For **each cell**, please report the **acreage** and the **secondary leachate** amount.

Refer to Appendix B of Leachate and Gas Condensate Report in Section 3.0

	SECONDARY LEACHATE COLLECTED (GALLONS)						SECONDARY LEACHATE TREATED OFF SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January	Refer to Appendix B for Leachate and Gas Condensate Report in Section 3.0						Refer to Table 3-2 of this report.					
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
ANNUAL												

	SECONDARY LEACHATE RECIRCULATED (GALLONS)						SECONDARY LEACHATE TREATED ON SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January	Refer to Table 3-1 of this report.									Not Applicable		
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
ANNUAL												

SECTION 5 – BENEFICIAL USE DETERMINATION MATERIALS AND ALTERNATIVE OPERATING COVER MATERIALS

For each type of waste material that the Department has approved for use as alternative operating cover (AOC), intermediate cover, or other landfill material, provide the annual weight in tons, use (i.e., operating cover, intermediate cover, etc.), and source of material. (If material is from a solid waste facility also provide facility name, address, NYS Planning Unit, County/ Province, and State/Country.) **Refer to the list of NYS Planning Units that can be found at the end of this report.**

Type of Solid Waste	Weight (tons/year)	Use	NYS Planning Unit (See Attached List of NYS Planning Units)	County or Province	State or Country	Source (Facility and Address)
Aggregate/Concrete						
Contaminated Soil						
Foundry Sand						
Glass						
Industrial Waste (specify)						
MSW Ash						
Wood Ash						
Paper Mill Sludge						
Processed C&D						
Waste Tire-Derived Aggregate /						
Waste Tires						
Other (specify)						
Total AOC						
Total Beneficial Use Determination Materials						

Refer to Table 1, made part of this form on next page.

The Seneca Meadows permitted hours of operation are 6 am to 6 pm Monday through Sunday

Maximum Allowable Tons: 6000 daily/yearly average

Percent Alternative Operating Cover (AOC) Calculation

AOC Calculations: Total Tons AOC/Total Tons Waste Disposed x 100 = 327,522.3/2,068,960.5= 15.8%

Please note the calculation **is**: Tons AOC (from table above)/Tons Solid Waste (from table in Section 6) x 100 and **Not**: Tons AOC / (Tons Solid Waste + AOC) x 100

Seneca Meadows, Inc.
2020 Annual Report
Table 1
Total Tonnage of Material Received Per Quarter

Waste Type	Quarter 1 (tons)	Quarter 2 (tons)	Quarter 3 (tons)	Quarter 4 (tons)	Grand Total	Daily Average (tons)*
Asbestos	1,793.4	1,852.3	2,232.5	3,095.3	8,973.6	25.0
Industrial Ash	1,915.0	1,056.2	3,629.3	5,468.2	12,068.7	33.6
Construction Debris	11,516.3	15,573.3	42,070.1	58,443.4	127,603.1	355.4
Contaminated Soil	2,482.0	5,719.2	15,667.5	18,678.9	42,547.6	118.5
Medical Waste	-	-	-	-	-	-
Sludge	17,405.6	13,660.5	11,127.7	9,512.4	51,706.2	144.0
Other Industrial Waste	4,143.7	3,510.6	2,949.4	3,389.1	13,992.7	39.0
Solid Waste (MSW)	342,587.1	310,842.6	435,127.4	385,833.9	1,474,390.9	4,106.9
Grits & Screenings	2,313.3	2,646.4	2,678.4	2,515.7	10,153.8	28.3
Hardfill	-	-	-	-	-	-
Processed Construction Debris	-	-	-	-	-	-
Tires-NonProcessable& Shreds	1.6	-	-	-	1.6	0.0
TOTAL	384,158.1	354,861.1	515,482.3	486,936.8	**1,741,438.2**	**4,850.8**

BUDs	Quarter 1 (tons)	Quarter 2 (tons)	Quarter 3 (tons)	Quarter 4 (tons)	Grand Total	Daily Average (tons)*
Coal Ash	-	-	-	-	-	-
Auto Fluff	2,391.8	127.3	146.0	115.3	2,780.3	7.7
C&D (BUD)	95,913.1	69,003.6	68,220.4	55,023.3	288,160.5	802.7
Contaminated Soil	4,401.1	7,353.0	2,947.2	470.6	15,171.8	42.3
Foundry Sand (BUD)	172.0	73.1	118.7	48.2	412.1	0.1
Hard Fill	-	-	34.1	-	34.1	-
Paper Sludge	-	-	-	-	-	-
Other Industrial Waste (BUD)	75.7	88.5	64.8	49.0	278.0	0.1
Ash	1,559.4	2,861.7	3,745.2	1,272.9	9,439.3	3.5
B/R Tire Cover	4,003.1	2,417.4	911.3	3,347.7	10,679.5	9.3
Yard Debris	55.4	156.9	214.2	140.4	566.8	0.4
Z9500 (Tire Chips for Cover)	-	-	-	-	-	-
TOTAL	108,571.5	82,081.5	76,401.9	60,467.4	**327,522.3**	**912.3**

*Based on 360 working days during 2020

SECTION 6 - SOLID WASTE DISPOSED

Provide the tonnages of solid waste disposed. Exclude Beneficial Use Material amounts reported in Section 5 and Recyclable Material amounts reported in Section 8. Specify the methods used to measure the quantities disposed and the percentages measured by each method:

_____% Scale Weight _____% Estimated

_____% Truck Count _____% Other (Specify: _____)

Type of Solid Waste	January (tons)	February (tons)	March (tons)	April (tons)	May (tons)	June (tons)	July (tons)
Asbestos							
Ash (Coal)							
Ash (MSW Energy Recovery)							
Construction & Demolition Debris (mixed)							
Industrial Waste (Including Industrial Process Sludges)							
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)							
Oil/Gas Drilling Waste							
Petroleum Contaminated Soil							
Sewage Treatment Plant Sludge							
Treated Regulated Medical Waste							
Emergency Authorization Waste (Storm Debris)							
Other (specify)							
Total Tons Disposed							

Refer to Table 4-1 of this report for the monthly waste volumes by category, made part of this form on next page.

SECTION 6 - SOLID WASTE DISPOSED (continued)

Type of Solid Waste	Tip Fee ($/Ton)	August (tons)	September (tons)	October (tons)	November (tons)	December (tons)	Total Year (tons)	Daily Avg. (tons)
Asbestos								
Ash (Coal)								
Ash (MSW Energy Recovery)								
Construction & Demolition Debris (mixed)								
Industrial Waste (Including Industrial Process Sludges)								
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)								
Oil/Gas Drilling Waste								
Petroleum Contaminated Soil								
Sewage Treatment Plant Sludge								
Treated Regulated Medical Waste								
Emergency Authorization Waste (Storm Debris)								
Other (specify)								
Total Tons Disposed								

Refer to Table 4-1 of this report for the monthly waste volumes by category.

SECTION 7 – SERVICE AREA OF SOLID WASTE RECEIVED

Please identify where the waste is coming from. The total tons received reported below should equal the total tons received in Section 6 (Solid Waste Disposed). DO NOT REPORT IN CUBIC YARDS!

- If the waste ***WAS*** received from another solid waste management facility, please write in the name *and* address of the facility along with the appropriate state, county and planning unit/municipality.
- If the waste ***WAS NOT*** received from another solid waste management facility, please write in "***Direct Haul***" along with the appropriate state, county and planning unit/municipality where the waste was generated.

Specify transport method and percentages of total waste transported by each:

100 % Road _____% Rail _____% Water _____% Other (specify:_____)

Explain which waste types and service areas below are included in these transport methods _____

SERVICE AREA OF SOLID WASTE RECEIVED					
TYPE OF SOLID WASTE	**SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "Direct Haul"**	**SERVICE AREA STATE OR COUNTRY**	**SERVICE AREA COUNTY OR PROVINCE**	**SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECEIVED**
Asbestos	Refer to Table 2, made part of this form following this section.				
Ash (Coal)	**The Seneca Meadows permitted hours of operation are 6 am to 6 pm Monday through Sunday** Maximum Allowable Tons: 6000 daily/yearly average				
Ash (MSW Energy Recovery)					
Construction & Demolition Debris (mixed)					

SERVICE AREA OF SOLID WASTE RECEIVED					
TYPE OF SOLID WASTE	**SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED** (Name & Address) **OR "Direct Haul"**	**SERVICE AREA STATE OR COUNTRY**	**SERVICE AREA COUNTY OR PROVINCE**	**SERVICE AREA NYS PLANNING UNIT** (See Attached List of NYS Planning Units)	**TONS RECEIVED**
Industrial Waste (Including Industrial Process Sludges)	Refer to Table 2, made part of this form on next page. **The Seneca Meadows permitted hours of operation are 6 am to 6 pm Monday through Sunday** Maximum Allowable Tons: 6000 daily/ yearly average				
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)					
Oil/Gas Drilling Waste					
Petroleum Contaminated Soil					
Sewage Treatment Plant Sludge					
Treated Regulated Medical Waste (TRMW)*					
Emergency Authorization Waste (Storm Debris)					
Other (specify)					
				TOTAL RECEIVED (tons): _____	

* List generators that provide you Certificates of Treatment forms and quantities of TRMW from each _____

Table 2
Waste Origination / Percentage of Total Waste Received

IN STATE (By County)	Asbestos	Ash	Construction Debris	Contaminated Soil	Sludge	Other Industrial Waste	Solid Waste (MSW)	Grits & Screenings	Tires-NonProcessable & Shreds	Auto Fluff	C&D (BUD)	Contaminated Soil (BUD)	Foundry Sand	Other Industrial Waste (BUD)	Industrial Ash	B/R Tire Cover	Yard Waste	Total by Location	Percentage
	Tons																	*Tons*	*%*
ALBANY	1,395	0	232	0	0	13	35,891	0	0	0	18,117	0	0	0	0	0	0	55,649	2.69%
ALLEGANY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
BRONX	0	0	43,633	0	0	0	136,036	0	0	0	56,220	0	0	0	0	0	0	235,888	11.40%
BROOKLYN	0	0	2,453	0	3,555	0	0	0	0	0	0	0	0	0	0	0	0	6,009	0.29%
BROOME	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9	0.00%
CATTARAUGUS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
CAYUGA	246	0	2,537	23	539	64	6,459	0	2	0	0	0	0	0	5,905	0	3	15,775	0.76%
CHAUTAUQUA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
CHEMUNG	3	0	268	0	0	0	0	0	0	0	0	0	0	0	0	0	0	271	0.01%
CHENANGO	0	0	0	3	0	0	53	0	0	0	0	0	0	0	0	0	0	56	0.00%
CLINTON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
COLUMBIA	0	0	0	0	0	0	2,385	0	0	0	8,277	0	0	0	0	0	0	10,662	0.52%
CORTLAND	68	0	0	0	0	292	0	0	0	0	0	0	0	0	0	0	0	360	0.02%
DELAWARE	46	0	0	0	314	0	0	0	0	0	0	0	0	0	0	0	0	360	0.02%
DUTCHESS	0	0	0	0	0	0	30,870	0	0	0	13,099	0	0	0	0	0	0	43,969	2.13%
ERIE	0	0	38	0	0	0	0	0	0	0	0	0	0	0	0	29	0	68	0.00%
ESSEX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
FRANKLIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
FULTON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
GENESEE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
GREENE	0	0	0	0	290	0	62,502	0	0	0	6,550	0	0	0	0	8,791	0	78,133	3.78%
HAMILTON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
HERKIMER	68	0	0	0	0	0	0	0	0	0	0	120	0	0	0	0	0	188	0.01%
JEFFERSON	0	6,617	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,617	0.32%
KINGS	0	0	0	0	1,116	0	48,511	0	0	0	0	0	0	0	0	0	0	49,627	2.40%
LEWIS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
LIVINGSTON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
MADISON	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	0.00%
MANHATTAN	0	0	0	0	23,306	0	0	0	0	0	0	0	0	0	0	0	0	23,306	1.13%
MONROE	2	0	46	0	0	0	1	0	0	0	0	0	0	0	0	0	0	48	0.00%
MONTGOMERY	126	0	0	0	341	0	58,958	4	0	0	0	0	0	0	0	0	0	59,429	2.87%
NASSAU	0	0	34	0	0	0	236,678	0	0	0	0	0	0	0	0	0	0	236,712	11.44%
NIAGARA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
ONEIDA	0	0	1,142	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,142	0.06%
ONEONTA	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0.00%
ONONDAGA	3,989	2,822	13,062	16,065	9,174	984	1,947	1,372	0	0	0	5,961	412	0	6,164	0	0	61,953	2.99%
ONTARIO	13	0	266	0	0	0	239	0	0	0	0	6,879	0	0	0	0	0	7,398	0.36%
ORANGE	0	0	21	0	35	0	0	0	0	0	0	0	0	0	0	0	0	56	0.00%
ORLEANS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
OSWEGO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
OTSEGO	246	0	0	0	150	0	0	0	0	0	0	0	0	0	0	0	0	396	0.02%
PUTNAM	0	0	0	0	272	0	0	0	0	0	0	0	0	0	0	0	0	272	0.01%
QUEENS	0	0	0	0	0	0	195,489	8,062	0	0	68,731	0	0	0	0	0	0	272,282	13.16%
RENSSELAER	204	0	0	0	0	0	0	0	0	0	235	0	0	0	0	0	0	439	0.02%
RICHMOND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
ROCKLAND	0	0	0	0	0	135	87,565	0	0	0	0	0	0	0	0	759	0	88,459	4.28%
SARATOGA	63	0	179	0	0	159	47,858	0	0	0	8,081	0	0	0	0	0	0	56,339	2.72%
SCHENECTADY	594	0	97	0	0	0	83,142	0	0	0	213	0	0	0	0	0	0	84,047	4.06%
SCHOHARIE	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0.00%
SCHUYLER	0	0	0	0	0	36	47	0	0	0	0	0	0	0	0	0	0	83	0.00%
SENECA	14	0	2,024	199	2,131	2,679	7,614	0	0	0	618	465	0	0	0	0	561	16,304	0.79%

Table 2
Waste Origination / Percentage of Total Waste Received

IN STATE (By County)	Asbestos	Ash	Construction Debris	Contaminated Soil	Sludge	Other Industrial Waste	Solid Waste (MSW)	Grits & Screenings	Tires-NonProcessable & Shreds	Auto Fluff	C&D (BUD)	Contaminated Soil (BUD)	Foundry Sand	Other Industrial Waste (BUD)	Industrial Ash	B/R Tire Cover	Yard Waste	Total by Location	Percentage
	Tons																	*Tons*	*%*
SKANEATELES	0	0	0	0	0	0	1,955	11	0	0	0	0	0	0	0	0	0	1,967	0.10%
STATEN ISLAND	0	0	0	0	0	0	8,142	0	0	0	0	0	0	0	0	0	0	8,142	0.39%
ST. LAWRENCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
STEUBEN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
SUFFOLK	0	0	928	0	0	0	12,486	0	0	0	32,446	0	0	0	0	0	0	45,860	2.22%
SULLIVAN	219	0	38	0	872	0	72,564	0	0	0	0	0	0	0	0	0	0	73,693	3.56%
TIOGA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
TOMPKINS	1,165	0	1,960	377	316	0	1,529	0	0	0	0	17	0	0	0	0	0	5,364	0.26%
ULSTER	53	0	0	343	0	0	135,263	0	0	0	662	0	0	0	0	0	0	136,320	6.59%
WARREN	96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	96	0.00%
WASHINGTON	16	0	228	0	52	2,003	24,357	0	0	0	13,100	0	0	0	0	0	0	39,757	1.92%
WAYNE	0	0	3,527	5,665	43	0	2,717	0	0	0	0	1,719	0	278	0	0	3	13,952	0.67%
WESTCHESTER	177	0	38,909	13	0	0	19,055	0	0	0	31,806	0	0	0	0	0	0	89,960	4.35%
WYOMING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
YATES	0	0	69	176	0	0	92	0	0	0	0	0	0	0	0	0	0	338	0.02%
Totals:	8,854	9,439	111,693	22,863	42,504	6,364	1,320,407	9,449	2	0	258,153	15,172	412	278	12,069	9,579	567	1,827,805	88.34%
OUT OF STATE	Asbestos	Ash	Construction Debris	Contaminated Soil	Sludge	Other Industrial Waste	Solid Waste (MSW)	Grits & Screenings	Tires-NonProcessable & Shreds	Auto Fluff	C&D (BUD)	Contaminated Soil (BUD)	Foundry Sand	Other Industrial Waste (BUD)	Industrial Ash	B/R Tire Cover	Yard Waste	Total by Location	Percentage
	Tons																		*%*
CANADA	119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	119	0.01%
CONNECTICUT	0	0	2,242	8,430	0	35	11,962	0	0	0	1,728	0	0	0	0	0	0	24,396	1.18%
MASSACHUSETTS	0	0	13,580	11,254	7,374	462	140,031	15	0	547	22,784	0	0	0	0	0	0	196,047	9.48%
NEW HAMPSHIRE	0	0	0	0	0	6,461	0	0	0	0	7,728	0	0	0	0	0	0	14,189	0.69%
NEW JERSEY	0	0	0	0	0	0	0	690	0	0	0	0	0	0	0	0	0	690	0.03%
PENNSYLVANIA	0	0	0	0	1,827	0	0	0	0	0	0	0	0	0	0	1,100	0	2,928	0.14%
RHODE ISLAND	0	0	0	0	0	706	2,080	0	0	0	0	0	0	0	0	0	0	2,786	0.13%
VERMONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
Totals:	119	0	15,822	19,684	9,202	7,663	154,073	705	0	547	32,240	0	0	0	0	1,100	0	241,156	11.66%
Grand Totals	8,974	9,439	127,514	42,548	51,706	14,027	1,474,480	10,154	2	547	290,394	15,172	412	278	12,069	10,679	567	2,068,961	100.00%

Note: There is a discrepancy of 1.6 tons in total waste accepted between this table and Tables 1 & 3. The total tonnage being reported is 2,068,960.5 as shown of Tables 1 & 3. This difference can be atrributed to a rounding error.

SECTION 8 –LANDFILL RECYCLABLE & RECOVERED MATERIALS

Is your facility also a permitted or registered Recyclables Handling & Recovery Facility?

☐ Yes; Complete Section 9 for material recovered from the mixed solid waste stream. Complete a Recyclables Handling & Recovery Facility (RHRF) form for material received as source separated. The RHRF form is located at: http://www.dec.ny.gov/chemical/52706.html .

☐ No; Complete Section 9 for material recovered from the mixed solid waste stream and for material received as source separated.

A. Service Area of Recyclable Material Received

Please identify where the recyclable materials are coming from. DO NOT REPORT IN CUBIC YARDS!

- If the materials ***WERE*** received from another solid waste management facility, please write in the name and address of the facility along with the appropriate state, county and planning unit/municipality.
- If the materials ***WERE NOT*** received from another solid waste management facility, please write in "***Direct Haul***" along with the appropriate state, county and planning unit/municipality where the recyclables were generated.

Specify transport method, list type of material(s) and percentages of total waste transported by each:

_____% Road: Waste Type(s):_____ _____% Rail: Waste Type(s):_____

_____% Water: Waste Type(s):_____ _____% Other (specify: _____): Waste Type(s):_____

SERVICE AREA OF RECYCLABLE MATERIAL RECEIVED					
MATERIAL	SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "Direct Haul"	SERVICE AREA STATE OR COUNTRY	SERVICE AREA COUNTY OR PROVINCE	SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECEIVED
Commingled Containers (metal, glass, plastic)	Not Applicable				
Commingled Paper (all grades)					
Single Stream (total)					
Brush, Branches, Trees, & Stumps					
Food Scraps					
Yard Waste (curbside)					
Other (specify)					
				TOTAL RECEIVED (tons):	

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS

B. Material Recovered

Identify the name of the destination facility to which the material was sent from your facility, the corresponding State/Country, the County/Province, the NYS Planning Unit, and the amount of material transported. **Refer to the list of NYS Planning Units that can be found at the end of this report.** DO NOT REPORT IN CUBIC YARDS!

Specify transport method and percentages of total material transported by each:

100 % Road _____% Rail _____% Water _____% Other (specify: _____)

Explain which materials and destinations below are included in these transport methods _____

PAPER RECOVERED					
RECOVERED MATERIAL	**DESTINATION** (Name & Address)	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT** (See Attached List of NYS Planning Units)	**TONS RECOVERED** (out of facility)
Commingled Paper (all grades)	Not Applicable				
Corrugated Cardboard					
Junk Mail					
Magazines					
Newspaper					
Office Paper					
Paperboard / Boxboard					
Other Paper (specify)					
				TOTAL PAPER RECOVERED (tons):	_____

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

GLASS RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Container Glass	Not Applicable				
Industrial Scrap Glass					
Other Glass (specify)					
TOTAL GLASS RECOVERED (tons):					

METAL RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Aluminum Foil / Trays	Not Applicable				
Bulk Metal (from MSW)					
Bulk Metal (from CD debris)					
Enameled Appliances / White Goods					
Industrial Scrap Metal					
Tin & Aluminum Containers					
Other Metal (specify)					
TOTAL METAL RECOVERED (tons):					

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

PLASTIC RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Mixed Plastic (#1 - #7)	Not Applicable				
PET (plastic #1)					
HDPE (plastic #2)					
Other Rigid Plastics (#3 - #7)					
Industrial Scrap Plastic					
Plastic Film & Bags					
Other Plastics (specify)					
				TOTAL PLASTIC RECOVERED (tons):	

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

MIXED MATERIAL RECOVERED					
RECOVERED MATERIAL	**DESTINATION** (Name & Address)	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT** (See Attached List of NYS Planning Units)	**TONS RECOVERED** (out of facility)
Commingled Containers (metal, glass, plastic)	Not Applicable				
Commingled Paper & Containers					
Single Stream (total)					
Other (specify)					
				TOTAL MIXED MATERIAL RECOVERED (tons):	_____

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

MISCELLANEOUS MATERIAL RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Electronics	See Section 13 of the Report				
Textiles					
Brush, Branches, Trees, & Stumps					
Food Scraps					
Yard Waste (curbside)					
Other (specify)					
				TOTAL MISCELLANEOUS MATERIAL RECOVERED (tons):	

VOLUME TO WEIGHT CONVERSION FACTORS

MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT	
GLASS – whole bottles	1 cubic yard	0.35 tons	GLASS - crushed mechanically	1 cubic yard	0.88 tons	ALUMINUM – cans – whole	1 cubic yard	0.03 tons
GLASS - semi crushed	1 cubic yard	0.70 tons	GLASS - uncrushed manually	55 gallon drum	0.16 tons	ALUMINUM – cans – flattened	1 cubic yard	0.125 tons
PAPER - high grade loose	1 cubic yard	0.18 tons	PLASTIC – PET – whole	1 cubic yard	0.015 tons			
PAPER - high grade baled	1 cubic yard	0.36 tons	PLASTIC – PET – flattened	1 cubic yard	0.04 tons			
PAPER - mixed loose	1 cubic yard	0.15 tons	PLASTIC – PET – baled	1 cubic yard	0.38 tons	WHITE GOODS - uncompacted	1 cubic yard	0.10 tons
NEWSPRINT - loose	1 cubic yard	0.29 tons	PLASTIC – styrofoam	1 cubic yard	0.02 tons	WHITE GOODS - compacted	1 cubic yard	0.5 tons
NEWSPRINT - compacted	1 cubic yard	0.43 tons	PLASTIC – HDPE – whole	1 cubic yard	0.012 tons			
CORRUGATED – loose	1 cubic yard	0.015 tons	PLASTIC – HDPE – flattened 1	1 cubic yard	0.03 tons			
CORRUGATED - baled	1 cubic yard	0.55 tons	PLASTIC – HDPE – baled	1 cubic yard	0.38 tons	FERROUS METAL - cans whole	1 cubic yard	0.08 tons
			PLASTIC – mixed (grocery bags)	45 gallon bag	0.01 tons	FERROUS METAL - cans	1 cubic yard	0.43 tons

SECTION 9 – UNAUTHORIZED SOLID WASTE

Has unauthorized solid waste been received at the facility during the reporting period?

☐ Yes ☐ No If yes, give information below for each incident (attach additional sheets if necessary):

Date Received	Type Received	Date Disposed	Disposal Method & Location
	Refer to Section 5 (Unauthorized Solid Waste/Radiation Monitoring) of this report.		

Radiation Monitoring

Does your facility use a fixed radiation monitor? ___■___ Yes _____ No

Identify Manufacturer Thermo Eberline, LLC and Model ASM 3000 of fixed unit.

Does your facility use a portable radiation monitor? _____ Yes _____ No

Identify Manufacturer Thermo Eberline, LLC and Model IdentiFINDER of portable unit.

If the radiation monitors have been triggered give information below for each incident:

Incident Number	Received		Hauler	Origin	Truck Number	Reading	Disposal Status	Removed	
	Date	Time						Date	Time
	Refer to Table 5 of this report for the specific incidents.								

SECTION 10 - WASTE IN PLACE

Summary by Waste Type and Year

Include all active and inactive sections of the landfill. Report waste disposed annually by type, if known, in tons per year. Report total waste disposed, if breakdown of types is not available. In the case where more than one landfill section operated in a given year identify each separately, if known. If the annual amount is not available, report the quantities for a range of years. If you include amounts from old, closed landfills then clearly identify them on the table and explain below. In each row, report quantities disposed each year (or group of years if individual years unknown) for each waste type. Report cumulative WIP at bottom (sum of annual quantities disposed). Add additional sheets as necessary.

Year	MSW (tons)	Asbestos Waste (tons)	Ash (tons)	C&D Debris (tons)	Industrial Waste (tons)	Petroleum Contaminated Soil (tons)	Sewage Treatment Plant Sludge (tons)	Other (tons)	Year(s) Total (tons)	Identify Landfill Section(s) Used
WIP Cumulative Total										

Refer to Table 3 (Waste in Place Summary), made part of this form on next page.

Overall in place volume _____ cubic yards

Method for determining waste composition, if known. _____

Explain if closed landfills are included above _____

Table 3 - Waste In Place Summary
(Tons)

YEAR	SMI LANDFILL	TOTAL WASTE IN PLACE (SMI)	SOUTHEAST LANDFILL	TOTAL WASTE IN PLACE (SELF)	SOUTHEAST BUMP OUT	TOTAL WASTE IN PLACE (SBO)	WESTERN EXPANSION	TOTAL WASTE IN PLACE (WEX)	EASTERN EXPANSION	TOTAL WASTE IN PLACE (EX)
Prior to 2000*		6,485,593								
2000	1,241,934	12,704,805	-	-	-	-	-	-	-	-
2001	1,391,885	14,096,690	-	-	-	-	-	-	-	-
2002	1,817,178	15,913,868	-	-	-	-	-	-	-	-
2003	1,295,262	17,209,130	697,449	697,449	-	-	-	-	-	-
2004	-	17,209,130	2,055,102	2,752,551	-	-	-	-	-	-
2005	-	17,209,130	2,226,558	4,979,109	-	-	-	-	-	-
2006	-	17,209,130	2,191,962	7,171,071	-	-	-	-	-	-
2007**	73,793	17,278,653	2,043,356	9,214,427	-	-	-	-	-	-
2008	264,445	17,543,098	1,738,373	10,952,800	9,748	9,748	-	-	-	-
2009	223,349	17,766,447	184,386	11,137,186	1,705,161	1,714,909	-	-	-	-
2010	-	24,252,040	-	11,137,186	2,476,660	4,191,569	-	-	-	-
2011	-	24,252,040	-	11,137,186	1,879,357	6,070,926	560,899	560,899	-	-
2012	-	24,252,040	-	11,137,186	483,704	6,554,630	1,799,669	2,360,568	-	-
2013	-	24,252,040	3,607	11,140,793	-	6,554,630	2,429,638	4,790,206	-	-
2014	-	24,252,040	-	11,140,793	-	6,554,630	2,096,247	6,886,453	-	-
2015	-	24,252,040	-	11,140,793	-	6,554,630	2,190,515	9,076,968	72,159	72,159
2016	-	24,252,040	-	11,140,793	-	6,554,630	144,465	9,221,433	2,444,833	2,516,993
2017	-	24,252,040	-	11,140,793	-	6,554,630	-	9,221,433	2,571,126	5,088,119
2018	-	24,252,040	-	11,140,793	-	6,554,630	615,289	9,836,722	2,510,499	7,598,618
2019		24,252,040		11,140,793		6,554,630	2,523,471	12,360,193	25,460	7,624,078
2020***/****	-	24,252,040	-	11,140,793	-	6,554,630	1,804,124	14,164,317	264,270	7,888,348

Notes:

* Total Waste in Place for the SMI Landfill only tracks waste placed since 2000. An estimated 6,485,593 tons was placed prior to 2000.

** Total Waste in Place for the SMI Landfill in 2007 reflects a 4270-ton decrease as waste had to be re-located to the SELF for construction purposes.

*** A breakdown of waste types accepted in 2020 can be found in Tables 4-1 and 4-2 of the Annual Report.

**** An additional 566.84 tons of waste was sent to the composting pile and is not accounted for in the 2020 totals but is accounted for in other report tables.

Waste Summary by Landfill Section

Provide waste in place information for all landfill sections.

Number of landfill sections: 4

Original* section used (years) from _____ to _____

Section Footprint _____ acres

Capped with approved final cover system Yes _____ No _____

Percent capped _____

Waste in Place: _____ Tons _____ Cubic Yards, if known

Next* section used (years) from _____ to _____

Section Footprint _____ acres

Capped with approved final cover system Yes _____ No _____

Percent capped _____

Waste in Place: _____ Tons _____ Cubic Yards, if known

* If there are additional landfill sections, phases or cells, please provide the same waste in place information on additional sheets and attach to form.

SECTION 11 - LANDFILL GAS

Does the landfill have a landfill gas collection & control system?
Yes ■ No ____ If Yes: Active ■ Passive ___

Number of gas wells: 802

Total landfill footprint acreage 339.53

Total landfill acreage from which gas is collected 334.51

Landfill sections from which gas is collected ALL

Landfill acreage from which gas is collected for energy recovery 334.51

Measured Methane Generation Rate*, k 0.04

Measured Potential Methane Generation Capacity*, L_o 100 m^3/Mg

NMOC Concentration* 535 ppmv as hexane

Does the landfill require a Title V Permit? Yes ■ No _____

Name of Landfill Gas Recovery (gas to energy or other use) Facility: Seneca Energy LLC (Aria Energy)

* Note: If Concentration NMOC, Lo and k are not known or included, default values will be used to calculate the NMOCs emissions from the Landfill.

Flare

Open and Enclosed Flares located at the Landfill and the Landfill Gas Recovery Facility:

Number of Flares: 5

Type of Flare: Opened Flare 1 Enclosed Flare 3

Please report units in cubic feet

Quantity of Gas Collected and Flared Annually 952,801,313 cubic feet
Flare Hours of Operation per Year 10,303.35 hours/year
Methane Percentage in Landfill Gas before flaring 50 %
Methane Destruction efficiency 98 %

Candlestick Flares:

Number of Candlestick Flares 0
Estimate of Gas Flared Candlestick Flare 0 cubic feet

Gas To Energy

Please report units in cubic feet

Number of Internal Combustion Engines: 18

Quantity of Gas collected for Internal Combustion Engine Annually 2,767,156,360 cubic feet
Methane Destruction efficiency 97 %
Methane Percentage in Landfill Gas before combustion 50 %
Utility Company Receiving Electricity NYSEG

Gas Processed for Use (Other than gas to electricity)

Quantity of Gas Collected for Processing 2,539,417,051 cubic feet
Methane Percentage in Landfill Gas before processing 50 %
On-site or Off-site User of Gas Dominion Transmission, Inc.

Landfill Gas Recovery Facility/Landfill Data

Facility Contact Rick Covell Phone # (248)412-7825

Contact e-mail address Rick.Covell@ariaenergy.com Fax # (_____)_____-_____

Operation and maintenance cost for calendar year: $N/A

Does the LGRF experience shut downs: ■ Yes _____No

If yes, indicate reasons for shut downs. List required submissions that have been attached to this form or the reasons for not attaching a required piece of information:

Utility breaker trips, gas collection system repairs, requests by the utility to shut the plant down and facility maintenance/repairs. See Title V Air Reporting for Startup, shutdown and malfunction information

Year landfill opened: 1973 Anticipated landfill closure date: 2025

Air space on site will managed to meet the permitted site life of 2025.

Reprinted (12/20)

Results of Condensate Sampling

Submit (attached to this form) condensate quality monitoring results accomplished in accordance with condensate sampling. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the Gas Condensate Report in Section 3.0 (Leachate Wastewater Management)

Landfill Gas Utilized For Energy Recovery

Provide the following information for the landfill gas recovered for energy. **DO NOT INCLUDE THE GAS FLARED!**

	Landfill Gas Collected for Energy Recovery (Cubic Feet)	Steam* Generated (Cubic Feet)	Total Electricity* Generated for onsite and offsite use (K.W.H.)	Total Gas Processed for use other than electricity generation (Cubic Feet)	Condensate Generated (Gallons)	Facility Operation (Hours)
January	281,622,389	N/A	10,391,000	223,276,847	256,615	3,155,087
February	250,003,627	N/A	10,086,000	222,354,658	390,312	1,358
March	276,119,817	N/A	11,073,000	181,894,968	385,208	1,324
April	248,514,385	N/A	10,082,000	215,205,286	326,767	1,403
May	253,212,0301	N/A	10,423,000	211,529,426	294,787	1,456
June	211,521,386	N/A	8,422,000	193,373,922	222,248	1,377
July	224,714,328	N/A	8,775,000	185,827,463	221,063	1,415
August	250,870,840	N/A	9,741,000	207,940,872	273,605	1,474
September	199,585,925	N/A	8,099,000	198,945,059	258,740	1,374
October	217,084,147	N/A	9,260,000	236,918,196	178,160	1,488
November	175,867,469	N/A	9,420,000	208,586,341	182,644	1,281
December	178,040,015	N/A	9,509,000	253,564,014	164,937	1,485
ANNUAL TOTAL	2,767,156,360	N/A	115,281,000	2,539,417,051	3,155,087	16,823

* Provide where applicable.

Normal Weekdays of Operation 7 Normal Hours of Operation 24

Electricity Generated and used/marketed offsite 87,986,672 KWH
Electricity Generated and used onsite 27,294,328 KWH
Gas Processed and used/marketed offsite 2,539,417,051 cubic feet
Gas Processed and used onsite 0 cubic feet

Describe the collection, storage, treatment and disposal techniques used in managing the condensate:

Refer to Section 3.0 (Leachate Wastewater Management) of this report.

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SECTION 12 - COST ESTIMATES AND FINANCIAL ASSURANCE DOCUMENTS

Are there required cost estimates and financial assurance documents for closure and post-closure care?

☒ Yes ☐ No If yes, attach additional sheets reflecting annual adjustments for inflation and any changes to the Closure Plan?

SECTION 13 – PROBLEMS

Were any problems encountered during the reporting period (e.g., specific occurrences which have led to changes in facility procedures)?

☐ Yes ☒ No If yes, attach additional sheets identifying each problem and the methods for resolution of the problem.

SECTION 14 – CHANGES

Were there any changes from approved reports, plans, specifications, and permit conditions?

☐ Yes ☒ No If yes, attach additional sheets identifying changes with a justification for each change.

SECTION 11 – LANDFILL OPERATOR TRAINING

Name of trained landfill operator: Seth Greathouse

Name and location of training course: Landfill Operator Certification, Holiday Inn, Syracuse, NY

Date completed: 12-13-2019

SECTION 16 - ANALYTICAL RESULTS

Submit (attached to this form) tables showing the sample collection date, the analytical results [including all peaks even if below the Method Detection Limits (MDL)], designation of upgradient wells and location number for each environmental monitoring point sampled, applicable water quality standards, and groundwater protection standards if established, MDL's, and Chemical Abstracts Service (CAS) numbers on all parameters. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to Section 9.0 (Groundwater Sampling and Analysis) of this report.

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SECTION 17 - COMPARING DATA

Submit (attached to this form) tables or graphical representations comparing current water quality with existing water quality and with upgradient water quality. These comparisons may include Piper diagrams, Stiff diagrams, tables, or other analyses. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to Section 9.0 (Groundwater Sampling and Analysis) of this report.

SECTION 18 - DISCUSSION OF RESULTS

Submit (attached to this form) a summary of any contraventions of State water quality standards, significant increases in concentrations above existing water quality, any exceedances of groundwater protection standards, and discussion of results, and any proposed modifications to the sampling and analysis schedule necessary to meet the Existing, Operational and Contingency water quality monitoring requirements. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to Section 9.0 (Groundwater Sampling and Analysis) of this report.

SECTION 19 - DATA QUALITY ASSESSMENT

Submit (attached to this form) any required data quality assessment reports. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to Section 9.0 (Groundwater Sampling and Analysis) of this report.

SECTION 20 - SUMMARIES OF MONITORING DATA

Submit (attached to this form) a summary of the water quality information presented in Sections 16 and 17 for the year of operation for which the Annual Report is made, noting any changes in water quality which have occurred throughout the year. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to Section 9.0 (Groundwater Sampling and Analysis) of this report.

SECTION 21 - SURFACE IMPOUNDMENTS

Does this landfill have a surface impoundment?

☐ Yes ■ No If yes, repeat Sections 15 through 18 above for Quarterly Reports and Section 19 above for Annual report. Attach additional submissions required by this section.

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SECTION 22 - PERMIT/CONSENT ORDER REPORTING REQUIREMENTS

Are there any additional permit/consent order reporting requirements not covered by the previous sections of this form?

☐ Yes ■ No If yes, attach additional sheets identifying the reporting requirements with their respective responses.

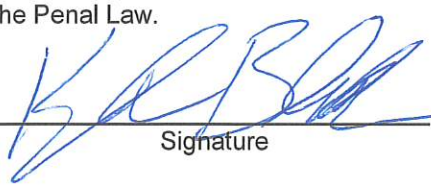
SECTION 23 - SIGNATURE AND DATE BY OWNER OR OPERATOR

Owner or Operator must sign, date and submit one completed form to the appropriate Regional Office (See attachment for Regional Office addresses, email addresses and Materials Management Contacts).

The Owner or Operator must also submit one copy by email, fax or mail to:

New York State Department of Environmental Conservation
Division of Materials Management
Bureau of Solid Waste Management
625 Broadway
Albany, New York 12233-7260
Fax 518-402-9041
Email address: SWMFannualreport@dec.ny.gov

I certify, under penalty of law, that the data and other information identified in this report have been prepared under my direction and supervision in compliance with a system designed to ensure that qualified personnel properly and accurately gather and evaluate this information. I am aware that any false statement I make in such report is punishable pursuant to section 71-2703(2) of the Environmental Conservation Law and section 210.45 of the Penal Law.



Signature

2/26/21
Date

Kyle Black
Name (Print or Type)

District Manager
Title (Print or Type)

kyle.black@wasteconnections.com
Email (Print or Type)

1786 Salcman Road
Address

Waterloo
City

New York 13165
State and Zip

(315) 539-5624
Phone Number

ATTACHMENTS: ■ YES ☐ NO
(Please check appropriate line)

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2.0 SITE LIFE

The remaining site life for the SMI facility includes both constructed and future expansion landfill areas. The constructed portions of the SMI facility include the Southeast Landfill and initial expansion stage (referred to as the SELF/EX-2 area), the SMI Landfill, the several stages of the western expansion (EX-1 or WEX) area (referred to as Stages 3/4/6), and the first stage (referred to as Stage 7) and the second stage (referred to as Stage 8) of the northeastern expansion (EX-3 or NEX). In 2018, waste placement began in the first phase of expansion area EX-1 (referred to as Stage 6A). In 2019, waste placement began in the second phase of expansion area EX-1 (referred to as Stage 6B). In 2020, waste placement began in the third phase of expansion area EX-1 (referred to as 6C). Future expansion areas include the remaining landfill stages (referred to as Stage 5) within the EX-1 expansion area.

WASTE INTAKE AND AIR SPACE CONSUMED IN 2020

Based on truck scale records, a total of 2,068,961 tons of waste (inclusive of BUDs) was received between January 1, 2020 and December 31, 2020. To determine air space remaining as of December 31, 2020 the remaining volume of airspace was determined as of the aerial flight on March 15, 2020 and supplemented with consumed volume based off truck scale records for the remainder of the year and the historical compaction rate of 0.85 Tons/CY the site. The remaining available airspace as of December 31, 2020 was estimated to be 10,024,038 CY. The remaining available airspace as of December 31, 2019 had been estimated to be 12,458,109 CY therefore the estimated consumed volume of airspace for 2020 is 2,434,071 CY.

The approximate locations of waste placement in Stages 7/8 and Stage 6A/B during 2020 are depicted on Figures 2-1 and 2-3. The following table summarizes air space consumed in the landfill in 2020.

Landfill Area	Air Space Consumed in 2020	
	Cubic Yards	Tons
Total Air Space Consumed	2,434,071	2,068,961

Notes:
1. Tonnage equivalent for air space consumed is based on the historical calculated annual average in-place waste density of 0.85 tons/cubic yard.

PLANNED NEAR-TERM WASTE FILLING LOCATIONS

Near-term waste filling will continue within the constructed and certified landfill areas which include Stage 6A, 6B and 6C during 2020. The approximate locations of waste placement in the Stages 7/8, and Stage 6A/B are depicted on Figures 2-1, and 2-3, respectively. Additionally, it is noted that the SELF/EX-2 and NEX/EX-3 areas contain plateau and veneer fills that represent significant remaining air space that may be utilized for future waste placement. The specific locations of veneer fills that may be utilized will depend on operational considerations and will be determined at a later time.

TOTAL REMAINING AIR SPACE AND SITE LIFE

The total remaining air space and site life for the SMI facility as of January 1, 2021 includes available air space within constructed and certified areas as well as the anticipated air space that will be available within permitted but, yet, unconstructed areas. Remaining air space within unconstructed areas is based on a comparison of anticipated top of liner grades and permitted final grades, with appropriate reductions for final cover thickness. Remaining air space within constructed areas is generally based on extending the 3H:1V design sideslope up from the existing top of slope until reaching either the permitted final waste grade or until a minimum (from an operational perspective) plateau area is reached, at which point the design slope breaks to the 4% plateau slope gradient. Generally, veneer fills on 3H:1V sideslopes are not included in the remaining air space estimate due

to the complexity of constructing thin lifts on steeper slopes. However, in limited cases, veneer fills may be significant and may therefore become operationally feasible for future waste placement. The following table summarizes remaining air space for constructed and future landfill areas.

Landfill Area	Remaining Air Space	
	Cubic Yards	Tons
Constructed Cells	2,186,480	1,858,508
Future Cells (Stage 5)	7,837,558	6,661,924
Total	**10,024,038**	**8,520,433**

Notes:

1. Tonnage equivalent for remaining air space is based on an assumed in-place waste density of 0.85 tons/cubic yard. This assumed value is used for planning estimates and is within the range of average annual historical waste densities.
2. Remaining air space in SELF/EX-2 and NEX/EX-3 areas include certain veneer fill areas that have become available due to settlement over time.

To calculate remaining site life, an assumed annual waste intake of 2,180,000 tons, inclusive of BUDs, is assumed. An average in-place waste density of 0.85 tons/cubic yard is also assumed based on historical observed values and planning estimates. Based on these assumptions and the remaining air space presented above, the total estimated remaining site life for the SMI facility is estimated to be 3 years, 11 months. Future waste intake rates and in-place density will affect the remaining site life.

FIGURE 2-1. APPROXIMATE LIMIT OF WASTE FILLING – 2020 EX-3 EXPANSION STAGE 7 & 8

FIGURE 2-2. GENERALIZED FILL AREA MAP FOR CALENDAR YEAR 2021 EX-3 EXPANSION STAGE 7 - 8

FIGURE 2-3. APPROXIMATE LIMIT OF WASTE FILLING – 2020 EX-1 EXPANSION STAGE 6A

FIGURE 2-4. GENERALIZED FILL AREA MAP FOR CALENDAR YEAR 2021 EX-1 EXPANSION STAGE 5/6A-6B

NOTES:

1.) BASE MAP WAS DEVELOPED FROM THE MARCH 15, 2020 AERIAL TOPOGRAPHY.

2.) 2020 FILL AREA LOCATIONS WERE OBTAINED ON REVIEW OF AND COMPARISON OF THE MONTHLY WASTE PLACEMENT FIELD SURVEYS.

WASTE PLACEMENT AREA FOR THE YEAR OF 2020.

SMI Landfill

Stage 8A & 8B

Stage 7A & 7B

Southeast Landfill

D:\PROJECTS\SMI\4213087 - 2020 ANNUAL REPORT_PROJECT DRAWINGS\2020 ANNUAL REPORT FIGURES\2020 GENFILLAREAMAP_NEX STAGE 7.DWG 02/12/2021 LAYOUT: WASTE FILLING 2020 (11X17)

PREPARED BY:
CORNERSTONE ENGINEERING AND GEOLOGY, PLLC

cornerstone PLLC

		DATE
DESIGNED BY:		
DRAWN BY:	D. STENSHORN	JAN.2021
CHECKED BY:	T. BROWN	JAN.2021

0 250' 500'
DRAWING SCALE IN FEET

PROJECT: SENECA MEADOWS LANDFILL

2020 ANNUAL REPORT

SENECA FALLS SENECA COUNTY NEW YORK

DRAWING TITLE:

APPROXIMATE LIMIT OF WASTE FILLING - 2020
EX-3 EXPANSION STAGE 7 - 8

Fig. 2-1

4213087

NOTES:

1.) BASE MAP WAS DEVELOPED FROM THE MARCH 15, 2020 AERIAL TOPOGRAPHY.

2.) PROPOSED FILL AREAS FOR 20210 ARE BASED ON PROJECTED FILL PROGRESSIONS.

PROJECTED WASTE PLACEMENT FOR THE YEAR 2021.

Stage 8A & 8B

SMI Landfill

Southeast Landfill

Stage 7A & 7B

D:\PROJECTS\SMI\4213087 - 2020 ANNUAL REPORT_PROJECT DRAWINGS\2020 ANNUAL REPORT FIGURES\2020 GENFILLAREAMAP_NEX STAGE 7.DWG 02/12/2021 LAYOUT: GEN FILL AREA_2021 (11X17)

PREPARED BY:
CORNERSTONE ENGINEERING AND GEOLOGY, PLLC

cornerstone PLLC

		DATE
DESIGNED BY:		
DRAWN BY:	D. STENSHORN	JAN.2021
CHECKED BY:	T. BROWN	JAN.2021

0 250' 500'
DRAWING SCALE IN FEET

PROJECT: SENECA MEADOWS LANDFILL
2020 ANNUAL REPORT
SENECA FALLS SENECA COUNTY NEW YORK

DRAWING TITLE:
GENERALIZED FILL AREA MAP FOR CALENDAR YEAR 2021
EX-3 EXPANSION STAGE 7 - 8

Fig. 2-2

4213087

NOTES:

1.) BASE MAP WAS DEVELOPED FROM THE MARCH 15, 2020 AERIAL TOPOGRAPHY.

2.) 2020 FILL AREA LOCATIONS WERE OBTAINED BASED ON REVIEW OF AND COMPARISON OF THE MONTHLY WASTE PLACEMENT FIELD SURVEYS.

WASTE PLACEMENT AREA FOR THE YEAR 2020.

Stage 3A & 3B

Stage 6A

39.5 ACRES

Stage 6B

Stage 6C

Stage 5A

N 12,000

N 12,500

E 11,000

E 11,500

E 12,000

PREPARED BY:
CORNERSTONE ENGINEERING AND GEOLOGY, PLLC

cornerstone PLLC

		DATE
DESIGNED BY:		
DRAWN BY:	D. STENSHORN	JAN.2021
CHECKED BY:	T. BROWN	JAN.2021

0 200' 500'
DRAWING SCALE IN FEET

PROJECT: SENECA MEADOWS LANDFILL
2020 ANNUAL REPORT
SENECA FALLS SENECA COUNTY NEW YORK

DRAWING TITLE:
APPROXIMATE LIMIT OF WASTE FILLING - 2020
EX-1 EXPANSION STAGES 6

Fig. 2-3

4213087

D:\PROJECTS\SWI\4213087 - 2020 ANNUAL REPORT_PROJECT DRAWINGS\2020 ANNUAL REPORT FIGURES\2020 GENFILLAREAMAP_WEX STAGE 5A-6.DWG 02/12/2021 LAYOUT: WASTE FILLING_2020(11X17)

NOTES:

1.) BASE MAP WAS DEVELOPED FROM THE MARCH 15, 2020 AERIAL TOPOGRAPHY.

2.) PROPOSED FILL AREAS FOR 2021 ARE BASED ON PROJECTED FILL PROGRESSIONS.

PROJECTED WASTE PLACEMENT FOR THE YEAR 2021.

Stage 3A & 3B

Stage 6A

52.0 ACRES

Stage 6B

Stage 6C

Stage 5A

N 11,500 E 12,000

N 11,500 E 12,500

N 12,000 E 11,000

N 12,000 E 11,500

N 12,000 E 12,000

N 12,000 E 12,500

N 12,500 E 11,000

N 12,500 E 12,000

N 12,500 E 12,500

STORAGE AREA

RIP RAP

D:\PROJECTS\SWI\4213087 - 2020 ANNUAL REPORT_PROJECT DRAWINGS\2020 ANNUAL REPORT FIGURES\2020 GENFILLAREAMAP_WEX STAGE 5A-6.DWG 02/12/2021 LAYOUT: GEN FILL AREA_2021(11X17)

PREPARED BY:
CORNERSTONE ENGINEERING AND GEOLOGY, PLLC

cornerstone PLLC

		DATE
DESIGNED BY:		
DRAWN BY:	D. STENSHORN	JAN.2021
CHECKED BY:	T. BROWN	JAN.2021

0 200' 500'
DRAWING SCALE IN FEET

PROJECT: SENECA MEADOWS LANDFILL

2020 ANNUAL REPORT

SENECA FALLS SENECA COUNTY NEW YORK

DRAWING TITLE:
GENERALIZED FILL AREA MAP FOR CALENDAR YEAR 2021 EX-1 EXPANSION STAGES 5A-6

Fig. 2-4

4213087

3.0 LEACHATE WASTEWATER MANAGEMENT

PRIMARY LEACHATE COLLECTION

Wastewater management at SMI is comprised of the collection, temporary storage, off-site transport and treatment of all leachate, septage, process water, contaminated groundwater or surface water, and landfill gas condensate. During calendar year 2020, wastewater was temporarily stored on-site in two 500,000-gallon and one 1,720,000-gallon glass-fused-to-steel-above-ground leachate storage tanks before being transported off-site for treatment, processed using an evaporator or processed in a reverse osmosis treatment system, where the permeate is discharged and the concentrate is trucked off-site. In total 70,291,205 gallons were treated (Appendix C of Leachate and Gas Condensate Report, this Section), SMI spent approximately $12,600,420 for treatment at an average cost of approximately $0.18 per gallon.

Leachate is defined as any liquid which accumulates in the leachate drawdown wells, any liquid which accumulates within a zone in which refuse has been deposited, or any liquid which has been in contact with or passed through solid waste, or which has been contaminated by liquid which has been in contact with or passed through solid waste. Figure 3-1 presents the existing leachate collection system for the SENECA MEADOWS Landfill. Leachate from the SMI Landfill is routinely removed from perimeter leachate wells #4 through #22. Liquid from the primary and secondary leachate collection system within the double lined cells (Area 1, Area 2, Area 3, and Area 4) is collected at AB Sideriser Station 1 (ABSRS-1) and AB Sideriser Station 2 (ABSRS-2). Leachate from the inactive landfill is primarily collected in the AB leachate drain from one of three sumps: ABMH-1, ABMH-2 or ABMH-3.

Figure 3-1a presents the existing leachate collection system for the Southeast Landfill. Liquid from the primary and secondary leachate collection systems within the double lined cells (Area 1 and Area 2) is collected at SE Sideriser Station 1 (SESRS-1) and at SE Sideriser Station 2 (SESRS-2).

Figure 3-1a also presents the existing leachate collection system for the Southeast Landfill Bumpout. Liquid from the primary and secondary leachate collection systems within the double lined cell is collected at SE Sideriser Station 3 (SESRS-3).

Figure 3-1b presents the existing leachate collection system for the Western Expansion Landfill. Liquid from the primary and secondary leachate collection systems within the double lined cells (Area 3, 4 and 6) is collected at WE Sideriser Station 3 (WESRS-3), at WE Sideriser Station 4 (WESRS-4), and at WE Sideriser Station 2 (WESRS-2).

Figure 3-1c presents the existing leachate collection system for the Northeast Expansion Landfill. Liquid from the primary and secondary leachate collection systems within the double lined cells (Area 7 and Area 8) is collected at Northeast Sideriser Station 1 (NESRS-1).

Contact water, septage, wash waters, and process water from construction activities and/or the operation of the Landfill's ancillary facilities is collected and processed as leachate. This includes the groundwater that is collected by the SM-11 drain system, located south of the SMI landfill area, and gravity drains to one of two sumps: SM-11(E) or SM-11(W).

Condensate from the SMI Landfill gas collection system drains to two underground holding tanks. The location of these tanks is presented in Figure 3-2. CT-008 is a 3,000-gallon, double-walled tank located along the perimeter access road near Area 3. Condensate from the Southeast Landfill gas collection system drains to three underground holding tanks. The location of these tanks is presented in Figure 3-2a. SE-CT-0001 is a 2,000-gallon, double-walled tank located on the north side of Black Brook. RP-CT-0001 is a 2,000-gallon, double-walled tank located in the Renewable Resource Park (RRP). RP-CT-0002 is a 48" diameter HDPE sump located at the SMI Landfill Gas Recovery Facility (LFGRF) in the RRP. Condensate from the Southeast Landfill Bumpout (SBO) gas collection system drains to three underground holding tanks. The location of these tanks is also presented in Figure 3-2a. SE-CT-0002 is a 2,000-gallon, double-walled tank located along the east berm of the SBO. SE-CT-0003 is a 2,000-

gallon, double-walled tank located along the south berm of the SBO. SE-CT-0004 is a 2,000-gallon, double-walled tank located along the southwest corner berm of the SBO. IES-HDPE SUMPS is a set of 48" diameter HDPE sumps located at the Innovative Energy gas-to-energy facility. Condensate from the Western Expansion gas collection system drains to two underground holding tanks. The location of these tanks is presented in Figure 3-2b. WE-CT-001 was a 2,000-gallon, double-walled tank which was removed from the north side of the Western Expansion Area 3 for the Stage 6A construction in May 2017. WE-CT-002 is a 2,000-gallon, double-walled tank located east of Western Expansion Area 4b and west of the Southeast Landfill Bumpout. WE-CT-003 is a 2,000-gallon, double walled tank located east of Western Expansion Area 4b. Two additional 2,000-gallon, double-walled condensate tanks (WEX-CT-004 and WEX-CT-005) were installed as part of the Western Expansion for Stages 5 and 6 as shown on Figure 3-2b and Figure 3-2c.

The majority of the liquid collected from the condensate tanks is leachate entering the gas system's horizontal collection trenches, then gravity draining through the header system into the holding tanks.

The Leachate and Gas Condensate Report summarizes the quantities of leachate, groundwater and process water removed from the Site on a monthly basis and the liquid removed from the landfill gas condensate tanks. Table 3-1 is a summary of leachate recirculated back into the Western Expansion or the Northern Expansion. In calendar year 2020, no leachate was recirculated back into the landfill, however, the table has been included as recirculation could potentially occur in future years at the Site. Table 3-2 is a summary of leachate treated at off-site POTW's and through the on-site evaporator.

LEACHATE TREATMENT SYSTEM & STORAGE TANK

During 2020, operation of the three-stage reverse osmosis (RO) leachate treatment system and 100,000-gallon, above-ground, concentrate storage tank continued. In calendar year 2020, approximately 24,887,509 gallons of raw leachate were processed and treated through the RO system. Raw leachate was pumped from two 500,000-gallon and one 1,720,000, above-ground,

storage tanks to the treatment plant building for processing. Permeate from the treatment system was discharged to a local sewer system. The concentrate stream was disposed offsite.

SECONDARY LEACHATE COLLECTION

Flow in the secondary leachate collection and removal system is comprised of construction water, consolidation water and primary liner containment system. Construction water and consolidation water are released from storage above the secondary liner system, and within the wet soil used in the soil liner construction, respective. Liquid from the secondary leachate collection system within the double lined cells (Area 1, Area 2, Area 3, and Area 4) is collected at AB Sideriser Station 1 (ABSRS-1) and AB Sideriser Station 2 (ABSRS-2). Figure 3-1 presents the existing leachate collection system for the SMI Landfill. Liquid from the secondary leachate collection system within the double lined cells (Area 1 and Area 2) of the Southeast Landfill is collected at SE Sideriser Station 1 (SESRS-1) and at SE Sideriser Station 2 (SESRS-2). Figure 3-1a presents the existing leachate collection system for the Southeast Landfill. Liquid from the secondary leachate collection system within the double lined cell of the Southeast Landfill Bumpout (SBO) is collected at SE Sideriser Station 3 (SESRS-3). Figure 3-1a presents the existing leachate collection system for the Southeast Landfill Bumpout. Liquid from the secondary leachate collection system within the double lined cells (Area 3, Area 4, and Area 6) of the Western Expansion Landfill is collected at WE Sideriser Station 3 (WESRS-3), WE Sideriser Station 4 (WESRS 4), and WE Sideriser Station 2 (WESRS 2). Figure 3-1b presents the existing leachate collection system for the Western Expansion Landfill. Figure 3-1c presents the existing leachate collection system for the Northern Expansion Landfill. The Leachate and Gas Condensate Annual Report summarizes the quantities of secondary leachate removed from the Site on a monthly basis. The table below summarizes the acreage covered by each side sump.

Sump ID	Area	Secondary Liner Acreage
ABSRS-1	Area 3	17.3
ABSRS-2	Area 1 & 2	37.0
SESRS-1	Area 1A & 1B	34.2
SERS-2	Area 2	36.01
SERS-3	SBO	35.2
WESRS-2	WEX6	32.07
WESRS-3	WEX3	35.2
WESRS-4	WEX4	29.5
NESRS	NEX7 & NEX8	37.03

The existing Supervisory Control and Data Acquisition (SCADA) system has been used to record flow rates in the secondary sumps in the AB Landfill, Southeast Landfill, the SBO, the Western Expansion, and the Northern Expansion during 2020. Construction and consolidation water may vary based on the amount and intensity of land filling or construction operations above the liner system. Accordingly, flow rates in the secondary LCRS will vary over time.

The flow rates to the secondary sumps at the nine locations summarized above are presented in the table below.

Sump ID	Area	Peak Leakage Rate 30-Day Average for 2020 (gal/ac)*
ABSRS-1	Area 3	2.13
ABSRS-2	Area 1 & 2	5.92
SESRS-1	SELF 1	8.99
SERS-2	SELF 2	4.55
SERS-3	SBO	13.05
WESRS-2	WEX6	8.47
WESRS-3	WEX3	14.91
WESRS-4	WEX4	10.90
NESRS	NEX7 & NEX8	13.22

* Data presented does not include leakage rates during NYSDEC approved construction events (outside of waste containment areas) to tie the Stage 5 liner system into adjacent liner systems.

RECIRCULATION AND OFF-SITE TREATMENT

Leachate collected at the sideriser stations located in the SMI, Southeast, Southeast Bumpout, and Western Expansion Landfills is conveyed to two 500,000-gallon and one 1,720,000 on-site storage tanks where it is mixed with primary leachate, septage, process water, contaminated wash water, contact water, and landfill gas condensate prior to being discharged to our RO treatment system for processing, or transported to local POTW's for treatment. In 2019 there was no leachate recirculation

performed. The summaries for leachate recirculation and off-site treatment and on-site evaporator are provided in Tables 3-1 and 3-2, respectively.

FIGURE 3-1. LEACHATE DRAWDOWN LOCATIONS (SMI LANDFILL)

FIGURE 3-1A. LEACHATE DRAWDOWN LOCATIONS (SOUTHEAST LANDFILL, SOUTHEAST LANDFILL BUMPOUT AND RENEWABLE RESOURCE PARK)

FIGURE 3-1B. LEACHATE DRAWDOWN LOCATIONS (WESTERN EXPANSION LANDFILL)

FIGURE 3-1C. LEACHATE DRAWDOWN LOCATIONS (NORTHERN EXPANSION LANDFILL)

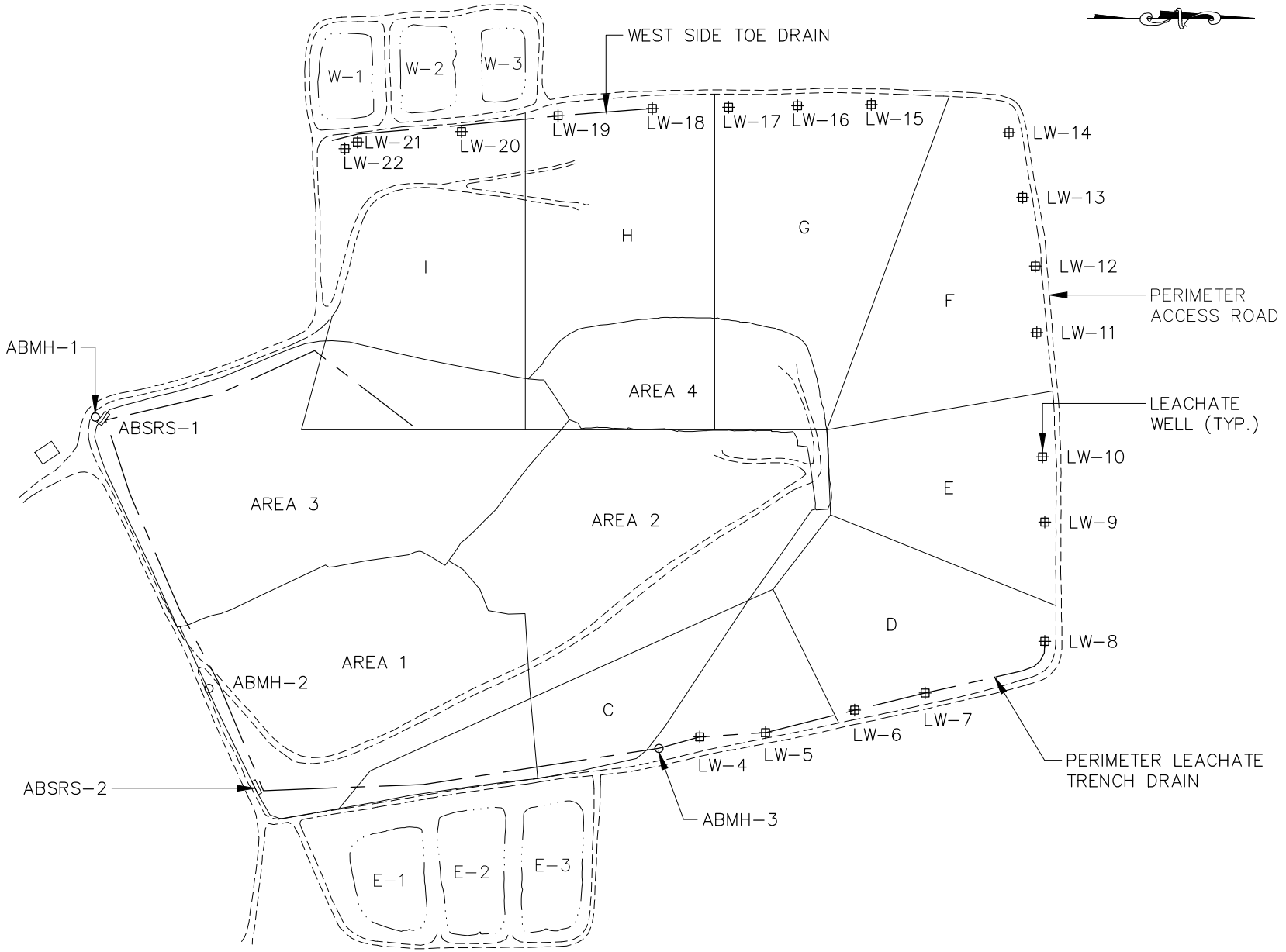
FIGURE 3-2. CONDENSATE TANK LOCATIONS (SMI LANDFILL)

FIGURE 3-2A. CONDENSATE TANK LOCATIONS (SOUTHEAST LANDFILL, SOUTHEAST LANDFILL BUMPOUT AND RENEWABLE RESOURCE PARK)

FIGURE 3-2B. CONDENSATE TANK LOCATIONS (WESTERN EXPANSION LANDFILL)

FIGURE 3-2C. CONDENSATE TANK LOCATIONS (WESTERN EXPANSION LANDFILL)

D:\PROJECTS\SMI\4213087 – 2020 ANNUAL REPORT_PROJECT DRAWINGS\2020 ANNUAL REPORT FIGURES\2020_SMI LF_LEACHATE DRAWDOWN LOCATIONS.DWG 01/14/2021 LAYOUT: FIG 3-1 (8.5X11)



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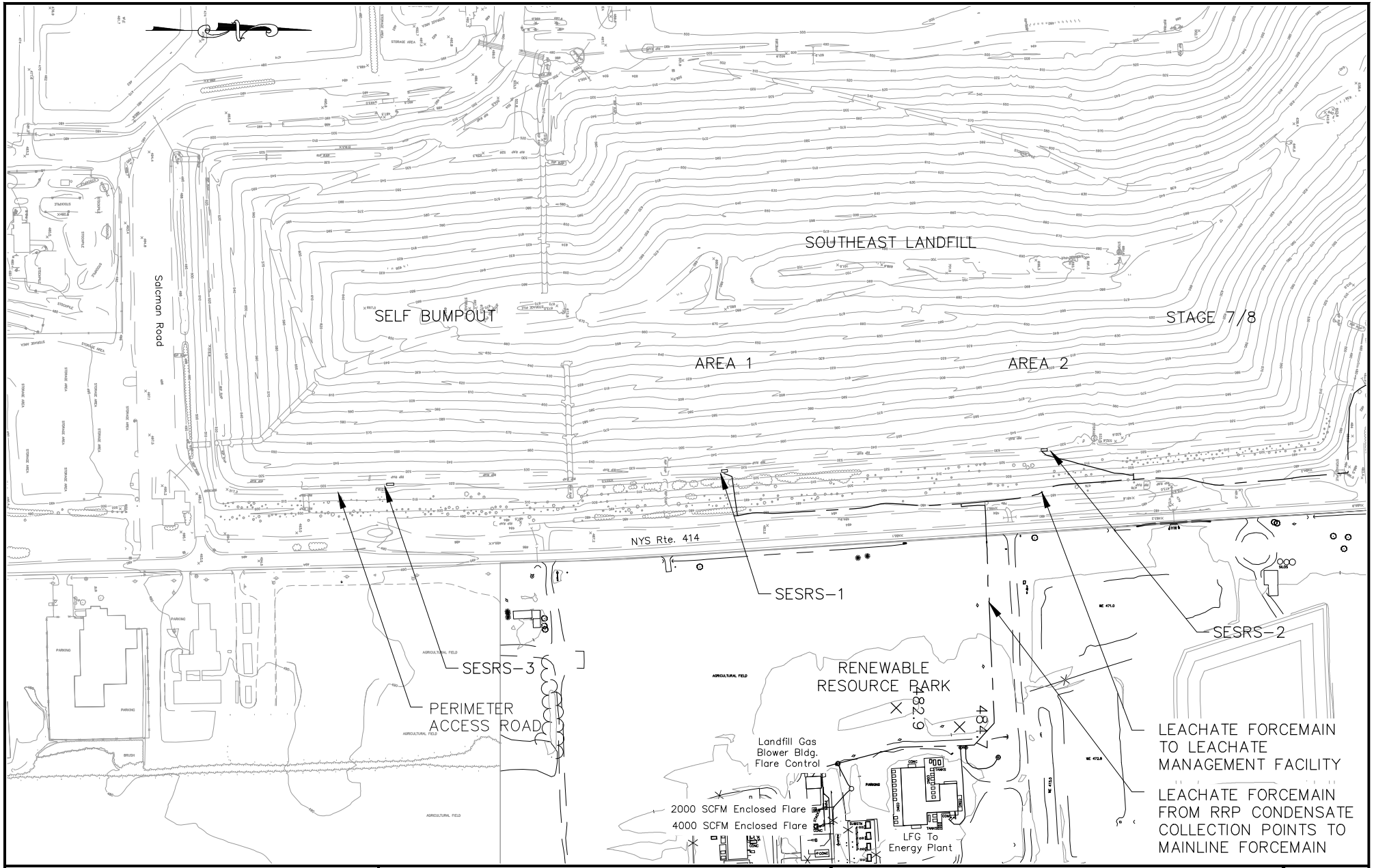
LEACHATE DRAWDOWN LOCATIONS
SMI LANDFILL

FIGURE
3-1

D:\PROJECTS\SMI\4213087 – 2020 ANNUAL REPORT_PROJECT DRAWINGS\2020 ANNUAL REPORT FIGURES\2020_SELE-SBO_LEACHATE DRAWDOWN LOCATIONS.DWG 01/14/2021 LAYOUT: FIG 3-1A (8.5X11)



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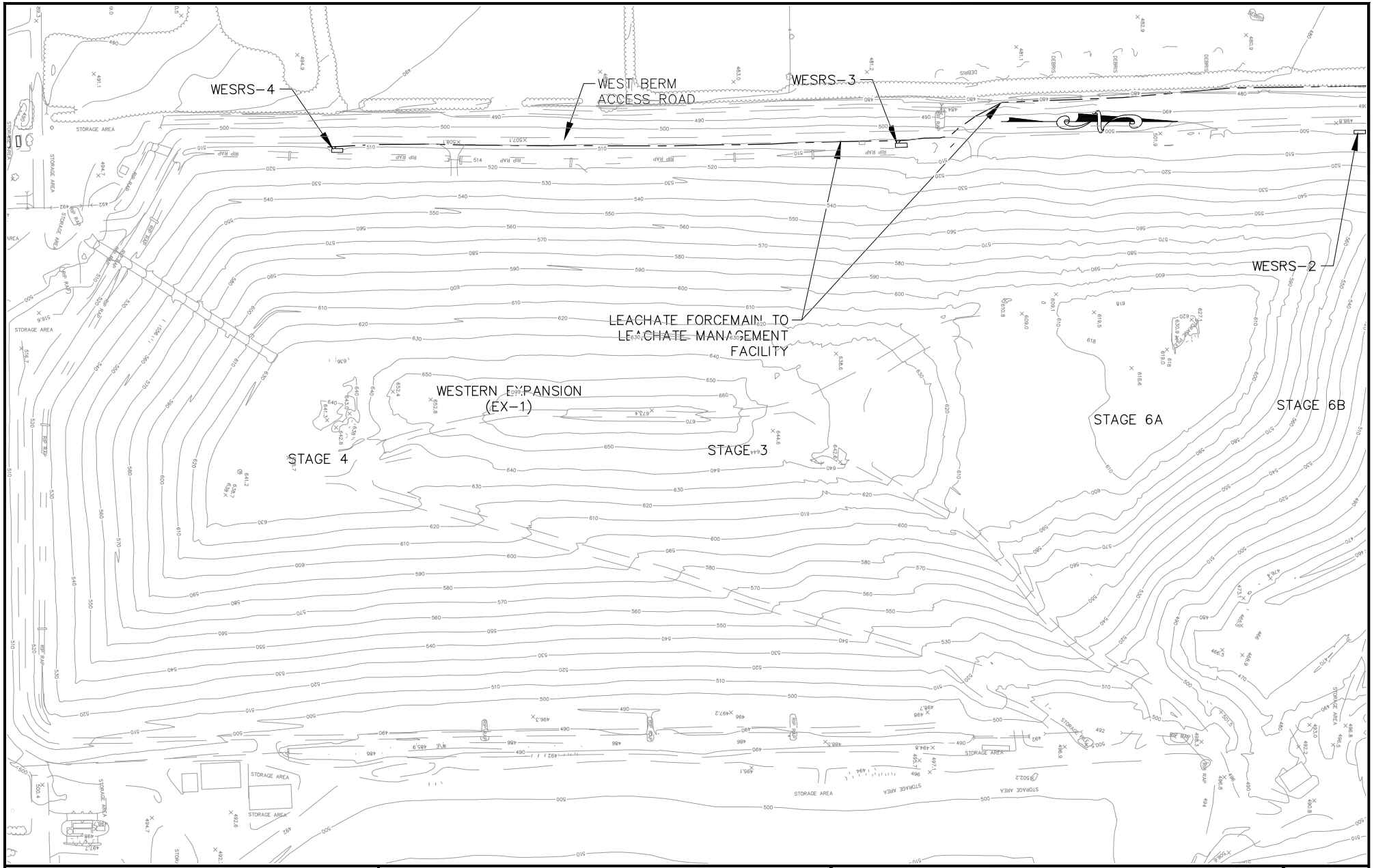
LEACHATE DRAWDOWN LOCATIONS SOUTHEAST LANDFILL, SELF BUMPOUT & RENEWABLE RESOURCE PARK

FIGURE
3-1a

D:\PROJECTS\SMI\4213087 – 2020 ANNUAL REPORT_PROJECT DRAWINGS\2020 ANNUAL REPORT FIGURES\2020_WEX_LEACHATE DRAWDOWN LOCATIONS.DWG 01/14/2021 LAYOUT: FIG 3-1B (8.5X11)



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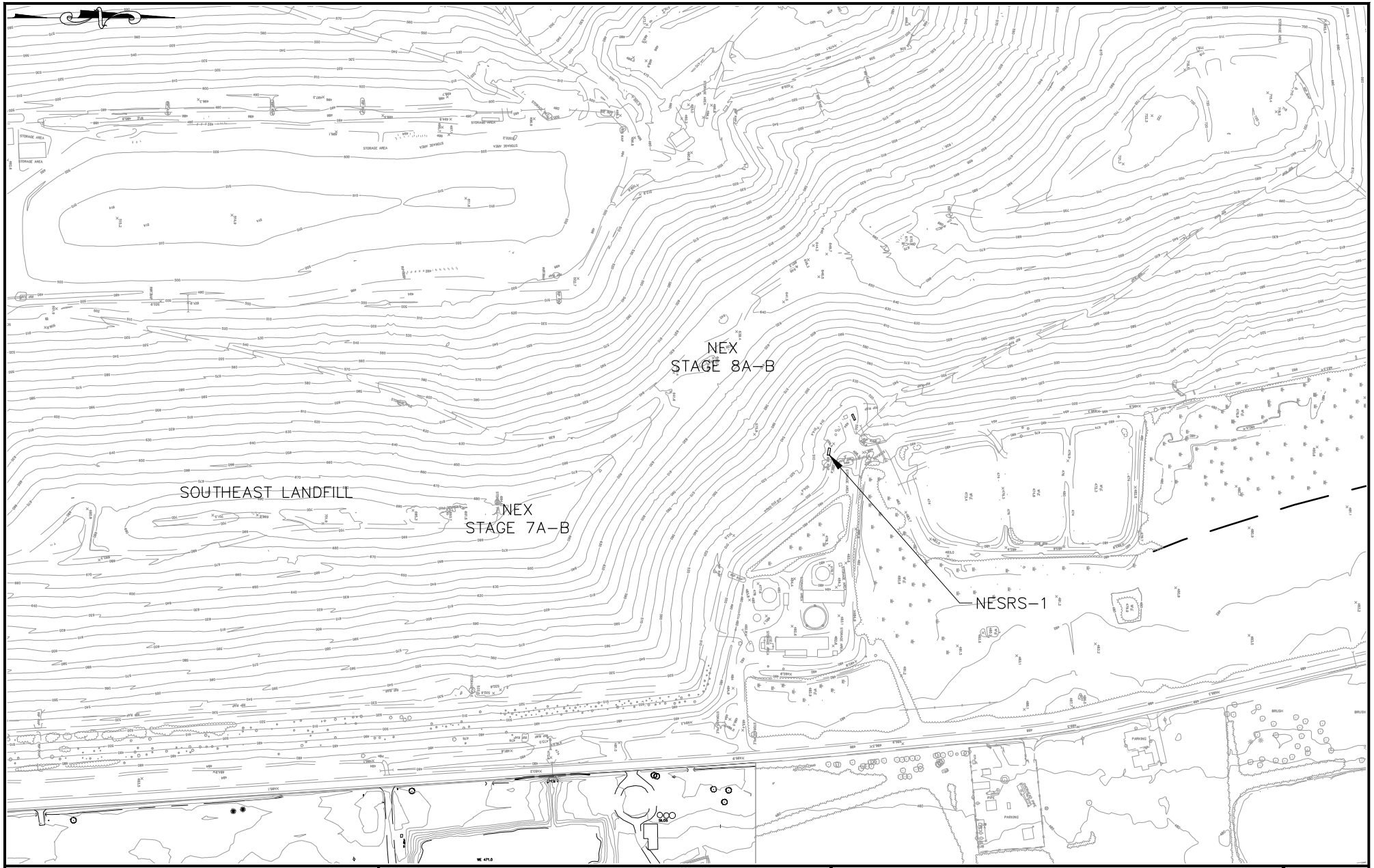
LEACHATE DRAWDOWN LOCATIONS
WESTERN EXPANSION LANDFILL

FIGURE
3–1b

D:\PROJECTS\SMI\4213087 – 2020 ANNUAL REPORT_PROJECT DRAWINGS\2020 ANNUAL REPORT FIGURES\2020_NEX_LEACHATE DRAWDOWN LOCATIONS.DWG 01/14/2021 LAYOUT: FIG 3-1C (8.5X11)



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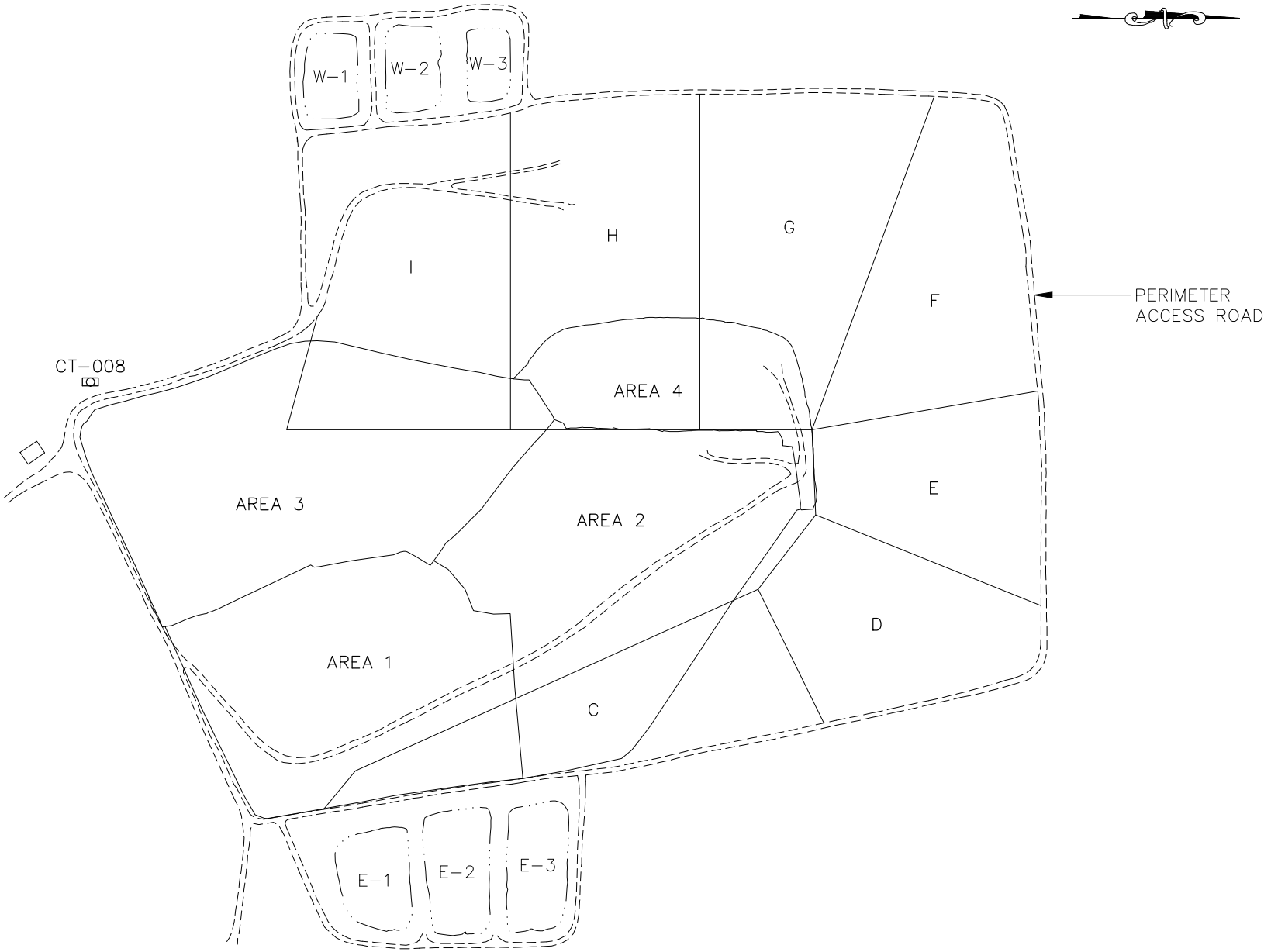
LEACHATE DRAWDOWN LOCATIONS
NORTHERN EXPANSION LANDFILL

FIGURE
3–1c

D:\PROJECTS\SMI\4213087 – 2020 ANNUAL REPORT_PROJECT DRAWINGS\2020 ANNUAL REPORT FIGURES\2020_SMI LF_CONDENSATE TANK LOCATIONS.DWG 01/14/2021 LAYOUT: FIG 3-2 (8.5X11)



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CONDENSATE TANK LOCATIONS
SMI LANDFILL

FIGURE
3-2

D:\PROJECTS\SMI\4213087 – 2020 ANNUAL REPORT_PROJECT DRAWINGS\2020 ANNUAL REPORT FIGURES\2020_SELE-SBO_CONDENSATE TANK LOCATIONS.DWG 01/14/2021 LAYOUT: FIG 3-2A (8.5X11)

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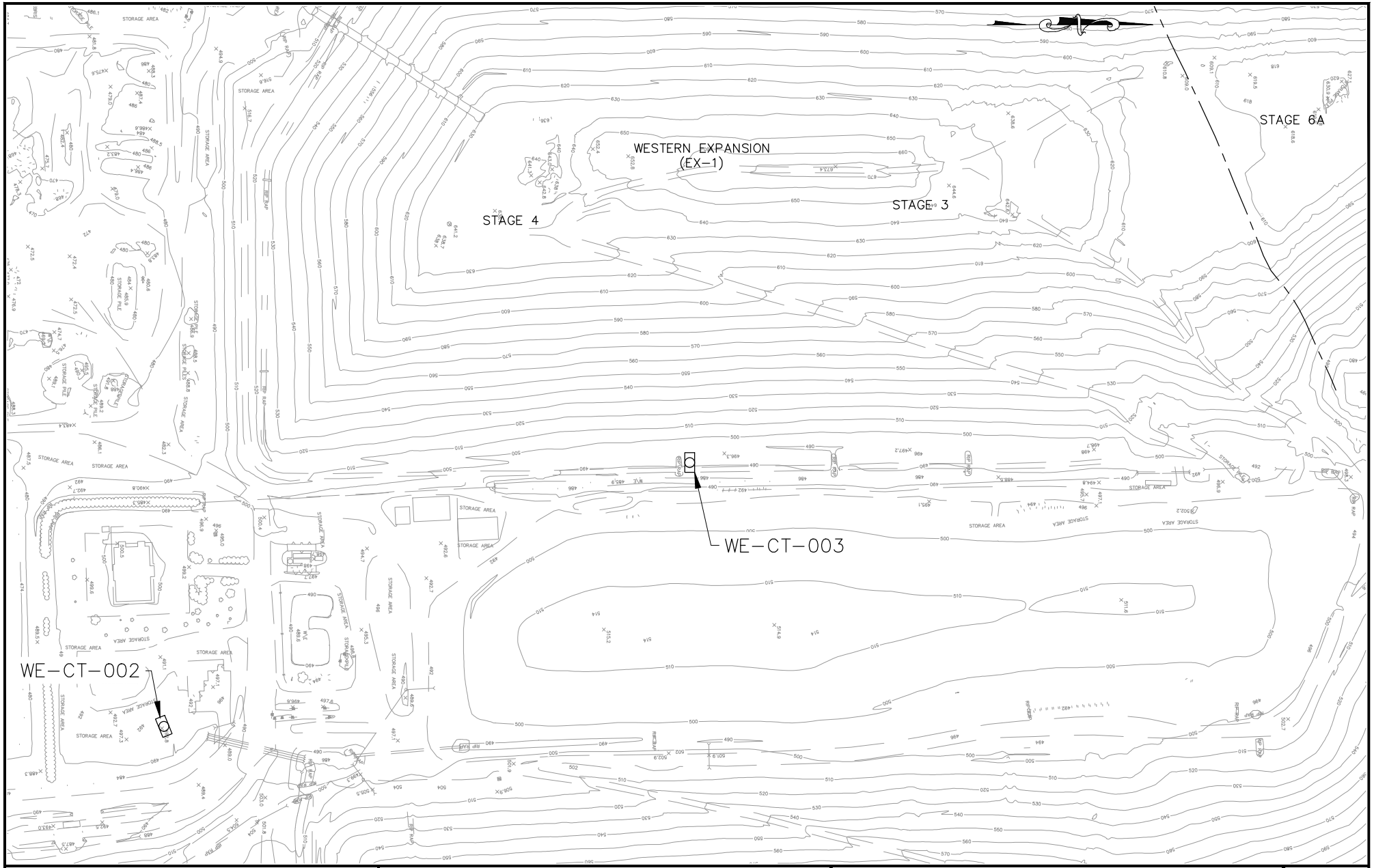
CONDENSATE TANK LOCATIONS
SOUTHEAST LANDFILL, SELF BUMPOUT
& RENEWABLE RESOURCE PARK

FIGURE
3-2a

D:\PROJECTS\SMI\4213087 – 2020 ANNUAL REPORT_PROJECT DRAWINGS\2020 ANNUAL REPORT FIGURES\2020_WEX_CONDENSATE TANK LOCATIONS.DWG 01/14/2021 LAYOUT: FIG 3-2B (8.5X11)



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CONDENSATE TANK LOCATIONS
WESTERN EXPANSION LANDFILL

FIGURE
3-2b

D:\PROJECTS\SMI\4213087 – 2020 ANNUAL REPORT_PROJECT DRAWINGS\2020 ANNUAL REPORT FIGURES\2020_WEX 004_005_CONDENSATE TANK LOCATIONS.DWG 01/14/2021 LAYOUT: FIG 3-2C (8.5X11)

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2020 ANNUAL REPORT
SENECA FALLS SENECA COUNTY NEW YORK

CONDENSATE TANK LOCATIONS
WESTERN EXPANSION LANDFILL

FIGURE
3-2c

TABLE 3-1. LEACHATE RECIRCULATION SUMMARY

TABLE 3-2. LEACHATE TREATED OFF-SITE

Seneca Meadows, Inc.
2020 Annual Report
Table 3-1
Leachate Recirculation Summary

Date	Leachate Recirculated to Existing Landfill Spray Application (Gal)	Number of Loads Recirculated	Leachate Recirculated to SMI Injection Lines (Gal)	Number of Loads Recirculated	Leachate Recirculated to SELF Injection Lines (Gal)	Number of Loads Recirculated	Leachate Recirculated to SELF Spray Application (Gal)	Number of Loads Recirculated	Leachate Recirculated to SBO Spray Application (Gal)	Number of Loads Recirculated	Leachate Recirculated to SBO Injection Lines (Gal)	Number of Loads Recirculated	Leachate Recircukated to WEX Spray Application (Gal)	Number of Loads Recirculated	Leachate Recirculated to NEX Spray Application (Gal)	Number of Loads Recirculated
January	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
March	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
April	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
September	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Grand Total	**0**	**0**														

Note: No leachate was recirculated in 2020. This table is to be reserved for future leachate recirculation records.

Seneca Meadows Inc.
2020 Annual Report
Table 3-2
Leachate Treated Off-Site

Month	From Tank(s) To Chittenango (Gal)	From Tank(s) Steuben (Gal)	From Tank(s) To V. Webster (Gal)	From Tank(s) To Passaic Valley (Gal)	From Tank(s) To BSA (Gal)	From Tank(s) To SF Sewer (Gal)*	Tanks to Evaporator Raw	Total From Tank(s) / RO To POTW's (Gal)
January	206,740	712,208	183,953	162,731	4,576,106	1,730,545	108,939	**7,681,222**
February	198,294	605,453	123,193	148,560	4,424,217	1,749,914	113,655	**7,363,286**
March	222,639	741,889	126,023	162,660	4,513,933	1,614,173		**7,381,317**
April	222,667	735,510	25,523	141,410	2,632,361	1,388,882		**5,146,353**
May	210,773	691,878	85,715	173,868	3,532,912	1,533,296		**6,228,442**
June	231,042	733,290	127,644	141,733	2,842,996	1,371,852		**5,448,557**
July	181,907	741,317	0	177,487	3,609,039	1,673,637		**6,383,387**
August	74,135	597,042	0	134,254	1,861,345	1,157,927		**3,824,703**
September	115,428	589,904	50,430	162,931	2,979,876	1,501,869		**5,400,438**
October	49,150	667,911	25,426	155,640	2,655,952	1,081,414		**4,635,493**
November	82,164	554,853	50,633	134,760	2,261,180	849,720		**3,933,310**
December	1,484,850	713,760	56,584	148,999	3,429,772	1,030,732		**6,864,697**
Total	**3,279,789**	**8,085,015**	**855,124**	**1,845,033**	**39,319,689**	**16,683,961**	**222,594**	**70,291,205**

SENECA MEADOWS, INC.

CLEANING RECORDS

Seneca Meadows, Inc.

2020 Annual Report

Daily Line Cleaning Report

Date	Location	Line Segment (Sta. to Sta.)	Jetter Equipment Used	Pipe Diameter	Pipe Type	Total Length (Linear Footage)	Total Linear Footage Cleaned	No. of Passes	Total Water Used (Gallons)	Total Leachate Removed (Gallons)	Notes
06/02/20	SELF	CO3E	ROTATOR	8"	HDPE	1,489'	600'	1	3,500		
06/02/20	SELF	CO1E	ROTATOR	8"	HDPE	700'	650'	2	3,500		
06/03/20	SELF	CO3E	ROTATOR	8"	HDPE	1,489'	1,500'	2	10,000		
06/04/20	SELF	WEST DRAIN	ROTATOR	8"	HDPE	800'	800'	3	10,000		
06/19/20	NEX	CO7E	ROTATOR	8"	HDPE	581'	650'	1	2,000		
06/19/20	NEX	CO9E	ROTATOR	8"	HDPE	600'	600'	1	3,000		
06/19/20	NEX	CO10E	ROTATOR	8"	HDPE	600'	500'	1	3,000		
06/23/20	NEX	CO10E	ROTATOR	8"	HDPE	600'	600'	1	2,500		
06/23/20	NEX	CO11E	ROTATOR	8"	HDPE	1,450'	900'	2	7,000		
06/24/20	NEX	CO11E	ROTATOR	8"	HDPE	1,450'	1,200'	1	20,000		
06/25/20	NEX	CO11E	ROTATOR	8"	HDPE	1,450'	1,300'	1	7,000		
06/25/20	SELF	CO14E	ROTATOR	8"	HDPE	1,489'	900'	1	3,000		
06/25/20	NEX	CO10E	ROTATOR	8"	HDPE	600'	600'	2	4,000		
06/26/20	NEX	CO9E	ROTATOR	8"	HDPE	600'	600'	2	4,000		
06/26/20	NEX	CO7E	ROTATOR	8"	HDPE	600'	600'	2	3,500		
06/26/20	NEX	C03E	ROTATOR	8"	HDPE	1,300'	700'	1	6,000		
06/29/20	NEX	CO3E	ROTATOR	8"	HDPE	1,300'	1,300'	1	15,000		
07/01/20	NEX	CO6E	ROTATOR	8"	HDPE	935'	935'	2	15,000		
07/02/20	NEX	CO2N	ROTATOR	8"	HDPE	1,150'	850'		1,000		
07/06/20	NEX	CO2N	ROTATOR	8"	HDPE	1,150'	1,149'		12,000		
07/06/20	NEX	CO1N	ROTATOR	8"	HDPE	340'	340'		5,000		
07/07/20	NEX	CO8E	ROTATOR	8"	HDPE	230'	230'				
07/07/20	NEX	SUMP	ROTATOR	8"	HDPE		170'				
07/07/20	NEX	CO8E	ROTATOR	8"	HDPE	230'	230'				
07/21/20	SELF2	CO14E	ROTATOR	8"	HDPE	1,490'	1,490'	2	6,000		
07/21/20	BUMPOUT	CO10E	ROTATOR	8"	HDPE	1,028'	800'	1	6,000		
07/23/20	BUMPOUT	CO10E	ROTATOR	8"	HDPE	1,028'	1,028'	2	14,000		
07/24/20	BUMPOUT	CO9E	ROTATOR	8"	HDPE	420'	625'	2	4,500		
07/24/20	BUMPOUT	CO1E	ROTATOR	8"	HDPE	1,100'	1,100'		14,000		
07/28/20	BUMPOUT	CO5E	ROTATOR	8"	HDPE	1,020'	1,000'		6,000		
07/28/20	BUMPOUT	CO1W	ROTATOR	8"	HDPE	659'	650'	2	3,000		
07/28/20	BUMPOUT	CO2W	ROTATOR	8"	HDPE	682'	670'	2	3,000		
07/28/20	BUMPOUT	CO5W	ROTATOR	8"	HDPE	1,020'	500'	1	1,500		
07/29/20	BUMPOUT	CO5E	ROTATOR	8"	HDPE	1,020'	1,100'	1	2,500		
07/30/20	WEX3	CO6W	ROTATOR	8"	HDPE	1,800'	700'	1	10,000		
08/18/20	WEX3	CO6W	ROTATION	8"	HDPE		1000'		8,000		
08/19/20	WEX3	CO2W	ROTATION	8"	HDPE		900'		4,000		
08/20/20	WEX3	CO6W	ROTATION	8"	HDPE		1300'		2,000		
08/24/20	WEX4	CO13W	ROTATION	8"	HDPE		700'		3,000		
08/24/20	SELF1	WEST DRAIN	ROTATION	8"	HDPE		500'		2,500		
08/24/20	SELF1	CO3E	ROTATION	8"	HDPE		900'				
09/16/20	SELF1	CO3E	ROTATION	8"	HDPE		1450'		12,000		
09/17/20	SELF1	WEST DRAIN	ROTATION	8"	HDPE		760'				
09/18/20	SELF1	CO2E	ROTATIO/CHISEL	8"	HDPE		900'		13,000		
09/19/20	TANTALO	COE	STANDARD	6"	PVC		320'		500		
09/19/20	TANTALO	COW	STANDARD	6"	PVC		200'		500		
09/19/20	TANTALO	CO10	STANDARD	6"	PVC		900'		3,000		
09/19/20	TANTALO	CO6	STANDARD	6"	PVC		900'		3,000		
09/21/20	WEX4	CO13W	ROTATION	8"	HDPE		900'				
09/21/20	WEX4	CO14S	ROTATION	8"	HDPE		700'				
09/21/20	WEX4	CO15S	ROTATION	8"	HDPE		500'				
09/22/20	WEX4	CO15S	ROTATION	8"	HDPE		900'				
09/23/20	WEX4	CO14S	ROTATION	8"	HDPE		710'				
09/23/20	WEX4	CO13W	ROTATION	8"	HDPE		810'		2,000		
09/23/20	WEX4	CO10W	ROTATION/CHISEL	8"	HDPE		520'				
09/24/20	WEX4	CO10W	ROTATION	8"	HDPE		900'		15,000		
09/25/20	WEX4	CO10W	ROTATION	8"	HDPE		1316'				
09/26/20	TANTALO	CO2	STANDARD	6"	PVC		900'				
09/26/20	TANTALO	CO8	STANDARD	6"	PVC		900'				
09/26/20	TANTALO	CO10	STANDARD	6"	PVC		900'				
09/28/20	WEX4	CO11W	FOOTBALL	8"	HDPE		415'				
09/28/20	WEX4	CO12W	ROTATOR	8"	HDPE		240'				
09/30/20	WEX3	CO2W	ROTATOR	8"	HDPE		900'				
09/30/20	TANTALO	CO6	STANDARD	6"	PVC		900'				
09/30/20	TANTALO	COW	STANDARD	6"	PVC		200'				
09/30/20	TANTALO	COE	STANDARD	6"	PVC		300'				
10/01/20	WEX4	CO9W	ROTATION	8"	HDPE		516'				
10/02/20	WEX4	CO8W	ROTATION	8"	HDPE		240'				
10/05/20	WEX3	CO2W	ROTATION	8"	HDPE		1300'				
10/06/20	WEX3	CO3W	ROTATION	8"	HDPE		700'				
10/08/20	WEX3	CO3W	ROTATION	8"	HDPE		1390'		20,000		
10/09/20	WEX3	CO3W	ROTATION	8"	HDPE		900'		2,500		
10/09/20	WEX3	CO1W	ROTATION	8"	HDPE		235'		3,500		

Seneca Meadows, Inc.

2020 Annual Report

Daily Line Cleaning Report

Date	Location	Line Segment (Sta. to Sta.)	Jetter Equipment Used	Pipe Diameter	Pipe Type	Total Length (Linear Footage)	Total Linear Footage Cleaned	No. of Passes	Total Water Used (Gallons)	Total Leachate Removed (Gallons)	Notes
10/09/20	WEX2	CO4W	ROTATION	8"	HDPE		500'		2,000		
10/10/20	WEX2	CO4W	ROTATION	8"	HDPE		560'		2,500		
10/10/20	WEX2	CO2W	ROTATION	8"	HDPE		570'		3,000		
10/12/20	WEX2	CO1W	ROTATION	8"	HDPE		900'		10,000		
10/13/20	WEX2	CO1W	ROTATION	8"	HDPE		1,275'		12,000		
10/13/20	WEX2	CO2W	ROTATION	8"	HDPE		570'				
10/14/20	WEX2	CO2W	ROTATION	8"	HDPE		600'				
10/14/20	WEX2	CO5W	ROTATION	8"	HDPE		400'				
10/15/20	WEX2	CO5W	ROTATION	8"	HDPE		1200'				
10/16/20	WEX2	24" TEE	ROTATION	8"	HDPE		200'				
10/16/20	WEX2	CO7W	ROTATION	8"	HDPE		330'				
10/19/20	WEX2	CO5W	ROTATION	8"	HDPE		900'				
10/19/20	WEX2	CO4W	ROTATION	8"	HDPE		550'				
10/20/20	WEX2	CO3W	ROTATION	8"	HDPE		275'				
10/20/20	WEX2	CO6W	ROTATION	8"	HDPE		500'				
10/21/20	WEX2	CO6W	ROTATION	8"	HDPE		700'		7,000		
10/21/20	WEX2	CO7W	ROTATION	8"	HDPE		328'		3,000		
10/22/20	WEX2	CO7W	ROTATION	8"	HDPE		328'		3,000		
11/04/20	SELF1	CO2E	CHISEL	8"	HDPE		900'				
11/05/20	SELF1	CO3E	ROTATION	8"	HDPE		400'				
11/09/20	SELF1	CO5E	ROTATION	8"	HDPE		850'				
11/09/20	SELF1	CO2W	CHISEL	8"	HDPE		720'				
11/11/20	SELF1	CO2E	ROTATION	8"	HDPE		800'				

SENECA MEADOWS, INC.

LEACHATE AND GAS CONDENSATE REPORT

2020 ANNUAL REPORT

LEACHATE AND GAS CONDENSATE REPORT

2020 ANNUAL REPORT

SENECA MEADOWS SOLID WASTE MANAGEMENT FACILITY

WASTE CONNECTIONS, INC.
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FEBRUARY 2021

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APPENDIX A Leachate and Gas Condensate Chemical Data
APPENDIX B SM-11 Drain Chemical Data
APPENDIX C Leachate and Gas Condensate Quantities

EXECUTIVE SUMMARY

The monitoring of leachate and gas condensate was conducted at the Seneca Meadows Solid Waste Management Facility, Seneca Falls, New York, during 2020 in compliance with an Environmental Monitoring Plan (EMP) and Site Analytical Plan (SAP).

Leachate samples were collected from above the primary liner systems of all lined fill areas at the facility, from leachate recovery wells on the Existing Landfill, and from drains that service the A/B Overfill Area of the Existing Landfill and the previous SM-11 disposal area. Samples of liquid from the secondary liner systems of each lined fill area were also collected. Composite samples of gas condensate were collected from various storage tanks at the facility.

The sampling of leachate, secondary liquids, and gas condensate was conducted semi-annually during the second and fourth quarters. Liquids collected from secondary liner systems were also sampled during the first and third quarters.

The semi-annual samples (second and fourth quarters) were analyzed for the expanded list of chemical parameters (minus dioxins and furans) identified in 6 NYCRR Part 360-2.11(d)(6), which includes general chemistry parameters, metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), herbicides, and pesticides. The secondary liquid samples collected during the first and third quarters were analyzed for the baseline list of parameters, which includes general chemistry parameters, metals, and VOCs.

Stiff and Piper diagrams of the leachate and gas condensate samples revealed cation compositions dominated by sodium and anion compositions consisting mainly of chloride and bicarbonate.

The analytical results showed that most general chemistry parameters except hexavalent chromium, total cyanide, nitrate, and sulfide were elevated in the leachate and gas condensate samples relative to naturally-occurring

groundwater at the site. Arsenic, boron, chromium, iron, magnesium, manganese, potassium, and sodium were also elevated. Aluminum, barium, cobalt, nickel, thallium, vanadium, and zinc were slightly elevated relative to groundwater concentrations. Antimony, beryllium, cadmium, copper, lead, mercury, selenium, silver, and tin were found at low or non-detect levels.

A few volatile organic compounds, mainly acetone and 2-butanone, and some semi-volatile organic compounds, mainly phenolic compounds, were detected in the leachate samples from both semi-annual events. Endosulfan 1, a pesticide, and the herbicides 2,4-D and 2,4,5-TP were detected in a few samples at low levels. No PCBs were detected in any of the samples.

By comparison to the leachate samples, the gas condensate samples exhibited lower values for many of the general chemistry parameters. Hexavalent chromium, cyanide, and nitrate were not detected in the samples. In addition, beryllium, cadmium, cobalt, copper, lead, nickel, selenium, silver, thallium, tin, and vanadium were not detected in either of the two semi-annual condensate samples. The concentrations of aluminum, antimony, arsenic, iron, zinc, and mercury concentrations were slightly elevated.

Fewer organic compounds were detected in the gas condensate samples as compared to the leachate samples. Acetone, 2-butanone, and phenolic compounds were the dominant organic compounds in the gas condensate samples, and on average, were higher in the gas condensate samples than in the leachate samples. A trace of endosulfan 1, a pesticide, was detected in the fourth quarter sample. No herbicides or PCBs were detected in the samples.

Samples collected from the west end of the SM-11 drain were substantially more dilute than the leachate samples, but continue to show slight exceedances of the groundwater standards for a few analytes.

The chemical data and Stiff diagrams for each secondary sampling location showed no signs of impacts from primary leachate except for sideriser sump ABSRS-2(S), which

was temporarily impacted by primary leachate during construction in 2017. The volume of liquid collected at sump ABSRS-2(S), during 2020 was well within the regulatory action level of 20 gallons per acre per day, however. Evaluations of analytical data for samples of porewater from beneath the secondary liner systems also showed no indications that the integrity of the liners had been compromised.

The volumes of leachate and gas condensate collected during 2020 at various sumps and storage tanks at the solid waste facility were recorded monthly and are provided in this report.

1.0 INTRODUCTION

This report summarizes the results of leachate and landfill gas condensate monitoring conducted at the Seneca Meadows Solid Waste Management Facility, Seneca Falls, New York, during 2020.

Leachate and gas condensate monitoring at the landfill is conducted for the purposes of:

- Characterizing leachate and gas condensate quality,
- Monitoring the quantities of leachate and gas condensate generated at the facility, and
- Evaluating the integrity of landfill liner systems.

Leachate and gas condensate monitoring consists of the semi-annual sampling and analyzing of leachate generated above the primary liners of lined landfills at the facility (i.e., the A/B area of the Existing Landfill, the Southeast Landfill, the Southeast Landfill Bumpout, the Western Expansion Landfill, and the Northern Expansion Landfill), from leachate recovery wells that surround the Existing Landfill, and from gas condensate collected at each of the landfills and the Renewable Resource Recovery Facility. Liquid collected from the secondary liner systems of the lined landfills is sampled and analyzed quarterly.

In addition, drainage from the west end of the SM-11 drain located along the southern boundary of the Existing Landfill is sampled as part of the leachate monitoring program. The SM-11 drain was installed to capture and dispose of shallow groundwater drained from an area south of the Existing Landfill where waste was previously removed (known as the SM-11 area). The drainage is sampled to monitor the leaching of residual contaminants by shallow groundwater flow.

Leachate, secondary liquid, and gas condensate are monitored semi-annually during the second and fourth quarters of the year (April and October) and are analyzed for the 6 NYCRR Part 360 list of expanded chemical parameters (minus dioxins and furans), which includes field parameters, general chemistry parameters, metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, and herbicides.

In addition to the semi-annual events, liquids collected from the secondary liner systems are also sampled during the first and third quarters of the year (January and July). The first and third quarter samples are analyzed for the Part 360 list of baseline chemical parameters, which includes field parameters, general chemistry parameters, metals, and VOCs. The analytical data obtained from the secondary liner systems are used to assess the performance of the primary liner systems.

Stiff and Piper diagrams were used to define the general chemical characteristics of the leachate and gas condensate samples. The analytical results were also reviewed to identify chemical parameters that were substantially elevated relative to non-contaminated groundwater at the facility. Parameters exhibiting elevated concentrations were identified as possible indicators of impacts to groundwater and surface water at the facility.

In addition to monitoring leachate chemical quality, the quantity of leachate generated by the facility is also monitored. Leachate collected from the liner systems of lined landfills at the facility (i.e., all areas except the Existing Landfill) and from leachate recovery wells at the Existing Landfill is pumped by an automated system through a dual containment forcemain to two on-site 500,000-gallon leachate storage tanks. A site-wide Supervisory Control and Data Acquisition (SCADA) system tabulates the daily and year-to-date volumes of leachate generated by various sources at the facility. The volume data are included in the semi-annual monitoring reports and are summarized in this report.

Gas recovered from the landfills is conveyed along a header to an electrical generating facility and gas flares. Condensate formed during the conveyance is collected at holding tanks located on the Seneca Meadows facility and at

the Renewable Resource Recovery Facility. The tanks are pumped on a routine basis and the condensate is transported to the leachate storage tanks for disposal at a wastewater treatment facility or processing through SMI's reverse osmosis treatment system. The volumes of condensate generated at the facility are recorded monthly and reported with the leachate quantities.

The results of the 2020 monitoring, including the analytical data, are discussed in separate semi-annual reports and are available for review at the offices of Seneca Meadows, Inc. and the Region 8 Office of the New York State Department of Environmental Conservation, Avon, New York. The purpose of this annual report is to summarize the findings of the semi-annual reports.

2.0 SAMPLING AND ANALYSIS

2.1 SAMPLE LOCATIONS

The leachate and gas condensate samples collected during the 2020 monitoring events are listed in Table 2-1. The sampling locations are shown in Figure 2-1.

2.2 COMPLIANCE

Monitoring of leachate and gas condensate was conducted in compliance with the methods and procedures described in the Environmental Monitoring Plan (EMP) and the Site Analytical Plan (SAP) for the Seneca Meadows Solid Waste Management Facility. Sampling and analysis of leachate and gas condensate was conducted semi-annually by ALS Environmental, Rochester, NY. Secondary liquids were sampled and analyzed quarterly. The analytical results were evaluated in monitoring reports filed with the NYSDEC's Region 8 Office following each semi-annual monitoring event.

Table 2-1

Leachate and Gas Condensate Sample Summary

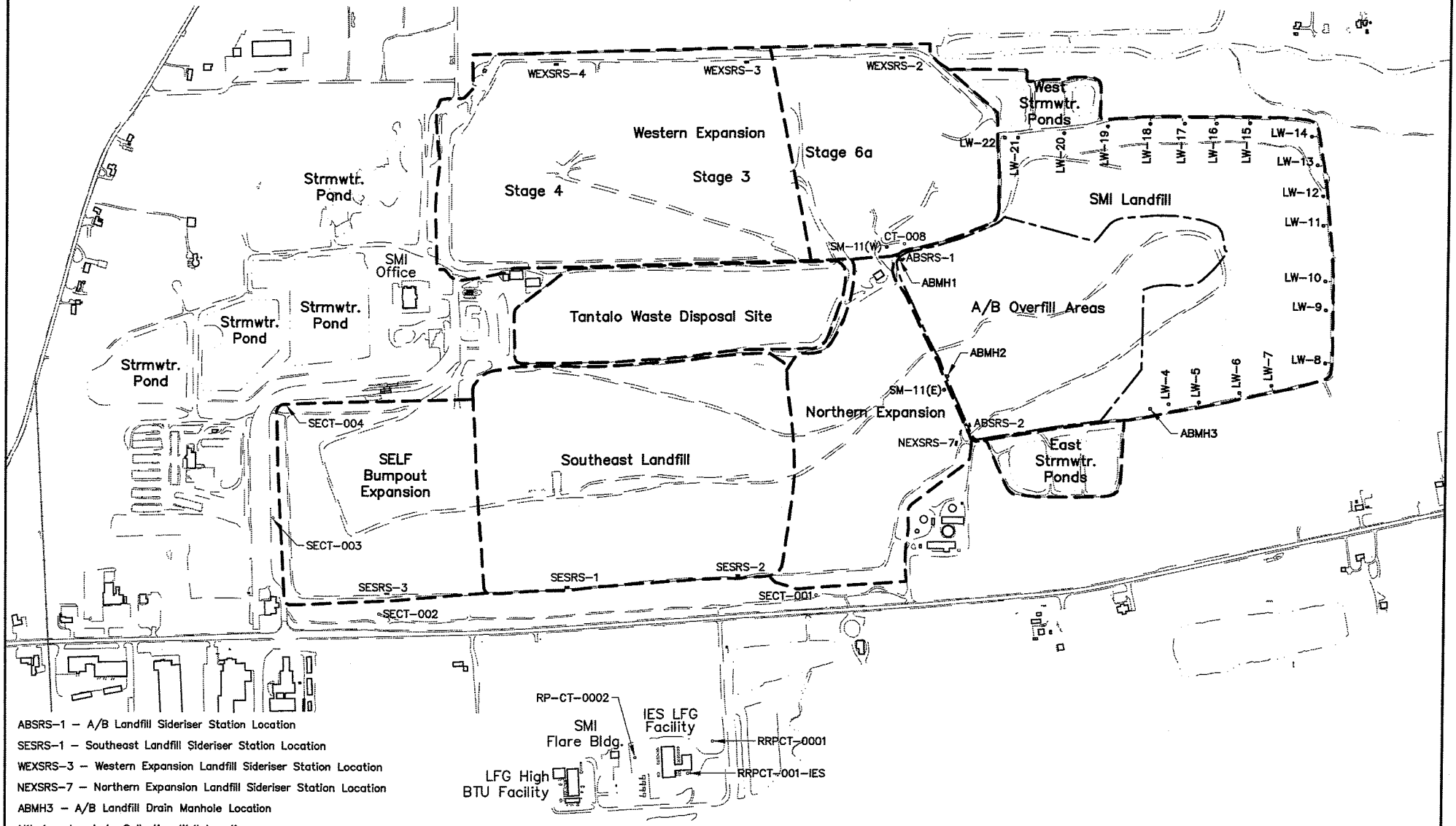
Sample Number	Description	Location
1st Quarter 2020		
ABSRS-1(S)	Liquid / Secondary liner system	A/B Overfill Area 1
ABSRS-2(S)	Liquid / Secondary liner system	A/B Overfill Area 2
NEXSRS-7(S)	Liquid / Secondary liner system	Northern Expansion Area
SESRS-1(S)	Liquid / Secondary liner system	Southeast Landfill Area 1
SESRS-2(S)	Liquid / Secondary liner system	Southeast Landfill Area 2
SESRS-3(S)	Liquid / Secondary liner system	Southeast Landfill Bumpout
WEXSRS-2(S)	Liquid / Secondary liner system	Western Expansion Area
WEXSRS-3(S)	Liquid / Secondary liner system	Western Expansion Area
WEXSRS-4(S)	Liquid / Secondary liner system	Western Expansion Area
2nd Quarter 2020		
ABSRS-1(P)	Leachate / Primary liner system	A/B Overfill Area 1
ABSRS-1(S)	Liquid / Secondary liner system	A/B Overfill Area 1
ABSRS-2(P)	Leachate / Primary liner system	A/B Overfill Area 2
ABSRS-2(S)	Liquid / Secondary liner system	A/B Overfill Area 2
NEXSRS-7(P)	Leachate / Primary liner system	Northern Expansion Area
NEXSRS-7(S)	Liquid / Secondary liner system	Northern Expansion Area
SESRS-1(P)	Leachate / Primary liner system	Southeast Landfill Area 1
SESRS-1(S)	Liquid / Secondary liner system	Southeast Landfill Area 1
SESRS-2(P)	Leachate / Primary liner system	Southeast Landfill Area 2
SESRS-2(S)	Liquid / Secondary liner system	Southeast Landfill Area 2
SESRS-3(P)	Leachate / Primary liner system	Southeast Landfill Bumpout
SESRS-3(S)	Liquid / Secondary liner system	Southeast Landfill Bumpout
WEXSRS-2(P)	Leachate / Primary liner system	Western Expansion Area
WEXSRS-2(S)	Liquid / Secondary liner system	Western Expansion Area
WEXSRS-3(P)	Leachate / Primary liner system	Western Expansion Area
WEXSRS-3(S)	Liquid / Secondary liner system	Western Expansion Area
WEXSRS-4(P)	Leachate / Primary liner system	Western Expansion Area
WEXSRS-4(S)	Liquid / Secondary liner system	Western Expansion Area
LW-4	Leachate Recovery Well	Existing Landfill
LW-8	Leachate Recovery Well	Existing Landfill
LW-12	Leachate Recovery Well	Existing Landfill
LW-16	Leachate Recovery Well	Existing Landfill
LW-20	Leachate Recovery Well	Existing Landfill
T-008	Gas condensate tank	Existing Landfill
SE CT-001	Gas condensate (Tank #1)	Southeast Landfill
SE CT-002	Gas condensate (Tank #2)	Southeast Landfill Bumpout
SE CT-003	Gas condensate (Tank #2)	Southeast Landfill Bumpout
SE CT-004	Gas condensate (Tank #2)	Southeast Landfill Bumpout
WE CT-001	Gas Condensate (Tank #1)	Western Expansion Area
WE CT-002	Gas Condensate (Tank #2)	Western Expansion Area
RRPCT1	Gas condensate (Tank #1)	Renewable Resource Recovery Fac.
RRPCT2	Gas condensate (Tank #2)	Renewable Resource Recovery Fac.
RRPCT1-IES	Gas condensate (Tank #1)	Renewable Resource Recovery Fac.
SM-11W	West end of SM-11 drain	SM-11 area

Table 2-1 (Continued)

Leachate and Gas Condensate Sample Summary

Sample Number	Description	Location
3rd Quarter 2020		
ABSRS-1(S)	Liquid / Secondary liner system	A/B Overfill Area 1
ABSRS-2(S)	Liquid / Secondary liner system	A/B Overfill Area 2
NEXSRS-7(S)	Liquid / Secondary liner system	Northern Expansion Area
SESRS-1(S)	Liquid / Secondary liner system	Southeast Landfill Area 1
SESRS-2(S)	Liquid / Secondary liner system	Southeast Landfill Area 2
SESRS-3(S)	Liquid / Secondary liner system	Southeast Landfill Bumpout
WEXSRS-2(S)	Liquid / Secondary liner system	Western Expansion Area
WEXSRS-3(S)	Liquid / Secondary liner system	Western Expansion Area
WEXSRS-4(S)	Liquid / Secondary liner system	Western Expansion Area
4th Quarter 2020		
ABSRS-1(P)	Leachate / Primary liner system	A/B Overfill Area 1
ABSRS-1(S)	Liquid / Secondary liner system	A/B Overfill Area 1
ABSRS-2(P)	Leachate / Primary liner system	A/B Overfill Area 2
ABSRS-2(S)	Liquid / Secondary liner system	A/B Overfill Area 2
NEXSRS-7(P)	Leachate / Primary liner system	Northern Expansion Area
NEXSRS-7(S)	Liquid / Secondary liner system	Northern Expansion Area
SESRS-1(P)	Leachate / Primary liner system	Southeast Landfill Area 1
SESRS-1(S)	Liquid / Secondary liner system	Southeast Landfill Area 1
SESRS-2(P)	Leachate / Primary liner system	Southeast Landfill Area 2
SESRS-2(S)	Liquid / Secondary liner system	Southeast Landfill Area 2
SESRS-3(P)	Leachate / Primary liner system	Southeast Landfill Bumpout
SESRS-3(S)	Liquid / Secondary liner system	Southeast Landfill Bumpout
WEXSRS-2(P)	Leachate / Primary liner system	Western Expansion Area
WEXSRS-2(S)	Liquid / Secondary liner system	Western Expansion Area
WEXSRS-3(P)	Leachate / Primary liner system	Western Expansion Area
WEXSRS-3(S)	Liquid / Secondary liner system	Western Expansion Area
WEXSRS-4(P)	Leachate / Primary liner system	Western Expansion Area
WEXSRS-4(S)	Liquid / Secondary liner system	Western Expansion Area
LW-7	Leachate Recovery Well	Existing Landfill
LW-11	Leachate Recovery Well	Existing Landfill
LW-15	Leachate Recovery Well	Existing Landfill
LW-19	Leachate Recovery Well	Existing Landfill
T-008	Gas condensate	Existing Landfill
SE CT-001	Gas condensate (Tank #1)	Southeast Landfill
SE CT-002	Gas condensate (Tank #2)	Southeast Landfill Bumpout
SE CT-003	Gas condensate (Tank #2)	Southeast Landfill Bumpout
SE CT-004	Gas condensate (Tank #2)	Southeast Landfill Bumpout
WE CT-001	Gas Condensate (Tank #1)	Western Expansion Area
WE CT-002	Gas Condensate (Tank #2)	Western Expansion Area
RRPCT1	Gas condensate	Renewable Resource Recovery Fac.
RRPCT2	Gas condensate (Tank #2)	Renewable Resource Recovery Fac.
RRPCT1-IES	Gas condensate	Renewable Resource Recovery Fac.
SM-11W	West end of SM-11 drain	SM-11 area

S:\L03\P67\Groundwater-Pore Water\2013 Grnd Water Diagrams\Overall Site Leachate-Gas Condensate.dwg 02/25/2013



ABSRS-1 – A/B Landfill Sideriser Station Location
SESRS-1 – Southeast Landfill Sideriser Station Location
WEXSRS-3 – Western Expansion Landfill Sideriser Station Location
NEXSRS-7 – Northern Expansion Landfill Sideriser Station Location
ABMH3 – A/B Landfill Drain Manhole Location
LW-4 – Leachate Collection Well Location
CT-009 – Landfill Gas Collection System Condensate Storage Tank Location

SENECA MEADOWS LANDFILL
1786 SALCMAN ROAD
WATERLOO, NEW YORK 13165

LEACHATE AND GAS CONDENSATE SAMPLING LOCATIONS AT THE SMI SOLID WASTE MANAGEMENT FACILITY

0 500 1000
Scale In Feet

FIGURE
2-1

2.3 COMPLETENESS

The EMP specifies the locations at which leachate samples are to be collected during each leachate monitoring event. These locations include sumps that collect leachate from above the primary liner systems of lined landfills and secondary liquids from the secondary liner systems, 19 leachate recovery wells that surround the west, north, and east sides of the Existing Landfill, and three manholes that access the A/B drain of the A/B Overfill Area of the Existing Landfill (see Figure 2-1).

A sub-set of the 19 leachate recovery wells and three manholes at the Existing Landfill were scheduled for sampling during each semi-annual event (see Table 2-1). The locations sampled were those specified in the EMP. Manhole ABMH3, which was scheduled for sampling during the fourth quarter, was dry and could not be sampled.

In addition to the leachate samples, a composite sample of gas condensate was collected at designated storage tanks during each semi-annual event.

During both semi-annual events, complete samples were collected from the locations specified in the EMP.

2.4 LABORATORY ANALYSIS

The leachate samples were collected as whole, unfiltered grab samples. The gas condensate samples were collected as one sample composited from individual grab samples collected at each of the storage tanks listed in Table 2-1.

The leachate and gas condensate samples were analyzed for the expanded list of chemical parameters (minus dioxins and furans) provided in the 6 NYCRR Part 360 water quality analysis tables following USEPA/SW-846 methods. The analytical results were provided in USEPA Tier 2 format (NYSDEC ASP Category A format).

3.0 SUMMARY OF RESULTS

3.1 LEACHATE QUALITY

Summary statistics of the analytical data obtained for the leachate and gas condensate samples from both semi-annual sampling events of 2020 are provided in Appendix A. The summary statistics for leachate were computed using data obtained for 29 samples collected from the Existing Landfill leachate recovery wells and from the primary liner systems of the lined landfills during both semi-annual events. These samples represent the higher strength leachate collected at the facility. The analytical results are discussed briefly in the following sections.

3.1.1 Field Parameters

The field measurements taken during both semi-annual sampling events show pHs ranging from neutral (7.00) to slightly alkaline (7.98) with an average pH of 7.46. Oxidation-reduction (redox) potentials ranged from reducing (-213 mV) to mildly reducing (27 mV) with an average value of -98 mV. Specific conductivities ranged widely from 1,639 to 365,000 μmhos/cm, and on the average were high (26,643 μmhos/cm). Sample turbidities also ranged widely from 2.1 to 996 nephelometric turbidity units (NTU) and on the average were slightly elevated (97 μmhos/cm).

3.1.2 General Chemistry

Most of the general chemistry parameters listed in Appendix A are elevated relative to concentrations commonly found in naturally-occurring groundwater at the facility and are also elevated relative to the NYSDEC Class GA groundwater standards.

The general chemistry parameters that constitute the major portion of the leachate total dissolved solids (TDS) content, ranked from high to low concentration, follow the order:

chloride > alkalinity > ammonia > sulfate

Parameters that were rarely detected or detected at low concentrations include hexavalent chromium, total cyanide, nitrate, and sulfide.

3.1.3 Metals

Metals in the leachate samples exhibiting elevated concentrations relative to natural groundwater at the facility include arsenic, boron, chromium, iron, magnesium, manganese, potassium, sodium, and thallium.

The metals that typically constitute the greatest portion of the TDS content, ranked from high to low concentration, follow the order:

sodium > potassium > calcium > magnesium

Metals exhibiting slightly elevated concentrations in leachate relative to local, natural groundwater include aluminum, barium, cobalt, nickel, vanadium, and zinc.

Copper and lead were rarely detected. Antimony, beryllium, mercury, silver, and tin were not detected.

3.1.4 Organic Compounds

Organic compounds detected in the leachate samples are also listed in Appendix A.

Volatile organic compounds (VOCs) detected in the leachate samples consist mainly of acetone and 2-butanone (a.k.a. methyl ethyl ketone or MEK). Additional VOCs including cis-1,2-dichloroethene, ethylbenzene, and vinyl chloride were detected at substantially lower concentrations in a few samples.

Several semi-volatile organic compounds (SVOCs) were also detected in the samples. Phenolic compounds (3+4 methylphenol and phenol) were detected at the highest

concentrations. Bis(2-ethylhexyl) phthalate (BEHP), a common laboratory contaminant, and 2,4-dimethylphenol, 2-methylphenol, naphthalene, phenanthrene, and o-toluidine were detected in a few samples at much lower concentrations.

One pesticide (endosulfan 1) and two herbicides (2,4-D and 2,4,5-TP) were detected at low concentrations in a few samples. No PCBs were detected in the samples.

3.2 GAS CONDENSATE QUALITY

Summaries of the analytical results for the two semi-annual gas condensate samples are provided in Appendix A and are discussed in the following sections.

Equal volumes of gas condensate from the various condensate holding tanks at the SMI facility were composited into one sample during each semi-annual sampling event. Each sample therefore provides an "average" of the condensate chemistry for each event.

3.2.1 Field Parameters

As compared to the leachate samples, on average the gas condensate samples exhibited lower conductivities and similar pHs. The oxidation-reduction potentials (ORPs) of the condensate were slightly higher and the turbidities were lower.

3.2.2 General Chemistry

By comparison to the leachate samples, the gas condensate samples exhibited lower values for alkalinity, bromide, chloride, hardness, TDS, and sulfate, and higher values for ammonia, BOD, TOC, COD, and total phenolics. Bromide, hexavalent chromium, and nitrate were not detected in the condensate samples.

The concentrations of the major general chemistry parameters follow the order:

alkalinity > ammonia > chloride > sulfate

3.2.3 Metals

The concentrations of major metals in the condensate are substantially lower than those found in the leachate and follow the order:

sodium > potassium > calcium > magnesium

By comparison to the leachate samples, the gas condensate samples showed slightly higher detections of antimony, arsenic, and zinc, and trace detections of mercury.

The gas condensate samples showed fewer overall detections of metals than the leachate samples. Beryllium, cadmium, cobalt, copper, lead, nickel, selenium, silver, thallium, tin, and vanadium were not detected in either of the semi-annual condensate samples.

3.2.4 Organic Compounds

Fewer organic compounds were detected in the condensate samples as compared to the leachate samples. However, the concentrations of acetone and 2-butanone were substantially higher in the condensate.

One pesticide (endosulfan 1) was detected at a low level in one of the fourth quarter condensate sample. No PCBs or herbicides were detected in either of the condensate samples.

3.3 SM-11 DRAIN SAMPLES

The semi-annual monitoring results for the samples collected from the SM-11 drain (SM-11 West) are provided in Appendix B. Although these samples are included with the semi-annual leachate and gas condensate monitoring, the historical analytical results have shown a chemical quality that is more similar to groundwater at the facility than leachate. Thus, the results are discussed separately in this report.

In general, the results for the SM-11 drain samples are substantially more dilute than the leachate samples. However, as shown in Appendix B, exceedances of the Class GA

groundwater standards occurred for ammonia in the fourth quarter sample and for color, TDS, sulfate, and turbidity in both of the semi-annual samples.

The metals data show exceedances of the standards for arsenic and manganese in the fourth quarter samples and for iron, magnesium, and sodium in both samples.

No organic compounds were detected in the SM-11 drain samples during either semi-annual sampling event.

The analytical results indicate that the drain continues to remove slightly contaminated shallow groundwater from the SM-11 area. The overall chemical quality, however, is substantially more dilute than leachate and appears to be only slightly more concentrated than non-contaminated groundwater at the facility.

3.4 LEACHATE AND GAS CONDENSATE QUANTITIES

The quantities of leachate and gas condensate collected at the Seneca Meadows Solid Waste Management Facility were reported as monthly totals in each semi-annual Leachate and Gas Condensate Monitoring Report submitted in 2020. The total volumes collected from each fill area during 2020 are provided in Appendix C of this report.

3.5 EVALUATION OF LINER INTEGRITY

For fill areas having primary and secondary liner systems, which include all fill areas except an older portion of the Existing Landfill, the analytical results for leachate collected above the primary liner, fluids from the secondary system, and porewater from drains beneath the liner systems were compared to detect possible leakage of the liners.

In each semi-annual Leachate and Gas Condensate Report, Stiff diagrams were used to compare the general inorganic chemistry of the primary leachate samples to the secondary liquid samples collected at each drainage sump. Possible leakage of the primary system is indicated by chemical patterns in the Stiff diagrams of secondary samples

that begin to mimic those of the primary samples. Possible leakage of a secondary system into the underlying porewater is determined the same way.

The chemical data and Stiff diagrams for each secondary sampling location show no signs of impacts from primary leachate except for ABSRS-2, which was temporarily impacted by primary leachate during construction in 2017 as previously reported. The volume of liquid collected at sump ABSRS-2 during 2020, however, was well within the regulatory action level of 20 gallons per acre per day (GPAD).

The chemical data for porewaters beneath the secondary liner systems, which are sampled quarterly as part of groundwater monitoring program, show compositions similar to non-contaminated groundwater at the facility and show no indications that the integrities of the secondary liner systems have been compromised.

4.0 CONCLUSIONS

The monitoring of landfill leachate, gas condensate, and liquid collected from secondary liner systems of the lined landfills at the Seneca Meadows Solid Waste Management Facility was conducted semi-annually during the second and fourth quarters of 2020. The samples were analyzed for the 6 NYCRR Part 360 list of expanded chemical parameters minus dioxins and furans. Liquids collected from secondary liner systems were also sampled during the first and third quarters of the year and analyzed for the Part 360 list of baseline chemical parameters.

The concentrations of most general chemistry parameters including color, biological oxygen demand (BOD), alkalinity, ammonia, bromide, chloride, chemical oxygen demand (COD), total dissolved solids (TDS), total Kjeldahl nitrogen (TKN), total organic carbon (TOC), and total phenols were found to be elevated in the leachate samples relative to naturally-occurring groundwater at the facility. Hexavalent chromium, total cyanide, nitrate, and sulfide were at low or non-detect levels.

Metals in the leachate samples exhibiting elevated concentrations relative to natural groundwater at the landfill include arsenic, boron, chromium, iron, magnesium, manganese, potassium, and sodium. Metals exhibiting slightly elevated concentrations relative to groundwater include aluminum, barium, cadmium, cobalt, copper, lead, nickel, thallium, vanadium, and zinc. Antimony, beryllium, mercury, silver, and tin were not detected.

A few volatile organic compounds, mainly acetone and 2-butanone, and a few semi-volatile organic compounds, mainly phenolic compounds, were detected in the leachate samples from both semi-annual events. One pesticide (endosulfan 1) and two herbicides (2,4-D and 2,4,5-TP) were detected at low concentrations in a few samples. No PCBs were detected in the samples.

By comparison to the leachate samples, the gas condensate samples exhibited lower values for alkalinity, bromide, chloride, hardness, TDS, and sulfate, and higher values for ammonia, BOD, COD, TOC, and total phenolics.

The gas condensate samples showed fewer overall detections of metals than the leachate samples. Beryllium, cadmium, cobalt, copper, lead, nickel, selenium, silver, thallium, tin, and vanadium were not detected in either of the two semi-annual condensate samples. However, by comparison to the leachate samples, the condensate samples exhibited slightly higher values for antimony, arsenic, zinc, and mercury.

Fewer organic compounds were detected in the gas condensate samples as compared to the leachate samples. Acetone, 2-butanone, and phenolic compounds were the dominant organic compounds in the gas condensate samples, and on average, were higher in the gas condensate samples than in the leachate samples. One pesticide (endosulfan 1) was detected at a low level in one of the semi-annual condensate samples. No PCBs or herbicides were detected in either of the condensate samples.

The samples collected from the SM-11 drain (SM-11 West) were substantially more dilute than the leachate samples. However, the samples exhibited slight exceedances of the Class GA groundwater standards for ammonia in the fourth

quarter sample and for color, TDS, sulfate, and turbidity in both of the semi-annual samples.

The metals data for SM-11 West showed exceedances of the standards for arsenic and manganese in the fourth quarter samples and for iron, magnesium, and sodium in both samples. No organic compounds were detected in the SM-11 drain samples during either semi-annual sampling event. The analytical results indicate that the drain continues to remove slightly contaminated groundwater from the SM-11 area.

The chemical data and Stiff diagrams for each secondary sampling location show no signs of impacts from primary leachate except for sideriser sump ABSRS-2, which was temporarily impacted by primary leachate during construction in 2017. The volume of liquid collected at this sump during 2020 was well within the regulatory action level of 20 gallons per acre per day (GPAD).

Evaluations of analytical data for samples of porewater from beneath the secondary liner systems showed no indications that the integrity of the liners has been compromised.

The quantities of leachate and gas condensate collected during 2020 were recorded monthly and summarized in each semi-annual monitoring report, as required.

Appendix A

Leachate and Gas Condensate Chemical Data

Field and General Chemistry Parameters
Leachate and Gas Condensate

2020 Annual Summary

Parameter	Units	GW Std	Leachate				Gas Condensate			
			# Detects	Min	Max	Avg	# Detects	Min	Max	Avg
Alkalinity, Total as CaCO3	mg/L		29	365	11400	6149	2	3850	5080	4465
Ammonia as Nitrogen	mg/L	2	29	13.1	2470	1385	2	1180	1830	1505
Biochemical Oxygen Demand (BOD)	mg/L		29	3.9	8010	989	2	1360	7230	4295
Bromide	mg/L	2	24	3.8	152	36.4	0			
Carbon, Total Organic	mg/L		29	17.2	5870	1500	2	3160	3390	3275
Chemical Oxygen Demand, Total	mg/L		29	47.5	17500	4653	2	6320	17100	11710
Chloride	mg/L	250	29	77.4	24700	7023	2	536	545	541
Chromium, Hexavalent	mg/L	0.05	1	0.200	0.200	0.200	0			
Color, True	Color Units	15	29	125.0	5200	2273	2	200	850	525
Conductivity, Field	uMHOS/cm		29	1639	365000	36643	2	9587	11545	10566
Cyanide, Total	mg/L	0.2	26	0.008	0.770	0.254	1	0.156	0.156	0.156
Hardness, Total as CaCO3	mg/L		29	171	5360	962	2	116	520	318
Nitrate as Nitrogen	mg/L	10	5	3.5	8.6	6.1	0			
Nitrogen, Total Kjeldahl (TKN)	mg/L		29	15.3	2630	1491	2	1280	2030	1655
Oxidation-Reduction Potential (ORP), F	mV		29	-213	27	-98	2	-155	71	-42
pH, Field	pH Units	6.5-8.5	29	7.00	7.98	7.46	2	7.54	7.71	7.63
Phenolics, Total Recoverable	mg/L	0.001	27	0.033	9.9	1.1	2	8.7	11.7	10.2
Solids, Total Dissolved (TDS)	mg/L	500	29	1110	41700	13601	2	2630	2770	2700
Sulfate	mg/L	250	26	2.8	432	113	2	27.5	71.7	49.6
Sulfide, Acid-Soluble	mg/L		8	2.0	20.4	7.5	1	6.6	6.6	6.6
Temperature, Field	DEG C		29	10.9	26.9	19.1	2	13.7	19.4	16.6
Turbidity, Field	NTU	5	29	2.1	996	97	2	13.0	22	18

Notes:

Leachate data includes 29 samples from leachate recovery wells and primary liner systems

Gas condensate data includes 2 semi-annual composite samples

Metals
Leachate and Gas Condensate

2020 Annual Summary

Parameter	Units	GW Std	Leachate				Gas Condensate			
			# Detects	Min	Max	Avg	# Detects	Min	Max	Avg
Aluminum	mg/L		18	0.130	1.810	0.61	2	0.26	0.30	0.28
Antimony	mg/L	0.003	0				2	0.109	0.112	0.111
Arsenic	mg/L	0.025	26	0.017	0.546	0.115	2	0.308	0.342	0.325
Barium	mg/L	1	29	0.054	2.33	0.84	2	0.037	0.053	0.045
Beryllium	mg/L	0.003 (G)	0				0			
Boron	mg/L	1	29	0.22	40.7	14.0	2	2.49	3.03	2.76
Cadmium	mg/L	0.005	1	0.006	0.006	0.006	0			
Calcium	mg/L		29	11.2	1550	154	2	17	109	63
Chromium	mg/L	0.05	27	0.034	0.986	0.250	2	0.043	0.064	0.054
Cobalt	mg/L		6	0.051	0.064	0.058	0			
Copper	mg/L	0.2	1	0.021	0.021	0.021	0			
Iron	mg/L	0.3	29	0.69	263	17.5	2	2.2	18.2	10.2
Lead	mg/L	0.025	2	0.0074	0.0115	0.009	0			
Magnesium	mg/L	35	29	34.8	491	140	2	17.9	60.4	39
Manganese	mg/L	0.3	29	0.01	11.4	0.76	2	0.048	0.955	0.50
Mercury	mg/L	0.0007	0				2	0.0057	0.0059	0.0058
Nickel	mg/L	0.1	25	0.043	0.378	0.155	0			
Potassium	mg/L		29	16.5	3180	855	2	107	165	136
Selenium	mg/L	0.01	0				0			
Silver	mg/L	0.05	0				0			
Sodium	mg/L	20	29	59.7	6460	2593	2	369	373	371
Thallium	mg/L	0.0005 (G)	4	0.010	0.056	0.033	0			
Tin	mg/L		0				0			
Vanadium	mg/L		10	0.057	0.15	0.082	0			
Zinc	mg/L		13	0.023	0.222	0.091	2	0.04	0.86	0.45

Notes:

Leachate data includes 29 samples from leachate recovery wells and primary liner systems

Gas condensate data includes 2 semi-annual composite samples

"G" indicates a guidance value

Organic Compounds
Leachate and Gas Condensate

2020 Annual Summary

Parameter	Units	GW Std	Leachate				Gas Condensate			
			# Detects	Min	Max	Avg	# Detects	Min	Max	Avg
Volatile Organic Compounds										
Acetone	ug/L	50 (G)	10	130	22000	6204	2	16000	36000	26000
2-Butanone (MEK)	ug/L	50 (G)	11	240	12000	4063	2	23000	48000	35500
cis-1,2-Dichloroethene	ug/L	5	1	630	630	630				
Ethylbenzene	ug/L	5	1	52	52	52				
Vinyl chloride	ug/L	2	1	280	280	280				
Semi-Volatile Organic Compounds										
Benzyl alcohol	ug/L	NR					2	310	620	465
Bis(2-ethylhexyl) Phthalate	ug/L	5	3	27	400	182	1	210	210	210
2,4-Dimethylphenol		50(G)	1	25	25	25				
2-Methylphenol	ug/L	5	3	34	34	34				
3+4-Methylphenol	ug/L	5	14	26	6100	1685	2	3100	3900	3500
Naphthalene	ug/L	10 (G)	1	27	27	27				
Phenanthrene	ug/L	50 (G)	1	69	69	69				
o-Toluidine	ug/L	5	5	48	100	70				
Phenol	ug/L	1	7	44	2800	921	2	1800	2600	2200
PCBs										
Pesticides										
Endosulfan 1	ug/L	NR	6	0.20	0.77	0.54	1	0.14	0.14	0.14
Herbicides										
2,4-D	ug/L	50	1	7.1	7.1	7.1				
2,4,5-TP	ug/L	0.26	1	2.8	2.8	2.8				

Notes:

Leachate data includes 29 samples from leachate recovery wells and primary liner systems

Gas condensate data includes 2 semi-annual composite samples

"G" indicates a guidance value, "NR" means not regulated

Appendix B

SM 11 Drain Chemical Data

Field and General Chemistry Parameters
SM-11 Drain Samples

2020 Annual Summary

			SM-11 West		
Parameter	**Units**	**GW Std**	**2nd Qtr**	**4th Qtr**	**Average**
Alkalinity, Total as CaCO3	mg/L		251	596	424
Ammonia as Nitrogen	mg/L	2	0.871	11.7	6.3
Biochemical Oxygen Demand (BOD)	mg/L			5.7	5.7
Bromide	mg/L	2			
Carbon, Total Organic (TOC)	mg/L		7.1	23.7	15.4
Chemical Oxygen Demand, Total	mg/L		12.2	58.4	35.3
Chloride	mg/L	250	20.4	229	125
Chromium, Hexavalent	mg/L	0.05			
Color, True	Color Units	15	35	90	63
Conductivity, Field	uMHOS/cm		1350	2249	1800
Cyanide, Total	mg/L	0.2			
Hardness, Total as CaCO3	mg/L		699	1020	860
Nitrate as Nitrogen	mg/L	10	2.3		2.3
Nitrogen, Total Kjeldahl (TKN)	mg/L		1.16	14.4	7.8
pH, Field	pH UNITS	6.5-8.5	7.76	7.52	7.6
Phenolics, Total Recoverable	mg/L	0.001			
Oxidation-Reduction Potential (ORP), Field	mV		-108	-112	-110
Solids, Total Dissolved (TDS)	mg/L	500	725	1460	1093
Sulfate	mg/L	250	344	339	342
Sulfide, Acid-Soluble	mg/L				
Temperature, Field	DEG C		11.1	9.7	10.4
Turbidity, Field	NTU	5	14.9	32.3	23.6

Note: blank space indicates a non-detect result

Metals
SM-11 Drain Samples

2020 Annual Summary

			SM-11 West		
Parameter	**Units**	**GW Std**	**2nd Qtr**	**4th Qtr**	**Average**
Aluminum	mg/L				
Antimony	mg/L	0.003			
Arsenic	mg/L	0.025	0.017	0.043	0.030
Barium	mg/L	1	0.113	0.211	0.162
Beryllium	mg/L	0.003 (G)			
Boron	mg/L	1		0.260	0.260
Cadmium	mg/L	0.005			
Calcium	mg/L		187	238	213
Chromium	mg/L	0.050			
Cobalt	mg/L				
Copper	mg/L	0.200			
Iron	mg/L	0.300	7.69	20.9	14.3
Lead	mg/L	0.025			
Magnesium	mg/L	35	56.4	103	79.7
Manganese	mg/L	0.300	0.144	0.337	0.241
Mercury	mg/L	0.0007			
Nickel	mg/L	0.100			
Potassium	mg/L		9.9	15.1	12.5
Selenium	mg/L	0.010			
Silver	mg/L	0.050			
Sodium	mg/L	20	49.3	111	80
Thallium	mg/L	0.0005 (G)			
Tin	mg/L				
Vanadium	mg/L				
Zinc	mg/L				

Notes:

Blank space indicates a non-detect result

"G" indicates a guidance value

Appendix C

Leachate and Gas Condensate Quantities

2020 Leachate Forcemain Flow Data
(in Gals)

	Tantalo	
Date	**TAN1**	**T0015**
January Total	1084	0
February Total	883675	0
March Total	211663	0
April Total	263892	0
May Total	222892	0
June Total	68935	26508
July Total	76437	30435
August Total	110535	18973
September Total	96492	21327
October Total	63032	3646
November Total	112534	4376
December Total	325330	7002
Yearly Total	**2,436,500**	**112,268**

2020 Leachate Forcemain Flow Data
(in Gals)

	SMI Landfill									
Date	**LW4**	**LW5**	**LW6**	**LW7**	**LW8**	**LW9**	**LW10**	**LW11**	**LW12**	**LW13**
January Total	17478	13253	16651	9609	131618	11260	5468	19526	4796	22567
February Total	22232	17927	16924	16523	142939	11528	6465	19065	7228	29229
March Total	16095	12182	15926	13719	129754	9035	5464	20399	6448	20060
April Total	14036	11761	15508	13315	103766	11901	6017	20683	5282	16549
May Total	8198	7884	12201	7481	94566	8295	5552	14709	5059	8773
June Total	3521	7604	9794	6438	38664	5166	2908	13205	4544	4275
July Total	1210	8180	10248	8757	28173	8034	2883	16129	3587	9030
August Total	0	13380	9285	7128	29594	6417	4819	13511	3047	30616
September Total	3853	11527	6600	7533	27729	6474	5281	15496	2728	23735
October Total	10850	4833	6624	5605	16151	5639	4511	11633	1868	4054
November Total	19914	4280	7210	7044	18763	6020	5053	11291	2170	5532
December Total	20325	10628	12580	19702	33892	13540	7193	14708	2801	7267
Yearly Total	**137,712**	**123,438**	**139,550**	**122,855**	**795,609**	**103,309**	**61,613**	**190,354**	**49,556**	**181,686**

2020 Leachate Forcemain Flow Data
(in Gals)

	SMI Landfill										
Date	**LW14**	**LW15**	**LW16**	**LW17**	**LW18**	**LW19**	**LW20**	**LW21**	**LW22**	**SM11W**	**CT8**
January Total	71509	28555	28125	7623	10957	19489	137552	38003	18537	2725	200
February Total	87000	28672	27970	8872	11319	18593	144687	33332	20614	10740	0
March Total	72359	60925	60442	16530	26658	35412	275097	66299	54643	16582	0
April Total	47589	27756	33163	9868	27509	514326	103511	17324	19495	13543	
May Total	25262	24496	27734	8308	26351	11244	99466	104501	17929	12996	0
June Total	2955	22923	29063	7423	26358	8448	86381	15730	15359	7302	4300
July Total	17845	21724	21256	9581	17602	7004	46692	6199	85825	10206	
August Total	7119	17558	19398	7100	15118	6520	44815	7069	41622	1448	
September Total	3221	15815	19410	6021	14243	6431	43387	7229	38647	0	
October Total	15453	10541	13878	4113	8801	5339	28194	5567	27565	0	
November Total	21284	11586	13627	4048	9621	6457	29429	6702	25621	0	
December Total	75096	11746	19440	5970	15141	26227	60464	12410	28861	0	
Yearly Total	**446,692**	**282,296**	**313,506**	**95,457**	**209,677**	**665,489**	**1,099,675**	**320,363**	**394,718**	**75,542**	**4,500**

2020 Leachate Forcemain Flow Data
(in Gals)

	AB Landfill						
Date	**ABMH1**	**ABMH2**	**ABMH3**	**ABSS1 (Pri)**	**ABSS1 (SEC)**	**ABSS2 (Pri)**	**ABSS2 (SEC)**
January Total	155452	0	12296	116324	278	149958	2048
February Total	109747	69856	14496	105178	177	22621	2892
March Total	35702	39414	18557	246974	62	280894	4256
April Total	290	36826	15830	153133	199	152729	488
May Total	0	54746	25311	131404	0	121790	3512
June Total	44856	1776	12459	240242	1008	160686	5683
July Total	450	56399	23124	130824	644	68981	2419
August Total	0	41736	17354	115643	579	86492	3001
September Total	165	42490	11340	121426	6282	107613	2244
October Total	1	29996	10592	90867	9482	61253	2434
November Total	378	43073	9281	110115	9225	68186	0
December Total	0	40870	13720	105059	28644	66096	5092
Yearly Total	**347,041**	**457,180**	**184,360**	**1,667,190**	**56,579**	**1,347,298**	**34,071**

2020 Leachate Forcemain Flow Data
(in Gals)

	Southeast Landfill/Southeast Landfill Bumpout									
Date	**SESS1 (Pri)**	**SESS1 (SEC)**	**SESS2 (PRI)**	**SESS2 (SEC)**	**SESS3 (Pri)**	**SESS3 (SEC)**	**SEBOCT2**	**SEBOCT3**	**SEBOCT4**	**SECT1**
January Total	11137	4307	581126	2224	167893	8172	8617	6752	4700	10284
February Total	380336	3863	1004713	2163	697769	4159	9543	1067	0	45699
March Total	327462	6557	945099	3171	637055	12138	17366	954	0	36077
April Total	179216	4082	830112	1748	472070	6664	17327	1991	0	33162
May Total	11834	3742	849184	2546	567798	6134	14165	0	621	18764
June Total	170636	8534	820129	2446	244374	1059	5081	378	981	9398
July Total	101935	3841	694185	61	248956	1799	2551	0	1624	10734
August Total	75183	3995	772273	2303	250060	3240	6714	1099	1277	12982
September Total	721324	4005	795069	0	401976	3384	8020	2316	1580	14919
October Total	256459	5143	476598	155	163865	1842	4570	1161	2086	10016
November Total	340761	17585	329610	3329	247242	3045	6336	926	796	12509
December Total	360158	8380	646669	3134	364127	10441	7914	1153	2625	27078
Yearly Total	**2,936,441**	**74,034**	**8,744,765**	**23,281**	**4,463,184**	**62,077**	**108,206**	**17,797**	**16,289**	**241,621**

2020 Leachate Forcemain Flow Data
(in Gals)

	WEX Landfill										
Date	**WESS2 (Pri)**	**WESS2 (SEC)**	**WESS2 (PW)**	**WESS3 (Pri)**	**WESS3 (sec)**	**WESS4 (Pri)**	**WESS4 (SEC)**	**WESS4 (PW)**	**WECT5**	**WECT4**	**WECT2**
January Total	1066802	224976		804182	9105	284318	4089	35194	25721	4417	0
February Total	881143	11811		-680718	2900	174560	8190	88422	22527	3978	1200
March Total	1166936	45787		268929	2846	304669	3205	55185	15830	5360	2500
April Total	807684	6522		119495	5919	130392	7126	49780	7250	1405	1000
May Total	1669235	6318		124177	5668	249118	6795	61537	10127	7862	1500
June Total	634576	7133		244331	2230	272793	7185	43847	9986	0	1200
July Total	1516719	112		165827	3197	21512	125	25251	5770	0	3500
August Total	836383	121		334860	3052	451890	9312	16971	4821	670	4800
September Total	834087	16251		364011	3052	400913	9312	29415	10901	9053	2000
October Total	781840	7170		236372	3088	206833	298	8569	9304	5747	2300
November Total	827375	2285		381816	2998	208144	9350	17078	11408	18369	2500
December Total	1643531	8849		196479	5405	213355	0	8495	16607	19621	1200
Yearly Total	**12,666,310**	**337,336**	**-**	**2,559,762**	**49,459**	**2,918,497**	**64,987**	**439,744**	**150,252**	**76,482**	**23,700**

2020 Leachate Forcemain Flow Data
(in Gals)

	Northern Expansion Landfill	
Date	**A7SS1 (Pri)**	**A7SS1 (SEC)**
January Total	463941	14727
February Total	472601	0
March Total	888839	602
April Total	464854	417
May Total	451421	0
June Total	458544	1426
July Total	555229	284
August Total	444557	0
September Total	474375	0
October Total	444582	256
November Total	432750	2262
December Total	699592	0
Yearly Total	**6,251,286**	**19,975**

2020 Leachate Forcemain Flow Data
(in Gals)

	Resource Recovery Facility		
Date	**RRPCT1 (#1)**	**RRPCT1 (#2)**	**RRPCT2**
January Total	44603	84438	1984
February Total	156665	63417	2316
March Total	135520	57950	3356
April Total	125540	69551	2641
May Total	113065	73764	5920
June Total	85453	85665	3305
July Total	74578	115119	3687
August Total	64768	162319	4455
September Total	54419	149673	2860
October Total	29010	108820	1746
November Total	26315	97429	1458
December Total	39408	35797	1234
Yearly Total	**949,343**	**1,103,942**	**34,962**

2020 Leachate Forcemain Flow Data
(in Gals)

		Miscellaneous				
Date	**Gas Wells**	**Site cons /Maintenance**	**Tire Facility**	**Ponded water**	**Shop oil/water**	**containment tanks**
January Total	64900	32350	3000	1000	1000	8100
February Total	83900	20400	7500	0	200	9500
March Total	110295	13000	7000	425	1350	14380
April Total	66900	22630	7000	41450	1000	7500
May Total	49000	9480	4000	0	1000	12500
June Total	16500	2000	3000	31500	1000	9800
July Total	3500	1500	4000	4500	0	25000
August Total	9700	8000	3000	2000	0	12000
September Total	3000	18000	4000		0	0
October Total	3400	1800	0	600	1000	18500
November Total	4600	14300	6000	2400	1200	8470
December Total	12300	20100	5000	8800	1000	1000
Yearly Total	**427,995**	**163,560**	**53,500**	**92,675**	**8,750**	**126,750**

2020 Leachate Forcemain Flow Data
(in Gals)

	Totals								
Date	**Tantalo**	**SMI**	**AB**	**SELF/SBO**	**WEX**	**NEX**	**RRP**	**Misc.**	***Total***
January Total	1084	615501	436356	805211	2458803	478668	131024	110350	***5036996***
February Total	883675	681859	324966	2149311	514014	472601	222398	121500	***5370324***
March Total	211663	934029	625859	1985880	1871247	889442	196826	146450	***6861396***
April Total	263892	1032902	359496	1546371	1136573	465271	197732	146480	***5148718***
May Total	222892	531004	336763	1474788	2142336	451421	192749	75980	***5427933***
June Total	95443	322359	466710	1263017	1223281	459970	174424	63800	***4069003***
July Total	106872	340164	282842	1065686	1742014	555513	193383	38500	***4324975***
August Total	129508	285562	264805	1129126	1662881	444557	231542	34700	***4182681***
September Total	117819	265359	291560	1952592	1678995	474375	206952	25000	***5012653***
October Total	66678	191219	204625	921896	1261520	444838	139576	25300	***3255652***
November Total	116910	215649	240258	962138	1481323	435012	125201	36970	***3613461***
December Total	332332	397990	259481	1431679	2113542	699592	76439	48200	***5359255***
Yearly Total	**2,548,768**	**5,813,598**	**4,093,719**	**16,687,695**	**19,286,528**	**6,271,260**	**2,088,247**	**873,230**	**57,663,045**

Tantalo = Tantalo Waste Site
SMI = Existing Landfill
AB = AB Overflow Area at Existing Landfill
SELF/SBO = Southeast Landfill / Southeast Landfill Bumpout
WEX = Western Expansion Landfill
NEX = Northern Expansion Landfill
RRP = Resource Recovery Facility
Misc. = Gas wells, Site Maintenance, Tire Facility, Ponded Water, Shop OiL/Water Containment Tanks

4.0 SOLID WASTE/BUDS/DIVERTED WASTE/ADC

NOTE:

THE SENECA MEADOWS PERMITTED HOURS OF OPERATION ARE 6 AM TO 6 PM MONDAY THROUGH SUNDAY. MAXIMUM ALLOWABLE TONS: 6000 DAILY/YEARLY AVERAGE

TOTAL MATERIAL/BUDS

From January 1, 2020 to December 31, 2020, SENECA MEADOWS, INC. received a total of 2,068,961 tons of material (1,741,438 tons of solid waste and 327,522 tons of Beneficial Use Determination {BUD} material used in landfilling operations). Tables 4-1 and 4-2 provides a monthly break down of the total tonnage of material for 2020 by type. Approved BUDs received at SMI are used for daily cover or in the construction of access roads, as a replacement for natural or virgin materials in accordance with the usage criteria outlined in the Facility's Part 360 permit.

DIVERTED WASTE

Approximately 566.8 tons of source separated yard debris was diverted from the Seneca Meadows Landfill and stockpiled prior to chipping within the area reserved at the Site for mulching and/or chipping. The chipped material is used for landfill operations for bulking and stabilization of haul roads and used to stabilize disturbed ground surface and erosion control.

WASTE TIRES

Approximately 16,032 tons of chipped tires were processed and utilized in the landfill construction. The tire facility operates under NYSDEC Registration #50K03 and tire volumes are reported separately to the DEC on a quarterly basis. The quarterly reports are included in this section for reference and this report serves as both the annual landfill report and the annual tire report for SMI.

TABLE 4-1. TOTAL TONNAGE OF MATERIAL RECEIVED BY TYPE

TABLE 4-2. BUDS UTILIZED BY CATEGORY

Seneca Meadows, Inc.
2020 Annual Report
Table 4-1
Total Tonnage of Material Received by Type

Waste Type	January	February	March	April	May	June	July	August	September	October	November	December	Grand Total
Asbestos	877.3	447.2	469.0	732.2	827.9	292.3	507.6	788.7	936.2	1,019.8	1,415.7	659.8	8,973.6
Industrial Ash	577.5	497.4	840.1	264.4	390.1	401.8	669.7	1,871.1	1,088.5	1,509.6	2,527.1	1,431.5	12,068.7
Construction Debris	3,498.5	3,251.7	4,766.2	4,025.7	4,659.5	6,888.1	3,724.5	18,460.9	19,884.6	22,963.1	18,115.1	17,365.2	127,603.1
Contaminated Soil	1,019.0	656.4	806.7	703.4	2,892.7	2,123.1	1,691.1	6,989.1	6,987.3	4,715.5	5,362.4	8,600.9	42,547.6
Medical Waste	-	-	-	-	-	-	-	-	-	-	-	-	-
Sludge	6,098.1	5,088.8	6,218.7	5,137.7	4,870.0	3,652.8	3,980.8	3,488.0	3,658.9	3,290.4	3,053.9	3,168.1	51,706.2
Other Industrial Waste	1,286.7	1,297.7	1,559.3	1,123.5	1,134.3	1,252.7	857.0	981.3	1,111.1	1,182.6	1,071.9	1,134.6	13,992.7
Solid Waste (MSW)	131,993.0	99,825.2	110,768.8	81,752.5	100,617.1	128,472.9	150,885.2	141,372.2	142,869.9	147,104.2	119,419.1	119,310.6	1,474,390.9
Grits & Screenings	407.7	591.1	1,314.5	956.6	954.1	735.7	575.3	1,121.7	981.4	849.1	716.1	950.6	10,153.8
Hardfill	-	-	-	-	-	-	-	-	-	-	-	-	-
Processed Construction Debris	-	-	-	-	-	-	-	-	-	-	-	-	-
Tires-NonProcessable& Shreds	-	-	1.6	-	-	-	-	-	-	-	-	-	1.6
TOTAL	**145,757.8**	**111,655.5**	**126,744.8**	**94,696.0**	**116,345.7**	**143,819.4**	**162,891.2**	**175,073.0**	**177,518.1**	**182,634.3**	**151,681.3**	**152,621.3**	**1,741,438.2**

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Table 4-2
BUDs Utilized by Category

BUDs/ADC	January	February	March	April	May	June	July	August	September	October	November	December	Grand Total
Coal Ash	-	-	-	-	-	-	-	-	-	-	-	-	-
Auto Fluff	65.7	2,298.2	27.9	63.9	32.8	30.6	81.2	-	64.8	56.8	58.5	-	2,780.3
C&D (BUD)	37,016.7	27,386.2	31,510.3	14,234.3	23,210.5	31,558.8	32,156.3	18,900.7	17,163.3	19,060.4	17,911.4	18,051.5	288,160.5
Contaminated Soil	2,036.7	2,186.5	177.9	6,958.9	276.2	117.9	2,138.6	251.6	557.0	1.6	280.1	188.9	15,171.8
Foundry Sand (BUD)	66.4	34.2	71.4	27.0	17.4	28.7	34.6	50.9	33.3	13.7	34.5	-	412.1
Hard Fill	-	-	-	-	-	-	34.1	-	-	-	-	-	34.1
Paper Sludge	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Industrial Waste (BUD)	-	54.0	21.6	28.0	35.5	25.1	12.9	14.4	37.5	13.9	23.8	11.3	278.0
Ash	665.5	305.1	588.9	448.1	1,457.2	956.3	2,561.9	397.7	785.6	506.1	434.4	332.4	9,439.3
B/R Tire Cover	1,254.8	1,209.8	1,538.6	1,071.7	661.4	684.2	239.2	574.4	97.7	1,471.2	989.6	887.0	10,679.5
Yard Debris	30.6	0.8	24.0	39.6	55.7	61.7	90.4	46.9	76.9	44.9	86.4	9.1	566.8
Z9500 (Tire Chips for Cover)	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	41,136.4	33,474.6	33,960.6	22,871.6	25,746.7	33,463.2	37,349.2	20,236.6	18,816.1	21,168.6	19,818.6	19,480.2	327,522.3

Grand Total **327,522.3**

5.0 UNAUTHORIZED SOLID WASTE/RADIATION MONITORING

In accordance with Condition 36 of SMI's 6 NYCRR Part 360 Operating Permit, the following materials are considered unauthorized waste and cannot be disposed of in the SENECA MEADOWS Landfill:

- Waste identified in 6 NYCRR Part 362-2.1(b);
- Any intact steel or plastic drums larger than 10-gallon capacity that has not been crushed and had at least one end removed or has not been shredded unless otherwise approved by the Department in writing;
- Any container which has held hazardous waste and is not empty according to 6 NYCRR Part 371.1(f);
- Any container of 5 to 10-gallon capacity shall not be disposed of at this facility unless the containers have been crushed, compacted, or rendered incapable of holding any liquids except that small quantities of dry wastes may be containerized for disposal in this manner;
- Any regulated medical waste, which has not been treated in accordance with the requirements of 6 NYCRR Subpart 365-2 or 10 NYCRR Subpart 10-3;
- Any industrial or commercial liquids, sludges, or slurries which contain any free liquids or are less than 20 percent solids;
- Any waste(s) regulated by 6 NYCRR Part 364 unless the waste hauler possesses a valid Part 364 permit; and,
- Tires which have not been cut into a minimum of two equal pieces.

Sludges and chemical, industrial, commercial, food, or process wastes are reviewed for compliance with this condition by SENECA MEADOWS prior to accepting these wastes for disposal at this facility. Records relating to the acceptance of these wastes are provided to our on-site DEC Monitor on a monthly basis and are available on-site for NYSDEC inspection.

SENECA MEADOWS has implemented a full-time Radiation Monitoring Program with the use of a gate system on both of the in-bound scales. Vehicles are screened with a hand-held monitoring device if the gate system indicates a detection. Table 5-1 contains the radiation incidents that occurred during the radiation monitoring.

Unauthorized materials that have been co-mingled with incoming solid waste are routinely retrieved from the SENECA MEADOWS Landfill for proper disposal or returned to the generator. Incidents where unauthorized waste required special considerations are identified in the following paragraph.

UNAUTHORIZED WASTE INCIDENTS

SMI's waste screening procedures require all retrieved unauthorized waste, which can be safely handled, to be sent back with the hauler who delivered it to the Site. According to SMI policy, if an unauthorized material is discovered after the hauler has left the premises, the hauling company (if known) is contacted to retrieve the container, or SMI prepares it for appropriate disposition. Containers holding liquid or unauthorized solid waste are segregated from the working face and temporarily stored, on-site, for NYSDEC inspection and/or sampling/characterization.

In 2020, there were 8 documented events (records on file at SMI's office) where improperly permitted waste, unacceptable co-mingled waste, or unacceptable industrial waste materials (drums/containers, medical waste, asbestos, fluorescent lamps/ballasts, compressed gas tanks, air conditioners/refrigeration equipment, materials with free liquids, etc.) were discovered, rejected from the site, and returned to the hauler. These materials were detected during SMI's random waste inspections; or as a result of SMI's trained spotters, equipment operators, scale house personnel, or our program for randomly monitoring the receipt of incoming waste loads for compliance. SMI maintains contracts with Stericycle and Clean Harbors to handle the removal of unauthorized materials received on site.

In addition to these recorded events, SMI also rejected numerous incoming waste loads where the hauler's vehicle was improperly covered; the hauler lacked the necessary approvals, or visible 6 NYCRR Part 364 markings; the hauler contained a hot load; the presence of free liquids was observed; or where acceptance pre-conditions were not followed by the hauler/generator (i.e., dusty materials delivered during windy conditions, improper packaging, labeling, and/or unapproved delivery timeframes).

TABLE 5-1. RADIATION MONITORING INCIDENT REPORT

Table 5-1

Radiation Monitoring Incident Report

Incident Number	Received		Hauler	Origin	Reading (μrem/hr.)	Nuclided ID	Source Disposal Status	Removed	
	Date	Time						Date	Time
1	2/5/2020	13:11	Winter Brothers	Oyster Bay, NY	263	I-131	Accepted		
2	3/16/2020	11:00	Winter Brothers	Oyster Bay, NY	153	I-131	Accepted		
3	4/1/2021	11:05	LMP Trucking Corp	Flushing, NY	65	I-131	Accepted		
4	4/8/2021	9:27	MAX Services Corp.	Flushing, NY	128	I-131	Accepted		
5	7/28/2020	7:10	GottaDo	Kingston, NY	364	I-131	Accepted		

6.0 LANDFILL GAS COLLECTION AND CONTROL

Multiple repairs, modifications and enhancements occurred to the gas collection system for the following landfill areas during the calendar year of 2020: the SMI landfill (SMILF), the Southeast Landfill (SELF), the Southeast Bumpout landfill (SBO), the Western Expansion landfill (WEX), the Northeast Expansion landfill (NEX) and the Northwest Expansion landfill (NWX). These enhancements were conducted to further assist in landfill gas collection efficiency, to reduce odors and to limit surface emissions at the Site. All newly installed landfill gas (LFG) collectors were connected to the existing LFG collection header system delivering collected LFG to the Renewable Resource Park located on the East Side of Route 414.

The following is a summary of the 2020 major construction efforts for each landfill area:

- SMILF
  - Installed four (4) Horizontal Slope Collectors (HSC) and one (1) Pocket Well (PW).
    - The new collectors were connected to laterals which connect to the existing LFG collection header system.
  - Removed seven (7) Vertical Gas Wells (GW), (1) Horizontal Collector (HC) and two (2) PWs from the SMILF LFG collection system.
    - The collectors were removed due to waste overfill or were no longer making a beneficial contribution to the LFG collection system.
- SELF
  - No collectors were installed during 2020.
  - One (1) inactive well was approved to be made active once again.
  - Removed one (1) HC, one (1) HSC and two (2) PWs from the SELF LFG collection system.
    - The collectors were removed due to waste overfill or were no longer making a beneficial contribution to the LFG collection system.
- SBO
  - No collectors were installed during 2020.

- No collectors were removed during 2020.

- WEX
  - No collectors were installed during 2020.
  - Removed two (2) GWs, one (1) HC and one (1) Tirechip Collector (TC) from the WEX LFG collection system.
    - The collectors were removed were no longer making a beneficial contribution to the LFG collection system.
- NEX
  - Installed sixteen (16) Vertical GWs, six (6) HSCs and one (1) PW.
    - The new collectors were connected to laterals which connect to the existing LFG collection header system.
  - Removed nineteen (19) Vertical GWs, twenty-five (25) HCs, four (4) Horizontal Collectors-Direct Burials (HDC), four (4) HSCs and one (1) PW from the NEX LFG collection system.
    - The collectors were removed due to waste overfill, final cover placement or became watered out within the waste mass and were no longer making a beneficial contribution to the LFG collection system.
- NWX
  - Installed twenty-eight (28) Vertical GWs, forty (40) HCs, fourteen (14) HCDs and two (2) TCs.
    - The new collectors were connected to laterals which connect to the existing LFG collection header system.
  - Removed five (5) HCs and two (2) HCDs from the NEX LFG collection system.
    - The collectors became watered out within the waste mass and were no longer making a beneficial contribution to the LFG collection system.

PLANNED ACTIVITIES FOR 2021

SMI is currently scheduling the following proposed landfill gas collection and control system related construction activities for 2021:

- Stages 5 and 6 of the Northwest Expansion
  - Install twenty-five (25) vertical landfill gas collection wells and seventy-five (75) horizontal gas collection wells.
  - Install approximately two-thousand five-hundred feet (2,500') of vertical collector drill depth.
  - Install approximately twenty-thousand feet (20,000) of six-inch diameter (6") HCs and HCDs.
  - Install approximately thirteen-thousand feet (13,000') of vacuum line, which will connect to the existing LFG collection header system:
    - Eighteen-inch (18") line – approximately two-thousand (2,000')
    - Eight-inch (8") line – approximately one-thousand (1,000')
    - Six-inch (6") line – approximately ten-thousand feet (10,000')
- Regular evaluation and the replacement of the existing LFG collection vertical wells, laterals and headers to control emissions, improved collection efficiency and control site-related odors.

7.0 COST ESTIMATES AND FINANCIAL ASSURANCE DOCUMENTS

Financial assurance for closure and post-closure care for the SENECA MEADOWS facility are provided by two surety bonds issued by Argonaut Insurance Company. Based on cost estimates contained in the 2020 Annual Report, the required financial assurance for closure would be $30,876,607 and $25,607,239 or post-closure. These estimates are comparable to those presented in the 2019 Annual Report. Closure/post closure assurance amounts are established in accordance with the requirements of the NYSDEC; Section 5.0 of SMI's December 2006 Engineering Report, and previous updates to the closure/post-closure cost estimates. Closure/post-closure funding is currently provided in separate surety bonds for closure and post-closure. The surety bond for closure and post-closure will be adjusted to the updated value upon written NYSDEC approval.

The following narrative, and the closure and post-closure cost estimate tables provided in this Annual Report, provide the updated closure/post-closure cost estimate. Adjustments to the values of the closure/post-closure bonds will be made by Waste Connections, Inc. based on the updated closure/post-closure cost estimates, following written approval by the NYSDEC.

CLOSURE COST ESTIMATE

SMI updated its current evaluation of the maximum anticipated waste footprint requiring placement of final cover over the constructed landfills throughout their remaining life. The analysis is summarized in Table 7-1 and was performed for the entire permitted landfill configuration. Based on SMI's evaluation and the planned 2021 construction, the maximum anticipated area for unconstructed final cover is anticipated to occur during 2021. Consequently, this represents the greatest closure cost scenario. As indicated in Table 7-1, the closure cost includes constructing new final cover over approximately 171.6 acres. The areas of future final cover installation are assumed to utilize a geosynthetic cover system, rather than a clay barrier cover system. In plateau areas, a geosynthetic clay liner (GCL) is included beneath the geomembrane.

As shown in Table 7-2, the updated estimate indicates that the greatest cost of closure of the Landfill in current dollars amounts to $30,876,607. This represents an increase in the estimated cost for closure from last year's estimate, primarily due to the addition of constructed liner footprint and the capping schedule for the site.

POST-CLOSURE CARE COST ESTIMATE

The post-closure cost is calculated as the present value of annual expenditures for Seneca Meadows Landfill over the respective 30-year post-closure period. This post-closure estimate is based on the previous estimates developed for the facility. The post-closure period is defined as the period starting immediately following installation of the last final cover phase (anticipated to be in 2028) and extending for 30 years beyond (i.e., 2058). In preparing the updated post-closure cost estimate, an upward adjustment of 1.3% was made to the prior year's unit costs. The 1.3% increase is from the U.S. Bureau of Labor and Statistics' 2020 Consumer Price Index data for the Northeast.

Post-closure costs are presented in 2021 dollars. A net present worth is calculated assuming funds are invested in an interest-bearing account at the current time and generate a post-inflation rate of return of 5% that compounds annually. Although costs will generally rise in the future due to inflation, this cost escalation is accounted for by using a post-inflation rate of return, which means that the actual rate of return in a given year would approximately equal the sum of the post-inflation rate of return and the rate of inflation for that year. Future annual cost escalations are assumed to equal 2%[1]. A summary of the post-closure care costs, including the associated schedule for commencement of post-closure activities, is provided in Table 7-3.

The current post-closure leachate management cost estimate incorporates updated unit treatment costs for on-site pre-treatment followed by discharge to the Town of Seneca Falls' publicly owned treatment works (POTW). Tables 7-3D and 7-3E present the predicted leachate management costs

[1] Interest rate is based long-term projected composite index of 2.18% (USACE, Civil Works Construction Cost Index System, 9/13, Table A-2 – Long term index of 1.9%, adjusted by 1.15 for New York)

and volumes, respectively, during the post-closure period. The on-site treatment system utilizes reverse osmosis to generate a stream of treated leachate, suitable for discharge to the local POTW, and a stream of concentrated leachate. The system recovery is assumed to operate at an efficiency of 75%, meaning the stream of concentrated leachate would equal 25% of the pre-treatment inflow. The on-site treatment system has been sized to treat approximately 120,000 gallons of leachate per day. The current design flow rates have been developed for current conditions and are well above the anticipated post-closure flow rate for leachate. The estimated pre-treatment cost of $0.0306/gallon is based on SMI's in-house estimated costs for plant operation during 2020. It was assumed that 100% of leachate would be pre-treated, with 75% of the volume discharged to the Seneca Falls POTW (e.g., the treated leachate). The treatment and disposal of pre-treated leachate is estimated to be $0.0140/gallon based on costs incurred in 2020. The concentrate stream (i.e., 25% of the leachate volume to be pre-treated) was assumed to be further treated. The cost for treatment of the concentrate stream and recirculation into the landfill is estimated to be $0.0759/gallon based on historical operation costs for the landfill.

The post-closure cost estimate is summarized in Table 7-3, with further detail in Tables 7-3A through 7-3E. As shown in the updated post closure cost summary, the present value for post-closure care is calculated at $25,607,239. This represents an increase from the prior year's estimate. The increase is primarily attributable to the update to the assumed phasing of final cover. Since the last stage of final cover construction is anticipated to occur into 2028, the post-closure period is assumed to commence on January 1, 2029 and extend for 30 years thereafter.

TABLE 7-1. FINAL COVER INSTALLATION TIMELINE

TABLE 7-2. CLOSURE COST ESTIMATE (SMI, SOUTHEAST/EX-2, AND EX-1 [STAGE 3&4] LANDFILLS)

TABLE 7-3. POST-CLOSURE CARE COST ESTIMATE SUMMARY

TABLE 7-3A. POST-CLOSURE MONITORING COSTS BASIS

TABLE 7-3B. FINAL COVER REPAIR COST BASIS

TABLE 7-3C. MISCELLANEOUS POST-CLOSURE MAINTENANCE / REPAIR COSTS BASIS

TABLE 7-3D. ANNUAL LEACHATE DISPOSAL COST BASIS

TABLE 7-3E. ANNUAL LEACHATE VOLUMES

Seneca Meadows, Inc.

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Table 7-1

Final Cover Installation Timeline

Seneca Meadows Landfill

Year	Permitted Footprint	Existing Cap Area	New Cap Area	Constructed Cap Area	Constructed Liner Footprint	Uncapped and Lined Area	Notes
2021 Year End	350.5	148.6	30.3	178.9	350.5	171.6	Stage 5 liner system operational (full permitted landfill footprint constructed), 17.4 acres of previously constructed SMI cap will be removed for future operations, thereby reducing existing cap area by same amount.
2022 Year End	350.5	178.9	0.0	178.9	350.5	171.6	
2023 Year End	350.5	178.9	0.0	178.9	350.5	171.6	
2024 Year End	350.5	178.9	37.5	216.4	350.5	134.1	
2025 Year End	350.5	216.4	37.5	253.9	350.5	96.6	
2026 Year End	350.5	253.9	37.5	291.4	350.5	59.1	
2027 Year End	350.5	291.4	37.5	328.9	350.5	21.6	
2028 Year End	350.5	328.9	21.6	350.5	350.5	0.0	

Seneca Meadows, Inc.

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Table 7-2

Closure Cost Estimate

Seneca Meadows Landfill

Direct Costs

Item No.	Item Description	Qty.	Unit	Unit Cost (12)	Item Cost
1	Barrier protection layer (2) (2a)	171.6	acre	$27,770	$4,765,398
2	Topsoil, from On-Site Areas (3)	171.6	acre	$13,361	$2,292,828
3	Drainage Layer (GCD) (4)	171.6	acre	$22,049	$3,783,601
4	Subdrain Collection Pipes (4a)	121,490	LF	$18.53	$2,250,937
5	40 mil LLDPE membrane (5) (13)	148.1	acre	$16,164	$2,394,277
6	Gas Venting Layer (GCD) (4)	148.1	acre	$25,833	$3,826,312
7	GCL (Plateau) (6)	36.2	acre	$19,452	$704,149
8	Diversion swales (7)	47,346	LF	$25.73	$1,218,217
9	Cover Tie-in and Perimeter Channel (7a)	10,120	LF	$90.57	$916,592
10	Downchutes (8)	4,518	LF	$128	$576,685
11	Stilling Basins / Road Crossings (8)	16	ea	$12,206	$195,290
12	Gas Collection System (9)	148.1	acre	$7,726	$1,144,397
13	Hydroseeding and mulch	171.6	acre	$14,134	$2,425,461
14	Leachate Disposal Costs	2,720,000	gallon	$0.18	$489,600
				Total Direct Cost:	**$26,983,745**

Indirect Costs (Composite of All Landfills)

14	Mobilization/Demobilization	2%	of Direct Costs		$539,674.90
15	Survey	2%	of Direct Costs		$539,675
16	SWPPP Compliance and Dust Control (10)	2%	of Direct Costs		$539,675
17	Engineering and Certification (11)	1	LS	$1,394,000	$1,394,000
18	Bonding	1%	of Direct Costs		$269,837
19	Tire Processing Facility Closure (14)	1	LS	$610,000	$610,000
				Total Indirect Cost:	**$3,892,862**
				Total Closure Cost:	**$30,876,607**

Notes/Assumptions:

1 This closure cost estimate is based on an estimated worst-case site closure scenario, which would occur prior to the construction of any additional final cover (i.e., prior to final cover construction slated for 2021). All remaining areas will be capped with a geosynthetic final cover system. On plateau areas, a geosynthetic clay liner (GCL) is added beneath the geomembrane. All areas of the landfill are assumed to be filled to an extent that no additional material will be necessary to create positive drainage off the footprint and over the perimeter berms.

2 Barrier protection layer (BPL) may be obtained from stockpiles from the Stages 5 and 6 footprint excavation, the Renewable Resource Park (RRP) South area, and the Meadow View mine area. The unit cost used in this estimate is based on 2016 Contractor bid price and sourcing the material from the Meadow View mine area. Costs include excavation, hauling, and placement of material and are based on 2016 Contractor bid price of $5.30/sy for a 2-ft-thick layer.

2a The 18-inch-thick barrier layer may be obtained from stockpiles from the Stages 5 and 6 footprint excavation, the RRP South area, and the Meadow View mine area. The unit cost used in this estimate ($23.48/CY) is based on sourcing the material from the Meadow View mine area. Costs include excavation, hauling, and placement of material and are based on per cubic yard pricing provided by an independent contractor retained by Seneca Meadows Inc. for the construction of the Stages 7 and 8 baseliner construction.

3 Topsoil from on-site sources is from stockpiles, RRP South footprint, and the Meadowview Mine footprint, as well as existing topsoil placed on intermediate cover areas (where present). Unit cost for topsoil from on-site sources is $2.55/sy based on 2016 Contractor bid price and includes topsoil stripping, stockpiling, and reinstallation. Approximately 67.8 acres of intermediate cover on the SMI Landfill and SELF/EX-2 include an estimated 3 inches of topsoil. Prior to final cover placement, the topsoil in these areas will be stripped and retained for reuse. This is expected to generate approximately 27,300 cy. Excluding this reusable volume, a prior soil balance analysis for the site predicted a topsoil deficit of approximately 71,600 cy. Including this reusable volume from intermediate cover areas, the estimated topsoil deficit is 44,300 cy, equivalent to approximately 55 acres of final cover. Prior to placing Stages 5 and 6 into operation, the landfill footprint is approximately 41 acres smaller than the permitted footprint. Consequently, the topsoil deficit will require the import of material to cover approximately 14 acres (i.e., 55 acres minus 41 acres). This volume of topsoil will be purchased and imported to the site. The unit cost for imported topsoil is based on $35/CY for material purchase, hauling, and placement.

4 GCD material costs based on 2016 orders, are $0.34/sq.ft. and $0.27/sq.ft. for drainage layer and gas venting layer material, respectively. Installation costs are included based on 2016 Contractor bid prices. Gas venting layer cost includes select subgrade preparation.

4a Quantities for subdrain collection piping are based on an average linear footage per acre from the 2016 final cover design. Unit cost for subdrain collection piping based on 2016 Contractor bid price.

5 Geomembrane cost is based on $0.185/sq.ft from a 2016 quote by a manufacturer, plus installation-related 2016 Contractor bid price of $1.42/sy.

6 GCL unit cost includes $0.33/sq.ft. for material and shipping based on 2016 quote from manufacturer plus a 1.8% CPI increase in 2017 Annual Report, a 2.2% CPI increase in 2018, and a 1.6% CPI increase in 2019. An additional 25% is added for installation-related costs.

7 Diversion swale unit cost is based on 2016 Contractor bid price. Swale quantities are estimates and are prorated based on total swale linear footage and fraction of landfill remaining to be capped.

7a Cover tie-in and perimeter channel provision and unit cost based on 2016 final cover bid structure and contractor bid price.

8 Downchute unit cost is based on 2016 Contractor bid price for Flexamat downchutes. Downchute quantitiies are estimates and are prorated based on total downchute linear footage and fraction of landfill remaining to be capped. Stilling basins and road crossings unit cost is based on 2016 Contractor bid price.

9 Gas collection system includes gas wells, vents, piping. Per acre cost based on 2016 Contractor bid price.

10 SWPPP compliance and dust control prices based on 2016 Contractor bid prices.

11 Engineering and certification cost is based on final cover installation occuring over two construction seasons. For each construction season, a set of contract documents will be created, including construction drawings (approximately 30 sheets at $5,000 per sheet for engineering and drawing creation), technical specifications ($15,000), and bid form ($5,000). Bid assistance is assumed to cost $15,000 per year for two years. Full-time construction observation is estimated to cost $420,000 per year (based on three on-site staff for 50 hours per week, 35 weeks per year, $80/hr) for two years. Miscellaneous office support is estimated to cost $42,000 per year (based on one senior engineer, 8 hours per week, 35 weeks per year, $150/hr) for two years. Two certification reports are assumed, with each report costing $50,000.

12 In the 2016 Annual Report all unit prices prices obtained from 2016 sources were increased by the CPI value of 1.1% to simulate anticipated 2017 prices. In preparation of the 2017 Annual Report the costs presented in the 2016 Annual Report were increased by a CPI value of 1.8% to simulate anticpated 2018 prices. In preparation of the 2018 Annual Report the costs presented in the 2017 Annual Report were increased by a CPI value of 2.2% to simulate anticipated 2019 prices. In preparation of the 2019 Annual Report the costs presented in the 2018 Annual Report were increased by a CPI value of 1.6% to simulate anticipated 2020 prices. In preparation of the 2020 Annual Report the costs presented in the 2019 Annual Report were increased by a CPI value of 1.3% to simulate anticipated 2021 prices.

13 Installed WEX exposed geomembrane liner will be used as the based to the final cap for this area.

14 Based on historic maximums of tires stored on site documented in quarterly reports from 2015 to 2019, The Maximum quantity of processed Tire chips stored at the Tire Processing Facility under current operating conditions is approximately 24,000 tons. As operating conditions are not expected to change in 2020, this quantity remains a reasonable worst case condition for 2020. Using typical conversion factors of approximately 1200 pounds per cubic Yard and 40 tires per cubic yard, this storage equates to approximately 1,600,000 processed whole tire equivalents. Therefore, the maximum required surety to be maintained by Seneca Meadows Inc. for stored processed tire chips is $400,000. In accordance with the above, the total required surety for the TPF will be $610,000.

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Table 7-3 - Cost Summary

Current Year: 2021
Annual Rate of Return on Investment, Post-Inflation: 5.0%

Year	Monitoring							Maintenance/Repairs								Leachate Management			Total Annual Cost (2021 Dollars)	Investment Duration (Years) from Current Year	Net Present Value, 5% Post-Inflation Rate of Return
	Groundwater	Surface Water	Sediment	Leachate	Condensate	Landfill Gas	Subtotal	Final Cover	Drainage Structures	Gas System	Groundwater Monitoring System	Leachate Collection System	Mowing	Security	Subtotal	Treatment & Disposal	Miscellaneous	Subtotal			
2029	$ 85,739	$ 14,398	$ 13,641	$ 68,743	$ 2,490	$ 91,152	$ 276,163	$ 403,218	$ 194,123	$ 197,120	$ 2,707	$ 128,450	$ 51,677	$ 1,114	$ 978,409	$ 1,475,110	$ 400,548	$ 1,875,658	$ 3,130,230	8	$ 2,118,663
2030	$ 85,739	$ 14,398	$ 13,641	$ 68,743	$ 2,490	$ 91,152	$ 276,163	$ 352,016	$ 194,123	$ 197,120	$ 2,707	$ 128,450	$ -	$ 1,114	$ 875,530	$ 1,077,609	$ 400,548	$ 1,478,157	$ 2,629,851	9	$ 1,695,225
2031	$ 85,739	$ 14,398	$ 13,641	$ 68,743	$ 2,490	$ 91,152	$ 276,163	$ 292,330	$ 194,123	$ 197,120	$ 2,707	$ 128,450	$ 51,677	$ 1,114	$ 867,521	$ 976,077	$ 400,548	$ 1,376,625	$ 2,520,309	10	$ 1,547,251
2032	$ 85,739	$ 14,398	$ 13,641	$ 68,743	$ 2,490	$ 91,152	$ 276,163	$ 245,308	$ 194,123	$ 197,120	$ 2,707	$ 128,450	$ -	$ 1,114	$ 768,822	$ 939,097	$ 400,548	$ 1,339,646	$ 2,384,631	11	$ 1,394,244
2033	$ 85,739	$ 14,398	$ 13,641	$ 68,743	$ 2,490	$ 91,152	$ 276,163	$ 218,223	$ 194,123	$ 197,120	$ 2,707	$ 128,450	$ 51,677	$ 1,114	$ 793,415	$ 939,097	$ 400,548	$ 1,339,646	$ 2,409,223	12	$ 1,341,546
2034	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 202,549	$ 194,123	$ 197,120	$ 2,707	$ 128,450	$ -	$ 1,114	$ 726,064	$ 939,097	$ 400,548	$ 1,339,646	$ 2,311,919	13	$ 1,226,060
2035	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 186,875	$ 194,123	$ 197,120	$ 2,707	$ 128,450	$ 51,677	$ 1,114	$ 762,067	$ 939,097	$ 400,548	$ 1,339,646	$ 2,347,922	14	$ 1,185,860
2036	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 171,201	$ 194,123	$ 197,120	$ 2,707	$ 128,450	$ -	$ 1,114	$ 694,716	$ 939,097	$ 400,548	$ 1,339,646	$ 2,280,571	15	$ 1,096,994
2037	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 155,527	$ 194,123	$ 197,120	$ 2,707	$ 128,450	$ 51,677	$ 1,114	$ 730,719	$ 939,097	$ 400,548	$ 1,339,646	$ 2,316,574	16	$ 1,061,249
2038	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 194,123	$ 197,120	$ 2,707	$ 128,450	$ -	$ 1,114	$ 670,013	$ 939,097	$ 400,548	$ 1,339,646	$ 2,255,869	17	$ 984,228
2039	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 194,123	$ 197,120	$ 2,707	$ 128,450	$ 51,677	$ 1,114	$ 721,691	$ 939,097	$ 400,548	$ 1,339,646	$ 2,307,546	18	$ 958,833
2040	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 194,123	$ 197,120	$ 2,707	$ 128,450	$ -	$ 1,114	$ 670,013	$ 939,097	$ 400,548	$ 1,339,646	$ 2,255,869	19	$ 892,724
2041	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 194,123	$ 197,120	$ 2,707	$ 128,450	$ 51,677	$ 1,114	$ 721,691	$ 939,097	$ 400,548	$ 1,339,646	$ 2,307,546	20	$ 869,690
2042	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 194,123	$ 197,120	$ 2,707	$ 128,450	$ -	$ 1,114	$ 670,013	$ 939,097	$ 400,548	$ 1,339,646	$ 2,255,869	21	$ 809,727
2043	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 194,123	$ 463,498	$ 2,707	$ 128,450	$ 51,677	$ 1,114	$ 988,069	$ 939,097	$ 400,548	$ 1,339,646	$ 2,573,925	22	$ 879,896
2044	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 28,263	$ 197,120	$ 2,707	$ 128,450	$ -	$ 1,114	$ 504,153	$ 939,097	$ 400,548	$ 1,339,646	$ 2,090,008	23	$ 680,447
2045	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 28,263	$ 197,120	$ 2,707	$ 128,450	$ 51,677	$ 1,114	$ 555,830	$ 939,097	$ 400,548	$ 1,339,646	$ 2,141,686	24	$ 664,068
2046	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 28,263	$ 197,120	$ 2,707	$ 128,450	$ -	$ 1,114	$ 504,153	$ 939,097	$ 400,548	$ 1,339,646	$ 2,090,008	25	$ 617,185
2047	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 28,263	$ 197,120	$ 2,707	$ 128,450	$ 51,677	$ 1,114	$ 555,830	$ 939,097	$ 400,548	$ 1,339,646	$ 2,141,686	26	$ 602,329
2048	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 28,263	$ 197,120	$ 2,707	$ 128,450	$ -	$ 1,114	$ 504,153	$ 939,097	$ 400,548	$ 1,339,646	$ 2,090,008	27	$ 559,805
2049	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 28,263	$ 197,120	$ 2,707	$ 128,450	$ 51,677	$ 1,114	$ 555,830	$ 939,097	$ 400,548	$ 1,339,646	$ 2,141,686	28	$ 546,330
2050	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 28,263	$ 197,120	$ 2,707	$ 128,450	$ -	$ 1,114	$ 504,153	$ 939,097	$ 400,548	$ 1,339,646	$ 2,090,008	29	$ 507,760
2051	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 28,263	$ 197,120	$ 2,707	$ 128,450	$ 51,677	$ 1,114	$ 555,830	$ 939,097	$ 400,548	$ 1,339,646	$ 2,141,686	30	$ 495,538
2052	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 28,263	$ 197,120	$ 2,707	$ 128,450	$ -	$ 1,114	$ 504,153	$ 939,097	$ 400,548	$ 1,339,646	$ 2,090,008	31	$ 460,553
2053	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 28,263	$ 197,120	$ 2,707	$ 128,450	$ 51,677	$ 1,114	$ 555,830	$ 939,097	$ 400,548	$ 1,339,646	$ 2,141,686	32	$ 449,467
2054	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 28,263	$ 197,120	$ 2,707	$ 128,450	$ -	$ 1,114	$ 504,153	$ 939,097	$ 400,548	$ 1,339,646	$ 2,090,008	33	$ 417,735
2055	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 28,263	$ 197,120	$ 2,707	$ 128,450	$ 51,677	$ 1,114	$ 555,830	$ 939,097	$ 400,548	$ 1,339,646	$ 2,141,686	34	$ 407,680
2056	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 28,263	$ 197,120	$ 2,707	$ 128,450	$ -	$ 1,114	$ 504,153	$ 939,097	$ 400,548	$ 1,339,646	$ 2,090,008	35	$ 378,898
2057	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 28,263	$ 197,120	$ 2,707	$ 128,450	$ 51,677	$ 1,114	$ 555,830	$ 939,097	$ 400,548	$ 1,339,646	$ 2,141,686	36	$ 369,778
2058	$ 74,516	$ 4,005	$ 5,304	$ 68,743	$ 2,490	$ 91,152	$ 246,210	$ 146,499	$ 28,263	$ 463,498	$ 2,707	$ 128,450		$ 1,114	$ 770,531	$ 939,097	$ 400,548	$ 1,339,646	$ 2,356,387	37	$ 387,474
																			Total Net Present Value:	**$ 25,607,239**

Notes/Assumptions:

1. Costs are presented in 2021 dollars. Present value is based on investing the indicated amount in the present year in an account providing a post-inflation annual rate of return equal to the indicated percentage and whose interest compounds annually.
2. Refer to subsequent tables for development of individual cost components.
3. All 2020 prices have been increased by 1.3% to account for the increase in CPI through 2020 to simulate likely 2021 prices. (Source: U.S. Bureau of Labor Statistics)

Seneca Meadows, Inc.

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Post-Closure Care Cost Estimate

Table 7-3A - Post-Closure Monitoring Costs Basis

Groundwater, Years 1-5 (2)

Item No.		Unit Cost	Events Per Year	Number Locations	Item Cost
1	Part 360 Routine Parameters	$ 251.76	3	60	$ 45,300
2	Part 360 Baseline Parameters	$ 499.11	1	60	$ 29,900
3	Expenses/QA/Mileage	$ 2,598.15	4	1	$ 10,400
				Total Annual Cost:	**$ 85,600**

Groundwater, Years 6-30 (2)

Item No.	Item Description	Unit Cost	Events Per Year	Number Locations	Item Cost
1	Part 360 Routine Parameters	$ 251.76	3	17	$ 12,800
2	Part 360 Baseline Parameters	$ 499.11	1	17	$ 8,500
3	Part 360 Baseline Parameters	$ 499.11	2	43	$ 42,900
4	Expenses/QA/Mileage	$ 2,598.15	4	1	$ 10,400
				Total Annual Cost:	**$ 74,600**

Surface Water, Years 1-5 (2)

Item No.	Item Description	Unit Cost	Events Per Year	Number Locations	Item Cost
1	Part 360 Expanded Parameters	$ 1,246.66	1	4	$ 5,000
2	Part 360 Baseline Parameters	$ 499.11	3	4	$ 6,000
3	Expenses/QA/Mileage	$ 861.28	4	1	$ 3,400
				Total Annual Cost:	**$ 14,400**

Surface Water, Years 6-30 (2)

Item No.	Item Description	Unit Cost	Events Per Year	Number Locations	Item Cost
1	Modified Part 360 Baseline Parameters	$ 499.11	2	4	$ 4,000
				Total Annual Cost:	**$ 4,000**

Sediment, Years 1-5 (2)

Item No.	Item Description	Unit Cost	Events Per Year	Number Locations	Item Cost
1	Part 360 Expanded Parameters	$ 1,412.29	1	4	$ 5,600
2	Part 360 Baseline Parameters	$ 664.73	3	4	$ 8,000
				Total Annual Cost:	**$ 13,600**

Sediment, Years 6-30 (2)

Item No.	Item Description	Unit Cost	Events Per Year	Number Locations	Item Cost
1	Modified Part 360 Baseline Parameters	$ 664.73	2	4	$ 5,300
				Total Annual Cost:	**$ 5,300**

Leachate, Years 1-30

Item No.	Item Description	Unit Cost	Events Per Year	Number Locations	Item Cost
1	WWTP Discharge				
	Weekly	$ 150.18	52	1	$ 7,800
	Monthly	$ 194.33	12	1	$ 2,300
	Annually	$ 1,957.77	1	1	$ 2,000
2	Primary Leachate Collection System Characterization (Expanded Parameters)	$ 1,246.66	2	15	$ 37,400
3	Secondary Leachate Collection System Characterization (Baseline Parameters)	$ 499.11	4	9	$ 18,000
4	Expenses/QA/Mileage	$ 331.27	4	1	$ 1,300
				Total Annual Cost:	**$ 68,800**

Condensate, Years 1-30

Item No.	Item Description	Unit Cost	Events Per Year	Number Locations	Item Cost
1	Expanded Parameters	$ 1,246.66	2	1	$ 2,500
				Total Annual Cost:	**$ 2,500**

Landfill Gas, Years 1-30

Item No.	Item Description	Unit Cost	Events Per Year	Number Locations	Item Cost
1	Perimeter Soil Probes	$ 552.11	4	1	$ 2,200
2	Monthly Cover Inspection	$ 1,656.33	12	1	$ 19,900
3	NSPS Landfill Surface Screening	$ 11,649.45	4	1	$ 46,600
4	Title V Monthly Compliance Monitoring	$ 1,444.32	12	1	$ 17,300
5	Flare	$ 5,189.80	1	1	$ 5,200
				Total Annual Cost:	**$ 91,200**

Notes/Assumptions:

1. Individual line item costs are from the post-closure cost estimates contained in the 2019 Annual Report, and increased by 1.3% to account for an increase in CPI through 2020 and simulate 2021 prices.

2. After five years of post-closure monitoring, the assumption is made that monitoring requirements can be reduced based on substantial prior operating and post-closure data. Reductions are as shown in the table for frequency and estimated number of sampling locations, and are estimates that would be confirmed with NYSDEC at that time.

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Table 7-3B - Post-Closure Final Cover Repair Cost Basis

Year	Total Cover Area (acres)	Clay Cap		Geosynthetic Cap	
		Area (acres)	Repair Cost	Area (acres)	Repair Cost
2029	350.5	86.9	$36,322	263.6	$366,896
2030	350.5	86.9	$36,322	263.6	$315,694
2031	350.5	86.9	$36,322	263.6	$256,008
2032	350.5	86.9	$36,322	263.6	$208,986
2033	350.5	86.9	$36,322	263.6	$181,902
2034	350.5	86.9	$36,322	263.6	$166,228
2035	350.5	86.9	$36,322	263.6	$150,554
2036	350.5	86.9	$36,322	263.6	$134,880
2037	350.5	86.9	$36,322	263.6	$119,206
2038	350.5	86.9	$36,322	263.6	$110,177
2039	350.5	86.9	$36,322	263.6	$110,177
2040	350.5	86.9	$36,322	263.6	$110,177
2041	350.5	86.9	$36,322	263.6	$110,177
2042	350.5	86.9	$36,322	263.6	$110,177
2043	350.5	86.9	$36,322	263.6	$110,177
2044	350.5	86.9	$36,322	263.6	$110,177
2045	350.5	86.9	$36,322	263.6	$110,177
2046	350.5	86.9	$36,322	263.6	$110,177
2047	350.5	86.9	$36,322	263.6	$110,177
2048	350.5	86.9	$36,322	263.6	$110,177
2049	350.5	86.9	$36,322	263.6	$110,177
2050	350.5	86.9	$36,322	263.6	$110,177
2051	350.5	86.9	$36,322	263.6	$110,177
2052	350.5	86.9	$36,322	263.6	$110,177
2053	350.5	86.9	$36,322	263.6	$110,177
2054	350.5	86.9	$36,322	263.6	$110,177
2055	350.5	86.9	$36,322	263.6	$110,177
2056	350.5	86.9	$36,322	263.6	$110,177
2057	350.5	86.9	$36,322	263.6	$110,177
2058	350.5	86.9	$36,322	263.6	$110,177

Notes/Assumptions:

1. Unit cost for final cover repair is from post-closure cost estimates presented in the 2019 Annual Report and increased by 1.3% to account for an increase in CPI through 2020 to simulate 2021 prices.
2. Repair costs based on a $41,139/acre cost and a percent of cap area needing repair based on the number of years the cap has been installed. 1-5 years after installation = 5% area needing repair, 6-10 years = 2%, 11-30 years = 1%

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Post-Closure Care Cost Estimate

Table 7-3C - Miscellaneous Post-Closure Maintenance/Repair Costs Basis

Drainage Structure Maintenance, Years 1-15

Item No.	Item Description	Qty.	Unit	Unit Cost	Item Cost
1	Sediment Basin Cleaning, One Basin Per Year	1	LS	$ 53,276	$ 53,276
2	Swale, Downchute, Culvert, and Structure Cleaning				
	Backhoe/Loader	10	day	$ 761	$ 7,608
	Dump Truck	10	day	$ 544	$ 5,440
	Crew (2 Laborers, 2 Operators)	10	day	$ 12,509	$ 125,085
	Misc Equipment (e.g., chipper)	10	day	$ 271	$ 2,715
				Total Annual Cost:	**$ 194,123**

Drainage Structure Maintenance, Years 16-30

Item No.	Item Description	Qty.	Unit	Unit Cost	Item Cost
1	Swale, Downchute, Culvert, and Structure Cleaning				
	Backhoe/Loader	10	day	$ 761	$ 7,608
	Dump Truck	10	day	$ 544	$ 5,440
	Crew (2 Laborers, 2 Operators)	10	day	$ 1,250	$ 12,500
	Misc Equipment (e.g., chipper)	10	day	$ 271	$ 2,715
				Total Annual Cost:	**$ 28,263**

Gas System Maintenance, Years 1-14, 16-29

Item No.	Item Description	Qty.	Unit	Unit Cost	Item Cost
1	Misc. Maintenance	1	LS	$ 197,120	$ 197,120
				Total Annual Cost:	**$ 197,120**

Gas System Maintenance, Years 15, 30

Item No.	Item Description	Qty.	Unit	Unit Cost	Item Cost
1	Misc. Maintenance	1	LS	$ 197,120	$ 197,120
2	Flare Replacement	1	LS	$ 266,378	$ 266,378
				Total Annual Cost:	**$ 463,498**

Groundwater Monitoring System Maintenance, Years 1-30

Item No.	Item Description	Qty.	Unit	Unit Cost	Item Cost
1	Misc. Maintenance (well development, protective casing repairs, etc.)	1	LS	$ 2,664	$ 2,664
				Total Annual Cost:	**$ 2,664**

Leachate Collection System Maintenance, Years 1-30

Item No.	Item Description	Qty.	Unit	Unit Cost	Item Cost
1	Primary Collection Pipe Cleaning (all areas)	44,213	LF	$ 2.17	$ 95,846
2	Misc. Pumps, Valves and Piping Repairs and Replacement	1	LS	$ 16,302	$ 16,302
3	Misc. Forcemains Repair and Cleaning	1	LS	$ 16,302	$ 16,302
				Total Annual Cost:	**$ 128,450**

Mowing, Years 1-30, Biennially

Item No.	Item Description	Qty.	Unit	Unit Cost	Item Cost
1	Mowing	360	acre	$ 141.29	$ 50,866
				Total Biennial Cost:	**$ 50,866**

Site Security, Years 1-30

Item No.	Item Description	Qty.	Unit	Unit Cost	Item Cost
1	Perimeter fence and site security system maintenance/repairs	1	LS	$ 1,097	$ 1,097
				Total Annual Cost:	**$ 1,097**

Notes/Assumptions:

1. Individual line item costs are from the post-closure cost estimates contained in the 2019 Annual Report, and increased by 1.3% to account for an increase in CPI through 2020 and simulate 2021 prices.

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Table 7-3D - Annual Post-Closure Leachate Disposal Cost Basis

Year	Annual Leachate Volume (gal)	Groundwater Collection (gal)	Annual Leachate Volume (gal) (2)	On-Site Leachate Pre-Treatment Through Reverse Osmosis System (100% of Annual Leachate Volume)			Concentrate Treatment and Recirculation (25% of Annual Leachate Volume)			Off-Site Disposal at Seneca Falls POTW (75% of Annual Leachate Volume)			Annual Cost (2021 Dollars)
				Volume (gal)	Unit Cost	Treatment Cost	Volume (gal)	Unit Cost	Treatment Cost	Volume (gal)	Unit Cost	Treatment Cost	
2029	18,236,852	6,329,648	24,566,500	24,566,500	$ 0.0306	$ 751,553	6,141,625	$ 0.0759	$ 465,988	18,424,875	$ 0.0140	$ 257,569	$ 1,475,110
2030	11,616,872	6,329,648	17,946,519	17,946,519	$ 0.0306	$ 549,031	4,486,630	$ 0.0759	$ 340,417	13,459,890	$ 0.0140	$ 188,161	$ 1,077,609
2031	9,925,952	6,329,648	16,255,599	16,255,599	$ 0.0306	$ 497,301	4,063,900	$ 0.0759	$ 308,343	12,191,699	$ 0.0140	$ 170,433	$ 976,077
2032	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2033	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2034	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2035	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2036	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2037	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2038	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2039	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2040	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2041	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2042	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2043	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2044	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2045	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2046	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2047	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2048	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2049	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2050	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2051	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2052	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2053	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2054	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2055	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2056	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2057	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097
2058	9,310,094	6,329,648	15,639,742	15,639,742	$ 0.0306	$ 478,460	3,909,935	$ 0.0759	$ 296,661	11,729,806	$ 0.0140	$ 163,976	$ 939,097

Notes/Assumptions:

1. Costs are presented in 2021 dollars based on increasing costs from the 2019 Annual Report by 1.3% to account for CPI through 2020. Future costs for RO concentrate treatment and disposal are currrently being evaluated by Waste Connections and based on those evaluations the proposed cost for RO concentrate treatment and disposal would be less than or equal to the historical cost for RO concentrate treatment and disposal therefore the historical cost has been maintained for conservatism in the cost estimate.
2. Annual post-closure leachate volume includes estimated collected volumes (Table 7-3E) plus a groundwater influence component (unlined areas) estimated to be equivalent to 2.1 inches per year and is assumed to occur across the approximately 111-acre footprint of the SMI Landfill.

3. 100% of generated leachate is assumed to be treated on-site through reverse osmosis system. 75% of the treated leachate is assumed to be discharged to the sanitary sewer for further treatment and disposal at the Seneca Falls treatment plant. Concentrate from the reverse osmosis system is assumed to be 25% of the annual volume and is assumed to be then treated further and managed by recirculation into the landfill.

4. In addition to the leachate treatment costs, an annual amount of $400,548 is included in the post-closure care estimate for miscellaneous costs related to leachate management. This amount includes costs for inpsections, power, reporting, administration, taxes and insurance and contingency.

Seneca Meadows, Inc.
2020 Annual Report
Post-Closure Care Cost Estimate
Table 7-3E - Annual Post-Closure Leachate Volumes

Year	Total Lined Area (acres)	Total Leachate (gal)	Clay Cap		Geosynthetic Cap	
			Area (acres)	Volume (gal)	Area (acres)	Volume (Gallons)
2029	350.6	18,236,852	90.5	7,544,391	260.1	10,370,005
2030	350.6	14,387,172	90.5	7,544,391	260.1	6,520,324
2031	350.6	11,616,872	90.5	7,544,391	260.1	3,750,024
2032	350.6	9,925,952	90.5	7,544,391	260.1	2,059,104
2033	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2034	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2035	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2036	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2037	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2038	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2039	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2040	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2041	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2042	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2043	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2044	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2045	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2046	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2047	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2048	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2049	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2050	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2051	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2052	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2053	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2054	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2055	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2056	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2057	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2058	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247
2059	350.6	9,310,094	90.5	7,544,391	260.1	1,443,247

1. The total lined acrage presented in this table varies slightly from that presented in Table 7-1 due to rounding errors. The larger number presented here offers a more conservative estimation of leachate volumes.

8.0 PROBLEMS/CHANGES

SMI did not receive NOV's in 2020.

9.0 GROUNDWATER SAMPLING AND ANALYSIS

The annual review of groundwater analytical data has been prepared by KR Applin & Associates of Dansville, New York. Their report summarizes the groundwater monitoring activities for 2020, as required by SMI's 6 NYCRR Part 360 Operating Permit and is included in this section.

GROUNDWATER MONITORING REPORT

2020 ANNUAL REPORT

SENECA MEADOWS SOLID WASTE MANAGEMENT FACILITY

WASTE CONNECTIONS, INC.
Connect with the Future®

FEBRUARY 2021

KR Applin & Associates 8806 Route 256 Dansville, NY 14437 585.335.5998

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EXECUTIVE SUMMARY

During 2020, groundwater monitoring at the Seneca Meadows Solid Waste Management Facility (SMI), Seneca Falls, NY, was conducted quarterly during January, April, July, and October. The monitoring was conducted in compliance with an approved Environmental Monitoring Plan (EMP) and Site Analytical Plan (SAP).

Groundwater monitoring was conducted on a facility-wide basis and included the sampling and analysis of 60 groundwater monitoring wells (overburden and bedrock) that surround the Existing Landfill, the Southeast Landfill (SELF), the SELF Bumpout, the Western Expansion Area, and the Northern Expansion Area. Porewater collected from beneath the lined landfills at the facility was also sampled and analyzed during each monitoring event.

Each of the wells and porewater sampling locations were sampled for 6 NYCRR Part 360 routine chemical parameters during the first, second, and fourth quarters and for Part 360 baseline chemical parameters during the third quarter. The sampling and laboratory analyses were performed by ALS, Rochester, New York.

The quarterly monitoring of groundwater levels at the facility showed a potential for downward vertical flow within the overburden sediments. Flow in the bedrock was determined to be in a south to southeast direction.

The quarterly analytical data were evaluated for potential impacts by plotting the results on Stiff and Piper diagrams, by comparing the results to 6 NYCRR Part 703 Class GA groundwater standards and trigger values established for each analyte, and by intrawell statistical analyses performed using DumpStat© software.

Results of the data evaluations revealed two types of impacts to groundwater quality at the facility. These are: 1) impacts to bedrock groundwater by organic contaminants associated with the Tantalo Site, which is centrally located within the facility, and 2) impacts to shallow groundwater

adjacent to the facility access road and Route 414 by inorganic components derived from road deicing agents.

Evaluations of the analytical data for the wells impacted by the Tantalo Site indicate improvements in groundwater quality surrounding most of the wells. The progress of remedial measures currently being applied to the impacted areas will continue to be monitored.

The wells impacted by road deicing agents have shown increasing trends in sodium, chloride, and other inorganic constituents attributed to the corrosion of well grouting material. Recent monitoring results show slight declines in the concentrations of many of these parameters.

No modifications to the present monitoring program are recommended at this time.

1.0 INTRODUCTION

This report provides a summary of the sampling and analytical results for quarterly groundwater monitoring conducted at the Seneca Meadows, Inc. (SMI) Solid Waste Management Facility, Seneca Falls, New York, during 2020.

Groundwater monitoring is conducted on a facility-wide basis and is accomplished with the quarterly sampling of several overburden and bedrock wells, which are strategically located to monitor groundwater quality surrounding five areas of waste disposal. These are shown in Figure 1-1 and include:

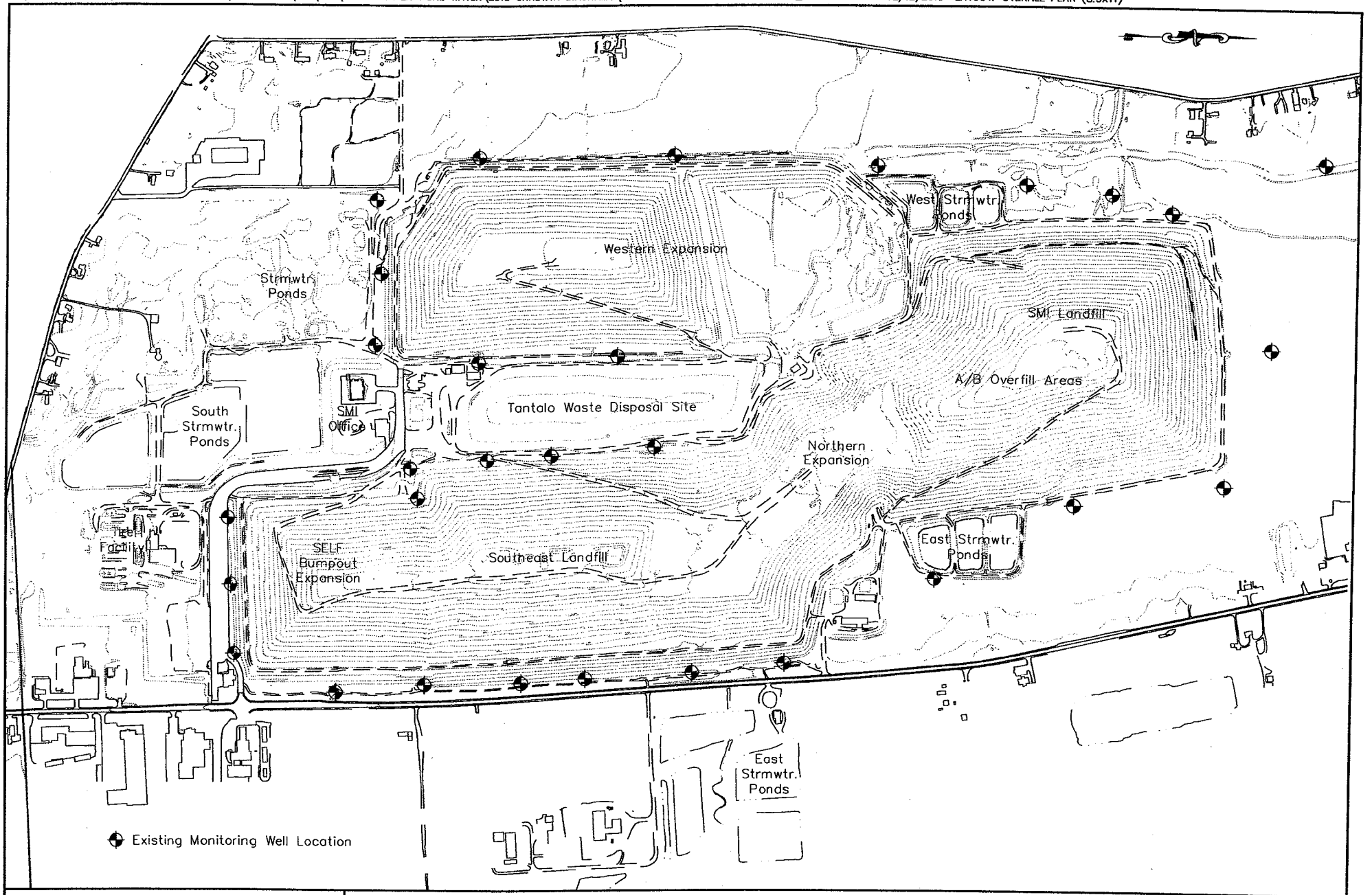
- the Existing Landfill
- the Southeast Landfill (SELF),
- the SELF Bumpout,
- the Western Expansion Area, and
- the Northern Expansion Area

In addition to the groundwater monitoring wells, porewater from beneath the liner systems of lined landfills at the facility is sampled quarterly. Porewater is sampled at one location at the A/B Overfill Area of the Existing Landfill, two locations at the SELF, one location at the SELF Bumpout, three locations at the Western Expansion Landfill, and one location at the Northern Expansion Landfill.

During 2020, monitoring was conducted during January, April, July, and October. The results for each quarterly event, including all raw field and laboratory data, were provided in quarterly monitoring reports, which are available for review at the offices of SMI and the New York State Department of Environmental Conservation (NYSDEC), Region 8, Avon, New York.

The purpose of this annual report is to briefly summarize the findings provided in the quarterly reports and to identify particular aspects of the monitoring program that may require modification or improvement.

S:\EASTERN REGION\6270 SENECA LANDFILL\ENGINEERING\L03\P67\GROUNDWATER-PORE WATER\2018 GRNDWTR DIAGRAMS\OVERALL SITE OPERATIONAL AREAS_APRIL2018.DWG 02/12/2019 LAYOUT: OVERALL PLAN (8.5X11)



SENECA MEADOWS LANDFILL
1786 SALCMAN ROAD
WATERLOO, NEW YORK 13165

OPERATIONAL AREAS AT THE SMI SOLID WASTE MANAGEMENT FACILITY

0 500 1000
Scale In Feet

FIGURE
1-1

2.0 MONITORING WELL ARRAY

Thirty seven overburden wells and 33 bedrock wells currently comprise the monitoring well array at the SMI Solid Waste Management Facility. The wells associated with each fill area are listed in Table 2-1. The locations of the wells are shown in expanded views of the Existing Landfill, the SELF, the SELF Bumpout, the Western Expansion Area, and the Northern Expansion Area in Figures 2-1, 2-2, and 2-3.

Monitoring wells surrounding the Existing Landfill (Fig. 2-1) include eight overburden wells and seven bedrock wells. In addition, porewater is collected from beneath the liner system of the A/B Overfill Area and is sampled quarterly at sump AB-0002-PW.

The SELF monitoring well array (Fig. 2-2) currently consists of ten overburden wells and eight bedrock wells. Some of the SELF wells have shown indications of being impacted by organic contaminants (trichloroethene and its degradation products) as well as inorganic chemicals such as sodium and chloride. These contaminants are known to originate at the Tantalo Waste Site located west of and adjacent to the SELF. The affected wells include:

Overburden Wells	Bedrock Wells
SE-0101-UL	SE-0100-SBR
T-0001-UT	SE-0100-DBR
	SE-0106-SB
	T-0001-SB

The degree to which the wells are impacted depends on their locations relative to the Tantalo contaminant plume. Those within or near the plume exhibit higher concentrations of contaminants.

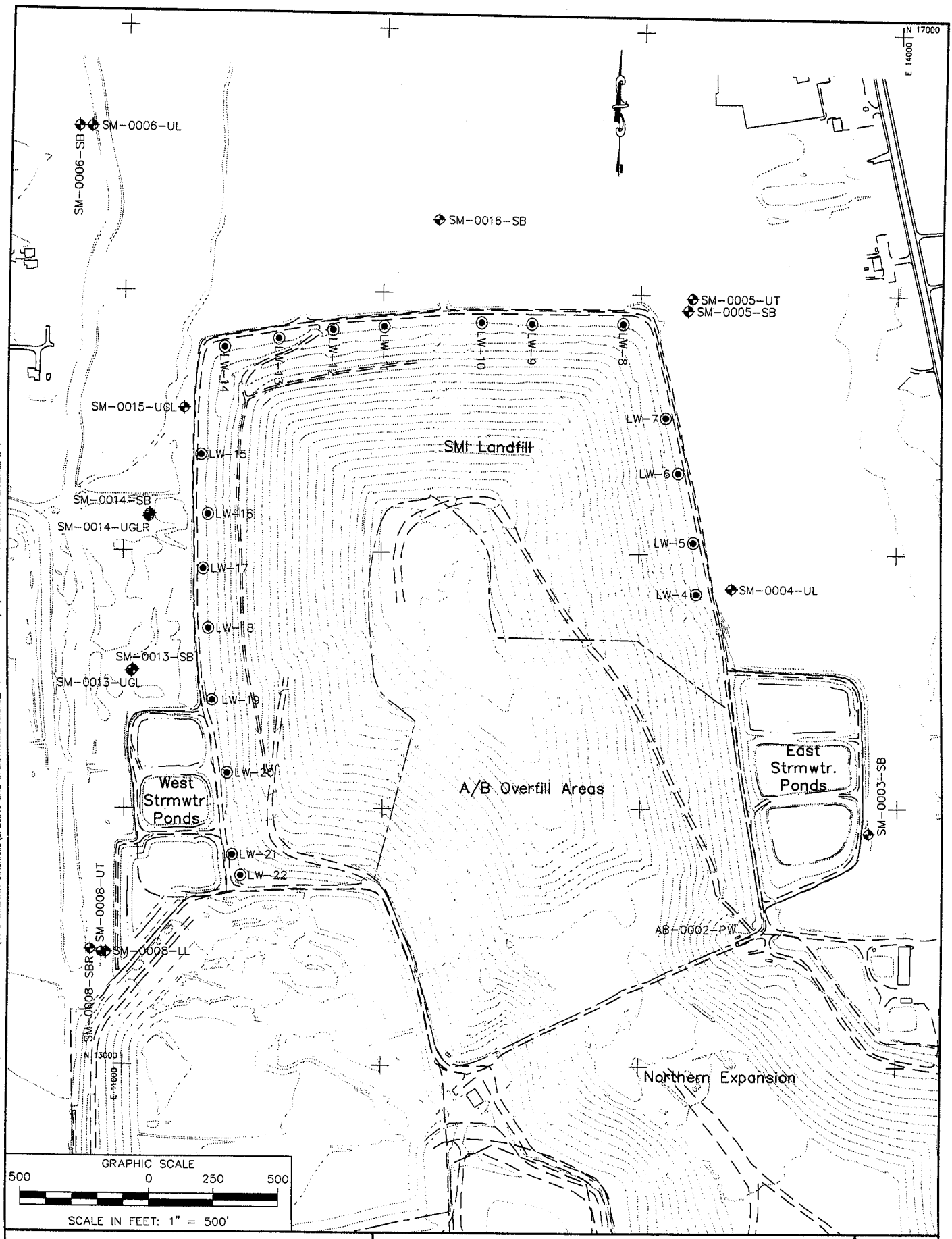
Porewater at the SELF is sampled at two locations, SE-0001-PW and SE-0002-PW, located along the east side of the landfill (see Fig. 2-2).

The SELF Bumpout monitoring well array consists of six overburden wells and four bedrock wells. Porewater at the

Table 2-1

Groundwater and Porewater Monitoring Points

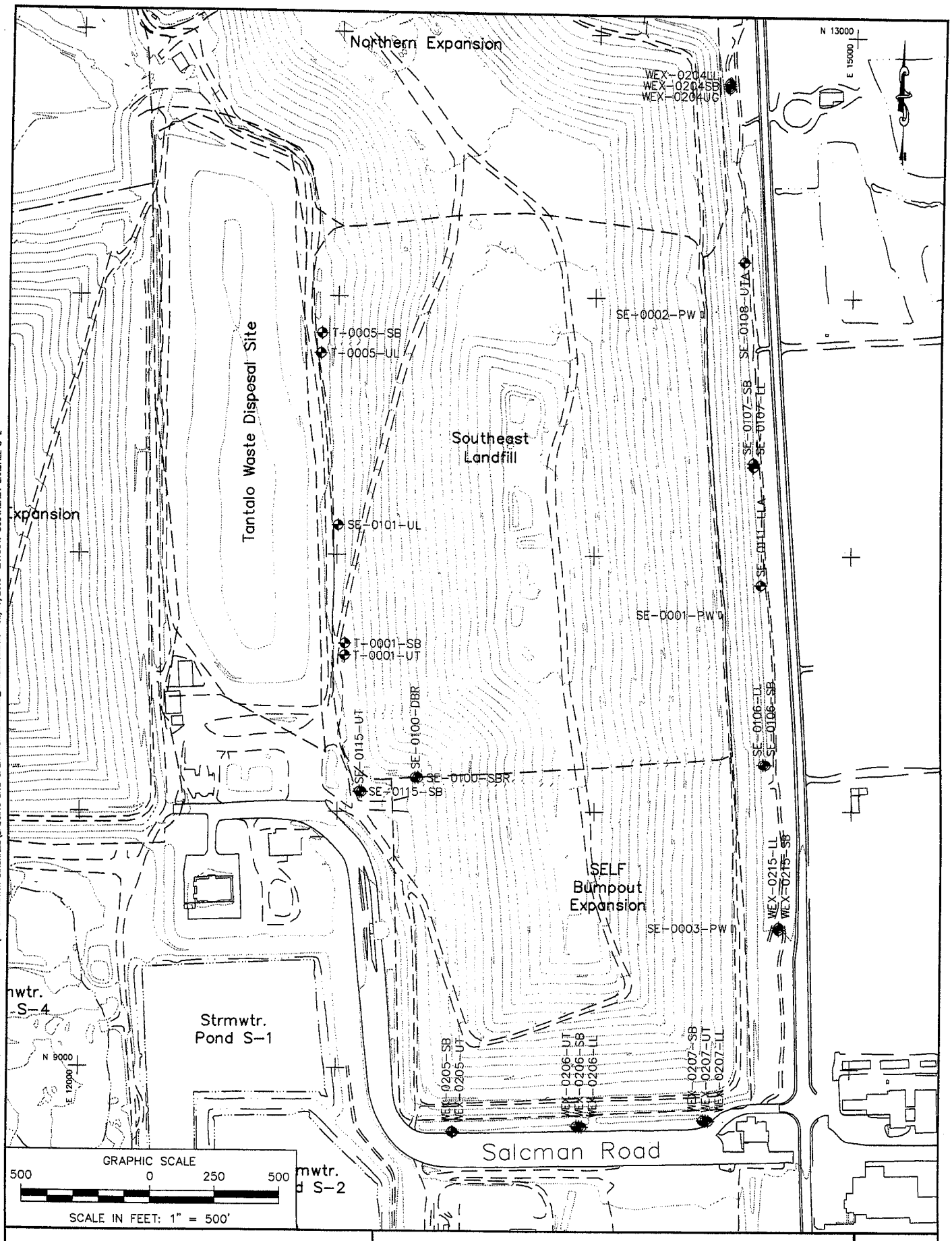
	Existing Landfill	Southeast Landfill	Southeast LF Bumpout	Western Expansion
Overburden Wells	SM-0004-UL SM-0005-UT SM-0006-UL SM-0008-UT SM-0008-LL SM-0013-UGL SM-0014-UGLR SM-0015-UGL	SE-0101-UL SE-0106-LL SE-0107-LL SE-0108-UTA SE-0111-LLA SE-0115-UT T-0001-UT T-0005-UT WEX-0204-UG WEX-0204-LL	WEX-0205-UTR WEX-0206-UT WEX-0206-LL WEX-0207-UT WEX-0207-LL WEX-0215-LL	WEX-0208-UT WEX-0208-LL WEX-0209-UT WEX-0209-LL WEX-0210-UTR WEX-0210-LL WEX-0211-UT WEX-0214-UT WEX-0214-LL
Bedrock Wells	SM-0003-SB SM-0005-SB SM-0006-SB SM-0008-SBR SM-0013-SB SM-0014-SB SM-0016-SB	SE-0100-SBR SE-0100-DBR SE-0106-SB SE-0107-SB SE-0115-SB T-0001-SB T-0005-SB WEX-0204-SB	WEX-0205-SB WEX-0206-SB WEX-0207-SB WEX-0215-SB	WEX-0208-SB WEX-0209-SB WEX-0210-SB WEX-0210-DBR WEX-0211-SB WEX-0212-IB WEX-0213-SB WEX-0214-SB
Porewater Samples	AB-0002-PW NEX-0007-PW (Northern Expansion)	SE-0001-PW SE-0002-PW	SE-0003-PW	WEX-0002-PW WEX-0003-PW WEX-0004-PW



S:\EASTERN REGION\6270 SENECA LANDFILL\ENGINEERING\L03\P67\GROUNDWATER-PORE WATER\2018 GRNDWTR DIAGRAMS\SPECIFIC SITE OPERATIONAL AREAS_APRIL2018.DWG 02/13/2019 LAYOUT: EXISTING LANDFILL 2-1

SENECA MEADOWS LANDFILL
1786 SALCMAN ROAD
WATERLOO, NEW YORK 13165

SENECA MEADOWS LANDFILL	FIGURE
GROUNDWATER MONITORING WELLS	2-1



S:\EASTERN REGION\6270 SENECA LANDFILL\ENGINEERING\L03\P67\GROUNDWATER-FORE WATER\2018 GRNDWTR DIAGRAMS\SPECIFIC SITE OPERATIONAL AREAS_APRIL2018.DWG 02/13/2019 LAYOUT: SOUTHEAST LANDFILL 3-2

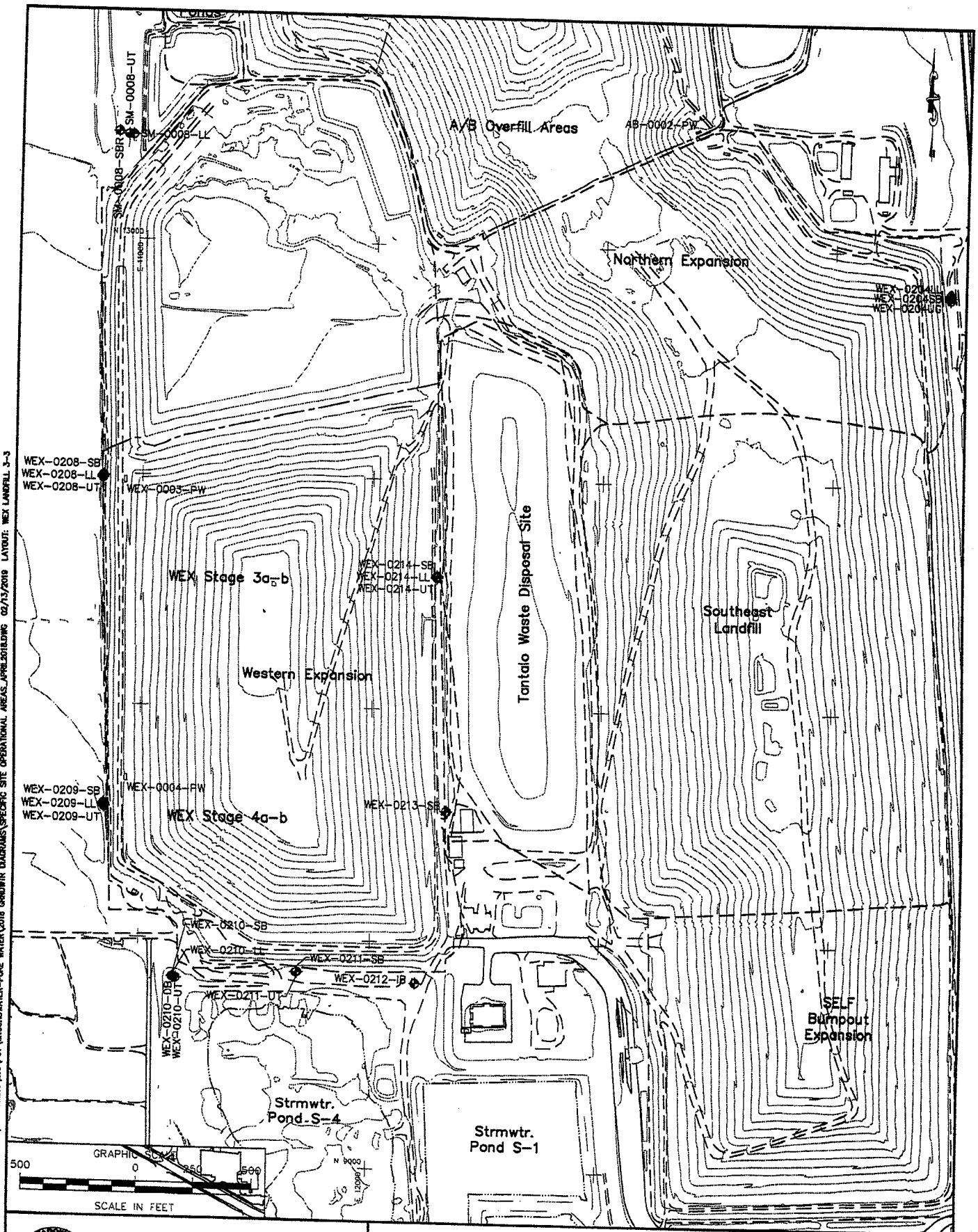
SENECA MEADOWS LANDFILL
1786 SALCMAN ROAD
WATERLOO, NEW YORK 13165

SOUTHEAST LANDFILL

GROUNDWATER MONITORING WELLS

FIGURE

2-2



S:\EASTERN REGION\6270 SENECA LANDFILL\ENGINEERING\003\P67\GROUNDWATER-PORE WATER\2018 GRNDWTR DIAGRAMS\SPECIFIC SITE OPERATIONAL AREAS_APRIL2018.DWG 02/13/2019 LAYOUT: WEX LANDFILL 3-3

SENECA MEADOWS LANDFILL
1786 SALCMAN ROAD
WATERLOO, NEW YORK 13165

WESTERN EXPANSION LANDFILL

GROUNDWATER MONITORING WELLS

FIGURE 2-3

SELF Bumpout is sampled at one location labeled SE-0003-PW in Figure 2-2.

The Western Expansion monitoring well array consists of nine overburden wells and eight bedrock wells. Porewater collected at the Western Expansion is sampled at three locations labeled WEX-0002-PW, WEX-0003-PW, and WEX-0004-PW in Figure 2-3.

The Northern Expansion Area (Fig. 2-3) is the most recent fill area to be developed at the facility. Monitoring of the area is currently accomplished using wells bordering the Existing Landfill and the SELF. Porewater is sampled at location NEX-0007-PW.

3.0 SUMMARY OF MONITORING ACTIVITIES

3.1 SAMPLING AND ANALYSIS

3.1.1 Compliance

During 2020, groundwater monitoring at the SMI facility was conducted in compliance with their approved Environmental Monitoring Plan (EMP) [December 2006; revised February 2007] and Site Analytical Plan (SAP) [November 2006]. All the monitoring wells and porewater sampling locations listed in Table 2-1 were scheduled for sampling each quarter.

All sampling and analyses were performed by ALS, Rochester, New York. Laboratory analyses of the samples from each quarterly event were conducted in accordance with USEPA/SW-846 analytical methods. Analytical results for samples analyzed for 6 NYCRR Part 360 routine chemical parameters (first, second, and fourth quarters) were validated internally by the laboratory. The results for Part 360 baseline chemical parameters (third quarter) were validated by an independent data validator.

Monitoring reports summarizing the results of each quarterly event were submitted to the Region 8 Office of the NYSDEC following each event.

3.1.2 Completeness

The SAP for the SMI Solid Waste Facility sets a completion goal for the collection of samples at 85% and a completion goal for the analysis of samples also at 85%.

During each quarterly monitoring event of 2020, some wells could not be sampled due to dry conditions or inadequate recharge. However, more than 85% of the wells were sampled during each quarterly event. Therefore, the 85% completion goal for sampling was met.

Usable analytical data were obtained for 100% of the results obtained from each monitoring event. No analytical data were rejected as a result of the data usability reviews or data validation. Therefore, the 85% completion goal for sample analysis was met for each quarterly event.

3.2 DATA EVALUATION METHODS

3.2.1 Groundwater Elevation Data

Groundwater elevation data were obtained quarterly prior to sample collection. The data were used to determine groundwater flow directions at the facility. Previous hydrogeologic studies of the site determined that groundwater flow within the overburden sediments surrounding the site is toward the landfilled areas. Within the bedrock zones, groundwater flow was determined by comparing the elevations of groundwater within the bedrock monitoring wells.

3.2.2 Stiff and Piper Diagrams

Stiff and Piper diagrams (e.g., Fetter, 1988; Hounslow, 1995) are graphical plots of the major water quality components (calcium, magnesium, sodium, potassium, chloride, sulfate, and alkalinity) analyzed in each sample. The diagrams were prepared using the analytical results obtained from each quarterly sampling event and were used to characterize the general water quality of the samples, for making visual comparisons of the water quality at different

sampling locations, and for differentiating natural versus contaminated groundwater.

3.2.3 Exceedance Reports

The analytical results from each quarterly event were compared to the 6 NYCRR Part 703 Class GA groundwater standards and to trigger values established for each analyte as defined in the EMP. Results exceeding the standards or trigger values were used to identify potential impacts to groundwater at the facility.

3.2.4 Statistical Analyses

The quarterly groundwater results for the facility were evaluated statistically in accordance with a statistical analysis plan prepared by Dr. Robert Gibbons at the University of Chicago (Gibbons, 2003).

In accordance with the plan, intrawell statistical analyses were performed on the data obtained for each well in the monitoring well array using Shewart-CUSUM control charts. The data were also evaluated for trends using Sen's test. The analyses were performed on 14 target inorganic analytes including several leachate indicator parameters. Trends involving volatile organic compounds were also identified.

The results of the statistical analyses were included in each quarterly groundwater monitoring report.

3.3 IDENTIFICATION OF FACILITY-RELATED IMPACTS TO GROUNDWATER

Potential or confirmed impacts to groundwater by facility-derived chemical components were identified using one or more of the following criteria:

- Elevated concentrations of key leachate indicator parameters, especially sodium and chloride, and other

parameters not commonly detected in background samples such as ammonia, bromide, nitrate, BOD, COD, phenols, and trace metals (e.g., arsenic, chromium, and lead).

- Exceedances of NYSDEC Class GA groundwater standards.
- Exceedances of established background trigger values.
- Statistically significant upward trends in historical data.
- Detections of volatile organic compounds (VOCs).

For 2020, all monitoring wells identified as being impacted by facility-derived chemical components were linked to known sources of contamination, which are currently being remediated. These sources include:

- The Tantalo Waste Site located adjacent to the west boundary of the SELF, and
- Road deicing agents applied to the facility access road (Salcman Road) and to Route 414, which lies adjacent to the east side of the facility.

Experience with monitoring groundwater quality at the SMI Waste Management Facility has shown that potential impacts to groundwater by landfill leachate is most readily identified by increasing trends in chloride and to a lesser extent sodium. Semi-annual monitoring of leachate generated at the various waste disposal sites of the facility have shown sodium and chloride to be the dominant inorganic chemical components. Chloride does not readily participate in mineral precipitation, ion exchange, or other common geochemical reactions that might otherwise serve to attenuate its mobility. Chloride is therefore likely to migrate faster and further than other components associated with a contaminant release. Rising trends in chloride (and sodium) are therefore useful for predicting the possible approach of a contaminant plume or stringer to a monitoring well downgradient of a fill area.

The detections of certain organic compounds in the groundwater samples are also indicators of possible waste-derived impacts. Groundwater impacts attributable to the Tantalo Site have been and continue to be most readily identified by the detection of VOCs, namely trichloroethene and its degradation products (cis- and trans-dichloroethene, chloroethane, 1-1, dichloroethene, and vinyl chloride). Monitoring wells impacted by the Tantalo Site are currently limited to wells along the southwest and south sides of the SELF (e.g., wells SE-0101-UL, SE-0100-SBR, SE-0100-DBR, SE-0106-SB, T-0001-UT, and T-0001-SB) and to wells along the east and south sides of the Western Expansion Area (e.g., wells WEX-0211-SB, WEX-0212-IB, WEX-0213-SB, and WEX-0214-SB).

4.0 SUMMARY OF MONITORING RESULTS

4.1 GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

Groundwater elevations measured in the overburden and bedrock monitoring wells during the four quarters of 2020 are summarized in Tables 4-1 and 4-2. As shown in the tables, groundwater elevations in the overburden and bedrock wells were generally highest during the first half of the year when freshwater recharge rates were higher.

Based on previous hydrogeologic studies of the site, shallow groundwater flow surrounding lined landfills at the facility (i.e., all except the Existing Landfill) occurs in the direction of the landfill due to the diversion of recharge away from the landfill, which suppresses the water table beneath the landfill relative to the surrounding area. At the Existing Landfill, shallow groundwater flow is also diverted toward the landfill by the pumping of leachate recovery wells located along the west, north, and east margins of the landfill, and by the AB drain that traverses the southern boundary of the landfill.

Table 4-1

Groundwater Elevation Data - Overburden Wells

Well Number	TOC * Elevation	Groundwater Elevations				Range		Average
		Jan-20	Apr-20	Jul-20	Oct-20	min	max	
Existing Landfill								
SM-0004-UL	482.75	480.36	480.66	479.81	479.71	479.71	480.66	480.14
SM-0005-UT	483.98	480.96	480.92	477.98	474.72	474.72	480.96	478.65
SM-0006-UL	481.42	475.34	478.98	dry	dry	475.34	478.98	477.16
SM-0008-UT	481.16	475.14	474.34	470.95	469.71	469.71	475.14	472.54
SM-0008-LL	481.98	451.55	452.06	450.73	450.03	450.03	452.06	451.09
SM-0013-UGL	481.81	478.09	478.01	469.96	466.57	466.57	478.09	473.16
SM-0014-UGLR	482.59	478.78	479.06	473.16	469.98	469.98	479.06	475.25
SM-0015-UGL	481.57	478.34	477.99	472.55	470.16	470.16	478.34	474.76
Southeast Landfill								
SE-0101-UL	507.12	478.30	477.10	477.29	477.31	477.10	478.30	477.50
SE-0106-LL	487.86	460.91	460.65	460.98	460.83	460.65	460.98	460.84
SE-0107-LL	484.36	dry	dry	dry	dry			
SE-0108-UTA	483.58	463.78	463.67	461.19	460.26	460.26	463.78	462.23
SE-0111-LLA	484.77	455.24	460.05	454.49	453.09	453.09	460.05	455.72
SE-0115-UT	505.50	471.57	471.99	466.19	469.40	466.19	471.99	469.79
T-0001-UT	506.32	474.46	474.31	473.81	473.35	473.35	474.46	473.98
T-0005-UT	501.44	475.59	474.63	474.17	473.97	473.97	475.59	474.59
WEX-0204-UG	487.08	479.08	478.97	478.99	477.23	477.23	479.08	478.57
WEX-0204-LL	486.47	460.41	460.04	456.81	455.57	455.57	460.41	458.21
Southeast Landfill Bumpout								
WEX-0205-UTR	495.50	487.20	487.11	485.99	485.40	485.40	487.20	486.43
WEX-0206-UT	498.62	489.14	489.06	487.83	487.56	487.56	489.14	488.40
WEX-0206-LL	497.08	450.33	450.63	446.05	445.49	445.49	450.63	448.13
WEX-0207-UT	499.94	493.76	493.63	492.19	492.09	492.09	493.76	492.92
WEX-0207-LL	500.28	461.86	461.72	461.25	461.50	461.25	461.86	461.58
WEX-0215-LL	493.24	458.24	457.99	458.20	458.37	457.99	458.37	458.20
Western Fill Cell								
WEX-0208-UT	483.74	480.62	480.38	479.66	479.24	479.24	480.62	479.98
WEX-0208-LL	483.71	473.56	475.42	455.61	458.56	455.61	475.42	465.79
WEX-0209-UT	497.18	492.16	492.35	485.43	477.95	477.95	492.35	486.97
WEX-0209-LL	496.18	451.14	452.16	447.80	445.50	445.50	452.16	449.15
WEX-0210-UTR	487.14	482.06	482.49	482.29	481.72	481.72	482.49	482.14
WEX-0210-LL	483.04	453.42	453.13	452.52	450.74	450.74	453.42	452.45
WEX-0211-UT	486.37	471.42	472.05	dry	470.16	470.16	472.05	471.21
WEX-0214-UT	482.17	472.92	471.96	470.47	468.03	468.03	472.92	470.85
WEX-0214-LL	482.25	dry	446.97	dry	dry	446.97	446.97	446.97

* TOC = top of well casing

Table 4-2

Groundwater Elevation Data - Bedrock Wells

Well Number	TOC * Elevation	Groundwater Elevations				Range		Average
		Jan-20	Apr-20	Jul-20	Oct-20	min	max	
Existing Landfill								
SM-0003-SB	483.30	465.20	464.14	461.15	459.67	459.67	465.20	462.54
SM-0005-SB	482.95	471.60	471.96	469.34	467.99	467.99	471.96	470.22
SM-0006-SB	481.34	475.34	475.70	472.90	470.81	470.81	475.70	473.69
SM-0008-SBR	481.04	452.17	453.62	449.30	447.16	447.16	453.62	450.56
SM-0013-SB	481.67	466.54	467.04	464.16	461.42	461.42	467.04	464.79
SM-0014-SB	482.03	468.76	469.01	466.32	463.95	463.95	469.01	467.01
SM-0016-SB	484.53	472.37	472.64	469.88	467.82	467.82	472.64	470.68
Southeast Landfill								
SE-0100-SBR	525.50	450.50	451.36	449.04	449.30	449.04	451.36	450.05
SE-0100-DBR	526.45	449.89	450.45	445.68	443.25	443.25	450.45	447.32
SE-0106-SB	487.66	450.01	451.13	447.32	445.99	445.99	451.13	448.61
SE-0107-SB	484.45	452.55	453.42	450.05	449.35	449.35	453.42	451.34
SE-0115-SB	505.14	457.32	459.43	452.02	454.59	452.02	459.43	455.84
T-0001-SB	503.56	454.72	455.28	453.10	452.33	452.33	455.28	453.86
T-0005-SB	501.53	454.43	461.42	455.79	454.69	454.43	461.42	456.58
WEX-0204-SB	486.69	458.85	458.69	455.03	454.09	454.09	458.85	456.67
Southeast Landfill Bumpout								
WEX-0205-SB	495.27	450.24	451.34	446.71	445.99	445.99	451.34	448.57
WEX-0206-SB	498.75	450.19	451.30	446.72	445.90	445.90	451.30	448.53
WEX-0207-SB	500.58	454.40	455.57	450.98	450.27	450.27	455.57	452.81
WEX-0215-SB	493.28	448.96	450.14	445.07	443.94	443.94	450.14	447.03
Western Fill Cell								
WEX-0208-SB	483.48	451.00	452.14	446.98	444.68	444.68	452.14	448.70
WEX-0209-SB	496.09	451.31	452.35	447.29	444.97	444.97	452.35	448.98
WEX-0210-SB	483.12	445.65	448.27	441.90	439.15	439.15	448.27	443.74
WEX-0210-DB	483.52	447.60	446.12	442.90	440.31	440.31	447.60	444.23
WEX-0211-SB	485.84	452.76	455.63	451.64	449.19	449.19	455.63	452.31
WEX-0212-IB	484.44	452.20	453.63	446.71	dry	446.71	453.63	450.85
WEX-0213-SB	493.98	476.48	476.14	476.23	474.68	474.68	476.48	475.88
WEX-0214-SB	482.93	443.06	444.32	440.33	438.60	438.60	444.32	441.58

* TOC = top of well casing

Quarterly evaluations of the water level data for the bedrock wells indicated a southerly and southeasterly flow direction, which was consistent throughout 2020.

Comparisons of the water level data for shallow and deep monitoring well pairs (e.g., SM-0008-UT and SM-0008-SBR, SE-0115-UT and SE-0115-SB, WEX-0205-UT and WEX-0205-SB, WEX-0208-UT and WEX-0208-SB) showed that the water levels in the bedrock wells are several feet deeper indicating a substantial vertical component to groundwater flow beneath most, if not all, of the site. Because of this, contaminants released from the landfills would be expected to migrate downward through the overburden and eventually spread laterally when bedrock is encountered. Impacts identified to some of the SELF and Western Expansion wells (see Sect. 4.2.1) are consistent with this groundwater flow pattern.

4.2 SUMMARY OF GROUNDWATER IMPACTS

Impacts to groundwater quality at the SMI facility are limited to specific wells or areas already known to be impacted. These include:

- Areas impacted by a contaminant plume that originates from the Tantalo Waste Site, which is also undergoing remediation, and

- Overburden wells impacted by road deicing agents.

Impacts to wells downgradient and cross-gradient of the Tantalo Site involve mainly organic compounds as well as some inorganic analytes. Wells impacted by deicing agents exhibit increasing trends of sodium, chloride, and other major inorganic water quality parameters and show trace or non-detect VOC detections.

Discussions of the water quality at wells associated with the areas identified above are provided in the following sections.

4.2.1 Wells Impacted By The Tantalo Site

Several wells and a few porewater samples were identified in the 2020 quarterly monitoring reports as being impacted by the contaminant plume that extends from the Tantalo Site. The impacts vary in degree depending on the locations of the wells in relation to the contaminant plume and were identified by detections of VOCs known to originate at the Tantalo Waste Site. These include trichloroethene and its degradation products chloroethane, 1,1-dichloroethene, cis- and trans-1,2-dichloroethene, and vinyl chloride. (Acetone and 2-butanone were detected at trace concentrations in several wells, but these detections were attributed to laboratory contamination). Elevated levels of inorganic parameters, mainly chloride, bromide, and sodium, were also detected in some of the wells.

The monitoring wells and porewater samples exhibiting detections of the Tantalo VOCs during the third quarter 2020 monitoring event are listed in Table 4-3.

As indicated by the "J" laboratory qualifiers in Table 4-3, most of the VOC detections were at trace levels [i.e., below the method reporting limits (MRLs)]. Detections of trichloroethene and/or its degradation products above the MRLs were found for overburden well T-0001-UT and for bedrock wells SE-0100-SBR, SE-0100-DBR, WEX-0211-SB, WEX-0212-IB, and WEX-0213-SB. Acetone and 2-butanone were detected above the MRLs in well SM-0008-SBR but may be the result of laboratory contamination.

As shown in Table 4-3, traces of benzene and chlorobenzene were detected in overburden wells SE-0101-UL and WEX-0208-LL. Aromatic hydrocarbons are not commonly found in groundwater at the facility. Possible sources for the low level hydrocarbon concentrations are not obvious.

VOCs were also detected in porewater samples AB-0002-PW, SE-0002-PW, and SE-0003-PW. The low levels of acetone and 2-butanone detected in sample AB-0002-PW and the trace of carbon disulfide in sample SE-0002-PW are most likely due to laboratory or field contamination. The VOCs found in sample SE-0003-PW may reflect limited Tantalo

Table 4-3

Summary of VOCs in Groundwater Samples
3rd Quarter 2020
(Values are in ug/L)

Sample ID	Analyte	MRL *	Result *
Overburden Wells			
SE-0101-UL	Benzene	5	1.4 J
	Chlorobenzene	5	1.4 J
T-0001-UT	1,1-Dichloroethene	5	0.24 J
	Trichloroethene	5	1.9 J
	Vinyl chloride	5	**5.4**
	cis-1,2-Dichloroethene	5	**120**
	trans-1,2-Dichloroethene	5	2.0 J
WEX-0208-LL	Benzene	5	1.9 J
WEX-0214-UT	4-Methyl-2-pentanone	10	0.64 J
Bedrock Wells			
SE-0100-SBR	1,1-Dichloroethene	5	1.0 J
	Trichloroethene	5	0.63 J
	Vinyl chloride	5	**18**
	cis-1,2-Dichloroethene	5	**62**
	trans-1,2-Dichloroethene	5	0.77 J
SE-0100-DBR	1,1-Dichloroethene	5	2.1 J
	Trichloroethene	5	**6.4**
	Vinyl chloride	5	**34**
	cis-1,2-Dichloroethene	5	**140**
	trans-1,2-Dichloroethene	5	1.3 J
SE-0106-SB	Vinyl chloride	5	0.22 J
	cis-1,2-Dichloroethene	5	0.37 J
SE-0115-SB	Carbon disulfide	10	1.1 J
SM-0008-SBR	Acetone	10	**550**
	2-Butanone	10	**65**
	2-Hexanone	10	4.3 J
T-0001-SB	Carbon disulfide	10	0.44 J
	Chloroform	5	0.49 J
	Vinyl chloride	5	1.4 J
	cis-1,2-Dichloroethene	5	1.2 J
WEX-0204-SB	2-Butanone	10	1.1 J
WEX-0205-SB	cis-1,2-Dichloroethene	5	0.40 J
WEX-0211-SB	Trichloroethene	5	**40**
	cis-1,2-Dichloroethene	5	**20**
	trans-1,2-Dichloroethene	5	0.32 J
WEX-0211-SB Dup	Trichloroethene	5	**41**
	cis-1,2-Dichloroethene	5	**20**
	trans-1,2-Dichloroethene	5	0.31 J

Table 4-3 (Continued)

Summary of VOCs in Groundwater Samples
3rd Quarter 2020
(Values are in ug/L)

Sample ID	Analyte	MRL *	Result *
WEX-0212-IB	Trichloroethene	5	**12**
	cis-1,2-Dichloroethene	5	**26**
	trans-1,2-Dichloroethene	5	0.40 J
WEX-0213-SB	1,1-Dichloroethene	5	0.46 J
	Tetrachloroethene	5	0.38 J
	Trichloroethene	5	**27**
	Vinyl chloride	5	4.2 J
	cis-1,2-Dichloroethene	5	**140**
	trans-1,2-Dichloroethene	5	0.90 J
WEX-0214-SB	Vinyl chloride	5	4.4 J
	cis-1,2-Dichloroethene	5	1.9 J
Porewater			
AB-0002-PW	2-Butanone	10	**15**
	Acetone	10	**11**
SE-0002-PW	Carbon disulfide	10	0.60 J
SE-0003-PW	1,1-Dichloroethene	5	0.36 J
	Vinyl chloride	5	**5.8**
	cis-1,2-Dichloroethene	5	**26**

* Notes:
MRL = method reporting limit
J qualifier indicates a result below the MRL

contamination of the overburden groundwater directly beneath the SELF Bumpout.

Statistical analyses of the VOC data (see 3rd Quarter 2020 Groundwater Monitoring Report dated November, 2020) found increasing trends for cis-1,2-dichloroethene in overburden well T-0001-UT and bedrock well WEX-0214-SB, and an increasing trend for vinyl chloride in bedrock well T-0001-SB. Decreasing trends were found for the following VOCs in the wells listed below.

SE-0106-SB	cis-1,2-Dichloroethene
SE-0100-SBR	Trichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,1-Dichloroethene, Vinyl chloride
SE-0100-DBR	Trichloroethene, cis-1,2-Dichloroethene, Vinyl chloride
WEX-0211-SB	Trichloroethene, cis-1,2-Dichloroethene
WEX-0213-SB	Vinyl chloride

4.2.2 Wells Impacted By Road Deicing Agents

Increasing trends in the concentrations of sodium, chloride, and other major water quality components such as calcium, magnesium, and sulfate have been observed in a few monitoring wells surrounding the SELF Bumpout. Most of the wells are shallow overburden wells and include the following (see Fig. 2-2):

WEX-0205-UT/SB
WEX-0206-UT
WEX-0207-UT
WEX-0215-UT
SE-0115-UT/SB

Time series plots of TDS, sodium, and chloride concentrations in the affected wells are provided in Appendix A. The plots show trends of increasing concentration over the

past several years. Similar trends have been found for calcium, magnesium, and sulfate but are not shown.

A few possible causes for the rising trends have been investigated, including leakage from the SELF Bumpout liner system, but the following observations point to road salt as the most likely source of the contamination.

- All the wells affected are adjacent to the facility entrance (Salcman Road) and Route 414, which borders the east side of the facility. These roadways have been routinely treated during winter months with road deicing agents, namely rock salt (sodium chloride). A commercially available deicing agent consisting of a mixture of molasses and magnesium chloride salts has been used at the facility in the past few years to minimize impacts to shallow groundwater.

- Almost all the wells affected are shallow overburden wells, which are more susceptible to surface sources of contamination than deeper wells at the facility. For example, wells WEX-0205-UT, WEX-0206-UT, and WEX-0207-UT, which exhibit the highest concentrations of sodium, chloride, and other chemical constituents, are only 20 feet deep and are screened over the lowermost 10 feet.

- The parameters exhibiting rising trends are limited to sodium, chloride, and other major inorganic chemical components. Other parameters commonly elevated in landfill leachate such as ammonia, bromide, phenolics, and organic compounds have not been detected or have been detected at trace levels. A trace of cis-1,2-dichloroethene, was detected in bedrock well WEX-0205-SB during the third quarter 2020 monitoring event (see Table 4-3), but this well may be slightly impacted by the Tantalo contaminant plume.

Similar increasing trends in the concentrations of the parameters mentioned above have also occurred in bedrock wells WEX-0205-SB and SE-0115-SB (see App. A). These trends most likely result from the vertically downward flow of contaminated shallow overburden groundwater. The parameter

concentrations in the overburden wells are substantially higher than the concentrations found in the bedrock wells.

As mentioned above, other major dissolved constituents such as calcium, magnesium, and sulfate also exhibit trends of increasing concentration similar to those found for sodium and chloride. These trends are believed to result from the corrosive effects of chloride on the well grouting material (Portland cement), which contains substantial amounts of gypsum ($CaSO_4 \cdot 2H_2O$) and perhaps additional magnesium-bearing minerals. Corrosion of the grout would likely release substantial amounts of dissolved calcium, magnesium, and sulfate to the surrounding groundwater.

Other shallow monitoring wells further north along Route 414 (SE-0106-LL, SE-0111-LLA, and WEX-0204-UG) and further west along Salcman Road (SE-0115-UT) exhibit similar trends, but not as pronounced as those for the wells near Salcman Road (see time series plots in Appendix A).

The time series plots for most of the wells show slight declines in the dissolved solids content during the last few monitoring events of 2020. Whether this indicates a leveling off or reversal of the trends can only be determined with additional monitoring. The plots will be updated annually to determine the course of the trends.

5.0 CONCLUSIONS

During 2020, quarterly groundwater monitoring at the Seneca Meadows, Inc. Solid Waste Management Facility was conducted in compliance with the methods and procedures described in the Environmental Monitoring Plan (EMP) and Site Analytical Plan (SAP). Sampling was conducted during January, April, July, and October.

Groundwater elevations in the monitoring wells were generally highest during the first half of the year in response to freshwater recharge during the late winter and spring. Comparisons of the water level data for shallow and deep monitoring well pairs showed that the water levels in the

bedrock wells were several feet deeper indicating a vertical component to groundwater flow through the overburden. Water level data for the bedrock wells indicated a southerly and southeasterly flow direction, which was consistent throughout 2020.

Impacts to groundwater quality were limited mainly to specific wells or areas at the facility already known to be impacted. These include wells known to be impacted by a VOC plume that originates from the Tantalo Waste Site and shallow wells adjacent to the landfill access road along the south side of the SELF Bumpout and adjacent to Route 414, which show indications of contamination from road deicing agents.

VOCs known to originate at the Tantalo Waste Site, including trichloroethene, 1,1-dichloroethene, cis- and trans-1,2-dichloroethene, and vinyl chloride were detected in a few wells located downgradient or cross-gradient of the Tantalo Site. Wells having VOC detections well above the method reporting limits include overburden well T-0001-UT and bedrock wells SE-0100-SBR, SE-0100-DBR, T-0001-SB, WEX-0211-SB, WEX-0212-IB, and WEX-0213-SB. Statistical analyses of the VOC data show downward trends in VOC concentrations in many of these wells. It is expected that the downward trends will continue as remediation of the Tantalo Site continues.

Impacts to shallow overburden wells near Salcman Road (wells WEX-0205-UT, WEX-0206-UT, WEX-0207-UT, WEX-0215-LL, and SE-0115-UT) and along Route 414 (SE-0106-LL, SE-0111-LLA, and WEX-0204-UG) by major inorganic chemical components including sodium, chloride, and others appear to be due to contamination by road deicing agents.

The wells identified as being impacted will continue to be monitored closely. Intrawell analyses of the analytical results will be used to track the trends in analyte concentrations over time.

No modifications to the present monitoring program are recommended at this time.

6.0 REFERENCES

Fetter, C.W., 1988, Applied Hydrogeology: Merrill Publishing Co., 592 pp.

Gibbons, R.D., 2003, Statistical Methods for Ground-Water Monitoring at the Southeast Landfill: 35 pp. plus appendices.

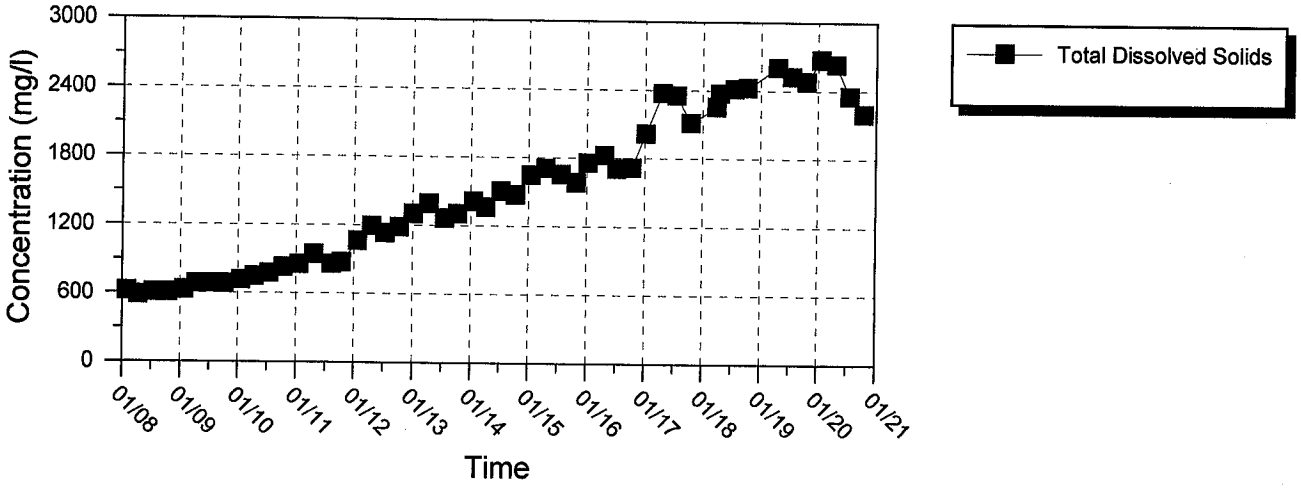
Hounslow, A.W., 1995, Water Quality Data: Analysis and Interpretation: Lewis Publishers, 397 pp.

New York State Dept. of Environmental Conservation, 2001, 6 NYCRR Part 360: Solid Waste Management Facilities.

Appendix A

Time Series Plots

WEX-0205-UT



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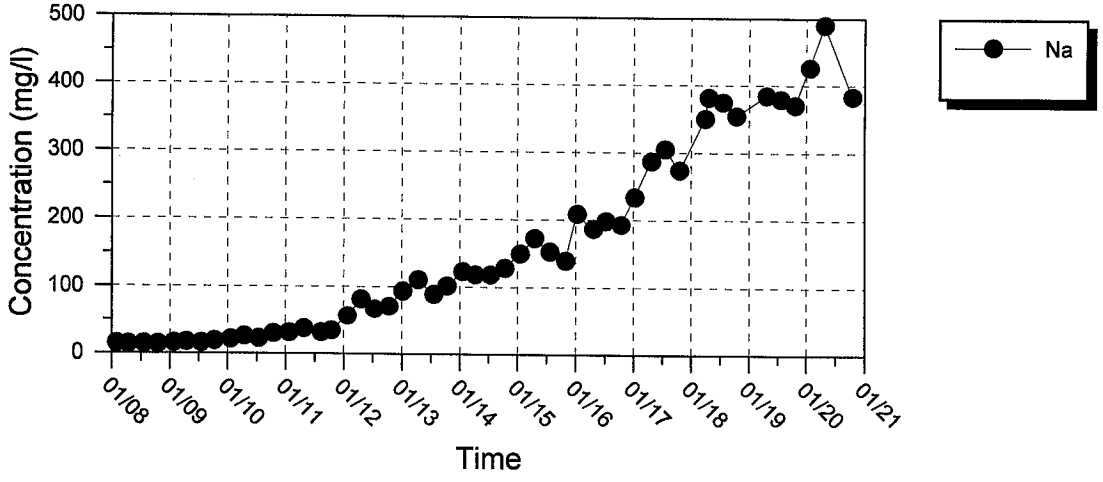

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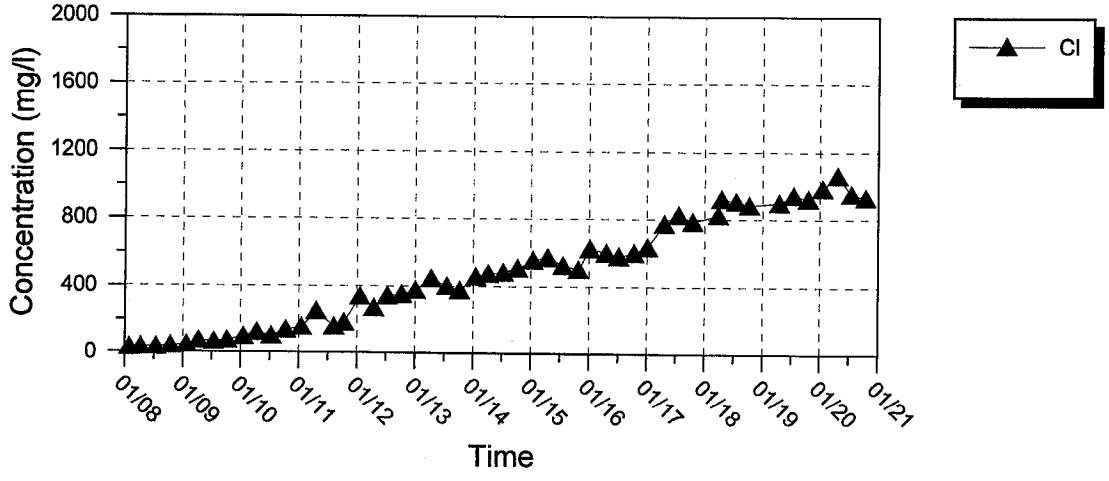

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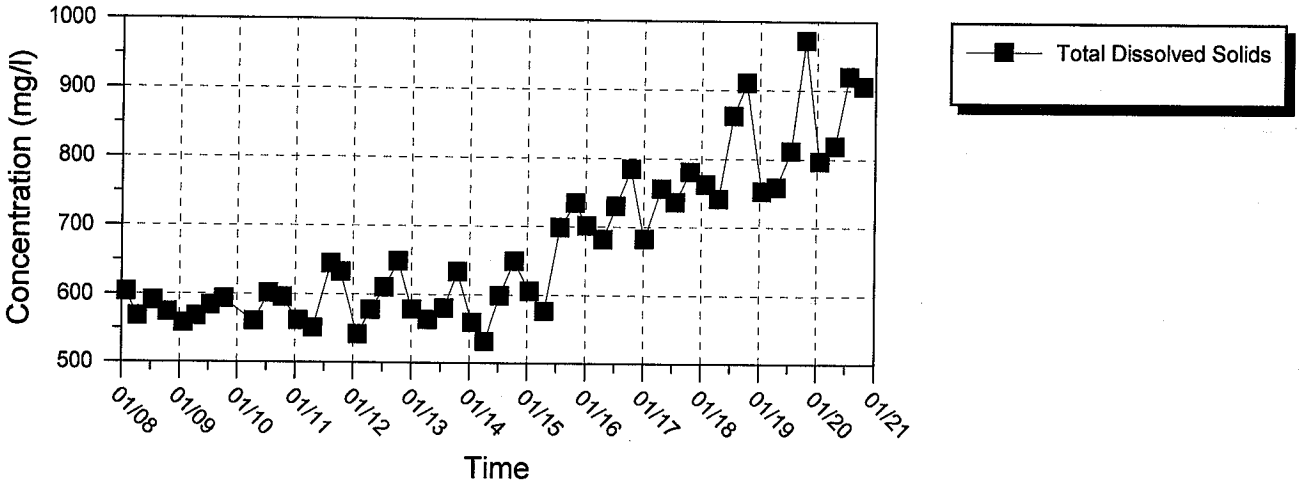
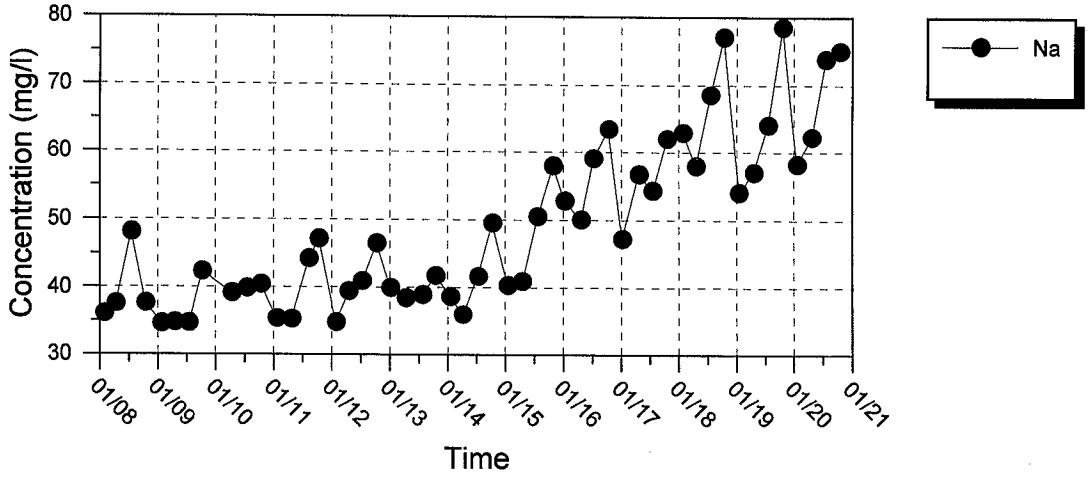
	CLIENT: Waste Connections, Inc.	DATE: 2008 - 2020 Data

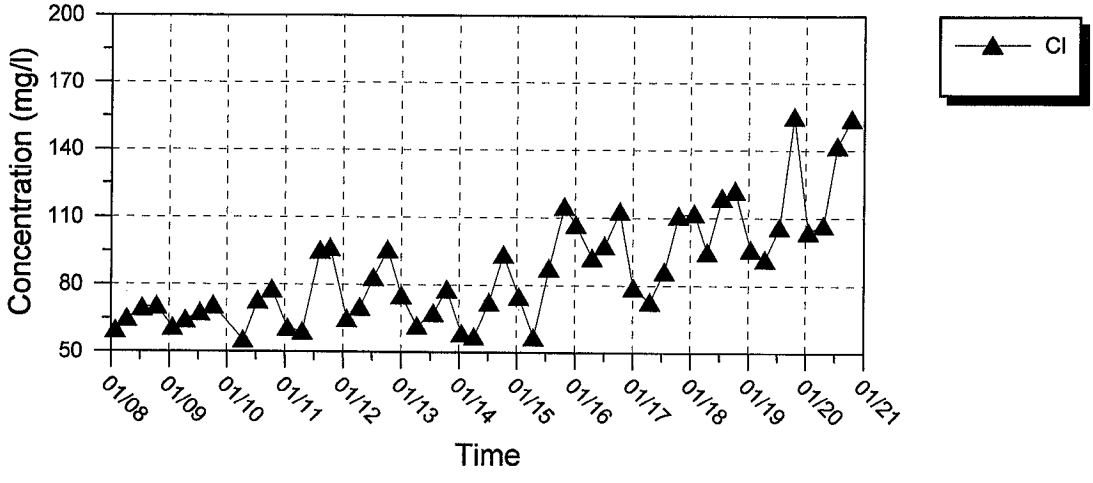
WEX-0205-SB



WEX-0205-SB

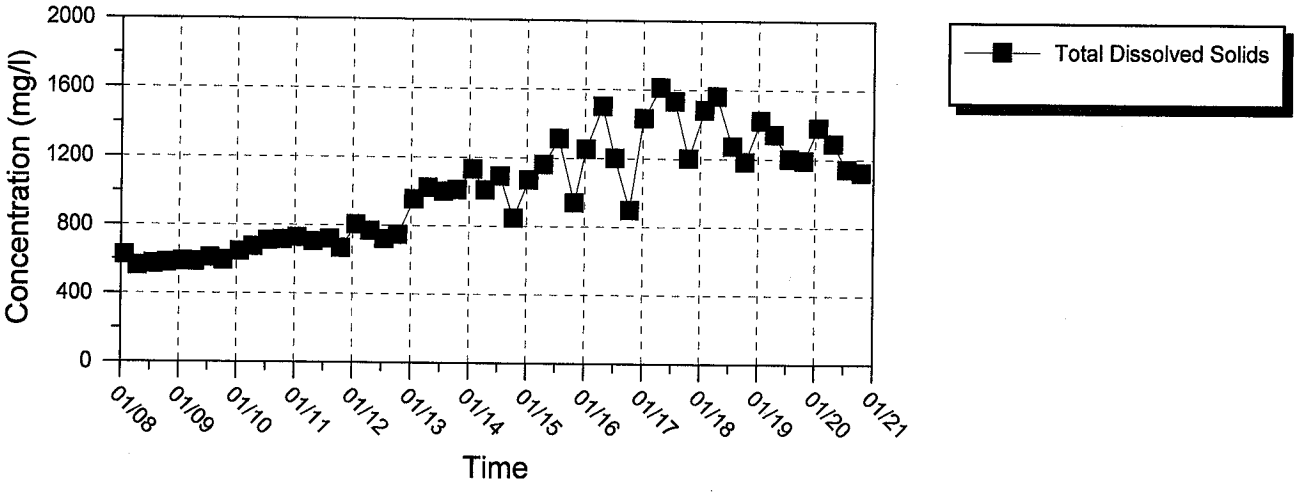


WEX-0205-SB



TITLE: Time Series Plots		
	SITE: Seneca Meadows Solid Waste Mngmnt Fac.	EVENT: 2020 Annual Report
	CLIENT: Waste Connections, Inc.	DATE: 2008 - 2020 Data

WEX-0206-UT



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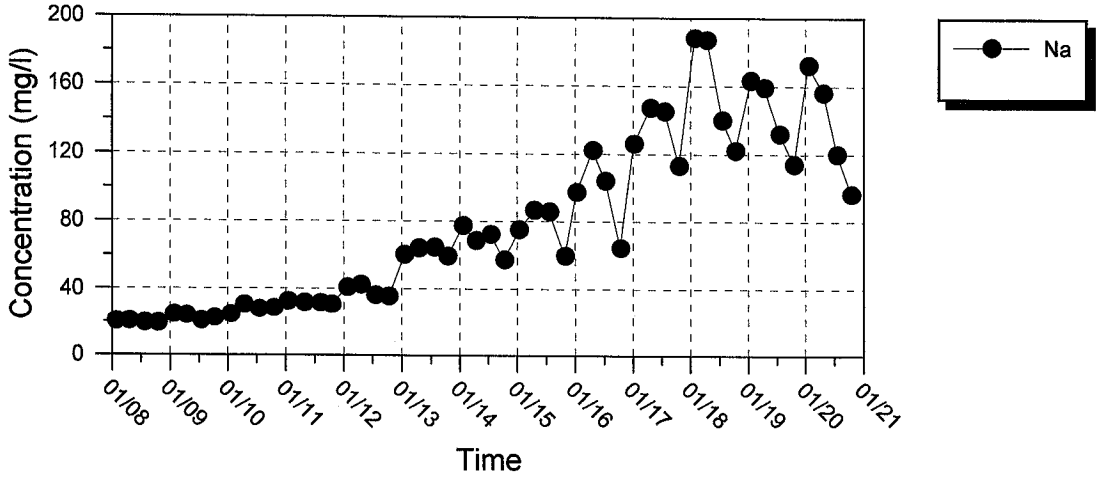

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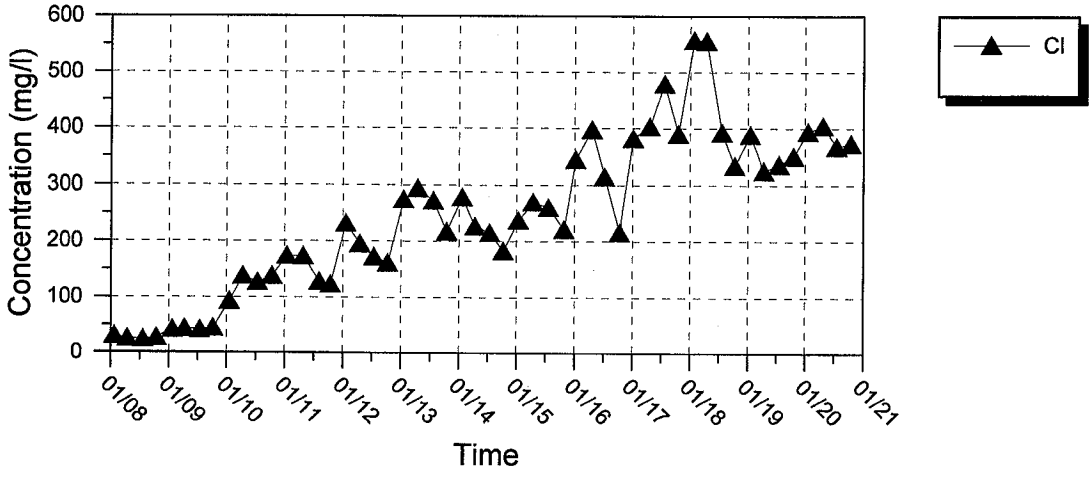

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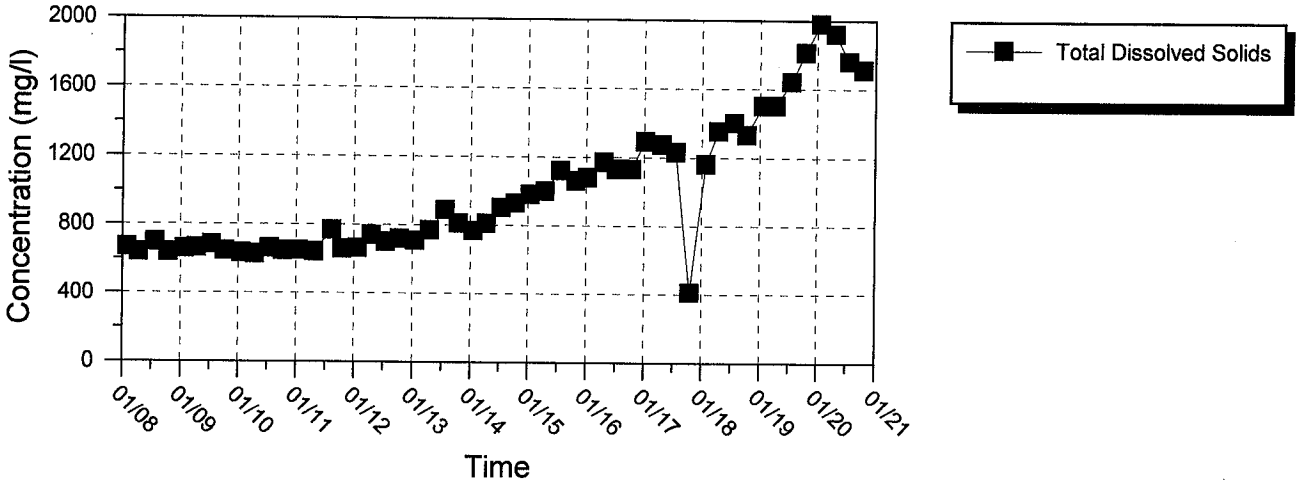

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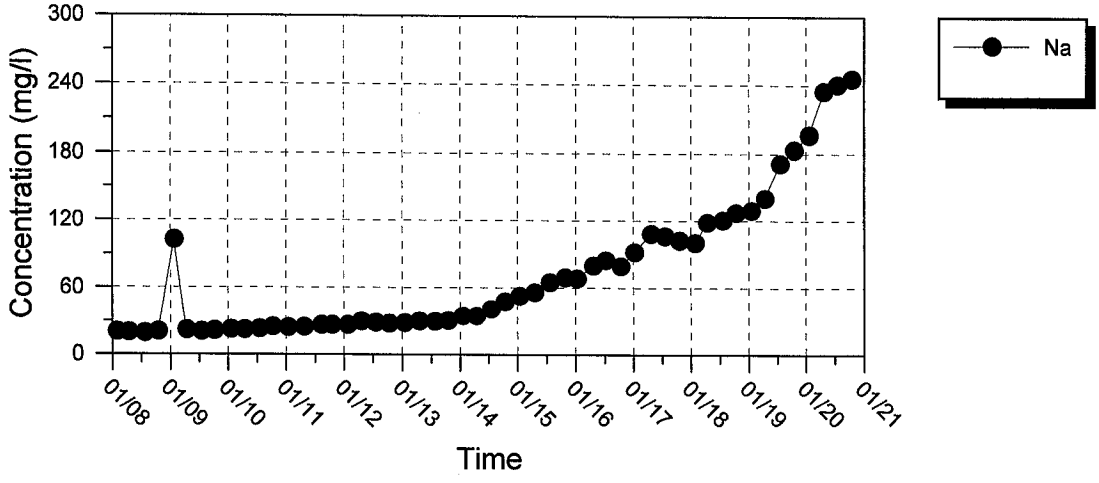

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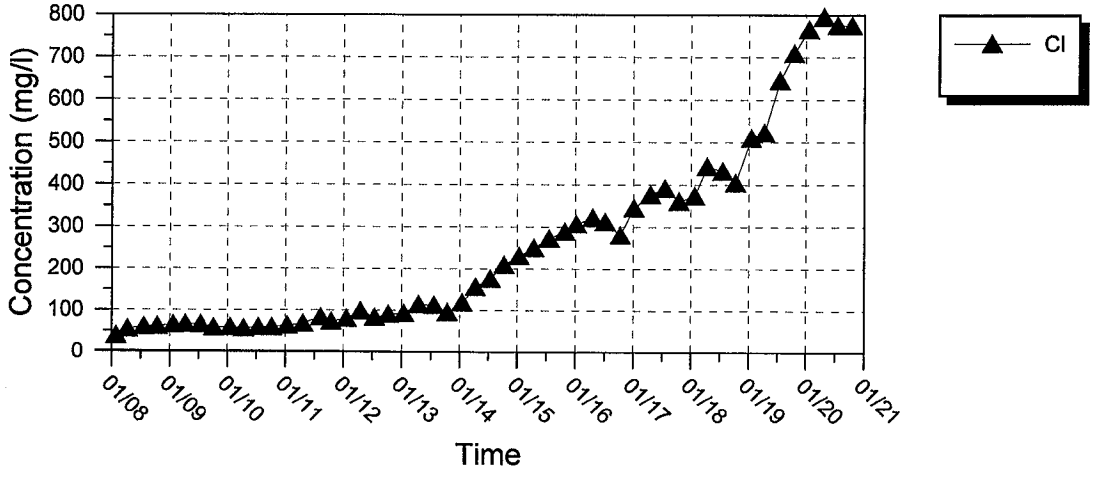

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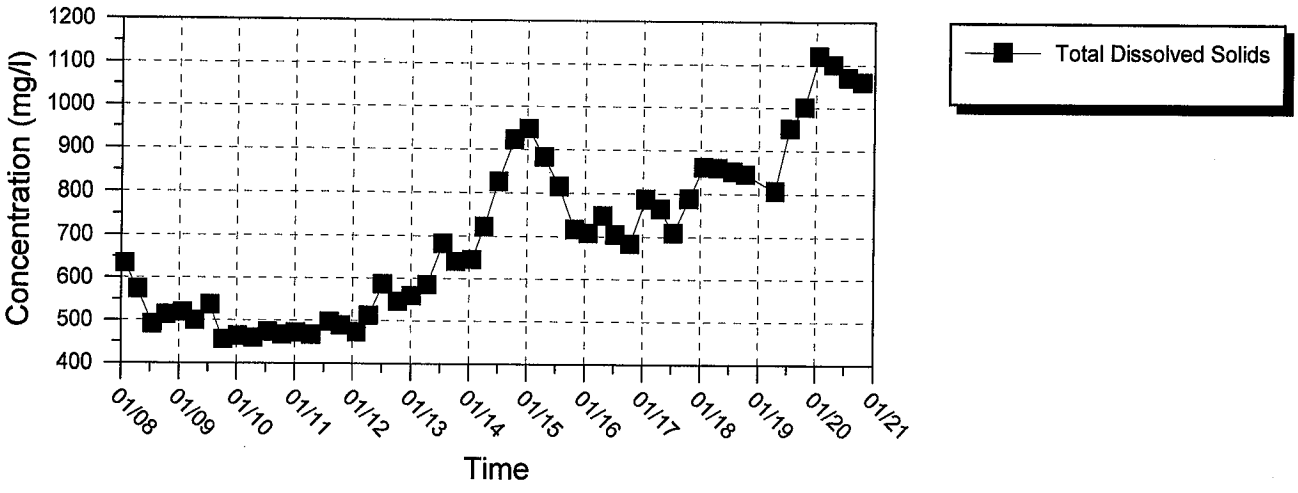

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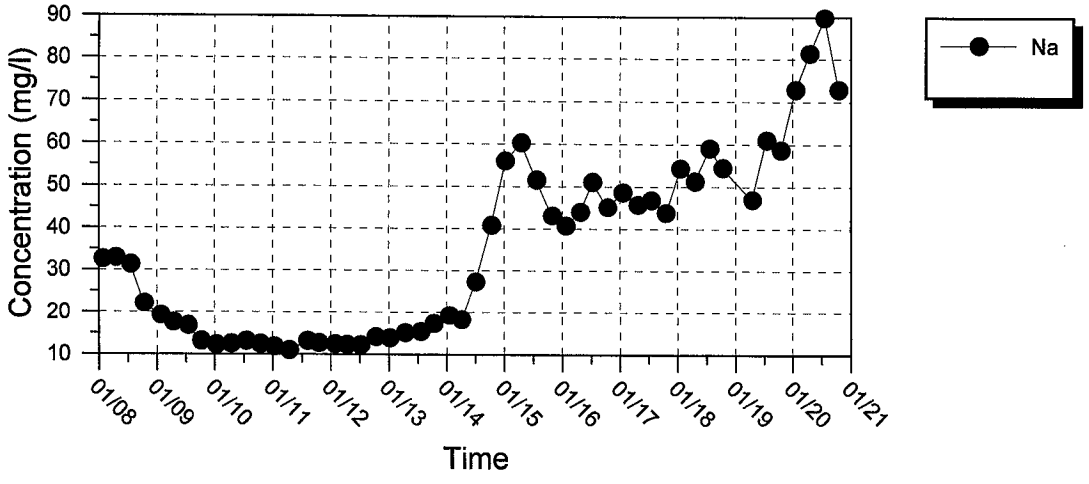

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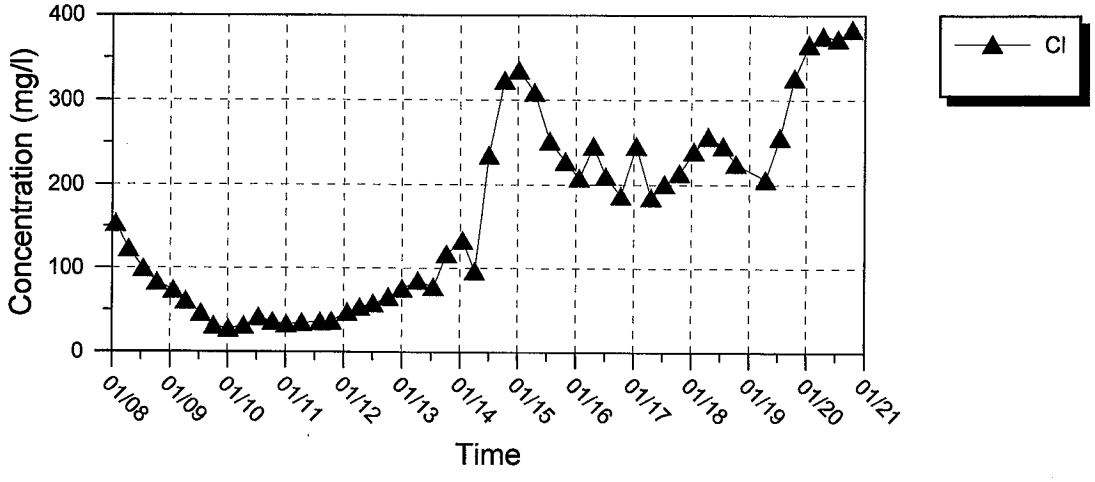

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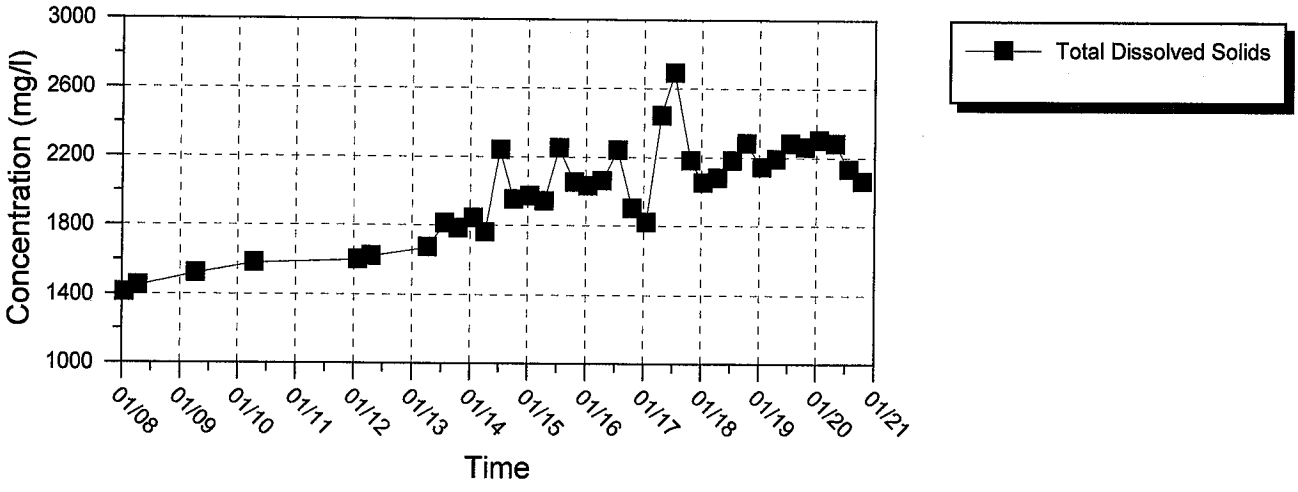

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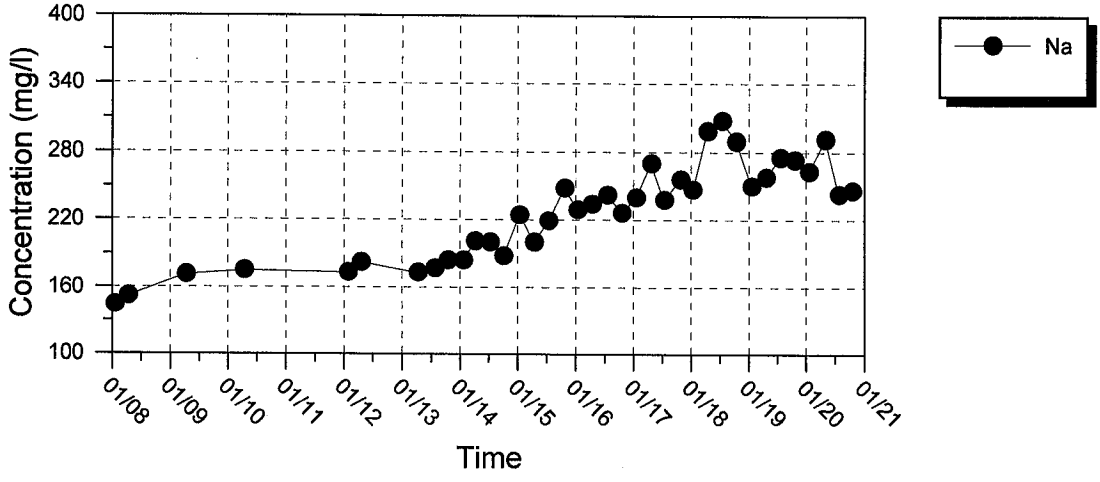

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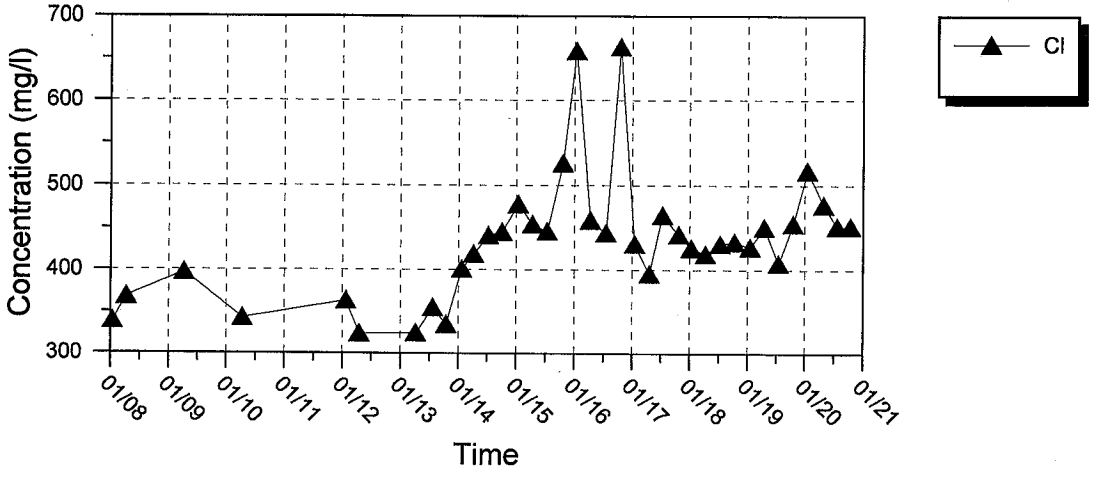

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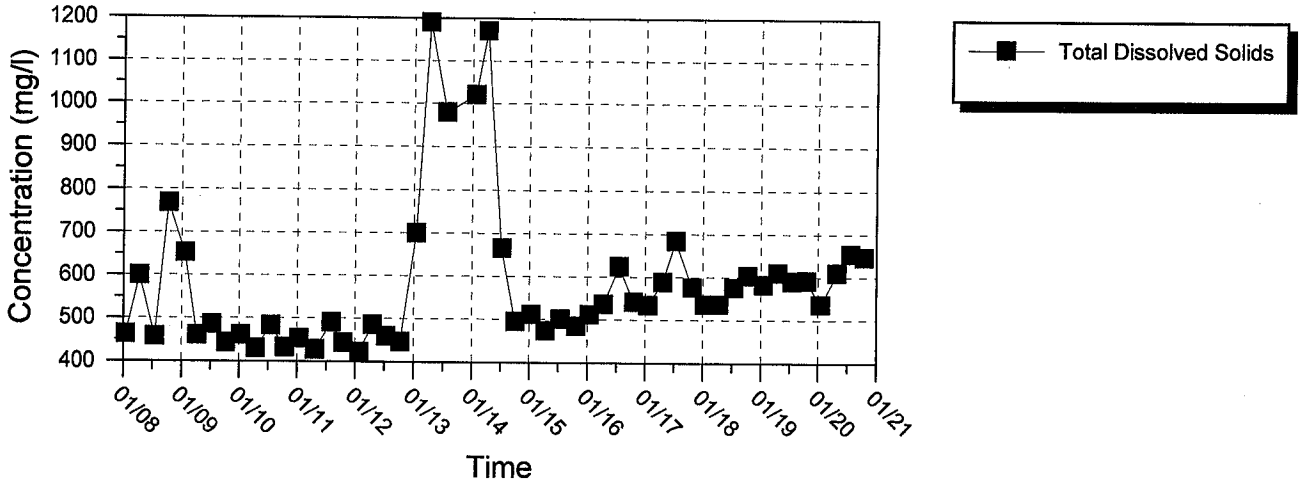

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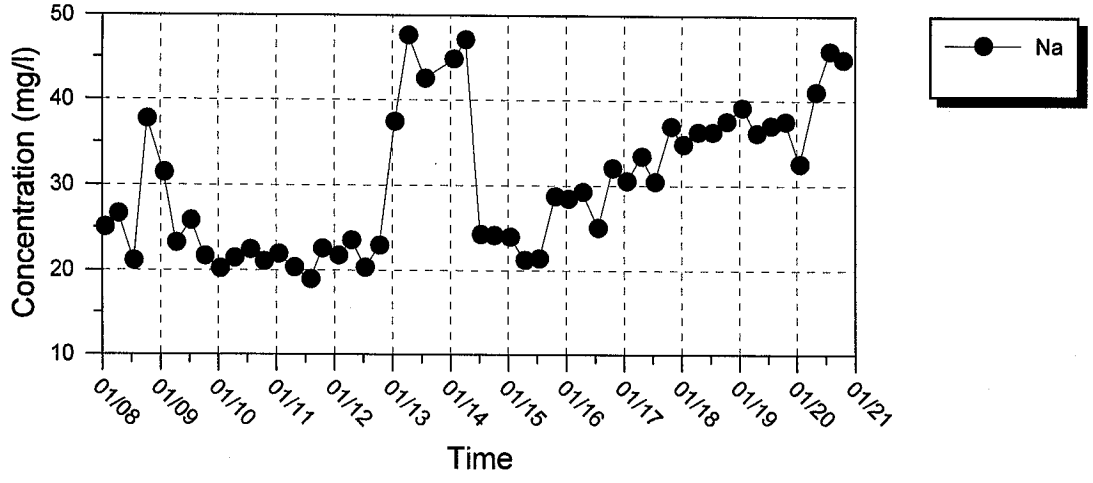

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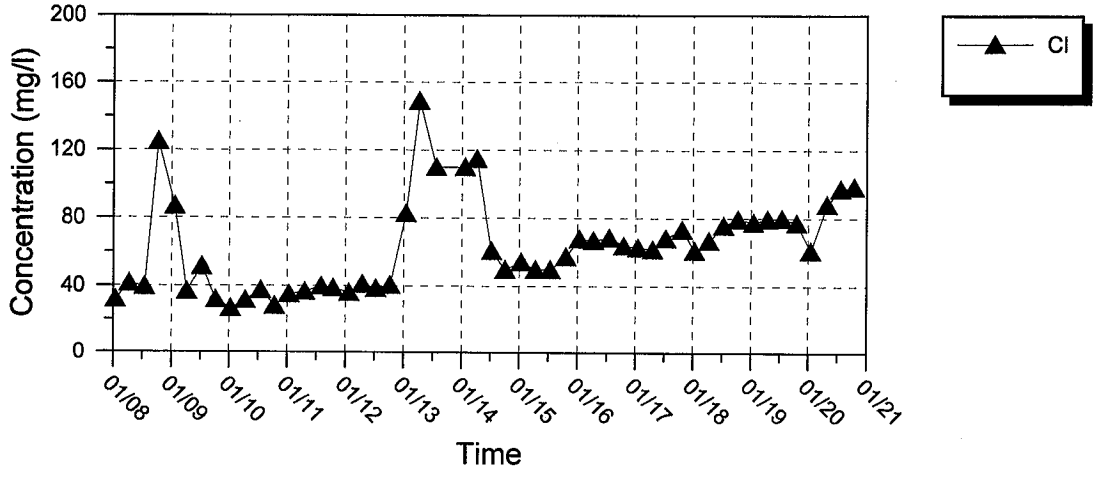

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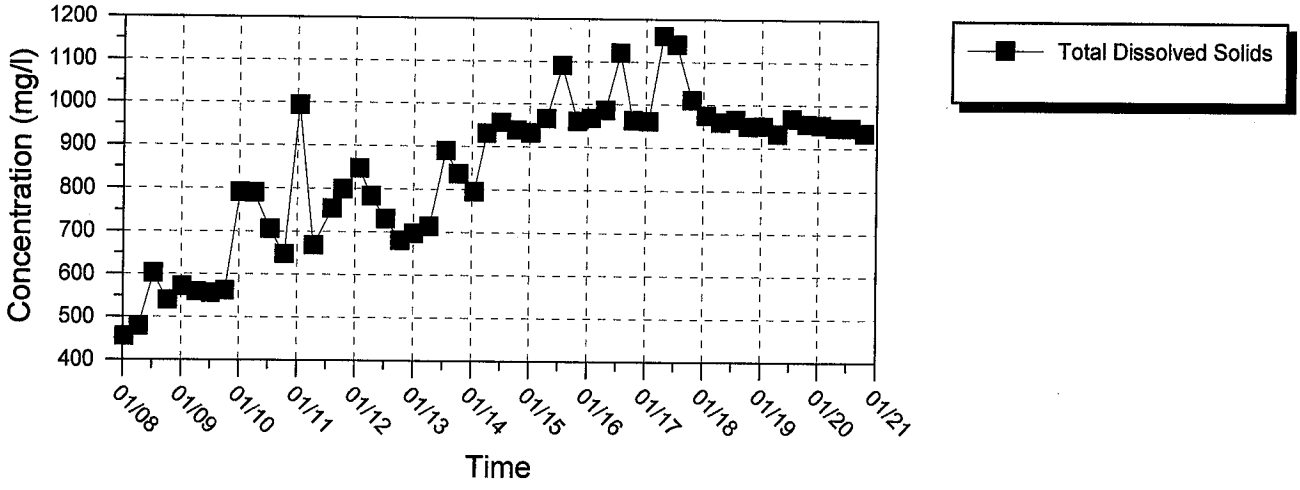

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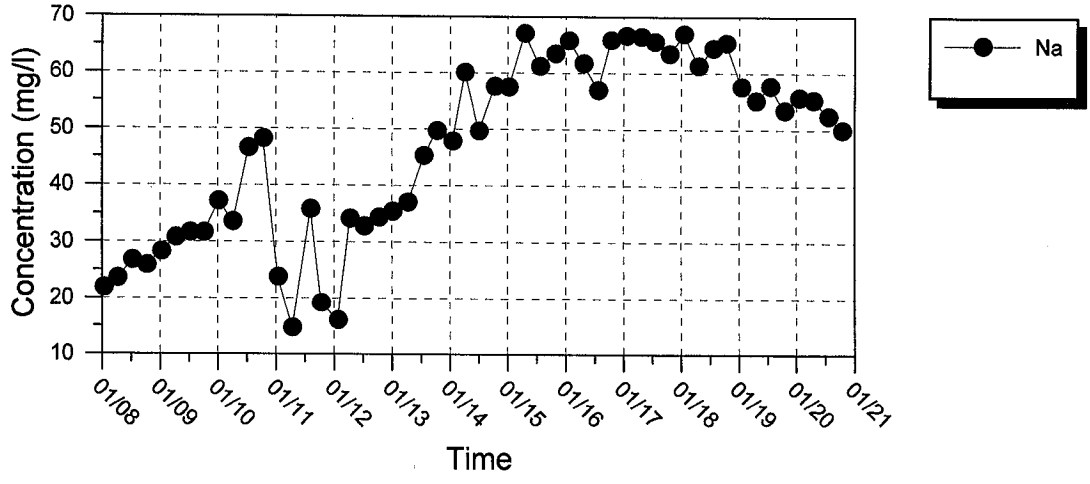

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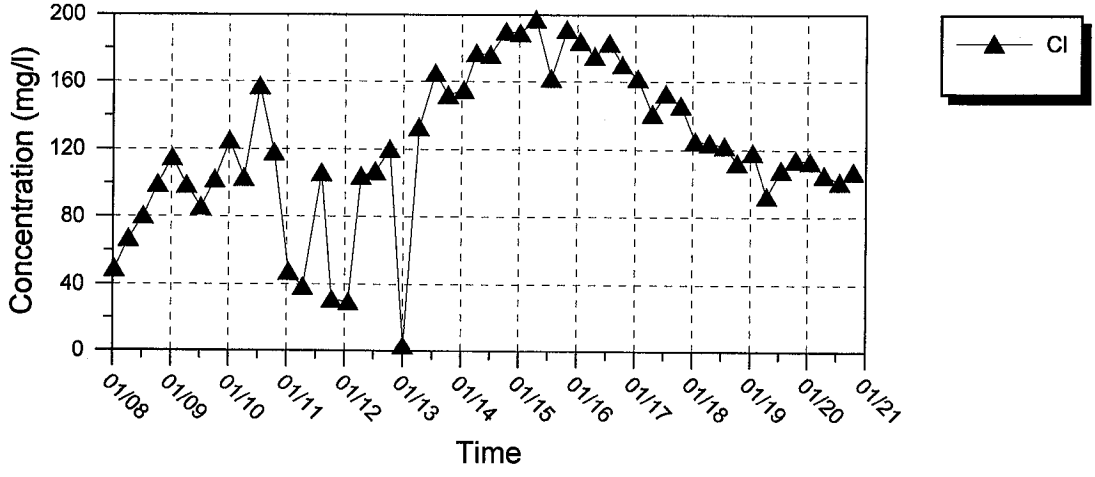

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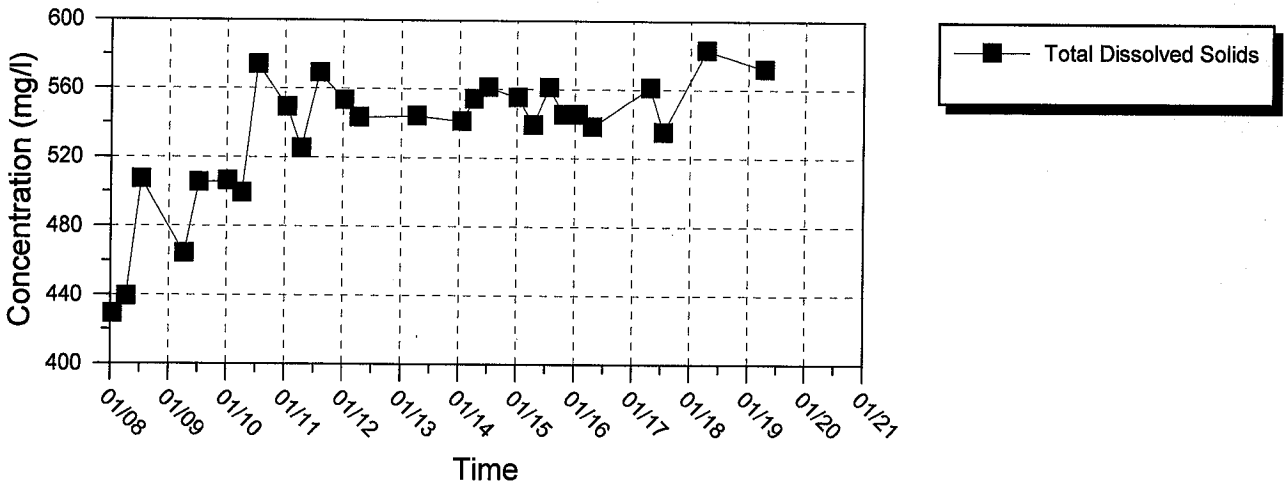

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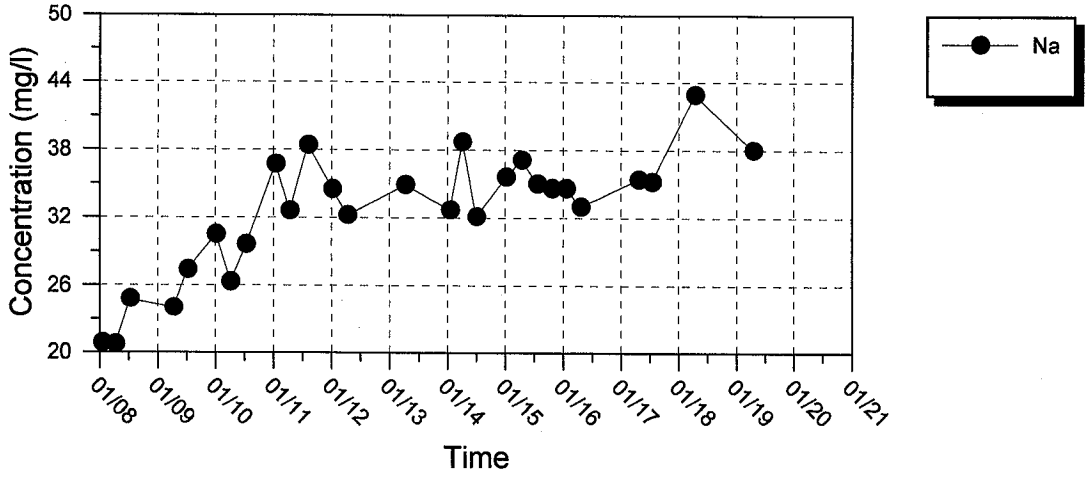

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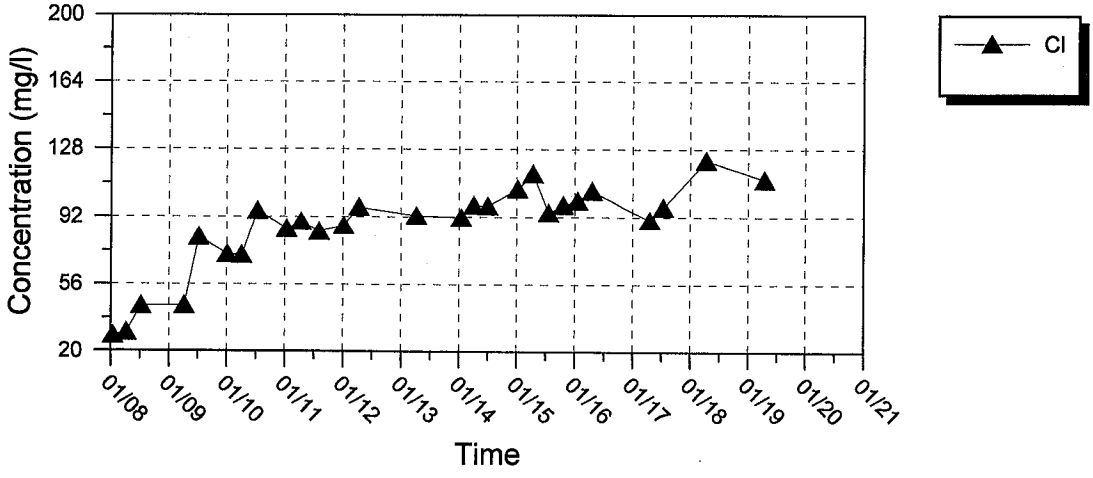

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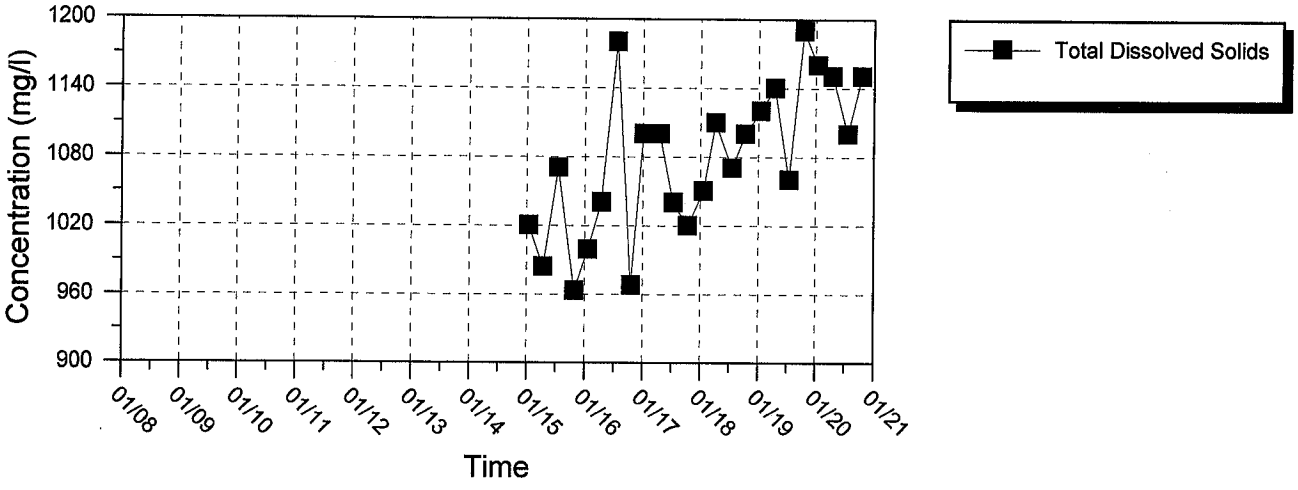

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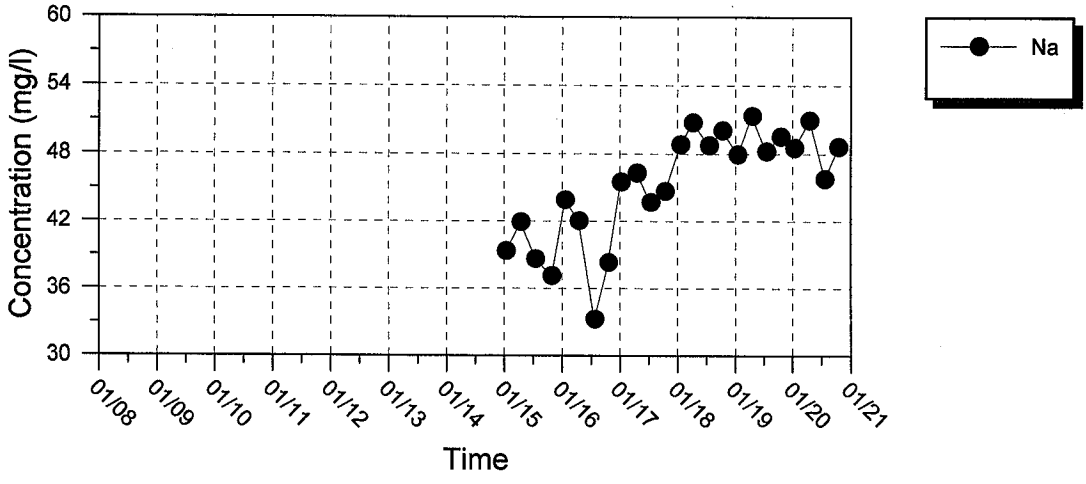

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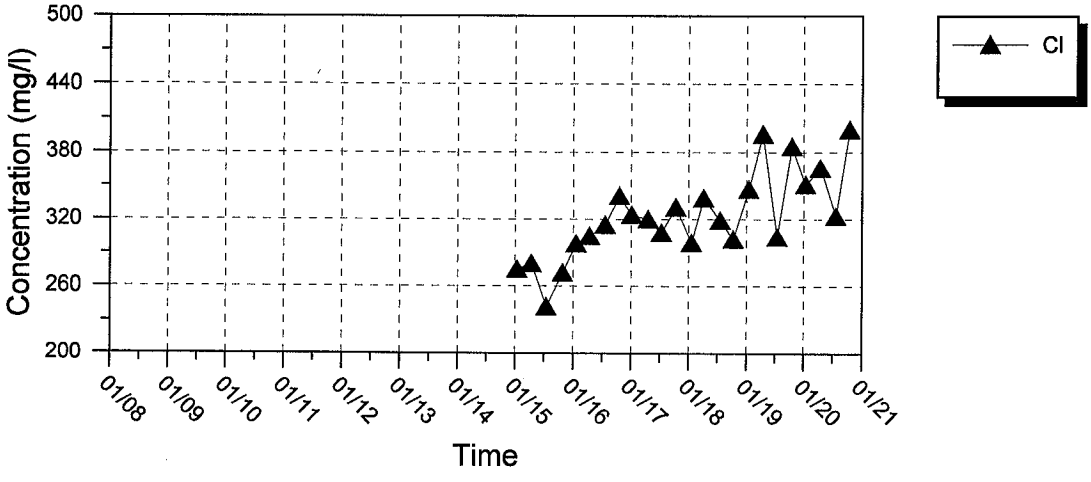

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	SITE: Seneca Meadows Solid Waste Mngmnt Fac.	EVENT: 2020 Annual Report
	CLIENT: Waste Connections, Inc.	DATE: 2008 - 2020 Data

10.0 RETENTION PONDS DISCHARGE EVENTS

Stormwater runoff from within the SMI Landfill, Southeast Landfill, Southeast Bumpout, and Western Expansion are diverted to 13 separate ponds associated with the landfill areas. Figure 10-1 details the location of the retention ponds and general stormwater flow direction for the site.

SMI LANDFILL

Surface water runoff from within the SMI Landfill footprint area is diverted to three east-side retention ponds and three west-side retention ponds. When the pond reaches capacity (approximately 474 ft MSL), the gate valve in the pond inlet structure is closed and stormwater is diverted to another empty retention pond. Once the pond is closed, the stormwater is sampled and analyzed by a certified laboratory. If all the analytical parameters are in compliance with the permitted discharge limits, SENECA MEADOWS prepares a request for NYSDEC approval to discharge the pond. Once authorization has been received, pond discharge activities are completed in accordance with the SENECA MEADOWS operating permit.

SOUTHEAST LANDFILL, SOUTHEAST BUMPOUT (SBO), AND WESTERN EXPANSION

The stormwater runoff from the Southeast Landfill (SELF), the SELF Bumpout (SBO), and the majority of the Western Expansion areas are managed through the use of collection ponds, pumping points, and a series of conveyance structures where it passes under Salcman Road, and into the South Pond System. The stormwater is received into South Pond 3 and is transferred to an empty pond as maximum capacity is reached (approximately 471 ft. msl). The collected stormwater is pumped into one of the other ponds that make up the South Pond system (i.e. South Ponds 1, 2 or 4). Once full, the ponds are allowed to settle for approximately two weeks. Following this settlement period, a sample is collected and analyzed by a certified laboratory. After analytical testing and confirmation that constituent concentrations are in compliance with the approved limits, Seneca Meadows submits a request for discharge approval to the NYSDEC.

When authorization to discharge has been received from NYSDEC, the ponds are discharged in accordance with SMI's Part 360 Operating Permit.

The stormwater run-off from northern portions of the western expansion (Stage 3/3A) is managed through a series of conveyance features into a temporary pond at the northeast corner of Stage 3. This water is then pumped into the Tantalo channel which eventually ends up in the South Pond system

POND DISCHARGE EVENT

During pond discharge events, SENECA MEADOWS' contracted laboratory conducts sampling and analysis of discharged stormwater and surface water. The discharge sampling point designations for the east, west, south, and temporary ponds are as follows for this reporting period:

- East Ponds (E-1, E-2, and E-3): Pump outlet, SW-022 (transitioned to Ponds E-5 and E-6 in November 2016)
- West Ponds (W-1, W-2, and W-3): Pump outlet and SW-005
- South Ponds: Pump outlet and SW-023
- Western Expansion: Pump outlet, SW-023 and/or SW-024

These samples are analyzed for pH, specific conductivity, and total suspended solids (TSS).

There was a total of 22 pond discharge events completed in 2020. Table 10-1 summarizes the discharge events and the estimated gallons discharged per event.

TABLE 10-1. STORMWATER RETENTION POND DISCHARGE SUMMARY

FIGURE 10-1. STORMWATER MANAGEMENT SYSTEM COMPONENTS

Table 10-1
Seneca Meadows, Inc.
Storm Water Retention Pond Discharge Summary

	Location	Start	End	Elapse Time (hrs.)	Starting Elevation	Ending Elevation	Estimated Gallons Discharged	Estimated Pumping Rate (gpm)
		Date/Time (hrs.)	Date/Time (hrs.)					
1	West Pond- 2	1/5/2020 8:30	1/7/2020 16:30	56.00	0	465	0	0.00
2	West Pond- 3	1/12/2020 13:00	1/14/2020 15:00	50.00	474	460	0	0.00
3	South Pond- 2	1/8/2020 15:00	1/20/2020 10:00	283.00	471	460	19,456,530	1145.85
4	East Pond-5	1/11/2020 13:00	1/23/2020 7:00	282.00	476	454	13,996,580	827.22
5	West Pond- 2	2/2/2020 9:30	2/4/2020 9:30	48.00	474	467	2,679,733	930.46
6	South Pond- 1	1/25/2020 9:00	2/5/2020 15:00	270.00	471	466	0	0.00
7	East Pond-6	2/17/2020 10:30	2/27/2020 9:30	239.00	476	465	13,996,580	976.05
8	West Pond- 3	2/24/2020 13:45	2/27/2020 10:30	68.75	474	460	3,267,736	792.18
9	South Pond- 2	2/27/2020 8:00	2/28/2020 10:30	26.50	REPAIRS			1217.94
		3/2/2020 8:15	3/12/2020 8:00	239.75	471	460	19,456,530	
10	West Pond- 2	3/16/2020 9:00	3/19/2020 14:00	77.00	474	465	2,679,733	580.03
11	West Pond- 3	3/31/2020 13:45	4/2/2020 7:30	41.75	474	460	3,267,736	1304.49
12	South Pond- 1	3/31/2020 12:30	4/9/2020 11:45	215.25	471	466	18,278,898	1415.32
13	West Pond- 2	8/24/2020 8:45	8/27/2020 9:30	72.75	474	465	2,679,733	613.91
14	East Pond-5	4/24/2020 14:30	5/8/2020 7:00	328.50	476	454	13,996,580	710.13
15	East Pond-6	5/15/2020 7:30	5/25/2020 7:30	240.00	476	465	13,996,580	971.98
16	West Pond- 2	5/25/2020 8:00	5/28/2020 7:15	71.25	474	465	2,679,733	626.84
17	South Pond- 2	5/22/2020 15:15	6/2/2020 7:15	256.00	471	460	19,456,530	1266.70
18	West Pond- 3	6/7/2020 8:00	6/8/2020 19:15	35.25	474	465	2,156,706	1019.72
19	East Pond-5	7/7/2020 8:45	7/17/2020 7:00	238.25	476	454	13,996,580	979.12
20	West Pond- 2	8/16/2020 19:00	8/19/2020 7:15	60.25	474	465	2,679,733	741.28
21	South Pond- 2	10/13/2020 15:15	10/22/2020 13:45	214.50	471	461	17,510,877	1360.60
22	West Pond- 2	11/29/2020 8:30	12/2/2020 9:00	72.50	474	465	2,679,733	616.03

PREPARED BY:
CORNERSTONE ENGINEERING AND GEOLOGY, PLLC

cornerstone PLLC

		DATE
DESIGN BY:		
DRAWN BY:	D.STENSHORN	JAN 2021
CHECKED BY:	T. BROWN	JAN 2021

Drawing Scale
0 300 600
Scale In Feet

PROJECT: SENECA MEADOWS LANDFILL

2020 ANNUAL REPORT

SENECA FALLS SENECA COUNTY NEW YORK

DRAWING TITLE:

STORMWATER MANAGEMENT SYSTEMS COMPONENTS

Fig. 10-1

4213087

Z:\PROJECTS\SWM\4213087 - 2020 ANNUAL REPORT_PROJECT DRAWINGS\2020 ANNUAL REPORT FIGURES\2020 SWM SYSMAP.DWG 01/19/2021 LAYOUT: SITE PLAN (11X17)

11.0 BLACK BROOK SAMPLING AND ANALYSIS

The annual review of Black Brook surface water and sediment analytical data has been prepared by KR Applin & Associates. KRA&A's report summarizes surface water and sediment monitoring activities for 2020, as required by SMI's 6 NYCRR Part 360 Operating Permit and is included in this section of the Report.

BLACK BROOK MONITORING REPORT

2020 ANNUAL REPORT

SENECA MEADOWS SOLID WASTE MANAGEMENT FACILITY

WASTE CONNECTIONS, INC.
Connect with the Future®

January 2021

KR Applin & Associates 8806 Route 256 Dansville, NY 14437 585.335.5998

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EXECUTIVE SUMMARY

The monitoring of Black Brook surface water and sediment quality was conducted quarterly at the Seneca Meadows Solid Waste Management Facility, Seneca Falls, New York, during 2020 in accordance with an approved Environmental Monitoring Plan (EMP) and Site Analytical Plan (SAP).

Monitoring was conducted in accordance with the Phase II procedures outlined in the EMP. Under the Phase II procedures, surface water and sediment samples were collected at one location upstream of the facility, at one location adjacent to the facility, and at two locations downstream of the facility.

Quarterly sampling was conducted during January, June, August, and November of 2020. The samples collected during the first, second, and fourth quarters were analyzed for a modified list of 6 NYCRR Part 360 routine chemical parameters. The third quarter samples were analyzed for a modified list of Part 360 baseline parameters. A grain size analysis was also performed on sediment samples collected each quarter.

Comparisons of the quarterly surface water results to trigger values computed from historical chemical data from upstream sample SW-017 showed exceedances of the triggers for several parameters including COD, calcium, magnesium, sodium, chloride, and sulfate mainly during the second, third, and fourth quarters. These were attributed to natural sources. Common leachate constituents such as ammonia, bromide, and heavy metals were below their respective trigger values.

Exceedances of the NYSDEC Class C surface water standards for TDS and iron occurred nearly each quarter in both the upstream and downstream samples. Manganese also exceeded its standard in each sample during the second quarter. The exceedances were attributed to naturally occurring concentrations.

For the sediment samples, several exceedances of the trigger values for a variety of parameters including COD, chloride, sulfate, TKN, lead, manganese, and others, occurred in both the upstream and downstream samples. COD exceeded the trigger value more frequently than other parameters. The third quarter analytical results for sample SS-018, which included results for the NYSDEC Part 360 baseline parameters, exhibited trigger exceedances for several parameters including various metals. The metals exceedances were attributed to an elevated organic matter content of the sample.

The sediment analytical results for each quarterly event were compared to the NYSDEC guidance values for screening contaminated sediment. None of the quarterly results exceeded the Class A guidance limits indicating little or no risk to aquatic life.

The results of the grain size analyses indicated that all the sediment samples except one consisted mostly of silt-size and finer sediment.

Evaluations of the 2020 quarterly monitoring results for the Black Brook surface water and sediment samples showed no consistent exceedances of trigger values, standards, or guidance values in the downstream samples that might otherwise indicate a potential facility derived impact.

No major modifications to the current monitoring program are recommended at this time.

1.0 INTRODUCTION

The environmental monitoring program for the Seneca Meadows Solid Waste Management Facility, Seneca Falls, New York, includes the monitoring of Black Brook, a small stream that flows past the western border of the facility. During early 2013, the stream was relocated to flow around the facility rather than traverse the facility. The relocation of the stream was completed as part of the planned expansion of the SMI facility.

As specified in the Environmental Monitoring Plan (EMP) for the facility, the monitoring of Black Brook requires the quarterly sampling and analysis of surface water and sediment collected at locations upstream and downstream of the facility. The samples are analyzed for specific chemical parameters listed in the EMP.

During 2020, the water and bottom sediment quality of Black Brook was monitored in accordance with the Phase II procedures specified in the EMP, which require the sampling of surface water and sediment at one location upstream of the facility, one location adjacent to the facility, and two locations downstream of the facility. The analytical requirements remained the same as those required during the previous Phase I sampling program.

The sampling and analytical results obtained for each quarterly monitoring event of 2020 are provided in quarterly monitoring reports, which are available for review at Seneca Meadows, Inc., Seneca Falls, New York, and the Region 8 office of the New York State Department of Environmental Conservation (NYSDEC), Avon, New York. The quarterly reports provide all analytical data generated for each monitoring event and an evaluation of the results, including the identification of potential impacts to Black Brook by facility-derived chemical components. This annual report summarizes the major findings presented in the 2020 quarterly reports.

2.0 SAMPLING AND ANALYSIS

2.1 COMPLIANCE

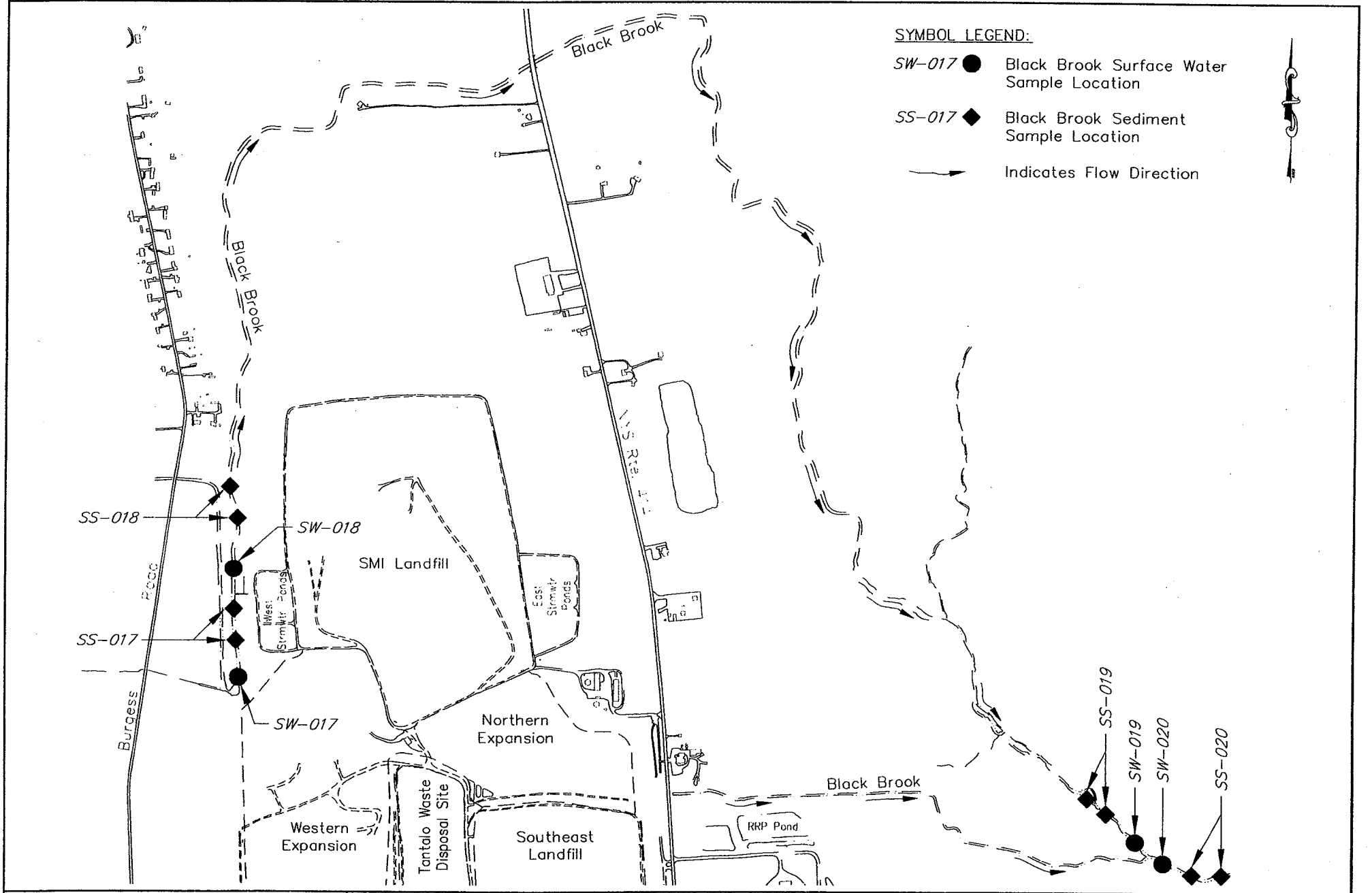
The quarterly monitoring of Black Brook surface water and sediment was conducted during 2020 in accordance with the procedures described in the EMP (December 2006; revised February 2007) and Site Analytical Plan (SAP; November 2006) for the Seneca Meadows Solid Waste Management Facility.

Monitoring was conducted in accordance with the Phase II procedures provided in Section 3.4 of the EMP. Sampling of the surface water and sediments was conducted at the four locations shown in Figure 2-1. Sampling site SW/SS-017 is upstream of the facility. Sampling site SW/SS-018 is adjacent to the facility and sites SW/SS-019 and SW/SS-020 are downstream of the facility.

In accordance with Section 3.4 of the EMP, the first and second quarter sampling events of 2020 were conducted when no discharge of the on-site stormwater retention basins was occurring. The third and fourth quarter sampling events were conducted during discharge of the west stormwater retention basin (see Fig. 2-1).

The quarterly sampling events are normally conducted during January, April, July, and October of each year. However, during 2020, the second, third, and fourth quarter events were delayed until June, August, and November. The second and third quarter events were delayed due to low stream flow. Dry conditions continued into the third quarter and prevented the collection of samples at two locations furthest downstream of the facility (SW/SS-019 and SW/SS-020). The fourth quarter event was delayed because access was temporarily denied (during deer hunting season) to two sampling points furthest downstream of the facility, which are located on private property.

S:\EASTERN REGION\6270 SENECA LANDFILL\ENGINEERING\L03\P67\GROUNDWATER-PORE WATER\2018 GRNDWTR DIAGRAMS\OVERALL SITE SPCC-SWPP-FIG 2-1.DWG 02/13/2019 LAYOUT: FIGURE 1 (8.5X11)



SENECA MEADOWS LANDFILL
1786 SALCMAN ROAD
WATERLOO, NEW YORK 13165

BLACK BROOK SAMPLING LOCATIONS AT THE SMI SOLID WASTE MANAGEMENT FACILITY

0 400 800 1200
Scale In Feet

FIGURE
2-1

The field sampling and laboratory analyses were performed by ALS Environmental, Rochester, NY, in accordance with the procedures provided in the EMP and SAP. The laboratory was approved to perform the analyses under the New York State Department of Health's (NYSDOH's) Environmental Laboratory Approval Program (ELAP).

The samples collected during the first, second, and fourth quarters were analyzed for a modified list of Part 360 routine chemical parameters provided in the EMP. The analytical results were validated internally by the laboratory. The third quarter samples were analyzed for a modified list of Part 360 baseline parameters. The third quarter results were validated by an independent data validator and are provided in the report entitled "Data Validation Report, 3rd Quarter 2020, Seneca Meadows Solid Waste Management Facility" dated September 2020.

2.2 COMPLETENESS

Completeness of the quarterly monitoring is indicated by 1) the success in obtaining all samples scheduled for collection and 2) the total amount of usable data obtained during each quarterly event.

Complete samples were collected from each designated sampling point during the first, second, and fourth quarter sampling events. During the third quarter event, samples could not be collected from sampling points SW/SS-019 and SW/SS-020 due to dry conditions.

As specified in the EMP, the samples collected during the first, second, and fourth quarters were analyzed for a modified list of Part 360 routine chemical parameters and the third quarter samples were analyzed for a modified list of Part 360 baseline parameters.

Based on the results of validation performed by the laboratory and an independent validator, all analytical results were considered usable for the purpose of evaluating Black Brook water and sediment quality.

2.3 DATA EVALUATION METHODS

2.3.1 Surface Water

Potential impacts to Black Brook surface water by facility-derived chemical components were determined in part by comparing the analytical results of samples taken adjacent to and downstream of the facility (SW-018, SW-019, and SW-020) to trigger values for each chemical parameter calculated using historical data for upstream sample SW-017. The methods used to calculate the trigger values are discussed in Section 3.7.1 of the EMP.

The analytical results for each quarterly monitoring event were also compared to NYSDEC Class C surface water standards (NYSDEC, 1993) listed in Section 3.0 of the EMP. The standards are provided in Table 2-1 of this report.

2.3.2 Stream Sediment

Potential impacts to stream sediment quality were evaluated by comparing the results for samples taken adjacent to and downstream of the landfill (SS-018, SS-019, and SS-020) to trigger values for each chemical parameter calculated using historical data for upstream sample SS-017 (see EMP, Sect. 3.7.1).

The sediment results were also compared to the guidance values for screening and assessing contaminated sediment (NYSDEC, 2014) shown in Table 2-1 of this report.

Table 2-1

Standards and Guidance Values for Surface Waters and Sediments

	Surface Water		Sediment (1)			
Parameter	**Units**	**NYSDEC Class C Std**	**Units**	**Class A**	**Class B**	**Class C**
pH	pH units	6.5-8.5				
DO	mg/L	>5.0				
Turbidity	NTU	(2)				
TKN	mg/L	(3)				
TDS	mg/L	500				
Phenols	mg/L	0.005				
Aluminum	mg/L	0.100				
Arsenic	mg/L	0.34	mg/Kg	<10	10 - 33	> 33
Beryllium	mg/L	1.1				
Boron	mg/L	10				
Cadmium	mg/L	0.0093	mg/Kg	<1	1 - 5	>5
Chromium	mg/L	1.0868	mg/Kg	<43	43 - 110	>110
Chromium (hex)	mg/L	0.016	mg/Kg	<32	32 - 150	>150
Cobalt	mg/L	0.005				
Copper	mg/L	0.0282				
Cyanide	mg/L	0.022				
Iron	mg/L	0.3				
Lead	mg/L	0.2265	mg/Kg	<36	36 - 130	>130
Mercury	mg/L	2.6xE-6	mg/Kg	<0.2	0.2 - 1	>1
Nickel	mg/L	0.9123	mg/Kg	<23	23 - 49	>49
Selenium	mg/L	0.0046				
Silver	mg/L	0.0001	mg/Kg	<1	1 - 2.2	>2.2
Thallium	mg/L	0.008				
Vanadium	mg/L	0.014				
Zinc	mg/L	0.2286	mg/Kg	<120	120 - 460	>460

(1) From "Screening and Assessment of Contaminated Sediment", NYSDEC, June 2014

Class A Low risk
Class B Moderately contaminated
Class C Highly contaminated

(2) Turbidity - no increase that will cause a substantial visible contrast to natural conditions

(3) Nitrogen - none in amounts that will result in growths of algae, weeds, and slime that will impair the waters for their best usages

3.0 SUMMARY OF RESULTS

3.1 SURFACE WATER

3.1.1 Exceedances of Trigger Values

The trigger value exceedances found for various water quality parameters during each of the four quarterly monitoring events are summarized in Table 3-1. Important observations to be made from the table include the following:

- The parameters exhibiting trigger exceedances in the downstream samples also exceeded the trigger values in upstream sample SW-017. This indicates that the elevated parameter concentrations have a source upstream of the facility.

- Most of the parameters exhibiting exceedances are major water quality constituents (calcium, magnesium, sodium, chloride, and sulfate) that can occur from natural rock-water interactions. Common leachate chemical constituents such as ammonia, bromide, and heavy metals were below their respective trigger values.

- As compared to upstream sample SW-017, fewer trigger exceedances were found in the downstream samples, which indicates the parameter concentrations are diluted along the flow path of the stream. A downstream increase in parameter concentrations might otherwise indicate an impact by the facility.

- Overall, more exceedances occurred during the second quarter (June) and fourth quarter (November), which suggests a possible seasonal influence on the water quality.

Table 3-1

Summary of Trigger Value Exceedances
Surface Water Samples

	Upstream	Downstream		
	SW-017	**SW-018**	**SW-019**	**SW-020**
1st Qtr 2020	COD	COD	COD	COD
2nd Qtr 2020	Turbidity		Turbidity	Turbidity
	Conductivity	Conductivity		
	BOD	BOD		
	Hardness	Hardness		
	Calcium	Calcium		
	Magnesium	Magnesium	Magnesium	Magnesium
			Iron	Iron
	Sulfate	Sulfate	Sulfate	
	TDS	TDS		
		TSS	TSS	TSS
3rd Qtr 2020	Conductivity	Conductivity	no sample	no sample
	Hardness			
	Calcium			
	Magnesium	Magnesium		
	TDS	TDS		
4th Qtr 2020	Conductivity		Conductivity	Conductivity
		BOD	BOD	
	Hardness			
	Calcium			
	Magnesium	Magnesium		Magnesium
	Sodium		Sodium	Sodium
	Chloride		Chloride	Chloride
	Sulfate	Sulfate	Sulfate	Sulfate
	TDS			

3.1.2 Exceedances of NYSDEC Class C Standards

The analytical results from each quarterly sampling event that exceeded the NYSDEC Class C surface water standards are summarized in Table 3-2.

As shown in the table, the standard exceedances were limited to total dissolved solids (TDS), iron, and manganese. Because the exceedances occurred in nearly all the samples, both upstream and downstream of the facility, they are attributed to natural water quality.

3.2 SEDIMENT

3.2.1 Exceedances of Trigger Values

The parameters for which trigger value exceedances were identified during the four quarters of 2020 monitoring are summarized in Table 3-3. Important observations to be made from the table include the following:

- Chemical oxygen demand (COD) exceeded the trigger value more frequently than other parameters with exceedances occurring in both the upstream and downstream samples.

- Trigger exceedances were identified during the third quarter for a variety of parameters, including bromide, chloride, total phenolics, and several metals, in downstream sample SS-018. (The list of exceedances is longer, in part, because more parameters were included in the Part 360 baseline analysis). The exceedances were attributed to low stream flow (lack of dilution) during drought-like conditions and to an elevated total organic carbon (TOC) content, which may concentrate metals by adsorption (e.g., see Horowitz, 1985). Alternatively, the large number of exceedances may signal a facility-derived impact. However, no samples were taken further downstream (due to dry conditions) to confirm that possibility.

- Lead exceeded the trigger value in one or more of the downstream samples during the first and fourth quarters.

Table 3-2

Exceedances of NYSDEC Class C Surface Water Standards

	Upstream	Downstream		
	SW-017	**SW-018**	**SW-019**	**SW-020**
1st Qtr 2020	TDS	TDS	TDS	TDS
	Iron	Iron	Iron	Iron
2nd Qtr 2020	TDS	TDS	TDS	TDS
	Iron	Iron	Iron	Iron
	Manganese	Manganese	Manganese	Manganese
3rd Qtr 2020	TDS	TDS	no	no
	Iron		sample	sample
4th Qtr 2020	TDS	TDS	TDS	TDS
	Iron		Iron	Iron

NYSDEC Class C Standards:
TDS = 500 mg/L; Iron and manganese = 0.300 mg/L

Table 3-3

Summary of Trigger Value Exceedances
Sediment Samples

	Upstream	Downstream		
	SS-017	**SS-018**	**SS-019**	**SS-020**
1st Qtr 2020	COD	COD		COD
		Chloride	Chloride	
				TKN
			Lead	
			Manganese	
2nd Qtr 2020	COD	COD	COD	COD
		TOC		
	Chloride	Chloride	Chloride	
		TKN		
	Sulfate	Sulfate		
3rd Qtr 2020		COD	no sample	no sample
		TOC		
		TKN		
		Bromide		
		Chloride		
		Cyanide		
		Nitrate		
		Sulfate		
		Phenolics		
		Aluminum		
		Barium		
		Chromium		
		Manganese		
		Vanadium		
		Zinc		
4th Qtr 2020	COD	COD	COD	COD
		TKN		
				Iron
		Lead	Lead	Lead
				Manganese
				Potassium

The exceedances were slight and were not accompanied by exceedances for other possible contaminants. Thus, the exceedances were attributed to natural sources.

- Overall, there were few exceedances that consistently occurred over all four quarters that would indicate a facility-derived impact.

3.2.2 Exceedances of NYSDEC Sediment Guidance Limits

The sediment analytical results for each quarterly event were compared to the NYSDEC guidance values for screening contaminated sediment (NYSDEC, 2014), which are shown in Table 2-1. All the quarterly results were less than the Class A guidance limits indicating little or no risk to aquatic life.

3.3 GRAIN SIZE ANALYSES

The sediment samples were collected from depositional environments within the streambed that correspond to the low velocity zones of stream flow. The samples were collected from the upper portion of the sediment column in an attempt to obtain the fine-grain (silt-size or finer) fraction of sediment, which is most likely to contain the highest concentrations of organic matter and metals.

Grain size analyses were performed on a portion of the sediment sample collected at each sampling station to determine the particle size distribution of each sample. The percentage of the silt-size or finer fraction of the sediment samples, as determined by the fraction of sample passing the #200 sieve, was used as a measure of the success in collecting fine-grained samples.

The percentages of the silt-size and finer fraction of sediment in each sample collected during the 2020 monitoring events are summarized in table below. As indicated in the table, all the samples except the fourth quarter sample of SS-019 consisted mainly of silt-size and finer sediment.

Percent Silt-Size and Finer Sediment

Sample ID	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
SS-017	91.1	96.1	88.2	76.4
SS-018	93.1	85.8	80.7	76.1
SS-019	78.4	85.2	-	42.8
SS-020	79.1	69.1	-	85.7

4.0 CONCLUSIONS

The monitoring of Black Brook surface water and sediment was conducted during 2020 in compliance with the Environmental Monitoring Plan (EMP) and the Sampling and Analysis Plan (SAP) for the Seneca Meadows Solid Waste Management Facility. Quarterly sampling was conducted during January, June, August, and November. Complete surface water and sediment samples were collected during each quarterly monitoring event except for the third quarter when two locations furthest downstream of the facility were not sampled due to dry conditions.

The first, second, and fourth quarter samples were analyzed for a modified list of 6 NYCRR Part 360 routine chemical parameters. The third quarter samples were analyzed for a modified list of Part 360 baseline parameters. A grain size analysis was also performed on the sediment samples collected each quarter.

Potential impacts to Black Brook by facility-derived chemical components were evaluated by comparing the analytical results for samples taken adjacent to and downstream of the facility to trigger values calculated using historical data for samples taken upstream of the facility. The results for the surface water samples were also compared to the NYSDEC Class C surface water standards and the sediment results were compared to NYSDEC guidance values for screening contaminated sediment.

For the surface water samples, exceedances of the water quality trigger values were identified each quarter in each of the upstream and downstream samples. A greater number of exceedances occurred during the second, third, and fourth quarters and consisted mainly of major water quality parameters such as calcium, magnesium, sodium, chloride, and sulfate. Because most of the exceedances also occurred in upstream sample SW-017, the exceedances were attributed to natural sources.

Exceedances of the NYSDEC Class C surface water standards were found each quarter for a few analytes, mainly iron, manganese, and TDS, in the upstream and downstream samples. The exceedances were attributed to natural sources.

For the sediment samples, trigger exceedances were identified for a few parameters, including COD, TKN, chloride, sulfate, lead, and manganese, each quarter in both the upstream and downstream samples. COD exceeded the trigger value more frequently than other parameters. During the third quarter, when the samples were analyzed for the NYSDEC Part 360 baseline list of parameters, several more exceedances, including exceedances of the triggers for bromide, cyanide, total phenolics, and a few metals, were found in downstream sample SS-018. The exceedances for the metals were attributed to the elevated organic matter content of the sample. None of the quarterly results exceeded the NYSDEC Class A guidance limits for screening contaminated sediment indicating little or no risk to aquatic life.

The results of the grain size analyses indicated that all sediment samples except the fourth quarter sample from downstream location SS-019 consisted mostly of silt-size and finer sediment.

Evaluations of the 2020 quarterly monitoring results for the Black Brook surface water and sediment samples showed no indication of potential impacts by the landfill facility. No major modifications to the current monitoring program are recommended at this time.

5.0 REFERENCES

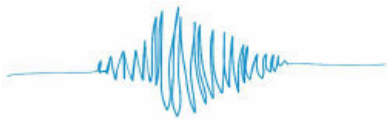
Horowitz, A. J., 1985, A Primer on Trace Metal-Sediment Chemistry; U.S. Geological Survey Water Supply Paper 84-2277, 61 pp.

New York State Department of Environmental Conservation, 1993, Ambient Water Quality and Guidance Values: Division of Water Technical and Operational Guidance Series (1.1.1), 89 pp.

New York State Department of Environmental Conservation, 2014, Screening and Assessment of Contaminated Sediment: Division of Fish, Wildlife and Marine Resources, Bureau of Habitat.

12.0 NOISE SURVEY

In accordance with the requirements of SMI's current operating permit and the Environmental Monitoring Plan, noise monitoring was conducted along the boundaries of the facility property lines (in the direction of residential use properties) during July 2020. This noise monitoring/reporting was conducted by Aurora Acoustical Consultants, Inc. of East Aurora, New York. The report, entitled "2020 Annual Noise Survey" dated February 5, 2021, is included in this section.



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2020
ANNUAL NOISE SURVEY

FOR

SENECA MEADOWS, INC.
SANITARY LANDFILL
WATERLOO, NEW YORK

VOLUME I

Prepared for
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February 5, 2021

AURORA ACOUSTICAL CONSULTANTS Inc.

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AURORA ACOUSTICAL CONSULTANTS Inc.

2020 ANNUAL NOISE SURVEY
FOR SENECA MEADOWS, INC. LANDFILL
WATERLOO, NEW YORK

1.0 Introduction

Sound level surveys were performed to identify sources of sound and characterize levels of environmental noise representative of operations for the year 2020 of the Seneca Meadows, Inc. (SMI) landfill facility received along boundaries with properties authorized for residential use, in fulfillment of requirements of 6 NYCRR Part 360 Section 19 of New York State. Noise level identification requirements are described in the Seneca Meadows, Inc. Operations, Maintenance, and Monitoring Plan, and the Environmental Monitoring Plan (Appendix D & E of the Engineering Report dated December 2006, revised February 2007) and the New York State Department of Environmental Conservation 6 NYCRR Part 360 landfill facility permit (NYSDEC Permit 8-453200023/000001). The Seneca Meadows, Inc. Engineering Report further contains information on site layout and operational factors required to control noise from landfill operations, maintenance activities, and construction operations at the Southeast Landfill (SELF), the Northern Expansion landfill (NEX, Stages 7-8), and the Western Expansion landfill (WEX, Stages 3-6). The documents additionally describe noise mitigations that are currently in effect. The accepted mitigations include limiting specified operations to daytime hours, use of regular maintenance practices and proper silencers, adherence to minimum specified property line setback distances, and provision of shielding and enclosures around identified noise sources.

Sound levels received along the Seneca Meadows landfill boundaries were identified by surveys at representative boundary locations during the week of July 6 to July 10, 2020. The monitored sound levels are compared in this report to the sound level criteria contained in the New York State Title 6 NYCRR Part 360 Regulations effective November 4, 2017. The Part 360 Regulations specify maximum sound levels from landfill equipment or operations received at landfill boundaries adjoining properties that are zoned or otherwise authorized for residential purposes. The Regulations specify sound level limits for daytime and nighttime periods for rural, suburban, and urban community characters. The sound level limits are defined in terms of the "equivalent steady-state sound level" metric, designated L_{eq}, which is the integrated average value of the time-varying sound levels. The L_{eq} sound level metric that describes the sound level over a one-hour time period is designated $L_{eq\text{-}1\ hr}$. The one-hour sound level average metric is referenced by the Part 360 Regulations and is used in this assessment.

The sound monitoring characterized landfill operations during the period from the morning of Monday July 6 to the evening of Friday July 10, 2020, which coincided with the annual peak period of landfill waste placement operations, site maintenance activities, and landfill cell construction. The sound monitoring was performed at ten representative receptor locations on the boundaries of the landfill adjoining properties that are currently zoned or authorized for residential use in the Town of Waterloo and Town of Seneca Falls. The survey locations were chosen to represent existing and former residential-use properties, agricultural parcels, and undeveloped properties. The survey locations for the year 2020 coincide with locations used in previous annual sound surveys to allow comparisons of the measured sound levels.

Sound level monitoring was performed using automatic noise level loggers that were programmed to continuously record the average sound levels during the survey period and record the data by consecutive fifteen-minute time periods, designated $L_{eq\text{-}15\ min}$. The fifteen-minute average levels were processed by logarithmic summation into one-hour averages ($L_{eq\text{-}1\ hr}$) for comparison to the one-hour average sound level limits contained in the 6 NYCRR Part 360 Regulations. Also recorded during the noise survey period were the minimum and maximum sound levels for each sampling period ($L_{min,}$ L_{max}) to characterize the range of noise levels.

The levels of facility noise and the sources of sound were further identified and characterized at each logging location by means of short-term sampling measurements obtained with a portable sound level analyzer. The sampling was performed at each logging location during three time periods on July 29 on the starting day of the monitoring period, and three times at each location on August 31 on the last day of the monitoring period. The L_{eq} average sound levels from each sampling measurement are presented in the report as additional means to evaluate facility noise acceptability in comparison to the 6 NYCRR Part 360 $L_{eq\text{-}1\ hr}$ sound level limits. The sound levels were measured over periods of ten to twenty minutes as appropriate to characterize steady average levels representative of one-hour periods, in accord with the Part 360 Regulations. The short-term noise samples were measured using one-second averaging periods ($L_{eq\text{-}1\ sec}$), which allowed detailed characterizations of contributing environmental noise peaks. The prominent sources of sound observed that contributed to each sampling measurement were aurally and visually identified and recorded. The sampling surveys were performed in two daytime periods during normal hours of waste acceptance operations to identify landfill equipment sources and ambient sources, and during afternoon and evening hours at the end of normal waste acceptance operations as means to evaluate the contributing background sources.

The hourly-average sound levels ($L_{eq\text{-}1\ hr}$) obtained by continuous logging and by sampling surveys were compared to the sound level limits specified in the Part 360 Regulations for a *suburban* community

character to evaluate the acceptability of the received facility noise levels. The suburban community designation appropriately represents the community around the facility based on the density and character of the residential community and the extent of commercial and industrial development adjoining the facility, and the class and volume of traffic on adjoining roadways. Commercial properties that adjoin the facility include the Wal-Mart Super Center at the intersection of Route 414 and North Road, the Holiday Inn hotel on Route 414 south of the landfill, and the Hampton Inn commercial hotel on Balsey Road at the intersection with Route 414. Other small- to medium-sized businesses located on Route 414 east and south of the landfill include a contracting company, bottle and packaging manufacturing facilities, a welding shop, banks, and an automobile parts store. The Tarjac finishing facility and a self-storage facility are located at the intersection of Salcman Road. Additional businesses located on Route 414 north of the landfill facility include automobile sales and service facilities and commercial graphic design offices. Industrial facilities located east and north of the SMI landfill include the Seneca Energy, Inc. (SEI) landfill gas-to-energy plant, which is located in the Seneca Meadows Renewable Resource Park (RRP), and the Mobil Oil Pipeline facility on the east side of State Route 414, both opposite the original SMI landfill. The Waterloo Central School District bus garage and maintenance facility is located on North Road adjacent to the south boundary of the landfill. North Seneca Ambulance, Inc. is located at the intersection of North and Burgess Roads.

The noise assessments characterized sound levels produced by normal daily landfill operations near the western side of Stage 6 and on the western slop of Stages 7-8. Operations at Stage 6 consisted of waste acceptance from tractor trailers and municipal trucks, with unloading of trailers using two tippers, and placement of waste using one or two compactors and two or three bulldozers. Truck traffic leading to and from the Stage 6 landfill area traveled along site access roads on the western side of the SELF berm. Operations at Stages 7-8 consisted of waste acceptance from tractor trailers, unloading using one tipper, and placement of waste by two compactors and a bulldozer. Truck traffic leading to the Stage 7-8 fill area drove up the SELF berm from the south end, traveled along the top of the SELF berm, and exited on the access road along the west side of the SELF berm.

Operations at the tire recycling facility include tire acceptance and sorting of tires with a claw excavator and a front end loader.

Construction activities ongoing at the bottom of the Stage 5 area included placement of soils on top of the installed geotextile liner with articulated trucks and one or two bulldozers. Construction activities on the neighboring overfill slope at the southeast corner of the SMI landfill consisted of excavation of soils with two excavators, and placement of soils and compacting with two or three bulldozers and two rollers.

Construction adjacent to the Stages 7-8 landfill waste placement area consisted of excavation with an excavator and soil loading onto articulated trucks. Construction on the west side of the WEX berm consisted of soil trenching, drilling, and placement of gas collection lines with an excavator, soil drill, bulldozer, and articulated trucks. The soil trucks commonly operated on the access road on the east side of the WEX berm, with a number of trucks observed using the access road on the west side of the WEX berm.

Soil materials used for liner construction and daily cover operations were being transported from the materials storage area located on the south side of Salcman Road by articulated trucks. Some materials were being received and deposited at the storage area by ten-wheel dump trucks. Soils were being loaded onto articulated trucks with one or two excavators. Deposited soils at the storage area were being maintained with one or two front end loaders.

Observed daily maintenance operations included removal and placement of cover soil with articulated trucks, excavators, bulldozers, and compactors. The soil transport trucks largely employed the site access road on the east side of the WEX berm. Other maintenance activities included watering of site access roads, road sweeping along the site entrance roads and along the shoulders of State Route 414, and operation of odor neutralizing systems. An odor neutralizing system is installed in an enclosure at the southwest corner of the WEX berm, and another system is locat4ed in a shed near the north end of the south retention pond. One or two truck-mounted systems were operational at the west side of the Stage 6 area, and alternately one truck was operated on top of the SELF berm. Water for the road watering operations was being drawn from the retention pond on the south side of Salcman Road and from the retention pond to the west of the original SMI landfill berm. A landfill gas flare system was in operation at the base of the east side of the WEX berm.

Figure 1 describes the zoning designations of the current property holdings of Seneca Meadows Inc. and the adjoining properties for the Towns of Seneca Falls and Waterloo. The zoning districts surrounding the boundaries of the refuse disposal properties include residential, agricultural, commercial, and industrial properties. Survey locations were placed along the facility boundaries adjacent to properties zoned or authorized for residential use. The survey locations are identified on the property holdings plan of Figure 2.

Noise monitoring was performed at locations on the eastern boundary of the landfill along State Route 414. The receptor locations adjoin properties in the Highway Commercial zoning classification in the Town of Seneca Falls. Survey Locations 1 and 2 represent former residential-use properties on the east side of the Route 414 highway adjacent to the SELF and NEX berms. Survey Locations 3 and 4

represent existing and former residential-use properties on the west side of Route 414, and existing residential-use properties and undeveloped residentially-authorized properties on the east side of Route 414 adjacent to the original SMI landfill.

Survey Location 1 is located on the eastern boundary of the landfill adjacent to the SELF landfill near the intersection of the former Salcman Road entrance. The location represents residentially-authorized properties along the east side of the highway contained in Industrial and Highway Commercial zoning districts in the Town of Seneca Falls. The properties formerly contained residences that have been removed, except for one unoccupied residence that most recently has been used as an industrial and highway construction field office and a mill shop. The building was not in use during the sound surveys. The properties along the highway opposite Location 1 have previously been used for agricultural purposes, although were fallow during the sound surveys. The Seneca Energy Inc. gas-to-energy plant and High BTU facility are located east of this area in the Resource Recovery Park. The operations of the SEI facilities were audible at Location 1 in the daytime between passes of traffic. The facilities produced audible noise in the evening after the normal hours of facility operation, when traffic volumes on Route 414 were reduced resulting in lower ambient noise levels. The background noise environment at Survey Location 1 was largely characterized by sounds of traffic on Route 414, including accelerating and decelerating vehicles in the vicinity of the signalized entrance to the landfill facility. Sounds of landfill activities at Stage 6 and at Stages 7-8 ere not perceptible at the location due to the screening of the SELF berm and distance from each landfill area. The truck traffic operating on top of the SELF berm was not visible and not perceptible at Location 1.

Survey Location 2 is located on the eastern boundary of the landfill adjacent to the NEX landfill berm, south of the intersection of the entrance road to the landfill leachate management facility. The location represents residentially-authorized properties in zoning districts designated Flood Plain Protection on the east side of Route 414 and Highway Commercial on both sides of Route 414 in the Town of Seneca Falls. Former residences on the east side of the highway have been removed except for a small storage building. East of the commercial corridor are landfill retention ponds, which are accessed from a road along the storage building. The background noise environment at Survey Location 2 is largely characterized by sounds of traffic on Route 414, including accelerating and decelerating vehicles in the vicinity of the landfill entrance driveway and leachate facility driveway, with occasional turning vehicles. Maintenance activities on top of the NEX berm were not visible during the sound surveys and did not contribute to the noise environment at Location 2. Sounds of landfill operations at Stage 6 and Stages 7-8, and construction activities at Stage 5, were not perceptible at Location 2 due to the screening of the NEX berm. The survey location is in the vicinity of the Seneca Energy Inc gas-to-energy facility. The operations of the SEI gas-to-energy plant and High BTU facility were audible in the daytime between passes of traffic. The gas plant facilities were perceptible at the location in evening periods after the

normal hours of facility operation, when traffic volumes on Route 414 were reduced.

Survey Location 3 is located on the eastern boundary along Route 414, east of the original SMI landfill. The location represents an existing residential property on the east side of the highway, and a former residential-use property on the west side of the highway, which are property holdings of SMI. The properties are located in a Highway Commercial zoning district in the Town of Seneca Falls. The existing residence is located approximately 300 feet to the northeast of the survey location. The former residential property is located approximately 700 feet to the north of the survey location. Other residentially-authorized properties adjacent to the survey location are wooded and undeveloped, and are property holdings of SMI. Additional properties south of the survey location include the commercial Mobil Oil Pipeline facility and the Seneca Meadows Environmental Education Center. Additional properties to the north include an automobile repair facility, a commercial automobile auction facility, a commercial vehicle repair facility, and a commercial graphics facility to the north of the survey location. The noise environment at Location 3 is characterized by sounds of free-flowing vehicle traffic on Route 414 and environmental sounds that include birds and insects. Sounds of landfill operations, maintenance activities, and construction operations were not perceptible at Location 3 during the sound surveys.

Survey Location 4 is located northeast of the original SMI landfill just south of the northern boundaries of the landfill holdings. The location represents residential-use properties bordering the eastern boundary of the landfill within the Highway Commercial zoning district in the Town of Seneca Falls. The properties include an existing residential property on the west side of Route 414 located approximately 250 feet north of the survey location, and two residential properties located on the east side of Route 414 located approximately 600 feet southeast and 800 feet southeast of the survey location. Other properties that surround the represented residential properties which are residentially-authorized are holdings of SMI. The surrounding properties are extensively wooded and undeveloped, with the exception of an open parcel to the west of the survey location that is leased for agricultural use, which is owned by SMI. There were no farming activities observed on the farm parcel during the survey period. An adjoining parcel located west of the survey location contains a gas compressor station operated by Chesapeake Appalachia LLC. The background noise environment at Survey Location 4 is characterized by sounds of free-flowing vehicle traffic on Route 414 and environmental sounds of birds, and insects in the wooded and agricultural areas and amphibians in wetland areas adjoining the survey location. Sounds of landfill operations, maintenance activities, and construction operations were not perceptible at Location 4 during the sound surveys.

Other properties on the east side of Route 414 opposite the landfill between the Highway Commercial corridor and Black Brook Road include agricultural parcels, undeveloped property, and the Seneca Meadows Wetland Preserve and trail system. The properties are contained in Agricultural zoning and

Flood Plain Protection zoning classifications in the Town of Seneca Falls. The nearest occupied residences east of the facility boundaries are located along the west side of Black Brook Road at distances of 5600 feet and 6700 feet from Route 414. The depth of the woods between Route 414 and the residential properties ranges from 1400 feet to 3600 feet. The wooded areas are estimated to provide at least ten decibels of sound attenuation of landfill and highway traffic sounds, in addition to the attenuation from distance. As the result of the significant amount of sound attenuation from both distance and the wooded buffer zone, sounds of landfill operations are not perceptible at residential properties along Black Brook Road in comparison to the local background traffic noise and environmental noise. The predicted received sound levels along Black Brook Road are lower than the suburban sound level limits of the Part 360 regulations.

Properties that adjoin the eastern boundary of the landfill to the north of the original SMI landfill and the agricultural parcel are densely wooded and are contained in the zoning classification Refuse Disposal in the Town of Seneca Falls. The properties are landfill holdings of SMI. Additional properties located directly north of the landfill holdings are zoned Agricultural and are heavily wooded and undeveloped. The landfill is separated from residences to the north along Strong Road by a wooded buffer area extending over 4000 feet in width. The wooded area is estimated to provide at least ten decibels of sound attenuation of landfill sounds, in addition to the attenuation from distance. As the result of the significant amount of sound attenuation from both distance and the wooded buffer zone, sounds of landfill operations are not perceptible at residential properties along Strong Road in comparison to the local background traffic noise and environmental noise. The predicted received sound levels are lower than the sound level limits of the Part 360 regulations. The dominant sources of background noise to the north include traffic on Route 414, traffic on Burgess Road, sounds of birds, insects, and amphibians, and noise produced by the natural gas compressor facility operated by Chesapeake Appalachia LLC that is located in the center of the northern wooded area.

Survey Location 5 represents a grouping of residential properties located on the east and west sides of Burgess Road, northwest of the original SMI landfill. The residences are contained in the Low-Density Residential zoning classification of the Town of Waterloo. The residences extend from the northwest corner of the SMI landfill north to Strong Road in a closely-spaced suburban-style arrangement. The survey location was located on the western boundary of the landfill on the east side of Black Brook, opposite the rear property lines of the closest residential properties on the east side of Burgess Road. The dominant sources of noise are birds, insects, and amphibians, wind, traffic on Burgess Road, and occasional sounds of Stage 6 landfill operations or Stage 5 construction operations.

Survey Location 6 represents residential-use properties on the east side of Burgess Road that border the western boundary of the landfill opposite the WEX Stage 3-4 landfill area, and other residentially-authorized but undeveloped property on the west side of Burgess Road. The properties are included in a Low-Density Residential zoning district in the Town of Waterloo. The properties contain two residences on the east side of Burgess Road. One residence is located on a land parcel that borders the western boundary of the landfill holdings. The second residence is located on a parcel that is contained within the boundaries of the first property, and does not directly border the landfill boundaries. The properties that immediately adjoin the western boundary of the landfill are extensively used for agricultural purposes. Haying had just occurred prior to surveys, and bailing occurred during the survey period. Properties on the west side of Burgess Road opposite survey Location 6 include fallow agricultural land, which are holdings of SMI. Further west is the Meadow View Mine soil mine. The soil mine was not in operation during the sound surveys. The dominant sources of noise are birds and wind, traffic on Burgess Road, and sounds of construction of WEX landfill gas collection systems, and occasional passbys of maintenance trucks on the access road on the western side of the WEX berm.

Survey Location 7 is located at the southwest corner boundaries of the landfill, and represents several existing residential-use properties on the east side of Burgess Road between Salcman Road and North Road, and a number of former residential-use properties on the east side of Burgess Road north of the intersection. The properties are contained in an area zoned Moderate-Density Residential in the Town of Waterloo. Four of the five existing residential properties south of Salcman Road are holdings of SMI. The vacant residential-use properties to the north of Salcman Road are also SMI property holdings. Non-residential properties around the survey location include the Meadow View Mine, undeveloped properties west of the survey location, the North Seneca Ambulance, Inc. facility at the intersection of North Road and Burgess Road, the Waterloo School District bus garage and maintenance facility to the south of Salcman Road, and undeveloped properties adjacent to the bus garage that are holdings of SMI. The dominant sources of noise at the location are birds and wind, traffic on Burgess Road, site traffic, and sounds of soil storage site activities.

Survey Locations 8 and 9 represent properties along the southern boundaries of the landfill facility. The properties include a small number of residential-use properties and mixed-use properties on the north side of North Road between Burgess Road and the Finger Lakes Railway grade crossing, which are located in the Town of Waterloo in a district zoned Moderate-Density Residential. Several of the residential-use properties along the southern boundary are holdings of SMI. Residential-use properties on the south side of North Road are contained in the boundaries of the Village of Waterloo. Location 8 was located on the north side of North Road to the west of the railroad grade crossing. Location 9 was located on the north side of North Road on the north boundaries of the residential properties, to the east

of the access road to the bus garage. Non-residential facilities in the vicinity of the survey location include the Seneca County Fairgrounds, offices for the Seneca County government, and commercial dental laboratory facilities in the Village of Waterloo and in a Highway Commercial district of the Town of Seneca Falls. The dominant sources of noise are insects, birds, wind, traffic on North Road. Sounds of soil storage site activities were occasionally perceptible at Location 9. Railroad traffic was perceptible at Location 8.

The southeast corner of the landfill adjoins a number of commercial properties on the north side of North Road and west side of Route 414, including an auto parts store, a bank, an office building, industrial facilities, and a church property. Properties on the east side of Route 414 are zoned Industrial, and contain a self-storage facility, beverage container and packaging facilities, and a product finishing facility on property that is a holding of SMI. Properties on the south side of North Road include a Wal-Mart Super Center and a restaurant at the intersection of Route 414. Properties on the north and south sides of Balsey Road extending east of Route 414 include a bank, a hotel, a restaurant, office buildings, and a church property. The properties are located in a district zoned Highway Commercial in the Town of Seneca Falls. The properties that adjoin the southeast boundaries of the landfill facility contain no residences.

Survey Location 10 represents the western boundary of the landfill opposite the active Stage 6 landfill area and the Stage 5 area under construction. The location is opposite residentially-authorized properties along both sides of Burgess Road contained in a Low-Density Residential zoning district in the Town of Waterloo. The adjoining property between the east side of Burgess Road and the western boundary of the landfill was previously used for agricultural purposes and grazing and does not contain residences. The property was not being farmed during the sound surveys. The survey location in addition represents a former residential property on the west side of Burgess Road, which is currently vacant except for a storage building. The properties on the west side of Burgess Road opposite the survey location are owned by SMI. The perceptible sources of noise included operations of odor neutralizing systems, landfill operations, and construction operations.

Sound levels were monitored at each of the ten represented residential-use boundary locations identified in Figure 2 to assess compliance with the sound level limits contained in the 6NYCRR Part 360 landfill regulations. The sound level monitoring characterized the background noise levels and the noise generated by operations of the landfill consisting of normal daily waste acceptance activities, waste placement activities, soil transport and cover operation, and maintenance operations, combined with landfill construction operations.

The acceptability of the noise levels received on the western and southern boundaries of the landfill, noise compliance was evaluated using sound level limits contained in 6 NYCRR Part 360 that apply to the *suburban* community, which were determined to be appropriate for the character of the residential and commercial community. The referenced Part 360 sound level limits are 62 dBA L_{eq} for daytime hours from 7:00 a.m. to 10:00 p.m., and 52 dBA L_{eq} for nighttime hours from 10:00 p.m. to 7:00 a.m.

The acceptability of the noise levels received at locations along the eastern landfill boundaries in daytime hours was evaluated in comparison to the Part 360 limits and to the background noise levels from highway traffic on Route 414. The background noise levels are referenced as alternate noise criteria for periods in which the levels of background noise exceeded the Part 360 standard daytime sound level limits. The Part 360 standard describes background noise as that component of the noise environment which excludes any contributions from the solid waste management facility. The acceptability of noise received at Locations 1 to 4 was evaluated based on the measured levels of background traffic noise levels, which were not influenced by sounds of landfill operations during the sound surveys. The acceptability of sounds received in nighttime hours at Locations 1 to 4 was evaluated based on the measurements of background traffic noise levels, and referencing the suburban nighttime sound level limits with the exception of the early morning peak traffic period.

The average traffic background noise levels varied among the survey locations along the eastern facility boundary. The variances are attributed to differences in speed and flow of traffic on the Route 414 highway. At locations opposite the original SMI landfill extending north, the traffic is free-flowing and produces fairly consistent noise levels in the daytime hours. At locations opposite the SELF and NEX landfill berms, the background noise is characterized by sounds of accelerating and decelerating trucks and automobiles near the signalized entrance to the landfill, at the drive to the SEI facility, and at the drive to the landfill leachate management facility, which increased the average noise levels. Additional noise was generated by vehicles using jake braking to decelerate.

Along the western boundaries of the landfill, environmental sounds and traffic on Burgess Road contribute to the background noise environment at the residential receiving locations. Ambient sounds of Route 414 highway traffic are also perceptible at locations on the western boundary to the north of the landfill, where segments of the highway are not screened by landfill berms. Along the southern boundaries of the landfill, the background noise levels are largely due to traffic on North Road, environmental sources, and bus traffic and employee traffic on the roadway to the Waterloo school bus garage. Location 8 on the south boundary additionally receives background noise generated from train passes and train horns at the North Road grade crossing of the Finger Lakes Railway.

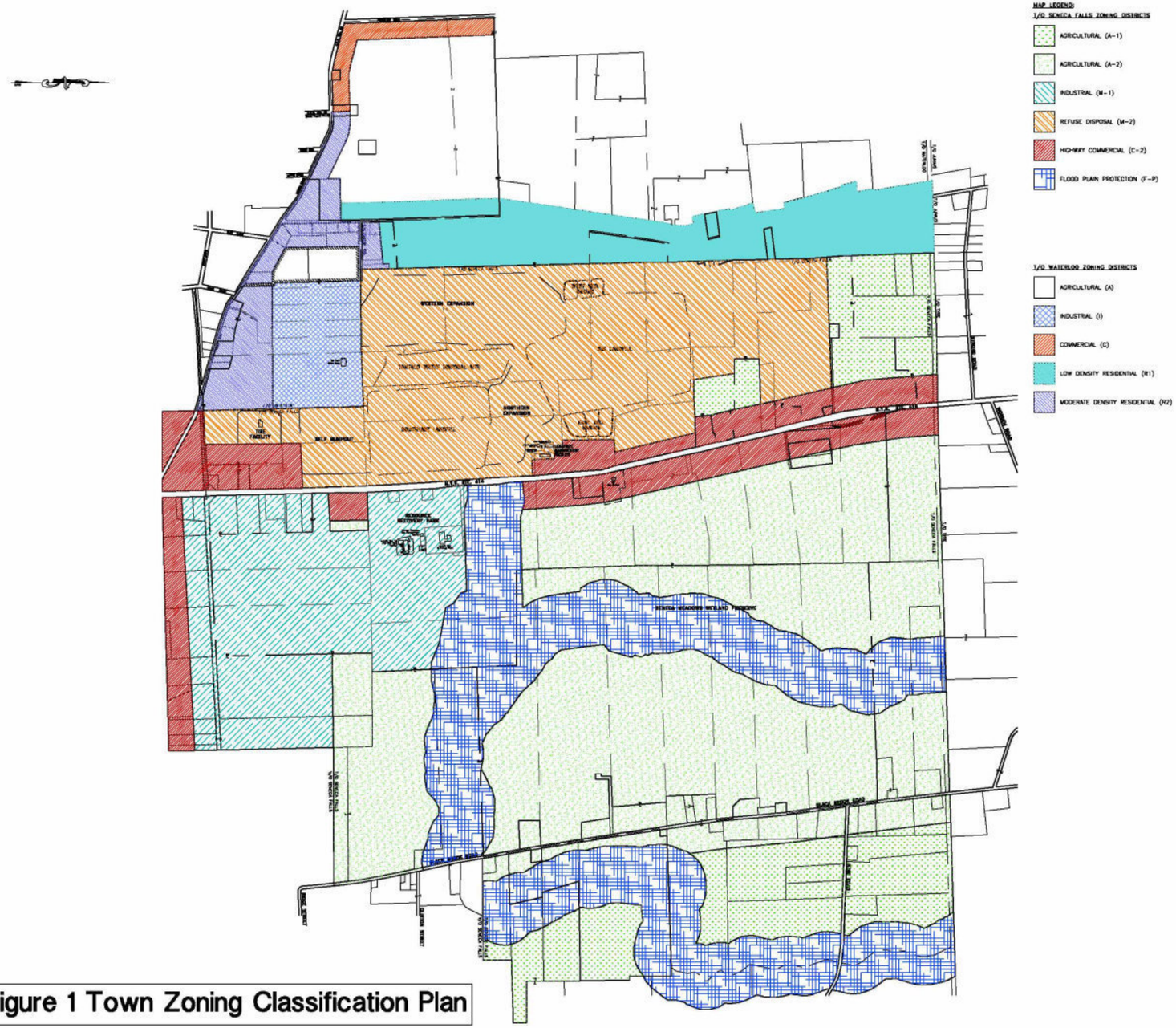


Figure 1 Town Zoning Classification Plan

The perceptible sources of environmental noise observed at each survey location on the boundaries of the landfill consisted of birds, insects, and wind blowing across vegetation, along with sounds of croaking amphibians in wetland areas. The environmental sources largely contributed to the noise measurements along the southern and western boundaries. Along the facility's eastern boundary with Route 414, traffic sounds were significant above environmental sources in the daytime hours, whereas insect and amphibian noise increased in the evening. Hay baling operations occurred during the survey period on an agricultural-use parcel adjacent to Survey Location 6. Farming activities were not observed on other agricultural-use properties along the western and eastern boundaries of the landfill.

Additional sources of background noise that contributed to measurements along the eastern landfill boundaries included energy generation equipment at the Seneca Energy, Inc. gas-to-energy plant on Route 414, consisting of indoor gas engine generators and outdoor gas flares. The plant is perceptible at Locations 1 and 2 between traffic passes in daytime hours during landfill operations, and may partly contribute to the received daytime noise levels. The SEI plant is increasingly perceptible in evening daytime hours after the normal hours of landfill operation when highway traffic volumes are reduced. In nighttime hours, the SEI plant, background traffic, and environmental sounds are the dominant contributors to the nighttime community background noise levels along the eastern landfill boundaries.

During the survey period, waste placement at the areas was performed with Caterpillar 836K and AlJon 600 waste handlers, and Caterpillar D6, D8 or D9 bulldozers. Two compactors and three or four bulldozers were in use at Stage 6. One or two compactors were in use on the west side of Stages 7-8, and a Caterpillar D-6 bulldozer was available. Two Phelps trailer tippers were in use at Stage 6 and one tipper at Stages 7-8. A Komatsu PC490LC excavator and articulated trucks were in use to clear the deposit site on the west side of Stages 7-8. Another Komatsu PC160LC excavator was available.

Soil loading at the materials storage area was being performed with a John Deere 450CLC excavator and a Kobelco E-30 excavator onto articulated trucks. A John Deere 544D front end loader and a Caterpillar loader were available. Soil was being unloaded at the site using ten-wheel dump trucks. Daily soil cover was being placed with Caterpillar D6 bulldozers and Volvo A40D, Volvo A40E, Terex TA400, and Bell B45E articulated trucks.

Tire stockpiles at the tire recycling facility on Salcman Road were being sorted and processed using one or two Caterpillar excavators with claw hooks and a Caterpillar loader.

Construction at the Stage 5 area included depositing of soil on the synthetic liner on the bottom of the cell using from articulated trucks, one or two John Deere 750K$_{LGP}$ or 850K$_{LGP}$ bulldozers, and one or two Caterpillar CS563E compactor rollers. Placement of soil on the Stage 5 liner overlap with the SMI landfill was being performed with one or two John Deere 450C$_{LC}$ excavators, a John Deer compact track loader, two or three Caterpillar CS563E compactor rollers or CP56 sheepsfoot compactor rollers, and articulated trucks.

Other construction included trenching and laying of a collection pipe system on the western side of the Stage 6 berm with a Komatsu PC220$_{LC}$ excavator, a John Deere 455D bulldozer, a John Deere 230C$_{LC}$ excavator, a soil drill, and articulated trucks. The soil trucks approached the construction site using the access road along the south side of Stage 6. A Volvo EC140D$_{L}$ excavator was being used to assemble collection pipe on the east side of the Stage 6 berm near the gas flare, and to trench and lay pipe at the western base of the Stage 6 slope.

A Komatsu PC230 excavator was being used to construct a drainage opening to the retention pond adjacent to Stage 6. A Bobcat compact skid steer with mower attachment was being used to mow grass on the east slope of the SMI landfill.

A drainage area along the access road to Stage 6 was being cleaned with a Volvo excavator. A Caterpillar D6R bulldozer was available on the plateau of the SELF landfill but was not observed to be in use. Leachate system cleaning was being performed with a vacuum truck and a water truck at a station on the north side of Stages 7-8.

A building enclosed odor neutralizing system at the southwest corner of the WEX berm and a system on the north end of the south retention pond were in rotating operation during the sound surveys. One or two truck-mounted HAWC 300-80D dust suppression and odor neutralizing systems were in rotating operation at the western edge of Stage 6, with one operating on the west side of Stages 7-8.

A portable gas flare system was in use at the base of the WEX berm on the east side, which included a National Turbine NT88304 blower.

Road and site watering was performed with a Caterpillar 613C water truck and a Volvo articulated water truck with Klein K-600 tank. The tankers were being filled using a portable pump at the southern retention pond. Street cleaning of the Salcman Road entrance and the shoulders of Route 414 was being performed with a Tymco Model 600 street sweeper.

At survey Location 1 on the eastern boundary, the noise levels were generated by traffic on Route 414, and by accelerating and decelerating vehicles in the vicinity of the landfill and industrial facility driveway intersections. Waste placement operations and hauler truck traffic at the Stage 6 area and at the Stages 7-8 area, dust and odor control operations at Stage 6, and construction at Stage 5, were not perceptible at Location 1 due to the intervening distance and shielding of the SELF berm.

At survey Location 2 on the eastern boundary, the noise levels were primarily due to traffic on Route 414. Waste placement activities, waste hauler truck traffic, and construction were not perceptible at the measurement location due to berm shielding. Soil placement operations on the top of NEX and WEX berms were not perceptible at Location 2 due to berm screening. Leachate trucks that occasionally entered the adjacent leachate facility driveway were partly perceptible and may have produced brief peaks in the measured noise levels similar to traffic passes.

The SEI Gas-to-Energy plant and High-BTU facility were perceptible in the daytime at Location 1 and Location 2 between passes of traffic on Route 414. The sources of sound consist of enclosed engine-generators and outdoor flare stacks. In daytime hours after the peak afternoon traffic period and in nighttime hours, the plants were audible when background noise levels were lower from reduced traffic volume on Route 414. The plant sounds may have partly contributed to the nighttime background noise levels at each location.

At survey Locations 3 and 4 on the eastern boundary, the noise levels were primarily produced by traffic on Route 414 along with contributions of environmental sources in daytime hours. The environmental sources were more influential in evening and nighttime periods. Waste placement operations and construction activities were not perceptible at Locations 3 or 4.

At survey Location 5 on the western boundary, the measured background levels were largely due to environmental sounds that included birds, insects, wind, and amphibians, along with traffic on Burgess Road and ambient noise from Route 414, and occasional activities of neighbors. Sounds of landfill vehicles were occasionally faintly perceptible at Location 5 including backup alarms, but did not significantly contribute to the measured ambient noise levels.

At survey Location 6 on the western boundary, the measured background levels were largely due to environmental sounds that included birds, insects, and wind, along with traffic on Burgess Road. Sounds of landfill waste placement operations at Stage 6 and construction at Stage 5 were faintly perceptible. Periods of construction involving trenching with an excavator and placement of collection pipe on the western access road were recorded in the daytime in the latter part of the week. Farm hay cutting operations were observed to have been done prior to Monday, with bales observed to be gathered on Friday of the survey week. Records suggest baling occurred on Tuesday of the survey period.

At survey Location 7 on the west boundary of the facility near the Salcman and Burgess Road intersection, the received sources of sound included waste hauler traffic on Salcman Road, soil excavation and transport activities at the Salcman Road materials storage area, and environmental sounds. The latter consisted of traffic on North and Burgess Roads, birds, insects, and amphibians. Not perceptible were waste placement operations at Stage 6, construction activities at Stage 5, or soil operations at the NEX and WEX berms. Mining operations were not active at the Meadow View Mine during the survey period.

At survey Locations 8 on the southern boundary of the facility, sounds of waste hauler traffic on Salcman Road were perceptible. The dominant source of noise was highway traffic on North Road. Environmental sources were partial contributors. Waste placement activities at Stage 6, construction at Stage 6, operations of the tire facility, and site maintenance activities were not distinguishable.

At Location 9 on the southern boundary, sources of sound included soil loading and transport operations in the materials storage area, environmental sources, and traffic on North Road, with occasional traffic on the bus garage driveway. Waste placement activities at Stage 6, construction at Stage 5, and maintenance activities were not distinguishable.

At survey Location 10 on the western boundary, the measured noise environment included sounds of waste placement operations at Stage 6, and operations of one or two dust and odor suppression systems, combined with construction activities at Stage 5, at the SMI overlap, and on the west side and base of Stage 6, with pass-bys of construction equipment. Environmental sounds were not significant in the daytime period and did not contribute to the to the measurements. No farming activities were observed in the adjoining agricultural field during the survey period. The nighttime noise environment was generated by environmental sources and traffic.

The noise requirements of the Part 360 waste management regulations have been interpreted in NYSDEC rulings to apply to landfill operations and to not include construction activities. This was concluded in an interim decision from the Deputy Commissioner of NYSDEC issued in October 1995 in the matter of the Saratoga County Landfill. The noise levels monitored during the survey period at certain boundary locations may have included the contributions of noise from certain construction operations including liner material placement and other activities. However, it is not possible to separate the contributions of construction operations from waste placement operations in the measurements. Therefore, certain measurements are considered to be conservative due to the ongoing construction operations.

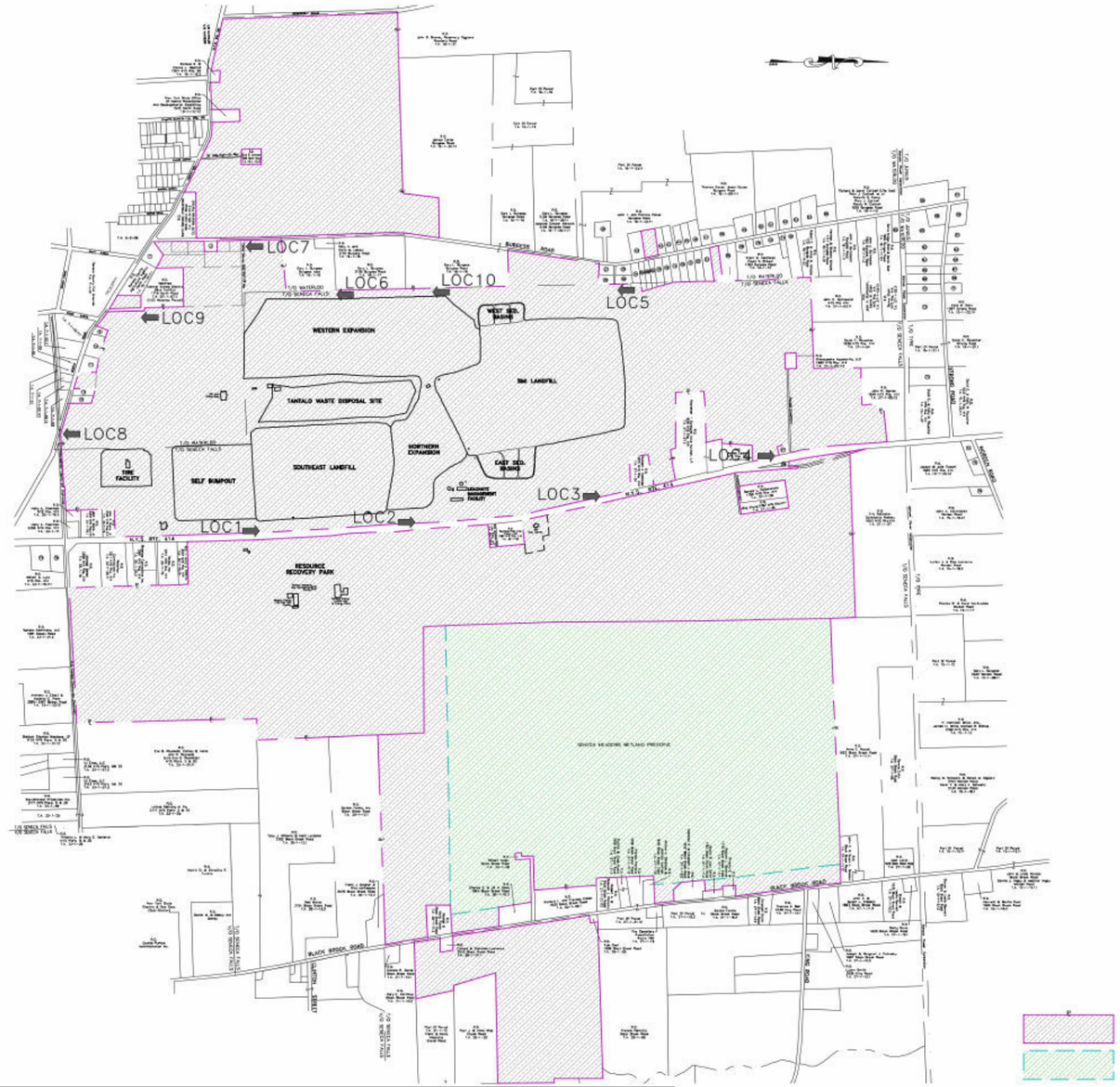


Figure 2 Property Holdings Plan with Sound Survey Locations

The surveys were scheduled to characterize the typical peak seasonal period of landfill waste acceptance and placement operations, site maintenance activities, and construction operations. The weekday daily volume of waste materials received from onsite and offsite sources and fill materials received from offsite sources was relatively uniform from Monday through Friday with minimum receipts on Monday and peak receipts on Tuesday. Normal operating hours for the facility are from 6:00 a.m. to 4:00 p.m. on weekdays and from 6:00 a.m. to 11:30 a.m. on Saturday. The total daily quantities of internal and external loads are summarized below, which are identified from SMI Hourly Tonnage Reports. The total volumes of receipts were typically highest on each day in the hours from 5:00 a.m. to 8:00 a.m. and from 12:00 p.m. to 3:00 p.m.

	Daily Total Internal and External	
	Tonnage	Loads
Monday July 6	19,930	747
Tuesday July 7	13,968	762
Wednesday July 8	13,772	776
Thursday July 9	11,625	677
Friday July 10	13,365	773
Saturday July 11	3,427	205

During the surveys the weather was typically clear or partly cloudy, with low to moderate wind speeds of 12 mph or below. There were slight increases from 4:00 p.m. to 6:00 p.m. on two days. There was a short rain storm on Wednesday July 8 from 12:30 p.m. to 3:00 p.m. with a single peak reading of 13 mph and gusts up to 24 mph coinciding with the rain events. The rain events caused two or three of the hourly average sound levels measured at each survey location to increase and exceed the standard daytime sound level limit. The exceptions are clearly identified on the logging records and are excluded from the compliance conclusions.

There were no scheduled community events or activities at the county fairgrounds during the survey period that would have affected local traffic counts or increased the environmental noise.

The following figures describe the observed activities during the period of the facility sound surveys, including waste placement operations at the active Stage 6 and Stages 7-8 landfill areas with compactors and bulldozers, trailer tippers, commercial tractor trailers, and soil trucks. The figures also describe maintenance operations, including soil loading and placement, watering, sweeping, leachate system cleaning, and odor and dust neutralizing. The figures further describe observed construction activities including placement of liner soils and compacting at Stage 5 and the SMI overlay, and collection pipe installation on the west face of Stage 6, which contributed to the measured operational noise levels.

Stage 6 Landfill, viewed from northeast

Stage 7-8 Landfill area, viewed from south

Liner construction was in progress at Stage 5 and at the SMI overlap, consisting of soil placement with bulldozers, excavators, and articulated trucks, and compacting with rollers, as shown in the figures below.

Liner construction at base of Stage 5, viewed from northeast, and on SMI overlay viewed from east.

Collection systems were being installed on the western face and along the base of Stage 6 with excavators, a bulldozer, and a soil drill. The construction added to noise at locations on the western boundary.

Collection pipe trenching and drilling on the west face of Stage 6, viewed from west, pipe placement viewed from west, and placement at the base of the berm, viewed from east

Collection pipes were being assembled on the east side of Stage 6 adjacent to the WEX gas flare.

Collection pipe assembly

Tire sorting operations were being performed at the tire recycling facility with a claw excavator and loader, as shown below. The operations did not produce significant noise.

Tire materials storage area sorting by excavator, loader

A road sweeper was in use to maintain Salcman Road and the public highway along the eastern boundary of the facility.

Road sweeping along highway

Leachate was being collected at the leachate storage facility for transport off site.

Leachate facility

Two portable odor and dust neutralizing systems were in operation on the western edge of Stage 6 and at the plateau of Stages 7-8.

Portable odor and dust neutralizing systems

Two water trucks were in use on landfill access roads and construction roads, at the materials storage area, and on Salcman Road. The trucks refilled from the retention ponds located south of Salcman Road and west of the SMI landfill.

Water trucks maintaining site roads, refilling at pond

Drain maintenance work was being performed on the access road to Stage 6 with an excavator.

Drain Maintenance

Dewatering occurred as needed using a pump located at Stage 5 adjacent to the Stage 6 landfill cell.

Dewatering pump adjacent to Stage 6

Fixed odor neutralizing sprayer systems were in rotating use around the landfill at various locations. Pump systems are installed in a building enclosure located at the southwest corner of the WEX landfill, and north of the south retention pond near the materials storage area, as shown below.

Odor neutralizing systems in noise enclosures

Soil loading and depositing was occurring at the materials storage area south of Salcman Road using excavators, loaders, and articulated trucks associated with construction sites and daily cover operations at the landfill cells.

Soil handling operations at Salcman Road materials storage area

A flare stack and blower, shown at the left of the photo below, was in use at the base of the east side of the WEX berm. The trailer system at the right was in development and not in use during the sound surveys.

Flare system

Farming activities occurred during the surveys, consisting of hay bailing of previously cut hay grass on the agricultural parcel west of the WEX berm adjacent to Survey Location 6.

Farming activities along the western boundary

Construction of an outlet at the retention pond adjacent to Stage 6 was being performed using an excavator.

Retention pond outlet construction activities at Stage 6 viewed from northeast and southwest

Excavators and a bulldozer were located on top of the Stage 7-8 and SMI berms but were not in use during the surveys.

Idle equipment

Idle equipment

The northern side of the SMI landfill was being mowed during the survey period with a bobcat track skidder with mower attachment.

Berm mowing

A leachate collection station north of the Stages 7-8 landfill was being cleaned with a pump truck and water truck.

Leachate collection system cleaning at NEX

The Seneca Energy, Inc. landfill gas-to-energy plant in the Renewable Resource Park is shown below, with the High BTU plant on the right. The facility includes gas turbine generators in the enclosed buildings and flare stacks between the buildings, at the center of the photograph. The facility noise is perceptible at Locations 1 and 2 on the eastern boundary of the landfill facility between traffic passes and when traffic volume is reduced.

The Mobil gas pipeline facility on Route 414 adjoining the SMI landfill is shown below. The facility is not a prominent source of noise.

The SMI Education Facility, shown below, was not in use during surveys and did not generate traffic.

The Sherman Compressor Facility of Chesapeake Appalachia LLC is located north of the SMI landfill adjacent to an agricultural parcel at the northeast boundary of the landfill facility, and is audible at Survey Location 4.

The sound levels measured at the boundaries of the landfill facility landfill during the annual sound surveys for the year 2020 were predominantly produced by traffic and environmental sources. At some boundary locations, sounds of waste placement operations, site maintenance activities, and site traffic, and construction were perceptible, although were not significant contributors to the measured hourly-average sound levels. The dominant sources of background noise consisted of traffic on Route 414 highway, North Road, and Burgess Road, and environmental sources consisting of birds, insects, amphibians in wetlands areas, wind across trees and vegetation, and farming activities. The environmental background sources were in particular influential along the wooded boundaries and agricultural parcels. Additional sources of background noise perceived along the southern boundaries included train passes and whistles at the grade crossing of the Finger Lakes Railroad with North Road, which occurred twice daily. In addition to the environmental sources, collection system construction activities and equipment passbys on the west side of the Stage 6 berm contributed to measured levels at Location 6. In addition to waste placement operations and operations of portable odor and dust control systems at Stage 6, sound levels at Location 10 were influenced by construction activities at Stage 5, the SMI overlap, and the western face of Stage 6, and by pass-bys of construction equipment.

The noise levels measured at survey Locations 1 to 4 were dominated by sounds of traffic on Route 414. The traffic sound levels were highest in the peak daytime traffic hours from 6:00 a.m. to 6:00 p.m. At Locations 1 and 2 the daytime noise levels were characterized by sounds of free flowing as well as accelerating and decelerating traffic in the vicinity of the survey locations. At Locations 3 and 4 the daytime noise levels were characterized by sounds of free flowing traffic on Route 414. At Locations 1 and 2 the measured daytime hourly-average noise levels consistently exceeded the 62 dBA daytime sound level limit of the Part 360 limit due to traffic between the hours of 6:00 a.m. and 6:00 p.m. At Location 3 the hourly-average sound levels exceeded the daytime limit in certain daytime hours. At Location 4, the hourly-average sound levels did not exceed the daytime limit. Sounds of landfill

operations were not perceptible at the locations between traffic passes.

The hourly-average noise levels in nighttime hours consistently exceeded the 52 dBA nighttime sound level limit of the Part 360 regulations at Location 2, and exceeded the nighttime limit over the majority of the nighttime hours exceeded the nighttime limit at Locations 1, 3 and 4. The exceptions are attributed to nighttime traffic on Route 414 and operations of the SEI gas-to-energy facility.

The hourly-average noise levels measured at Locations 5, 6, 7, 8 and 9 were largely influenced by sounds of traffic on nearby roadways and environmental sources. Daytime sounds of landfill waste placement operations, maintenance activities, materials storage operations, and site traffic were occasionally perceptible at each location but did not significantly influence the measured sound levels. There were no exceedances to the permissible limits in daytime hours due to facility operations. At Location 5, sounds of waste placement operations at Stage 6, and construction at Stage 6 and the SMI overlap, were occasionally faintly perceptible. At Location 6, sounds of waste placement and construction were largely screened by the Stage 6 berm, with sounds of the odor and dust neutralizer system being only faintly audible. The location was exposed to sounds of construction vehicles and soil trucks on the western side and heel of the Stage 6 berm, passbys of soil trucks and water trucks on the western maintenance road, and farming activities on the adjoining agricultural parcel. At Locations 7, 8, and 9, perceptible sounds included soil loading and unloading operations at the materials storage area. At Location 8, daily train passes at the nearby grade crossing caused several exceptions to the daytime sound level limits. There was one exception to the nighttime limit each at Locations 5, 7, and 8 that are attributed to environmental or roadway traffic sources.

At Location 10, the daytime hourly-average noise levels measured during landfill operational hours were influenced by waste placement operations and by operations of nearby odor and dust neutralizing systems, combined with construction operations at the base of Stage 5, on the overlap to the SMI landfill, and on the western slope and base of Stage 6. Construction equipment at times passed by the location on the western berm road. There were a number of minor exceedances to the daytime hourly-average sound level limit, which are attributed to the combined waste placement and construction operations. There were a number of exceptions to the nighttime limit at Location 10, which are attributed to operation of a dewatering pump or early equipment startup in hours just prior to 7:00 a.m. Because the adjacent property is used agriculturally and there are no occupied residential properties nearby, the daytime and nighttime exceptions are not considered to be significant.

A brief period of rain on Wednesday at midday caused exceptions in two hourly-averages at each location. These are not considered in evaluations of noise compliance.

1.1 Measured Noise Levels Summary

Sound surveys were performed around the SMI facility in the period from the morning of July 6 to the evening of July 10, 2020 at ten boundary line locations, as identified in Figure 2. The sound levels were continuously monitored in daytime and nighttime hours throughout the survey period with installed noise loggers. The sound levels were recorded in consecutive fifteen-minute time history intervals in several metrics, including the average sound level, $L_{eq\text{-}15min}$. The fifteen-minute averages were logarithmically combined to produce one-hour sound level averages ($L_{eq\text{-}1\ hr}$) for comparison to the hourly-average sound level limits contained in the Part 360 regulations, as means to evaluate the acceptability of landfill sound received at the boundaries.

Additional short-term sound level readings were obtained with portable sound level analyzers in a number of sampling periods at each survey location on two days. Surveys were performed on Monday on the starting day of continuous monitoring and on Friday on the final day of monitoring. The sampling surveys were obtained during representative portions of an hour in two daytime periods at each location during landfill operating hours, and in one evening period at each location after the normal hours of waste acceptance to characterize the background sound levels.

Sound level sampling was performed in measurement periods of ten to twenty minutes using sample averaging times of one second. The sampling measurements identified the noise environment at each location over periods sufficient to represent one-hour average levels in accord with the Part 360 regulations. The sampled sound level data were obtained for comparison to the hourly-average sound levels obtained from the continuous monitoring in corresponding time periods and for comparison to the Part 360 sound level limits. Prominent sound sources that occurred during the sampling surveys were identified in the sampling records.

The continuous logging surveys and the sampling surveys identified the sound levels produced by normal daily operations of waste acceptance, placement, and cover activities at the active Stage 6 and Stages 7-8 landfill areas, construction at Stage 5, the SMI overlap, and the Stage 6 western berm, and maintenance operations throughout the facility. The numbers of operating equipment and the hours in use at each waste placement area were relatively consistent on each day of the survey period, referencing the SMI daily equipment logs.

The volumes of accepted waste were relatively uniform on each survey day based on the landfill daily tonnage and vehicle reports. The total weekday material receipts was 65,601 tons, in comparison to 68,572 tons in the survey period in 2019. The daily average of waste receipts of all classes was 13,132 tons, in comparison to 12,470 tons in the 2019 survey.

The day with the highest volume of waste receipt was Tuesday, which volumes represented 21.2% of the weekday total and were 6.4% greater than the daily average of waste receipts. Receipts on Monday represented 19.7% of the weekday total and were 1.5% lower than the daily average. Receipts on Wednesday represented 21% of the weekday total and were 4.9% greater than the daily average. Receipts on Thursday represented 17.7% of the weekday total and were 11.5% lower than the daily average. Receipts on Friday represented 20.4% of the weekday total and were 1.8% greater than the daily average. Waste volumes received on Saturday morning represent just 5% of the total tonnage received in the six-day period from Monday to Saturday.

The total landfill delivery vehicle count on each weekday was relatively uniform. The five-day average total vehicle count was 747, compared to 824 in the survey period in 2019. Traffic volume on Monday equaled the average number of weekday vehicles. Traffic volume was 2% higher than the daily average on Tuesday, 4% higher on Wednesday, 9% lower on Thursday, and 3% higher on Friday. The volume of traffic on Saturday was 205, which was 5% of the six-day vehicle count total.

Sound survey Location 1 represents former residential-use properties adjoining the eastern boundary of the landfill on the east side of Route 414 near the former Salcman Road intersection. The properties are contained in the Highway Commercial zoning district in the Town of Seneca Falls. The former residential-use properties are adjacent to the Renewable Resource Park (RRP), which contains the Seneca Energy, Inc. (SEI) Gas-to-Energy plant and Seneca Energy II High-BTU plant. Each of the former residential-use properties are holdings of SMI, of which several are vacant and previously used for agricultural purposes. One of the former properties adjacent opposite Survey Location 1 contains a former residence, which is currently vacant. It was previously used as a construction office, mill shop, and vehicle storage site for projects at the Renewable Resource Park and for reconstruction of the Salcman Road intersection. The building was not in use at the time of the sound surveys. A construction trailer is parked adjacent, which is used as an office for the landfill construction company.

During the survey period from the morning of Monday July 6 to the evening of Friday July 10, the hourly-hour average sound levels measured at Location 1 with continuous logging ranged from a minimum of 51.7 dBA in the nighttime hours from 10:00 p.m. to 7:00 a.m. to a maximum of 79.2 dBA in the daytime hours from 7:00 a.m. to 10:00 p.m. including rain-generated peaks and 76.7 dBA without the rain peaks. The number of daytime hourly-average samples was 69, of which 50 exceeded the 62 dBA daytime criterion due to free flowing traffic and vehicle acceleration and deceleration events, excluding rain events. The numerical average of the daytime hourly-averages over the five-day survey period was 64.8 dBA. The sound levels in the daytime period of landfill operations and peak highway traffic from 7:00 a.m. to 6:00 p.m. averaged 66.1 dBA. During nighttime hours, 36 hourly-average sound levels were recorded, of which 31 exceeded the 52 dBA nighttime criterion, which are attributed to traffic and

operations of the neighboring SEI plant. The numerical average of the nighttime hourly-averages over the survey period was 56.8 dBA.

Survey Location 2 represents a former residential-use and agricultural-use property on the east side of Route 414 adjoining the east boundary of the NEX landfill berm. The property contains one storage building and is a holding of SMI. The property is in the vicinity of the Seneca Energy, Inc. gas-to-energy plant. The hourly-hour average sound levels measured at Location 2 with continuous logging ranged from a minimum of 55.3 dBA in the nighttime hours from 10:00 p.m. to 7:00 a.m. to a maximum of 73.78 dBA in the daytime hours from 7:00 a.m. to 10:00 p.m. including rain-generated peaks and 69.1 dBA without rain peaks. During daytime hours, 70 hourly-average samples were recorded, of which 57 exceeded the 62 dBA daytime criterion due to free flowing traffic and vehicle acceleration and deceleration events, excluding rain events. The numerical average of the daytime hourly-averages over the five-day survey period was 65.8 dBA. The sound levels in the daytime period of landfill operations and peak traffic from 7:00 a.m. to 6:00 p.m. averaged 67.0 dBA. During nighttime hours, 36 hourly-average sound levels were recorded, of which all exceeded the 52 dBA nighttime criterion, which are attributed to traffic and operations of the neighboring SEI plant. The numerical average of the nighttime hourly-averages over the survey period was 59.4 dBA.

Survey Location 3 was located on the east boundary of the landfill along Route 414 opposite the original SMI landfill. The location represents a current residential-use property on the east side of the highway adjacent to survey location and a former residential-use property on the west side of the highway just north of the location. Surrounding properties are wooded and undeveloped and are holdings of SMI. Other nearby properties on both sides of the highway contain commercial operations including an automobile auction site north of the survey location and a gas transmission facility south of the location. Sounds of landfill operations and construction activities were imperceptible due to the screening of the adjoining woods and the attenuation due to distance. The background noise levels at the location are dominated by free-flowing traffic on Route 414. The commercial automobile operations to the north and industrial gas line facility operations to the south did not generate perceptible noise. The hourly-hour average sound levels measured at Location 3 with continuous logging ranged from a minimum of 48.9 dBA in the nighttime hours from 10:00 p.m. to 7:00 a.m. to a maximum of 75.1 dBA in the daytime hours from 7:00 a.m. to 10:00 p.m. including rain-generated peaks and 63.3 dBA excluding rain peaks. During daytime hours, 70 hourly-average sound levels were recorded, of which 8 exceeded the 62 dBA daytime criterion, excluding rain events. The numerical average of the daytime hourly-averages over the five-day survey period was 60.2 dBA. The sound levels in the daytime period of landfill operations and peak traffic from 7:00 a.m. to 6:00 p.m. averaged 61.3 dBA. During nighttime hours, 36 hourly-average sound levels were recorded, of which 23 samples exceeded the 52 dBA nighttime criterion, which are attributed to traffic. The numerical average of the nighttime hourly-averages over the survey period was 54.2 dBA.

Survey Location 4 was located on the east boundary of the landfill along Route 414, approximately 2000 feet north of the SMI landfill. The location represents current residential-use properties on the east and west sides of the highway adjacent to the survey location. The survey location adjoins a leased parcel on the SMI property that is used agriculturally. The background noise levels at the location were largely due to free-flowing traffic on Route 414, and in part to environmental sounds and sounds of a gas transmission facility located west of the location. Sounds of landfill operations and construction activities were imperceptible as result of the screening of the adjoining woods and the attenuation due to distance. The hourly-hour average sound levels measured at Location 4 with continuous logging ranged from a minimum of 46.1 dBA in the nighttime hours from 10:00 p.m. to 7:00 a.m. to a maximum of 81.9 dBA in the daytime hours from 7:00 a.m. to 10:00 p.m. including rain-generated peaks and 60.7 dBA without rain peaks. During daytime hours, 70 hourly-average sound levels were recorded, of which none exceeded the 62 dBA daytime criterion, excluding rain events. The numerical average of the daytime hourly-averages over the five-day survey period was 57.4 dBA. The sound levels in the daytime period of landfill operations and peak traffic from 7:00 a.m. to 6:00 p.m. averaged 58.6 dBA. During nighttime hours, 36 hourly-average sound levels were recorded, of which 17 samples exceeded the 52 dBA nighttime criterion, which are attributed to traffic, the compressor sounds, and environmental sources. The numerical average of the nighttime hourly-averages over the survey period was 52.1 dBA.

Survey Location 5 represents a suburban grouping of residences on Burgess Road along the western boundary of the landfill facility opposite the northwest corner of the landfill property. The residences on each side of Burgess Road are located in a district zoned Low-Density Residential in the Town of Waterloo. The measured noise levels were predominantly the result of environmental sounds of insects, birds, and amphibians, local traffic on Burgess Road, and distant traffic on Route 414. The hourly-hour average sound levels measured at Location 5 with continuous logging ranged from a minimum of 41.0 dBA in the nighttime hours from 10:00 p.m. to 7:00 a.m. to a maximum of 79.1 dBA in the daytime hours from 7:00 a.m. to 10:00 p.m. including rain-generated peaks and 53.3 dBA excluding rain peaks. During daytime hours, 73 hourly-average sound levels were recorded, of which none exceeded the 62 dBA daytime criterion, excluding rain events. The numerical average of the daytime hourly-averages over the five-day survey period was 47.6 dBA. The sound levels in the daytime peak traffic period from 7:00 a.m. to 6:00 p.m. averaged 48.6 dBA. During nighttime hours, 36 hourly-average sound levels were recorded, of which one exceeded the 52 dBA nighttime criterion, which is attributed to an environmental event. The numerical average of the nighttime hourly-averages over the survey period was 42.7 dBA.

Survey Location 6 represents the western property line of the landfill facility opposite the WEX landfill area. The adjoining properties are zoned Low-Density Residential and are currently used for agricultural purposes. The location represents two residences located on the east side of Burgess Road approximately

700 feet to the west. One of the residences is located on the adjoining property parcel, whereas the other is located on a subdivision of the adjoining property. The location is characterized by environmental and traffic noise, and partly by sounds of landfill operations at Stage 6 and construction activities at Stage 5. The hourly-hour average sound levels measured at Location 6 with continuous logging ranged from a minimum of 39.9 dBA in the nighttime hours from 10:00 p.m. to 7:00 a.m. to a maximum of 70.5 dBA in the daytime hours from 7:00 a.m. to 10:00 p.m. including rain-generated peaks and 69.8 dBA excluding rain peaks. During daytime hours, 72 hourly-average sound levels were recorded, of which two exceeded the 62 dBA daytime criterion, which are attributed to construction or farming activities, excluding rain events. The numerical average of the daytime hourly-averages over the five-day survey period was 47.9 dBA. The sound levels in the daytime peak traffic period from 7:00 a.m. to 6:00 p.m. averaged 49.3 dBA. During nighttime hours, 36 hourly-average sound levels were recorded, of which none exceeded the 52 dBA nighttime criterion. The numerical average of the nighttime hourly-averages over the survey period was 41.1 dBA.

Location 7 represents the western boundary of the landfill near a group of residential properties at the intersection of Salcman Road and Burgess Road. The properties are contained in a Moderate-Density Residential district. Five residential properties containing residences are located south of the intersection on the east side of Burgess Road, of which four are current property holdings of SMI. Former residential properties located north of the intersection on the east side of Burgess are property holdings of SMI. The survey location is characterized by sounds of traffic on Burgess Road and North Road, environmental sources, waste hauler traffic on Salcman Road, and materials loading and unloading operations in the materials storage area south of Salcman Road. The hourly-hour average sound levels measured at Location 7 with continuous logging ranged from a minimum of 40.0 dBA in the nighttime hours from 10:00 p.m. to 7:00 a.m. to a maximum of 70.3 dBA in the daytime hours from 7:00 a.m. to 10:00 p.m. including rain-generated peaks and 55.5 dBA excluding rain peaks. During daytime hours, 72 hourly-average sound levels were recorded, of which none exceeded the 62 dBA daytime criterion, excluding rain events. The numerical average of the daytime hourly-averages over the five-day survey period was 49.8 dBA. The sound levels in the daytime peak traffic period from 7:00 a.m. to 6:00 p.m. averaged 50.4 dBA. During nighttime hours, 36 hourly-average sound levels were recorded, of which none exceeded the 52 dBA nighttime criterion. The numerical average of the nighttime hourly-averages over the survey period was 43.3 dBA.

Location 8 represents the south boundary of the landfill adjoining residential properties on the north side of North Road in the Town of Waterloo, and properties on the south side of North Road in the Village of Waterloo, which are located west of the Finger Lakes Railroad grade crossing with North Road. The noise at the survey location is largely due to traffic on North Road, environmental sources, rail traffic with horns at the grade crossing, and traffic on Salcman Road. The hourly-hour average sound levels

measured at Location 8 with continuous logging ranged from a minimum of 42.5 dBA in the nighttime hours from 10:00 p.m. to 7:00 a.m. to a maximum of 68.3 dBA in the daytime hours from 7:00 a.m. to 10:00 p.m. including rain-generated peaks and 67.4 dBA without rain peaks. During daytime hours, 72 hourly-average sound levels were recorded, of which 5 samples exceeded the 62 dBA daytime criterion, which are attributed to the passbys of trains at the nearby grade crossing, excluding rain events. The numerical average of the daytime hourly-averages over the five-day survey period was 50.0 dBA. The sound levels in the daytime peak traffic period from 7:00 a.m. to 6:00 p.m. averaged 50.1 dBA. During nighttime hours, 36 hourly-average sound levels were recorded, of which one sample exceeded the 52 dBA nighttime criterion, which is attributed to an environmental or traffic event. The numerical average of the nighttime hourly-averages over the survey period was 44.3 dBA.

Location 9 represents the south boundary of the landfill adjoining residential properties on the north and south sides of North Road located east and west of Inslee Street. The noise levels were the combination of sounds of environmental sources, traffic on North Road, traffic on Salcman Road, soil loading activities at the materials storage area, and occasional traffic on the road to the bus garage and activities in the bus garage. The hourly-hour average sound levels measured at Location 9 with continuous logging ranged from a minimum of 41.0 dBA in the nighttime hours from 10:00 p.m. to 7:00 a.m. to a maximum of 79.1 dBA in the daytime hours from 7:00 a.m. to 10:00 p.m. including rain-generated peaks and 53.3 dBA excluding rain events. During daytime hours, 72 hourly-average sound levels were recorded, of which none exceeded the 62 dBA daytime criterion, excluding rain events. The numerical average of the daytime hourly-averages over the five-day survey period was 47.8 dBA. The sound levels in the daytime peak traffic period from 7:00 a.m. to 6:00 p.m. averaged 48.8 dBA. During nighttime hours, 36 hourly-average sound levels were recorded, of which one exceeded the 52 dBA nighttime criterion, which is attributed to an environmental event. The numerical average of the nighttime hourly-averages over the survey period was 47.8 dBA.

Location 10 represents the facility boundary west of the active Stage landfill area and Stage 5 construction area. The location is opposite adjoining agricultural-use properties on the east side of Burgess Road and a former residential-use property on the west side of Burgess Road. The residential property is a current holding of SMI. The properties adjoining the boundary location are zoned Low-Density Residential. The noise received at the survey location in daytime hours was the combination of sounds of landfill waste placement operations, construction operations at several locations, and operations of odor and dust neutralizer systems. In nighttime hours the noise was largely generated by environmental sounds and local traffic, with periods of operation of a dewatering pump and early morning equipment startup. The hourly-hour average sound levels measured at Location 10 with logging ranged from a minimum of 42.4 dBA in the nighttime hours from 10:00 p.m. to 7:00 a.m. to a maximum of 70.1 dBA in the daytime hours from 7:00 a.m. to 10:00 p.m. including rain-generated peaks and 66.0

dBA excluding rain events. During daytime hours, 72 hourly-average sound levels were recorded, of which 13 exceeded the 62 dBA daytime criterion, which are attributed to operations of odor systems and passbys of construction equipment and soil trucks adjacent to the survey location. The numerical average of the daytime hourly-averages over the five-day survey period was 58.6 dBA. The sound levels in the daytime peak traffic period from 7:00 a.m. to 6:00 p.m. averaged 60.9 dBA. During nighttime hours, 38 hourly-average sound levels were recorded, of which seven exceeded the 52 dBA nighttime criterion, which are attributed to operations of a dewatering pump or early startup of equipment. The numerical average of the nighttime hourly-averages over the survey period was 46.1 dBA.

1.2 Summary Conclusions

Noise levels characterizing operations the Seneca Meadows, Inc. landfill during the year 2020 were evaluated on the boundaries of the facility adjoining properties zoned or authorized for residential use, as means to assess the acceptability of facility noise emissions in accordance with requirements of New York State Department of Environmental Conservation 6 NYCRR Part 360 Regulations for Solid Waste Management Facilities and Department rulings.

The sound surveys characterized the noise levels generated during the annual peak period of facility operations from daily waste acceptance and placement operations, daily cover operations, site maintenance activities, and landfill construction activities. The surveys were scheduled in a peak period to represent the highest hourly-average sound levels produced by the combined facility operations.

Noise levels were continuously monitored at each survey location with installed noise loggers during the period from the morning of Monday, July 6 to the evening of Friday, July 10, 2020. The logged sound levels at each survey location included the L_{eq} sound level averaged for each fifteen-minute period. Groups of fifteen-minute average sound level data were extrapolated into hourly-average noise levels ($L_{eq\text{-}1\ hr}$) for direct comparison to the Part 360 daytime and nighttime sound level criteria.

Noise levels were additionally sampled at each location using a portable sound level analyzer. The sampling surveys were obtained at each location over a portion of an hour each using one-second averaging periods. The sampled sound level data were determined to be appropriate representations of one-hour average sound levels. Aural observations were obtained to identify the prominent sound sources perceived at each location during normal landfill facility operations and during background periods outside of waste acceptance hours. The sampling surveys were performed on Monday and Friday of the survey period in two daytime periods during normal operations of the landfill and in one daytime afternoon-evening period after the hours of normal landfill waste acceptance and placement to evaluate the daytime background sound levels. Prominent sources of sound received at the measurement locations

were identified during the sampling surveys. The sampled sound level data were compared to the hourly-average sound level data obtained from the continuous logging to verify the logged data. The sampled data were further compared to the Part 360 sound level limits as additional means to assess the acceptability of the received noise levels.

The sound level data logged and sampled at the boundary locations adjoining residential-use properties were compared to the noise level criteria contained in 6 NYCRR Part 360 to assess the acceptability of the received noise levels and identify needs to mitigate prominent sound sources. The acceptability of the measured sound levels was assessed in comparison to the hourly-average sound level criteria that are associated with a suburban style community, which are 62 dBA for daytime periods (7:00 a.m. to 10:00 p.m.) and 52 dBA for nighttime periods (10:00 p.m. to 7:00 a.m.).

The noise criteria listed in subparagraph 360-1.19(j) of the Part 360 landfill regulations pertain to noise levels resulting from equipment or operations at a landfill facility which are received beyond the property line owned or controlled by the owner or operator of the facility at locations authorized for residential purposes. The acceptability of the sound levels at locations adjoining the landfill in the Town of Waterloo and in the Town of Seneca Falls was evaluated using the sound level limits associated with the suburban designation. The suburban designation has been used in past annual sound surveys and was chosen based on the character and density of the surrounding residential properties and current residences, the type and extent of surrounding commercial and industrial development, and the volume and character of traffic on the surrounding highway and railroad transportation facilities.

The hourly-average daytime and nighttime sound levels measured at survey Locations 5, 6, 7, 8, and 9 on the western and southern boundaries were determined to be acceptable in accord with the Part 360 sound level limits of 62 dBA L_{eq} in the daytime and 52 dBA L_{eq} in the nighttime for the suburban community character. The small number of daytime exceptions at Location 6 are attributed to noise from farming activities, or from construction activities or equipment passbys that are not regulated by Part 360. The small number of daytime exceptions at Location 8 are attributed to train passes at the nearby grade crossing. Two hourly-average daytime record exceptions at each location are attributed to a brief period of rain, which are excluded. The small number of nighttime hourly-average record exceptions that occurred outside the hours of landfill operations are attributed to environmental sources or traffic events. The hourly-average daytime and nighttime sound levels measured at survey Location 10 were determined to largely conform to the Part 360 daytime and nighttime sound level limits. A small number of minor exceedances occurred in daytime periods, and a small number of exceedances occurred in nighttime hours just prior to daytime period. The exceptions are considered to be insignificant because the operations included essential maintenance activities, and the adjoining properties are agricultural-use properties buffer which are not residentially occupied.

The daytime hourly-average noise levels measured at Locations 1 and 2 along the eastern boundary adjoining State Route 414 were found to extensively exceed the Part 360 daytime sound level limit of 62 dBA L_{eq} during the peak traffic period from 7:00 a.m. to 6:00 p.m. due to prominent effects of daytime traffic on State Route 414, including added sounds of vehicle acceleration and deceleration in the vicinity of industrial facility driveways with uses of jake brakes. It was determined from sound level readings and aural observations obtained during the series of sampling surveys that sounds of facility sources were not perceptible and as result did not contribute to the measured sound levels at either location due to the screening of the landfill berm and the masking effects of background traffic noise. The hourly-average sound levels measured in the remaining daytime period from 6:00 p.m. to 10:00 p.m. extensively complied with the Part 360 standard daytime sound level limit with a small number of minor exceedances at each location due to the reduced traffic volumes. The nearby SEI gas-to energy plant is perceptible between traffic and during periods of reduced volumes of traffic, and additionally contributes to the sound levels at Locations 1 and 2. The nighttime hourly-average sound levels at Locations 1 and 2 extensively exceeded the 52 dBA nighttime limit. The nighttime exceptions are attributed to the noise contributions of traffic, the SEI gas-to- energy plant, and environmental sources.

The daytime hourly-average sound levels measured at Location 3 on the eastern boundary were found to largely comply with the Part 360 daytime sound level limit for the suburban community character, excluding exceptions due to rain events, with a small number of exceptions that are attributed to traffic. The nighttime hourly-average sound levels at Location 3 complied with the 52 dBA nighttime limit for the majority of the samples, with the exceptions in the remaining periods attributed to the effects of nighttime traffic on State Route 414 and environmental sources.

The daytime hourly-average sound levels measured at Location 4 on the eastern boundary were found to consistently comply with the Part 360 daytime sound level limit for the suburban community character, excluding exceptions due to rain events. The nighttime hourly-average sound levels at Location 3 complied with the 52 dBA nighttime limit in about half of the samples, with the exceptions attributed to the effects of traffic on State Route 414, environmental sources, and the gas compressor station.

The ambient sound levels measured at Locations 1 and 2 are considered to characterize the background noise levels along the highway produced by free-flowing traffic and accelerating and decelerating vehicles. The ambient sound levels measured at Locations 3 and 4 are considered to characterize the background noise levels along the highway produced by free-flowing traffic without significant added vehicle noise events.

The acceptability of the hourly-average noise levels measured at Locations 1 to 4 that exceeded the Part 360 criteria was primarily evaluated based on the inaudibility of the landfill sources. The modified

criteria specified in Part 360 Subparagraph 360-1.19(j)(1) can be applied to receptor locations where the existing background noise levels without contributions of facility equipment and operations exceed the standard permissible sound level limits. The regulations section states the combined sound levels must not exceed the sound levels of the background by more than three decibels. However, the hourly-average sound levels measured at Locations 1 and 2 exceeded the hourly-average sound levels measured at Locations 3 and 4 by more than three decibels. The differences are attributed to the added sounds of traffic accelerating and decelerating on the highway, including the prominent effects of jake braking, in the vicinity of the signalized intersection at Salcman Road and industrial driveways. The measured sound levels at Locations 3 and 4 may further be lowered by the effects of vegetative absorption and scattering effects.

The daytime overall hourly-average sound level measured at Location 1 was an average of 7.5 dBA greater than the combined hourly-average daytime sound level measured at Location 4. The nighttime hourly-average sound level at Location 1 was 4.7 dBA greater than the overall nighttime hourly-average level at Location 4. The daytime hourly-average sound levels measured at Location 2 were an average of 8.4 dBA greater than the combined hourly-average daytime sound level measured at Location 4. The nighttime hourly-average sound level at Location 2 was 7.3 dBA greater than the overall nighttime hourly-average level at Location 4.

It is concluded that the daytime and nighttime noise levels measured at Locations 1 to 4 are acceptable referencing the alternate noise criteria of subparagraph 360-1.19(j)(1) of the Part 360 landfill regulations, relative to the high levels of traffic noise and the inaudibility of the landfill equipment sources.

Seneca Meadows maintains a Complaint Management Program to address community concerns regarding noise, odor, traffic, litter, and other issues as a requirement of its Host Community Benefit Agreement. The program includes an "800" telephone service that can be used by the community to voice concerns related to the facility's operations. The service is used to alert SMI staff to investigate complaints, resolve issues by appropriately modifying operations, and to prepare responses. There were no complaints received in the year 2020 related to noise.

The NYSDEC 6 NYCRR Part 360 landfill noise regulations that are referenced to determine acceptability of noise of landfill operation are summarized in the following report sections, with discussions regarding the application of the regulations.

2.0 Noise Criteria

Operational requirements for solid waste management facilities in New York State are mandated by the Department of Environmental Conservation Division of Solid Waste 6 NYCRR Part 360 regulations, in Section 360-1.19 effective November 4, 2017. The relevant restrictions on noise are specified in Section 360-1.19 paragraph (j) and its subsections. The requirements are reproduced in the following section.

2.1 6 NYCRR Part 360 Regulations

6 NYCRR Part 360 Section 360-1.19 paragraph (j) states:

(j) The owner or operator of a facility must ensure that noise (other than that occurring during construction of the facility) resulting from equipment or operations at the facility does not exceed the following energy equivalent sound levels beyond the property line owned or controlled by the owner or operator of the facility at locations authorized for residential purposes:

Character of Community	*L_{eq} Energy Equivalent Sound Levels*	
within a one-mile radius of facility	*7:00 a.m.-10:00 p.m.*	*10:00 p.m.-7:00 a.m.*
Rural	*57 dBA*	*47 dBA*
Suburban	*62 dBA*	*52 dBA*
Urban	*67 dBA*	*57 dBA*

The L_{eq} is the equivalent steady-state sound level which contains the same acoustic energy as the time varying sound level during a one-hour period. It is not necessary that the measurements be taken over a full one-hour time interval, but sufficient measurements must be available to allow a valid extrapolation to a one-hour time interval.

(*1*) *If the background sound level exceeds the referenced Leq sound level limit, the Leq sound levels from facility sources and background sources when combined must not exceed the Leq sound level of the background sources alone by more than three decibels (A).*

(2) The background sound level, measured as Leq, is the existing ambient sound level during a period of peak acoustical energy measured in the absence of sound produced by equipment or operations at the facility. A background sound level monitoring protocol must be submitted to the department for approval prior to conducting background measurements.

(3) Sound levels must be measured using the slow time constant and A-weighting. During the measurement period, no precipitation must occur and wind speeds must not exceed 12 miles per hour.

(4) Measuring instruments must be type 1 or class 1 precision sound level meters, type 2 or class 2 general purpose sound level meters, or corresponding special sound level meters type S1A or S2A.

(5) Noise assessments must include details of the attenuation factors and calculations utilized. Noise assessment calculations are allowed to utilize average annual conditions when calculating atmospheric attenuation.

(6) Mufflers are required on all internal combustion-powered equipment used at the facility.

2.2 Regulations Discussion

The 6 NYCRR Part 360 landfill regulations in Section 360-1.19(j) define limits to sound levels received beyond the property line owned or controlled by the owner or operator of the landfill facility at locations authorized for residential purposes. The sound surveys identified the levels of sound received at residentially-authorized properties adjoining the Seneca Meadows, Inc. landfill in accord with the regulations.

The properties surrounding the landfill are located in zoning districts in the Town of Waterloo and the Town of Seneca Falls that are zoned or authorized for residential, including Low Density Residential, Agricultural, and Flood Plain Protection in the Town of Seneca Falls, and Medium Density Residential, Highway Commercial, and Industrial in the Town of Waterloo. The surrounding residential-use properties contain existing residences and are the sites of former residences. A number of the properties are currently used for agricultural purposes. Non-residential adjoining properties include wetland preserve areas and commercial and industrial facilities located in commercial and industrial zoning districts. Additional areas around the landfill are property holdings of SMI and provide wide buffers from more distant occupied property.

Sound levels received at residentially-authorized properties bordering the eastern boundary of the landfill extending from the south face of the SELF to the northern boundary of the landfill property were identified by measurements at sound survey Locations 1 through 4. The properties along the eastern boundary include a very small number of current residences. The remaining properties along the eastern boundary are extensively owned by SMI and are forested and undeveloped or used agriculturally.

Properties located directly east of the SELF berm on the east side of Route 414 near Location 1 include a small number of former residential-use properties, which are contained in an Industrial zone in the Town of Seneca Falls. The adjoining properties are currently used for agricultural purposes and were fallow during the current sound survey period. One property at 2215 Route 414, which is owned by SMI, includes a former house that was previously used as a construction office and mill shop. The site was not in active use during the annual sound survey. An adjoining construction trailer was occupied during the daytime surveys but did the two stationed vehicles not produce measurable traffic noise. Survey Location 1 represents the former residential-use properties along the east side of Route 414 including the remaining former residential building.

Properties located directly east of the NEX landfill on the east side of Route 414 include a small number of former residential-use and agricultural-use properties, and undeveloped wooded properties in the Highway Commercial and Flood Plain Protection zoning districts in the Town of Seneca Falls. Also to the east of the NEX landfill near Location 2 are located several landfill retention ponds. The survey Location 2 represents a former residential-use and agricultural-use property on the east side of the highway, adjacent to undeveloped properties. The location is vacant with the exception of a storage building.

Properties located south of Location 1, which extend from Salcman Road to the intersection of North Road and Balsey Road, are zoned Highway Commercial and Industrial in the Town of Seneca Falls and contain a number of commercial and industrial facilities. Industrial properties on both sides of Route 414 at the Salcman Road landfill entrance are holdings of SMI, as shown in Figure 2.

Properties between Location 2 and Location 3 directly east of the original SMI landfill include a small number of former residential-use properties and undeveloped wooded properties on both sides of Route 414, and commercial properties on the east side of the highway, which are contained in the Highway Commercial zoning district in the Town of Seneca Falls. The commercial properties include the Exxon Mobil Oil Pipeline facility and the Seneca Meadows Environmental Education Center.

Survey Location 3 represents residential-use properties adjoining the northeast corner of the SMI landfill, including a current residential property on the east side of Route 414, former residential-use properties without residences on both sides of the highway, and undeveloped wooded properties on both sides of the highway. The properties are contained in the Highway Commercial zone in the Town of Seneca Falls. Adjoining commercial property includes an automobile repair facility located north of Location 3.

Residentially-authorized properties adjoining the landfill between survey Location 3 and Location 4 along Route 414 include former residential-use properties on the west side of the highway, an agricultural field on the east side of the highway, and undeveloped wooded properties on both sides of the highway. The properties on both sides of the highway are contained in Highway Commercial zoning districts. Commercial operations in the vicinity of the survey locations include a private vehicle repair facility, the Rochester-Syracuse Auto Auction barn, a commercial truck repair facility, and a graphics production office building.

Survey Location 4 represents residentially-authorized properties to the north of the landfill, including a current residential-use property on the west side of the highway, two residential-use properties on the east side of the highway, and undeveloped properties on both sides of the highway. The properties are contained in the Highway Commercial zoning district in the Town of Seneca Falls. Adjoining property includes undeveloped areas and an agricultural-use parcel contained in an Agricultural zoning district on the west side of the highway, which are SMI property holdings.

Properties east of the Route 414 Highway Corridor zoning district, which extend to Black Brook Road, include industrial properties, flood plain zones, agricultural properties, ponds, and wooded undeveloped properties. The properties include the Renewable Resource Park and the Seneca Meadows Wetlands Preserve, which are holdings of Seneca Meadows. The RRP is the site of the Seneca Energy, Inc. Gas-to-Energy facility and High BTU facility. The industrial properties and other properties provide a noise buffer between the landfill and the residential properties located along Black Brook Road approximately 6000 feet east of the landfill boundary. The depth of woods ranges from approximately 500 feet to 1000

feet. The sound attenuation due to distance from the active Stage 6 landfill area is estimated at 30 dBA or more. The additional sound attenuation from the vegetative screening is estimated at 10 dBA. Noise screening by the NEX landfill berm with overlap to the SMI landfill berm is estimated at 20 dBA. The sound levels received along Black Brook Road from the Stage 6 and Stages 7-8 waste placement activities are inaudible, and are projected to be below the local ambient levels due to the combined distance and screening attenuation factors.

Location 5 represents residential-use properties along the western boundary of the landfill, which are located on both sides of Burgess Road in a suburban grouping of residences to the northwest of the original SMI landfill. The properties are contained in a Low-Density Residential zoning district in the Town of Waterloo. One property on each side of the road in the residential grouping are current holdings of SMI.

Survey Location 6 represents residentially-authorized properties along the western boundary of the landfill along the WEX landfill berm, including two current residential-use properties on the east side of Burgess Road. The properties between the western boundary of the landfill and the residences are extensively used for agricultural purposes. Property on the west side of Burgess Road opposite Location 6 is a holding of SMI and was formerly used agriculturally. Further west of Burgess Road opposite Location 6 is the Meadow View soil mine and various retention ponds, which are property holdings of SMI. The soil mine was not in active operation during the sound survey period. The properties along Burgess Road are contained in a Low-Density Residential zoning district in the Town of Waterloo.

Survey Location 7 represents residentially-authorized properties at the southwest corner of the landfill holdings, including several current and former residential-use properties located on the east side of Burgess Road, and agricultural-use and undeveloped land on the west side of Burgess Road. Several of the residential properties to the south of Salcman Road are holdings of SMI. Several properties to the north of Salcman Road are former residential-use properties without residences that are holdings of SMI. The North Seneca Ambulance company is located on property southwest of the survey location at the intersection of North Road and Burgess Road. Each of these properties are contained in a Moderate-Density Residential zoning in the Town of Waterloo. The nearest residence to the west is located approximately 1200 feet west of Burgess Road, located on Agricultural zoning district in the Town of Waterloo. The sound levels at the residence are estimated to be 10 dBA lower with respect to levels measured at survey Location 7 due to the added distance from the Stage 6 landfill area and the Salcman Road materials storage area.

Survey Locations 8 and 9 represent residential-use properties along the south boundary of the landfill on the north and south sides of North Road. Properties on the north side of North Road are located in the Moderate-Density Residential zoning district of the Town of Waterloo. Several of the properties are holdings of SMI. Properties on the south side of North Road are located in the Village of Waterloo.

Other properties along the south boundaries of the landfill property include bus transportation facilities for the Town of Waterloo school district and the Seneca County Fairgrounds. There was infrequent employee traffic leading to and from the bus garage during the survey period. The fair grounds were not in use during the surveys. Survey Location 8 is in the vicinity of a grade crossing of the Finger Lakes Railway. Approximately two trains regularly crossed the grade per day during the survey period, as identified on the logging records.

Survey Location 10 represents agricultural-use properties that are residentially-authorized, located along the western boundary of the landfill adjacent to the Stage 6 landfill area and the Stage 5 construction area. Properties on the east side of Burgess Road are contained in Low-Density Residential zoning in the Town of Waterloo. The adjoining properties between the landfill's western boundary and Burgess Road do not contain residences, and have previously been used for agricultural purposes although were found to be fallow and overgrown during the surveys. Properties on the west side of Burgess Road are contained in Low-Density Residential zoning in the Town of Waterloo, and include a former residential-use property that is vacant except for a storage building, and buffer properties to the north of the Meadow View Mine, which are current holdings of SMI.

Properties at the southeast corner of the facility in the vicinity of the intersection of North Road and Route 414 include the Seneca County Offices, Wal-Mart Super Center, Advanced Auto, Generations Bank, Hampton Inn, and other commercial operations. The properties are included in a Highway Commercial zoning district in the Town of Seneca Falls and in the Village of Waterloo. The Finger Lakes Railway borders a portion of the landfill's south boundary. The properties are contained in a Highway Commercial zoning district in the Town of Seneca Falls and in the Village of Waterloo. The properties do not contain any residences and were not represented in the property line sound surveys.

The north boundary of the landfill adjoins undeveloped wooded properties that are zoned Agricultural. The Sherman Compressor Facility of Chesapeake Appalachia LLC is located on a remote private parcel, which is south of the landfill's northern property boundary. The undeveloped agricultural properties do not contain any permanent residences and were not represented in the property line sound surveys. The wooded properties provide a noise buffer between the landfill and the residential properties located along Strong Road approximately 8500 feet north of the active Stage 6 landfill area. The depth of woods is approximately 4800 feet deep. The sound attenuation due to distance from the active Stage 6 landfill area is estimated at over 30 dBA. The additional sound attenuation from the vegetative screening is estimated at 10 dBA. The additional sound attenuation from the SMI berm is estimated at 10 to 20 dBA. The sound levels received beyond the north boundary from waste placement activities at Stage 6 and Stages 7-8 are projected to be below the local ambient levels with the combined distance and screening attenuation factors .

The sound surveys and assessments for the Seneca Meadows Landfill operations reference the suburban community character to evaluate the acceptability of noise levels received at the boundaries of the landfill adjoining residential-use properties. The noise level limits described in Section 360-1.19(j) of the 6 NYCRR Part 360 regulations for the suburban community are 62 dBA L_{eq} in daytime hours (7:00 a.m. to 10:00 p.m.) and 52 dBA L_{eq} in nighttime hours (10:00 p.m. to 7:00 a.m.). The suburban character has been used in previous annual sound surveys and has determined to be the most appropriate community designation based on the character and density of the residential-use properties, the extent of the adjoining commercial and industrial facilities and their ongoing growth, and the volume and growth of highway and rail traffic on adjoining facilities, within one mile of the landfill.

The suburban designation was used to characterize the residential properties in the Low-Density and Moderate Density Residential zones and Highway Commercial zones and the extensive commercial and industrial development at the intersection of Route 414, North Road, and Balsey Road. Businesses include the Wal-Mart Super Center, Hampton Inn, Advance Auto Parts, and Generations Bank.

The volume of traffic on State Route 414 opposite the landfill is listed in the most recent NYSDOT Traffic Data Report at 6711 (AADT) for the year 2019. This is steady with AADT traffic counts of 6769 for the year 2018, and 6759 for the year 2017. These counts represent growth from previous years, with counts of 5905 for the year 2016, 5605 for the year 2015, 5632 for the year 2014, 5783 for the year 2013, 6020 for the year 2012, 5710 for the year 2011, 5690 for the year 2010, 5570 for the year 2009, and 5570 for the year 2008.

The volume of traffic on the on the segment of North Road bordering the south boundary of the landfill from Route 414 to Burgess Road is listed in the recent traffic report with an AADT of 4962 for the year 2020. This is a reduction from past counts of 6532 for the year 2019, 6576 for the year 2016, 6602 for the year 2015, 6154 for the year 2014, 5929 for the year 2011, and 5347 for the year 2009.

The volumes of traffic on the segment of North Road from Burgess Road to Route 96 are listed with AADT steady estimates of 5354 for the year 2019, 5368 for the year 2018, 5511 for the year 2016, 5735 for the year 2015, 5709 for the year 2014, and 5770 for the year 2009.

The standard sound level limits specified in 6 NYCRR Part 360 Section 360-1.19(j) for the suburban community were referenced to evaluate the acceptability of sound levels at the noise monitoring locations. The standard daytime and nighttime limits are applicable along the south and west boundaries. The surveys determined the daytime 62 dBA L_{eq} criterion was extensively exceeded at Locations 1 and 2, occasionally exceeded at Location 3, and met at Location 4. The surveys further determined the nighttime 52 dBA L_{eq} criterion was frequently or extensively exceeded at Locations 1 to 4.

The exceedances are attributed to background traffic, industrial sources, and environmental sources. The background noise levels are defined as the ambient noise levels that exclude facility noise contributions, as described in Section 360-1.19(j)(2) of the 6 NYCRR Part 360 regulations. The daytime background noise levels during hours of facility operation and during peak traffic periods are dominated by traffic sounds. The nighttime background noise levels are dominated by sounds of traffic and environmental sources. Part 360 subparagraph 360-1.19(j)(1) states that sound levels that do not exceed the background noise levels by more than three decibels. The measurements determined that background noise contributions from traffic and the SEI gas-to-energy facility are dominant sources at Locations 1 to 4, and it is not practical to measure facility noise alone. Sound level acceptability at these locations is accordingly additionally evaluated based on the perceptibility of landfill source sounds above the background noise environment.

The 6 NYCRR Part 360 regulations define requirements for sound level instrumentation in Subparagraphs 360-1.19(j)(3) and 360-1.19(j)(4). The sections specify measurements to be made with Type 1 or Class 1 precision sound level meters, Type 2 or Class 2 general purpose sound level meters, or Type S1A or S2A special purpose sound level meters, in terms of L_{eq} with settings of A-weighting and slow time response. Sampling sound level measurements were obtained with a Type 1 sound level meter which conforms to specifications of ANSI/ASA S1.4-2014/Part 1 / IEC 61672:1-2013. Logging sound level measurements were obtained with Type 2 sound level meters which conform to specifications of ANSI S1.4-1983. The meters were periodically calibrated with acoustical calibrators which conform to specifications of ANSI/ASA S1.40-2006 (R2016).

3.0 Noise Measurement Surveys

Sound levels were monitored along the facility boundaries of the Seneca Meadows, Inc. landfill to assess compliance of received facility noise levels during the year 2020 in accord with the landfill's approved Environmental Monitoring Plan. Noise measurements and assessments were performed in accord with the operational requirements section of the 6 NYCRR Part 360 *Regulations for Solid Waste Management Facilities* of November 2017 by the New York State Department of Environmental Conservation. The operational requirements stipulate that noise levels received beyond the landfill property lines at properties used or authorized for residential purposes that are produced by equipment or operations at the landfill not exceed designated sound level limits. The sound level limits are described in terms of the *energy equivalent sound level* referenced to a one-hour averaging period, designated ($L_{eq\text{-}1\,hr}$), and are defined by the character of the community (rural, suburban, and urban), and by the period of the day (daytime, nighttime).

3.1 Noise Assessment Methodology

The measured sound levels of landfill operations received at survey locations adjoining residentially-authorized properties were assessed for acceptability in comparison to the daytime and nighttime sound level limits specified for the suburban community character that are contained in 6 NYCRR Part 360 Section 360.1.19(j). At survey locations where the existing background noise levels were found to exceed the standard sound level limits, assessments of noise acceptability are based on comparisons of the measured sound levels to the background sound levels in accord with Section 360.1.19(j)(1), and in addition, relative to the perceived audibility of sounds of landfill operations. The assessments of noise acceptability at the receiver boundaries reference the permissible sound level limits for the suburban community designation, which is based on the character and density of the residential communities along the borders, the zoning classifications, the extent of commercial and industrial development around the site, and the volume and growth of traffic on the adjoining highways and roadways.

Sound level surveys were performed at ten representative locations on the boundaries of the facility adjoining properties zoned or authorized for residential use. The survey locations represent current residential-use properties with residences, former residential-use properties without residences, and properties within residentially-authorized districts that are undeveloped or used for agricultural purposes. The noise environment was characterized at each survey location over a five-day period of weekday operations. The sound survey location used as points of compliance are described in Figure 2 as Locations 1 through 10.

Surveys determine the noise environment around the SMI facility is dominated by ambient noise generated by roadway traffic, nearby industrial sources, and environmental sources. The environmental sources

included insects, birds, wind across vegetation, and farming activities, which contributed to the measured noise levels at each survey location and were in particular dominant along the western and southern boundaries of the landfill facility. A number of agricultural-use parcels exist along the western and eastern boundaries of the landfill. Farming activities were observed during the sound monitoring period at the parcel west of the Stage 6 landfill berm. Other parcels were fallow during the survey period, including areas east of the SELF, a parcel adjacent to Survey Location 4, and areas west of Burgess Road. Industrial sources that contributed to the ambient noise environment along the eastern boundary included the Seneca Energy Inc. gas-to-energy facility and a gas compressor station located north of the landfill near Location 4. The Meadow View soil mine to the west of the landfill was not in operation during the survey period.

The eastern boundary of the landfill facility along State Route 414 in the Town of Seneca Falls adjoins a number of business-use properties contained in properties zoned Industrial (I), a small number of former and current residential-use properties contained in properties zoned Highway Commercial (C-2), and undeveloped wooded areas.

Properties south of survey Location 1 along Route 414 are contained in Highway Commercial and Industrial zoning districts, and include a number of commercial businesses and industrial facilities including bottling and packaging facilities and self-storage facilities, but not residences. Properties opposite the southeast corner of the landfill facility along Route 414 in the vicinity of the intersection of North Road and Balsey Road contain a number of commercial businesses including a welding facility and an automotive parts store, and do not contain residences.

Survey Locations 1 and 2 represent former residential-use properties opposite the SELF and NEX (Stages 7-8) landfill berms. The former residential-use properties are current holdings of SMI and do not contain residences. One previous residential-use property includes a former residence that has been used as a construction office, but was inactive during the sound surveys. Traffic on Route 414 is the dominant source of noise along the eastern boundary of the landfill adjacent to the highway. The survey locations are also in the vicinity of the Seneca Energy, Inc. Gas to energy plant and High BTU plant, located on the east side of Route 414 in an industrial park. The gas facilities were in full production during the sound surveys. Sounds of the SEI facilities were perceptible at Locations 1 and 2 in daytime hours between traffic passes, and were increasingly perceptible in the late afternoon period after the normal hours of landfill operation and in evening hours when highway traffic volumes were reduced. Sounds of landfill operations and maintenance activities were not perceptible at Locations 1 and 2 due to the screening of the SELF and NEX berms, and therefore did not contribute to the measured noise levels at Locations 1 and 2.

Survey Location 3 represents residentially-authorized properties to the east of the original SMI landfill, including one residence on the east side of Route 414, one former residential-use property on the west side

of the highway, and surrounding wooded undeveloped properties that are holdings of SMI. Other properties near Location 3 contain commercial facilities, including a three-bay automobile repair facility, the Seneca Meadows Environmental Education Center, and the Exxon Mobil Oil Pipeline facility. These facilities did not produce significant traffic or perceptible noise at the survey location during the survey period. Traffic on Route 414 is the dominant source of noise at Location 3. Other sources of sound were environmental, including birds, insects, and wind. Sounds of landfill operations and maintenance activities were not perceptible, and therefore did not contribute to the measured noise levels at Location 3.

Sounds of street sweeping along the highway shoulders and on the site entrance were minimally perceptible during passbys at Locations 1, 2, and 3 but did not significantly add to measurements and were not distinguishable at other survey locations.

Survey Location 4 represents residentially-authorized properties to the northeast of the original SMI landfill, including one residential-use property on the west side of Route 414, two residential-use properties on the east side of the highway that contain two residences, and surrounding undeveloped and agricultural-use properties that are property holdings of SMI. Other properties near Location 4 contain commercial facilities, including a commercial graphics facility, an automobile auction facility, and a vehicle repair facility on the west side of Route 414 . The commercial facilities did not produce significant measurable site traffic noise or mechanical noise at Location 4. The Sherman Gas Compressor Station is located north of the location, and produced steady noise that was perceptible in the daytime between traffic passes, and in afternoon and evening hours when highway traffic volumes on Route 414 were reduced. Traffic on Route 414 is the dominant source of noise at Location 4. Other sources of sound were environmental, including birds, insects, amphibians, and wind. Sounds of landfill operations and maintenance activities were not perceptible, therefore did not contribute to the measured noise levels at Location 4.

The sound surveys at Locations 1 and 2 determined that highway traffic on Route 414 caused the measured background noise levels to consistently exceed the Part 360 standard 62 dBA L_{eq} daytime criterion during the operational period of the landfill predominantly due to highway traffic. The relative exceedances at Locations 1 and 2 are attributed to added traffic noise from acceleration and deceleration events in the vicinity of the industrial driveways along the highway, including uses of jake brakes. The sound surveys at Locations 1 to 4 determined the nighttime background sound levels consistently exceed the standard 52 dBA L_{eq} criterion, in particular in the morning peak traffic period. The sound surveys at Location 3 determined the daytime sound levels generated by traffic exceeded the daytime sound level limits in a number of time periods. The sound surveys at Location 4 determined the daytime sound levels complied with the daytime sound level limits. Traffic on the highway opposite Locations 3 and 4 was operating at steady speed.

The hourly-average sound levels at Locations 1 and 2 with variable traffic were typically found to be more than 3 dBA greater than the hourly-average sound levels at Locations 3 and 4 with steady traffic in corresponding hours, as described in the alternate criterion section of regulations Section 360.1.19(j)(1). Accordingly, conclusions on the acceptability of the hourly-average sound levels at Locations 1, 2 and 3 in the daytime and Locations 1 to 4 in the nighttime are determined based on the perceived audibility of sounds of landfill operations.

Properties located east of Route 414 include a number of undeveloped wooded parcels owned by SMI. These include the Seneca Meadows Wetland Preserve, which is contained on property zoned Flood Plain Protection. The properties function as buffer lands to separate the landfill from residential properties further to the east that are located along Black Brook Road approximately 6000 feet east of Route 414. The sounds of the landfill facility were not perceptible along Black Brook Road during the surveys due to the attenuation of the intervening wooded lands, the large attenuation due to distance, and the masking effects of local environmental noise and traffic on Black Brook Road and State Route 414. The residential property boundaries east of the landfill were not included in sound surveys, and compliance is assumed based on the inaudibility of landfill operations.

The western boundary of the facility along Burgess Road in the Town of Waterloo adjoins residential-use properties in districts zoned Low Density Residential (R1). Survey Location 5 represents a number of residentially-zoned properties located northwest of the original SMI landfill on both sides of Burgess Road opposite the western boundary of the landfill. The properties contain suburban-style residences and mobile homes. The properties are separated from the landfill by Black Brook and extensive wooded areas. Other properties along Burgess Road south of Location 5 are residentially-zoned and are densely wooded and undeveloped, and include private properties and holdings of SMI. The prominent sources of sound at Location 5 were determined to be environmental, including birds, insects, and traffic on Burgess Road and Route 414. Sounds of normal daily landfill operations at Stage 6 and construction at Stage 5 were only occasionally faintly perceptible at Survey Location 5. Sounds of truck-mounted odor and dust neutralizing system pumps located on the west edge of Stage 6 during the surveys were faintly perceptible. The landfill operations accordingly did not significantly contribute to the measured sound levels. Conclusions regarding sound level acceptability at Location 5 are based referencing the permissible sound level limits of 6 NYCRR Part 360 Section 360.1.19(j).

Survey Location 6 represents property on the east side of Burgess Road adjoining the Western Expansion Landfill (WEX), which includes two residences and agricultural-use parcels. The background sources of sound at Location 6 were largely environmental, and included farming activities. Sounds of landfill

operations at Stage 6 and Stages 7-8. and construction at Stage 5, were not significant or distinguishable. Measured sound levels were influenced in daytime periods by sounds of construction of the leachate collection pipe system on the west side and base of Stage 6, and by occasional sounds of soil truck passbys and water truck passbys. Conclusions regarding sound level acceptability at Location 6 are based referencing the permissible sound level limits of 6 NYCRR Part 360 Section 360.1.19(j). The limited exceptions observed to be caused by construction sources were excluded from compliance conclusions because construction operations are not regulated by Part 360.

Location 7 represents residentially-zoned properties at the southwest corner of the landfill facility on the east side of Burgess Road at the intersection of Salcman Road, which are zoned Moderate Density Residential (R2) in the Town of Waterloo. The represented properties include five residences on the east side of the Burgess Road south of the intersection, of which four are owned by SMI. The represented properties include two former residential-use properties located on the east side of Burgess Road north of the intersection, which are owned by SMI and are without residences. Properties on the west side of Burgess Road opposite Location 7 are zoned Low Density Residential (R1) in the Town of Waterloo. The properties include the Meadow View Mine, which was not in operation during the sound surveys, and undeveloped parcels that have been used agriculturally but were fallow during the sound surveys. The properties are holdings of SMI. Sources of sound at Location 7 were largely environmental, consisting of traffic on North and Burgess Roads, birds, insects, wind, and amphibians in a retention pond. Sounds of landfill traffic on Salcman Road and sounds of soil loading and transport activities in the materials storage areas South of Salcman Road were partly audible. Conclusions regarding sound level acceptability at Location 7 are based referencing the permissible sound level limits of 6 NYCRR Part 360 Section 360.1.19(j).

Locations 8 and 9 represent residentially-zoned properties bordering the southern boundaries of the landfill along the north side of North Road, which are located in the Town of Waterloo and are zoned Moderate Density Residential (R2). A small number of residences and small business operations are located in a suburban grouping between the grade crossing of the Finger Lakes Railway and the intersection of Inslee Street. Non-residential properties that adjoin the southern boundaries of the landfill include unzoned property annexed by the Village of Waterloo between Salcman Road and North Road that contains the transportation facilities for the Waterloo Central School District, and adjacent undeveloped parcels owned by SMI that do not contain residences. Properties along the south side of North Road opposite the landfill property holdings include a small number of residential located in the Village of Waterloo, and the Seneca County Fairgrounds between Inslee Road and Swift Street located in the Village of Seneca Falls. The southern boundary of the landfill, east of the railroad grade crossing on North Road, adjoins the Finger Lakes Railway and commercially-zoned properties zoned Highway Commercial in the Town of Seneca Falls, which

contain a bank, auto parts store, and a church, and other properties that are wooded and undeveloped. Sound levels were not measured or characterized at the commercial properties at the southeast corner of the facility. Sources of sound at Locations 8 and 9 primarily consist of environmental sources, including birds, wind, insects, and traffic on North Road. Sounds of soil loading and transport activities in the materials storage areas South of Salcman Road, and traffic on Salcman Road, were partly audible. Sounds of refilling of water trucks at the south retention pond were audible at the receiver locations. Tire sorting and processing at the tire processing facility on Salcman Road were not distinguishable at the receptors. Other environmental sounds include twice daily train passes with horns at the North Road grade crossing. Conclusions regarding sound level acceptability at Location 7 are based referencing the permissible sound level limits of 6 NYCRR Part 360 Section 360.1.19(j), with noted environmental exceptions.

Survey Location 10 represents agricultural-use properties on the east side of Burgess Road and a former residential-use property, undeveloped properties, and former agricultural-use properties on the west side of Burgess Road. The location is opposite the currently active landfill area and construction areas of Stage 6. The agricultural parcel was fallow during the sound surveys. The former residential-use property and other properties adjacent to the survey location are holdings of SMI. Sounds of truck-mounted odor and dust neutralizing system pumps located on the west edge of Stage 6 during the surveys were perceptible at Location 10. Sounds of landfill waste placement sources at Stage 6, construction at Stage 5, and passbys of construction equipment to the leachate system construction site, were partly perceptible due to screening of the berm. Conclusions regarding sound level acceptability at Location 10 are based referencing the permissible sound level limits of 6 NYCRR Part 360 Section 360.1.19(j), with noted temporary exceptions evaluated to be acceptable based on land use.

Limited facility maintenance activities were observed during surveys, consisting of cleaning of leachate collection systems north of NEX, operations of a dust and odor neutralizing system at Stages7-8, lawn mowing at SMI, and watering of site roads. These activities were not distinguishable at the receptors. A few individual pieces of idle equipment were stationed nearby.

The operations of the landfill during the survey period are considered to be representative of the seasonal peak period of landfill operations, based on the volume of waste receipts identified in SMI operational records, and the extent of construction and maintenance operations.

The community noise environment at locations on the borders of the landfill included sounds generated by ongoing construction operations in the Stage 6 area. The observed activities consisted of placement and compacting of soil liner on the base of the cell, grading of the overlay of the SMI landfill, construction of

a leachate collection system on the west side of Stage 6, and excavation at the waste placement cell on the west side of Stages 7-8. NYSDEC rulings have affirmed that the Part 360 noise regulations pertain to landfill facility operations and exclude construction activities. The construction activities and movements of construction equipment at Stage 6 are attributed to the two noise exceptions at survey Location 6. Due to the combined operations of waste placement with construction activities, it was not practical to separately identify and exclude the contributions of construction noise from measurements of landfill operations.

The sound surveys representing operations for the year 2020 at Seneca Meadows were scheduled during the seasonal peak period of landfill waste placement operations, site maintenance operations, and construction activities. The survey period further coincided with the seasonal peak period for traffic on surrounding highways. The surveys therefore represent the typical maximum hourly-average noise levels received along the facility boundaries in the 2020 season. The monitoring period also corresponds to the period when the surrounding community residents might be outdoors and most sensitive to received noise. Evaluations of the acceptability of the received noise were based on criteria contained in the 6 NYCRR Part 360 Solid Waste Management Facilities Regulations, in effect November 4, 2017.

Noise measurements and assessments reported herein were performed exclusively and independently by Aurora Acoustical Consultants Inc. of East Aurora, New York. The noise assessment procedures and survey locations used in the year 2020 correspond to those employed in previous annual sound surveys that were performed by the consultant.

Sound level monitoring was performed continuously at representative locations on the landfill property lines through a consecutive five-day period beginning on the morning of Monday, July 6, 2020 and continued through the evening of Friday, July 10, 2020. The sound level monitors continuously logged and identified the sound levels throughout daytime and nighttime by fifteen minute averaging periods, which were extrapolated to one-hour averages. Sampling sound surveys were performed at each of the survey locations to additionally characterize the facility sound and ambient sound levels and identify contributing sound sources on Monday and on Friday of the survey week. Sampling surveys were performed in three time periods during waste operations and in one background period after normal hours of waste acceptance.

The landfill waste acceptance and placement operations, site maintenance operations, and construction activities were relatively consistent on each day of the survey period, referencing the logs of hourly and daily volumes of materials and numbers of vehicle loads, the landfill equipment logs, and the construction equipment logs.

The hourly number of received loads of external DEC waste materials was fairly uniform up to noon time on each weekday, with the peak hour of typically from 7:00 a.m. to 8:00 a.m. The daily weekday total of DEC waste trucks ranged from 376 to 465.

The hourly number of received loads of external cover fill materials was fairly uniform from 8:00 a.m. to 2:00 p.m. The daily total of weekday fill trucks ranged from 111 to 251. The hourly number of received loads of external BUD materials varied by hour. The daily total of weekday BUD trucks ranged from 49 to 60. The hourly number of loads of external tire acceptance were variable on each day. The total daily number of tire loads ranged from5 to 15 on each weekday. There were minor numbers of internal transport of DEC and BUD materials on each day.

The total number of internal and external trucks was fairly uniform on Monday to Wednesday and on Friday, ranging from 762 to 776, with a slightly lower volume of 677 vehicles on Thursday.

The sound level loggers and analyzers used to monitor and sample the noise levels are identified in Appendix A to this survey report, along with the acoustic calibrators used to field calibrate the instruments. The noise loggers used to continuously monitor the noise consisted of Metrosonics, Inc. model db3080 sound level analyzers. The loggers conform to requirements for Type 2 sound level meters established in American National Standard ANSI S1.4-1983(R2006) with Amendment S1.4A-1985 (R2006). The sound level loggers were calibrated using a Metrosonics model cl304 acoustic calibrator having performance characteristics conforming to ANSI Standard S1.40-2006 (R2016) with an acoustical output signal that is traceable to the National Institute of Standards and Technology. The logging instruments were sealed in steel boxes for purposes of security, which were weatherproof . The enclosures were externally sealed and waterproofed to further prevent effects of humidity and moisture on the loggers. The microphones were extended from the enclosures on extension poles to provide free-field measurements with minimal screening and reflection effects of the enclosures and poles. The microphones were covered with weatherproofed windscreens to minimize noise artifacts from wind and to minimize effects of moisture on the microphone cartridges. The loggers were secured to utility poles and trees on the boundaries of the SMI property holdings in locations that prevented intentional tampering and generation of noise artifacts by the public.

The noise loggers were programmed to continuously sample the instantaneous sound levels and record the average L_{eq} noise levels in consecutive fifteen minute periods ($L_{eq\text{-}15\,min}$). The fifteen-minute durations were used to obtain detailed data for identifying the presence of sporadic noise artifacts or unusual noise events, such as passes of noisy vehicles or trains. The data were processed into one-hour averages ($L_{eq\text{-}1\,hr}$) to allow direct comparison to the hourly-average sound level criteria of the Part 360 regulations. The complete

logging data and graphical time histories of the average sound levels for each survey location are included on Appendix B to this report. The logging data describes both the $L_{eq\text{-}15\ min}$ and $L_{eq\text{-}1\ hr}$ average daytime and nighttime sound levels, and identifies peaks generated by rain events on Wednesday of the survey week and sporadic peaks that are attributed to train passes or noisy traffic. The $L_{eq\text{-}1\ hr}$ average noise level data obtained from the logging at each survey location are summarized in Table 1.

The noise loggers recorded additional sound level metrics, which are reported in the tabular record data, including the maximum A-weighted levels with slow time response, and statistical sound levels L_{10} and L_{99}, the latter which corresponds to the minimum sound level. The added metrics are not specifically used in determining compliance in accordance with noise requirements of the NYSDEC regulations. The added metrics were useful for characterizing the range of environmental sound levels at each location, including identifying the presence of artifacts in a sample period, in particular those generated at the start and ending of logging during the initiation and retrieval of the instruments. Artifacts generated by the surveyor during the installation and retrieval of the loggers in the starting and ending $L_{eq\text{-}15\ min}$ averages were excluded from the calculated $L_{eq\text{-}1\ hr}$ average sound levels.

Landfill sound sources were identified and characterized during the survey period with sampling surveys performed with the portable sound level analyzer. The surveys provide additional noise data and verify the data obtained by the continuous noise loggers. The surveys were performed in representative time periods on the initial day of logging and on the last day of logging. On each day the surveys were performed during two daytime periods coinciding with normal landfill operating hours, and in periods after the hours of normal waste acceptance. Sampling at each location occurred over a portion of an hour sufficiently long to characterize a one-hour sound level average as defined in the Part 360 regulations. The portable survey instrumentation included a Larson Davis model 831 sound level analyzer, which conforms to ANSI requirements for Class 1 (precision) sound level meters defined in ANSI/ASA S1.4-2014/Part 1 / IEC 61672:1-2013. The sound level analyzer was programmed to record the L_{eq} sound level data in consecutive one-second periods to allow detail characterization of prominent sound sources. The sound level analyzer was calibrated before and after each series of measurements using a CEL model 284/2 acoustic calibration source, which has characteristics conforming to ANSI/ASA S1.40-2006 (R2016) and acoustical output signal that is traceable to the National Institute of Standards and Technology. The portable analyzer model numbers are listed in Appendix A. The sampling data from the portable analyzer for surveys on Monday are reported in Appendix C and for Friday are reported in Appendix D. The sampling sound level data are summarized in Table 2.

3.2 Selection of Survey Locations

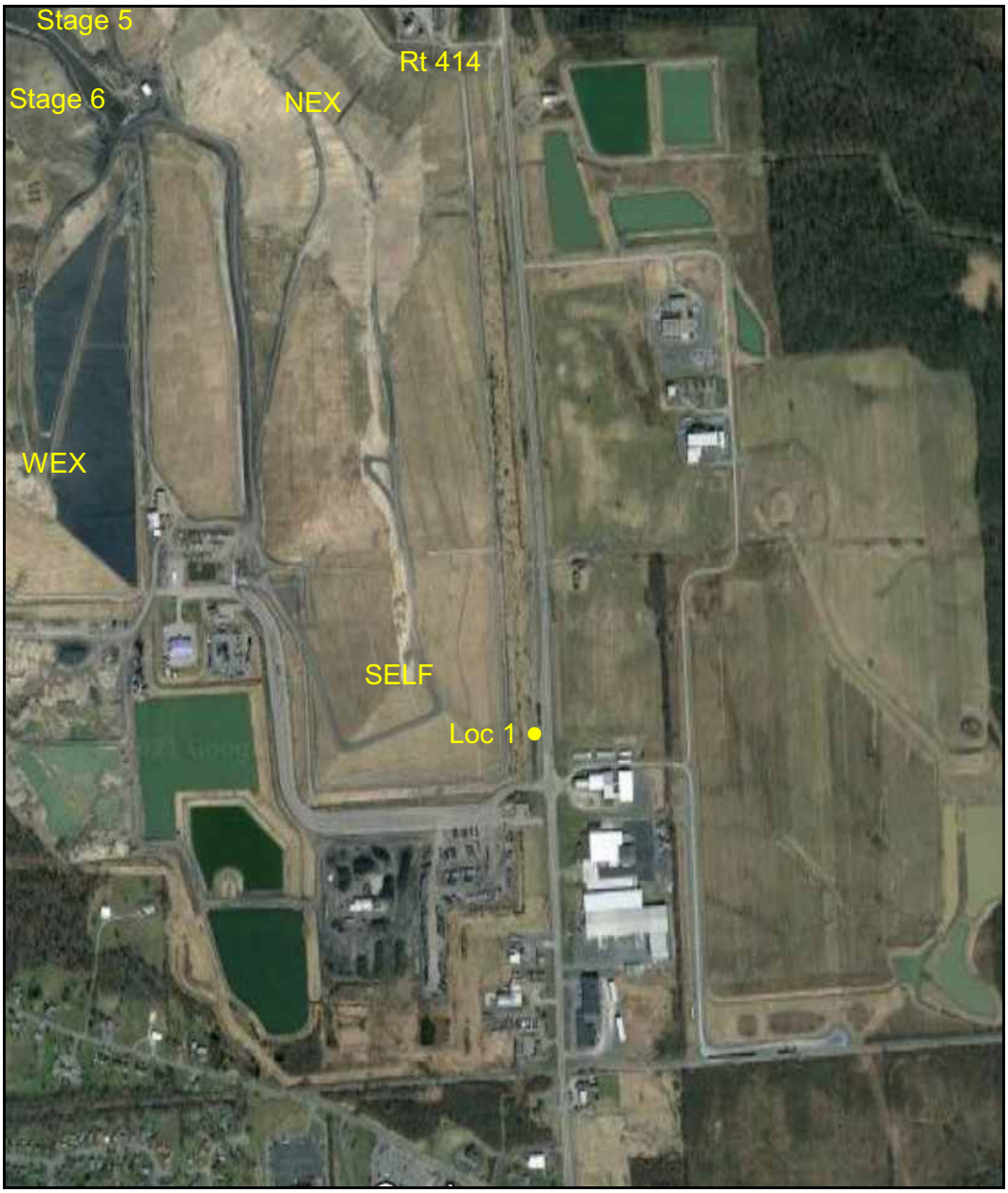
The survey locations used to perform noise logging and sampling are described on the Seneca Meadows, Inc. zoning and property holdings plan shown in Figure 2. The following section describes the community around each location. The survey locations and adjoining properties are further described in aerial photographs and photographs obtained during the sound surveys.

Survey Location 1 was chosen to represent several former residential-use properties on the east side of Route 414, which adjoin the east boundary of the Southeast Landfill. The properties are contained in the Industrial and Highway Commercial zoning districts of the Town of Seneca Falls. The Renewable Resource Park borders the former residential-use properties to the east, which contains the Seneca Energy, Inc. gas-to-energy facility and High BTU facility, which were in full operation during the sound surveys. One former residential building remains on the property at number 2215 Route 414, which is not residentially occupied and was formerly used as a construction office. A trailer is located adjacent to the building that is used as a construction office by the landfill construction company. The properties are holdings of SMI. The noise monitor was mounted to a power utility pole located on the eastern landfill boundary, 500 feet northeast of the existing former residence.

Noise levels received at survey Location 1 are predominantly generated by traffic on State Route 414, including sounds of vehicles accelerating and decelerating with jake brakes in the vicinity of Salcman Road. Sounds of landfill waste placement operations at Stage 6 with truck traffic operating at grade on the west side of the SELF, and at Stages 7-8, with truck traffic operating on the plateau of the SELF, were not audible at Location 1. The Seneca Energy, Inc. gas-to-energy plant includes a number of engine-generators that are enclosed in buildings, and outdoor enclosed flares. The Seneca Energy II High BTU plant contains processing equipment and compressors that convert the landfill gas to pipeline grade renewable natural gas. Operations of the equipment at the gas-to-energy facilities were perceptible between daytime traffic and in daytime evening periods after the afternoon peak traffic period. Construction activities at the base of Stage 5, on the overlap of SMI, and on the west side of Stage 6. were not audible at Location 1.

View to north of Location 1 with SEI facility and construction office on east of highway to right

View to south at Location 1 with former residence (construction office) on east side of highway to left



Aerial view of Location 1 at east boundary of SELF landfill, opposite former residential-use properties on east side of Rt 414

Survey Location 2 represents former residential-use property and undeveloped property on the west side of State Route 414 adjacent to the eastern boundary opposite the NEX landfill area. The adjoining properties are holdings of SMI. The former residential property contains a storage building and is the current site of the east retention ponds. A storage building exists but there are no residential buildings on the property. The noise logger was mounted to a utility pole on the eastern boundary adjacent to the eastern berm of the NEX landfill approximately 400 feet south of the entrance to the leachate storage facility.

Noise levels at survey Location 2 are dominated by traffic noise from State Route 414, including sounds of accelerating and decelerating vehicles and jake brakes. Waste placement activities at Stage 6 and at Stages 7-8 and associated truck traffic were not perceptible. Operations of the Seneca Energy, Inc. gas-to-energy facility were perceptible between traffic passes. Vehicles were occasionally observed to enter and exit the leachate facility on the adjacent entrance.

View to north of Location 2 with former residential-use properties and undeveloped properties on east side of Rt 414, right

View to south of Location 2 with former residential-use properties and SEI facility on east side of Rt 414, left

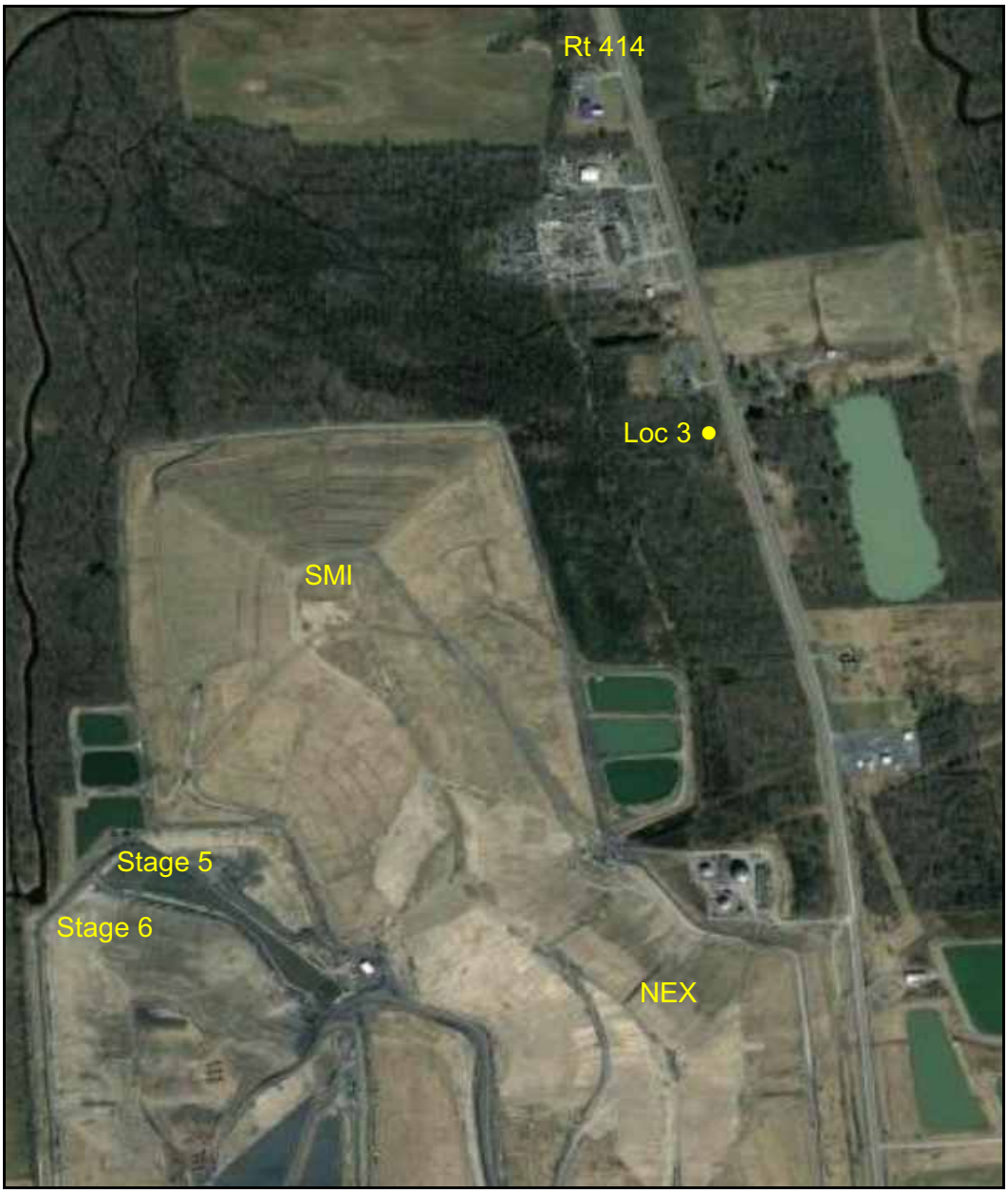
Aerial view of Location 2 adjacent to NEX landfill, opposite former residential property

Survey Location 3 represents a current residential-use property located on the east side of Route 414, former residential use properties on the west side of Route 414, and undeveloped wooded property on both sides of the highway along to the eastern boundary of the landfill, opposite the northeast corner of the original SMI landfill. The properties are contained in the Highway Commercial zoning district in the Town of Seneca Falls. The noise monitor was located on the eastern boundary of the landfill at the site of a former residence at the edge of the wooded area. The survey location is approximately 300 feet south of the current residence

on the east side of the highway, 350 feet south of an automobile repair facility on the west side of the highway, and 800 feet south of the former residential property on the west side of the highway. Noise levels at survey Location 3 were dominated by sounds of traffic on State Route 414. Sounds of landfill operations at Stage 6 and Stages 7-8 were not perceptible. Sounds of construction activities at Stage 5 were also not perceptible.

View to north at Location 3 toward residence on east side of highway to right, behind spruce trees

View to south at Location 3 of undeveloped property on east side of highway to left
and former residential-use property on west side of highway to right



Aerial view of Location 3 opposite SMI landfill with residence to northeast, with commercial and former residential properties to north, and surrounding undeveloped properties

Survey Location 4 represents current residential-use properties on the east and west sides of Route 414, and undeveloped wooded and agricultural parcels located northeast of the original SMI landfill. The survey location is 300 feet south of a residence on the west side of the highway, and 500 feet north of two residences on a private road on the west side of the highway. A commercial graphics facility is located on the adjacent property parcel to the south. An automobile auction facility and commercial vehicle repair facility are located 800 feet south of the location. The properties on both sides of the highway are contained in the

Highway Commercial zoning district in the Town of Seneca Falls, and are extensively owned by SMI. The survey location was adjacent to an open agricultural field on the west side of the highway, which is zoned Agricultural and owned by SMI. There were no farming activities on the field at the time of the surveys. A gas compressor facility is located approximately 1600 feet west-northwest of the survey location, which produced audible noise in the daytime between traffic and in hours after the afternoon peak traffic period.

The noise levels measured at this location are due to traffic on Route 414 and environmental noise sources including birds, insects, and wind in trees. Landfill operations at Stage 6, site maintenance activities, and construction activities at Stage 6 area were not perceptible.

View to north from Location 4 (residence at left)

View to south from Location 4 with undeveloped property on east side of highway to left, and undeveloped property and commercial property on west side of highway to right

Aerial view of Location 4 adjacent to residential-use properties to north and southeast

Noise survey Location 5 represents a number of residential properties on the western boundary of the landfill, northwest of the SMI landfill. The location describes a suburban grouping of homes located on both sides of Burgess Road contained in a Low-Density Residential district in the Town of Waterloo. The survey location was on the landfill property line at Black Brook, approximately 500 feet east of Burgess Road and

430 feet west of the access road at the northwest corner of the original SMI landfill. The environment noise at the location is characterized by environmental sounds consisting of birds, insects, amphibians, and wind in trees, and ambient sounds of traffic on Burgess Road and Route 414. Sounds of landfill operations at Stage 6 and and construction activities at Stage 5 and the SMI overlap were occasionally faintly perceptible at times. Sounds of landfill operations at Stages 7-8 at NEX were not specifically discernible due to the attenuation provided by the intervening distance and vegetation and shielding provided by the SMI berm.

View of east side of Burgess Road north of Location 5.

View of east side of Burgess Road south of Location 5.

Aerial view of Location 5 on landfill boundary, adjoining suburban residential grouping

Survey Location 6 represents the western boundary of the landfill adjacent to the WEX landfill. The location adjoins an agricultural property between Burgess Road and WEX containing two residences, which are located in a Low-Density Residential zoning district in the Town of Waterloo. The residences front the east side of Burgess Road, and are located approximately 800 feet west of the WEX boundary. The noise logger was located on the property line of the landfill approximately 900 feet east of Burgess Road and 1200 feet north of Salcman Road. The location was exposed to noise of environmental sources and construction on

the west side and base of Stage 6. Waste placement operations at Stage 6 were faintly perceptible. Waste placement operations at Stages 7-8 and construction activities at Stage 5 were not perceptible at the survey location, due to shielding of the WEX berm and the attenuation of the intervening distance. Farm hay baling activities occurred on the adjacent property during the survey period. The Meadow View soil mine to the west of Burgess Road was not in operation during the sound surveys.

View from Location 6 toward west across agricultural-use property with residential-use properties in background

View from Burgess Road opposite Location 6 toward north, with residences and agricultural properties on east side of road

Aerial view of Location 6 on west boundary adjoining residential and agricultural properties on east side of Burgess Road

Survey Location 7 represents residential-use properties on the western boundary of the landfill at the southwest corner of the landfill property, and was located approximately 190 feet east of Burgess Road and 90 feet north of Salcman Road. The properties are located in a Moderate-Density Residential district in the Town of Waterloo. Properties north of Salcman Road are vacant and owned by SMI. Five residential-use properties are located south of Salcman Road, of which four are owned by SMI. Prominent sound sources

at Location 7 were traffic on Burgess Road and North Road and environmental sounds. Perceptible landfill facility sources included soil loading and unloading operations at the Salcman Road materials storage area and site traffic on Salcman Road and on internal roads. Waste placement activities at Stage 6 and Stages 7-8 and construction activities at Stage 5were not discernible due to distance and screening of the WEX berm. The Meadow View soil mine to the west of Burgess Road was not in use during sound surveys.

View from Burgess Road to north at Location 7 with former residential-use properties on east side of Burgess Road to right (owned by SMI), with undeveloped areas and Meadow View Mine Drive to left

View from Burgess Road to south at Location 7 with residential-use properties on east side of Burgess Road to left (owned by SMI), with undeveloped areas and Meadow View Mine Drive to right

Aerial view of Location 7 representing residential-use properties along east side of Burgess Road to south of Salcman Road, and former residential-use properties to north of Salcman Road

Survey Location 8 represents residential-use properties along the southern boundary of the landfill property between of the grade crossing of the Finger Lakes Railway on North Road and Inslee Street. The location was approximately 170 feet north of North Road representing the south boundary. Properties include a small number of residential and mixed-use properties on the north side of North Road in the Town of Waterloo in

an area zoned Moderate-Density Residential, and a small number of residences located on the south side of North Road in the Village of Waterloo. Soil loading and unloading activities at the materials storage area and truck traffic on Salcman Road were partly perceptible, with occasional water truck loading. Prominent sound sources included vehicle traffic on North Road and environmental sources, with twice daily train passes at the grade crossing with horns. Landfill operations at Stage 6 and Stages 7-8, construction at Stage 5, and site maintenance activities were not discernible at the location due to distance and screening of the WEX berm.

View from Location 8 to west along North Road with residential-use properties on both sides of road

View from Location 8 to east along North Road with undeveloped properties on north side of North Road (left) and commercial properties on south (right)

Aerial view of Location 8 showing residences along south boundary on both sides of North Road

Survey Location 9 represents residential-use properties along the south boundary of the landfill property on North Road in the vicinity of Inslee Street. The location was approximately 700 feet north of North Road and 300 feet east of the bus garage entrance along the south boundary. The nearest residence, which is owned by SMI, is located 460 feet to the southwest on the north side of North Road, on the west side of the entrance road to the bus garage and maintenance facility. The nearest residence to the south is at 650 feet

from the south boundary. Residential properties on the north side of North Road are located in a Moderate Density Residential zoning district in the Town of Waterloo. Residences on the south side of North Road are located in the Village of Waterloo. Non-residential properties nearby include the Seneca County Fairgrounds and the Waterloo school bus facilities. Perceptible sources of sound include traffic on North Road, environmental sources, soil loading operations at the Salcman Road materials storage area, and traffic on site roads. There was occasional vehicle traffic to the bus garage. There were no activities at the fair grounds during the sound surveys.

View from North Road to west opposite Location 9 with residences along North Road and fairgrounds to left

View from North Road to east opposite Location 9 with residences along North Road and fairgrounds to right

Aerial view of Location 9 adjacent to residential properties on North Road, with nearest residence to southwest on west side of bus garage entrance (owned by SMI)

Survey Location 10 represents the western boundary of the landfill adjacent to the active Stage 6 landfill and construction areas. The boundary location was located 800 west of Burgess Road, adjoining agricultural fields on the east side of Burgess Road. The location represents a former residential-use property on the west side of Burgess Road approximately 950 feet west of the location, and other wooded undeveloped properties and agricultural-use properties that were overgrown and fallow during the surveys. The former residential-use and agricultural property on the west side of Burgess Road is owned by SMI. Properties on both sides of Burgess Road are contained in a Low Density Residential zoning district in the Town of Waterloo. The perceptible sources of sound in the daytime at Location 10 consisted of waste placement operations near the west side of Stage 6, construction of the liner on the base of Stage 5 and on the overlap of the SMI landfill berm, construction of the collection system on the west side and base of the Stage 6 berm, pass-bys of construction equipment on the berm, and operation of odor and dust neutralizing systems on the western edge of Stage 6. Prominent sources of sound in the nighttime were environmental sources consisting of birds, wind in trees, insects, and traffic on Burgess Road. Farming activities were not observed on the adjacent property during the survey period. The Meadow View soil mine to the west of Burgess Road was not in use during surveys.

View from west boundary at Location 10 toward west, showing adjacent fallow and overgrown agricultural property on east side of Burgess Road.

View from Burgess Road opposite Location 10 toward north with agricultural properties on east side of Burgess Road to right and undeveloped properties on west side of Burgess Road to left.

View from Burgess Road opposite Location 10 toward south with former residential-use property on west side of Burgess Road at right (owned by SMI).

Aerial view of Location 10 showing adjoining agricultural properties on east side of Burgess Road, with former residential-use and agricultural properties on west side of Burgess Road.

4.0 Measured Noise Levels and Regulations Compliance

The annual sound surveys identified the levels of noise produced by peak seasonal operations of the Seneca Meadows, Inc. landfill facility during the year 2020. The surveys were performed in accord with requirements of the 6 NYCRR Part 360 Section 360-1.19(j) landfill regulations effective November 4, 2017 to identify noise generated by the combination of facility sound sources consisting of waste acceptance and placement operations, tire recycling operations, and site maintenance activities. The noise monitoring included contributions of sounds of construction activities, although construction sources are excluded from the Part 360 regulations. The surveys characterized the noise environment along the property lines of the landfill adjoining properties that are zoned or otherwise authorized for residential purposes, in accord with the regulations. The survey locations represent properties contained in zoning districts designated Low-Density Residential (R1) and Moderate-Density Residential (R2) in the Town of Waterloo, and properties in zoning districts designated Highway Commercial (C-2) and Industrial (M-1) in the Town of Seneca Falls. The survey locations represent boundaries with properties with existing residences, former residential-use properties without residences, and properties zoned or authorized for residential use that are wooded, undeveloped, or otherwise used for agricultural purposes. The noise monitoring surveys and sampling sound surveys were performed at ten boundary locations adjoining residentially-authorized properties.

The noise monitoring period represents the annual peak period of waste acceptance and placement, site maintenance, recycling, and ongoing construction operations. The monitoring period further coincided with the seasonal peak period of traffic flows on the adjoining highways. The noise monitoring is therefore considered to represent the highest average noise emissions for the year 2020.

Noise level logging was performed with Metrosonics model db3080 noise level loggers, which were programmed to measure the received noise levels using A-weighting and slow metering response characteristics, in accord with the 6 NYCRR Part 360 Section 360-1.19(j) landfill regulations. Noise logging was performed continuously over the five-day weekday period from the morning of July 6, 2020 to the evening of Friday, July 10, 2020. The loggers computed and reported the average sound levels in consecutive fifteen-minute intervals ($L_{eq\text{-}15\,min}$) throughout the survey period in daytime and nighttime hours. The fifteen-minute sound level averages were processed into one-hour average sound levels ($L_{eq\text{-}1\,hr}$) for direct comparison to the hourly-average noise criteria contained in the Part 360 landfill regulations. The sound level loggers are rated Type 2 in accord with ANSI S1.4-1983 (R2006), which meets the instrumentation requirements of the Part 360 regulations. The measurements at each receptor location represent the combined noise contributions of landfill operations, maintenance activities, construction activities, and environmental and traffic background sources.

Table 1 summarizes the hourly-average sound levels, $L_{eq\text{-}1\ hr}$, obtained from continuous logging surveys at the ten monitoring locations on each survey day. Appendix B contains the detailed time history records of measured average sound levels ($L_{eq\text{-}15\,min}$) and the calculated hourly-average sound levels ($L_{eq\text{-}1\,hr}$) in graphical and tabular form for comparison to the sound level criteria. Sources of prominent noise peaks from environmental events, including a brief period of rain at each location, passes of trains, and other events are identified in the sound survey records in Appendix B. Readings of fifteen-minute averages that included artifacts generated by the surveyor during the setup and retrieval of the loggers were excluded from the calculations of the hourly-average sound levels.

Sampling sound surveys were performed at each of the survey locations in three time periods on Monday and Friday of the logging period to confirm and supplement the logged noise level data. The sampling was performed for a portion of an hour at each location, which was determined sufficient to be representative of an hourly-average sound level ($L_{eq\text{-}1\ hr}$) as permitted in the 6 NYCRR Part 360 landfill regulations. The summary sound level data are presented in Table 2 for comparison to the continuously logged hourly-average sound levels summarized in Table 1 and presented in Appendix B. Sampling measurements were obtained with a Larson Davis model 831 sound level analyzer, which conforms to requirements of the current American instrument standard ANSI/ASA S1.4-2014/Part 1 / IEC 61672:1-2013 for a Class 1 sound level meter. The analyzer accordingly meets the instrumentation requirements of 6 NYCRR Part 360 Section 360-1.19(j). The sampling measurements characterized the operational noise levels received in two daytime periods and the background noise levels received in daytime periods after the peak afternoon traffic period, and after the hours of normal daily waste acceptance.

The acceptability of the sound levels received during landfill operations in the year 2020 is determined referencing the noise level limits contained in 6 NYCRR Part 360 Section 360-1.19(j) for the suburban community character. The regulation limits are 62 dBA ($L_{eq\text{-}1\ hr}$) in daytime hours from 7:00 a.m. to 10:00 p.m. and 52 dBA ($L_{eq\text{-}1\ hr}$) in nighttime hours from 10:00 p.m. to 7:00 a.m.

The sound surveys characterized noise levels generated by operations consisting of normal waste placement and compacting at each active area. Equipment used at the Stage 6 and Stages 7-8 waste placement cells area consisted of bulldozers, compactors, and trailer tippers. Waste truck traffic accessed the west side of Stage 6 from Salcman Road and traveled along an internal road located on the west side of the SELF and NEX berm, and along the northern side of the WEX berm. Waste truck traffic accessed Stages 7-8 from Salcman Road and traveled across the top of the SELF berm to the site on the west side of the berm.

Site soil construction materials were being loaded at the materials storage area on the south side of Salcman Road onto articulated trucks with two excavators. Materials were being unloaded from ten-wheel dump

trucks. Two or more loaders were available for use in loading and moving materials.

Other landfill facility operations included unloading and sorting of recycled tire materials at the tire facility on the south side of Salcman Road with an excavators with claw hooks and a front end loader.

Daily cover operations were provided by articulated soil trucks, excavators, and bulldozers, using soils obtained from the materials storage area and from various excavation areas near Stage 5.

Other landfill maintenance activities included cleaning of a leachate collection system on the north face of the NEX berm with a water truck and pumper truck, watering of access roads with two water trucks, and sweeping of Salcman Road and shoulders of the Route 414 highway with a sweeper truck. The water trucks were filled with pump stations at the south retention pond and at the west retention pond. Dewatering of the Stage 5 construction site was performed with a portable pump. Construction of an outlet between Stage 5 and the west retention pond was being performed with an excavator. Equipment backup alarms were occasionally perceived at some survey locations. Bird chasing operations with pyrotechnics were occasionally observed during the surveys.

The sound levels measured at each receptor location were largely influenced or dominated by background noise produced by roadway traffic on Route 414, North Road, and Burgess Road and by environmental sources consisting of birds, insects, wind and sounding amphibians in wetlands areas. The sound levels measured at receiver locations along the eastern boundary opposite the SELF and NEX berms were additionally influenced by sounds of accelerating and decelerating vehicles in the vicinity of intersections and by operations of the Seneca Energy, Inc. landfill gas-to-energy plant and High BTU facility. Sound levels at Location 8 further included sounds of passing trains, and levels measured at Location 6 included farming activities. The environmental sources caused a small number of exceptions to the standard Part 360 sound level limits. Over the majority of the daytime measurements periods, the ongoing landfill waste acceptance and placement activities, site truck traffic, materials handling, and facility maintenance activities were minimally to partly perceptible at each receptor location and did not cause noise exceedances. At Location 10, a small number of minor daytime measurements exceed the standard limit by 1 or 2 dBA, which are attributed to operations of one or two portable odor and dust neutralizers west of Stage 6 and passbys of construction equipment. The exceptions are not considered to be significant because the adjoining property is unoccupied and was not being actively farmed at the time of surveys, and no community noise complaints were filed during the time.

Construction activities influenced a small number of the measured sound levels at Location 6, which consisted of soil trenching, drilling, and placement of collection lines and passbys of equipment on the

western side of the WEX berm. Construction is not regulated by the Part 360 regulations, and accordingly the exceptions are not considered in evaluations of sound level compliance.

A brief rain storm with elevated winds occurred in two of the hourly-average periods on Wednesday July 8 at midday, which are identified in the logging records for each location. The exceptions are excluded from evaluations of sound level compliance.

The following are summary conclusions regarding the compliance of the sound level logging records and observations obtained during sampling surveys.

Location 1

The hourly-average sound levels measured at survey Location 1 on the east boundary ranged from 51.7 dBA in the nighttime to 76.7 dBA, with a daytime average of 64.8 dBA, excluding periods with rain events. In daytime hours from 7:00 a.m. to 10:00 p.m., 50 of 69 hourly-average samples (72%) exceeded the 62 dBA L_{eq} daytime sound level limit of 6 NYCRR Part 360. The daytime exceedances are attributed to sounds of traffic on State Route 414, including sounds generated by vehicle acceleration and deceleration with jake brakes at the signalized intersection at Salcman Road and at entrance to the SEI gas-to-energy facility.

In nighttime hours from 10:00 p.m. to 7:00 a.m., 31 of 36 nighttime samples (86%) exceeded the 52 dBA L_{eq} nighttime limit. The nighttime exceedances are attributed to highway traffic and operations of the Seneca Energy, Inc. Gas-to-Energy and High BTU facilities.

The background traffic noise levels at Location 1 extensively exceeded the standard suburban sound level limits of the Part 360 regulations both in daytime and nighttime periods. Noise acceptability was evaluated in terms of perceptibility of the landfill operations and their potential contributions to the measured levels, based on application of 6 NYCRR Part 360 Section 360-1.19(j)(1). The sampling surveys and observations determined that landfill waste placement and cover operations at two cells, site truck traffic, site maintenance operations, and operation of the onsite flare system were not perceptible at Location 1 due to attenuation by the intervening berm and distance, and masking by elevated background traffic noise. It is concluded that because noise from landfill operations was imperceptible and had no observable effect on the measured hourly-average sound levels, the facility noise levels received at Location 1 do not exceed the background noise levels and comply with the noise requirements of 6 NYCRR Part 360 Section 360-1.19(j)(1).

Location 2

The hourly-average sound levels measured at survey Location 2 on the east boundary ranged from 59.4 dBA in the nighttime to 69.1 in daytime hours, with a daytime average of 65.8 dBA, excluding periods with rain

events. In daytime hours, 57 of 70 hourly-average samples (81%) exceeded the 62 dBA L_{eq} daytime sound level limit of 6 NYCRR Part 360. The daytime exceedances are attributed to sounds of Route 414 highway traffic, including sounds generated by vehicle acceleration and deceleration from the signalized intersection at Salcman Road and at the entrance to the leachate management facility, including use of jake brakes.

In nighttime hours, 36 of 36 nighttime samples (100%) exceeded the 52 dBA L_{eq} nighttime limit. The nighttime exceedances are attributed to highway traffic and operations of the Seneca Energy, Inc. gas-to-energy and High BTU facilities.

The background traffic noise levels at Location 2 extensively exceeded the standard Part 360 noise criteria, therefore, noise acceptability was evaluated in terms of perceptibility of the landfill operations and their potential contributions to the measured levels, referencing 6 NYCRR Part 360 Section 360-1.19(j)(1). The sampling surveys and observations determined that landfill waste placement and cover operations at two cells, site truck traffic, site maintenance operations, and operation of the onsite flare system were not perceptible at Location 2 due to attenuation by the intervening berm and distance, and masking by elevated background traffic noise. It is concluded that the facility noise levels received at Location 2 do not exceed the background noise levels and comply with the noise requirements of 6 NYCRR Part 360 Section 360-1.19(j)(1).

Location 3

The hourly-average sound levels at survey Location 3 on the east boundary ranged from 48.9 dBA in the nighttime to 63.3 dBA in daytime hours, with a daytime average of 60.2 dBA, excluding periods with rain events. In daytime hours, 8 of 70 hourly-average samples (11%) exceeded the 62 dBA daytime sound level limit of 6 NYCRR Part 360. Data obtained from the series of sampling surveys and observations determined that landfill operating sources and site traffic were imperceptible at the location due to the attenuation of the berm distance, and vegetation. The daytime exceedances are attributed to sounds of Route 414 highway traffic. It is concluded the daytime sound levels comply with the noise requirements of 6 NYCRR Part 360 Section 360-1.19(j).

In nighttime hours, 23 of 36 nighttime samples (64%) exceeded the 52 dBA nighttime limit. The nighttime exceedances are attributed to highway traffic and environmental sources. Accordingly, it is concluded that the facility noise levels received at Location 3 generated in nighttime hours do not exceed the background noise levels and comply with the noise requirements of 6 NYCRR Part 360 Section 360-1.19(j)(1).

Location 4

The hourly-average sound levels at survey Location 4 on the east boundary ranged from 52.1 dBA in the nighttime to 60.7 dBA in the daytime, with a daytime average of 57.4 dBA, excluding periods with rain events. In daytime hours, none of 70 hourly-average samples (0%) exceeded the 62 dBA daytime sound level limit of 6 NYCRR Part 360. Data obtained from the series of sampling surveys and observations determined that landfill operating sources were imperceptible at the location. It is concluded the daytime sound levels comply with the noise requirements of 6 NYCRR Part 360 Section 360-1.19(j).

In nighttime hours, 17 of 36 nighttime samples (47%) exceeded the 52 dBA nighttime limit. Accordingly, it is concluded that the facility noise levels received at Location 3 generated in nighttime hours do not exceed the background noise levels and comply with the noise requirements of 6 NYCRR Part 360 Section 360-1.19(j)(1).

The daytime hourly-average noise levels measured at Locations 1 and 2 were 7.5 to 8.4 dBA greater than the hourly-average sound levels measured at Location 4 due to the added noise from vehicle acceleration and deceleration events. The daytime hourly-average noise levels measured at Locations 3 were 2.9 dBA greater than the hourly-average sound levels measured at Location 4. Trees and tall vegetation adjacent to Locations 3 and 4 may have attenuated the measured sound levels to a degree at those locations due to sound absorption and scattering effects, which may account for a portion of the level differences.

Black Brook Road

The sound levels received at residential receivers along Black Brook Road in the Town of Seneca Falls are predicted to be attenuated by 10 dBA or more due to added distance and an additional 10 dBA due to intervening wooded vegetation with respect to sound levels measured at Locations 1 to 4 along the eastern boundary from activities in Stage 6. The sound levels received along Black Brook Road from landfill waste placement operations are modeled in the range of 20 to 25 dBA with attenuation from the berm and distance. Two daytime sampling measurements averaged 46.9 dBA and 52.6 dBA due to of birds and traffic. Data obtained from the sampling surveys and observations determined that landfill operating sources were imperceptible at the location. It is concluded the sound levels along Black Brook Road do not exceed the sound level limits of 6 NYCRR Part 360 Section 360-1.19(j).

Location 5

The hourly-average sound levels at survey Location 5 on the west boundary at the northwest corner of the landfill ranged from 44.3 dBA in the nighttime to 57.1 dBA in the daytime, with a daytime average of 47.9 dBA, excluding periods with rain events. In daytime hours, 0 of 73 hourly-average samples (0%) exceeded

the 62 dBA daytime sound level limit of 6 NYCRR Part 360. Data obtained from the series of sampling surveys and observations determined that landfill operating sources were only faintly perceptible at the location. In nighttime hours, one of 36 hourly-average samples (3%) exceeded the 52 dBA nighttime sound level limit of 6 NYCRR Part 360, which is attributed to an environmental source in the 10:00 p.m. hour. It is concluded the sound levels at Location 5 comply with the suburban sound level limits requirements of 6 NYCRR Part 360 Section 360-1.19(j).

Location 6

The hourly-average sound levels at survey Location 6 on the west boundary ranged from 41.1 dBA in the nighttime to 69.8 dBA in the daytime, with a daytime average of 47.9 dBA, excluding hours with rain events. In daytime hours, two of 72 hourly-average samples (3%) exceeded the 62 dBA daytime sound level limit of 6 NYCRR Part 360, which are attributed to farming activities or construction events which are not regulated. In nighttime hours, 0 of 38 hourly-average samples (0%) exceeded the 52 dBA nighttime sound level limit of 6 NYCRR Part 360. It is concluded the sound levels at Location 6 comply with the suburban sound level limits of 6 NYCRR Part 360 Section 360-1.19(j).

Location 7

The hourly-average sound levels at survey Location 7 on the west boundary at the southwest corner of the landfill ranged from 43.3 dBA in the nighttime to 55.5 dBA in the daytime, with a daytime average of 49.8 dBA, excluding periods with rain events. In daytime hours, none of 72 hourly-average samples (0%) exceeded the 62 dBA daytime sound level limit of 6 NYCRR Part 360. In nighttime hours, none of 36 hourly-average samples (0%) exceeded the 52 dBA nighttime sound level limit of 6 NYCRR Part 360. It is concluded the sound levels at Location 7 comply with the suburban sound level limits of 6 NYCRR Part 360 Section 360-1.19(j).

North Road

The sound levels received at the nearest residential receiver located west of Location 7 at 1569 North Road in the Town of Waterloo are predicted to be attenuated by 5 dBA or more due to distance with respect to sound levels measured at Location 7 on the western boundary. The sound levels received at the residence from Salcman Road traffic and activities in the Salcman Road soil storage area predicted to average approximately 38 dBA during daytime operational hours. It is concluded the received sound levels comply with the suburban sound level limits of 6 NYCRR Part 360 Section 360-1.19(j).

Location 8

The hourly-average sound levels at survey Location 8 on the south boundary ranged from 44.3 dBA in the nighttime to 67.4 dBA in the daytime, excluding periods with rain events. In daytime hours, 5 of 72 hourly-average samples (7%) exceeded the 62 dBA daytime sound level limit of 6 NYCRR Part 360, which are attributed to train passes and horns at the North Road grade crossing. In nighttime hours, 1 of 36 hourly-average samples (3%) exceeded the 52 dBA nighttime sound level limit of 6 NYCRR Part 360, which are attributed to traffic or environmental events. It is concluded the sound levels at Location 8 comply with the sound level limits of 6 NYCRR Part 360 Section 360-1.19(j).

Location 9

The hourly-average sound levels at survey Location 9 on the south boundary ranged from 42.3 dBA in the nighttime to 53.3 dBA in the daytime, with a daytime average of 42.4 dBA, excluding periods with rain events. In daytime hours, none of 72 hourly-average samples (0%) exceeded the 62 dBA daytime sound level limit of 6 NYCRR Part 360. In nighttime hours, one of 36 hourly-average samples (3%) exceeded the 52 dBA nighttime sound level limit of 6 NYCRR Part 360 due to an exception in one fifteen-minute period, which is attributed to traffic on the bus garage road or an environmental source. It is concluded the sound levels received at Location 9 comply with the suburban sound level limits of 6 NYCRR Part 360 Section 360-1.19(j).

Location 10

The hourly-average sound levels at survey Location 10 on the west boundary ranged from 46.1 dBA in the nighttime to 66.0 dBA in the daytime, with a daytime average of 58.6 dBA, excluding periods with rain events. In daytime hours, 13of 72 hourly-average samples (18%) exceeded the 62 dBA daytime sound level limit of 6 NYCRR Part 360. These exceptions are attributed to pass-bys of construction equipment and operation of odor and dust neutralizing systems. In nighttime hours, 7 of 38 hourly-average samples (18%) exceeded the 52 dBA nighttime sound level limit of 6 NYCRR Part 360, which are attributed to environmental sources and initial operations of landfill and construction equipment. The daytime and nighttime noise exceptions are not considered to be significant because the adjoining property is not in use and no noise complaints were thus filed, and because contributions of construction noise are excluded from compliance assessments. It is concluded the sound levels at Location 10 comply with the suburban sound level limits of 6 NYCRR Part 360 Section 360-1.19(j).

Strong Road

The sound levels received at the nearest residential receivers along Strong Road are predicted to be attenuated by 30 dBA or more due to distance from the active Stage 6 landfill area and by an additional 30

dBA due to sound attenuation of landfill berms and foliage. The received facility sound levels are predicted to be negligible and below the ambient sound levels, and comply with the suburban sound level limits of 6 NYCRR Part 360 Section 360-1.19(j).

Sampling and logging data comparisons

Sampling measurements obtained at each location in multiple time periods were additionally compared to the Part 360 limits and to the hourly-average sound levels obtained with continuous logging. Observations were obtained during the sampling surveys to identify the perceptible landfill sound sources and prominent background sound sources. The sampling surveys were performed in two daytime periods during hours of landfill operations and in one daytime period after the normal hours of waste acceptance on Monday and Friday of the survey week. The measurement periods ranged from ten to twenty minutes each, as appropriate to be representative of an hourly-average sound level.

The sampled hourly-average sound levels corresponded to the logged sound levels at each survey location in comparable time periods within differences ranging from 0 to 3.6 dBA in the majority of the 60 sampling records. These are acceptable differences between readings from Type 1 and Type 2 sound level meters and relative to slight offsets in measurement periods.

Table 1 summarizes the hourly-average sound levels obtained from continuous logging in the survey period from July 6, 2020 to July 10, 2020. The following Table 2 summarizes the average sound levels obtained from sampling surveys in the three periods on Monday and on Friday of the survey period.

Table 1
Summary of L_{eq} Noise Levels (dBA) Measured Along Landfill Property Lines with Logging Instruments

Measure-ment Location	Location Description			July 6-7, 2020																						
				Daytime hourly average (L_{eq}), dBA															Nighttime hourly average (L_{eq}), dBA								
		5-6a	6-7a	7-8a	8-9	9-10	10-11	11-12	12-1p	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10p	10-11	11-12	12-1a	1-2	2-3	3-4	4-5	5-6	6-7a
Loc 1	Rt. 414 east of SELF berm	-	-			65.3	65.4	64.9	64.9	64.8	64.7	63.9	62.3	63.7	60.6	59.6	59.5	57.8	56.1	56.3	55.3	51.7	52.2	56.5	58.1	61.4	65.8
Loc 2	Rt. 414 east of NEX berm	-	-		69.1	67.7	68.2	67.3	67.5	66.6	66.4	66.3	63.8	63.2	61.9	62.0	61.7	60.0	58.7	59.1	56.9	55.3	55.6	58.4	59.1	62.3	66.0
Loc 3	Rt. 414 east of SMI berm	-	-		62.5	62.4	62.5	61.8	61.9	61.5	61.4	61.0	58.5	57.9	56.8	57.0	57.5	55.0	53.7	53.7	51.5	51.4	50.6	53.1	55.2	58.6	61.4
Loc 4	Rt. 414 north of SMI berm	-	-		59.4	59.7	59.8	58.9	58.8	58.8	58.2	57.0	54.5	54.2	53.3	54.1	53.6	51.5	53.9	52.7	49.5	50.4	48.5	51.6	53.0	56.2	59.2
Loc 5	West boundary northwest of SMI	-	45.3	43.7	42.5	45.2	42.8	43.9	45.3	49.5	44.2	42.2	42.3	41.8	44.4	43.2	42.5	41.7	41.8	41.4	43.1	44.4	48.3	45.4	49.2	48.0	50.4
Loc 6	West boundary at WEX berm	41.6	42.3	57.5	69.1	69.8	42.0	41.9	42.4	42.2	41.6	43.6	42.9	44.3	42.4	41.7	41.0	40.6	40.2	39.9	39.9	40.1	40.5	41.4	43.3	42.2	45.9
Loc 7	Burgess Road at Salcman Road	-	-	50.3	48.9	48.4	47.6	47.9	48.7	46.9	46.6	47.7	48.9	49.1	49.7	50.0	47.6	44.1	43.1	41.4	40.2	40.1	40.2	41.2	46.8	48.9	48.1
Loc 8	South boundary	-	-	47.3	47.7	47.4	46.5	63.5	48.0	46.8	47.3	47.6	47.3	47.1	56.9	45.9	46.4	44.6	43.3	43.4	42.5	42.7	42.6	42.9	47.6	48.4	46.9
Loc 9	South boundary	-	-	53.3	47.5	48.8	46.8	48.8	47.6	46.6	47.3	47.2	47.8	46.2	44.4	43.6	44.5	50.2	42.0	42.3	41.1	41.2	41.2	41.5	42.3	45.0	46.1
Loc 10	West boundary at Stage 6	50.6	59.5	61.8	64.1	62.1	61.1	61.6	62.3	61.7	61.5	61.4	51.1	51.9	49.2	45.9	47.4	46.3	42.8	43.3	42.4	43.0	46.2	48.1	51.4	52.8	59.8

All survey data was measured by Aurora Acoustical Consultants Inc.

Table 1 (cont.)
Summary of L_{eq} Noise Levels (dBA) Measured Along Landfill Property Lines with Logging Instruments

Measure-ment Location	Location Description	July 7-8, 2020																						
		Daytime hourly average (L_{eq}), dBA															Nighttime hourly average (L_{eq}), dBA								
		7-8a	8-9	9-10	10-11	11-12	12-1p	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10p	10-11	11-12	12-1a	1-2	2-3	3-4	4-5	5-6	6-7a
Loc 1	Rt. 414 east of SELF berm	67.6	69.3	69.7	68.3	68.3	67.0	66.7	69.3	69.2	65.9	67.3	69.0	67.3	61.0	59.1	59.3	58.4	57.7	54.9	51.8	55.5	56.6	61.1	62.9
Loc 2	Rt. 414 east of NEX berm	67.5	68.1	68.1	68.0	67.6	67.6	67.6	67.3	66.9	65.1	64.9	63.3	62.3	60.2	59.7	59.3	57.6	58.6	57.8	55.4	58.2	59.5	64.1	65.9
Loc 3	Rt. 414 east of SMI berm	62.9	63.2	62.9	62.7	62.2	61.9	61.6	61.6	61.3	59.2	58.8	58.4	57.4	54.7	54.5	54.6	52.3	53.1	52.0	49.3	53.3	54.9	59.9	60.8
Loc 4	Rt. 414 north of SMI berm	60.7	60.4	60.7	59.7	58.9	58.4	58.1	59.0	58.0	55.4	55.3	55.7	54.9	51.7	51.7	53.8	53.0	50.1	50.2	47.8	51.0	53.1	57.0	58.2
Loc 5	West boundary northwest of SMI	51.8	50.5	50.4	50.7	50.9	51.5	51.9	53.4	53.7	50.2	51.6	53.1	52.2	47.3	46.0	52.9	50.8	43.0	44.8	44.2	48.4	48.9	46.9	47.0
Loc 6	West boundary at WEX berm	67.5	68.1	68.1	68.0	67.6	67.6	67.6	67.3	66.9	65.1	64.9	63.3	62.3	60.2	59.7	59.3	57.6	58.6	57.8	55.4	58.2	59.5	64.1	65.9
Loc 7	Burgess Road at Salcman Road	62.9	63.2	62.9	62.7	62.2	61.9	61.6	61.6	61.3	59.2	58.8	58.4	57.4	54.7	54.5	54.6	52.3	53.1	52.0	49.3	53.3	54.9	59.9	60.8
Loc 8	South boundary	60.7	60.4	60.7	59.7	58.9	58.4	58.1	59.0	58.0	55.4	55.3	55.7	54.9	51.7	51.7	53.8	53.0	50.1	50.2	47.8	51.0	53.1	57.0	58.2
Loc 9	South boundary	51.8	50.5	50.4	50.7	50.9	51.5	51.9	53.4	53.7	50.2	51.6	53.1	52.2	47.3	46.0	52.9	50.8	43.0	44.8	44.2	48.4	48.9	46.9	47.0
Loc 10	West boundary at Stage 6	60.3	51.1	53.2	54.2	52.5	52.6	47.5	55.8	53.7	51.4	54.2	57.0	51.4	43.4	42.4	42.7	42.7	40.9	40.2	40.3	40.3	40.8	41.8	41.9

All survey data was measured by Aurora Acoustical Consultants Inc.

Table 1 (cont.)
Summary of L_{eq} Noise Levels (dBA) Measured Along Landfill Property Lines with Logging Instruments

Measure-ment Location	Location Description	July 8-July9, 2020																						
		Daytime hourly average (L_{eq}), dBA															Nighttime hourly average (L_{eq}), dBA								
		7-8a	8-9	9-10	10-11	11-12	12-1p	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10p	10-11	11-12	12-1a	1-2	2-3	3-4	4-5	5-6	6-7a
Loc 1	Rt. 414 east of SELF berm	65.0	64.7	65.0	65.9	63.8	64.8	69.1	79.2	68.1	62.5	62.9	60.3	60.3	58.1	59.7	57.0	53.9	52.8	51.9	52.0	57.2	57.5	60.8	63.0
Loc 2	Rt. 414 east of NEX berm	67.2	67.1	67.3	67.9	66.8	67.1	68.2	73.7	68.3	65.9	65.9	63.5	62.5	60.6	61.3	60.0	57.1	56.6	55.4	55.3	59.4	60.8	63.7	66.8
Loc 3	Rt. 414 east of SMI berm	62.4	61.8	61.7	61.9	61.0	61.3	63.5	75.1	63.3	59.9	60.9	58.7	58.3	55.7	56.0	54.7	51.3	49.6	49.1	48.9	54.1	56.3	58.3	61.5
Loc 4	Rt. 414 north of SMI berm	59.6	58.5	58.5	58.0	58.0	58.5	64.9	81.9	58.0	55.3	56.2	53.8	53.4	51.8	52.2	51.4	48.5	47.9	46.1	46.9	52.4	53.4	55.7	58.7
Loc 5	West boundary northwest of SMI	47.7	44.3	45.6	48.2	47.6	46.1	64.6	79.3	57.1	43.4	45.6	43.3	42.1	41.2	40.8	45.3	41.0	40.2	40.9	42.5	43.1	44.5	44.5	46.0
Loc 6	West boundary at WEX berm	47.6	48.2	42.1	41.4	41.0	46.8	63.8	70.5	54.7	40.8	41.1	40.5	41.0	40.7	40.4	40.5	40.2	40.4	40.1	40.2	40.7	41.1	41.7	42.5
Loc 7	Burgess Road at Salcman Road	47.7	49.3	49.6	48.7	49.5	50.2	63.2	70.3	55.5	48.7	48.5	47.6	46.7	46.0	43.4	42.0	41.7	40.2	40.0	40.4	40.4	44.4	48.3	47.2
Loc 8	South boundary	47.6	53.6	46.4	45.8	65.8	45.9	58.4	68.3	54.5	51.4	47.1	56.2	46.6	45.6	44.8	44.1	43.1	42.9	42.7	42.6	42.6	45.2	47.7	53.7
Loc 9	South boundary	47.5	46.0	46.3	48.3	46.3	43.7	76.1	79.1	51.3	46.7	46.7	48.3	46.6	43.2	42.1	41.6	41.3	41.5	41.5	41.5	41.4	42.5	45.1	46.0
Loc 10	West boundary at Stage 6	52.8	51.3	53.1	53.6	59.0	62.4	66.9	70.1	58.1	48.2	48.3	47.3	49.1	47.2	43.5	43.2	42.7	42.8	42.9	43.0	44.4	45.3	56.0	62.7

All survey data was measured by Aurora Acoustical Consultants Inc.

Table 1 (cont.)
Summary of L_{eq} Noise Levels (dBA) Measured Along Landfill Property Lines with Logging Instruments

Measure-ment Location	Location Description	July 9-10, 2020																								
		Daytime hourly average (L_{eq}), dBA															Nighttime hourly average (L_{eq}), dBA								
		7-8a	8-9	9-10	10-11	11-12	12-1p	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10p	10-11	11-12	12-1a	1-2	2-3	3-4	4-5	5-6	6-7a
Loc 1	Rt. 414 east of SELF berm	64.8	63.7	63.3	63.8	64.1	65.3	63.6	63.6	63.5	63.4	61.7	61.0	60.7	58.4	59.2	58.8	54.1	52.8	53.5	53.3	54.3	56.5	60.7	61.9
Loc 2	Rt. 414 east of NEX berm	67.0	67.0	67.0	66.5	66.4	66.0	66.2	66.2	66.2	65.8	64.5	63.6	63.5	61.7	61.7	61.3	58.5	56.7	57.6	57.0	57.7	59.6	63.6	64.3
Loc 3	Rt. 414 east of SMI berm	61.7	61.2	60.5	60.3	60.3	59.9	59.4	59.5	59.5	58.9	58.0	58.0	57.5	55.9	55.8	55.8	53.0	51.1	52.8	50.8	52.1	54.8	58.9	59.4
Loc 4	Rt. 414 north of SMI berm	58.8	58.5	57.8	57.9	57.3	58.0	57.4	57.3	58.0	56.5	55.1	54.2	54.2	52.9	52.9	52.5	50.0	48.7	49.2	48.8	50.5	53.5	56.2	56.8
Loc 5	West boundary northwest of SMI	46.9	48.2	45.9	50.4	50.9	50.8	50.2	49.3	44.9	47.5	43.4	44.1	41.5	40.9	40.2	39.9	39.9	39.6	40.5	39.8	39.9	40.6	42.6	45.2
Loc 6	West boundary at WEX berm	43.7	42.7	42.0	42.2	43.8	49.0	43.4	41.9	40.7	42.5	41.5	40.9	40.9	40.6	40.2	40.0	40.0	40.1	39.9	40.0	40.3	40.6	41.2	45.3
Loc 7	Burgess Road at Salcman Road	47.5	47.1	49.2	50.2	49.5	48.8	49.5	48.8	48.1	47.4	49.3	53.7	50.8	49.3	45.1	42.3	41.4	40.4	40.6	40.1	40.6	47.1	49.3	50.2
Loc 8	South boundary	47.0	46.0	46.9	46.5	65.7	46.8	47.9	46.2	46.3	46.3	45.4	46.0	60.8	44.7	44.8	44.1	43.7	42.9	42.7	42.8	42.9	45.2	50.7	46.6
Loc 9	South boundary	46.9	46.7	45.9	46.2	48.3	47.1	48.7	48.1	48.6	44.5	42.6	43.5	44.9	43.0	42.8	42.0	41.5	41.5	41.4	41.4	41.7	42.3	44.9	53.6
Loc 10	West boundary at Stage 6	60.3	62.4	62.3	63.0	62.0	62.0	61.2	59.8	59.3	59.3	56.3	48.2	47.7	44.3	44.0	42.6	43.1	42.6	42.5	42.9	45.0	45.6	53.7	63.1

All survey data was measured by Aurora Acoustical Consultants Inc.

Table 1 (cont.)
Summary of L_{eq} Noise Levels (dBA) Measured Along Landfill Property Lines with Logging Instruments

Measure-ment Location	Location Description	July 10, 2020																								
		Daytime hourly average (L_{eq}), dBA															Nighttime hourly average (L_{eq}), dBA									
		7-8a	8-9	9-10	10-11	11-12	12-1p	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10p	10-11	11-12	12-1a	1-2	2-3	3-4	4-5	5-6	6-7a
Loc 1	Rt. 414 east of SELF berm	65.0	65.1	64.3	64.7	66.2	66.5	65.4	65.0	66.7	75.4	76.7	-	-	-	-	-	-	-	-	-	-	-	-	-
Loc 2	Rt. 414 east of NEX berm	67.2	66.7	67.2	67.3	66.7	66.8	67.1	66.8	66.8	67.6	67.9	-	-	-	-	-	-	-	-	-	-	-	-	-
Loc 3	Rt. 414 east of SMI berm	62.0	60.7	60.4	60.6	59.7	59.7	60.3	59.9	59.8	60.4	63.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Loc 4	Rt. 414 north of SMI berm	59.5	58.7	58.4	58.3	58.3	58.3	58.5	57.9	57.2	59.0	56.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Loc 5	West boundary northwest of SMI	48.2	47.6	48.5	47.6	52.9	51.5	48.9	49.5	49.0	54.7	55.3	43.0	45.3	-	-	-	-	-	-	-	-	-	-	-
Loc 6	West boundary at WEX berm	46.0	50.3	47.4	47.2	50.0	50.8	57.2	58.8	51.0	60.9	55.1	54.3	-	-	-	-	-	-	-	-	-	-	-	-
Loc 7	Burgess Road at Salcman Road	48.7	49.9	50.9	50.9	50.9	50.3	50.2	51.1	50.4	55.0	54.4	50.8	-	-	-	-	-	-	-	-	-	-	-	-
Loc 8	South boundary	47.8	46.8	47.3	67.4	47.3	47.2	48.1	47.3	47.2	49.8	49.8	61.2	46.4	-	-	-	-	-	-	-	-	-	-	-
Loc 9	South boundary	47.5	47.4	48.8	50.4	47.8	47.4	50.5	49.3	50.2	48.3	46.5	46.0	45.3	-	-	-	-	-	-	-	-	-	-	-
Loc 10	West boundary at Stage 6	62.2	63.1	63.8	62.9	63.8	62.8	62.3	63.2	61.7	66.0	63.6	55.8	-	-	-	-	-	-	-	-	-	-	-	-

All survey data was measured by Aurora Acoustical Consultants Inc.

Table 2

Summary of L_{eq} Noise Levels (dBA) Sampled Along Landfill Property Lines with Handheld Meter on July 6 and July 10, 2020

Measure-ment Location	Location Description	July 6, 2020		July 10, 2020	
		Average Noise Level L_{eq}, dBA	**Sample Start Time**	**Average Noise Level L_{eq}, dBA**	**Sample Start Time**
Loc 1	East boundary at Rt. 414, east of SELF berm	65.6	8:55:15 am	64.8	8:51:29 am
		66.8	11:59:38 am	62.1	1:40:15 pm
		64.4	4:05:49 pm	64.5	4:52:25 pm
Loc 2	East boundary at Rt. 414, east of NEX landfill site	68.2	8:35:42 am	65.7	9:07:37 am
		66.9	12:13:26 pm	66.5	1:51:11 pm
		62.0	4:17:38 pm	61.5	5:11:53 pm
Loc 3	East boundary at Rt. 414, east of SMI berm	63.3	8:17:32 am	62.4	9:22:03 am
		61.9	12:29:16 pm	62.8	2:02:50 pm
		59.8	4:30:44 pm	61.6	5:25:29 pm
Loc 4	East boundary at Rt. 414, northeast of SMI	60.0	7:54:19 am	58.3	9:41:59 am
		59.9	12:42:13 pm	60.6	2:14:51 pm
		55.7	4:42:55 pm	58.8	5:40:53 pm
Loc 5	West boundary, northwest of SMI berm	46.7	6:10:04 am	44.8	7:21:28 am
		41.1	1:16:39 pm	44.2	1:07:01 pm
		42.8	5:04:19 pm	41.7	6:00:38 pm
Loc 6	West boundary, west of WEX landfill	43.8	4:58:30 am	48.1	6:07:03 am
		43.7	2:17:26 pm	45.3	11:31:17 am
		44.8	5:56:40 pm	45.1	6:46:47 pm
Loc 7	West boundary, at Salcman Road	49.7	6:45:32 am	48.3	7:52:21 am
		45.3	11:11:25 am	50.0	12:10:50 pm
		46.4	3:11:45 pm	49.1	7:05:11 pm
Loc 8	South boundary	56.7	7:34:34 am	51.1	8:26:41 am
		46.9	11:42:29 am	50.0	12:42:15 pm
		48.8	3:47:39 pm	48.1	7:35:20 pm
Loc 9	South boundary	45.5	7:06:15 am	44.9	8:08:30 am
		46.0	11:26:27 am	46.1	12:25:58 pm
		44.8	3:26:59 pm	44.4	7:21:20 pm
Loc 10	West boundary, opposite Stages 5 and 6	62.0	9:47:02 am	63.0	6:26:55 am
		61.5	1:55:57 pm	60.5	11:47:35 am
		50.5	5:34:28 pm	46.2	6:29:28 pm

All sampled data was measured by Aurora Acoustical Consultants Inc.

5.0 Conclusions

Surveys of sound levels were obtained on the boundaries of the Seneca Meadows, Inc. landfill to evaluate the acceptability of sound produced during normal daytime landfill operations that are representative of the year 2020. The sound surveys were obtained in the five-day weekday period from the morning of July 6 through the evening of July 10, 2020. The sound surveys were obtained at ten representative locations on the boundaries adjoining properties zoned or authorized for residential use, including current residential-use properties, former residential properties, undeveloped properties, and agricultural-use parcels authorized for residences. The survey period was scheduled to coincide with the seasonal peak period of landfill waste placement operations, landfill maintenance activities, and construction activities. The survey period additionally corresponds to the peak annual period of highway traffic on the adjoining Route 414 and Route 96. The sound levels were continuously monitored at each survey location throughout the survey period with logging instruments which obtained sound level data in fifteen-minute periods. The fifteen-minute average levels were processed into hourly-average sound levels, designated $L_{eq\text{-}1\ hr}$.

The acceptability of the measured sound levels were assessed referencing sound level limits specified in the 6 NYCRR Part 360 Regulations for Solid Waste Management Facilities effective November 4, 2017. The measured hourly-average sound levels were compared to the hourly-average sound level limits for daytime and nighttime periods associated with the *suburban* community character listed in 6 NYCRR Part 360 Section 360-1.19(j) to evaluate acceptability of the sounds produced by landfill operations. The suburban community character is considered representative of the adjoining properties based on the density of residences, the character and density of nearby commercial and industrial development, and the historical volumes of traffic on adjoining highways. The sound level limits associated with the community character are 62 dBA L_{eq} in daytime hours from 7:00 a.m. to 10:00 p.m. and 52 dBA L_{eq} in nighttime hours from 10:00 p.m. to 7:00 a.m.

The survey locations represented properties zoned or authorized for residential purposes in the Town of Waterloo and the Town of Seneca Falls, New York, including those zoned Low-Density Residential, High-Density Residential, Agricultural, and Highway Commercial. The surveys of noise, assessments of data, and reports of findings and conclusions were prepared by Aurora Acoustical Consultants Inc. of East Aurora, New York. Supporting information on landfill waste acceptance operations, maintenance operations, construction activities, and other data were supplied by Seneca Meadows, Inc.

The sound surveys characterized the sound levels produced by normal daily waste placement and cover activities near the western limits of the Stage 6 landfill area (WEX) and on the western side of the Stages

7-8 landfill area (NEX). The waste placement operations included uses of numbers of waste compactors, bulldozers, trailer tippers, and waste hauling trucks. Daily cover operations were performed by articulated trucks and bulldozers using soils obtained from the materials storage area and from excavation areas.

Maintenance operations included soil loading and unloading at the Salcman Road materials storage area with excavators and loaders, and soil transport by articulated trucks to cell areas for daily cover and to construction areas. Other site maintenance operations included watering of access roads and water loading at retention ponds, operations of odor-neutralizing systems, operation of the onsite flare system on the east side of the WEX berm, cleaning of leachate collection systems, and operations of a dewatering pump. Construction activities included placement and compacting of soil liner material on the base of Stage 5 and on the overlap of the SMI landfill berm, excavation of soils at Stage 5 and at the Stages 7-8 landfill cell, and trenching, drilling, and placement of leachate collection systems on the western slope and base of the WEX berm with excavators, a bulldozer, and articulated soil trucks.

During the operating year 2020, Seneca Meadows, Inc. received no noise complaints from occupants of the adjoining residential properties.

Locations 1, 2, 3, 4

Sound level logging and sampling surveys performed at Locations 1, 2, 3, and 4 identified the sound levels at locations representing four existing residences, several former residential-use properties, and undeveloped wooded properties along the eastern boundary on both sides of Route 414. The properties are contained in Highway Commercial zoning, which is authorized for residential use, and Flood Plain Protection zoning districts. The former residential-use properties and undeveloped properties on both sides of the highway are extensively owned by SMI. Other properties along the eastern boundaries of the landfill include the Seneca Energy Inc. gas-to-energy facilities, commercial operations, educational facilities, undeveloped wooded property, and agricultural fields located on parcels zoned Highway Commercial and Agricultural. Commercial developments include a vehicle auction facility, a commercial vehicle repair facility, an automobile repair facility, and a commercial office building. Educational facilities consist of the Seneca Meadows Environmental Education Center. Nearby industrial facilities consist of the Seneca Energy, Inc and Seneca Energy II, LLC gas-to-energy facilities (SEI), the Exxon-Mobil gas pipeline facility, and The Chesapeake Appalachia LLC gas compressor station. Noise levels received at non-residential properties from landfill operations are not regulated by the Part 360 landfill regulations.

Properties located east of the commercial corridor between Route 414 and Blackbrook Road comprise broad areas of undeveloped wooded land, agricultural-use parcels, and the Seneca Meadows Wetlands Preserve, which are holdings of SMI. The noise levels at residential properties along Black Brook Road are dominated by sounds from environmental sources and local traffic. Sounds of landfill operations are inaudible along

Black Brook Road in comparison to the local ambient sound levels. It is estimated the landfill operations produce sound levels a minimum of 30 dBA lower than levels measured on the eastern boundary as the result of sound attenuation by distance, vegetative screening and absorption, and terrain absorption. Sampling measurements obtained average sound levels well below the part 360 daytime sound level limit.

The dominant source of received sound at survey locations on the eastern landfill boundary is highway traffic on Route 414. At survey Locations 1 and 2, the background traffic noise levels include sounds of vehicles accelerating and decelerating vehicles in the vicinity of the signalized entrance to SMI and the driveways for the energy facilities and the leachate storage area, which causes increases in traffic noise levels. Additional sources of sound at Locations 1 and 2 include components of the Seneca Energy Inc. gas-to-energy facility. At survey Locations 3 and 4 the traffic is free flowing and the background sound levels are lower than measured at Locations 1 and 2. Additional sources of received sounds observed at Locations 3 and 4 consisted of environmental sources including birds, insects, and wind in trees. The Chesapeake Appalachia LLC gas compressor station was perceptible between daytime traffic passes. Sounds of landfill operations were not perceived at Locations 1 to 4 during the survey period.

The daytime background hourly-average noise levels at survey Locations 1 and 2 were found to exceed the Part 360 standard daytime sound level limits during the majority of daytime hours of landfill operations. At Location 3, the hourly-average sound levels exceeded the limit in 11% of the samples. At survey Location 4 the daytime noise levels during daytime hours of landfill operations conformed to the Part 360 standard daytime sound level limits.

The nighttime noise levels at Locations 1 to 2 are due to the combination of traffic and operations of the SEI facility. The nighttime noise levels at Locations 3 and 4 are largely due to traffic and environmental sources. At Location 4, the Chesapeake Appalachia LLC gas compressor station contributed to the noise levels in nighttime hours. The nighttime background noise levels at Locations 1 to 4 were found to exceed the Part 360 standard nighttime sound level limits in the nighttime hours in all or a large majority of the time periods.

The acceptability of the measured sound levels at Locations 1, 2, and 3 in daytime hours was determined by evaluating the perceptibility of landfill sources with respect to the background residual noise levels, and by evaluating the differences in sound levels with respect to the background sound levels at Location 4 referencing 6 NYCRR Part 360 in Section 360-1.19 (j)(1). At each location, the landfill activities were not perceptible due to screening of the continuous SELF, NEX, and SMI berms, the sound attenuation due to distance and vegetation, and due to the masking of facility sounds by the higher levels of background traffic noise.

At Location 1, the daytime hourly-average sound levels were an average of 7.5 dBA above the average daytime hourly-average sound level at Location 4, excluding rain periods. The hourly average levels exceeded the background levels by more than 3 dBA in 65 of 69 daytime records, excluding rain periods. The nighttime hourly-average sound levels were an average of 4.7 dBA above the average daytime hourly-average sound level at Location 4. The hourly average levels exceeded the background levels by more than 3 dBA in 34 of 36 nighttime records.

At Location 2, the nighttime hourly-average sound levels were an average of 7.3 dBA above the average daytime hourly-average sound level at Location 4. The hourly average levels exceeded the background levels by more than 3 dBA in 28 of 36 nighttime records. The daytime hourly-average sound levels were an average of 8.4 dBA above the average daytime hourly-average sound level at Location 4, excluding rain periods. The hourly average levels exceeded the background levels by more than 3 dBA in 49 of 70 daytime records, excluding rain periods.

At Location 3, the daytime hourly-average sound levels were an average of 2.9 dBA above the average daytime hourly-average sound level at Location 4, excluding rain periods. The hourly average levels exceeded the background levels by more than 3 dBA in 17 of 70 daytime records, excluding rain periods. The nighttime hourly-average sound levels were an average of 2.1 dBA above the average daytime hourly-average sound level at Location 4. The hourly average levels exceeded the background levels by more than 3 dBA in one of 36 nighttime records.

The sound level differences at Locations 1, 2 and 3 with respect to Location 4 that are greater than the 3 dBA limit as described Part 360 Section 360-1.19 (j)(1) are attributed to the added effects of traffic noise from vehicle acceleration and deceleration that occurred at Locations 1 and 2, in contrast to lower background noise levels from free-flowing traffic at Locations 3 and 4. Vegetative absorption and scattering effects at survey Locations 3 and 4 may have also reduced the received sound levels and affected the perceived level differences.

It is concluded from the daytime sound surveys and observations at Locations 1 and 2 that the measured hourly-average sound levels exceed the standard Part 360 Section 360-1.19(j) daytime sound level limit due to elevated levels of background traffic noise. The background levels at times are more than 3 dBA above the background levels at Location 4, however, the differences are due to traffic noise effects and in part to the noise contributions of the SEI facility. The sounds of landfill operations are imperceptible compared to traffic noise, and do not significantly contribute to the measured sound levels. It is accordingly concluded the daytime sound levels at Locations 1 and 2 are acceptable in accord with the background noise level criterion stated in 6 NYCRR Part 360 in Section 360-1.19 (j)(1).

It is concluded from daytime sound surveys that the measured hourly-average daytime sound levels at Location 3 comply with the 62 dBA $L_{eq\text{-}1\ hr}$ daytime noise level limit in the majority of the daytime periods. In a small number of periods the noise exceptions are attributed to traffic effects. It is accordingly concluded the daytime sound levels at Locations 3 in the excepted periods are acceptable in accord with the background noise level criterion stated in 6 NYCRR Part 360 in Section 360-1.19 (j)(1).

It is concluded the hourly-average daytime sound levels at Location 4 comply with the 62 dBA $L_{eq\text{-}1\ hr}$ daytime noise level in each period.

The measured nighttime hourly-average sound levels measured at Locations 1 and 2 exceed the standard Part 360 nighttime sound level limit in all or a majority of the nighttime periods, and the levels at Locations 3 and 4 exceed the nighttime sound level limit in 47% to 64% of the nighttime periods, due to elevated levels of background traffic noise and contributions of the nearby gas compressor station. It is concluded the measured nighttime sound levels at Locations 1 to 4 are acceptable in accord with the background noise level criterion stated in 6 NYCRR Part 360 in Section 360-1.19 (j)(1) because the measured levels are dominated by traffic, and because the landfill operations were imperceptible in comparison.

Locations 5, 6, 7, 10

Sound level logging and sampling surveys at Locations 5, 6, 7, and 10 on the western boundary of the landfill identified the sound levels received at adjoining properties zoned or authorized for residential use during landfill operations combined with environmental sources and construction sources. The receptors represented in the surveys include several existing residential properties, along with former residential-use properties, agricultural-use parcels, and properties that are currently wooded and undeveloped, which are holdings of SMI.

The daytime sound levels at Location 5 were dominated by sounds of environmental sources and ambient traffic. In comparison, sounds of landfill operations were only faintly perceptible at Location 5 and did not significantly contribute to measured sound levels. Environmental sources and traffic were dominant sources in nighttime hours, and are attributed to an exception in one nighttime hour. It is concluded from logging and sampling surveys and from attended observations that the monitored landfill noise levels at Location 5 comply with the 62 dBA daytime L_{eq} noise level criterion and the L_{eq} 52 dBA nighttime noise level criterion of 6 NYCRR Part 360 Section 360-1.19(j).

The daytime sound levels at Location 6 were due to the combination of environmental sources, construction operations on the western slope and base of Stage 6, and pass-bys of soil trucks on the western berm road.

Landfill operations and odor and dust neutralizing systems at Stage 6 were only partly perceptible. Landfill operations at Stages 7-8, construction at Stage 5 and SMI, and operation of the onsite flare system were imperceptible due to the attenuation of the Stage 6 berm and distance. Construction operations and farming activities in the adjoining agricultural parcel are attributed to two daytime exceptions of the hourly-average levels. Environmental sources were dominant in nighttime hours. It is concluded from surveys and observations that the monitored landfill noise levels at Location 6 comply with the 62 dBA daytime L_{eq} noise level criterion and the L_{eq} 52 dBA nighttime noise level criterion of 6 NYCRR Part 360 Section 360-1.19(j).

The daytime sound levels at Location 7 consisted of environmental and traffic sounds combined in part with sounds of soil loading and unloading operations at the Salcman Road material storage area, soil truck traffic, and landfill waste truck traffic. Landfill operations at Stage 6 and Stages 7-8, area maintenance activities, operation of the flare system, and construction at Stages 5 and 6 were not distinguishable at Location 7 due to berm screening and distance and did not significantly contribute to the measured sound levels. Environmental sources and traffic were dominant in nighttime hours. One nighttime noise exception was due to a surveyor artifact. It is concluded from surveys and observations that the monitored landfill noise levels at Location 7 comply with the 62 dBA daytime L_{eq} noise level criterion and the L_{eq} 52 dBA nighttime noise level criterion of 6 NYCRR Part 360 Section 360-1.19(j).

The daytime sound levels at Location 10 were due to landfill waste placement operations and operations of odor and dust neutralizing systems at Stage 6, combined with construction operations at Stage 5, the SMI overlap, and the western face of Stage 6, with pass-bys of construction equipment. A small number of exceptions to the standard daytime limit occurred during 18% of the hourly averages, ranging from 1 to 3 dBA. Construction operations at a landfill are not regulated under 6 NYCRR Part 360 in assessments of sound level compliance, referencing rulings of New York State Department of Environmental Conservation that have concluded that noise contributions from construction sources are not regulated under the Part 360 regulations (Matter of Saratoga County Landfill, Second Interim Decision, October 3, 1995, page 8).

Environmental sources and ambient traffic contributed to the noise environment at Location 10 in nighttime hours. A small number of exceptions to the standard nighttime limit occurred during 18% of the hourly averages, which are attributed to use of a dewatering pump and early morning equipment startup to support landfill operations or construction.

The stated exceptions to the standard sound level limits are not considered to be significant based on the contributions of construction operations, and because the adjoining property is not currently occupied and

was not being farmed during surveys.

It is concluded from the logging and sampling surveys and attended observations at Location 10 that the monitored landfill noise levels comply with the 62 dBA L_{eq} daytime noise level criterion and the 52 dBA L_{eq} nighttime noise level criterion of 6 NYCRR Part 360 Section 360-1.19(j) with minor exceptions.

Locations 8, 9

Sound level logging and sampling surveys performed at Locations 8 and 9 on the southern boundary of the landfill identified the sound levels received from landfill operations and environmental sources at adjoining properties zoned or authorized for residential use, including existing residential properties and properties that are currently wooded and undeveloped.

The daytime sound levels at Location 8 were dominated by traffic and environmental sounds. The measured sound levels were only partial influenced by sounds of operations in the materials storage area, soil truck traffic, and waste vehicle traffic on Salcman Road. The landfill equipment sources did not significantly contribute to measured sound levels. Occasional operation of a water pump to fill water trucks was partly perceptible at the location. Environmental sources were dominant in nighttime hours. Exceptions occurred in five daytime hours, which are attributed to regular train passes with horns at the adjoining grade crossing. One nighttime exception occurred that is attributed to traffic or an environmental source. It is concluded from surveys and observations that the monitored landfill noise levels at Location 5 comply with the 62 dBA daytime L_{eq} noise level criterion and the L_{eq} 52 dBA nighttime noise level criterion of 6 NYCRR Part 360 Section 360-1.19(j).

The daytime sound levels at Location 9 were dominated by environmental sounds. The measured sound levels were only partial influenced by sounds of operations in the materials storage area, soil truck traffic, and waste vehicle traffic on Salcman Road. The landfill equipment sources did not significantly contribute to measured sound levels. Environmental sources were dominant in nighttime hours. One nighttime exception occurred that is attributed to traffic on the bus garage road or an environmental source. It is concluded from surveys and observations that the monitored landfill noise levels at Location 5 comply with the 62 dBA daytime L_{eq} noise level criterion and the L_{eq} 52 dBA nighttime noise level criterion of 6 NYCRR Part 360 Section 360-1.19(j).

Black Brook Road, North Road, and Strong Road

Sound levels at the nearest non-contiguous residences east of the landfill along Black Brook Road are predicted to be attenuated a minimum of 30 dBA from the levels measured along the eastern boundary due to distance, vegetative screening, soil absorption, and berm screening. Sampled sound levels on Black Brook

measured 46.9 dBA and 52.6 dBA due to birds and traffic, which comply with the 62 dBA daytime L_{eq} noise level criterion of 6 NYCRR Part 360 Section 360-1.19(j). Landfill sources were observed to be inaudible.

Sound levels at the nearest non-contiguous residences west of the landfill along North Road are predicted to be a minimum of 5 dBA lower than the levels measured at Location 7. Sound levels at the nearest non-contiguous residences north of the landfill along Strong Road are predicted to be attenuated a minimum of 90 dBA from east boundary levels. It is predicted the received sound levels at the nearest non-contiguous residences in each direction comply with the 62 dBA daytime L_{eq} noise level criterion and the L_{eq} 52 dBA nighttime noise level criterion of 6 NYCRR Part 360 Section 360-1.19(j).

Sound Surveys Summary

The findings of the logging surveys, sampling surveys, survey observations, and sound level assessments are summarized in Table 3 along with conclusions regarding the compliance of the noise levels received at the boundaries of the Seneca Meadows, Inc. landfill with respect to noise level limits associated with the suburban community character contained in 6 NYCRR Part 360 Section 360-1.19(j) and with respect to residual background noise levels as described in 6 NYCRR Part 360 Section 360-1.19(j) (1).

Table 3 2020 Annual Sound Survey Findings and Noise Compliance Summary

Location	Noise Monitoring Location Description	Background Sound Source & Landfill Operations Audibility and Compliance
Location 1	East boundary on east side of SELF, 1500 ft north of current Salcman Road entrance, 100 ft from edge of S.R. 414, adjacent to Highway Commercial zoning district. Represents former residential-use properties on east side of highway in Highway Commercial zoning (current holdings of SMI). Property to southeast contains a former residence, formerly used as a construction office and not in use during surveys, 450 ft from survey location. Other properties, previously used for agriculture, were not in farm use during surveys.	Dominant source of received noise levels is traffic on State Route 414 with added sounds of accelerating and decelerating vehicles and jake brakes at signalized SMI entrance, SEI driveway, and leachate storage facility driveway. Landfill operations at Stage 6 and Stages 7-8 and associated waste truck traffic were imperceptible due to distance and screening of the SELF-NEX berm. The landfill sources did not contribute to the measured noise levels. Soil loading and unloading operations at the Salcman Road storage area were imperceptible due to berm screening. Operations of the onsite gas flare system and tire facility were imperceptible due to distance and screening of the SELF-NEX berm. The sources did not contribute to the measured noise levels. Construction operations at Stage 5, 6, SMI were imperceptible due to distance and screening of the SELF-NEX berm. The construction sources did not contribute to the measured noise levels. Leachate collection system maintenance on the north face of the NEX berm was imperceptible. The maintenance sources did not contribute to the measured noise levels. Operations of the SEI gas-to-energy plant and High BTU plant were perceptible in the daytime between traffic and in hours after landfill hours of operation. The sources partly contributed to the measured daytime noise levels. The sources were perceptible in nighttime hours and largely influenced the measured nighttime levels. Noise acceptability was assessed by assessing perceptibility with respect to the background noise, and by comparing measured sound levels to background traffic noise levels measured at Location 4 The measured hourly-average noise levels are attributed to daytime and nighttime traffic background sources and nighttime environmental sources, and are concluded to comply with the alternate background noise criteria of Part 360 Paragraph 360-1.19(j)(1) for daytime and nighttime hours.

Table 3 (Cont.) Sound Survey and Compliance Summary

Location	Noise Monitoring Location Description	Background Sound Source & Landfill Operations Audibility and Compliance
Location 2	Eastern boundary to east of NEX, 400 ft south of leachate facility driveway, 90 ft from edge of S.R. 414, adjacent to Highway Commercial zoning district. Represents former residential-use property, former agricultural-use property, and undeveloped property on east side of highway in Flood Plain Protection, Highway Commercial, an Agricultural zoning districts (current holdings of SMI, includes retention ponds).	Dominant source of received noise levels is traffic on State Route 414 with added sounds of accelerating and decelerating vehicles and jake brakes at signalized SMI entrance and leachate area driveway. Landfill operations at Stage 6 and Stages 7-8 and associated waste truck traffic were imperceptible due to distance and screening of the SELF-NEX berm. The landfill sources did not contribute to the measured noise levels. Soil loading and unloading operations at the Salcman Road storage area were imperceptible due to berm screening. Operations of the onsite gas flare system and tire facility were imperceptible due to distance and screening of the SELF-NEX berm. The sources did not contribute to the measured noise levels. Construction operations at Stage 5, 6, SMI were imperceptible due to distance and screening of the SELF-NEX berm. The construction sources did not contribute to the measured noise levels. Leachate collection system maintenance on the north face of the NEX berm was imperceptible. The maintenance sources did not contribute to the measured noise levels. Operations of the SEI gas-to-energy plant and High BTU plant were perceptible in the daytime between traffic and in hours after landfill hours of operation. The sources partly contributed to the measured daytime noise levels. The sources were perceptible in nighttime hours and largely influenced the measured nighttime levels. Noise acceptability was assessed by assessing perceptibility with respect to the background noise, and by comparing measured sound levels to background traffic noise levels measured at Location 4 The measured hourly-average noise levels are attributed to daytime and nighttime traffic background sources and nighttime environmental sources, and are concluded to comply with the alternate background noise criteria of Part 360 Paragraph 360-1.19(j)(1) for daytime and nighttime hours.

Table 3 (Cont.) Sound Survey and Compliance Summary

Location	Noise Monitoring Location Description	Background Sound Source & Landfill Operations Audibility and Compliance
Location 3	Eastern boundary, 6900 ft north of current Salcman Road entrance, 100 ft from edge of S.R. 414, at Highway Commercial zoning. Represents current residential-use property 300 ft northeast of location on east side of highway and former residential use property 750 ft to north on west side of highway. Represents former residential-use and undeveloped properties on west side of highway (owned by SMI) authorized for residential use in Highway Commercial zoning. Represents undeveloped properties on east side of highway (owned by SMI) authorized for residential use in Highway Commercial & Agricultural zoning.	Dominant source of received noise levels is traffic on State Route 414. Traffic is free flowing without significant acceleration and deceleration events. Environmental sources are contributory sources. Landfill operations at Stage 6 and Stages 7-8 and associated waste truck traffic were imperceptible due to distance and screening of the SELF-NEX berm. The landfill sources did not contribute to the measured noise levels. Soil loading and unloading operations at the Salcman Road storage area were imperceptible due to berm screening. Operations of the onsite gas flare system and tire facility were imperceptible due to distance and screening of the SELF-NEX berm. The sources did not contribute to the measured noise levels. Construction operations at Stage 5, 6, SMI were imperceptible due to distance and screening of the SELF-NEX berm. The construction sources did not contribute to the measured noise levels. Leachate collection system maintenance on the north face of the NEX berm was imperceptible. The maintenance sources did not contribute to the measured noise levels.. Operations of the SEI gas-to-energy plant and High BTU plant were not distinguishable. The measured daytime hourly-average noise levels comply with the suburban limits of Part 360 Paragraph 360-1.19(j). Nighttime noise acceptability was assessed by assessing perceptibility with respect to the background noise, and by comparing measured sound levels to background traffic noise levels measured at Location 4 The measured hourly-average noise levels are attributed to nighttime traffic background sources and nighttime environmental sources, and are concluded to comply with the alternate background noise criteria of Part 360 Paragraph 360-1.19(j)(1) for daytime and nighttime hours.

Table 3 (Cont.) Sound Survey and Compliance Summary

Location	Noise Monitoring Location Description	Background Sound Source & Landfill Operations Audibility and Compliance
Location 4	Eastern boundary, 9350 ft north of current Salcman Road entrance, 100 ft from edge of S.R. 414, adjacent to Highway Commercial zoning. Represents residential-use property 230 ft north of location and adjacent agricultural properties west of location on west side of highway in Highway Commercial zoning. Represents two residential-use properties 580 ft and 800 ft southeast on east side of highway in Highway Commercial and Agricultural zoning. Represents undeveloped property on east side of highway (owned by SMI) in Highway Commercial and agricultural zoning.	Dominant source of received noise levels is traffic on State Route 414. Traffic is free flowing without significant acceleration and deceleration events. Secondary daytime sources and dominant nighttime sources are environmental, and the nearby gas compressor facility. Landfill operations at Stage 6 and Stages 7-8 and associated waste truck traffic were imperceptible due to distance and screening of the SELF-NEX berm. The landfill sources did not contribute to the measured noise levels. Soil loading and unloading operations at the Salcman Road storage area were imperceptible due to berm screening. Operations of the onsite gas flare system and tire facility were imperceptible due to distance and screening of the SELF-NEX berm. The sources did not contribute to the measured noise levels. Construction operations at Stage 5, 6, SMI were imperceptible due to distance and screening of the SELF-NEX berm. The construction sources did not contribute to the measured noise levels. Leachate collection system maintenance on the north face of the NEX berm was imperceptible. The maintenance sources did not contribute to the measured noise levels. Operations of the SEI gas-to-energy plant and High BTU plant were not distinguishable. Sounds of the nearby compressor station were partly perceptible between traffic and in hours after normal hours of waste acceptance. The sources may have partly contributed to the measured noise levels. The measured daytime hourly-average noise levels comply with the suburban limits of Part 360 Paragraph 360-1.19(j). Nighttime noise acceptability was assessed by assessing perceptibility with respect to the background noise, and by comparing measured sound levels to background traffic noise levels measured at Location 4 The measured hourly-average noise levels are attributed to nighttime traffic background sources and nighttime environmental sources, and are concluded to comply with the alternate background noise criteria of Part 360 Paragraph 360-1.19(j)(1) for daytime and nighttime hours.

Table 3 (Cont.) Sound Survey and Compliance Summary

Location	Noise Monitoring Location Description	Background Sound Source & Landfill Operations Audibility and Compliance
Location 5	Western boundary, 900 ft northwest of northwest corner of original SMI landfill, 400 ft east of Burgess Road. Represents suburban residential development and undeveloped residentially authorized properties on east and west sides of Burgess Road, including property holdings of SMI, in Low-Density Residential zoning district.	Dominant sources of background noise are environmental sources (insects, birds, amphibians, wind), local traffic on Burgess Road, and ambient traffic on Route 414. Landfill operations at Stage 6 and Stages 7-8 and associated waste truck traffic were imperceptible due to distance and screening of the SELF-NEX berm. The landfill sources did not contribute to the measured noise levels. Soil loading and unloading operations at the Salcman Road storage area were imperceptible due to berm screening. Operations of the onsite gas flare system and tire facility were imperceptible due to distance and screening of the WEX berm. The sources did not contribute to the measured noise levels. Construction operations at Stage 5, 6, SMI were imperceptible due to distance and screening of the SMI berm. The construction sources did not contribute to the measured noise levels. Leachate collection system maintenance on the north face of the NEX berm was imperceptible. The maintenance sources did not contribute to the measured noise levels. Operations of the SEI gas-to-energy plant and High BTU plant were not distinguishable. The measured hourly-average noise levels comply with the suburban limits of Part 360 Paragraph 360-1.19(j) in the daytime hours, with one nighttime exception attributed to traffic or an environmental event.

Table 3 (Cont.) Sound Survey and Compliance Summary

Location	Noise Monitoring Location Description	Background Sound Source & Landfill Operations Audibility and Compliance
Location 6	Western boundary, 1350 ft north of Salcman Road, 900 ft east of Burgess Road. Adjoins agricultural properties on east side of Burgess Road in Low-Density Residential zoning district. Represents two residences on east side of Burgess Road and undeveloped residentially authorized properties, including property holdings of SMI, in Low-Density Residential zoning district.	Dominant sources of background noise are environmental sources (insects, birds, wind), and local traffic on Burgess Road. Landfill operations at Stage 6 and Stages 7-8 and associated waste truck traffic were imperceptible due to distance and screening of the SELF-NEX berm. The landfill sources did not contribute to the measured noise levels. Soil loading and unloading operations at the Salcman Road storage area were imperceptible due to berm screening. Operations of the onsite gas flare system and tire facility were imperceptible due to distance and screening of the WEX berm. The sources did not contribute to the measured noise levels. Construction on the western face of WEX was perceptible and contributed to the measured noise levels. Leachate collection system maintenance on the north face of the NEX berm was imperceptible. The maintenance sources did not contribute to the measured noise levels. Operations of the SEI gas-to-energy plant and High BTU plant were not distinguishable. Operations at Meadow View Mine were not in progress. Farming activities influenced daytime measurements on one day. The measured hourly-average noise levels comply with the suburban limits of Part 360 Paragraph 360-1.19(j) in the daytime and nighttime hours, with limited exceptions attributed to construction and farming sources.

Table 3 (Cont.) Sound Survey and Compliance Summary

Location	Noise Monitoring Location Description	Background Sound Source & Landfill Operations Audibility and Compliance
Location 7	On western boundary near southwest corner of holdings, 100 ft north of Salcman Road, 200 ft east of Burgess Road. Represents five residences on south side of Salcman Road in suburban grouping on east side of Burgess Road (four owned by SMI), and former residential-use properties on east side of Burgess Road north of Salcman Road intersection (owned by SMI), in Moderate-Density Residential zoning district.	Received sound levels are the combination of traffic on Salcman Road, soil loading operations at the Salcman Road material storage area, and background traffic on Burgess Road and North Road, and sounds of environmental sources (birds, insects, amphibians, wind). Landfill operations at Stage 6 and Stages 7-8 and associated site truck traffic were not distinguishable due to distance and screening by the WEX berm. The landfill sources did not significantly contribute to the measured noise levels. Operations of the gas flare system were imperceptible due to distance and screening of the WEX berm. The sources did not contribute to the measured noise levels. Operations of the tire facility were imperceptible due to distance. The sources did not contribute to the measured noise levels. Construction operations at Stage 5, 6, SMI were not perceptible due to distance and screening of the WEX berm. The construction sources did not contribute to the measured noise levels. The measured hourly-average noise levels comply with the suburban limits of Part 360 Paragraph 360-1.19(j) in the daytime and nighttime hours.

Table 3 (Cont.) Sound Survey and Compliance Summary

Location	Noise Monitoring Location Description	Background Sound Source & Landfill Operations Audibility and Compliance
Location 8	On southern boundary of facility holdings, south of southern retention ponds, 175 ft north of North Road, 175 ft west of railroad crossing. Represents suburban grouping of residences on north and south sides of North Road between railroad crossing and Burgess Road, including holdings of SMI on north side of road, in Moderate-Density Residential and Village zoning districts.	Received sound levels are the combination of traffic on Salcman Road, background traffic on North Road, train passes, and sounds of environmental sources (birds, insects, amphibians, wind). Landfill operations at Stage 6 and Stages 7-8 and associated site truck traffic were not distinguishable due to distance. The landfill sources did not significantly contribute to the measured noise levels. Operations of the onsite gas flare system were imperceptible due to distance. The sources did not contribute to the measured noise levels. Operations of the tire facility were imperceptible due to distance. The sources did not contribute to the measured noise levels. Construction operations at Stage 5, 6, SMI were not perceptible due to distance and screening. The construction sources did not contribute to the measured noise levels. Train passes are attributed to 5 daytime exceptions. The measured hourly-average noise levels comply with the suburban limits of Part 360 Paragraph 360-1.19(j) in the daytime and nighttime hours, with limited daytime exceptions due to train passes and one nighttime exception attributed to traffic or an environmental event.

Table 3 (Cont.) Sound Survey and Compliance Summary

Location	Noise Monitoring Location Description	Background Sound Source & Landfill Operations Audibility and Compliance
Location 9	On southern boundary of facility holdings, south of southern retention ponds, 800 ft north of North Road, 250 ft east of bus garage entrance. Represents residence 400 ft to southwest (owned by SMI), residence 650 ft south of location along North Road in Moderate-Density Residential, and residences 850 ft south in Village zoning districts.	Received sound levels are the combination of soil loading activities at the Salcman Road material storage area, soil truck traffic, traffic on Salcman Road, background traffic on North Road and the bus garage road, and sounds of environmental sources (birds, insects, wind). Landfill operations at Stage 6 and Stages 7-8 and associated site truck traffic were not distinguishable due to distance. The landfill sources did not significantly contribute to the measured noise levels. Operations of the onsite gas flare system were imperceptible due to distance. The sources did not contribute to the measured noise levels. Operations of the tire facility were imperceptible due to distance. The sources did not contribute to the measured noise levels. Construction operations at Stage 5, 6, SMI were not perceptible due to distance and berm screening. The construction sources did not contribute to the measured noise levels. The measured hourly-average noise levels comply with the suburban limits of Part 360 Paragraph 360-1.19(j) in the daytime and nighttime hours with one nighttime exception attributed to traffic or an environmental event.

Table 3 (Cont.) Sound Survey and Compliance Summary

Location	Noise Monitoring Location Description	Background Sound Source & Landfill Operations Audibility and Compliance
Location 10	On western boundary, 2700 ft north of Salcman Road, 850 ft east of Burgess Road. Adjoins agricultural properties on east side of Burgess Road in Low-Density Residential zoning district. Represents residence on west side of Burgess Road (owned by SMI) in Low-Density Residential zoning district.	Received sound levels are the combination of waste placement activities at Stage 6 combined with construction activities at Stage 5, 6, SMI, construction vehicle pass-bys, and maintenance operations from odor and dust neutralizing systems. Dominant nighttime sources were environmental background sources and traffic on Burgess Road. Operations of the onsite gas flare system were imperceptible due to distance and screening of the WEX berm. The sources did not contribute to the measured noise levels. Operations of the tire facility were imperceptible due to distance and screening of the WEX berm. The sources did not contribute to the measured noise levels. Construction operations at Stages 5 and 6 and movements of construction equipment are attributed to 13 daytime noise exceptions. The exceptions were typically 3 dBA or less. Noise of construction activities is not regulated under Part 360 regulations. Adjoining property is unoccupied and not in agricultural use.
	Black Brook Road	The hourly-average noise levels from activities at Stage 6 are predicted to be attenuated by 50-60 dBA by distance, berms, and vegetation to levels of 20-25 dBA, and comply with the suburban limits of Part 360 Paragraph 360-1.19(j). Sampled levels comply with the daytime limit.
	Strong Road	The hourly-average noise levels from activities at Stage 6 are predicted to be attenuated by 60 dBA or more by distance, berms, and vegetation to negligible levels below ambient levels, and comply with the suburban limits of Part 360 Paragraph 360-1.19(j).
	North Road	The hourly-average noise levels from activities at Stage 6, Salcman Road traffic, and soil operations are predicted to be attenuated by 5 dBA or more than levels measured at Location 7 to levels of approximately 37 dBA, and comply with the suburban limits of Part 360 Paragraph 360-1.19(j).

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2020
ANNUAL NOISE SURVEY

FOR

SENECA MEADOWS, INC.
SANITARY LANDFILL
WATERLOO, NEW YORK

VOLUME II

Prepared for
SENECA MEADOWS, Inc.
1786 Salcman Road
Waterloo, New York 13165

Prepared by: Daniel P. Prusinowski

February 5, 2021

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Appendix A

Descriptions of Sound Level Instrumentation

AURORA ACOUSTICAL CONSULTANTS Inc.

SOUND TEST DATE July 29-August 2, 2019

SOUND LEVEL METER:

☐	Larson Davis 831	s/n 0001466	☒	Larson Davis 831	s/n 0001057
	½" mic 377B02	s/n 143898		½" mic 377B20	s/n 105288
	preamp PRM831	s/n 0141		preamp PRM831	s/n 10126
☐	CEL 593.C1R	s/n 3/0991604	☐	Larson Davis 800B	s/n 0327
	½" mic mk250	s/n 2039		½" mic 2559	s/n 1422
	preamp CEL 527	s/n 3/099/1527		preamp 826B	s/n 141
☐	CEL 480	s/n 118393	☐	CEL 440	s/n 058195
	½" mic CEL 250	s/n 1734		½" mic 250	s/n 1554
	preamp CEL 495	s/n 108368		preamp CEL 495	s/n 058195
☐	Rion SA-77	s/n 10151076	☐	Rion SA-78	s/n 00730055
	½" mic B&K 4176R	s/n 1583199		½" mic B&K 4176R	s/n 1583199
	Preamp Rion NH-174	s/n 61582		Preamp Rion NH-174	s/n 61582

☐	Metrosonics db3100	s/n 1163	¼" mic mk3100R	☐	Metrosonics db3100	s/n 4677	¼" mic mk3100R
☒	Metrosonics db3100	s/n 1414	¼" mic mk3100R	☐	Metrosonics db3100	s/n 4763	¼" mic mk3100R
☒	Metrosonics db3100	s/n 1505	¼" mic mk3100R	☐	Metrosonics db3100	s/n 4680	¼" mic mk3100R
☒	Metrosonics db3100	s/n 1511	¼" mic mk3100R	☒	Metrosonics db3100	s/n 4684	¼" mic mk3100R
☐	Metrosonics db3100	s/n 1658	¼" mic mk3100R				
☒	Metrosonics db3100	s/n 3067	¼" mic mk3100R	☐	Metrosonics db3100	s/n 4689	¼" mic mk3100R
☒	Metrosonics db3100	s/n 3819	¼" mic mk3100R	☒	Metrosonics db3100	s/n 5727	¼" mic mk3100R
☐	Metrosonics db3080	s/n 3980	¼" mic mk3100R	☐	Metrosonics db3080	s/n 5914	¼" mic mk3100R
☐	Metrosonics db3080	s/n 3996	¼" mic mk3100R	☐	Metrosonics db3080	s/n 5916	¼" mic mk3100R
☒	Metrosonics db3080	s/n 4036	¼" mic mk3100R	☐	Metrosonics db3080	s/n 6603	¼" mic mk3100R
☐	Metrosonics db3080	s/n 4049	¼" mic mk3100R	☐	Metrosonics db3080	s/n 6611	¼" mic mk3100R
☒	Metrosonics db3080	s/n 4401	¼" mic mk3100R	☐	Metrosonics db3080	s/n 6614	¼" mic mk3100R
☐	Metrosonics db3080	s/n 4415	¼" mic mk3100R	☐	Metrosonics db3080	s/n 6621	¼" mic mk3100R
☐	Metrosonics db3080	s/n 4418	¼" mic mk3100R	☐	Metrosonics db3080	s/n 6622	¼" mic mk3100R
☒	Metrosonics db3080	s/n 4441	¼" mic mk3100R	☐	Metrosonics db3080	s/n 6623	¼" mic mk3100R
☐	Metrosonics db3080	s/n 4676	¼" mic mk3100R	☐	Metrosonics db3080	s/n 6624	¼" mic mk3100R

CALIBRATOR:

☐	CEL 284/2	s/n 02512942	☐	GenRad 1562	s/n HP138
☐	CEL 284/2	s/n 3/07819583	☐	GenRad 1562	s/n IT109
☒	CEL 284/2	s/n 3/09819815	☐	GenRad 1562A	s/n 6818
☐	CEL 284/2	s/n 4/09921209	☐	GenRad 1562A	s/n 20934
☐	Larson Davis CA250	s/n 0206	☐	GenRad 1567	s/n 15350
☐	Metrosonics cl304	s/n 2054			
☒	Metrosonics cl304	s/n 3067			
☐	Metrosonics cl304	s/n 4541			
☐	Metrosonics cl304	s/n 5523			
☐	Metrosonics cl304	s/n 01379			

WEATHER:

☒ Clear ☐ Cloudy ☒ Brief rain ☐ Fog ☐ Snowing ☐ Snow on Ground ☐ Wet Streets

Temperature = _____°F Winds = _____ @ _____ mph Relative Humidity = _____ %

NOTES: Detailed weather data for the survey week are summarized in Appendix E

AURORA ACOUSTICAL CONSULTANTS Inc.

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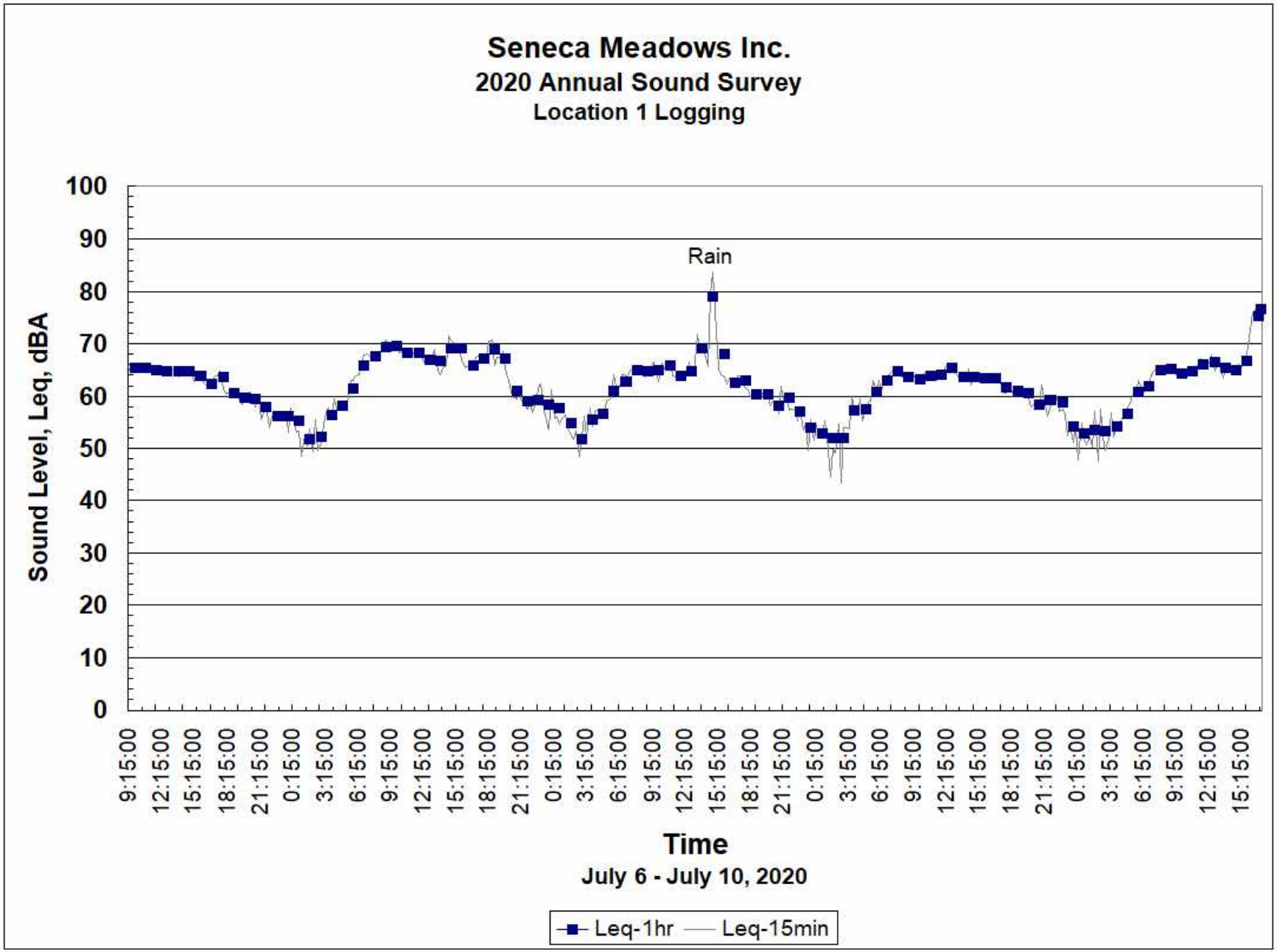
Appendix B

Sound Level Logging Surveys
July 6-July 10, 2020


Seneca Meadows Inc.
2020 Annual Sound Survey
Location 1 Logging
Sound Level, Leq, dBA
100
90
80
70
60
50
40
30
20
10
0
Rain
9:15:00
12:15:00
15:15:00
18:15:00
21:15:00
0:15:00
3:15:00
6:15:00
9:15:00
12:15:00
15:15:00
18:15:00
21:15:00
0:15:00
3:15:00
6:15:00
9:15:00
12:15:00
15:15:00
18:15:00
21:15:00
0:15:00
3:15:00
6:15:00
9:15:00
12:15:00
15:15:00
Time
July 6 - July 10, 2020
Leq-1hr
Leq-15min

****

Filename LOC1
Test Location 1
Employee Name
Employee No.
Department
Seneca Meadows Inc.
2020 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
Calibrator type Metrosonics CL304 3067
Calibrator calibration date 4/17/2019

****

METROSONICS db-3080 V1.20 SERIAL # 1414
Report printed on 7/12/2020 at 15:51:12

Seneca Meadows Inc.
2020 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
East Aurora, New York

Logging started at	7/6/2020 at 9:15:00
Total logging time	4 DAYS 7:46:02
Logging stopped at	7/10/2020 at 17:01:02
Total intervals	416
Interval length	0:15:00
Auto Stop	NO
Clock synch	YES
Response Rate	SLOW
Filter	A-WEIGHTED
Pre-Test Calibration Time	7/3/2020 at 18:23:31
Pre-Test Calibration Range	41 to 141 dB
Post-Test Calibration Time	7/12/2020 at 15:23:34
Post-Test Calibration Range	41 to 141 dB
Cut-off used for time history Lav	NONE

<<< SUMMARY REPORT FOR TEST NUMBER 1 OF 1 >>>

Exchange Rate 3dB		
Cutoffs	60dB	60dB
Ceiling	115dB	
DOSE Criterion level	90dB	
DOSE Criterion length	8 hours	
Lav(60)	65.4dB	
Lav(60)	65.3dB	
Lav(60)	65.3dB	
SEL	121.0dB	
TWA	76.5dB	
TWA(60)	76.4dB	
TWA(60)	76.4dB	
Lmax	98.4dB	7/8/2020 at 14:53:46
Lpk	128.4dB	7/8/2020 at 14:53:46
Time over 115 dB	00:00.0	
DOSE(60)	4.29%	
DOSE(60)	4.29%	

<<< TIME HISTORY REPORT FOR TEST NUMBER 1 OF 1 >>>

	START TIME	Leq(15-min) dBA	Lmax dBA	L(10.0) dBA	L(99.0) dBA	Leq(1-hr) dBA
7/6/2020						
	9:15:00	65.0	81.6	68.0	45.0	
	9:30:00	66.1	82.3	70.0	45.0	
	9:45:00	64.7	81.2	68.0	45.0	65.3
	10:00:00	65.1	78.0	69.0	46.0	
	10:15:00	65.5	79.2	69.0	46.0	
	10:30:00	65.6	82.2	68.0	46.0	
	10:45:00	65.5	78.8	69.0	45.0	65.4
	11:00:00	65.9	84.0	69.0	46.0	
	11:15:00	64.2	79.0	67.0	44.0	
	11:30:00	65.0	79.6	68.0	46.0	
	11:45:00	64.5	77.2	68.0	44.0	64.9
	12:00:00	64.5	75.2	69.0	46.0	
	12:15:00	65.1	79.6	69.0	46.0	
	12:30:00	64.7	78.6	69.0	44.0	
	12:45:00	65.1	82.7	68.0	44.0	64.9
	13:00:00	65.4	76.1	68.0	48.0	
	13:15:00	64.9	79.2	68.0	47.0	
	13:30:00	65.0	83.7	67.0	46.0	
	13:45:00	63.6	78.4	67.0	47.0	64.8
	14:00:00	64.9	78.4	68.0	47.0	
	14:15:00	63.8	77.6	67.0	45.0	
	14:30:00	65.0	81.7	68.0	45.0	
	14:45:00	65.0	82.5	67.0	49.0	64.7
	15:00:00	64.2	76.3	67.0	50.0	
	15:15:00	62.7	74.4	66.0	48.0	
	15:30:00	64.3	76.8	67.0	52.0	
	15:45:00	64.1	76.8	67.0	47.0	63.9
	16:00:00	62.6	77.0	66.0	47.0	
	16:15:00	62.0	73.6	65.0	47.0	
	16:30:00	61.9	72.9	65.0	47.0	
	16:45:00	62.5	72.9	66.0	48.0	62.3
	17:00:00	63.9	76.0	66.0	52.0	
	17:15:00	63.9	73.6	67.0	51.0	
	17:30:00	64.8	75.1	68.0	50.0	
	17:45:00	61.4	73.2	64.0	49.0	63.7
	18:00:00	60.3	75.0	63.0	47.0	
	18:15:00	60.5	76.5	63.0	46.0	
	18:30:00	60.4	73.2	64.0	47.0	
	18:45:00	61.1	81.2	63.0	46.0	60.6
	19:00:00	59.9	75.6	63.0	46.0	
	19:15:00	59.6	76.0	63.0	46.0	
	19:30:00	58.4	72.8	62.0	46.0	
	19:45:00	60.3	75.6	63.0	46.0	59.6
	20:00:00	59.8	75.0	63.0	47.0	
	20:15:00	60.8	78.0	63.0	47.0	
	20:30:00	59.0	76.7	62.0	47.0	
	20:45:00	57.9	74.4	61.0	47.0	59.5
	21:00:00	59.7	77.9	62.0	47.0	
	21:15:00	55.4	71.6	59.0	46.0	
	21:30:00	56.8	71.7	61.0	46.0	
	21:45:00	58.3	77.7	61.0	46.0	57.8
	22:00:00	54.0	68.7	57.0	46.0	
	22:15:00	56.1	71.9	59.0	46.0	
	22:30:00	56.9	74.8	58.0	47.0	
	22:45:00	56.8	73.1	59.0	47.0	56.1
	23:00:00	57.0	73.2	59.0	47.0	
	23:15:00	57.0	78.8	57.0	47.0	
	23:30:00	56.9	72.8	58.0	47.0	
	23:45:00	53.1	73.2	53.0	42.0	56.3
7/7/2020	0:00:00	57.8	76.8	59.0	42.0	
	0:15:00	55.4	76.8	54.0	42.0	
	0:30:00	53.1	76.8	47.0	42.0	
	0:45:00	53.2	74.4	49.0	42.0	55.3

1:00:00	48.4	69.2	45.0	42.0	
1:15:00	52.6	70.8	50.0	42.0	
1:30:00	50.4	69.2	46.0	42.0	
1:45:00	53.7	74.2	51.0	42.0	51.7
2:00:00	49.4	70.9	47.0	42.0	
2:15:00	55.6	76.6	50.0	42.0	
2:30:00	49.5	70.4	45.0	42.0	
2:45:00	50.9	72.6	46.0	42.0	52.2
3:00:00	54.6	72.8	54.0	42.0	
3:15:00	56.9	74.3	59.0	43.0	
3:30:00	57.7	75.6	58.0	42.0	
3:45:00	56.2	73.4	58.0	43.0	56.5
4:00:00	59.5	76.1	60.0	43.0	
4:15:00	57.4	74.0	60.0	42.0	
4:30:00	57.9	75.6	58.0	42.0	
4:45:00	57.3	71.9	60.0	44.0	58.1
5:00:00	57.8	74.1	62.0	44.0	
5:15:00	59.6	72.5	63.0	44.0	
5:30:00	62.9	78.4	66.0	45.0	
5:45:00	63.1	74.7	66.0	46.0	61.4
6:00:00	63.9	76.4	67.0	46.0	
6:15:00	64.1	78.3	67.0	48.0	
6:30:00	66.1	76.3	70.0	53.0	
6:45:00	67.9	79.2	71.0	53.0	65.8
7:00:00	68.0	78.2	72.0	54.0	
7:15:00	67.6	79.6	71.0	52.0	
7:30:00	67.0	81.5	70.0	50.0	
7:45:00	67.6	80.9	70.0	54.0	67.6
8:00:00	68.0	81.2	71.0	54.0	
8:15:00	68.2	80.1	71.0	57.0	
8:30:00	69.9	80.8	73.0	57.0	
8:45:00	70.7	81.3	74.0	56.0	69.3
9:00:00	69.2	79.6	72.0	57.0	
9:15:00	70.0	85.7	72.0	57.0	
9:30:00	70.1	80.0	73.0	57.0	
9:45:00	69.4	84.4	72.0	57.0	69.7
10:00:00	68.3	78.8	71.0	50.0	
10:15:00	68.4	76.7	71.0	55.0	
10:30:00	69.1	86.4	72.0	55.0	
10:45:00	67.4	78.8	71.0	52.0	68.3
11:00:00	67.8	81.2	70.0	54.0	
11:15:00	68.1	80.1	71.0	54.0	
11:30:00	69.2	79.2	72.0	56.0	
11:45:00	68.1	80.0	71.0	54.0	68.3
12:00:00	68.2	84.4	71.0	50.0	
12:15:00	66.5	78.8	70.0	47.0	
12:30:00	66.4	82.8	70.0	46.0	
12:45:00	66.5	79.2	70.0	50.0	67.0
13:00:00	67.3	87.4	70.0	49.0	
13:15:00	68.9	89.6	70.0	46.0	
13:30:00	64.7	76.0	68.0	47.0	
13:45:00	64.2	77.3	67.0	45.0	66.7
14:00:00	65.4	80.8	69.0	46.0	
14:15:00	65.9	78.0	69.0	46.0	
14:30:00	71.6	80.4	75.0	58.0	
14:45:00	70.8	79.2	74.0	55.0	69.3
15:00:00	70.3	78.8	74.0	56.0	
15:15:00	69.9	77.6	73.0	57.0	
15:30:00	68.9	76.8	72.0	55.0	
15:45:00	66.9	75.4	70.0	54.0	69.2
16:00:00	65.4	75.5	69.0	44.0	
16:15:00	65.7	73.7	68.0	49.0	
16:30:00	66.0	74.0	69.0	50.0	
16:45:00	66.4	74.8	70.0	53.0	65.9
17:00:00	67.3	75.4	70.0	52.0	
17:15:00	67.7	78.1	70.0	54.0	
17:30:00	67.2	76.9	70.0	52.0	
17:45:00	66.9	75.2	70.0	48.0	67.3
18:00:00	67.2	78.0	70.0	48.0	

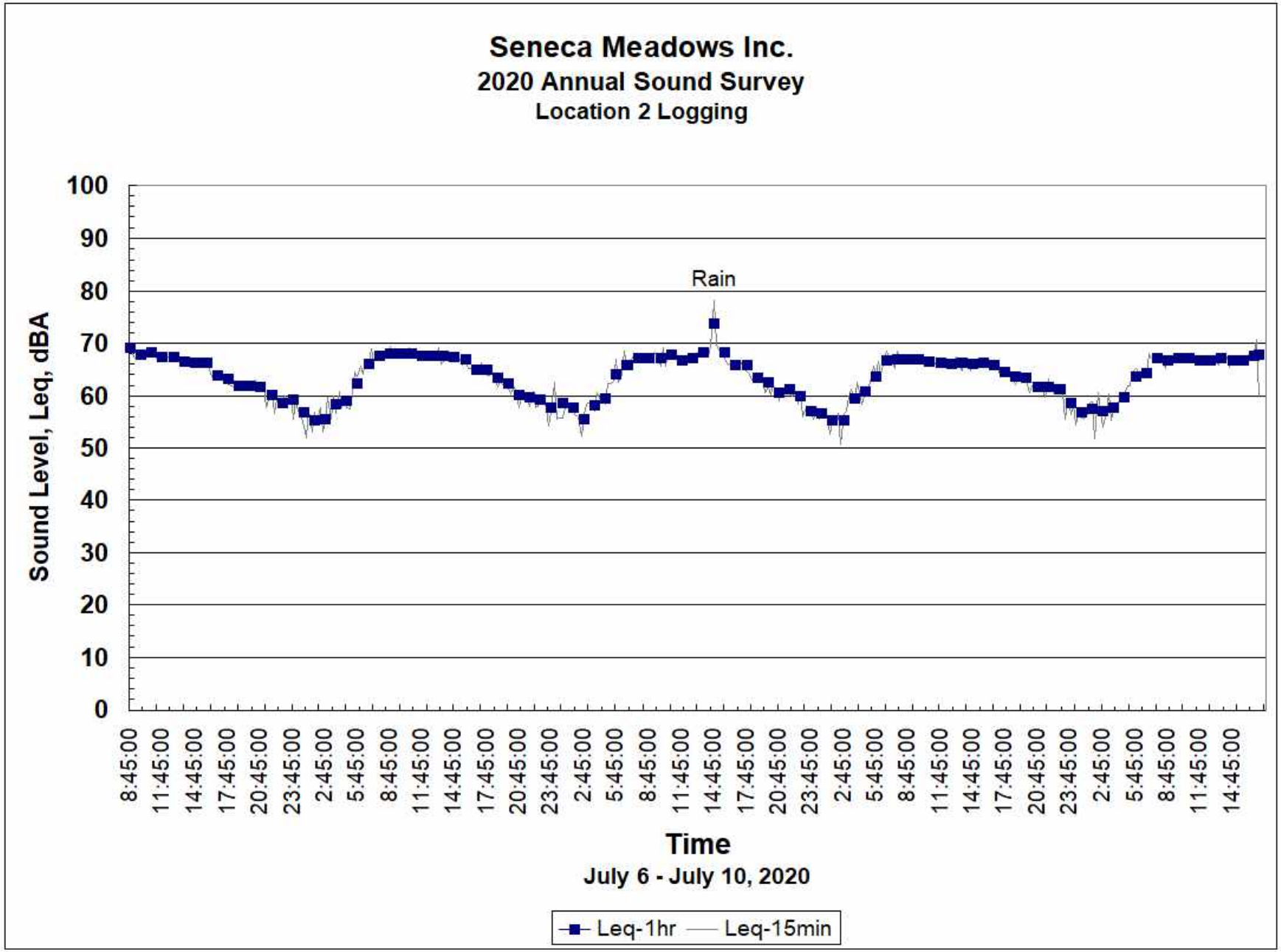
	18:15:00	70.4	77.4	73.0	57.0	
	18:30:00	70.6	79.6	73.0	60.0	
	18:45:00	65.9	75.2	69.0	50.0	69.0
	19:00:00	67.4	75.6	71.0	50.0	
	19:15:00	67.4	79.6	70.0	54.0	
	19:30:00	68.5	77.2	71.0	55.0	
	19:45:00	65.2	74.7	68.0	52.0	67.3
	20:00:00	62.9	72.4	66.0	45.0	
	20:15:00	60.9	75.3	64.0	44.0	
	20:30:00	59.6	78.8	62.0	44.0	
	20:45:00	59.5	69.2	63.0	44.0	61.0
	21:00:00	60.7	75.6	64.0	44.0	
	21:15:00	59.1	72.0	62.0	44.0	
	21:30:00	58.7	72.8	62.0	44.0	
	21:45:00	57.4	72.4	61.0	43.0	59.1
	22:00:00	59.1	75.5	62.0	42.0	
	22:15:00	56.8	70.0	60.0	42.0	
	22:30:00	58.6	75.6	62.0	43.0	
	22:45:00	61.5	76.2	64.0	44.0	59.3
	23:00:00	62.3	76.4	65.0	45.0	
	23:15:00	57.2	69.2	61.0	42.0	
	23:30:00	55.2	69.1	58.0	42.0	
	23:45:00	53.6	70.0	54.0	41.0	58.4
7/8/2020	0:00:00	61.2	82.0	60.0	42.0	
	0:15:00	55.8	76.0	56.0	42.0	
	0:30:00	55.9	70.8	59.0	42.0	
	0:45:00	54.7	71.4	57.0	42.0	57.7
	1:00:00	55.9	73.2	58.0	42.0	
	1:15:00	56.3	76.0	58.0	42.0	
	1:30:00	53.9	70.9	51.0	42.0	
	1:45:00	52.7	72.1	47.0	42.0	54.9
	2:00:00	51.8	70.4	51.0	42.0	
	2:15:00	53.4	75.2	52.0	42.0	
	2:30:00	48.5	65.3	50.0	42.0	
	2:45:00	52.1	72.0	49.0	42.0	51.8
	3:00:00	56.1	74.4	54.0	42.0	
	3:15:00	52.1	73.3	49.0	42.0	
	3:30:00	57.6	75.6	58.0	42.0	
	3:45:00	54.2	73.1	53.0	42.0	55.5
	4:00:00	57.0	74.8	54.0	42.0	
	4:15:00	57.4	74.8	57.0	42.0	
	4:30:00	55.7	75.1	56.0	42.0	
	4:45:00	56.2	73.5	59.0	43.0	56.6
	5:00:00	59.1	75.3	62.0	43.0	
	5:15:00	59.2	73.5	63.0	43.0	
	5:30:00	59.8	73.2	64.0	43.0	
	5:45:00	64.0	78.8	67.0	43.0	61.1
	6:00:00	60.7	76.5	64.0	43.0	
	6:15:00	61.7	76.2	65.0	44.0	
	6:30:00	64.2	80.0	68.0	45.0	
	6:45:00	63.9	80.0	67.0	44.0	62.9
	7:00:00	64.4	77.3	68.0	45.0	
	7:15:00	65.1	81.1	69.0	44.0	
	7:30:00	65.4	78.9	69.0	45.0	
	7:45:00	65.0	78.5	68.0	48.0	65.0
	8:00:00	64.6	77.2	69.0	47.0	
	8:15:00	65.0	81.5	69.0	46.0	
	8:30:00	63.6	75.6	68.0	45.0	
	8:45:00	65.4	81.6	68.0	46.0	64.7
	9:00:00	65.3	79.7	69.0	46.0	
	9:15:00	66.5	82.4	71.0	44.0	
	9:30:00	64.8	82.0	68.0	46.0	
	9:45:00	62.8	76.4	67.0	44.0	65.0
	10:00:00	66.4	86.3	69.0	47.0	
	10:15:00	65.1	82.0	68.0	44.0	
	10:30:00	65.0	79.6	69.0	44.0	
	10:45:00	66.8	90.4	68.0	43.0	65.9
	11:00:00	63.9	78.8	68.0	43.0	
	11:15:00	63.6	75.2	68.0	43.0	

	11:30:00	64.4	76.4	68.0	44.0	
	11:45:00	63.2	73.3	67.0	47.0	63.8
	12:00:00	64.0	75.6	68.0	44.0	
	12:15:00	63.5	76.0	67.0	45.0	
	12:30:00	66.6	84.4	68.0	46.0	
	12:45:00	64.2	75.2	69.0	45.0	64.8
	13:00:00	63.9	79.2	67.0	44.0	
	13:15:00	71.8	85.2	75.0	53.0	
	13:30:00	68.6	82.0	72.0	46.0	
	13:45:00	68.8	82.2	73.0	50.0	69.1
	14:00:00	67.6	81.6	70.0	52.0	
	14:15:00	65.7	75.5	69.0	52.0	
	14:30:00	79.3	91.5	83.0	61.0	
	14:45:00	83.7	98.4	87.0	65.0	79.2
	15:00:00	72.4	88.0	77.0	47.0	
	15:15:00	65.1	79.3	69.0	48.0	
	15:30:00	64.2	77.2	68.0	49.0	
	15:45:00	63.6	77.6	67.0	47.0	68.1
	16:00:00	62.4	74.8	66.0	43.0	
	16:15:00	63.5	76.1	67.0	44.0	
	16:30:00	62.2	72.9	66.0	43.0	
	16:45:00	61.6	74.7	65.0	44.0	62.5
	17:00:00	63.8	79.5	67.0	44.0	
	17:15:00	63.8	77.2	67.0	42.0	
	17:30:00	62.2	77.9	66.0	43.0	
	17:45:00	61.4	74.0	65.0	42.0	62.9
	18:00:00	61.2	76.0	65.0	42.0	
	18:15:00	59.5	73.2	64.0	42.0	
	18:30:00	60.3	73.6	64.0	43.0	
	18:45:00	60.2	73.6	64.0	42.0	60.3
	19:00:00	59.5	73.6	64.0	42.0	
	19:15:00	60.6	77.4	64.0	43.0	
	19:30:00	61.0	81.3	62.0	43.0	
	19:45:00	60.0	75.9	64.0	43.0	60.3
	20:00:00	58.2	71.6	62.0	42.0	
	20:15:00	59.0	73.2	64.0	43.0	
	20:30:00	58.5	74.1	63.0	43.0	
	20:45:00	56.5	69.5	61.0	42.0	58.1
	21:00:00	62.0	83.6	63.0	43.0	
	21:15:00	59.0	75.5	63.0	42.0	
	21:30:00	59.3	78.0	63.0	42.0	
	21:45:00	57.2	73.5	60.0	42.0	59.7
	22:00:00	57.4	72.9	61.0	42.0	
	22:15:00	57.3	73.7	60.0	42.0	
	22:30:00	55.3	71.6	57.0	42.0	
	22:45:00	57.5	75.2	59.0	42.0	57.0
	23:00:00	53.6	69.5	57.0	42.0	
	23:15:00	54.9	75.2	56.0	42.0	
	23:30:00	49.6	66.4	48.0	42.0	
	23:45:00	55.5	71.6	56.0	44.0	53.9
7/9/2020	0:00:00	51.6	69.2	50.0	44.0	
	0:15:00	54.7	76.0	49.0	42.0	
	0:30:00	51.9	68.0	52.0	43.0	
	0:45:00	52.1	73.2	48.0	43.0	52.8
	1:00:00	55.3	76.7	51.0	42.0	
	1:15:00	52.0	71.2	50.0	42.0	
	1:30:00	44.6	62.4	43.0	42.0	
	1:45:00	49.8	70.8	44.0	42.0	51.9
	2:00:00	49.1	67.4	45.0	42.0	
	2:15:00	54.6	72.8	49.0	42.0	
	2:30:00	43.4	45.1	44.0	42.0	
	2:45:00	53.9	74.4	46.0	42.0	52.0
	3:00:00	54.0	76.4	45.0	42.0	
	3:15:00	53.8	74.0	48.0	42.0	
	3:30:00	60.0	77.7	60.0	42.0	
	3:45:00	57.8	77.2	59.0	42.0	57.2
	4:00:00	56.5	75.7	54.0	42.0	
	4:15:00	59.5	78.0	60.0	42.0	
	4:30:00	55.2	76.4	50.0	42.0	

4:45:00	57.8	75.0	60.0	42.0	57.5
5:00:00	58.8	75.6	60.0	43.0	
5:15:00	59.0	76.4	62.0	43.0	
5:30:00	63.0	80.9	67.0	43.0	
5:45:00	61.1	75.2	65.0	44.0	60.8
6:00:00	63.1	78.8	67.0	43.0	
6:15:00	61.0	73.6	65.0	42.0	
6:30:00	63.3	78.8	67.0	44.0	
6:45:00	63.9	75.8	68.0	44.0	63.0
7:00:00	64.1	76.0	68.0	44.0	
7:15:00	64.9	77.6	67.0	48.0	
7:30:00	65.0	82.0	67.0	46.0	
7:45:00	65.3	78.8	69.0	49.0	64.8
8:00:00	63.6	75.6	67.0	44.0	
8:15:00	63.7	78.8	67.0	44.0	
8:30:00	63.2	76.0	67.0	43.0	
8:45:00	64.4	78.3	68.0	43.0	63.7
9:00:00	62.7	75.4	66.0	45.0	
9:15:00	63.9	76.3	67.0	44.0	
9:30:00	63.1	78.9	66.0	43.0	
9:45:00	63.3	77.2	67.0	44.0	63.3
10:00:00	63.6	78.4	67.0	45.0	
10:15:00	64.5	78.2	68.0	46.0	
10:30:00	63.5	79.4	66.0	44.0	
10:45:00	63.7	76.4	67.0	44.0	63.8
11:00:00	64.2	82.8	66.0	45.0	
11:15:00	62.9	74.0	66.0	46.0	
11:30:00	64.1	76.8	68.0	46.0	
11:45:00	64.8	79.4	68.0	46.0	64.1
12:00:00	64.8	74.4	68.0	48.0	
12:15:00	66.0	77.6	69.0	50.0	
12:30:00	65.4	79.2	68.0	49.0	
12:45:00	65.0	74.9	69.0	48.0	65.3
13:00:00	64.4	74.0	67.0	44.0	
13:15:00	63.8	76.0	68.0	45.0	
13:30:00	62.9	73.6	67.0	43.0	
13:45:00	63.2	74.7	66.0	44.0	63.6
14:00:00	63.1	75.2	66.0	44.0	
14:15:00	65.1	79.6	68.0	45.0	
14:30:00	62.1	75.2	65.0	45.0	
14:45:00	63.6	80.9	66.0	42.0	63.6
15:00:00	63.9	77.2	67.0	44.0	
15:15:00	62.9	76.0	66.0	42.0	
15:30:00	63.7	75.6	67.0	45.0	
15:45:00	63.3	77.5	67.0	42.0	63.5
16:00:00	63.8	81.5	67.0	44.0	
16:15:00	62.5	73.2	66.0	43.0	
16:30:00	64.1	83.6	66.0	43.0	
16:45:00	62.9	74.9	66.0	42.0	63.4
17:00:00	63.1	75.6	66.0	43.0	
17:15:00	62.0	80.4	65.0	42.0	
17:30:00	60.6	72.4	64.0	42.0	
17:45:00	60.6	78.0	64.0	42.0	61.7
18:00:00	62.5	77.6	65.0	43.0	
18:15:00	60.5	73.4	64.0	43.0	
18:30:00	60.5	73.9	64.0	43.0	
18:45:00	60.3	75.6	64.0	44.0	61.0
19:00:00	60.9	75.6	64.0	43.0	
19:15:00	60.7	75.6	64.0	43.0	
19:30:00	61.1	77.5	65.0	43.0	
19:45:00	59.8	74.8	64.0	44.0	60.7
20:00:00	58.0	72.4	62.0	43.0	
20:15:00	58.7	74.3	63.0	45.0	
20:30:00	58.9	73.3	62.0	44.0	
20:45:00	58.1	73.2	62.0	43.0	58.4
21:00:00	62.1	81.0	63.0	44.0	
21:15:00	58.3	74.4	62.0	44.0	
21:30:00	56.2	74.0	60.0	43.0	
21:45:00	57.7	76.4	61.0	44.0	59.2

	22:00:00	60.0	77.7	63.0	44.0	
	22:15:00	60.0	80.4	62.0	44.0	
	22:30:00	57.0	76.4	56.0	44.0	
	22:45:00	57.5	74.0	60.0	45.0	58.8
	23:00:00	56.4	74.5	58.0	44.0	
	23:15:00	52.5	67.0	54.0	44.0	
	23:30:00	54.7	72.0	54.0	44.0	
	23:45:00	51.0	71.6	48.0	42.0	54.1
7/10/2020	0:00:00	54.0	74.0	54.0	42.0	
	0:15:00	47.8	63.9	47.0	42.0	
	0:30:00	54.8	75.6	51.0	42.0	
	0:45:00	51.8	69.6	50.0	42.0	52.8
	1:00:00	50.6	68.0	50.0	42.0	
	1:15:00	52.2	69.2	51.0	42.0	
	1:30:00	50.3	70.0	46.0	42.0	
	1:45:00	57.1	76.7	55.0	42.0	53.5
	2:00:00	47.6	65.3	45.0	42.0	
	2:15:00	57.4	75.2	56.0	43.0	
	2:30:00	52.1	71.9	48.0	42.0	
	2:45:00	49.6	69.4	46.0	42.0	53.3
	3:00:00	51.7	74.6	46.0	42.0	
	3:15:00	56.8	72.4	58.0	43.0	
	3:30:00	52.2	70.4	54.0	43.0	
	3:45:00	54.4	76.8	53.0	43.0	54.3
	4:00:00	54.9	76.0	49.0	42.0	
	4:15:00	55.5	72.4	56.0	42.0	
	4:30:00	57.3	74.8	59.0	42.0	
	4:45:00	57.7	75.2	61.0	43.0	56.5
	5:00:00	58.6	74.1	61.0	43.0	
	5:15:00	60.1	76.4	62.0	43.0	
	5:30:00	59.9	77.6	62.0	43.0	
	5:45:00	63.0	74.1	68.0	43.0	60.7
	6:00:00	61.8	75.2	65.0	44.0	
	6:15:00	60.7	74.8	64.0	44.0	
	6:30:00	62.1	75.3	66.0	44.0	
	6:45:00	62.6	78.0	66.0	45.0	61.9
	7:00:00	64.6	75.6	68.0	46.0	
	7:15:00	65.0	78.8	69.0	44.0	
	7:30:00	64.5	74.8	68.0	45.0	
	7:45:00	65.8	80.0	69.0	49.0	65.0
	8:00:00	64.5	76.0	68.0	51.0	
	8:15:00	65.9	79.6	69.0	48.0	
	8:30:00	64.7	78.0	68.0	48.0	
	8:45:00	65.3	79.2	68.0	49.0	65.1
	9:00:00	64.5	75.6	68.0	48.0	
	9:15:00	64.1	76.0	68.0	46.0	
	9:30:00	63.9	76.4	67.0	47.0	
	9:45:00	64.8	78.0	68.0	46.0	64.3
	10:00:00	64.8	80.0	67.0	46.0	
	10:15:00	64.2	75.2	68.0	46.0	
	10:30:00	64.5	79.5	67.0	48.0	
	10:45:00	65.1	76.4	68.0	49.0	64.7
	11:00:00	65.3	75.2	68.0	49.0	
	11:15:00	66.4	75.6	70.0	49.0	
	11:30:00	67.2	76.8	70.0	52.0	
	11:45:00	65.5	75.2	69.0	48.0	66.2
	12:00:00	66.7	79.6	69.0	48.0	
	12:15:00	66.4	74.4	69.0	54.0	
	12:30:00	67.8	80.4	71.0	52.0	
	12:45:00	64.7	74.8	68.0	51.0	66.5
	13:00:00	65.7	77.3	69.0	49.0	
	13:15:00	66.6	78.0	70.0	47.0	
	13:30:00	63.4	74.3	67.0	51.0	
	13:45:00	65.3	77.4	69.0	47.0	65.4
	14:00:00	64.9	76.8	68.0	47.0	
	14:15:00	65.2	78.8	68.0	49.0	
	14:30:00	64.5	74.6	68.0	47.0	
	14:45:00	65.3	78.8	69.0	46.0	65.0
	15:00:00	66.1	76.8	70.0	50.0	

15:15:00	65.7	78.8	68.0	47.0	
15:30:00	66.3	75.2	70.0	51.0	
15:45:00	68.1	77.2	72.0	50.0	66.7
16:00:00	72.6	83.2	76.0	57.0	
16:15:00	76.0	85.3	79.0	64.0	
16:30:00	76.4	83.6	79.0	63.0	
16:45:00	75.8	86.8	78.0	64.0	75.4
17:00:00	76.7	82.0	80.0	64.0	76.7


Seneca Meadows Inc.
2020 Annual Sound Survey
Location 2 Logging
Sound Level, Leq, dBA
100
90
80
70
60
50
40
30
20
10
0
Rain
8:45:00
11:45:00
14:45:00
17:45:00
20:45:00
23:45:00
2:45:00
5:45:00
8:45:00
11:45:00
14:45:00
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14:45:00
17:45:00
20:45:00
23:45:00
2:45:00
5:45:00
8:45:00
11:45:00
14:45:00
Time
July 6 - July 10, 2020
Leq-1hr
Leq-15min

****

Filename LOC2
Test Location 2
Employee Name
Employee No.
Department
Seneca Meadows Inc.
2019 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
Calibrator type Metrosonics CL304 3067
Calibrator calibration date 4/17/2019

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METROSONICS db-3080 V1.20 SERIAL #1505
Report printed on 7/12/2020 at 15:53:48

Seneca Meadows Inc.
2020 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
East Aurora, New York

Logging started at	7/6/2020 at 8:45:00
Total logging time	4 DAYS 8:30:05
Logging stopped at	7/10/2020 at 17:15:05
Total intervals 419	
Interval length 0:15:00	
Auto Stop	NO
Clock synch	YES
Response Rate	SLOW
Filter	A-WEIGHTED
re-Test Calibration Time	7/3/2020 at 18:28:45
Pre-Test Calibration Range	39.6 to 139.6 dB
Post-Test Calibration Time	7/12/2020 at 15:27:14
Post-Test Calibration Range	39.6 to 139.6 dB
Cut-off used for time history Lav	NONE

<<< SUMMARY REPORT FOR TEST NUMBER 1 OF 1 >>>

Exchange Rate	3dB	
Cutoffs	60dB	60dB
Ceiling	115dB	
DOSE Criterion level	90dB	
DOSE Criterion length 8	HOURS	
Lav(60)	65.1dB	
Lav(60)	64.9dB	
Lav(60)	64.9dB	
SEL	119.7dB	
TWA	75.2dB	
TWA(60)	75.0dB	
TWA(60)	75.0dB	
Lmax	101.7dB	7/30/2019 at 12:34:40
Lpk	133.7dB	7/30/2019 at 12:34:40
Time over 115 dB	00:00.0	
DOSE(60)	3.15%	
DOSE(60)	3.15%	

<<< TIME HISTORY REPORT FOR TEST NUMBER 1 OF 1 >>>

	START TIME	Leq(15-min) dBA	Lmax dBA	L(10.0) dBA	L(99.0) dBA	Leq(1-hr) dBA
7/6/2020						
	8:45:00	69.1	90.8	73.6	48.6	69.1
	9:00:00	67.9	78.6	73.6	50.6	
	9:15:00	67.0	81.2	71.6	50.6	
	9:30:00	68.8	79.3	73.6	50.6	
	9:45:00	67.0	78.0	71.6	51.6	67.7
	10:00:00	68.1	79.5	72.6	50.6	
	10:15:00	68.7	79.8	73.6	50.6	
	10:30:00	67.7	86.0	71.6	50.6	
	10:45:00	68.3	79.6	73.6	51.6	68.2
	11:00:00	67.8	79.6	72.6	50.6	
	11:15:00	66.9	80.0	70.6	50.6	
	11:30:00	67.6	78.0	72.6	51.6	
	11:45:00	67.0	80.2	71.6	48.6	67.3
	12:00:00	68.2	82.8	73.6	46.6	
	12:15:00	67.3	78.8	72.6	49.6	
	12:30:00	67.1	78.8	71.6	50.6	
	12:45:00	67.2	79.6	71.6	48.6	67.5
	13:00:00	67.0	79.3	71.6	47.6	
	13:15:00	66.9	77.6	71.6	47.6	
	13:30:00	66.5	78.5	70.6	48.6	
	13:45:00	66.0	78.4	70.6	47.6	66.6
	14:00:00	67.1	78.4	71.6	48.6	
	14:15:00	65.7	78.8	69.6	47.6	
	14:30:00	66.8	79.2	70.6	47.6	
	14:45:00	65.7	79.2	69.6	46.6	66.4
	15:00:00	65.9	80.1	70.6	46.6	
	15:15:00	66.5	79.4	70.6	46.6	
	15:30:00	66.0	78.0	69.6	45.6	
	15:45:00	66.7	79.7	70.6	48.6	66.3
	16:00:00	65.0	77.6	68.6	46.6	
	16:15:00	63.7	76.4	67.6	45.6	
	16:30:00	63.1	77.1	66.6	45.6	
	16:45:00	63.2	75.5	67.6	46.6	63.8
	17:00:00	63.5	75.7	67.6	47.6	
	17:15:00	64.1	78.2	67.6	46.6	
	17:30:00	62.9	75.6	67.6	44.6	
	17:45:00	62.2	78.0	66.6	43.6	63.2
	18:00:00	61.8	76.8	65.6	44.6	
	18:15:00	61.6	78.4	65.6	44.6	
	18:30:00	62.1	77.0	65.6	44.6	
	18:45:00	61.9	76.0	66.6	43.6	61.9
	19:00:00	62.7	77.6	66.6	43.6	
	19:15:00	61.7	77.2	65.6	45.6	
	19:30:00	61.0	75.2	65.6	44.6	
	19:45:00	62.3	78.4	65.6	44.6	62.0
	20:00:00	61.6	76.4	65.6	45.6	
	20:15:00	63.1	82.0	66.6	46.6	
	20:30:00	61.2	78.4	64.6	46.6	
	20:45:00	60.7	76.6	63.6	47.6	61.7
	21:00:00	61.6	78.7	64.6	48.6	
	21:15:00	57.6	74.3	60.6	48.6	
	21:30:00	59.2	73.7	63.6	49.6	
	21:45:00	60.7	80.0	62.6	49.6	60.0
	22:00:00	56.6	70.0	60.6	50.6	
	22:15:00	59.3	73.8	62.6	50.6	
	22:30:00	59.0	77.2	59.6	50.6	
	22:45:00	59.3	75.6	61.6	49.6	58.7
	23:00:00	60.0	76.0	62.6	49.6	
	23:15:00	59.5	79.6	59.6	50.6	
	23:30:00	60.2	77.2	61.6	50.6	
	23:45:00	55.4	73.3	55.6	48.6	59.1
7/7/2020	0:00:00	59.1	77.0	60.6	48.6	
	0:15:00	57.2	77.8	58.6	47.6	
	0:30:00	55.7	78.4	52.6	46.6	

0:45:00	54.2	71.5	53.6	47.6	56.9
1:00:00	52.0	70.0	50.6	47.6	
1:15:00	57.2	74.5	55.6	47.6	
1:30:00	53.0	70.5	52.6	47.6	
1:45:00	56.8	74.0	55.6	47.6	55.3
2:00:00	55.0	73.8	52.6	48.6	
2:15:00	57.7	77.6	52.6	47.6	
2:30:00	53.1	71.3	51.6	48.6	
2:45:00	55.2	74.4	51.6	47.6	55.6
3:00:00	59.7	76.8	59.6	48.6	
3:15:00	55.5	75.9	54.6	48.6	
3:30:00	60.0	76.4	60.6	48.6	
3:45:00	56.6	75.9	58.6	48.6	58.4
4:00:00	60.8	76.2	61.6	48.6	
4:15:00	57.7	74.9	59.6	48.6	
4:30:00	59.6	77.0	58.6	48.6	
4:45:00	57.6	74.4	60.6	48.6	59.1
5:00:00	57.4	75.3	59.6	48.6	
5:15:00	60.2	74.5	63.6	48.6	
5:30:00	64.6	81.6	68.6	49.6	
5:45:00	63.6	76.5	68.6	48.6	62.3
6:00:00	65.7	78.0	70.6	49.6	
6:15:00	64.2	78.5	68.6	49.6	
6:30:00	66.9	83.9	71.6	50.6	
6:45:00	66.6	80.0	70.6	50.6	66.0
7:00:00	68.9	86.6	73.6	51.6	
7:15:00	66.6	78.2	71.6	50.6	
7:30:00	66.9	78.8	72.6	50.6	
7:45:00	67.4	79.7	71.6	51.6	67.5
8:00:00	67.9	79.7	72.6	50.6	
8:15:00	67.0	78.8	72.6	51.6	
8:30:00	67.8	80.8	72.6	51.6	
8:45:00	69.3	87.0	73.6	52.6	68.1
9:00:00	67.8	79.7	72.6	54.6	
9:15:00	68.7	87.3	72.6	51.6	
9:30:00	68.3	82.8	72.6	53.6	
9:45:00	67.7	78.9	72.6	53.6	68.1
10:00:00	68.0	79.2	72.6	52.6	
10:15:00	67.3	80.1	71.6	52.6	
10:30:00	69.2	86.6	73.6	53.6	
10:45:00	67.3	78.8	72.6	50.6	68.0
11:00:00	67.7	80.8	72.6	53.6	
11:15:00	67.4	82.4	71.6	52.6	
11:30:00	68.0	80.7	72.6	51.6	
11:45:00	67.4	77.6	72.6	53.6	67.6
12:00:00	68.0	80.2	72.6	52.6	
12:15:00	67.3	78.3	71.6	51.6	
12:30:00	67.8	83.5	72.6	52.6	
12:45:00	67.3	79.6	71.6	52.6	67.6
13:00:00	67.9	78.6	72.6	50.6	
13:15:00	69.2	85.1	73.6	51.6	
13:30:00	66.1	77.6	70.6	51.6	
13:45:00	66.6	78.5	70.6	52.6	67.6
14:00:00	67.5	80.0	72.6	50.6	
14:15:00	66.7	79.6	70.6	51.6	
14:30:00	67.6	79.1	71.6	52.6	
14:45:00	67.5	78.8	72.6	53.6	67.3
15:00:00	67.8	79.7	71.6	51.6	
15:15:00	67.0	78.9	71.6	52.6	
15:30:00	65.9	77.2	69.6	52.6	
15:45:00	66.8	80.2	70.6	51.6	66.9
16:00:00	65.1	78.4	68.6	50.6	
16:15:00	65.2	76.5	69.6	51.6	
16:30:00	65.5	78.8	69.6	51.6	
16:45:00	64.4	75.6	68.6	52.6	65.1
17:00:00	65.0	76.8	68.6	52.6	
17:15:00	66.2	80.2	69.6	51.6	
17:30:00	64.3	76.9	68.6	50.6	
17:45:00	63.8	77.0	67.6	51.6	64.9

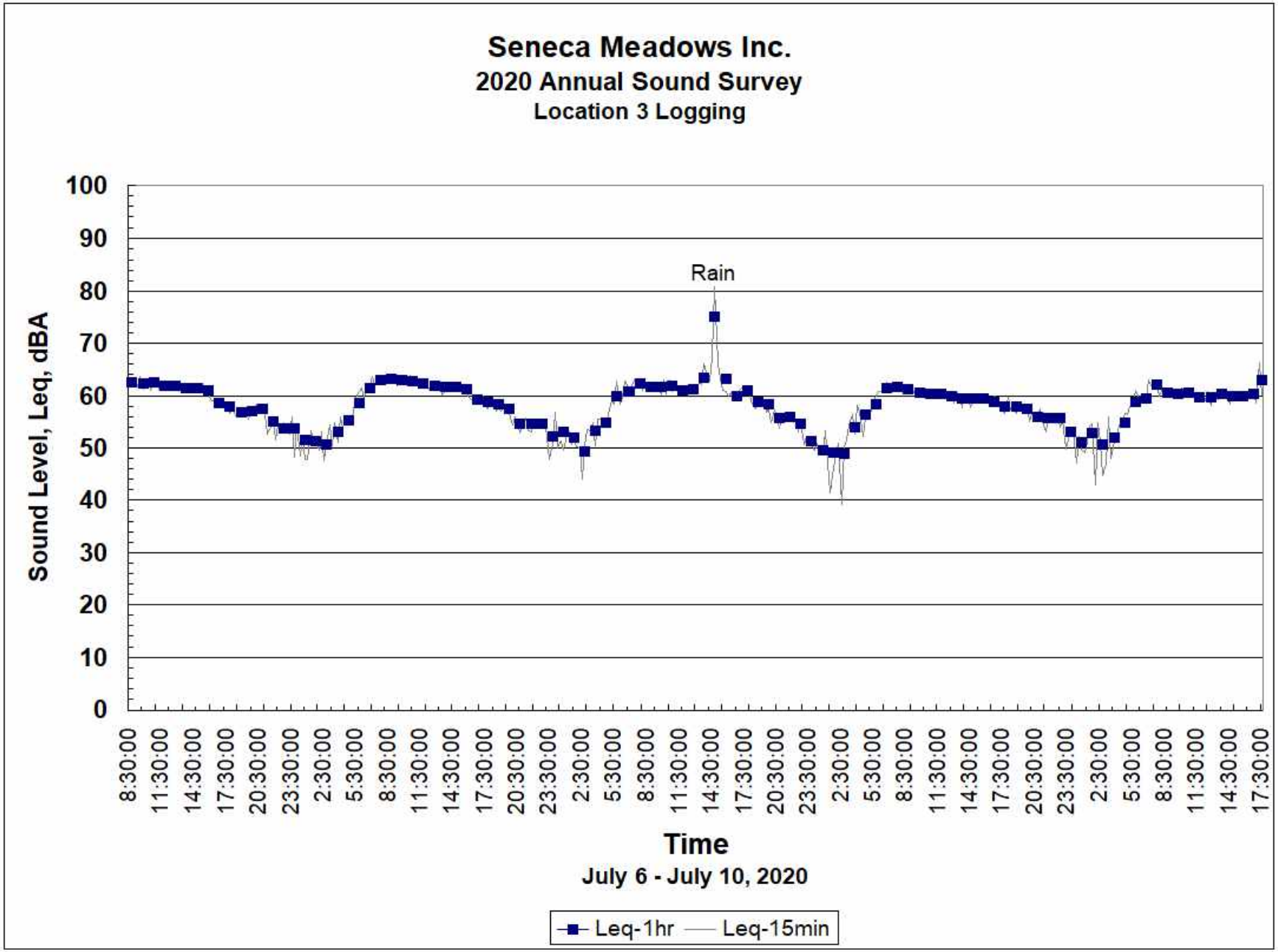
	18:00:00	63.9	75.3	68.6	51.6	
	18:15:00	64.4	76.9	67.6	50.6	
	18:30:00	62.9	80.3	66.6	51.6	
	18:45:00	61.7	78.2	65.6	49.6	63.3
	19:00:00	62.8	78.0	66.6	51.6	
	19:15:00	62.1	75.5	66.6	49.6	
	19:30:00	62.7	76.9	66.6	50.6	
	19:45:00	61.4	78.3	64.6	49.6	62.3
	20:00:00	60.3	73.4	64.6	49.6	
	20:15:00	61.6	77.6	65.6	48.6	
	20:30:00	60.2	79.3	63.6	48.6	
	20:45:00	57.7	72.1	61.6	48.6	60.2
	21:00:00	60.2	76.5	63.6	49.6	
	21:15:00	60.6	75.0	64.6	48.6	
	21:30:00	59.7	80.4	62.6	48.6	
	21:45:00	57.9	73.7	61.6	48.6	59.7
	22:00:00	60.7	76.5	64.6	48.6	
	22:15:00	57.6	74.3	59.6	48.6	
	22:30:00	57.9	76.1	58.6	47.6	
	22:45:00	60.2	76.4	62.6	48.6	59.3
	23:00:00	60.0	78.0	61.6	47.6	
	23:15:00	57.4	74.1	58.6	48.6	
	23:30:00	54.2	75.1	52.6	46.6	
	23:45:00	56.9	75.7	54.6	47.6	57.6
7/8/2020	0:00:00	62.5	83.2	61.6	47.6	
	0:15:00	55.5	72.6	54.6	48.6	
	0:30:00	55.8	73.2	54.6	48.6	
	0:45:00	55.7	72.2	54.6	48.6	58.6
	1:00:00	57.5	74.7	56.6	48.6	
	1:15:00	59.0	77.2	60.6	48.6	
	1:30:00	57.3	77.9	54.6	48.6	
	1:45:00	57.1	75.4	54.6	48.6	57.8
	2:00:00	56.1	75.6	53.6	48.6	
	2:15:00	55.9	77.2	53.6	48.6	
	2:30:00	52.2	66.5	52.6	48.6	
	2:45:00	56.4	75.9	54.6	49.6	55.4
	3:00:00	58.4	74.5	58.6	49.6	
	3:15:00	58.5	76.3	57.6	49.6	
	3:30:00	58.8	76.1	58.6	48.6	
	3:45:00	57.0	76.0	56.6	48.6	58.2
	4:00:00	60.6	76.1	61.6	48.6	
	4:15:00	59.5	76.1	60.6	49.6	
	4:30:00	59.1	75.9	61.6	49.6	
	4:45:00	58.4	76.7	60.6	48.6	59.5
	5:00:00	62.3	77.9	64.6	48.6	
	5:15:00	62.3	74.5	66.6	50.6	
	5:30:00	62.7	75.3	66.6	49.6	
	5:45:00	67.0	84.4	70.6	50.6	64.1
	6:00:00	62.6	78.0	66.6	49.6	
	6:15:00	64.1	78.3	67.6	49.6	
	6:30:00	68.6	86.8	71.6	50.6	
	6:45:00	65.9	79.6	70.6	50.6	65.9
	7:00:00	66.8	79.1	72.6	49.6	
	7:15:00	67.8	80.1	72.6	51.6	
	7:30:00	67.3	80.2	71.6	52.6	
	7:45:00	66.8	77.0	71.6	50.6	67.2
	8:00:00	67.0	81.3	71.6	51.6	
	8:15:00	67.1	79.5	72.6	51.6	
	8:30:00	66.9	78.5	71.6	50.6	
	8:45:00	67.3	79.1	72.6	48.6	67.1
	9:00:00	67.6	82.5	72.6	48.6	
	9:15:00	68.3	79.7	73.6	50.6	
	9:30:00	67.2	78.7	72.6	50.6	
	9:45:00	65.6	79.3	69.6	49.6	67.3
	10:00:00	69.2	87.4	72.6	49.6	
	10:15:00	65.6	78.4	70.6	47.6	
	10:30:00	68.2	78.9	73.6	51.6	
	10:45:00	68.0	85.2	71.6	47.6	67.9
	11:00:00	67.4	79.0	72.6	48.6	

	11:15:00	67.2	79.3	71.6	47.6	
	11:30:00	66.7	79.4	70.6	50.6	
	11:45:00	65.9	79.6	69.6	48.6	66.8
	12:00:00	67.4	81.2	72.6	45.6	
	12:15:00	66.5	80.0	70.6	45.6	
	12:30:00	66.9	77.8	71.6	49.6	
	12:45:00	67.6	79.1	72.6	48.6	67.1
	13:00:00	66.6	79.0	71.6	48.6	
	13:15:00	68.7	80.7	72.6	48.6	
	13:30:00	67.9	82.6	72.6	47.6	
	13:45:00	69.2	82.8	73.6	48.6	68.2
	14:00:00	68.1	80.8	72.6	53.6	
	14:15:00	68.0	80.4	72.6	53.6	
	14:30:00	71.9	82.5	75.6	54.6	
	14:45:00	78.2	88.4	82.6	58.6	73.7
	15:00:00	69.9	80.8	74.6	51.6	
	15:15:00	68.2	82.9	72.6	49.6	
	15:30:00	67.5	78.6	71.6	52.6	
	15:45:00	67.1	79.2	71.6	51.6	68.3
	16:00:00	65.8	77.6	70.6	48.6	
	16:15:00	66.4	78.8	70.6	51.6	
	16:30:00	66.0	77.3	69.6	52.6	
	16:45:00	65.1	78.8	68.6	50.6	65.9
	17:00:00	66.8	79.6	70.6	50.6	
	17:15:00	66.3	79.2	69.6	49.6	
	17:30:00	65.5	78.8	69.6	50.6	
	17:45:00	64.6	78.2	68.6	51.6	65.9
	18:00:00	64.0	78.9	67.6	50.6	
	18:15:00	63.0	75.6	67.6	49.6	
	18:30:00	63.3	76.4	67.6	51.6	
	18:45:00	63.8	77.4	67.6	50.6	63.5
	19:00:00	63.0	76.8	66.6	51.6	
	19:15:00	64.1	79.5	67.6	50.6	
	19:30:00	60.5	76.4	64.6	48.6	
	19:45:00	61.7	77.6	65.6	49.6	62.5
	20:00:00	60.1	73.0	64.6	48.6	
	20:15:00	61.8	78.0	65.6	49.6	
	20:30:00	61.1	76.0	64.6	49.6	
	20:45:00	59.1	72.0	63.6	49.6	60.6
	21:00:00	61.4	77.0	64.6	50.6	
	21:15:00	61.5	75.8	65.6	50.6	
	21:30:00	61.7	80.0	64.6	49.6	
	21:45:00	60.7	76.7	64.6	49.6	61.3
	22:00:00	60.0	76.9	63.6	50.6	
	22:15:00	60.5	76.0	63.6	48.6	
	22:30:00	58.4	75.2	60.6	48.6	
	22:45:00	60.8	78.6	62.6	48.6	60.0
	23:00:00	56.0	70.5	59.6	47.6	
	23:15:00	57.6	77.2	57.6	47.6	
	23:30:00	57.3	75.9	54.6	49.6	
	23:45:00	57.3	73.8	58.6	49.6	57.1
7/9/2020	0:00:00	55.5	73.7	55.6	49.6	
	0:15:00	57.6	75.4	56.6	50.6	
	0:30:00	55.4	70.6	55.6	49.6	
	0:45:00	57.5	76.9	53.6	50.6	56.6
	1:00:00	57.1	75.4	55.6	50.6	
	1:15:00	55.5	72.8	54.6	49.6	
	1:30:00	52.7	64.4	53.6	50.6	
	1:45:00	55.1	72.4	54.6	51.6	55.4
	2:00:00	55.3	72.0	54.6	50.6	
	2:15:00	56.5	73.9	54.6	49.6	
	2:30:00	50.6	53.3	51.6	48.6	
	2:45:00	56.7	75.2	54.6	49.6	55.3
	3:00:00	57.0	78.2	52.6	49.6	
	3:15:00	59.6	79.5	55.6	49.6	
	3:30:00	61.2	77.0	62.6	49.6	
	3:45:00	58.8	77.4	60.6	49.6	59.4
	4:00:00	62.5	82.4	60.6	49.6	
	4:15:00	60.5	77.9	61.6	50.6	

4:30:00	58.4	77.2	56.6	50.6	
4:45:00	60.9	78.8	63.6	50.6	60.8
5:00:00	61.1	77.2	63.6	50.6	
5:15:00	62.6	76.5	66.6	50.6	
5:30:00	65.6	81.2	69.6	51.6	
5:45:00	64.1	77.2	67.6	51.6	63.7
6:00:00	66.6	81.2	71.6	51.6	
6:15:00	64.2	77.1	68.6	50.6	
6:30:00	66.8	79.2	71.6	51.6	
6:45:00	68.5	86.8	72.6	51.6	66.8
7:00:00	67.5	85.0	71.6	51.6	
7:15:00	66.2	80.0	70.6	50.6	
7:30:00	65.2	78.1	69.6	51.6	
7:45:00	68.4	81.2	72.6	52.6	67.0
8:00:00	67.2	83.8	71.6	51.6	
8:15:00	66.4	80.3	70.6	51.6	
8:30:00	66.9	80.3	71.6	50.6	
8:45:00	67.3	80.2	72.6	50.6	67.0
9:00:00	67.1	81.8	71.6	52.6	
9:15:00	67.0	78.9	71.6	52.6	
9:30:00	66.2	78.5	70.6	50.6	
9:45:00	67.7	85.7	71.6	50.6	67.0
10:00:00	66.5	78.8	70.6	51.6	
10:15:00	67.4	79.2	72.6	51.6	
10:30:00	66.2	79.2	69.6	50.6	
10:45:00	65.6	76.9	69.6	50.6	66.5
11:00:00	66.4	78.2	70.6	51.6	
11:15:00	66.1	77.8	70.6	50.6	
11:30:00	67.2	76.8	72.6	51.6	
11:45:00	65.7	77.6	69.6	51.6	66.4
12:00:00	65.8	79.7	69.6	52.6	
12:15:00	66.2	77.4	70.6	51.6	
12:30:00	66.0	78.6	70.6	51.6	
12:45:00	65.9	78.2	69.6	50.6	66.0
13:00:00	66.5	82.4	70.6	50.6	
13:15:00	67.3	82.3	71.6	49.6	
13:30:00	66.1	78.0	70.6	47.6	
13:45:00	64.7	76.4	68.6	48.6	66.2
14:00:00	66.6	79.2	70.6	49.6	
14:15:00	66.5	77.4	70.6	50.6	
14:30:00	64.8	78.0	68.6	48.6	
14:45:00	66.6	85.2	70.6	45.6	66.2
15:00:00	65.7	79.6	69.6	44.6	
15:15:00	66.1	77.7	69.6	49.6	
15:30:00	66.8	80.4	70.6	48.6	
15:45:00	66.2	79.3	69.6	47.6	66.2
16:00:00	65.5	78.4	69.6	43.6	
16:15:00	66.2	78.5	70.6	48.6	
16:30:00	65.3	77.6	69.6	48.6	
16:45:00	66.1	79.7	69.6	45.6	65.8
17:00:00	66.1	79.8	69.6	47.6	
17:15:00	63.9	76.2	67.6	50.6	
17:30:00	63.6	74.8	67.6	48.6	
17:45:00	64.1	78.6	66.6	49.6	64.5
18:00:00	64.3	77.2	67.6	49.6	
18:15:00	63.6	78.7	66.6	50.6	
18:30:00	63.9	80.8	67.6	49.6	
18:45:00	62.2	76.5	66.6	50.6	63.6
19:00:00	63.9	80.4	67.6	49.6	
19:15:00	63.9	78.6	68.6	47.6	
19:30:00	62.8	76.3	67.6	48.6	
19:45:00	63.2	78.0	66.6	48.6	63.5
20:00:00	60.6	73.2	64.6	47.6	
20:15:00	61.9	75.9	65.6	51.6	
20:30:00	62.0	76.7	65.6	50.6	
20:45:00	62.2	79.6	65.6	49.6	61.7
21:00:00	62.0	76.9	64.6	51.6	
21:15:00	61.2	76.6	64.6	52.6	
21:30:00	59.6	75.9	62.6	51.6	

	21:45:00	63.2	78.8	65.6	54.6	61.7
	22:00:00	61.0	77.6	63.6	54.6	
	22:15:00	61.6	75.3	65.6	53.6	
	22:30:00	61.9	80.1	62.6	53.6	
	22:45:00	60.5	74.6	62.6	54.6	61.3
	23:00:00	60.6	78.1	62.6	51.6	
	23:15:00	55.5	71.6	57.6	50.6	
	23:30:00	59.5	78.0	59.6	50.6	
	23:45:00	56.3	75.1	55.6	50.6	58.5
7/10/2020	0:00:00	58.4	79.6	59.6	49.6	
	0:15:00	54.4	69.8	53.6	50.6	
	0:30:00	57.3	77.2	54.6	50.6	
	0:45:00	55.8	72.1	54.6	49.6	56.7
	1:00:00	55.4	72.4	54.6	49.6	
	1:15:00	56.4	72.2	55.6	50.6	
	1:30:00	58.7	78.2	55.6	50.6	
	1:45:00	58.8	76.8	56.6	49.6	57.6
	2:00:00	51.7	65.7	52.6	49.6	
	2:15:00	60.5	77.2	60.6	51.6	
	2:30:00	56.9	74.4	54.6	49.6	
	2:45:00	54.0	71.1	53.6	49.6	57.0
	3:00:00	55.8	77.6	52.6	49.6	
	3:15:00	60.4	78.0	60.6	49.6	
	3:30:00	55.2	74.0	54.6	49.6	
	3:45:00	57.5	76.3	57.6	49.6	57.7
	4:00:00	58.2	77.2	55.6	50.6	
	4:15:00	59.1	74.8	60.6	49.6	
	4:30:00	60.3	75.8	62.6	49.6	
	4:45:00	60.4	76.8	63.6	50.6	59.6
	5:00:00	62.0	76.4	65.6	50.6	
	5:15:00	61.9	77.4	64.6	49.6	
	5:30:00	64.6	78.3	68.6	50.6	
	5:45:00	65.1	77.9	70.6	49.6	63.6
	6:00:00	64.6	77.6	68.6	50.6	
	6:15:00	63.6	79.2	66.6	49.6	
	6:30:00	65.0	78.0	69.6	50.6	
	6:45:00	64.0	78.2	67.6	50.6	64.3
	7:00:00	68.1	83.8	72.6	49.6	
	7:15:00	67.1	80.2	71.6	50.6	
	7:30:00	66.8	83.8	70.6	50.6	
	7:45:00	66.6	80.6	70.6	50.6	67.2
	8:00:00	66.4	79.6	70.6	51.6	
	8:15:00	67.8	84.2	72.6	52.6	
	8:30:00	65.2	78.9	68.6	51.6	
	8:45:00	66.9	78.0	71.6	51.6	66.7
	9:00:00	66.8	80.0	71.6	51.6	
	9:15:00	66.9	80.5	71.6	52.6	
	9:30:00	67.4	86.5	70.6	51.6	
	9:45:00	67.5	82.6	71.6	52.6	67.2
	10:00:00	68.0	83.4	72.6	52.6	
	10:15:00	67.4	78.9	71.6	52.6	
	10:30:00	66.5	79.4	70.6	51.6	
	10:45:00	67.0	78.4	70.6	51.6	67.3
	11:00:00	66.6	77.9	70.6	51.6	
	11:15:00	66.3	78.8	70.6	52.6	
	11:30:00	67.2	78.8	71.6	52.6	
	11:45:00	66.5	79.1	70.6	50.6	66.7
	12:00:00	67.6	82.6	70.6	50.6	
	12:15:00	66.3	76.9	70.6	51.6	
	12:30:00	67.2	79.0	71.6	51.6	
	12:45:00	65.8	77.4	70.6	51.6	66.8
	13:00:00	67.3	77.9	71.6	52.6	
	13:15:00	66.8	78.3	71.6	50.6	
	13:30:00	65.9	79.5	70.6	50.6	
	13:45:00	68.1	80.4	72.6	51.6	67.1
	14:00:00	67.1	79.1	71.6	51.6	
	14:15:00	67.5	80.4	71.6	50.6	
	14:30:00	65.4	76.8	69.6	49.6	
	14:45:00	67.0	79.4	71.6	49.6	66.8

15:00:00	67.0	79.3	71.6	50.6	
15:15:00	66.5	78.4	70.6	49.6	
15:30:00	66.7	81.0	70.6	50.6	
15:45:00	67.0	78.0	71.6	52.6	66.8
16:00:00	66.5	77.6	70.6	52.6	
16:15:00	67.9	81.6	71.6	54.6	
16:30:00	67.8	79.9	71.6	53.6	
16:45:00	68.2	82.8	71.6	56.6	67.6
17:00:00	70.6	92.3	71.6	55.6	
17:15:00	59.6	60.8	60.6	58.6	67.9


Seneca Meadows Inc.
2020 Annual Sound Survey
Location 3 Logging
Sound Level, Leq, dBA
100
90
80
70
60
50
40
30
20
10
0
Rain
8:30:00
11:30:00
14:30:00
17:30:00
20:30:00
23:30:00
2:30:00
5:30:00
8:30:00
11:30:00
14:30:00
17:30:00
20:30:00
23:30:00
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5:30:00
8:30:00
11:30:00
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20:30:00
23:30:00
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5:30:00
8:30:00
11:30:00
14:30:00
17:30:00
20:30:00
23:30:00
2:30:00
5:30:00
8:30:00
11:30:00
14:30:00
17:30:00
Time
July 6 - July 10, 2020
Leq-1hr
Leq-15min

****

Filename LOC3
Test Location 3
Employee Name
Employee No.
Department
Seneca Meadows Inc.
2019 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
Calibrator type Metrosonics CL304 3067
Calibrator calibration date 4/17/2019

****

METROSONICS db-3080 V1.20 SERIAL #1511
Report printed on 7/12/2020 at 15:56:17

Seneca Meadows Inc.
2020 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
East Aurora, New York

Logging started at	7/6/2020 at 8:30:00
Total logging time	4 DAYS 9:00:11
Logging stopped at	7/10/2020 at 17:30:11
Total intervals	421
Interval length	0:15:00
Auto Stop	NO
Clock synch	YES
Response Rate	SLOW
Filter	A-WEIGHTED
Pre-Test Calibration Time	7/3/2020 at 18:36:34
Pre-Test Calibration Range	39.1 to 139.1 dB
Post-Test Calibration Time	7/12/2020 at 15:31:58
Post-Test Calibration Range	40.7 to 140.7 dB
Cut-off used for time history Lav	NONE

<<< SUMMARY REPORT FOR TEST NUMBER 1 OF 1 >>>

Exchange Rate	3dB	
Cutoffs	60dB	60dB
Ceiling	115dB	
DOSE Criterion level	90dB	
DOSE Criterion length	8 hours	
Lav(60)	60.7dB	
Lav(60)	60.1dB	
Lav(60)	60.1dB	
SEL	116.3dB	
TWA	71.8dB	
TWA(60)	71.3dB	
TWA(60)	71.3dB	
Lmax	94.1dB	7/8/2020 at 14:54:58
Lpk	124.6dB	7/8/2020 at 14:49:56
Time over 115 dB	00:00.0	
DOSE(60)	1.31%	
DOSE(60)	1.31%	

<<< TIME HISTORY REPORT FOR TEST NUMBER 1 OF 1 >>>

	START TIME	Leq(15-min) dBA	Lmax dBA	L(10.0) dBA	L(99.0) dBA	Leq(1-hr) dBA
7/6/2020						
	8:30:00	63.3	77.1	68.1	40.1	
	8:45:00	61.6	76.1	66.1	39.1	62.5
	9:00:00	62.7	75.3	67.1	40.1	
	9:15:00	61.6	74.7	66.1	40.1	
	9:30:00	63.6	74.9	68.1	41.1	
	9:45:00	61.2	75.2	65.1	40.1	62.4
	10:00:00	62.7	73.2	67.1	40.1	
	10:15:00	63.3	74.8	67.1	43.1	
	10:30:00	61.1	74.9	65.1	41.1	
	10:45:00	62.7	74.5	67.1	42.1	62.5
	11:00:00	62.6	75.9	67.1	42.1	
	11:15:00	61.2	74.7	64.1	40.1	
	11:30:00	62.3	75.1	67.1	41.1	
	11:45:00	61.0	72.7	64.1	41.1	61.8
	12:00:00	62.5	76.0	67.1	40.1	
	12:15:00	62.0	75.5	66.1	41.1	
	12:30:00	61.3	74.8	65.1	41.1	
	12:45:00	61.6	74.0	66.1	41.1	61.9
	13:00:00	61.1	73.2	65.1	39.1	
	13:15:00	62.6	75.5	66.1	40.1	
	13:30:00	61.2	75.1	65.1	42.1	
	13:45:00	60.7	74.8	64.1	40.1	61.5
	14:00:00	62.1	74.7	66.1	40.1	
	14:15:00	60.5	74.7	63.1	39.1	
	14:30:00	61.8	75.1	66.1	39.1	
	14:45:00	60.9	76.1	64.1	40.1	61.4
	15:00:00	61.5	77.1	65.1	40.1	
	15:15:00	60.7	72.7	64.1	41.1	
	15:30:00	60.7	72.8	64.1	43.1	
	15:45:00	61.0	74.4	64.1	43.1	61.0
	16:00:00	59.3	72.0	63.1	39.1	
	16:15:00	58.8	71.4	62.1	41.1	
	16:30:00	57.7	68.6	61.1	42.1	
	16:45:00	58.0	73.0	61.1	40.1	58.5
	17:00:00	58.3	71.2	62.1	42.1	
	17:15:00	58.6	72.8	62.1	41.1	
	17:30:00	57.8	70.4	61.1	41.1	
	17:45:00	56.6	71.2	60.1	40.1	57.9
	18:00:00	57.3	72.0	61.1	39.1	
	18:15:00	56.2	72.3	60.1	39.1	
	18:30:00	56.9	73.9	60.1	39.1	
	18:45:00	56.8	72.9	61.1	39.1	56.8
	19:00:00	57.2	73.0	60.1	39.1	
	19:15:00	57.3	73.3	60.1	39.1	
	19:30:00	55.4	70.0	60.1	39.1	
	19:45:00	57.9	73.9	61.1	39.1	57.0
	20:00:00	57.4	73.9	60.1	39.1	
	20:15:00	58.4	74.9	61.1	39.1	
	20:30:00	57.2	74.5	59.1	39.1	
	20:45:00	56.7	73.6	60.1	39.1	57.5
	21:00:00	56.4	73.9	59.1	39.1	
	21:15:00	52.7	69.7	55.1	39.1	
	21:30:00	54.1	69.6	58.1	39.1	
	21:45:00	56.0	75.6	58.1	39.1	55.0
	22:00:00	51.5	67.7	55.1	39.1	
	22:15:00	54.5	70.8	57.1	39.1	
	22:30:00	53.4	72.8	53.1	39.1	
	22:45:00	54.8	73.0	56.1	39.1	53.7
	23:00:00	54.5	71.7	56.1	39.1	
	23:15:00	52.7	73.6	52.1	40.1	
	23:30:00	56.0	75.2	56.1	39.1	
	23:45:00	48.3	69.2	46.1	39.1	53.7
7/7/2020	0:00:00	54.2	72.9	56.1	39.1	
	0:15:00	48.4	64.2	50.1	39.1	

0:30:00	52.3	72.7	46.1	39.1	
0:45:00	47.9	68.5	44.1	39.1	51.5
1:00:00	47.7	67.6	44.1	39.1	
1:15:00	53.2	70.7	52.1	39.1	
1:30:00	51.5	75.5	44.1	39.1	
1:45:00	51.6	69.7	51.1	39.1	51.4
2:00:00	49.6	70.7	46.1	40.1	
2:15:00	53.0	73.6	48.1	39.1	
2:30:00	47.5	68.2	45.1	39.1	
2:45:00	50.7	71.2	48.1	39.1	50.6
3:00:00	54.3	72.2	54.1	39.1	
3:15:00	50.4	72.3	48.1	39.1	
3:30:00	54.8	71.6	55.1	39.1	
3:45:00	51.1	70.0	52.1	39.1	53.1
4:00:00	56.0	72.3	57.1	39.1	
4:15:00	53.7	70.3	55.1	40.1	
4:30:00	55.6	71.9	57.1	39.1	
4:45:00	55.1	71.6	58.1	40.1	55.2
5:00:00	54.3	72.7	55.1	41.1	
5:15:00	57.3	74.3	60.1	40.1	
5:30:00	59.5	72.3	63.1	41.1	
5:45:00	60.8	77.2	64.1	41.1	58.6
6:00:00	61.4	76.1	65.1	41.1	
6:15:00	59.5	73.6	63.1	42.1	
6:30:00	62.1	75.6	66.1	41.1	
6:45:00	62.1	74.5	66.1	42.1	61.4
7:00:00	63.7	80.0	68.1	44.1	
7:15:00	62.2	73.9	66.1	41.1	
7:30:00	62.7	74.3	67.1	41.1	
7:45:00	63.0	75.2	67.1	44.1	62.9
8:00:00	63.3	76.1	68.1	42.1	
8:15:00	62.5	77.3	66.1	42.1	
8:30:00	62.6	74.1	67.1	44.1	
8:45:00	64.2	77.1	69.1	45.1	63.2
9:00:00	63.5	75.3	68.1	45.1	
9:15:00	61.9	77.7	66.1	43.1	
9:30:00	63.1	75.2	67.1	44.1	
9:45:00	63.0	75.5	67.1	46.1	62.9
10:00:00	62.6	74.7	67.1	46.1	
10:15:00	62.1	74.4	66.1	43.1	
10:30:00	63.8	81.2	68.1	45.1	
10:45:00	61.9	73.9	66.1	44.1	62.7
11:00:00	62.7	75.6	66.1	45.1	
11:15:00	61.6	74.4	65.1	44.1	
11:30:00	62.6	76.7	66.1	46.1	
11:45:00	62.0	74.8	66.1	41.1	62.2
12:00:00	62.9	77.9	67.1	44.1	
12:15:00	61.3	72.6	65.1	43.1	
12:30:00	61.2	73.6	65.1	42.1	
12:45:00	62.0	76.7	66.1	42.1	61.9
13:00:00	62.2	77.2	66.1	42.1	
13:15:00	62.8	76.7	67.1	42.1	
13:30:00	60.1	71.3	64.1	40.1	
13:45:00	60.7	77.1	64.1	40.1	61.6
14:00:00	61.6	73.7	66.1	40.1	
14:15:00	61.2	73.9	65.1	43.1	
14:30:00	62.1	75.5	65.1	42.1	
14:45:00	61.6	74.0	65.1	45.1	61.6
15:00:00	61.9	74.5	66.1	43.1	
15:15:00	61.8	72.7	65.1	43.1	
15:30:00	60.9	73.6	64.1	43.1	
15:45:00	60.3	72.4	64.1	41.1	61.3
16:00:00	59.6	72.8	63.1	41.1	
16:15:00	59.2	70.0	63.1	41.1	
16:30:00	59.5	71.1	63.1	40.1	
16:45:00	58.3	70.7	62.1	41.1	59.2
17:00:00	58.9	74.4	62.1	42.1	
17:15:00	60.0	73.5	63.1	43.1	
17:30:00	58.4	73.2	62.1	40.1	

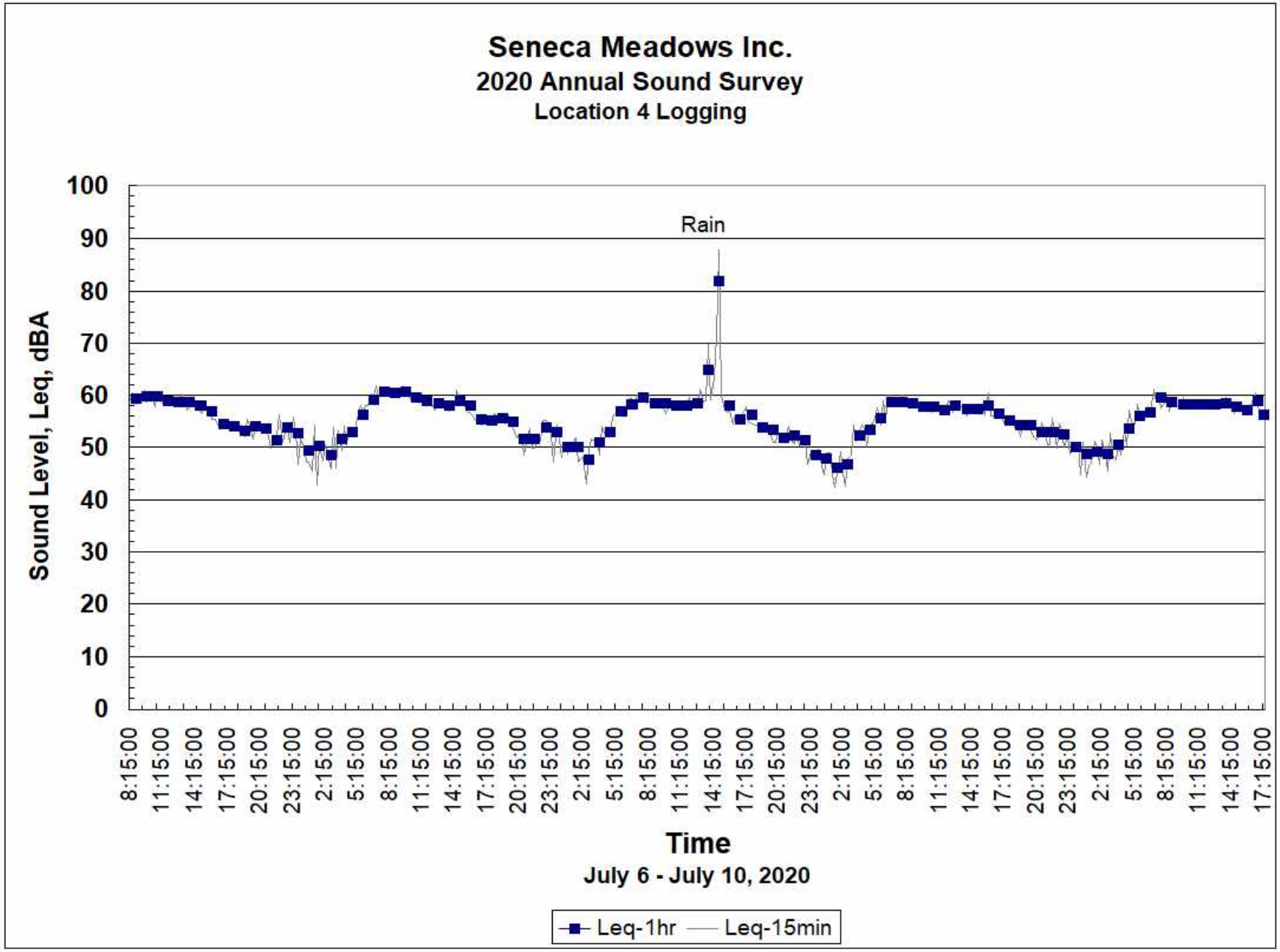
	17:45:00	57.4	68.8	62.1	43.1	58.8
	18:00:00	59.4	73.1	63.1	41.1	
	18:15:00	59.3	74.1	62.1	40.1	
	18:30:00	57.0	70.5	61.1	42.1	
	18:45:00	57.6	74.1	61.1	40.1	58.4
	19:00:00	57.1	72.1	61.1	41.1	
	19:15:00	58.2	76.2	60.1	41.1	
	19:30:00	57.5	71.1	61.1	42.1	
	19:45:00	56.6	73.9	60.1	42.1	57.4
	20:00:00	54.3	67.8	59.1	40.1	
	20:15:00	56.0	73.2	59.1	39.1	
	20:30:00	55.1	74.0	58.1	39.1	
	20:45:00	52.8	64.4	58.1	39.1	54.7
	21:00:00	55.3	73.6	58.1	40.1	
	21:15:00	55.8	71.3	59.1	39.1	
	21:30:00	53.3	71.0	57.1	39.1	
	21:45:00	53.1	69.9	56.1	39.1	54.5
	22:00:00	54.9	71.2	58.1	39.1	
	22:15:00	54.0	71.2	56.1	39.1	
	22:30:00	54.0	73.1	54.1	40.1	
	22:45:00	55.3	72.0	57.1	40.1	54.6
	23:00:00	55.2	72.8	56.1	40.1	
	23:15:00	52.1	69.1	52.1	39.1	
	23:30:00	47.7	69.1	44.1	39.1	
	23:45:00	50.9	68.9	49.1	39.1	52.3
7/8/2020	0:00:00	56.9	77.1	56.1	39.1	
	0:15:00	50.0	67.5	50.1	39.1	
	0:30:00	51.4	71.2	46.1	39.1	
	0:45:00	49.6	67.3	49.1	39.1	53.1
	1:00:00	51.5	70.0	49.1	39.1	
	1:15:00	53.7	71.1	54.1	39.1	
	1:30:00	50.6	70.9	49.1	39.1	
	1:45:00	51.7	71.5	48.1	39.1	52.0
	2:00:00	50.2	71.4	45.1	39.1	
	2:15:00	50.0	72.9	42.1	39.1	
	2:30:00	44.1	63.6	40.1	39.1	
	2:45:00	50.4	69.9	48.1	39.1	49.3
	3:00:00	53.6	70.8	53.1	39.1	
	3:15:00	53.3	75.5	47.1	39.1	
	3:30:00	54.9	72.3	56.1	39.1	
	3:45:00	50.4	70.7	49.1	39.1	53.3
	4:00:00	55.6	72.8	56.1	39.1	
	4:15:00	55.5	74.0	55.1	39.1	
	4:30:00	54.1	70.7	57.1	39.1	
	4:45:00	54.2	72.5	56.1	39.1	54.9
	5:00:00	57.4	73.7	59.1	40.1	
	5:15:00	59.1	76.8	62.1	39.1	
	5:30:00	58.3	73.1	61.1	40.1	
	5:45:00	62.8	80.5	66.1	41.1	59.9
	6:00:00	58.4	74.1	62.1	40.1	
	6:15:00	59.7	74.3	63.1	41.1	
	6:30:00	62.7	76.9	65.1	41.1	
	6:45:00	61.3	75.0	65.1	40.1	60.8
	7:00:00	62.0	73.6	66.1	41.1	
	7:15:00	63.1	77.1	68.1	40.1	
	7:30:00	62.2	74.9	66.1	41.1	
	7:45:00	62.3	73.5	67.1	42.1	62.4
	8:00:00	61.1	74.8	65.1	40.1	
	8:15:00	62.2	75.5	67.1	42.1	
	8:30:00	61.5	72.4	66.1	41.1	
	8:45:00	62.2	75.3	66.1	41.1	61.8
	9:00:00	62.1	76.2	66.1	40.1	
	9:15:00	62.5	75.0	67.1	41.1	
	9:30:00	61.5	74.8	66.1	40.1	
	9:45:00	60.2	71.6	65.1	39.1	61.7
	10:00:00	62.9	79.9	67.1	42.1	
	10:15:00	60.3	73.8	64.1	40.1	
	10:30:00	62.9	75.2	67.1	41.1	
	10:45:00	60.8	72.0	65.1	41.1	61.9

	11:00:00	61.4	72.4	66.1	39.1	
	11:15:00	61.2	73.2	65.1	42.1	
	11:30:00	61.1	72.8	65.1	40.1	
	11:45:00	60.3	73.7	64.1	40.1	61.0
	12:00:00	61.7	73.7	66.1	40.1	
	12:15:00	60.4	75.0	64.1	40.1	
	12:30:00	60.9	72.8	65.1	41.1	
	12:45:00	62.0	72.7	66.1	41.1	61.3
	13:00:00	62.0	74.1	66.1	41.1	
	13:15:00	62.3	73.9	66.1	46.1	
	13:30:00	62.1	76.1	66.1	41.1	
	13:45:00	66.0	88.0	68.1	44.1	63.5
	14:00:00	63.6	78.3	67.1	48.1	
	14:15:00	62.7	75.6	66.1	46.1	
	14:30:00	67.3	92.2	68.1	50.1	
	14:45:00	80.8	94.1	86.1	57.1	75.1
	15:00:00	66.0	83.5	69.1	47.1	
	15:15:00	63.2	78.3	67.1	43.1	
	15:30:00	61.1	74.3	64.1	43.1	
	15:45:00	60.9	77.1	64.1	42.1	63.3
	16:00:00	59.9	73.6	64.1	42.1	
	16:15:00	60.6	73.1	64.1	41.1	
	16:30:00	59.8	72.7	63.1	40.1	
	16:45:00	59.3	73.8	62.1	39.1	59.9
	17:00:00	61.1	74.0	64.1	42.1	
	17:15:00	61.4	74.7	64.1	40.1	
	17:30:00	60.9	75.3	64.1	39.1	
	17:45:00	60.2	74.7	64.1	39.1	60.9
	18:00:00	59.9	73.5	63.1	39.1	
	18:15:00	58.3	71.5	62.1	39.1	
	18:30:00	57.5	70.9	61.1	39.1	
	18:45:00	58.8	72.8	62.1	39.1	58.7
	19:00:00	58.9	74.0	62.1	39.1	
	19:15:00	59.6	76.4	63.1	39.1	
	19:30:00	56.8	76.7	60.1	39.1	
	19:45:00	57.5	75.1	61.1	39.1	58.3
	20:00:00	54.9	68.4	59.1	39.1	
	20:15:00	57.2	76.3	60.1	39.1	
	20:30:00	56.3	70.7	61.1	39.1	
	20:45:00	53.7	68.6	58.1	39.1	55.7
	21:00:00	56.0	73.6	59.1	39.1	
	21:15:00	56.3	71.0	60.1	39.1	
	21:30:00	56.2	70.9	60.1	39.1	
	21:45:00	55.3	72.3	58.1	39.1	56.0
	22:00:00	54.8	70.8	59.1	39.1	
	22:15:00	55.5	71.2	59.1	39.1	
	22:30:00	53.0	71.5	54.1	39.1	
	22:45:00	55.0	71.2	58.1	39.1	54.7
	23:00:00	50.6	64.5	55.1	39.1	
	23:15:00	52.3	73.0	51.1	39.1	
	23:30:00	51.6	71.2	48.1	39.1	
	23:45:00	50.6	68.3	50.1	39.1	51.3
7/9/2020	0:00:00	49.6	69.7	49.1	39.1	
	0:15:00	50.9	71.5	48.1	39.1	
	0:30:00	49.0	67.1	48.1	39.1	
	0:45:00	48.6	70.4	42.1	39.1	49.6
	1:00:00	53.3	73.5	50.1	39.1	
	1:15:00	47.2	66.7	46.1	39.1	
	1:30:00	41.4	59.3	40.1	39.1	
	1:45:00	46.2	66.3	42.1	39.1	49.1
	2:00:00	48.6	67.2	45.1	39.1	
	2:15:00	50.9	71.2	46.1	39.1	
	2:30:00	39.3	40.4	39.1	39.1	
	2:45:00	50.2	71.4	44.1	39.1	48.9
	3:00:00	51.5	73.6	43.1	39.1	
	3:15:00	54.3	76.0	46.1	39.1	
	3:30:00	56.3	74.4	57.1	39.1	
	3:45:00	52.6	69.5	54.1	39.1	54.1
	4:00:00	58.2	78.7	56.1	39.1	

4:15:00	56.8	74.1	58.1	40.1	
4:30:00	52.3	71.9	50.1	39.1	
4:45:00	56.0	71.9	58.1	39.1	56.3
5:00:00	55.8	72.7	57.1	42.1	
5:15:00	57.1	72.3	60.1	41.1	
5:30:00	59.0	71.1	63.1	43.1	
5:45:00	60.1	75.0	63.1	41.1	58.3
6:00:00	60.8	74.0	65.1	41.1	
6:15:00	60.7	76.3	64.1	41.1	
6:30:00	61.6	76.0	65.1	42.1	
6:45:00	62.6	76.9	67.1	42.1	61.5
7:00:00	62.0	78.0	65.1	43.1	
7:15:00	60.9	73.5	64.1	42.1	
7:30:00	61.3	78.7	64.1	40.1	
7:45:00	62.6	76.7	66.1	42.1	61.7
8:00:00	61.2	74.4	65.1	40.1	
8:15:00	60.9	73.3	64.1	41.1	
8:30:00	61.3	75.4	65.1	40.1	
8:45:00	61.3	73.1	66.1	42.1	61.2
9:00:00	61.0	76.6	64.1	40.1	
9:15:00	60.8	73.2	64.1	41.1	
9:30:00	59.8	72.6	64.1	41.1	
9:45:00	60.5	77.2	63.1	40.1	60.5
10:00:00	60.2	72.7	64.1	41.1	
10:15:00	61.4	73.6	66.1	39.1	
10:30:00	59.6	73.6	62.1	40.1	
10:45:00	59.9	73.5	64.1	39.1	60.3
11:00:00	60.3	73.2	64.1	41.1	
11:15:00	60.0	77.5	63.1	41.1	
11:30:00	61.1	73.4	65.1	40.1	
11:45:00	59.7	71.9	63.1	40.1	60.3
12:00:00	60.0	75.4	63.1	42.1	
12:15:00	60.1	74.4	64.1	40.1	
12:30:00	59.4	72.0	63.1	39.1	
12:45:00	60.1	74.3	63.1	41.1	59.9
13:00:00	58.7	72.1	62.1	40.1	
13:15:00	60.8	74.7	64.1	40.1	
13:30:00	59.6	71.9	64.1	39.1	
13:45:00	57.8	70.0	61.1	39.1	59.4
14:00:00	60.3	72.9	64.1	39.1	
14:15:00	60.4	75.5	64.1	40.1	
14:30:00	57.7	71.5	61.1	40.1	
14:45:00	59.2	71.5	62.1	40.1	59.5
15:00:00	60.2	76.2	62.1	39.1	
15:15:00	58.5	70.4	62.1	39.1	
15:30:00	60.0	73.6	64.1	42.1	
15:45:00	58.9	72.0	62.1	40.1	59.5
16:00:00	58.9	71.7	62.1	39.1	
16:15:00	58.3	70.8	62.1	39.1	
16:30:00	58.3	70.9	61.1	41.1	
16:45:00	59.9	73.4	63.1	42.1	58.9
17:00:00	59.6	74.5	62.1	40.1	
17:15:00	57.7	71.2	61.1	39.1	
17:30:00	57.4	71.1	61.1	39.1	
17:45:00	56.7	73.5	60.1	39.1	58.0
18:00:00	59.8	73.7	62.1	39.1	
18:15:00	57.3	73.2	61.1	39.1	
18:30:00	57.7	74.4	61.1	39.1	
18:45:00	56.6	70.8	60.1	39.1	58.0
19:00:00	57.4	73.9	61.1	39.1	
19:15:00	57.1	72.0	61.1	39.1	
19:30:00	57.5	72.8	61.1	39.1	
19:45:00	57.9	74.4	61.1	39.1	57.5
20:00:00	55.0	68.0	60.1	39.1	
20:15:00	56.7	72.0	60.1	39.1	
20:30:00	55.9	71.8	59.1	39.1	
20:45:00	56.0	70.4	60.1	39.1	55.9
21:00:00	57.5	74.0	60.1	40.1	
21:15:00	55.1	72.3	58.1	40.1	

	21:30:00	53.0	71.7	56.1	39.1	
	21:45:00	56.4	73.4	60.1	39.1	55.8
	22:00:00	56.7	75.5	59.1	40.1	
	22:15:00	55.7	73.2	59.1	39.1	
	22:30:00	56.4	76.1	56.1	39.1	
	22:45:00	53.9	70.7	56.1	39.1	55.8
	23:00:00	55.5	73.8	57.1	39.1	
	23:15:00	49.7	68.3	52.1	39.1	
	23:30:00	51.8	71.5	50.1	39.1	
	23:45:00	52.9	74.1	50.1	39.1	53.0
7/10/2020	0:00:00	53.2	74.7	53.1	39.1	
	0:15:00	47.1	64.6	43.1	39.1	
	0:30:00	52.1	72.4	48.1	39.1	
	0:45:00	49.6	68.8	49.1	39.1	51.1
	1:00:00	49.2	68.2	49.1	39.1	
	1:15:00	51.0	69.7	48.1	39.1	
	1:30:00	54.2	76.0	50.1	39.1	
	1:45:00	54.6	75.2	50.1	39.1	52.8
	2:00:00	42.9	60.3	42.1	39.1	
	2:15:00	54.8	71.6	55.1	39.1	
	2:30:00	51.0	70.8	46.1	39.1	
	2:45:00	44.7	63.6	42.1	39.1	50.8
	3:00:00	46.9	66.9	42.1	39.1	
	3:15:00	56.0	74.7	56.1	39.1	
	3:30:00	48.1	70.9	42.1	39.1	
	3:45:00	51.3	72.1	49.1	39.1	52.1
	4:00:00	52.4	73.0	50.1	39.1	
	4:15:00	54.3	72.4	55.1	39.1	
	4:30:00	55.0	71.5	58.1	39.1	
	4:45:00	56.5	72.8	59.1	39.1	54.8
	5:00:00	56.3	73.2	59.1	40.1	
	5:15:00	57.9	72.8	60.1	40.1	
	5:30:00	58.8	71.9	63.1	40.1	
	5:45:00	61.1	76.2	65.1	41.1	58.9
	6:00:00	60.1	75.3	63.1	40.1	
	6:15:00	58.4	73.3	61.1	40.1	
	6:30:00	59.4	73.0	63.1	40.1	
	6:45:00	59.7	74.5	62.1	40.1	59.4
	7:00:00	62.9	77.7	67.1	41.1	
	7:15:00	61.8	73.3	66.1	41.1	
	7:30:00	61.4	75.2	65.1	41.1	
	7:45:00	61.9	75.9	66.1	41.1	62.0
	8:00:00	60.0	73.6	64.1	41.1	
	8:15:00	61.3	75.2	65.1	41.1	
	8:30:00	60.0	73.2	64.1	41.1	
	8:45:00	61.2	73.5	65.1	40.1	60.7
	9:00:00	60.8	72.3	65.1	39.1	
	9:15:00	59.6	72.6	63.1	42.1	
	9:30:00	60.2	75.0	64.1	39.1	
	9:45:00	60.8	74.3	65.1	39.1	60.4
	10:00:00	61.5	74.4	66.1	41.1	
	10:15:00	60.3	72.3	64.1	41.1	
	10:30:00	59.6	72.4	63.1	40.1	
	10:45:00	60.6	73.6	64.1	41.1	60.6
	11:00:00	60.1	72.2	63.1	42.1	
	11:15:00	59.5	71.5	63.1	44.1	
	11:30:00	60.2	71.2	64.1	46.1	
	11:45:00	59.1	72.3	63.1	43.1	59.7
	12:00:00	60.3	74.8	63.1	42.1	
	12:15:00	59.1	70.1	62.1	44.1	
	12:30:00	60.7	72.9	65.1	43.1	
	12:45:00	58.1	71.2	61.1	44.1	59.7
	13:00:00	60.5	73.2	64.1	43.1	
	13:15:00	60.4	77.8	64.1	44.1	
	13:30:00	59.3	74.0	62.1	44.1	
	13:45:00	61.0	72.7	64.1	43.1	60.3
	14:00:00	59.8	72.3	63.1	43.1	
	14:15:00	60.5	72.1	64.1	44.1	
	14:30:00	58.4	70.4	61.1	43.1	

14:45:00	60.4	73.0	64.1	43.1	59.9
15:00:00	59.5	71.9	63.1	43.1	
15:15:00	59.8	75.6	63.1	44.1	
15:30:00	59.5	70.8	63.1	43.1	
15:45:00	60.4	73.5	64.1	44.1	59.8
16:00:00	59.9	72.8	63.1	44.1	
16:15:00	60.8	72.8	64.1	46.1	
16:30:00	59.9	76.3	62.1	46.1	
16:45:00	61.0	78.5	63.1	45.1	60.4
17:00:00	58.5	71.7	61.1	45.1	
17:15:00	66.3	90.5	65.1	44.1	
17:30:00	59.9	64.1	63.1	49.1	63.0


Seneca Meadows Inc.
2020 Annual Sound Survey
Location 4 Logging
Rain
Sound Level, Leq, dBA
100
90
80
70
60
50
40
30
20
10
0
8:15:00
11:15:00
14:15:00
17:15:00
20:15:00
23:15:00
2:15:00
5:15:00
8:15:00
11:15:00
14:15:00
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17:15:00
20:15:00
23:15:00
2:15:00
5:15:00
8:15:00
11:15:00
14:15:00
17:15:00
Time
July 6 - July 10, 2020
Leq-1hr
Leq-15min

****

Filename LOC4
Test Location 4
Employee Name
Employee No.
Department
Seneca Meadows Inc.
2019 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
Calibrator type Metrosonics CL304 3067
Calibrator calibration date 4/17/2019

****

METROSONICS db-3080 V1.20 SERIAL #3819
Report printed on 7/12/2020 at 15:57:13

Seneca Meadows Inc.
2020 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
East Aurora, New York

Logging started at	7/6/2020 at 8:15:00
Total logging time	4 DAYS 9:23:15
Logging stopped at	7/10/2020 at 17:38:15
Total intervals	422
Interval length	0:15:00
Auto Stop	NO
Clock synch	YES
Response Rate	SLOW
Filter	A-WEIGHTED
Pre-Test Calibration Time	7/3/2020 at 18:43:44
Pre-Test Calibration Range	39.4 to 139.4 dB
Post-Test Calibration Time	7/12/2020 at 15:27:04
Post-Test Calibration Range	39.4 to 139.4 dB
Cut-off used for time history Lav	NONE

<<< SUMMARY REPORT FOR TEST NUMBER 1 OF 1 >>>

Exchange Rate	3dB	
Cutoffs	60dB	60dB
Ceiling	115dB	
DOSE Criterion level	90dB	
DOSE Criterion length	8 hours	
Lav(60)	63.0dB	
Lav(60)	62.6dB	
Lav(60)	62.6dB	
SEL	118.6dB	
TWA	74.1dB	
TWA(60)	73.8dB	
TWA(60)	73.8dB	
Lmax	102.4dB	7/8/2020 at 14:52:46
Lpk	133.6dB	7/8/2020 at 14:51:15
Time over 115 dB	00:00.0	
DOSE(60)	2.36%	
DOSE(60)	2.36%	

<<< TIME HISTORY REPORT FOR TEST NUMBER 1 OF 1 >>>

	START TIME	Leq(15-min) dBA	Lmax dBA	L(10.0) dBA	L(99.0) dBA	Leq(1-hr) dBA
7/6/2020						
	8:15:00	59.2	71.2	64.4	42.4	
	8:30:00	60.4	72.8	65.4	43.4	
	8:45:00	58.2	72.8	62.4	42.4	59.4
	9:00:00	60.1	72.6	65.4	43.4	
	9:15:00	58.8	72.0	63.4	42.4	
	9:30:00	60.9	72.0	66.4	43.4	
	9:45:00	58.8	72.4	63.4	42.4	59.7
	10:00:00	59.9	71.6	64.4	44.4	
	10:15:00	60.4	75.2	64.4	42.4	
	10:30:00	57.9	71.2	61.4	44.4	
	10:45:00	60.5	73.4	65.4	44.4	59.8
	11:00:00	59.3	72.4	64.4	43.4	
	11:15:00	58.6	71.2	62.4	43.4	
	11:30:00	59.0	72.8	63.4	42.4	
	11:45:00	58.6	72.0	63.4	43.4	58.9
	12:00:00	59.5	71.6	64.4	44.4	
	12:15:00	59.0	72.9	63.4	42.4	
	12:30:00	58.3	71.2	62.4	43.4	
	12:45:00	58.3	71.2	62.4	42.4	58.8
	13:00:00	60.2	75.6	64.4	42.4	
	13:15:00	59.3	72.6	63.4	42.4	
	13:30:00	57.1	69.2	61.4	42.4	
	13:45:00	57.7	71.2	62.4	42.4	58.8
	14:00:00	58.7	72.4	63.4	42.4	
	14:15:00	58.0	73.2	62.4	43.4	
	14:30:00	59.0	72.4	63.4	42.4	
	14:45:00	56.5	71.5	59.4	42.4	58.2
	15:00:00	57.4	70.4	60.4	42.4	
	15:15:00	57.2	73.6	60.4	43.4	
	15:30:00	57.7	71.6	61.4	42.4	
	15:45:00	55.5	70.5	59.4	42.4	57.0
	16:00:00	55.5	68.1	59.4	43.4	
	16:15:00	54.6	66.8	58.4	43.4	
	16:30:00	53.5	69.6	56.4	42.4	
	16:45:00	54.1	67.2	57.4	43.4	54.5
	17:00:00	54.4	68.0	57.4	43.4	
	17:15:00	55.2	73.6	57.4	42.4	
	17:30:00	53.7	67.0	57.4	42.4	
	17:45:00	53.1	71.2	56.4	42.4	54.2
	18:00:00	53.6	69.6	56.4	42.4	
	18:15:00	52.9	71.2	54.4	42.4	
	18:30:00	54.2	73.2	56.4	42.4	
	18:45:00	52.2	64.4	56.4	42.4	53.3
	19:00:00	55.4	72.0	58.4	42.4	
	19:15:00	54.2	71.2	55.4	42.4	
	19:30:00	51.7	66.0	54.4	42.4	
	19:45:00	54.5	71.5	56.4	42.4	54.1
	20:00:00	53.1	70.8	54.4	42.4	
	20:15:00	54.5	70.8	56.4	42.4	
	20:30:00	53.2	71.6	54.4	42.4	
	20:45:00	53.4	71.3	55.4	42.4	53.6
	21:00:00	52.2	69.2	55.4	41.4	
	21:15:00	49.9	68.4	51.4	41.4	
	21:30:00	51.3	65.2	54.4	42.4	
	21:45:00	52.3	72.0	53.4	42.4	51.5
	22:00:00	56.4	80.4	51.4	42.4	
	22:15:00	51.1	67.6	53.4	42.4	
	22:30:00	52.9	72.3	53.4	42.4	
	22:45:00	53.4	75.1	52.4	42.4	53.9
	23:00:00	50.9	67.3	53.4	42.4	
	23:15:00	55.9	77.7	55.4	42.4	
	23:30:00	52.7	72.0	51.4	42.4	
	23:45:00	46.8	64.8	48.4	42.4	52.7

7/7/2020	0:00:00	51.6	71.2	53.4	42.4	
	0:15:00	50.1	70.9	50.4	42.4	
	0:30:00	47.2	66.0	46.4	42.4	
	0:45:00	47.3	67.6	43.4	42.4	49.5
	1:00:00	45.4	63.2	44.4	41.4	
	1:15:00	54.4	74.0	53.4	41.4	
	1:30:00	42.8	46.9	44.4	42.4	
	1:45:00	50.5	68.7	50.4	42.4	50.4
	2:00:00	47.4	66.0	48.4	42.4	
	2:15:00	50.6	69.2	50.4	42.4	
	2:30:00	48.6	69.2	47.4	42.4	
	2:45:00	46.0	61.6	46.4	42.4	48.5
	3:00:00	53.8	72.8	53.4	42.4	
	3:15:00	46.1	64.8	47.4	41.4	
	3:30:00	53.2	69.2	54.4	42.4	
	3:45:00	49.5	66.5	50.4	42.4	51.6
	4:00:00	54.0	71.6	55.4	42.4	
	4:15:00	50.5	68.8	52.4	42.4	
	4:30:00	53.6	69.6	55.4	42.4	
	4:45:00	53.0	70.4	54.4	42.4	53.0
	5:00:00	53.5	69.2	54.4	44.4	
	5:15:00	55.6	72.4	57.4	44.4	
	5:30:00	58.0	70.8	62.4	44.4	
	5:45:00	56.6	71.2	59.4	44.4	56.2
	6:00:00	58.1	73.6	61.4	44.4	
	6:15:00	58.1	73.6	61.4	44.4	
	6:30:00	60.2	73.2	64.4	45.4	
	6:45:00	59.8	77.8	63.4	44.4	59.2
	7:00:00	61.7	75.7	66.4	46.4	
	7:15:00	59.5	73.6	63.4	45.4	
	7:30:00	60.2	71.2	64.4	46.4	
	7:45:00	61.1	73.2	64.4	48.4	60.7
	8:00:00	60.6	74.4	64.4	46.4	
	8:15:00	60.0	72.4	64.4	44.4	
	8:30:00	60.6	74.4	64.4	48.4	
	8:45:00	60.3	73.2	64.4	48.4	60.4
	9:00:00	60.2	74.8	64.4	46.4	
	9:15:00	60.2	74.0	64.4	50.4	
	9:30:00	61.7	70.4	64.4	53.4	
	9:45:00	60.6	72.4	63.4	52.4	60.7
	10:00:00	59.9	70.8	63.4	51.4	
	10:15:00	58.7	74.0	61.4	49.4	
	10:30:00	60.0	72.2	63.4	50.4	
	10:45:00	60.0	71.2	62.4	52.4	59.7
	11:00:00	58.6	69.6	62.4	48.4	
	11:15:00	59.2	72.7	63.4	48.4	
	11:30:00	58.6	72.4	62.4	47.4	
	11:45:00	59.3	70.5	62.4	50.4	58.9
	12:00:00	59.3	72.0	63.4	47.4	
	12:15:00	57.8	70.4	61.4	47.4	
	12:30:00	57.2	68.4	61.4	46.4	
	12:45:00	59.0	76.4	62.4	50.4	58.4
	13:00:00	58.6	71.0	62.4	50.4	
	13:15:00	58.7	71.6	62.4	50.4	
	13:30:00	57.9	70.7	61.4	50.4	
	13:45:00	57.0	70.3	59.4	50.4	58.1
	14:00:00	58.0	69.3	61.4	51.4	
	14:15:00	57.9	70.9	61.4	50.4	
	14:30:00	60.9	79.2	63.4	52.4	
	14:45:00	58.6	71.8	62.4	51.4	59.0
	15:00:00	59.8	74.0	63.4	51.4	
	15:15:00	58.0	70.8	61.4	51.4	
	15:30:00	56.8	69.6	60.4	50.4	
	15:45:00	56.5	67.6	58.4	51.4	58.0
	16:00:00	56.0	66.2	58.4	50.4	
	16:15:00	55.1	66.8	57.4	45.4	
	16:30:00	55.9	72.0	59.4	43.4	
	16:45:00	54.3	69.2	57.4	42.4	55.4
	17:00:00	56.0	70.8	58.4	43.4	

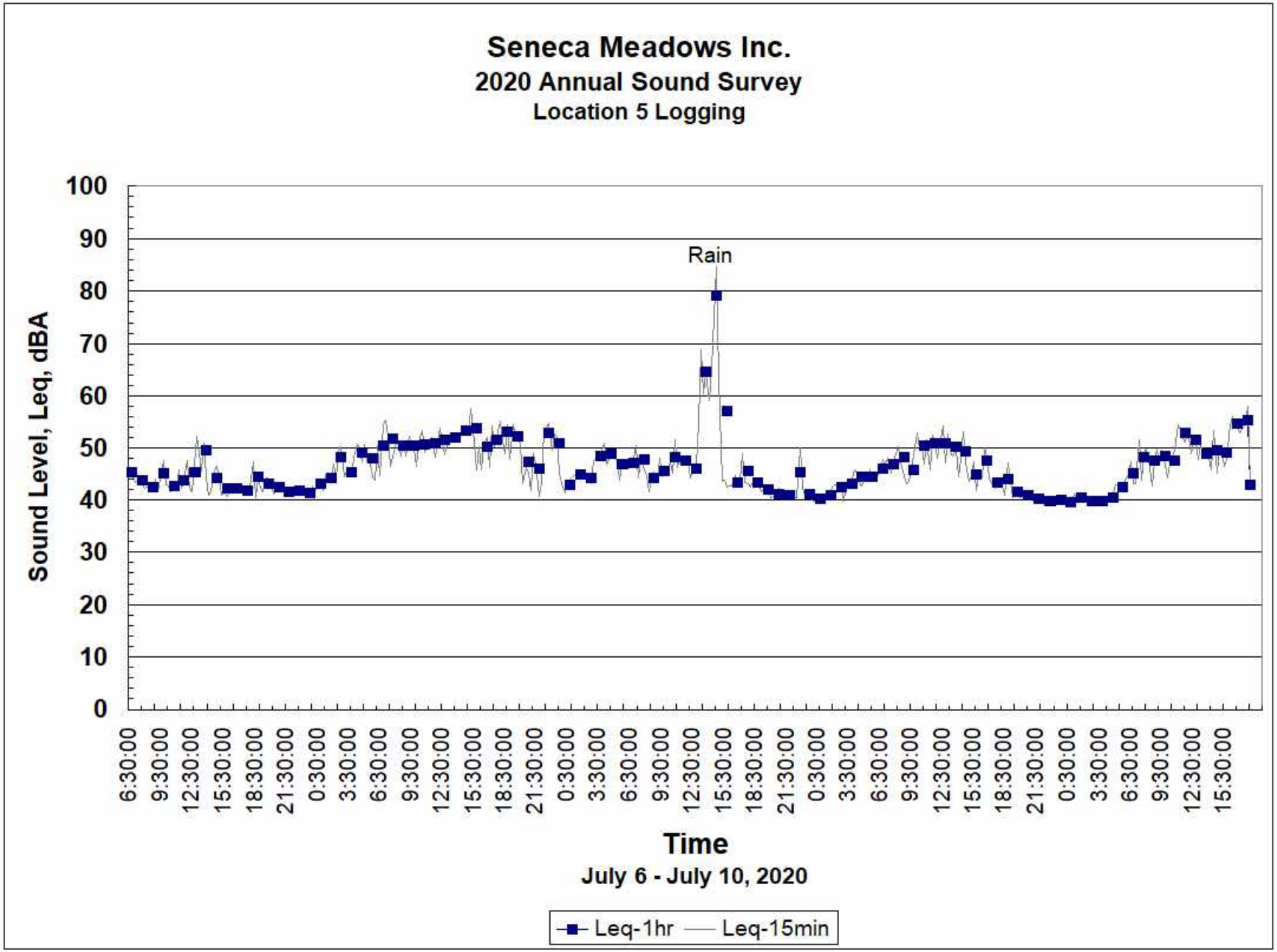
	17:15:00	56.1	70.5	58.4	43.4	
	17:30:00	54.3	67.4	58.4	43.4	
	17:45:00	54.4	68.4	57.4	44.4	55.3
	18:00:00	56.6	72.6	59.4	44.4	
	18:15:00	55.5	70.0	58.4	43.4	
	18:30:00	55.3	71.2	58.4	44.4	
	18:45:00	55.4	74.8	57.4	43.4	55.7
	19:00:00	54.6	69.2	57.4	43.4	
	19:15:00	56.4	79.8	57.4	43.4	
	19:30:00	54.4	71.2	56.4	44.4	
	19:45:00	53.6	72.6	55.4	43.4	54.9
	20:00:00	51.9	64.8	55.4	43.4	
	20:15:00	52.6	68.5	55.4	42.4	
	20:30:00	52.6	71.6	54.4	42.4	
	20:45:00	48.5	60.4	52.4	42.4	51.7
	21:00:00	52.4	70.3	55.4	42.4	
	21:15:00	53.6	68.8	56.4	42.4	
	21:30:00	49.9	66.6	53.4	42.4	
	21:45:00	49.8	67.0	53.4	42.4	51.7
	22:00:00	52.4	68.8	54.4	42.4	
	22:15:00	51.3	66.8	53.4	42.4	
	22:30:00	55.1	72.4	56.4	43.4	
	22:45:00	55.1	70.0	57.4	43.4	53.8
	23:00:00	54.8	72.0	56.4	42.4	
	23:15:00	52.4	67.8	54.4	42.4	
	23:30:00	47.3	64.5	50.4	42.4	
	23:45:00	54.4	75.6	53.4	42.4	53.0
7/8/2020	0:00:00	51.5	71.5	52.4	42.4	
	0:15:00	48.2	66.7	48.4	42.4	
	0:30:00	51.1	71.0	49.4	42.4	
	0:45:00	48.7	66.8	48.4	41.4	50.1
	1:00:00	49.6	66.8	50.4	42.4	
	1:15:00	50.7	67.2	49.4	41.4	
	1:30:00	51.9	72.4	50.4	41.4	
	1:45:00	47.3	68.2	45.4	41.4	50.2
	2:00:00	48.0	68.4	44.4	41.4	
	2:15:00	48.2	69.6	45.4	41.4	
	2:30:00	43.1	56.4	43.4	41.4	
	2:45:00	49.5	69.2	47.4	41.4	47.8
	3:00:00	51.7	70.8	50.4	41.4	
	3:15:00	51.3	70.0	49.4	41.4	
	3:30:00	51.8	70.0	52.4	42.4	
	3:45:00	48.5	69.4	49.4	42.4	51.0
	4:00:00	54.1	70.8	56.4	42.4	
	4:15:00	52.3	68.6	53.4	42.4	
	4:30:00	52.8	68.4	54.4	42.4	
	4:45:00	52.9	70.0	54.4	43.4	53.1
	5:00:00	55.9	71.2	57.4	44.4	
	5:15:00	56.8	74.7	59.4	43.4	
	5:30:00	57.8	76.7	59.4	43.4	
	5:45:00	57.3	73.1	59.4	42.4	57.0
	6:00:00	55.9	71.3	58.4	42.4	
	6:15:00	57.6	72.8	60.4	43.4	
	6:30:00	59.6	74.0	63.4	44.4	
	6:45:00	59.0	71.6	63.4	43.4	58.2
	7:00:00	59.3	71.8	63.4	44.4	
	7:15:00	60.4	74.8	64.4	45.4	
	7:30:00	59.5	73.2	63.4	45.4	
	7:45:00	59.2	74.0	62.4	45.4	59.6
	8:00:00	58.4	72.0	62.4	46.4	
	8:15:00	58.7	73.6	63.4	45.4	
	8:30:00	58.5	71.2	62.4	44.4	
	8:45:00	58.5	73.2	62.4	44.4	58.5
	9:00:00	59.3	74.8	63.4	45.4	
	9:15:00	59.4	73.6	64.4	44.4	
	9:30:00	58.1	71.6	62.4	44.4	
	9:45:00	56.5	70.8	60.4	43.4	58.5
	10:00:00	57.7	70.9	62.4	45.4	
	10:15:00	58.3	71.5	62.4	45.4	

	10:30:00	58.5	73.1	63.4	46.4	
	10:45:00	57.6	68.7	62.4	47.4	58.0
	11:00:00	57.8	71.2	62.4	48.4	
	11:15:00	57.7	71.9	62.4	47.4	
	11:30:00	58.0	69.6	62.4	48.4	
	11:45:00	58.6	73.2	62.4	47.4	58.0
	12:00:00	59.7	75.2	64.4	45.4	
	12:15:00	57.6	70.0	61.4	44.4	
	12:30:00	58.5	71.2	62.4	45.4	
	12:45:00	58.1	70.4	63.4	45.4	58.5
	13:00:00	61.1	79.3	65.4	45.4	
	13:15:00	58.8	74.2	62.4	46.4	
	13:30:00	58.9	74.7	63.4	45.4	
	13:45:00	69.8	98.0	67.4	48.4	64.9
	14:00:00	59.2	74.9	62.4	45.4	
	14:15:00	63.3	78.6	67.4	49.4	
	14:30:00	71.2	89.6	74.4	53.4	
	14:45:00	87.8	102.4	92.4	61.4	81.9
	15:00:00	59.9	75.2	63.4	48.4	
	15:15:00	57.4	72.0	60.4	44.4	
	15:30:00	56.8	70.4	60.4	45.4	
	15:45:00	56.9	68.4	60.4	44.4	58.0
	16:00:00	54.5	66.9	58.4	42.4	
	16:15:00	56.2	69.2	59.4	44.4	
	16:30:00	54.9	69.2	58.4	43.4	
	16:45:00	55.5	70.4	58.4	42.4	55.3
	17:00:00	56.8	71.6	59.4	43.4	
	17:15:00	57.8	71.2	60.4	42.4	
	17:30:00	55.0	68.4	58.4	42.4	
	17:45:00	54.5	68.6	57.4	41.4	56.2
	18:00:00	54.3	70.8	56.4	42.4	
	18:15:00	54.3	75.6	56.4	42.4	
	18:30:00	53.6	66.4	57.4	42.4	
	18:45:00	53.0	67.3	56.4	42.4	53.8
	19:00:00	54.4	70.8	57.4	42.4	
	19:15:00	54.1	70.9	56.4	42.4	
	19:30:00	53.2	70.0	55.4	41.4	
	19:45:00	51.1	65.6	54.4	42.4	53.4
	20:00:00	51.0	65.4	54.4	42.4	
	20:15:00	53.3	71.2	55.4	42.4	
	20:30:00	51.4	68.4	54.4	42.4	
	20:45:00	51.0	67.2	54.4	42.4	51.8
	21:00:00	52.3	71.2	54.4	41.4	
	21:15:00	54.0	71.2	57.4	42.4	
	21:30:00	51.1	69.6	54.4	41.4	
	21:45:00	50.7	67.6	54.4	41.4	52.2
	22:00:00	52.6	70.6	54.4	41.4	
	22:15:00	50.4	67.2	53.4	42.4	
	22:30:00	50.8	68.6	51.4	41.4	
	22:45:00	51.3	68.5	53.4	42.4	51.4
	23:00:00	46.7	59.2	50.4	41.4	
	23:15:00	49.2	68.8	48.4	41.4	
	23:30:00	49.1	68.8	45.4	41.4	
	23:45:00	48.5	64.4	50.4	41.4	48.5
7/9/2020	0:00:00	49.7	68.8	49.4	41.4	
	0:15:00	46.5	63.6	48.4	41.4	
	0:30:00	44.9	62.8	44.4	41.4	
	0:45:00	49.0	68.0	49.4	41.4	47.9
	1:00:00	49.1	70.4	46.4	41.4	
	1:15:00	45.0	64.1	43.4	41.4	
	1:30:00	42.3	54.0	42.4	41.4	
	1:45:00	45.1	62.0	44.4	41.4	46.1
	2:00:00	49.2	68.8	47.4	41.4	
	2:15:00	45.0	63.2	43.4	41.4	
	2:30:00	42.5	53.6	42.4	41.4	
	2:45:00	48.0	66.8	44.4	41.4	46.9
	3:00:00	48.5	67.2	46.4	41.4	
	3:15:00	54.4	71.0	54.4	42.4	
	3:30:00	51.3	68.1	52.4	42.4	

3:45:00	53.2	73.6	52.4	42.4	52.4
4:00:00	54.2	72.0	54.4	41.4	
4:15:00	53.8	72.4	54.4	41.4	
4:30:00	50.1	68.8	51.4	41.4	
4:45:00	54.2	69.6	56.4	42.4	53.4
5:00:00	54.5	69.7	56.4	43.4	
5:15:00	55.6	68.9	58.4	43.4	
5:30:00	57.6	71.3	60.4	44.4	
5:45:00	54.2	70.8	57.4	44.4	55.7
6:00:00	58.9	73.2	62.4	44.4	
6:15:00	55.7	72.4	58.4	44.4	
6:30:00	60.1	72.1	64.4	45.4	
6:45:00	59.1	71.2	63.4	44.4	58.7
7:00:00	57.8	72.8	60.4	44.4	
7:15:00	58.6	72.0	62.4	43.4	
7:30:00	58.3	73.4	61.4	43.4	
7:45:00	60.0	74.8	63.4	44.4	58.8
8:00:00	58.4	70.0	63.4	43.4	
8:15:00	57.8	73.1	61.4	43.4	
8:30:00	58.7	71.2	62.4	43.4	
8:45:00	58.9	70.4	63.4	43.4	58.5
9:00:00	58.0	74.8	61.4	42.4	
9:15:00	57.7	70.0	61.4	42.4	
9:30:00	57.5	71.3	61.4	44.4	
9:45:00	57.8	74.0	61.4	43.4	57.8
10:00:00	58.1	72.4	62.4	43.4	
10:15:00	58.6	70.8	63.4	42.4	
10:30:00	56.7	70.9	60.4	42.4	
10:45:00	57.9	72.6	62.4	43.4	57.9
11:00:00	57.9	72.0	61.4	43.4	
11:15:00	57.0	70.4	60.4	43.4	
11:30:00	57.7	70.0	62.4	44.4	
11:45:00	56.3	68.6	59.4	43.4	57.3
12:00:00	59.0	72.4	63.4	44.4	
12:15:00	58.2	74.0	61.4	44.4	
12:30:00	56.8	69.6	60.4	42.4	
12:45:00	57.9	74.4	60.4	43.4	58.0
13:00:00	57.8	71.2	61.4	44.4	
13:15:00	57.9	70.8	62.4	43.4	
13:30:00	57.5	71.7	61.4	43.4	
13:45:00	56.1	69.2	60.4	42.4	57.4
14:00:00	58.2	71.6	62.4	42.4	
14:15:00	56.5	68.8	60.4	43.4	
14:30:00	57.6	72.3	61.4	43.4	
14:45:00	56.7	69.6	60.4	42.4	57.3
15:00:00	56.3	73.1	58.4	42.4	
15:15:00	57.4	72.1	60.4	42.4	
15:30:00	56.4	70.3	59.4	42.4	
15:45:00	60.4	84.0	60.4	43.4	58.0
16:00:00	56.1	73.6	58.4	43.4	
16:15:00	56.0	69.8	59.4	42.4	
16:30:00	56.3	70.4	59.4	44.4	
16:45:00	57.3	72.7	60.4	43.4	56.5
17:00:00	56.5	71.6	59.4	42.4	
17:15:00	54.8	71.6	58.4	42.4	
17:30:00	54.6	72.0	57.4	42.4	
17:45:00	54.2	70.8	55.4	41.4	55.1
18:00:00	56.0	71.6	58.4	42.4	
18:15:00	53.5	69.2	56.4	41.4	
18:30:00	54.3	72.4	57.4	41.4	
18:45:00	52.2	67.2	56.4	41.4	54.2
19:00:00	53.9	71.1	56.4	42.4	
19:15:00	55.1	70.0	58.4	42.4	
19:30:00	54.4	67.6	57.4	42.4	
19:45:00	53.3	69.6	56.4	41.4	54.2
20:00:00	52.2	65.7	56.4	41.4	
20:15:00	51.5	65.6	55.4	42.4	
20:30:00	52.3	68.2	54.4	42.4	
20:45:00	54.8	71.6	56.4	42.4	52.9

	21:00:00	52.8	70.0	55.4	41.4	
	21:15:00	50.6	68.0	52.4	41.4	
	21:30:00	50.6	68.5	53.4	41.4	
	21:45:00	55.6	73.6	58.4	41.4	52.9
	22:00:00	49.9	68.0	52.4	41.4	
	22:15:00	54.5	72.4	56.4	42.4	
	22:30:00	53.7	74.4	51.4	41.4	
	22:45:00	50.1	66.7	52.4	41.4	52.5
	23:00:00	52.0	69.6	54.4	41.4	
	23:15:00	48.7	65.6	50.4	42.4	
	23:30:00	49.3	70.8	46.4	41.4	
	23:45:00	49.2	71.2	47.4	41.4	50.0
7/10/2020	0:00:00	50.5	72.4	49.4	41.4	
	0:15:00	44.8	58.4	47.4	41.4	
	0:30:00	51.1	69.6	50.4	41.4	
	0:45:00	44.4	57.6	46.4	41.4	48.7
	1:00:00	46.5	63.6	48.4	41.4	
	1:15:00	47.1	65.2	45.4	41.4	
	1:30:00	51.2	68.8	51.4	41.4	
	1:45:00	50.3	70.2	48.4	41.4	49.2
	2:00:00	46.7	67.0	45.4	41.4	
	2:15:00	51.5	70.4	52.4	41.4	
	2:30:00	48.9	67.6	47.4	41.4	
	2:45:00	45.4	63.8	44.4	41.4	48.8
	3:00:00	52.8	72.0	52.4	41.4	
	3:15:00	48.5	68.8	46.4	42.4	
	3:30:00	47.7	68.4	45.4	42.4	
	3:45:00	51.1	70.4	49.4	41.4	50.5
	4:00:00	48.5	68.0	49.4	41.4	
	4:15:00	53.2	69.8	54.4	42.4	
	4:30:00	50.4	66.0	52.4	42.4	
	4:45:00	57.1	76.4	58.4	43.4	53.5
	5:00:00	55.0	74.4	56.4	43.4	
	5:15:00	54.5	68.6	56.4	42.4	
	5:30:00	58.2	70.0	63.4	42.4	
	5:45:00	56.0	69.6	59.4	43.4	56.2
	6:00:00	56.3	74.8	58.4	43.4	
	6:15:00	56.2	69.6	58.4	43.4	
	6:30:00	57.8	72.0	61.4	43.4	
	6:45:00	56.7	71.2	60.4	43.4	56.8
	7:00:00	61.2	75.6	66.4	44.4	
	7:15:00	58.7	71.6	62.4	44.4	
	7:30:00	59.7	74.6	63.4	44.4	
	7:45:00	57.6	70.8	61.4	43.4	59.5
	8:00:00	58.6	72.7	62.4	44.4	
	8:15:00	59.8	76.4	64.4	44.4	
	8:30:00	57.0	71.2	60.4	44.4	
	8:45:00	59.1	72.8	63.4	44.4	58.7
	9:00:00	58.2	69.9	62.4	42.4	
	9:15:00	57.9	70.0	62.4	43.4	
	9:30:00	57.4	73.1	61.4	42.4	
	9:45:00	59.6	73.6	64.4	46.4	58.4
	10:00:00	58.5	71.2	62.4	44.4	
	10:15:00	58.4	72.0	62.4	43.4	
	10:30:00	58.3	74.4	62.4	43.4	
	10:45:00	57.8	69.6	61.4	43.4	58.3
	11:00:00	58.0	70.7	61.4	44.4	
	11:15:00	58.5	70.0	62.4	45.4	
	11:30:00	58.5	69.6	62.4	45.4	
	11:45:00	58.3	73.6	61.4	44.4	58.3
	12:00:00	58.6	72.6	62.4	46.4	
	12:15:00	58.2	74.4	62.4	44.4	
	12:30:00	59.1	75.2	62.4	46.4	
	12:45:00	57.3	70.4	60.4	45.4	58.3
	13:00:00	59.0	71.6	63.4	43.4	
	13:15:00	57.7	70.0	61.4	44.4	
	13:30:00	57.6	74.0	60.4	42.4	
	13:45:00	59.5	72.6	63.4	45.4	58.5
	14:00:00	58.5	70.4	62.4	45.4	

14:15:00	58.2	72.0	62.4	43.4	
14:30:00	56.6	70.0	59.4	43.4	
14:45:00	58.1	72.0	61.4	45.4	57.9
15:00:00	56.9	68.8	60.4	44.4	
15:15:00	57.3	70.0	60.4	44.4	
15:30:00	56.7	70.0	59.4	44.4	
15:45:00	57.8	68.9	61.4	43.4	57.2
16:00:00	57.5	73.2	60.4	47.4	
16:15:00	59.4	71.6	62.4	47.4	
16:30:00	60.5	81.6	62.4	47.4	
16:45:00	57.7	69.7	60.4	48.4	59.0
17:00:00	57.0	70.4	59.4	45.4	
17:15:00	55.2	69.3	58.4	44.4	56.2
17:30:00	69.1	87.2	73.4	48.4	


Seneca Meadows Inc.
2020 Annual Sound Survey
Location 5 Logging
Sound Level, Leq, dBA
100
90
80
70
60
50
40
30
20
10
0
Rain
6:30:00
9:30:00
12:30:00
15:30:00
18:30:00
21:30:00
0:30:00
3:30:00
6:30:00
9:30:00
12:30:00
15:30:00
18:30:00
21:30:00
0:30:00
3:30:00
6:30:00
9:30:00
12:30:00
15:30:00
18:30:00
21:30:00
0:30:00
3:30:00
6:30:00
9:30:00
12:30:00
15:30:00
Time
July 6 - July 10, 2020
Leq-1hr
Leq-15min

****

Filename LOC5
Test Location 5
Employee Name
Employee No.
Department
Seneca Meadows Inc.
2019 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
Calibrator type Metrosonics CL304 3067
Calibrator calibration date 4/17/2019

****

METROSONICS db-3080 V1.20 SERIAL #3996
Report printed on 7/12/2020 at 15:57:31

Seneca Meadows Inc.
2020 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
East Aurora, New York

Logging started at	7/6/2020 at 6:30:00
Total logging time	4 DAYS 11:30:05
Logging stopped at	7/10/2020 at 18:00:05
Total intervals	431
Interval length	0:15:00
Auto Stop	NO
Clock synch	YES
Response Rate	SLOW
Filter	A-WEIGHTED
Pre-Test Calibration Time	7/3/2020 at19:07:03
Pre-Test Calibration Range	39.1 to 139.1 dB
Post-Test Calibration Time	7/12/2020 at15:31:07
Post-Test Calibration Range	39.5 to 139.5 dB
Cut-off used for time history Lav	NONE

<<< SUMMARY REPORT FOR TEST NUMBER 1 OF 1 >>>

Exchange Rate	3dB	
Cutoffs	60dB	60dB
Ceiling	115dB	
DOSE Criterion level	90dB	
DOSE Criterion length	8 hours	
Lav(60)	59.5dB	
Lav(60)	59.3dB	
Lav(60)	59.3dB	
SEL	115.2dB	
TWA	70.8dB	
TWA(60)	70.6dB	
TWA(60)	70.6dB	
Lmax	98.1dB	7/8/2020 at 14:53:22
Lpk	129.6dB	7/8/2020 at 14:52:05
Time over 115 dB	00:00.0	
DOSE(60)	1.13%	
DOSE(60)	1.13%	

<<< TIME HISTORY REPORT FOR TEST NUMBER 1 OF 1 >>>

	START TIME	Leq(15-min) dBA	Lmax dBA	L(10.0) dBA	L(99.0) dBA	Leq(1-hr) dBA
7/6/2020						
	6:30:00	45.6	52.8	47.1	42.1	
	6:45:00	45.0	65.2	46.1	41.1	45.3
	7:00:00	43.4	48.2	44.1	41.1	
	7:15:00	43.8	49.1	45.1	41.1	
	7:30:00	44.3	58.0	45.1	40.1	
	7:45:00	43.2	49.2	45.1	40.1	43.7
	8:00:00	42.3	49.1	43.1	40.1	
	8:15:00	42.8	56.2	44.1	40.1	
	8:30:00	42.9	49.6	45.1	40.1	
	8:45:00	42.0	59.2	43.1	39.1	42.5
	9:00:00	44.1	59.5	45.1	39.1	
	9:15:00	41.7	49.6	43.1	39.1	
	9:30:00	45.2	62.7	46.1	39.1	
	9:45:00	47.6	68.3	46.1	39.1	45.2
	10:00:00	43.0	56.8	45.1	39.1	
	10:15:00	42.6	57.2	44.1	39.1	
	10:30:00	41.7	52.4	43.1	39.1	
	10:45:00	43.6	53.6	46.1	39.1	42.8
	11:00:00	42.5	58.1	44.1	39.1	
	11:15:00	45.9	64.8	44.1	39.1	
	11:30:00	42.3	59.6	43.1	39.1	
	11:45:00	43.9	63.2	45.1	39.1	43.9
	12:00:00	47.6	66.0	48.1	39.1	
	12:15:00	42.2	58.8	43.1	39.1	
	12:30:00	41.7	54.4	43.1	39.1	
	12:45:00	46.7	66.5	47.1	39.1	45.3
	13:00:00	52.3	72.0	55.1	39.1	
	13:15:00	45.6	60.4	46.1	39.1	
	13:30:00	50.8	69.2	53.1	39.1	
	13:45:00	44.4	68.4	44.1	39.1	49.5
	14:00:00	41.0	54.8	42.1	39.1	
	14:15:00	41.6	56.8	42.1	39.1	
	14:30:00	45.5	64.8	45.1	39.1	
	14:45:00	46.4	72.0	44.1	39.1	44.2
	15:00:00	44.4	59.2	46.1	39.1	
	15:15:00	40.9	47.3	42.1	39.1	
	15:30:00	41.4	51.7	42.1	39.1	
	15:45:00	40.8	48.8	42.1	39.1	42.2
	16:00:00	42.2	52.9	44.1	39.1	
	16:15:00	42.3	52.8	44.1	39.1	
	16:30:00	42.3	55.5	43.1	39.1	
	16:45:00	42.5	59.2	43.1	39.1	42.3
	17:00:00	41.6	48.4	43.1	39.1	
	17:15:00	42.0	52.0	44.1	39.1	
	17:30:00	41.8	55.2	42.1	39.1	
	17:45:00	41.9	54.4	43.1	39.1	41.8
	18:00:00	42.4	53.1	44.1	39.1	
	18:15:00	47.3	70.0	43.1	39.1	
	18:30:00	40.5	47.6	42.1	39.1	
	18:45:00	44.3	60.8	44.1	39.1	44.4
	19:00:00	42.2	52.4	44.1	39.1	
	19:15:00	41.7	57.9	43.1	39.1	
	19:30:00	44.3	64.4	44.1	39.1	
	19:45:00	44.1	63.2	44.1	39.1	43.2
	20:00:00	43.8	62.3	46.1	39.1	
	20:15:00	41.2	49.5	42.1	39.1	
	20:30:00	41.9	49.2	44.1	39.1	
	20:45:00	42.6	67.9	42.1	39.1	42.5
	21:00:00	41.7	52.8	43.1	39.1	
	21:15:00	41.7	50.6	43.1	39.1	
	21:30:00	42.3	50.0	44.1	39.1	
	21:45:00	40.9	48.4	42.1	39.1	41.7
	22:00:00	40.8	53.6	42.1	39.1	
	22:15:00	42.2	48.4	44.1	39.1	

	22:30:00	41.8	49.2	44.1	39.1	
	22:45:00	42.2	49.2	44.1	39.1	41.8
	23:00:00	42.2	49.2	44.1	39.1	
	23:15:00	42.0	49.6	44.1	39.1	
	23:30:00	40.5	49.3	41.1	39.1	
	23:45:00	40.4	49.2	41.1	39.1	41.4
7/7/2020	0:00:00	42.7	58.8	45.1	39.1	
	0:15:00	41.7	49.5	44.1	39.1	
	0:30:00	43.9	52.9	46.1	39.1	
	0:45:00	43.8	62.8	46.1	39.1	43.1
	1:00:00	41.9	49.2	44.1	39.1	
	1:15:00	45.0	52.5	48.1	39.1	
	1:30:00	45.0	53.0	47.1	40.1	
	1:45:00	44.8	61.1	47.1	39.1	44.4
	2:00:00	47.0	67.2	48.1	39.1	
	2:15:00	44.1	59.7	47.1	39.1	
	2:30:00	49.4	67.6	50.1	40.1	
	2:45:00	50.3	66.1	50.1	40.1	48.3
	3:00:00	44.4	52.4	47.1	39.1	
	3:15:00	45.6	51.8	48.1	39.1	
	3:30:00	46.3	63.3	49.1	39.1	
	3:45:00	45.2	53.2	48.1	39.1	45.4
	4:00:00	48.1	54.0	50.1	40.1	
	4:15:00	50.6	69.2	50.1	40.1	
	4:30:00	49.9	75.1	49.1	40.1	
	4:45:00	47.3	63.6	49.1	40.1	49.2
	5:00:00	50.7	72.0	50.1	40.1	
	5:15:00	47.4	63.6	50.1	41.1	
	5:30:00	47.2	64.9	48.1	40.1	
	5:45:00	44.2	56.0	46.1	40.1	48.0
	6:00:00	43.9	52.1	45.1	41.1	
	6:15:00	50.5	70.5	47.1	42.1	
	6:30:00	44.8	59.5	46.1	41.1	
	6:45:00	54.4	77.6	47.1	41.1	50.4
	7:00:00	55.2	77.6	56.1	42.1	
	7:15:00	52.3	69.9	53.1	41.1	
	7:30:00	46.5	66.8	46.1	41.1	
	7:45:00	48.2	72.0	46.1	41.1	51.8
	8:00:00	50.8	71.0	51.1	41.1	
	8:15:00	51.0	72.0	51.1	42.1	
	8:30:00	48.4	66.0	47.1	41.1	
	8:45:00	51.3	68.8	53.1	41.1	50.5
	9:00:00	48.5	71.6	46.1	42.1	
	9:15:00	52.2	73.2	51.1	41.1	
	9:30:00	50.0	68.6	50.1	41.1	
	9:45:00	50.0	69.2	52.1	41.1	50.4
	10:00:00	46.4	62.1	48.1	41.1	
	10:15:00	51.2	71.6	50.1	41.1	
	10:30:00	53.3	70.0	56.1	42.1	
	10:45:00	49.2	72.7	50.1	41.1	50.7
	11:00:00	50.7	69.7	52.1	41.1	
	11:15:00	51.6	70.4	54.1	41.1	
	11:30:00	52.0	72.8	50.1	41.1	
	11:45:00	48.3	68.8	47.1	41.1	50.9
	12:00:00	51.0	72.8	51.1	40.1	
	12:15:00	53.8	72.2	55.1	40.1	
	12:30:00	50.9	70.5	53.1	40.1	
	12:45:00	48.6	66.7	51.1	40.1	51.5
	13:00:00	51.4	73.2	51.1	39.1	
	13:15:00	52.0	69.2	56.1	40.1	
	13:30:00	52.4	71.6	55.1	39.1	
	13:45:00	51.8	73.6	54.1	40.1	51.9
	14:00:00	52.7	68.7	56.1	40.1	
	14:15:00	53.2	75.3	55.1	41.1	
	14:30:00	53.9	71.6	56.1	42.1	
	14:45:00	53.8	73.9	55.1	42.1	53.4
	15:00:00	52.8	71.2	52.1	41.1	
	15:15:00	57.6	83.3	57.1	42.1	
	15:30:00	51.1	69.2	52.1	42.1	

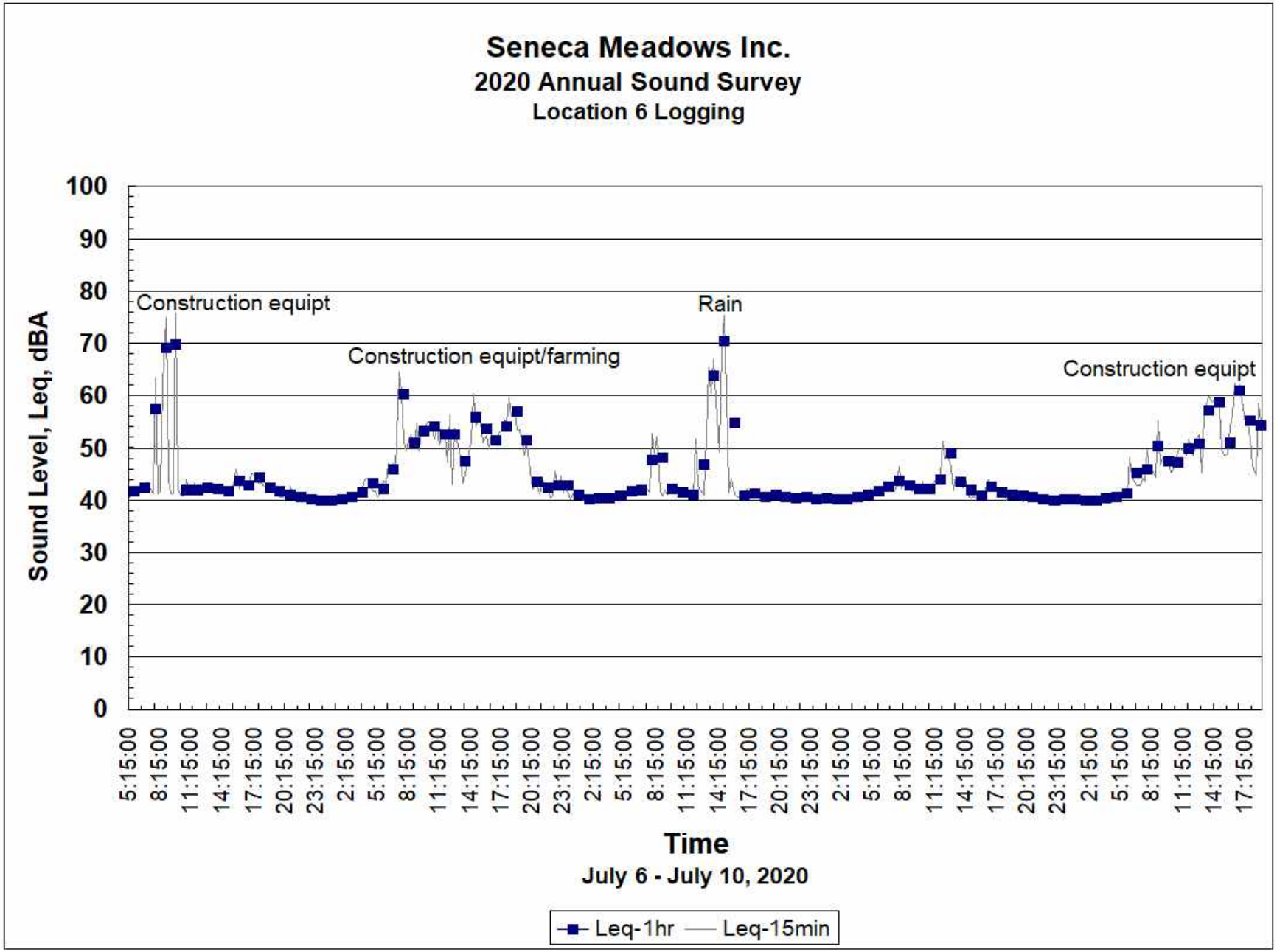
	15:45:00	45.9	66.8	46.1	41.1	53.7
	16:00:00	50.2	68.8	52.1	40.1	
	16:15:00	45.7	63.2	46.1	41.1	
	16:30:00	50.7	70.9	52.1	40.1	
	16:45:00	52.0	70.8	53.1	40.1	50.2
	17:00:00	46.2	64.8	48.1	40.1	
	17:15:00	54.2	78.8	54.1	40.1	
	17:30:00	50.2	66.8	54.1	40.1	
	17:45:00	52.1	71.2	52.1	39.1	51.6
	18:00:00	55.0	73.6	57.1	40.1	
	18:15:00	51.5	72.4	50.1	41.1	
	18:30:00	48.8	71.3	48.1	40.1	
	18:45:00	54.4	74.4	56.1	40.1	53.1
	19:00:00	47.8	67.2	49.1	40.1	
	19:15:00	54.4	81.0	52.1	40.1	
	19:30:00	52.7	72.8	53.1	40.1	
	19:45:00	51.7	72.2	50.1	40.1	52.2
	20:00:00	50.7	70.4	50.1	39.1	
	20:15:00	43.1	65.6	45.1	39.1	
	20:30:00	46.3	70.4	46.1	39.1	
	20:45:00	45.1	65.6	45.1	39.1	47.3
	21:00:00	41.9	51.2	44.1	39.1	
	21:15:00	49.0	72.0	44.1	39.1	
	21:30:00	47.2	68.4	45.1	39.1	
	21:45:00	40.7	51.6	42.1	39.1	46.0
	22:00:00	43.4	63.3	43.1	39.1	
	22:15:00	53.6	73.6	54.1	39.1	
	22:30:00	53.7	72.8	56.1	39.1	
	22:45:00	54.7	76.0	56.1	39.1	52.9
	23:00:00	49.6	72.4	49.1	39.1	
	23:15:00	52.7	71.6	55.1	39.1	
	23:30:00	52.3	70.6	52.1	39.1	
	23:45:00	45.1	62.6	45.1	39.1	50.8
7/8/2020	0:00:00	43.1	64.4	45.1	39.1	
	0:15:00	41.3	50.1	43.1	39.1	
	0:30:00	43.1	50.5	46.1	39.1	
	0:45:00	44.0	52.8	46.1	39.1	43.0
	1:00:00	44.5	51.6	47.1	39.1	
	1:15:00	44.6	51.6	47.1	39.1	
	1:30:00	45.1	52.4	48.1	39.1	
	1:45:00	45.0	51.6	47.1	39.1	44.8
	2:00:00	45.1	52.0	48.1	39.1	
	2:15:00	44.6	51.2	47.1	39.1	
	2:30:00	43.8	51.6	46.1	39.1	
	2:45:00	43.1	64.4	43.1	39.1	44.2
	3:00:00	47.5	67.2	48.1	39.1	
	3:15:00	47.8	61.8	50.1	40.1	
	3:30:00	49.4	66.2	50.1	40.1	
	3:45:00	48.7	63.2	50.1	40.1	48.4
	4:00:00	50.9	72.3	52.1	40.1	
	4:15:00	46.9	66.9	49.1	39.1	
	4:30:00	47.5	64.1	50.1	39.1	
	4:45:00	49.1	67.7	50.1	40.1	48.9
	5:00:00	48.5	62.8	50.1	42.1	
	5:15:00	47.5	64.4	50.1	40.1	
	5:30:00	43.9	52.0	46.1	40.1	
	5:45:00	46.6	66.6	47.1	40.1	46.9
	6:00:00	47.1	71.2	45.1	40.1	
	6:15:00	46.0	68.5	46.1	41.1	
	6:30:00	47.0	67.2	47.1	41.1	
	6:45:00	47.8	67.6	48.1	40.1	47.0
	7:00:00	50.5	69.6	51.1	40.1	
	7:15:00	44.2	60.0	44.1	40.1	
	7:30:00	47.8	69.2	48.1	40.1	
	7:45:00	45.7	64.8	47.1	40.1	47.7
	8:00:00	44.8	61.3	46.1	40.1	
	8:15:00	41.6	49.2	43.1	39.1	
	8:30:00	44.5	62.6	46.1	40.1	
	8:45:00	45.3	64.4	45.1	39.1	44.3

	9:00:00	44.1	62.9	44.1	39.1	
	9:15:00	48.0	68.8	47.1	39.1	
	9:30:00	44.4	64.0	45.1	39.1	
	9:45:00	44.7	65.0	42.1	39.1	45.6
	10:00:00	44.9	61.2	45.1	39.1	
	10:15:00	47.4	65.2	50.1	39.1	
	10:30:00	45.1	66.7	45.1	39.1	
	10:45:00	51.6	74.4	50.1	39.1	48.2
	11:00:00	46.2	70.8	44.1	39.1	
	11:15:00	48.7	66.5	51.1	39.1	
	11:30:00	47.9	67.1	49.1	39.1	
	11:45:00	47.4	67.1	49.1	39.1	47.6
	12:00:00	47.4	70.0	44.1	39.1	
	12:15:00	44.2	62.4	44.1	39.1	
	12:30:00	45.4	64.6	45.1	39.1	
	12:45:00	46.6	65.8	46.1	39.1	46.1
	13:00:00	55.0	73.5	58.1	39.1	
	13:15:00	68.7	89.5	70.1	41.1	
	13:30:00	60.5	90.0	44.1	39.1	
	13:45:00	64.3	87.8	62.1	40.1	64.6
	14:00:00	59.0	85.2	51.1	41.1	
	14:15:00	65.0	89.6	60.1	42.1	
	14:30:00	75.2	93.3	78.1	48.1	
	14:45:00	84.8	98.1	88.1	61.1	79.3
	15:00:00	63.0	85.3	63.1	42.1	
	15:15:00	43.6	59.6	44.1	40.1	
	15:30:00	43.8	66.8	44.1	40.1	
	15:45:00	42.5	51.6	44.1	40.1	57.1
	16:00:00	42.8	60.4	44.1	40.1	
	16:15:00	42.8	48.4	44.1	40.1	
	16:30:00	44.7	62.9	45.1	40.1	
	16:45:00	43.1	61.6	44.1	40.1	43.4
	17:00:00	43.7	57.2	45.1	40.1	
	17:15:00	49.0	71.2	47.1	39.1	
	17:30:00	43.4	62.0	44.1	39.1	
	17:45:00	43.1	60.4	44.1	39.1	45.6
	18:00:00	42.4	57.6	43.1	39.1	
	18:15:00	43.6	61.1	46.1	39.1	
	18:30:00	43.1	57.2	46.1	39.1	
	18:45:00	44.0	57.7	45.1	39.1	43.3
	19:00:00	41.7	53.2	43.1	39.1	
	19:15:00	41.9	49.5	43.1	39.1	
	19:30:00	43.0	60.4	44.1	39.1	
	19:45:00	41.6	54.4	42.1	39.1	42.1
	20:00:00	40.5	48.0	42.1	39.1	
	20:15:00	40.7	53.5	42.1	39.1	
	20:30:00	41.1	48.3	42.1	39.1	
	20:45:00	42.3	65.6	43.1	39.1	41.2
	21:00:00	41.4	51.3	43.1	39.1	
	21:15:00	41.0	48.4	42.1	39.1	
	21:30:00	40.4	46.4	42.1	39.1	
	21:45:00	40.5	47.2	42.1	39.1	40.8
	22:00:00	41.7	51.2	44.1	39.1	
	22:15:00	40.5	48.1	42.1	39.1	
	22:30:00	40.4	50.9	42.1	39.1	
	22:45:00	49.9	77.2	43.1	39.1	45.3
	23:00:00	42.2	64.2	42.1	39.1	
	23:15:00	41.0	49.8	43.1	39.1	
	23:30:00	40.3	47.2	42.1	39.1	
	23:45:00	40.4	47.6	42.1	39.1	41.0
7/9/2020	0:00:00	39.9	46.9	41.1	39.1	
	0:15:00	39.7	46.8	40.1	39.1	
	0:30:00	39.9	47.9	40.1	39.1	
	0:45:00	41.0	50.3	42.1	39.1	40.2
	1:00:00	40.1	48.5	41.1	39.1	
	1:15:00	40.9	54.8	42.1	39.1	
	1:30:00	40.8	49.6	42.1	39.1	
	1:45:00	41.8	50.0	44.1	39.1	40.9
	2:00:00	42.6	50.8	45.1	39.1	

2:15:00	43.0	52.7	45.1	39.1	
2:30:00	42.2	51.5	44.1	39.1	
2:45:00	42.1	52.0	44.1	39.1	42.5
3:00:00	39.8	46.4	40.1	39.1	
3:15:00	43.4	50.0	46.1	39.1	
3:30:00	43.9	59.2	46.1	39.1	
3:45:00	44.2	51.2	46.1	39.1	43.1
4:00:00	45.7	52.8	48.1	40.1	
4:15:00	45.2	52.4	48.1	39.1	
4:30:00	43.6	63.1	46.1	39.1	
4:45:00	42.8	50.4	44.1	40.1	44.5
5:00:00	44.4	51.2	47.1	40.1	
5:15:00	43.9	52.8	46.1	40.1	
5:30:00	45.7	67.6	44.1	40.1	
5:45:00	43.5	51.3	44.1	41.1	44.5
6:00:00	44.8	59.9	46.1	41.1	
6:15:00	44.7	53.5	47.1	41.1	
6:30:00	46.0	65.6	48.1	41.1	
6:45:00	47.8	68.0	48.1	42.1	46.0
7:00:00	46.8	70.8	46.1	41.1	
7:15:00	48.0	71.2	48.1	41.1	
7:30:00	45.1	61.2	46.1	41.1	
7:45:00	47.2	68.1	48.1	41.1	46.9
8:00:00	48.8	69.6	49.1	41.1	
8:15:00	50.3	72.4	48.1	40.1	
8:30:00	47.3	61.2	49.1	42.1	
8:45:00	44.5	58.4	47.1	40.1	48.2
9:00:00	43.2	50.6	45.1	40.1	
9:15:00	43.6	51.2	45.1	40.1	
9:30:00	45.6	63.2	47.1	41.1	
9:45:00	48.7	71.9	49.1	41.1	45.9
10:00:00	52.8	73.2	50.1	41.1	
10:15:00	49.7	73.6	48.1	41.1	
10:30:00	50.1	70.8	49.1	42.1	
10:45:00	46.9	64.0	47.1	41.1	50.4
11:00:00	51.5	72.8	50.1	41.1	
11:15:00	45.7	63.2	47.1	40.1	
11:30:00	52.4	73.2	53.1	40.1	
11:45:00	51.3	70.0	51.1	41.1	50.9
12:00:00	47.9	72.1	46.1	40.1	
12:15:00	50.5	70.8	50.1	41.1	
12:30:00	54.1	71.7	56.1	40.1	
12:45:00	47.1	64.9	48.1	40.1	50.8
13:00:00	52.6	73.9	53.1	40.1	
13:15:00	49.1	67.6	50.1	39.1	
13:30:00	48.5	67.2	48.1	39.1	
13:45:00	49.5	74.0	48.1	39.1	50.2
14:00:00	44.5	68.4	44.1	39.1	
14:15:00	47.7	69.5	48.1	39.1	
14:30:00	53.1	70.0	57.1	39.1	
14:45:00	47.2	68.0	48.1	39.1	49.3
15:00:00	43.6	63.4	45.1	39.1	
15:15:00	44.8	63.6	46.1	39.1	
15:30:00	47.4	66.0	48.1	39.1	
15:45:00	41.8	53.6	43.1	39.1	44.9
16:00:00	44.7	64.2	46.1	39.1	
16:15:00	44.2	64.0	45.1	39.1	
16:30:00	50.0	68.3	53.1	40.1	
16:45:00	48.4	71.4	47.1	39.1	47.5
17:00:00	44.2	60.0	45.1	39.1	
17:15:00	43.1	56.5	44.1	39.1	
17:30:00	42.3	63.6	43.1	39.1	
17:45:00	43.7	60.4	46.1	39.1	43.4
18:00:00	42.8	59.6	44.1	39.1	
18:15:00	42.9	55.6	46.1	39.1	
18:30:00	40.9	52.0	43.1	39.1	
18:45:00	47.2	67.2	44.1	39.1	44.1
19:00:00	43.5	57.5	46.1	39.1	
19:15:00	40.5	46.8	43.1	39.1	

	19:30:00	40.6	47.3	42.1	39.1	
	19:45:00	40.8	49.2	42.1	39.1	41.5
	20:00:00	40.4	52.7	42.1	39.1	
	20:15:00	41.1	51.2	43.1	39.1	
	20:30:00	40.5	49.6	42.1	39.1	
	20:45:00	41.6	48.0	44.1	39.1	40.9
	21:00:00	40.1	48.0	41.1	39.1	
	21:15:00	39.8	44.0	41.1	39.1	
	21:30:00	39.9	45.6	41.1	39.1	
	21:45:00	40.8	52.0	42.1	39.1	40.2
	22:00:00	39.7	46.4	40.1	39.1	
	22:15:00	40.0	47.0	41.1	39.1	
	22:30:00	39.7	47.1	40.1	39.1	
	22:45:00	40.0	50.0	41.1	39.1	39.9
	23:00:00	40.0	46.4	41.1	39.1	
	23:15:00	39.5	45.6	40.1	39.1	
	23:30:00	40.4	50.4	42.1	39.1	
	23:45:00	39.8	47.1	40.1	39.1	39.9
7/10/2020	0:00:00	39.3	45.6	40.1	39.1	
	0:15:00	39.5	47.2	40.1	39.1	
	0:30:00	39.9	48.4	40.1	39.1	
	0:45:00	39.7	48.4	40.1	39.1	39.6
	1:00:00	41.1	50.3	43.1	39.1	
	1:15:00	40.5	48.0	42.1	39.1	
	1:30:00	39.8	48.4	40.1	39.1	
	1:45:00	40.3	50.4	41.1	39.1	40.5
	2:00:00	40.1	48.0	41.1	39.1	
	2:15:00	40.0	58.6	40.1	39.1	
	2:30:00	39.6	46.9	40.1	39.1	
	2:45:00	39.5	46.4	40.1	39.1	39.8
	3:00:00	39.8	46.4	41.1	39.1	
	3:15:00	39.2	42.4	39.1	39.1	
	3:30:00	40.1	46.0	41.1	39.1	
	3:45:00	40.4	55.2	42.1	39.1	39.9
	4:00:00	39.7	45.2	40.1	39.1	
	4:15:00	40.2	46.0	42.1	39.1	
	4:30:00	41.0	51.6	43.1	39.1	
	4:45:00	41.3	49.2	43.1	39.1	40.6
	5:00:00	42.9	51.2	45.1	39.1	
	5:15:00	42.7	58.4	44.1	39.1	
	5:30:00	41.9	50.4	43.1	39.1	
	5:45:00	42.7	54.4	44.1	40.1	42.6
	6:00:00	44.1	54.8	46.1	40.1	
	6:15:00	45.0	60.0	46.1	40.1	
	6:30:00	47.3	68.4	46.1	41.1	
	6:45:00	43.2	52.2	44.1	41.1	45.2
	7:00:00	43.2	52.3	44.1	41.1	
	7:15:00	51.6	77.1	49.1	40.1	
	7:30:00	43.7	61.6	44.1	40.1	
	7:45:00	48.8	67.2	49.1	40.1	48.2
	8:00:00	49.7	70.1	51.1	40.1	
	8:15:00	47.9	69.7	48.1	40.1	
	8:30:00	42.8	55.4	44.1	40.1	
	8:45:00	47.5	69.0	46.1	40.1	47.6
	9:00:00	49.8	69.5	50.1	40.1	
	9:15:00	47.0	65.2	48.1	40.1	
	9:30:00	49.6	69.3	51.1	39.1	
	9:45:00	46.7	66.0	49.1	40.1	48.5
	10:00:00	44.2	62.4	46.1	40.1	
	10:15:00	47.2	66.7	47.1	40.1	
	10:30:00	48.1	67.2	48.1	40.1	
	10:45:00	49.5	69.6	48.1	40.1	47.6
	11:00:00	54.4	74.9	53.1	40.1	
	11:15:00	53.4	76.0	54.1	41.1	
	11:30:00	52.0	72.9	51.1	40.1	
	11:45:00	51.2	68.3	52.1	41.1	52.9
	12:00:00	53.6	75.6	54.1	41.1	
	12:15:00	48.8	70.8	48.1	41.1	
	12:30:00	51.1	69.7	52.1	42.1	

12:45:00	51.1	72.0	51.1	40.1	51.5
13:00:00	47.8	68.4	48.1	41.1	
13:15:00	50.5	69.6	50.1	41.1	
13:30:00	48.7	71.8	47.1	41.1	
13:45:00	48.1	66.5	48.1	40.1	48.9
14:00:00	48.1	73.2	48.1	40.1	
14:15:00	45.7	69.6	44.1	40.1	
14:30:00	53.4	73.6	51.1	40.1	
14:45:00	45.1	65.6	46.1	40.1	49.5
15:00:00	50.5	71.2	49.1	40.1	
15:15:00	50.1	74.8	48.1	41.1	
15:30:00	46.4	65.2	47.1	41.1	
15:45:00	47.8	66.4	48.1	41.1	49.0
16:00:00	54.5	77.2	55.1	42.1	
16:15:00	56.0	77.2	59.1	45.1	
16:30:00	53.7	72.5	54.1	45.1	
16:45:00	54.3	74.9	55.1	45.1	54.7
17:00:00	52.9	70.4	54.1	44.1	
17:15:00	53.7	74.3	55.1	44.1	
17:30:00	54.9	79.2	54.1	43.1	
17:45:00	58.0	81.4	54.1	39.1	55.3
18:00:00	43.0	45.4	45.1	39.1	43.0


Seneca Meadows Inc.
2020 Annual Sound Survey
Location 6 Logging
Sound Level, Leq, dBA
100
90
80
70
60
50
40
30
20
10
0
Construction equipt
Construction equipt/farming
Rain
Construction equipt
5:15:00
8:15:00
11:15:00
14:15:00
17:15:00
20:15:00
23:15:00
2:15:00
Time
July 6 - July 10, 2020
Leq-1hr
Leq-15min

****

Filename LOC6
Test Location 6
Employee Name
Employee No.
Department
Seneca Meadows Inc.
2019 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
Calibrator type Metrosonics CL304 3067
Calibrator calibration date 4/17/2019

****

METROSONICS db-3080 V1.20 SERIAL #4036
Report printed on 8/6/2019 at 15:31:20

Seneca Meadows Inc.
2020 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
East Aurora, New York

Logging started at	7/6/2020 at 5:15:00
Total logging time	4 DAYS 13:30:18
Logging stopped at	7/10/2020 at 18:45:18
Total intervals	439
Interval length	0:15:00
Auto Stop	NO
Clock synch	YES
Response Rate	SLOW
Filter	A-WEIGHTED
Pre-Test Calibration Time	7/3/2020 at 18:52:35
Pre-Test Calibration Range	32.5 to 132.5 dB
Post-Test Calibration Time	7/12/2020 at 15:31:36
Post-Test Calibration Range	32.7 to 132.7 dB
Cut-off used for time history Lav	NONE

<<< SUMMARY REPORT FOR TEST NUMBER 1 OF 1 >>>

Exchange Rate	3dB	
Cutoffs	60dB	60dB
Ceiling	115dB	
DOSE Criterion level	90dB	
DOSE Criterion length	8 hours	
Lav(60)	55.8dB	
Lav(60)	55.4dB	
Lav(60)	55.4dB	
SEL	111.6dB	
TWA	67.1dB	
TWA(60)	66.7dB	
TWA(60)	66.7dB	
Lmax	93.8dB	7/8/2020 at 14:55:18
Lpk	116.1dB	7/8/2020 at 14:55:18
Time over 115 dB	00:00.0	
DOSE(60)	0.46%	
DOSE(60)	0.46%	

<<< TIME HISTORY REPORT FOR TEST NUMBER 1 OF 1 >>>

	START TIME	Leq(15-min) dBA	Lmax dBA	L(10.0) dBA	L(99.0) dBA	Leq(1-hr) dBA
7/6/2020						
	5:15:00	40.6	47.2	41.5	40.5	
	5:30:00	42.1	56.6	42.5	40.5	
	5:45:00	42.0	51.4	43.5	40.5	41.6
	6:00:00	41.9	51.8	43.5	40.5	
	6:15:00	42.1	54.9	43.5	40.5	
	6:30:00	42.5	51.4	44.5	40.5	
	6:45:00	42.7	59.8	44.5	40.5	42.3
	7:00:00	43.5	53.4	46.5	40.5	
	7:15:00	41.8	52.6	43.5	40.5	
	7:30:00	41.2	50.4	41.5	40.5	
	7:45:00	63.4	77.5	65.5	40.5	57.5
	8:00:00	41.2	50.9	42.5	40.5	
	8:15:00	41.6	47.4	43.5	40.5	
	8:30:00	62.4	77.3	65.5	40.5	
	8:45:00	74.9	93.4	67.5	40.5	69.1
	9:00:00	43.6	57.7	43.5	40.5	
	9:15:00	41.2	48.6	42.5	40.5	
	9:30:00	41.3	49.4	42.5	40.5	
	9:45:00	75.8	93.4	66.5	40.5	69.8
	10:00:00	41.8	56.1	42.5	40.5	
	10:15:00	40.7	52.4	41.5	40.5	
	10:30:00	40.9	48.5	41.5	39.5	
	10:45:00	43.8	60.5	46.5	39.5	42.0
	11:00:00	41.8	53.8	41.5	39.5	
	11:15:00	41.3	61.0	41.5	39.5	
	11:30:00	43.2	55.5	45.5	39.5	
	11:45:00	41.0	50.2	42.5	39.5	41.9
	12:00:00	43.1	55.9	45.5	39.5	
	12:15:00	41.1	56.6	41.5	39.5	
	12:30:00	42.1	54.6	43.5	40.5	
	12:45:00	43.0	57.3	43.5	39.5	42.4
	13:00:00	42.0	55.1	43.5	39.5	
	13:15:00	42.6	59.9	43.5	39.5	
	13:30:00	42.4	49.8	43.5	40.5	
	13:45:00	41.9	52.6	43.5	39.5	42.2
	14:00:00	41.3	47.8	42.5	40.5	
	14:15:00	41.6	49.8	43.5	39.5	
	14:30:00	41.7	49.0	43.5	40.5	
	14:45:00	41.7	49.8	43.5	39.5	41.6
	15:00:00	42.6	51.4	44.5	40.5	
	15:15:00	42.7	59.8	44.5	40.5	
	15:30:00	45.9	59.4	48.5	40.5	
	15:45:00	42.1	52.2	43.5	40.5	43.6
	16:00:00	44.1	57.8	45.5	39.5	
	16:15:00	41.9	53.5	43.5	39.5	
	16:30:00	42.4	51.2	44.5	39.5	
	16:45:00	42.8	53.4	44.5	40.5	42.9
	17:00:00	45.1	57.8	47.5	40.5	
	17:15:00	44.9	58.2	47.5	40.5	
	17:30:00	43.7	54.6	46.5	40.5	
	17:45:00	43.1	57.4	45.5	39.5	44.3
	18:00:00	43.3	53.5	45.5	40.5	
	18:15:00	42.6	55.0	44.5	40.5	
	18:30:00	41.6	48.8	43.5	39.5	
	18:45:00	42.0	49.7	44.5	39.5	42.4
	19:00:00	41.9	56.1	43.5	39.5	
	19:15:00	42.9	56.6	43.5	39.5	
	19:30:00	41.2	47.8	43.5	39.5	
	19:45:00	40.6	47.0	41.5	39.5	41.7
	20:00:00	40.6	47.4	42.5	39.5	
	20:15:00	40.1	48.7	40.5	39.5	
	20:30:00	40.2	47.3	40.5	39.5	
	20:45:00	42.5	60.0	41.5	39.5	41.0
	21:00:00	41.5	53.4	41.5	39.5	

	21:15:00	40.4	51.9	41.5	39.5	
	21:30:00	40.2	48.2	40.5	39.5	
	21:45:00	40.2	45.4	40.5	39.5	40.6
	22:00:00	40.1	45.4	40.5	39.5	
	22:15:00	40.2	53.0	40.5	39.5	
	22:30:00	40.1	46.6	40.5	39.5	
	22:45:00	40.2	43.4	40.5	39.5	40.2
	23:00:00	40.0	42.2	40.5	39.5	
	23:15:00	39.9	41.1	40.5	39.5	
	23:30:00	39.9	40.6	40.5	39.5	
	23:45:00	39.9	41.8	40.5	39.5	39.9
7/7/2020	0:00:00	39.9	41.8	40.5	39.5	
	0:15:00	39.9	41.0	40.5	39.5	
	0:30:00	39.9	41.8	40.5	39.5	
	0:45:00	39.9	40.7	40.5	39.5	39.9
	1:00:00	39.9	41.8	40.5	39.5	
	1:15:00	40.1	44.5	40.5	39.5	
	1:30:00	40.1	43.0	40.5	39.5	
	1:45:00	40.1	49.7	40.5	39.5	40.1
	2:00:00	40.9	49.8	41.5	39.5	
	2:15:00	40.5	52.0	40.5	39.5	
	2:30:00	40.3	44.6	40.5	39.5	
	2:45:00	40.4	48.2	40.5	39.5	40.5
	3:00:00	41.2	51.0	42.5	39.5	
	3:15:00	41.2	53.7	41.5	39.5	
	3:30:00	40.7	49.4	41.5	39.5	
	3:45:00	42.3	53.8	44.5	40.5	41.4
	4:00:00	43.8	57.9	45.5	40.5	
	4:15:00	44.2	55.4	46.5	40.5	
	4:30:00	43.1	60.0	44.5	40.5	
	4:45:00	41.6	54.5	42.5	40.5	43.3
	5:00:00	41.6	61.2	42.5	40.5	
	5:15:00	40.5	46.5	40.5	40.5	
	5:30:00	42.2	57.2	43.5	40.5	
	5:45:00	43.7	56.6	46.5	40.5	42.2
	6:00:00	43.3	55.3	45.5	40.5	
	6:15:00	47.0	59.3	50.5	40.5	
	6:30:00	45.4	58.0	49.5	40.5	
	6:45:00	46.9	62.2	48.5	40.5	45.9
	7:00:00	45.5	58.1	48.5	40.5	
	7:15:00	64.6	82.2	61.5	40.5	
	7:30:00	60.9	75.0	63.5	40.5	
	7:45:00	50.9	63.8	55.5	41.5	60.3
	8:00:00	49.4	63.4	52.5	41.5	
	8:15:00	51.5	62.1	56.5	40.5	
	8:30:00	52.6	69.4	57.5	40.5	
	8:45:00	50.2	61.7	54.5	41.5	51.1
	9:00:00	54.8	68.9	58.5	41.5	
	9:15:00	49.5	62.9	53.5	40.5	
	9:30:00	54.0	77.5	55.5	41.5	
	9:45:00	53.0	66.2	56.5	41.5	53.2
	10:00:00	54.9	67.4	58.5	41.5	
	10:15:00	54.9	67.8	59.5	41.5	
	10:30:00	54.4	65.7	58.5	41.5	
	10:45:00	51.7	65.5	56.5	40.5	54.2
	11:00:00	53.9	65.4	58.5	41.5	
	11:15:00	50.6	64.8	55.5	40.5	
	11:30:00	52.7	66.6	55.5	40.5	
	11:45:00	52.3	67.8	56.5	40.5	52.5
	12:00:00	47.3	60.6	51.5	40.5	
	12:15:00	56.3	74.1	58.5	40.5	
	12:30:00	43.0	57.9	44.5	40.5	
	12:45:00	53.6	75.3	48.5	40.5	52.6
	13:00:00	50.4	72.3	46.5	40.5	
	13:15:00	48.1	65.7	50.5	39.5	
	13:30:00	43.2	57.9	45.5	39.5	
	13:45:00	44.8	58.2	47.5	40.5	47.5
	14:00:00	47.6	60.8	51.5	40.5	
	14:15:00	51.2	67.4	54.5	40.5	

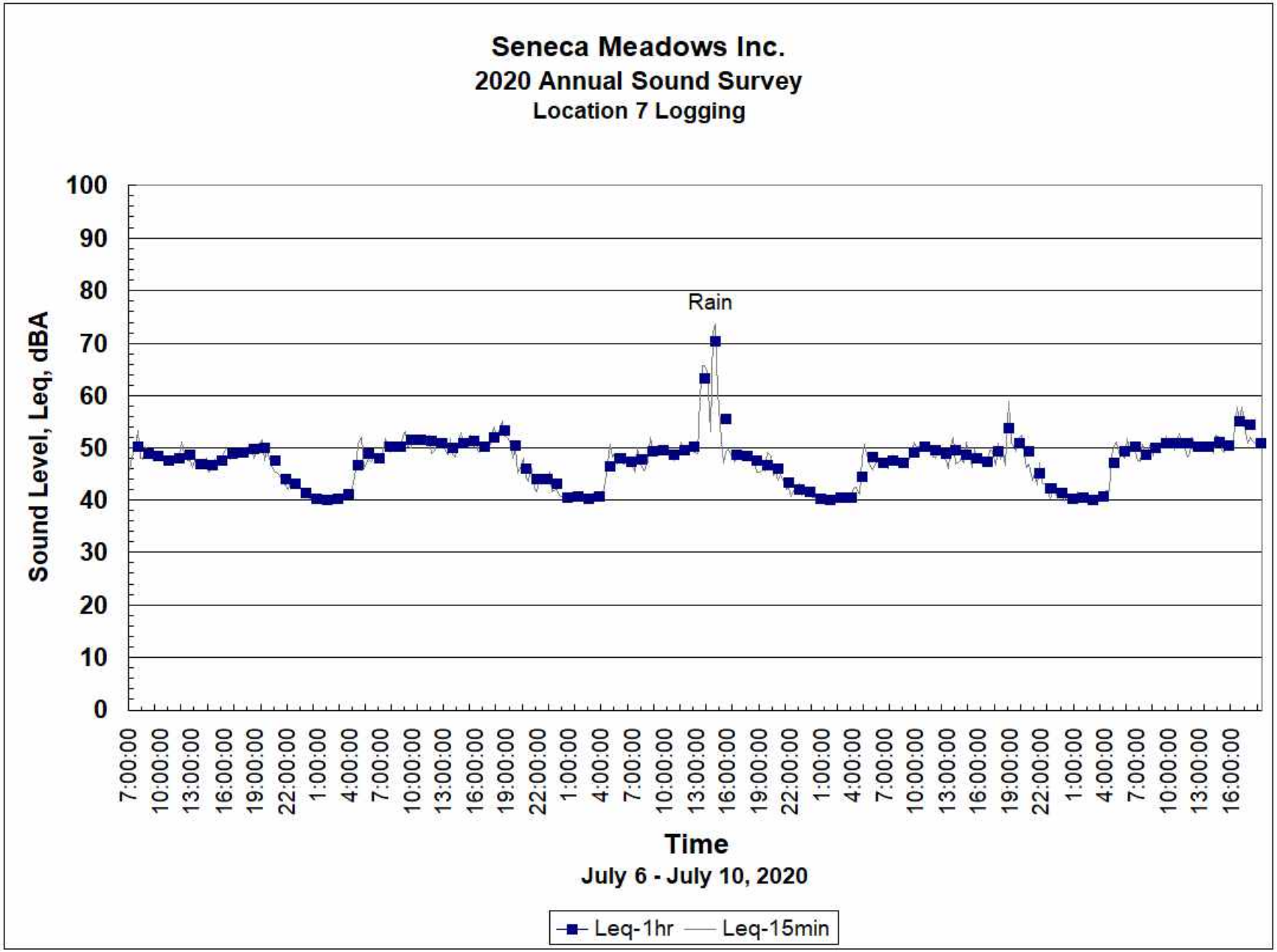
	14:30:00	60.3	79.8	61.5	42.5	
	14:45:00	54.1	67.6	58.5	41.5	55.8
	15:00:00	55.3	67.9	59.5	41.5	
	15:15:00	54.9	68.8	59.5	41.5	
	15:30:00	51.1	65.7	55.5	41.5	
	15:45:00	52.3	66.6	56.5	40.5	53.7
	16:00:00	50.0	61.8	54.5	40.5	
	16:15:00	52.6	67.4	55.5	40.5	
	16:30:00	51.5	64.6	55.5	40.5	
	16:45:00	50.9	64.7	55.5	40.5	51.4
	17:00:00	52.7	64.9	56.5	40.5	
	17:15:00	53.5	69.0	57.5	40.5	
	17:30:00	55.4	70.1	58.5	40.5	
	17:45:00	54.7	68.0	58.5	41.5	54.2
	18:00:00	59.6	73.0	64.5	40.5	
	18:15:00	56.2	71.4	60.5	41.5	
	18:30:00	56.5	70.2	61.5	41.5	
	18:45:00	53.5	68.7	57.5	40.5	57.0
	19:00:00	53.4	66.6	57.5	40.5	
	19:15:00	51.4	64.2	55.5	40.5	
	19:30:00	48.6	61.8	52.5	40.5	
	19:45:00	50.9	65.8	53.5	40.5	51.4
	20:00:00	45.4	54.4	48.5	40.5	
	20:15:00	42.2	61.7	43.5	39.5	
	20:30:00	42.6	56.1	43.5	39.5	
	20:45:00	42.5	61.7	43.5	39.5	43.4
	21:00:00	41.2	52.2	42.5	39.5	
	21:15:00	43.6	58.8	43.5	39.5	
	21:30:00	42.1	60.6	41.5	39.5	
	21:45:00	42.3	58.2	41.5	39.5	42.4
	22:00:00	40.3	48.6	40.5	39.5	
	22:15:00	40.7	47.5	41.5	39.5	
	22:30:00	45.5	60.3	44.5	39.5	
	22:45:00	42.2	56.6	43.5	40.5	42.7
	23:00:00	44.6	62.7	43.5	39.5	
	23:15:00	41.5	61.0	41.5	39.5	
	23:30:00	42.4	54.6	44.5	39.5	
	23:45:00	41.5	56.2	41.5	39.5	42.7
7/8/2020	0:00:00	40.1	47.4	40.5	39.5	
	0:15:00	41.4	53.1	42.5	39.5	
	0:30:00	41.5	52.9	42.5	39.5	
	0:45:00	40.6	50.2	41.5	39.5	40.9
	1:00:00	40.3	44.3	40.5	39.5	
	1:15:00	40.0	42.2	40.5	39.5	
	1:30:00	40.1	44.2	40.5	39.5	
	1:45:00	40.3	44.2	40.5	39.5	40.2
	2:00:00	40.4	44.9	40.5	39.5	
	2:15:00	40.3	44.2	40.5	39.5	
	2:30:00	40.2	41.4	40.5	39.5	
	2:45:00	40.2	41.5	40.5	40.5	40.3
	3:00:00	40.3	41.4	40.5	40.5	
	3:15:00	40.3	42.2	40.5	40.5	
	3:30:00	40.4	45.8	40.5	40.5	
	3:45:00	40.3	44.0	40.5	40.5	40.3
	4:00:00	40.4	44.4	40.5	40.5	
	4:15:00	40.9	49.8	41.5	40.5	
	4:30:00	40.8	41.9	41.5	40.5	
	4:45:00	41.0	44.5	41.5	40.5	40.8
	5:00:00	41.7	54.3	41.5	40.5	
	5:15:00	41.1	46.2	42.5	40.5	
	5:30:00	42.6	55.0	43.5	40.5	
	5:45:00	41.5	47.0	42.5	40.5	41.8
	6:00:00	41.7	56.5	42.5	40.5	
	6:15:00	41.7	46.6	42.5	40.5	
	6:30:00	42.4	49.7	43.5	40.5	
	6:45:00	41.7	52.6	42.5	40.5	41.9
	7:00:00	41.9	47.7	43.5	40.5	
	7:15:00	42.2	52.6	43.5	40.5	
	7:30:00	41.5	53.0	41.5	40.5	

	7:45:00	52.7	71.4	49.5	40.5	47.6
	8:00:00	48.9	68.2	48.5	40.5	
	8:15:00	52.0	71.0	53.5	40.5	
	8:30:00	41.7	51.0	43.5	40.5	
	8:45:00	40.9	57.4	41.5	40.5	48.2
	9:00:00	41.9	53.4	43.5	40.5	
	9:15:00	41.1	52.5	41.5	40.5	
	9:30:00	42.7	53.8	44.5	39.5	
	9:45:00	42.4	57.3	42.5	39.5	42.1
	10:00:00	41.7	50.4	43.5	39.5	
	10:15:00	41.3	47.8	42.5	39.5	
	10:30:00	41.3	49.3	42.5	39.5	
	10:45:00	41.4	50.5	43.5	39.5	41.4
	11:00:00	41.6	56.1	42.5	40.5	
	11:15:00	41.2	52.2	42.5	39.5	
	11:30:00	41.0	58.6	41.5	39.5	
	11:45:00	40.1	41.8	40.5	39.5	41.0
	12:00:00	51.6	71.4	47.5	39.5	
	12:15:00	42.8	50.3	46.5	39.5	
	12:30:00	41.9	48.7	44.5	39.5	
	12:45:00	41.1	54.2	41.5	39.5	46.8
	13:00:00	52.4	71.3	51.5	39.5	
	13:15:00	65.4	85.9	67.5	42.5	
	13:30:00	60.6	81.5	62.5	40.5	
	13:45:00	66.9	84.7	71.5	41.5	63.8
	14:00:00	59.3	84.9	58.5	40.5	
	14:15:00	49.3	72.2	50.5	41.5	
	14:30:00	69.8	85.8	73.5	46.5	
	14:45:00	75.4	93.8	79.5	44.5	70.5
	15:00:00	60.5	89.2	47.5	40.5	
	15:15:00	41.5	53.4	42.5	40.5	
	15:30:00	44.1	70.2	41.5	40.5	
	15:45:00	41.0	44.2	41.5	40.5	54.7
	16:00:00	40.6	46.4	41.5	40.5	
	16:15:00	40.4	45.0	40.5	40.5	
	16:30:00	40.9	48.4	41.5	40.5	
	16:45:00	41.2	49.8	41.5	40.5	40.8
	17:00:00	42.2	51.8	43.5	40.5	
	17:15:00	41.1	49.4	42.5	40.5	
	17:30:00	40.6	48.2	41.5	39.5	
	17:45:00	40.4	49.4	40.5	39.5	41.1
	18:00:00	40.8	51.6	40.5	39.5	
	18:15:00	40.2	46.9	40.5	39.5	
	18:30:00	40.5	45.2	41.5	39.5	
	18:45:00	40.5	49.9	41.5	39.5	40.5
	19:00:00	40.1	50.2	40.5	39.5	
	19:15:00	40.3	50.6	40.5	39.5	
	19:30:00	41.3	49.4	43.5	39.5	
	19:45:00	42.0	53.7	43.5	40.5	41.0
	20:00:00	40.8	50.4	41.5	39.5	
	20:15:00	40.3	48.7	40.5	39.5	
	20:30:00	40.4	46.6	40.5	39.5	
	20:45:00	41.1	59.4	40.5	40.5	40.7
	21:00:00	40.6	46.1	41.5	40.5	
	21:15:00	40.2	41.9	40.5	39.5	
	21:30:00	40.4	57.2	40.5	39.5	
	21:45:00	40.4	42.0	40.5	40.5	40.4
	22:00:00	40.4	44.5	40.5	40.5	
	22:15:00	40.5	54.6	40.5	40.5	
	22:30:00	40.8	51.8	41.5	40.5	
	22:45:00	40.3	51.3	40.5	39.5	40.5
	23:00:00	40.1	45.2	40.5	39.5	
	23:15:00	40.1	41.8	40.5	39.5	
	23:30:00	40.3	43.8	40.5	40.5	
	23:45:00	40.2	43.6	40.5	40.5	40.2
7/9/2020	0:00:00	40.1	41.4	40.5	40.5	
	0:15:00	41.1	62.8	40.5	39.5	
	0:30:00	40.3	51.1	40.5	39.5	
	0:45:00	40.1	45.5	40.5	39.5	40.4

1:00:00	40.1	42.9	40.5	39.5	
1:15:00	40.4	55.8	40.5	40.5	
1:30:00	40.0	40.5	40.5	39.5	
1:45:00	40.0	47.5	40.5	39.5	40.1
2:00:00	40.0	45.8	40.5	39.5	
2:15:00	40.1	45.0	40.5	39.5	
2:30:00	40.3	42.5	40.5	40.5	
2:45:00	40.2	43.3	40.5	40.5	40.2
3:00:00	40.2	44.2	40.5	39.5	
3:15:00	40.3	52.7	40.5	39.5	
3:30:00	40.6	50.6	41.5	40.5	
3:45:00	41.4	60.9	41.5	40.5	40.7
4:00:00	40.6	43.0	41.5	40.5	
4:15:00	41.0	49.0	41.5	40.5	
4:30:00	41.0	49.8	41.5	40.5	
4:45:00	41.6	55.5	41.5	40.5	41.1
5:00:00	42.1	51.9	43.5	40.5	
5:15:00	41.5	55.8	41.5	40.5	
5:30:00	42.1	50.4	43.5	40.5	
5:45:00	41.2	50.2	41.5	40.5	41.7
6:00:00	41.5	46.5	42.5	40.5	
6:15:00	42.4	49.2	44.5	40.5	
6:30:00	42.4	50.0	44.5	40.5	
6:45:00	43.5	54.6	45.5	40.5	42.5
7:00:00	42.4	53.8	43.5	40.5	
7:15:00	41.6	48.9	42.5	40.5	
7:30:00	42.7	55.4	42.5	40.5	
7:45:00	46.3	67.8	45.5	40.5	43.7
8:00:00	42.1	48.2	43.5	40.5	
8:15:00	43.4	53.8	45.5	40.5	
8:30:00	42.8	51.1	45.5	40.5	
8:45:00	42.4	51.8	44.5	40.5	42.7
9:00:00	41.6	51.9	43.5	40.5	
9:15:00	42.7	57.0	43.5	39.5	
9:30:00	42.3	55.3	43.5	39.5	
9:45:00	41.4	49.7	42.5	39.5	42.0
10:00:00	43.4	62.3	46.5	40.5	
10:15:00	41.6	50.2	43.5	39.5	
10:30:00	42.2	51.0	44.5	40.5	
10:45:00	41.2	48.7	42.5	39.5	42.2
11:00:00	42.8	54.3	45.5	39.5	
11:15:00	43.8	62.4	46.5	39.5	
11:30:00	44.0	56.0	46.5	39.5	
11:45:00	44.6	59.2	47.5	39.5	43.8
12:00:00	51.3	66.9	53.5	40.5	
12:15:00	47.9	62.8	51.5	40.5	
12:30:00	49.1	62.2	53.5	39.5	
12:45:00	46.1	57.8	49.5	39.5	49.0
13:00:00	41.9	55.4	44.5	39.5	
13:15:00	44.6	55.8	47.5	39.5	
13:30:00	43.9	54.5	46.5	39.5	
13:45:00	42.8	57.0	43.5	39.5	43.4
14:00:00	42.3	54.3	45.5	39.5	
14:15:00	43.6	57.5	46.5	39.5	
14:30:00	40.5	51.4	41.5	39.5	
14:45:00	40.4	49.8	40.5	39.5	41.9
15:00:00	40.5	48.6	40.5	39.5	
15:15:00	40.4	52.1	40.5	39.5	
15:30:00	40.9	49.7	42.5	39.5	
15:45:00	41.1	50.7	42.5	39.5	40.7
16:00:00	40.4	51.0	40.5	39.5	
16:15:00	43.1	55.3	46.5	39.5	
16:30:00	44.0	60.6	45.5	39.5	
16:45:00	41.7	51.4	43.5	39.5	42.5
17:00:00	41.7	53.4	43.5	39.5	
17:15:00	41.8	56.5	41.5	39.5	
17:30:00	41.3	54.1	42.5	39.5	
17:45:00	41.3	51.0	43.5	39.5	41.5
18:00:00	41.3	52.2	43.5	39.5	

	18:15:00	40.0	51.3	40.5	39.5	
	18:30:00	40.7	55.8	40.5	39.5	
	18:45:00	41.5	52.6	43.5	39.5	40.9
	19:00:00	41.1	50.6	42.5	39.5	
	19:15:00	41.8	55.4	43.5	39.5	
	19:30:00	40.6	47.7	41.5	39.5	
	19:45:00	39.8	43.6	40.5	39.5	40.9
	20:00:00	40.1	55.5	40.5	39.5	
	20:15:00	39.9	43.8	40.5	39.5	
	20:30:00	40.7	61.8	40.5	39.5	
	20:45:00	41.5	64.6	40.5	39.5	40.6
	21:00:00	40.3	55.0	40.5	39.5	
	21:15:00	39.9	42.8	40.5	39.5	
	21:30:00	40.6	53.8	41.5	39.5	
	21:45:00	40.0	42.7	40.5	39.5	40.2
	22:00:00	40.0	43.3	40.5	39.5	
	22:15:00	40.0	43.7	40.5	39.5	
	22:30:00	40.0	45.8	40.5	39.5	
	22:45:00	40.0	41.0	40.5	39.5	40.0
	23:00:00	40.2	42.6	40.5	39.5	
	23:15:00	40.0	41.8	40.5	39.5	
	23:30:00	40.0	44.6	40.5	39.5	
	23:45:00	39.9	40.6	40.5	39.5	40.0
7/10/2020	0:00:00	40.3	55.7	40.5	39.5	
	0:15:00	40.0	40.8	40.5	39.5	
	0:30:00	39.9	42.6	40.5	39.5	
	0:45:00	40.0	41.6	40.5	39.5	40.1
	1:00:00	39.8	41.9	39.5	39.5	
	1:15:00	40.0	43.3	40.5	39.5	
	1:30:00	39.9	41.0	40.5	39.5	
	1:45:00	39.9	40.9	40.5	39.5	39.9
	2:00:00	40.0	41.0	40.5	39.5	
	2:15:00	40.1	41.4	40.5	39.5	
	2:30:00	40.0	41.2	40.5	39.5	
	2:45:00	39.9	40.2	40.5	39.5	40.0
	3:00:00	40.1	41.2	40.5	39.5	
	3:15:00	40.4	47.8	40.5	39.5	
	3:30:00	40.5	49.2	40.5	39.5	
	3:45:00	40.3	43.2	40.5	39.5	40.3
	4:00:00	40.4	48.4	40.5	39.5	
	4:15:00	40.3	43.0	40.5	39.5	
	4:30:00	40.4	44.6	40.5	40.5	
	4:45:00	41.2	48.6	42.5	40.5	40.6
	5:00:00	41.5	55.4	43.5	40.5	
	5:15:00	41.1	54.9	41.5	40.5	
	5:30:00	40.7	46.6	41.5	40.5	
	5:45:00	41.3	51.5	42.5	40.5	41.2
	6:00:00	48.1	60.2	52.5	40.5	
	6:15:00	44.5	60.0	44.5	40.5	
	6:30:00	43.5	58.3	43.5	40.5	
	6:45:00	42.9	59.8	45.5	40.5	45.3
	7:00:00	42.8	56.6	43.5	40.5	
	7:15:00	44.2	60.7	45.5	40.5	
	7:30:00	43.6	58.2	45.5	40.5	
	7:45:00	49.6	58.3	53.5	40.5	46.0
	8:00:00	45.2	62.2	48.5	40.5	
	8:15:00	46.0	63.8	47.5	40.5	
	8:30:00	44.3	58.2	46.5	40.5	
	8:45:00	55.2	67.8	59.5	40.5	50.3
	9:00:00	46.7	62.1	48.5	40.5	
	9:15:00	48.1	62.2	50.5	40.5	
	9:30:00	47.6	65.4	48.5	40.5	
	9:45:00	47.2	60.6	51.5	40.5	47.4
	10:00:00	45.2	60.9	47.5	40.5	
	10:15:00	45.8	57.8	48.5	40.5	
	10:30:00	47.1	58.7	50.5	40.5	
	10:45:00	49.5	61.4	52.5	40.5	47.2
	11:00:00	49.9	60.6	53.5	40.5	
	11:15:00	49.3	64.2	53.5	40.5	

11:30:00	48.5	66.2	50.5	40.5	
11:45:00	51.6	71.7	53.5	40.5	50.0
12:00:00	49.4	64.6	52.5	40.5	
12:15:00	48.6	60.6	52.5	40.5	
12:30:00	51.3	67.4	54.5	40.5	
12:45:00	52.6	75.0	53.5	40.5	50.8
13:00:00	45.3	63.8	47.5	40.5	
13:15:00	56.5	75.8	53.5	40.5	
13:30:00	58.1	75.9	59.5	40.5	
13:45:00	59.9	76.2	61.5	39.5	57.2
14:00:00	58.7	76.4	58.5	40.5	
14:15:00	59.5	82.2	60.5	40.5	
14:30:00	59.3	79.9	60.5	40.5	
14:45:00	57.6	80.2	60.5	40.5	58.8
15:00:00	49.7	68.2	51.5	40.5	
15:15:00	48.6	63.2	52.5	40.5	
15:30:00	48.8	63.6	51.5	40.5	
15:45:00	54.1	70.6	57.5	40.5	51.0
16:00:00	56.3	73.8	61.5	41.5	
16:15:00	62.2	78.1	66.5	41.5	
16:30:00	60.9	75.4	65.5	42.5	
16:45:00	62.0	77.0	66.5	42.5	60.9
17:00:00	57.6	71.0	61.5	41.5	
17:15:00	54.5	68.5	58.5	40.5	
17:30:00	54.7	68.0	58.5	40.5	
17:45:00	51.7	66.1	55.5	40.5	55.1
18:00:00	46.6	60.6	50.5	40.5	
18:15:00	44.7	61.0	46.5	40.5	
18:30:00	58.5	79.4	58.5	40.5	
18:45:00	54.8	61.6	57.5	42.5	54.3


Seneca Meadows Inc.
2020 Annual Sound Survey
Location 7 Logging
Sound Level, Leq, dBA
100
90
80
70
60
50
40
30
20
10
0
Rain
7:00:00
10:00:00
13:00:00
16:00:00
19:00:00
22:00:00
1:00:00
4:00:00
7:00:00
10:00:00
13:00:00
16:00:00
19:00:00
22:00:00
1:00:00
4:00:00
7:00:00
10:00:00
13:00:00
16:00:00
19:00:00
22:00:00
1:00:00
4:00:00
7:00:00
10:00:00
13:00:00
16:00:00
Time
July 6 - July 10, 2020
Leq-1hr
Leq-15min

****

Filename LOC7
Test Location 7
Employee Name
Employee No.
Department
Seneca Meadows Inc.
2019 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
Calibrator type Metrosonics CL304 3067
Calibrator calibration date 4/17/2019

****

METROSONICS db-3080 V1.20 SERIAL #4401
Report printed on 7/12/2020 at 16:00:40

Seneca Meadows Inc.
2020 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
East Aurora, New York

Logging started at	7/6/2020 at 7:00:00
Total logging time	4 DAYS 12:07:43
Logging stopped at	7/10/2020 at 19:07:43
Total intervals	433
Interval length	0:15:00
Auto Stop	NO
Clock synch	YES
Response Rate	SLOW
Filter	A-WEIGHTED
Pre-Test Calibration Time	7/3/2020 at 19:26:49
Pre-Test Calibration Range	39.6 to 139.6 dB
Post-Test Calibration Time	7/12/2020 at 15:41:06
Post-Test Calibration Range	39.6 to 139.6 dB
Cut-off used for time history Lav	NONE

<<< SUMMARY REPORT FOR TEST NUMBER 1 OF 1 >>>

Exchange Rate	3dB	
Cutoffs	60dB	60dB
Ceiling	115dB	
DOSE Criterion level	90dB	
DOSE Criterion length	8 hours	
Lav(60)	53.0dB	
Lav(60)	51.2dB	
Lav(60)	51.2dB	
SEL	108.7dB	
TWA	64.3dB	
TWA(60)	62.5dB	
TWA(60)	62.5dB	
Lmax	91.0dB	7/8/2020 at 14:52:52
Lpk	120.9dB	7/8/2020 at 13:38:02
Time over 115 dB	00:00.0	
DOSE(60)	0.17%	
DOSE(60)	0.17%	

<<< TIME HISTORY REPORT FOR TEST NUMBER 1 OF 1 >>>

	START TIME	Leq(15-min) dBA	Lmax dBA	L(10.0) dBA	L(99.0) dBA	Leq(1-hr) dBA
7/6/2020						
	7:00:00	45.8	56.8	49.6	40.6	
	7:15:00	48.2	58.4	52.6	40.6	
	7:30:00	50.4	64.6	53.6	41.6	
	7:45:00	53.3	73.7	54.6	43.6	50.3
	8:00:00	48.1	56.3	51.6	40.6	
	8:15:00	47.7	58.6	51.6	40.6	
	8:30:00	50.2	60.7	54.6	41.6	
	8:45:00	49.1	57.7	52.6	41.6	48.9
	9:00:00	48.6	64.4	50.6	40.6	
	9:15:00	48.0	60.6	51.6	40.6	
	9:30:00	47.5	58.8	50.6	40.6	
	9:45:00	49.4	65.7	51.6	40.6	48.4
	10:00:00	47.9	57.3	50.6	40.6	
	10:15:00	48.1	64.8	50.6	40.6	
	10:30:00	47.3	58.9	51.6	40.6	
	10:45:00	47.1	57.6	50.6	40.6	47.6
	11:00:00	48.5	65.9	51.6	40.6	
	11:15:00	47.2	56.3	50.6	40.6	
	11:30:00	47.3	59.7	50.6	40.6	
	11:45:00	48.6	60.5	52.6	40.6	47.9
	12:00:00	51.0	63.3	54.6	40.6	
	12:15:00	47.7	57.4	51.6	39.6	
	12:30:00	47.5	61.6	50.6	40.6	
	12:45:00	47.5	59.7	50.6	40.6	48.7
	13:00:00	46.2	57.6	49.6	39.6	
	13:15:00	47.5	59.5	51.6	39.6	
	13:30:00	46.7	56.5	51.6	40.6	
	13:45:00	47.0	59.1	50.6	40.6	46.9
	14:00:00	46.7	56.1	50.6	40.6	
	14:15:00	47.9	58.6	51.6	40.6	
	14:30:00	45.4	56.8	48.6	39.6	
	14:45:00	46.1	56.7	49.6	39.6	46.6
	15:00:00	47.7	62.4	51.6	40.6	
	15:15:00	46.4	56.8	50.6	39.6	
	15:30:00	47.8	59.3	51.6	40.6	
	15:45:00	48.5	60.4	51.6	39.6	47.7
	16:00:00	49.5	64.6	52.6	40.6	
	16:15:00	49.8	65.6	52.6	40.6	
	16:30:00	47.8	61.7	51.6	39.6	
	16:45:00	48.0	58.0	52.6	40.6	48.9
	17:00:00	49.3	65.4	52.6	40.6	
	17:15:00	48.2	65.3	51.6	40.6	
	17:30:00	49.8	60.8	54.6	39.6	
	17:45:00	49.1	60.4	53.6	39.6	49.1
	18:00:00	49.2	66.1	52.6	40.6	
	18:15:00	50.5	59.3	54.6	39.6	
	18:30:00	50.6	60.8	55.6	39.6	
	18:45:00	48.1	58.8	52.6	39.6	49.7
	19:00:00	49.3	58.0	53.6	39.6	
	19:15:00	50.5	62.4	54.6	39.6	
	19:30:00	51.6	68.3	55.6	39.6	
	19:45:00	47.5	59.3	52.6	39.6	50.0
	20:00:00	49.4	68.0	52.6	39.6	
	20:15:00	48.0	61.6	51.6	39.6	
	20:30:00	46.7	61.3	50.6	39.6	
	20:45:00	45.3	56.8	49.6	39.6	47.6
	21:00:00	45.1	56.4	49.6	39.6	
	21:15:00	44.8	58.8	47.6	39.6	
	21:30:00	43.1	56.4	44.6	39.6	
	21:45:00	42.9	57.6	43.6	39.6	44.1
	22:00:00	42.0	56.8	41.6	39.6	
	22:15:00	43.4	58.0	44.6	39.6	
	22:30:00	43.6	60.3	44.6	39.6	
	22:45:00	43.3	58.9	43.6	39.6	43.1

	23:00:00	42.2	57.4	42.6	39.6	
	23:15:00	42.1	57.6	42.6	39.6	
	23:30:00	40.5	52.1	41.6	39.6	
	23:45:00	40.7	55.2	40.6	39.6	41.4
7/7/2020	0:00:00	40.5	55.3	39.6	39.6	
	0:15:00	40.0	52.4	39.6	39.6	
	0:30:00	40.3	53.2	39.6	39.6	
	0:45:00	39.8	48.4	39.6	39.6	40.2
	1:00:00	39.6	49.6	39.6	39.6	
	1:15:00	40.1	51.2	39.6	39.6	
	1:30:00	40.4	53.2	39.6	39.6	
	1:45:00	40.3	54.9	39.6	39.6	40.1
	2:00:00	39.9	44.5	40.6	39.6	
	2:15:00	40.7	53.1	41.6	39.6	
	2:30:00	40.0	44.5	40.6	39.6	
	2:45:00	40.3	54.2	40.6	39.6	40.2
	3:00:00	41.1	54.0	42.6	39.6	
	3:15:00	41.2	53.3	42.6	39.6	
	3:30:00	40.8	54.0	41.6	39.6	
	3:45:00	41.6	57.6	41.6	39.6	41.2
	4:00:00	41.7	58.8	41.6	39.6	
	4:15:00	43.2	58.8	43.6	39.6	
	4:30:00	45.7	55.4	49.6	39.6	
	4:45:00	50.7	56.5	52.6	45.6	46.8
	5:00:00	52.1	63.4	55.6	41.6	
	5:15:00	46.0	55.6	49.6	40.6	
	5:30:00	46.8	61.4	50.6	40.6	
	5:45:00	47.7	58.1	50.6	41.6	48.9
	6:00:00	47.4	58.1	51.6	40.6	
	6:15:00	48.2	58.2	51.6	42.6	
	6:30:00	47.8	56.2	51.6	41.6	
	6:45:00	48.8	56.8	52.6	41.6	48.1
	7:00:00	48.5	59.3	52.6	42.6	
	7:15:00	51.8	64.0	54.6	43.6	
	7:30:00	50.8	59.1	54.6	42.6	
	7:45:00	49.2	56.6	52.6	42.6	50.3
	8:00:00	51.1	69.3	52.6	43.6	
	8:15:00	49.5	58.1	52.6	42.6	
	8:30:00	50.5	59.1	53.6	43.6	
	8:45:00	49.5	61.8	52.6	42.6	50.2
	9:00:00	52.2	60.5	55.6	43.6	
	9:15:00	53.0	62.0	55.6	43.6	
	9:30:00	50.3	59.2	53.6	42.6	
	9:45:00	49.9	60.8	52.6	42.6	51.5
	10:00:00	52.3	69.0	55.6	43.6	
	10:15:00	50.7	62.4	54.6	43.6	
	10:30:00	51.4	61.9	55.6	42.6	
	10:45:00	51.8	61.2	54.6	44.6	51.6
	11:00:00	51.6	62.9	55.6	43.6	
	11:15:00	51.7	61.7	55.6	44.6	
	11:30:00	52.4	64.5	55.6	43.6	
	11:45:00	48.8	61.3	51.6	42.6	51.3
	12:00:00	49.5	63.9	52.6	42.6	
	12:15:00	51.8	69.5	54.6	42.6	
	12:30:00	50.7	58.8	54.6	41.6	
	12:45:00	50.9	58.9	54.6	41.6	50.8
	13:00:00	50.0	59.3	53.6	40.6	
	13:15:00	48.7	59.4	52.6	42.6	
	13:30:00	51.7	61.2	55.6	40.6	
	13:45:00	48.6	58.8	51.6	42.6	49.9
	14:00:00	48.2	56.8	50.6	43.6	
	14:15:00	50.1	63.7	52.6	43.6	
	14:30:00	52.9	68.5	55.6	44.6	
	14:45:00	50.6	60.4	52.6	44.6	50.8
	15:00:00	50.7	64.4	53.6	43.6	
	15:15:00	51.7	63.3	54.6	43.6	
	15:30:00	52.5	63.6	54.6	44.6	
	15:45:00	50.2	59.6	53.6	42.6	51.4
	16:00:00	50.7	60.6	54.6	42.6	

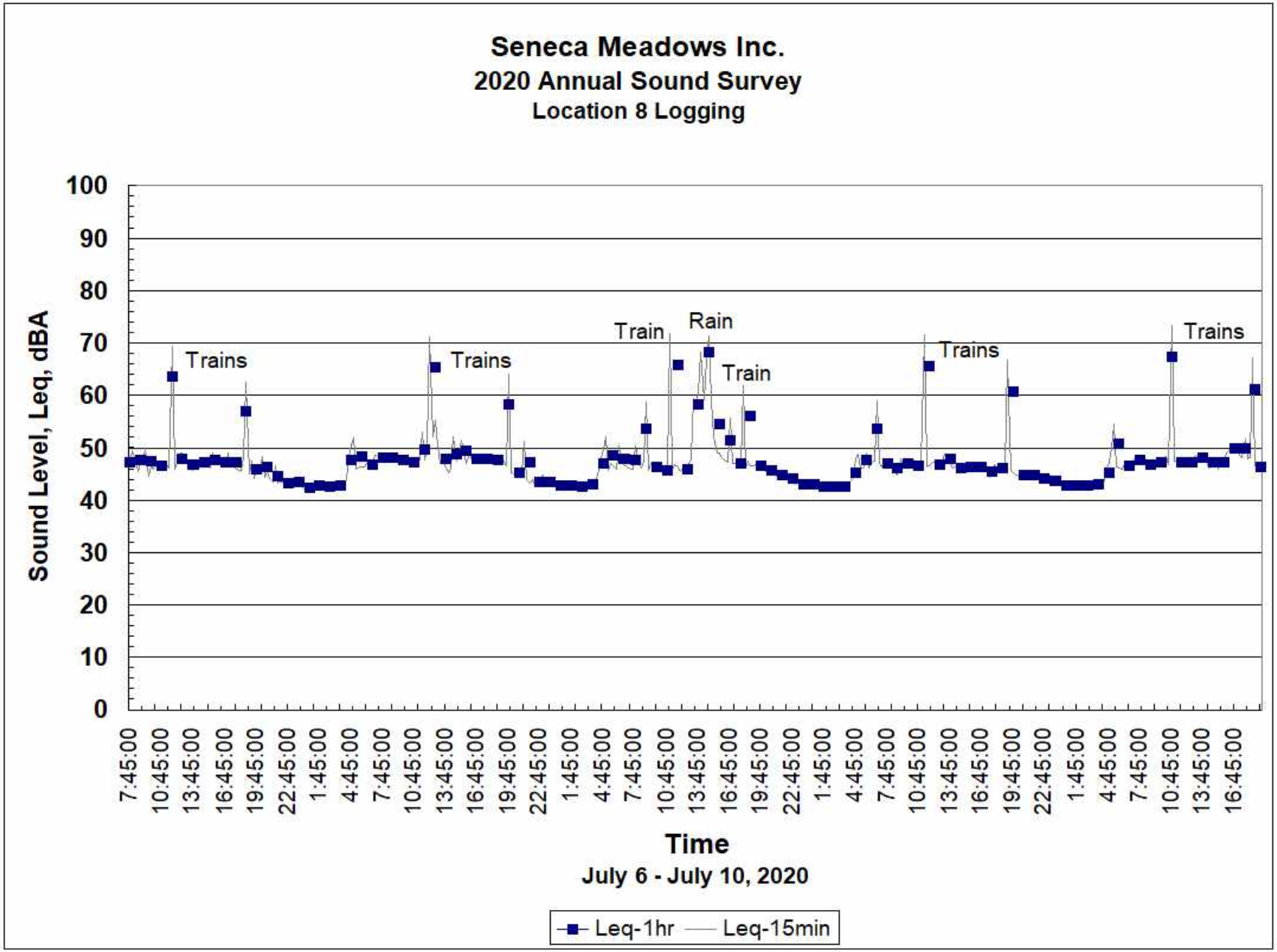
	16:15:00	49.1	56.4	52.6	41.6	
	16:30:00	50.2	63.2	52.6	42.6	
	16:45:00	50.7	63.5	53.6	44.6	50.2
	17:00:00	50.1	60.6	53.6	42.6	
	17:15:00	49.8	62.0	53.6	40.6	
	17:30:00	52.7	68.4	55.6	41.6	
	17:45:00	53.9	66.3	57.6	40.6	52.0
	18:00:00	51.3	61.7	54.6	42.6	
	18:15:00	53.9	68.2	56.6	42.6	
	18:30:00	55.0	66.1	58.6	41.6	
	18:45:00	52.2	63.7	55.6	41.6	53.3
	19:00:00	51.9	66.8	55.6	41.6	
	19:15:00	50.9	61.3	54.6	42.6	
	19:30:00	48.1	60.5	51.6	40.6	
	19:45:00	49.9	66.8	53.6	40.6	50.4
	20:00:00	45.1	56.0	48.6	39.6	
	20:15:00	46.0	61.6	49.6	39.6	
	20:30:00	48.0	67.2	50.6	39.6	
	20:45:00	44.4	58.4	47.6	39.6	46.1
	21:00:00	43.5	54.8	46.6	39.6	
	21:15:00	46.9	62.4	49.6	39.6	
	21:30:00	42.3	56.0	44.6	39.6	
	21:45:00	41.7	52.6	42.6	39.6	44.1
	22:00:00	43.5	58.8	45.6	39.6	
	22:15:00	44.2	60.4	46.6	39.6	
	22:30:00	44.4	56.4	48.6	39.6	
	22:45:00	43.7	60.0	44.6	39.6	44.0
	23:00:00	45.4	61.2	46.6	39.6	
	23:15:00	41.5	54.7	42.6	39.6	
	23:30:00	41.9	55.6	43.6	39.6	
	23:45:00	42.1	54.7	42.6	39.6	43.0
7/8/2020	0:00:00	40.7	53.5	40.6	39.6	
	0:15:00	40.6	53.7	40.6	39.6	
	0:30:00	40.7	53.6	41.6	39.6	
	0:45:00	40.2	50.6	40.6	39.6	40.6
	1:00:00	40.7	51.2	40.6	39.6	
	1:15:00	40.2	53.3	39.6	39.6	
	1:30:00	40.3	52.1	39.6	39.6	
	1:45:00	41.7	55.2	39.6	39.6	40.8
	2:00:00	40.4	52.8	40.6	39.6	
	2:15:00	39.9	50.0	39.6	39.6	
	2:30:00	41.2	56.4	39.6	39.6	
	2:45:00	39.6	40.8	39.6	39.6	40.3
	3:00:00	39.7	41.4	39.6	39.6	
	3:15:00	41.4	58.0	40.6	39.6	
	3:30:00	39.9	55.7	40.6	39.6	
	3:45:00	41.6	56.0	41.6	39.6	40.7
	4:00:00	40.6	54.2	40.6	39.6	
	4:15:00	42.3	58.1	41.6	39.6	
	4:30:00	45.2	56.1	48.6	39.6	
	4:45:00	50.6	63.3	55.6	41.6	46.4
	5:00:00	48.2	58.0	52.6	40.6	
	5:15:00	48.9	58.4	52.6	40.6	
	5:30:00	46.9	59.2	50.6	40.6	
	5:45:00	48.1	62.5	51.6	41.6	48.1
	6:00:00	46.9	58.5	50.6	40.6	
	6:15:00	47.1	56.3	50.6	41.6	
	6:30:00	48.2	60.1	51.6	41.6	
	6:45:00	46.8	58.3	49.6	40.6	47.3
	7:00:00	45.4	55.7	48.6	40.6	
	7:15:00	49.9	68.8	54.6	40.6	
	7:30:00	47.8	58.4	52.6	40.6	
	7:45:00	46.2	56.2	50.6	40.6	47.7
	8:00:00	45.6	57.3	48.6	40.6	
	8:15:00	47.3	55.2	50.6	40.6	
	8:30:00	52.0	66.0	55.6	41.6	
	8:45:00	49.5	59.0	53.6	40.6	49.3
	9:00:00	50.2	59.1	54.6	40.6	
	9:15:00	50.0	61.3	54.6	40.6	

	9:30:00	49.2	58.4	53.6	40.6	
	9:45:00	48.7	58.1	52.6	40.6	49.6
	10:00:00	49.4	60.0	53.6	40.6	
	10:15:00	48.6	60.0	52.6	40.6	
	10:30:00	48.9	63.2	52.6	40.6	
	10:45:00	47.6	59.2	51.6	39.6	48.7
	11:00:00	48.0	66.4	50.6	39.6	
	11:15:00	48.3	60.0	52.6	39.6	
	11:30:00	51.1	64.1	55.6	39.6	
	11:45:00	49.8	62.4	54.6	39.6	49.5
	12:00:00	49.2	60.1	53.6	39.6	
	12:15:00	51.2	59.6	55.6	39.6	
	12:30:00	50.9	59.7	55.6	39.6	
	12:45:00	49.2	58.4	53.6	39.6	50.2
	13:00:00	48.8	67.2	52.6	39.6	
	13:15:00	59.6	80.4	61.6	43.6	
	13:30:00	65.6	90.8	66.6	41.6	
	13:45:00	65.8	87.4	65.6	40.6	63.2
	14:00:00	64.9	87.2	66.6	43.6	
	14:15:00	53.0	77.6	54.6	43.6	
	14:30:00	72.1	88.9	76.6	46.6	
	14:45:00	73.7	91.0	77.6	49.6	70.3
	15:00:00	60.6	83.1	60.6	41.6	
	15:15:00	51.6	77.2	53.6	40.6	
	15:30:00	47.2	57.9	51.6	40.6	
	15:45:00	49.4	60.4	52.6	40.6	55.5
	16:00:00	49.8	61.2	54.6	39.6	
	16:15:00	49.0	63.7	52.6	39.6	
	16:30:00	47.3	57.7	51.6	39.6	
	16:45:00	48.1	58.9	52.6	39.6	48.7
	17:00:00	49.1	58.5	53.6	39.6	
	17:15:00	48.4	59.9	52.6	39.6	
	17:30:00	48.0	58.4	52.6	39.6	
	17:45:00	48.3	60.4	52.6	39.6	48.5
	18:00:00	47.6	58.7	52.6	39.6	
	18:15:00	48.6	61.2	52.6	39.6	
	18:30:00	48.1	67.3	51.6	39.6	
	18:45:00	45.3	57.7	49.6	39.6	47.6
	19:00:00	45.3	58.0	49.6	39.6	
	19:15:00	45.7	60.0	48.6	39.6	
	19:30:00	45.6	57.6	49.6	39.6	
	19:45:00	49.1	70.4	48.6	39.6	46.7
	20:00:00	48.5	61.6	52.6	39.6	
	20:15:00	44.7	60.0	48.6	39.6	
	20:30:00	45.4	63.8	47.6	39.6	
	20:45:00	43.9	57.4	47.6	39.6	46.0
	21:00:00	45.0	58.4	48.6	39.6	
	21:15:00	43.4	54.8	46.6	39.6	
	21:30:00	42.1	54.4	43.6	39.6	
	21:45:00	42.4	56.4	43.6	39.6	43.4
	22:00:00	40.8	54.9	40.6	39.6	
	22:15:00	41.9	58.1	40.6	39.6	
	22:30:00	41.8	54.8	41.6	39.6	
	22:45:00	43.2	61.2	42.6	39.6	42.0
	23:00:00	41.0	56.8	39.6	39.6	
	23:15:00	42.3	57.6	39.6	39.6	
	23:30:00	42.2	59.5	40.6	39.6	
	23:45:00	41.1	55.2	39.6	39.6	41.7
7/9/2020	0:00:00	40.4	53.4	39.6	39.6	
	0:15:00	40.4	53.6	39.6	39.6	
	0:30:00	40.2	54.4	39.6	39.6	
	0:45:00	39.6	45.2	39.6	39.6	40.2
	1:00:00	40.0	52.8	39.6	39.6	
	1:15:00	40.0	52.0	39.6	39.6	
	1:30:00	40.4	53.2	39.6	39.6	
	1:45:00	39.6	42.7	39.6	39.6	40.0
	2:00:00	40.0	52.0	39.6	39.6	
	2:15:00	39.8	50.1	39.6	39.6	
	2:30:00	40.4	55.0	39.6	39.6	

2:45:00	41.2	60.0	40.6	39.6	40.4
3:00:00	40.3	53.1	40.6	39.6	
3:15:00	40.4	52.8	40.6	39.6	
3:30:00	39.8	42.8	40.6	39.6	
3:45:00	41.0	56.8	40.6	39.6	40.4
4:00:00	42.3	57.7	41.6	39.6	
4:15:00	42.5	58.4	42.6	39.6	
4:30:00	41.2	44.8	42.6	40.6	
4:45:00	47.9	59.2	51.6	41.6	44.4
5:00:00	50.7	60.9	54.6	42.6	
5:15:00	48.6	60.0	52.6	41.6	
5:30:00	46.4	60.9	48.6	40.6	
5:45:00	45.9	56.8	49.6	41.6	48.3
6:00:00	46.9	59.6	50.6	40.6	
6:15:00	47.4	63.2	50.6	40.6	
6:30:00	46.6	58.0	50.6	41.6	
6:45:00	47.9	59.3	51.6	40.6	47.2
7:00:00	46.5	57.6	50.6	40.6	
7:15:00	46.0	56.7	49.6	40.6	
7:30:00	48.2	59.7	52.6	40.6	
7:45:00	48.6	62.2	51.6	41.6	47.5
8:00:00	46.9	59.2	50.6	40.6	
8:15:00	47.6	59.2	51.6	40.6	
8:30:00	47.2	59.9	51.6	40.6	
8:45:00	46.6	56.0	50.6	39.6	47.1
9:00:00	47.6	61.2	51.6	39.6	
9:15:00	47.8	60.5	51.6	39.6	
9:30:00	49.2	58.1	52.6	40.6	
9:45:00	51.2	64.3	55.6	40.6	49.2
10:00:00	50.1	64.6	53.6	41.6	
10:15:00	50.4	60.4	54.6	39.6	
10:30:00	49.8	57.5	53.6	40.6	
10:45:00	50.6	59.0	54.6	40.6	50.2
11:00:00	50.0	59.7	54.6	40.6	
11:15:00	51.0	71.6	53.6	40.6	
11:30:00	48.2	56.8	51.6	40.6	
11:45:00	48.1	56.0	51.6	40.6	49.5
12:00:00	49.6	63.1	53.6	40.6	
12:15:00	48.8	59.6	52.6	41.6	
12:30:00	49.0	58.9	52.6	40.6	
12:45:00	47.6	57.9	50.6	41.6	48.8
13:00:00	46.0	56.9	49.6	40.6	
13:15:00	50.5	60.9	54.6	41.6	
13:30:00	52.0	65.2	55.6	42.6	
13:45:00	46.9	56.3	50.6	40.6	49.5
14:00:00	47.4	56.7	51.6	40.6	
14:15:00	48.1	55.5	51.6	39.6	
14:30:00	47.2	61.4	50.6	39.6	
14:45:00	51.1	62.6	56.6	39.6	48.8
15:00:00	48.3	57.7	52.6	39.6	
15:15:00	46.3	56.4	50.6	39.6	
15:30:00	49.7	67.6	53.6	39.6	
15:45:00	47.3	58.8	51.6	39.6	48.1
16:00:00	47.4	56.9	51.6	39.6	
16:15:00	46.6	59.6	50.6	39.6	
16:30:00	48.1	60.5	52.6	39.6	
16:45:00	47.2	57.3	50.6	39.6	47.4
17:00:00	49.5	58.4	53.6	39.6	
17:15:00	49.3	65.6	52.6	39.6	
17:30:00	46.7	57.3	50.6	39.6	
17:45:00	50.9	63.9	55.6	39.6	49.3
18:00:00	47.8	70.1	50.6	39.6	
18:15:00	49.2	67.2	53.6	39.6	
18:30:00	46.6	67.7	50.6	39.6	
18:45:00	58.8	83.6	51.6	39.6	53.7
19:00:00	50.8	67.3	53.6	39.6	
19:15:00	50.5	61.3	54.6	40.6	
19:30:00	49.3	58.0	53.6	39.6	
19:45:00	52.1	61.8	56.6	39.6	50.8

	20:00:00	52.4	70.7	55.6	39.6	
	20:15:00	48.6	59.2	52.6	39.6	
	20:30:00	46.2	57.2	49.6	39.6	
	20:45:00	47.0	57.9	51.6	39.6	49.3
	21:00:00	43.8	57.3	46.6	39.6	
	21:15:00	45.2	62.3	48.6	39.6	
	21:30:00	43.0	59.2	43.6	39.6	
	21:45:00	47.1	67.3	45.6	39.6	45.1
	22:00:00	43.3	55.4	43.6	39.6	
	22:15:00	43.0	60.0	42.6	39.6	
	22:30:00	42.1	56.5	41.6	39.6	
	22:45:00	40.2	53.6	40.6	39.6	42.3
	23:00:00	42.7	56.8	41.6	39.6	
	23:15:00	40.9	57.2	40.6	39.6	
	23:30:00	40.4	51.6	40.6	39.6	
	23:45:00	41.1	56.4	40.6	39.6	41.4
7/10/2020	0:00:00	39.9	43.9	40.6	39.6	
	0:15:00	40.7	54.1	40.6	39.6	
	0:30:00	41.1	55.2	40.6	39.6	
	0:45:00	39.6	40.9	39.6	39.6	40.4
	1:00:00	39.6	40.9	39.6	39.6	
	1:15:00	41.6	58.0	40.6	39.6	
	1:30:00	40.4	52.4	39.6	39.6	
	1:45:00	40.5	53.6	39.6	39.6	40.6
	2:00:00	39.7	49.9	39.6	39.6	
	2:15:00	40.1	52.8	39.6	39.6	
	2:30:00	40.7	57.7	40.6	39.6	
	2:45:00	39.7	42.5	39.6	39.6	40.1
	3:00:00	40.6	55.2	40.6	39.6	
	3:15:00	40.4	55.6	40.6	39.6	
	3:30:00	39.9	54.3	40.6	39.6	
	3:45:00	41.4	57.3	40.6	39.6	40.6
	4:00:00	41.8	58.2	41.6	39.6	
	4:15:00	41.8	59.2	40.6	39.6	
	4:30:00	48.4	57.5	52.6	39.6	
	4:45:00	50.3	57.9	52.6	44.6	47.1
	5:00:00	51.2	58.4	54.6	42.6	
	5:15:00	48.2	58.9	52.6	40.6	
	5:30:00	48.8	60.0	52.6	40.6	
	5:45:00	48.1	60.9	51.6	41.6	49.3
	6:00:00	51.7	60.3	55.6	41.6	
	6:15:00	49.5	58.5	53.6	41.6	
	6:30:00	49.9	60.7	53.6	41.6	
	6:45:00	49.4	59.9	52.6	41.6	50.2
	7:00:00	47.6	58.1	51.6	40.6	
	7:15:00	47.4	59.6	50.6	40.6	
	7:30:00	50.7	68.9	53.6	43.6	
	7:45:00	48.3	59.8	51.6	42.6	48.7
	8:00:00	49.8	58.6	52.6	42.6	
	8:15:00	50.8	66.2	53.6	42.6	
	8:30:00	48.5	56.8	52.6	42.6	
	8:45:00	50.3	62.8	52.6	44.6	49.9
	9:00:00	49.4	58.9	52.6	43.6	
	9:15:00	51.6	63.0	54.6	44.6	
	9:30:00	50.0	57.3	52.6	43.6	
	9:45:00	52.2	60.8	56.6	42.6	50.9
	10:00:00	50.9	59.2	54.6	42.6	
	10:15:00	51.3	58.8	54.6	44.6	
	10:30:00	49.6	59.7	52.6	42.6	
	10:45:00	51.4	68.2	53.6	43.6	50.9
	11:00:00	52.6	68.5	54.6	45.6	
	11:15:00	51.4	61.2	54.6	44.6	
	11:30:00	50.0	59.8	53.6	42.6	
	11:45:00	48.3	59.2	51.6	42.6	50.9
	12:00:00	49.0	57.2	52.6	42.6	
	12:15:00	51.9	60.7	54.6	46.6	
	12:30:00	50.2	61.3	52.6	44.6	
	12:45:00	49.5	58.4	52.6	42.6	50.3
	13:00:00	50.4	59.9	54.6	41.6	

13:15:00	50.1	61.1	54.6	41.6	
13:30:00	50.3	62.0	53.6	41.6	
13:45:00	49.9	59.7	53.6	41.6	50.2
14:00:00	50.2	64.9	53.6	41.6	
14:15:00	49.0	58.1	52.6	40.6	
14:30:00	52.5	61.6	56.6	42.6	
14:45:00	52.0	61.6	56.6	42.6	51.1
15:00:00	49.6	60.8	52.6	42.6	
15:15:00	49.1	57.4	52.6	42.6	
15:30:00	51.1	61.3	54.6	44.6	
15:45:00	51.3	59.1	54.6	43.6	50.4
16:00:00	50.3	60.6	53.6	42.6	
16:15:00	53.9	76.4	55.6	44.6	
16:30:00	57.7	73.2	60.6	45.6	
16:45:00	55.1	68.3	58.6	44.6	55.0
17:00:00	57.8	77.1	59.6	46.6	
17:15:00	53.2	65.8	56.6	43.6	
17:30:00	50.9	61.1	54.6	42.6	
17:45:00	52.1	59.8	55.6	42.6	54.4
18:00:00	51.3	64.0	54.6	42.6	
18:15:00	50.8	61.6	54.6	41.6	
18:30:00	51.1	66.4	53.6	40.6	
18:45:00	50.1	61.2	53.6	41.6	50.8
19:00:00	64.5	83.3	65.6	41.6	


Seneca Meadows Inc.
2020 Annual Sound Survey
Location 8 Logging
Sound Level, Leq, dBA
100
90
80
70
60
50
40
30
20
10
0
Trains
Trains
Train
Rain
Train
Trains
Trains
7:45:00
10:45:00
13:45:00
16:45:00
19:45:00
22:45:00
1:45:00
4:45:00
7:45:00
10:45:00
13:45:00
16:45:00
19:45:00
22:45:00
1:45:00
4:45:00
7:45:00
10:45:00
13:45:00
16:45:00
19:45:00
22:45:00
1:45:00
4:45:00
7:45:00
10:45:00
13:45:00
16:45:00
Time
July 6 - July 10, 2020
Leq-1hr
Leq-15min

****

Filename LOC8
Test Location 8
Employee Name
Employee No.
Department
Seneca Meadows Inc.
2019 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
Calibrator type Metrosonics CL304 3067
Calibrator calibration date 4/17/2019

****

METROSONICS db-3080 V1.20 SERIAL # 4441
Report printed on 7/12/2020 at 16:01:56

Seneca Meadows Inc.
2020 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
East Aurora, New York

Logging started at	7/6/2020 at 7:45:00
Total logging time	4 DAYS 11:52:35
Logging stopped at	7/10/2020 at 19:37:35
Total intervals	432
Interval length	0:15:00
Auto Stop	NO
Clock synch	YES
Response Rate	SLOW
Filter	A-WEIGHTED
Pre-Test Calibration Time	7/3/2020 at 19:11:40
Pre-Test Calibration Range	39 to 139 dB
Post-Test Calibration Time	7/12/2020 at 15:42:26
Post-Test Calibration Range	39.3 to 139.3 dB
Cut-off used for time history Lav	NONE

<<< SUMMARY REPORT FOR TEST NUMBER 1 OF 1 >>>

Exchange Rate	3dB	
Cutoffs	60dB	60dB
Ceiling	115dB	
DOSE Criterion level	90dB	
DOSE Criterion length	8 hours	
Lav(60)	55.2dB	
Lav(60)	54.6dB	
Lav(60)	54.6dB	
SEL	110.9dB	
TWA	66.5dB	
TWA(60)	65.9dB	
TWA(60)	65.9dB	
Lmax	98.5dB	7/10/2020 at 10:49:22
Lpk	118.7dB	7/8/2020 at 14:09:44
Time over 115 dB	00:00:00.00	
DOSE(60)	0.37%	
DOSE(60)	0.37%	

<<< TIME HISTORY REPORT FOR TEST NUMBER 1 OF 1 >>>

	START TIME	Leq(15-min) dBA	Lmax dBA	L(10.0) dBA	L(99.0) dBA	Leq(1-hr) dBA
7/6/2020						
	7:45:00	47.3	59.6	50.0	42.0	47.3
	8:00:00	49.5	66.8	50.0	42.0	
	8:15:00	47.7	58.5	50.0	42.0	
	8:30:00	45.5	59.3	47.0	42.0	
	8:45:00	47.1	57.7	50.0	42.0	47.7
	9:00:00	46.9	65.0	48.0	42.0	
	9:15:00	49.8	66.1	50.0	42.0	
	9:30:00	44.6	52.1	46.0	42.0	
	9:45:00	46.5	59.1	49.0	42.0	47.4
	10:00:00	46.0	54.1	48.0	42.0	
	10:15:00	47.5	59.8	50.0	42.0	
	10:30:00	45.7	56.3	47.0	42.0	
	10:45:00	46.7	60.1	49.0	42.0	46.5
	11:00:00	46.0	55.9	48.0	42.0	
	11:15:00	47.1	59.9	49.0	42.0	
	11:30:00	46.2	52.2	48.0	42.0	
	11:45:00	69.5	93.6	52.0	42.0	63.5
	12:00:00	46.0	59.9	48.0	42.0	
	12:15:00	47.3	63.1	49.0	41.0	
	12:30:00	48.8	65.3	50.0	43.0	
	12:45:00	49.1	68.0	51.0	42.0	48.0
	13:00:00	46.9	60.9	49.0	41.0	
	13:15:00	46.7	66.9	49.0	41.0	
	13:30:00	47.7	56.7	51.0	41.0	
	13:45:00	45.6	56.5	47.0	42.0	46.8
	14:00:00	46.5	54.9	50.0	41.0	
	14:15:00	46.9	63.0	49.0	42.0	
	14:30:00	48.0	58.7	51.0	42.0	
	14:45:00	47.7	59.9	50.0	42.0	47.3
	15:00:00	47.0	53.2	50.0	42.0	
	15:15:00	46.2	57.3	48.0	42.0	
	15:30:00	49.1	60.5	52.0	42.0	
	15:45:00	47.7	65.1	48.0	41.0	47.6
	16:00:00	48.1	59.7	51.0	42.0	
	16:15:00	46.8	57.3	49.0	42.0	
	16:30:00	47.6	59.7	50.0	42.0	
	16:45:00	46.4	56.6	48.0	42.0	47.3
	17:00:00	48.9	61.7	51.0	42.0	
	17:15:00	46.3	51.7	48.0	42.0	
	17:30:00	46.7	57.5	48.0	42.0	
	17:45:00	46.0	57.3	48.0	42.0	47.1
	18:00:00	45.7	56.4	47.0	42.0	
	18:15:00	45.5	54.6	47.0	42.0	
	18:30:00	48.2	72.9	46.0	42.0	
	18:45:00	62.6	88.8	53.0	41.0	56.9
	19:00:00	45.1	56.6	47.0	41.0	
	19:15:00	47.4	57.3	50.0	42.0	
	19:30:00	44.1	52.8	45.0	41.0	
	19:45:00	46.2	58.3	47.0	41.0	45.9
	20:00:00	46.4	64.1	46.0	41.0	
	20:15:00	48.4	68.9	46.0	42.0	
	20:30:00	44.4	60.3	45.0	41.0	
	20:45:00	45.4	57.0	47.0	41.0	46.4
	21:00:00	44.2	58.1	46.0	41.0	
	21:15:00	43.5	54.9	45.0	41.0	
	21:30:00	46.6	73.7	44.0	41.0	
	21:45:00	43.3	50.3	44.0	41.0	44.6
	22:00:00	43.5	56.3	44.0	41.0	
	22:15:00	43.5	55.3	44.0	41.0	
	22:30:00	42.9	50.6	43.0	41.0	
	22:45:00	43.2	48.9	44.0	42.0	43.3
	23:00:00	43.8	49.6	45.0	41.0	
	23:15:00	43.6	50.5	44.0	42.0	
	23:30:00	43.1	47.0	44.0	42.0	

	23:45:00	43.0	49.5	44.0	41.0	43.4
7/7/2020	0:00:00	42.5	44.8	43.0	41.0	
	0:15:00	42.1	44.8	42.0	41.0	
	0:30:00	42.4	47.2	43.0	41.0	
	0:45:00	42.8	44.7	43.0	41.0	42.5
	1:00:00	42.7	45.9	43.0	41.0	
	1:15:00	42.4	44.9	43.0	41.0	
	1:30:00	42.6	49.5	43.0	41.0	
	1:45:00	43.1	48.0	44.0	41.0	42.7
	2:00:00	42.5	44.7	43.0	41.0	
	2:15:00	42.5	45.7	43.0	41.0	
	2:30:00	42.5	46.0	43.0	41.0	
	2:45:00	42.7	45.2	43.0	41.0	42.6
	3:00:00	42.8	47.5	43.0	41.0	
	3:15:00	42.9	49.9	43.0	41.0	
	3:30:00	42.7	48.7	43.0	41.0	
	3:45:00	43.1	49.5	44.0	41.0	42.9
	4:00:00	43.4	52.7	44.0	41.0	
	4:15:00	44.0	51.6	46.0	41.0	
	4:30:00	48.4	56.1	52.0	42.0	
	4:45:00	50.5	73.7	52.0	43.0	47.6
	5:00:00	51.9	62.3	56.0	43.0	
	5:15:00	45.8	54.6	48.0	42.0	
	5:30:00	46.3	52.2	48.0	42.0	
	5:45:00	46.3	55.6	48.0	42.0	48.4
	6:00:00	46.3	53.5	48.0	42.0	
	6:15:00	46.9	54.9	48.0	43.0	
	6:30:00	47.1	63.3	48.0	43.0	
	6:45:00	47.2	57.6	48.0	43.0	46.9
	7:00:00	48.5	67.7	49.0	43.0	
	7:15:00	48.4	62.0	50.0	43.0	
	7:30:00	47.7	66.8	48.0	43.0	
	7:45:00	48.0	58.1	50.0	44.0	48.2
	8:00:00	48.9	60.1	51.0	44.0	
	8:15:00	47.9	58.9	49.0	44.0	
	8:30:00	47.8	59.0	49.0	43.0	
	8:45:00	48.0	59.6	49.0	44.0	48.2
	9:00:00	48.1	62.6	49.0	43.0	
	9:15:00	47.7	58.1	49.0	44.0	
	9:30:00	47.2	54.3	49.0	43.0	
	9:45:00	48.0	60.1	50.0	44.0	47.8
	10:00:00	46.9	58.8	48.0	43.0	
	10:15:00	47.2	56.8	48.0	44.0	
	10:30:00	47.4	56.9	49.0	44.0	
	10:45:00	47.1	58.5	49.0	43.0	47.2
	11:00:00	47.3	56.9	49.0	44.0	
	11:15:00	47.6	55.9	49.0	44.0	
	11:30:00	53.1	69.0	54.0	44.0	
	11:45:00	47.7	56.1	49.0	44.0	49.7
	12:00:00	50.1	63.9	52.0	43.0	
	12:15:00	71.2	95.3	56.0	43.0	
	12:30:00	52.2	74.5	52.0	43.0	
	12:45:00	55.1	76.5	49.0	42.0	65.4
	13:00:00	50.3	74.5	48.0	43.0	
	13:15:00	46.9	56.4	49.0	43.0	
	13:30:00	46.9	59.7	48.0	43.0	
	13:45:00	46.3	54.0	48.0	43.0	47.9
	14:00:00	45.2	52.5	47.0	42.0	
	14:15:00	46.0	56.3	47.0	43.0	
	14:30:00	52.2	70.5	53.0	44.0	
	14:45:00	47.5	60.1	49.0	43.0	48.7
	15:00:00	48.8	62.1	51.0	44.0	
	15:15:00	51.4	67.1	52.0	44.0	
	15:30:00	49.1	61.3	51.0	44.0	
	15:45:00	47.1	58.0	48.0	43.0	49.4
	16:00:00	48.9	59.3	52.0	43.0	
	16:15:00	47.4	62.7	48.0	42.0	
	16:30:00	47.0	57.7	48.0	43.0	
	16:45:00	48.4	58.9	50.0	44.0	48.0

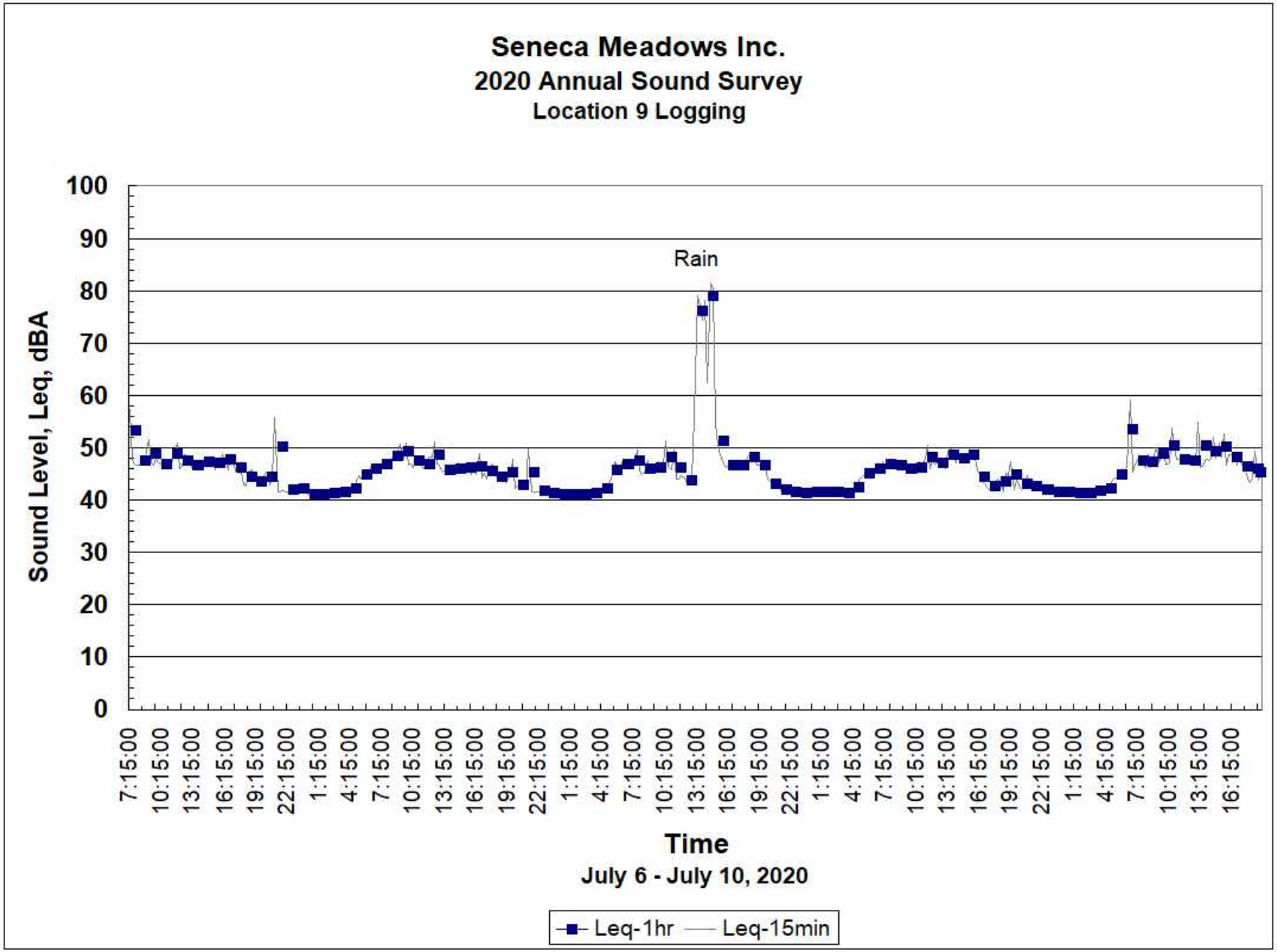
	17:00:00	48.0	60.0	49.0	44.0	
	17:15:00	47.4	54.0	49.0	43.0	
	17:30:00	47.4	53.7	49.0	43.0	
	17:45:00	48.5	60.1	50.0	43.0	47.8
	18:00:00	47.4	52.5	49.0	44.0	
	18:15:00	48.6	58.8	50.0	44.0	
	18:30:00	47.8	54.7	49.0	43.0	
	18:45:00	46.8	54.8	48.0	42.0	47.7
	19:00:00	47.1	57.3	48.0	43.0	
	19:15:00	47.8	59.3	49.0	43.0	
	19:30:00	46.6	56.1	49.0	43.0	
	19:45:00	64.0	90.3	56.0	43.0	58.2
	20:00:00	45.2	54.4	46.0	42.0	
	20:15:00	45.0	54.9	47.0	42.0	
	20:30:00	45.7	61.7	47.0	42.0	
	20:45:00	44.7	54.1	46.0	42.0	45.2
	21:00:00	45.0	58.8	46.0	42.0	
	21:15:00	51.2	68.4	46.0	42.0	
	21:30:00	43.8	50.5	45.0	42.0	
	21:45:00	43.3	48.8	44.0	41.0	47.2
	22:00:00	43.8	48.9	45.0	42.0	
	22:15:00	43.1	47.6	44.0	41.0	
	22:30:00	43.4	49.7	44.0	42.0	
	22:45:00	43.6	50.2	44.0	42.0	43.5
	23:00:00	44.9	59.8	45.0	42.0	
	23:15:00	43.4	48.5	44.0	42.0	
	23:30:00	42.7	47.6	43.0	41.0	
	23:45:00	42.8	49.0	43.0	41.0	43.5
7/8/2020	0:00:00	42.8	61.6	42.0	41.0	
	0:15:00	42.6	49.3	43.0	41.0	
	0:30:00	42.9	47.2	43.0	42.0	
	0:45:00	42.8	45.4	43.0	41.0	42.8
	1:00:00	42.8	46.1	43.0	42.0	
	1:15:00	42.6	44.7	43.0	41.0	
	1:30:00	42.8	44.5	43.0	42.0	
	1:45:00	42.7	45.9	43.0	41.0	42.7
	2:00:00	42.4	43.6	42.0	41.0	
	2:15:00	42.6	45.4	43.0	41.0	
	2:30:00	42.5	44.5	43.0	41.0	
	2:45:00	42.4	44.5	43.0	41.0	42.5
	3:00:00	42.5	46.0	43.0	41.0	
	3:15:00	42.8	48.4	43.0	41.0	
	3:30:00	43.1	46.0	44.0	41.0	
	3:45:00	43.4	52.6	44.0	42.0	43.0
	4:00:00	43.1	45.7	43.0	42.0	
	4:15:00	44.7	50.9	46.0	42.0	
	4:30:00	47.3	52.1	49.0	43.0	
	4:45:00	49.7	57.7	53.0	43.0	46.9
	5:00:00	52.0	60.4	56.0	42.0	
	5:15:00	45.6	55.7	47.0	42.0	
	5:30:00	47.0	60.7	48.0	42.0	
	5:45:00	46.5	53.3	48.0	43.0	48.6
	6:00:00	45.9	58.7	47.0	42.0	
	6:15:00	50.3	71.3	50.0	43.0	
	6:30:00	47.6	60.4	49.0	43.0	
	6:45:00	46.8	57.7	48.0	43.0	48.0
	7:00:00	46.3	57.7	48.0	42.0	
	7:15:00	45.9	56.4	47.0	42.0	
	7:30:00	46.0	53.1	47.0	43.0	
	7:45:00	50.3	66.1	51.0	43.0	47.6
	8:00:00	47.9	64.9	49.0	43.0	
	8:15:00	46.2	56.5	48.0	42.0	
	8:30:00	47.5	59.2	50.0	42.0	
	8:45:00	58.8	79.5	50.0	42.0	53.6
	9:00:00	45.6	53.3	47.0	42.0	
	9:15:00	47.1	60.7	50.0	41.0	
	9:30:00	47.0	65.4	47.0	42.0	
	9:45:00	45.5	52.7	47.0	42.0	46.4
	10:00:00	45.5	54.5	47.0	42.0	

	10:15:00	46.6	64.9	48.0	42.0	
	10:30:00	44.8	56.0	46.0	41.0	
	10:45:00	46.0	55.2	49.0	41.0	45.8
	11:00:00	71.8	96.5	56.0	42.0	
	11:15:00	45.6	53.4	48.0	41.0	
	11:30:00	46.7	61.3	49.0	42.0	
	11:45:00	46.4	58.9	48.0	41.0	65.8
	12:00:00	45.5	56.9	47.0	41.0	
	12:15:00	46.2	61.8	48.0	41.0	
	12:30:00	45.6	59.8	47.0	41.0	
	12:45:00	46.2	53.2	49.0	42.0	45.9
	13:00:00	47.8	63.7	50.0	42.0	
	13:15:00	59.5	77.9	62.0	45.0	
	13:30:00	58.8	83.3	59.0	44.0	
	13:45:00	60.3	83.7	60.0	44.0	58.4
	14:00:00	68.4	86.2	72.0	48.0	
	14:15:00	59.3	83.3	59.0	45.0	
	14:30:00	67.0	84.3	71.0	47.0	
	14:45:00	71.5	84.9	75.0	50.0	68.3
	15:00:00	59.1	80.1	58.0	44.0	
	15:15:00	52.2	75.7	52.0	44.0	
	15:30:00	49.0	58.5	51.0	43.0	
	15:45:00	49.0	66.0	50.0	43.0	54.5
	16:00:00	48.1	57.3	50.0	42.0	
	16:15:00	47.7	59.7	50.0	42.0	
	16:30:00	47.3	60.6	50.0	42.0	
	16:45:00	55.7	76.7	49.0	42.0	51.4
	17:00:00	47.1	57.7	49.0	42.0	
	17:15:00	47.1	55.5	49.0	42.0	
	17:30:00	47.5	67.5	48.0	42.0	
	17:45:00	46.5	56.8	48.0	42.0	47.1
	18:00:00	61.8	88.3	53.0	42.0	
	18:15:00	46.1	60.2	48.0	42.0	
	18:30:00	47.5	68.6	48.0	42.0	
	18:45:00	46.6	58.1	48.0	42.0	56.2
	19:00:00	46.6	57.7	49.0	41.0	
	19:15:00	46.9	59.1	48.0	42.0	
	19:30:00	45.6	54.9	47.0	43.0	
	19:45:00	47.0	64.0	48.0	43.0	46.6
	20:00:00	45.9	56.7	48.0	42.0	
	20:15:00	45.3	53.5	47.0	42.0	
	20:30:00	46.1	68.9	47.0	42.0	
	20:45:00	45.0	52.6	46.0	42.0	45.6
	21:00:00	46.2	69.0	46.0	42.0	
	21:15:00	44.1	53.7	45.0	42.0	
	21:30:00	43.8	51.8	45.0	41.0	
	21:45:00	44.5	54.5	46.0	42.0	44.8
	22:00:00	44.5	59.4	45.0	42.0	
	22:15:00	44.1	52.4	45.0	42.0	
	22:30:00	43.5	52.1	44.0	41.0	
	22:45:00	44.4	54.3	45.0	42.0	44.1
	23:00:00	43.1	54.1	44.0	41.0	
	23:15:00	43.5	52.7	45.0	41.0	
	23:30:00	43.4	54.9	43.0	41.0	
	23:45:00	42.3	48.1	42.0	41.0	43.1
7/9/2020	0:00:00	42.6	47.4	43.0	41.0	
	0:15:00	43.5	55.5	44.0	41.0	
	0:30:00	42.9	48.9	43.0	42.0	
	0:45:00	42.7	47.6	43.0	42.0	42.9
	1:00:00	42.7	46.0	43.0	41.0	
	1:15:00	42.8	47.2	43.0	41.0	
	1:30:00	42.7	44.1	43.0	42.0	
	1:45:00	42.4	43.3	42.0	41.0	42.7
	2:00:00	42.4	45.3	42.0	42.0	
	2:15:00	42.5	47.6	42.0	42.0	
	2:30:00	42.6	45.7	43.0	42.0	
	2:45:00	42.8	53.2	43.0	41.0	42.6
	3:00:00	42.4	49.2	42.0	41.0	
	3:15:00	42.5	46.5	43.0	41.0	

3:30:00	42.7	46.1	43.0	42.0	
3:45:00	42.9	51.3	43.0	41.0	42.6
4:00:00	42.8	52.4	43.0	41.0	
4:15:00	43.6	51.0	44.0	41.0	
4:30:00	44.3	51.0	45.0	42.0	
4:45:00	48.0	56.0	51.0	42.0	45.2
5:00:00	48.8	61.3	50.0	42.0	
5:15:00	45.8	59.7	47.0	42.0	
5:30:00	46.4	54.3	48.0	43.0	
5:45:00	48.9	68.3	49.0	42.0	47.7
6:00:00	46.1	57.7	48.0	42.0	
6:15:00	47.2	62.0	48.0	42.0	
6:30:00	47.4	62.3	49.0	42.0	
6:45:00	59.0	80.5	53.0	43.0	53.7
7:00:00	47.1	63.1	48.0	42.0	
7:15:00	46.3	58.5	48.0	42.0	
7:30:00	47.2	57.5	50.0	42.0	
7:45:00	47.2	57.7	49.0	42.0	47.0
8:00:00	46.9	56.1	50.0	42.0	
8:15:00	46.8	59.6	49.0	42.0	
8:30:00	45.4	54.8	47.0	42.0	
8:45:00	44.7	53.8	46.0	41.0	46.0
9:00:00	47.8	62.9	50.0	42.0	
9:15:00	46.3	63.2	48.0	41.0	
9:30:00	46.3	66.3	47.0	42.0	
9:45:00	47.2	63.7	50.0	42.0	46.9
10:00:00	46.1	56.7	48.0	42.0	
10:15:00	47.6	57.7	50.0	42.0	
10:30:00	45.9	53.4	48.0	42.0	
10:45:00	46.1	57.5	48.0	41.0	46.5
11:00:00	47.1	59.3	50.0	42.0	
11:15:00	71.7	96.5	56.0	42.0	
11:30:00	46.4	56.5	48.0	42.0	
11:45:00	46.5	54.1	48.0	42.0	65.7
12:00:00	47.0	61.2	48.0	43.0	
12:15:00	47.2	66.5	48.0	43.0	
12:30:00	46.5	54.5	48.0	43.0	
12:45:00	46.5	55.2	48.0	42.0	46.8
13:00:00	47.2	57.3	50.0	42.0	
13:15:00	48.7	67.5	48.0	42.0	
13:30:00	48.8	67.0	49.0	41.0	
13:45:00	46.7	60.1	48.0	42.0	47.9
14:00:00	46.1	54.3	48.0	42.0	
14:15:00	46.3	58.8	48.0	42.0	
14:30:00	46.2	54.9	49.0	42.0	
14:45:00	46.0	62.5	47.0	41.0	46.2
15:00:00	46.8	59.1	49.0	42.0	
15:15:00	46.1	54.9	48.0	41.0	
15:30:00	45.9	58.9	48.0	41.0	
15:45:00	46.5	62.4	49.0	41.0	46.3
16:00:00	46.1	56.6	48.0	41.0	
16:15:00	45.5	60.4	47.0	41.0	
16:30:00	47.3	58.8	50.0	41.0	
16:45:00	46.2	57.8	49.0	41.0	46.3
17:00:00	46.1	58.0	48.0	41.0	
17:15:00	45.5	58.1	47.0	41.0	
17:30:00	44.3	52.4	46.0	41.0	
17:45:00	45.5	55.9	47.0	41.0	45.4
18:00:00	46.7	68.7	47.0	41.0	
18:15:00	46.0	60.7	47.0	41.0	
18:30:00	45.3	54.4	47.0	42.0	
18:45:00	46.0	56.8	48.0	41.0	46.0
19:00:00	45.6	55.0	47.0	42.0	
19:15:00	66.7	92.1	56.0	42.0	
19:30:00	45.6	60.1	47.0	41.0	
19:45:00	45.2	57.3	47.0	41.0	60.8
20:00:00	44.8	55.7	46.0	41.0	
20:15:00	44.5	50.9	46.0	42.0	
20:30:00	44.6	56.8	46.0	42.0	

	20:45:00	45.0	54.0	46.0	42.0	44.7
	21:00:00	44.9	53.3	46.0	42.0	
	21:15:00	45.1	54.9	47.0	42.0	
	21:30:00	44.7	57.7	46.0	42.0	
	21:45:00	44.3	49.3	46.0	42.0	44.8
	22:00:00	44.3	55.2	46.0	42.0	
	22:15:00	43.9	52.1	45.0	42.0	
	22:30:00	43.9	53.6	45.0	42.0	
	22:45:00	44.4	58.1	45.0	42.0	44.1
	23:00:00	43.9	48.9	45.0	42.0	
	23:15:00	44.9	59.1	47.0	42.0	
	23:30:00	42.9	50.7	43.0	42.0	
	23:45:00	42.8	50.1	43.0	41.0	43.7
7/10/2020	0:00:00	43.3	56.5	44.0	42.0	
	0:15:00	42.6	46.1	43.0	41.0	
	0:30:00	42.8	47.3	43.0	42.0	
	0:45:00	42.7	46.8	43.0	41.0	42.9
	1:00:00	42.4	46.9	43.0	41.0	
	1:15:00	42.3	47.8	42.0	41.0	
	1:30:00	42.9	55.0	42.0	41.0	
	1:45:00	43.2	55.6	43.0	42.0	42.7
	2:00:00	42.6	47.3	43.0	42.0	
	2:15:00	42.9	55.8	43.0	42.0	
	2:30:00	42.6	52.0	42.0	41.0	
	2:45:00	42.9	46.6	43.0	42.0	42.8
	3:00:00	42.7	49.6	43.0	41.0	
	3:15:00	43.1	58.2	43.0	41.0	
	3:30:00	42.7	56.6	43.0	41.0	
	3:45:00	43.2	52.9	44.0	41.0	42.9
	4:00:00	43.2	49.9	44.0	42.0	
	4:15:00	42.9	50.0	43.0	42.0	
	4:30:00	45.7	56.5	48.0	42.0	
	4:45:00	47.3	60.5	49.0	43.0	45.2
	5:00:00	49.8	58.5	53.0	43.0	
	5:15:00	54.6	75.7	56.0	42.0	
	5:30:00	46.3	54.1	48.0	42.0	
	5:45:00	46.1	60.5	47.0	43.0	50.7
	6:00:00	45.8	53.5	47.0	43.0	
	6:15:00	46.9	54.5	48.0	43.0	
	6:30:00	47.2	58.3	49.0	43.0	
	6:45:00	46.2	54.0	48.0	43.0	46.6
	7:00:00	47.3	64.3	48.0	43.0	
	7:15:00	48.2	56.4	50.0	43.0	
	7:30:00	48.1	62.9	50.0	43.0	
	7:45:00	47.4	63.3	48.0	44.0	47.8
	8:00:00	47.0	54.5	49.0	43.0	
	8:15:00	46.9	55.9	48.0	43.0	
	8:30:00	46.8	53.7	49.0	42.0	
	8:45:00	46.6	55.9	48.0	43.0	46.8
	9:00:00	47.2	59.2	49.0	43.0	
	9:15:00	46.7	55.7	48.0	42.0	
	9:30:00	47.6	61.7	49.0	42.0	
	9:45:00	47.6	60.9	49.0	42.0	47.3
	10:00:00	46.6	58.5	49.0	42.0	
	10:15:00	48.3	65.4	49.0	42.0	
	10:30:00	46.8	56.9	50.0	42.0	
	10:45:00	73.4	98.5	54.0	43.0	67.4
	11:00:00	47.5	59.7	49.0	42.0	
	11:15:00	47.4	58.9	49.0	43.0	
	11:30:00	47.2	64.5	49.0	43.0	
	11:45:00	47.2	59.6	50.0	42.0	47.3
	12:00:00	47.2	62.5	48.0	43.0	
	12:15:00	47.5	56.1	49.0	43.0	
	12:30:00	46.6	55.6	48.0	43.0	
	12:45:00	47.5	59.1	49.0	44.0	47.2
	13:00:00	48.5	63.9	50.0	43.0	
	13:15:00	48.2	57.6	51.0	43.0	
	13:30:00	48.1	61.7	50.0	42.0	
	13:45:00	47.6	56.1	50.0	42.0	48.1

14:00:00	48.1	60.4	50.0	43.0	
14:15:00	46.1	55.0	48.0	42.0	
14:30:00	47.2	58.0	50.0	42.0	
14:45:00	47.4	61.4	50.0	42.0	47.3
15:00:00	47.8	64.1	49.0	43.0	
15:15:00	46.0	54.5	47.0	43.0	
15:30:00	47.7	61.3	49.0	43.0	
15:45:00	47.2	59.8	48.0	43.0	47.2
16:00:00	49.0	68.6	50.0	44.0	
16:15:00	49.4	57.2	51.0	45.0	
16:30:00	50.1	63.5	52.0	46.0	
16:45:00	50.7	67.7	52.0	44.0	49.8
17:00:00	49.9	62.5	51.0	44.0	
17:15:00	48.5	56.5	50.0	44.0	
17:30:00	48.1	55.3	50.0	43.0	
17:45:00	51.7	72.9	50.0	44.0	49.8
18:00:00	48.0	56.8	50.0	44.0	
18:15:00	48.2	58.4	49.0	44.0	
18:30:00	67.1	92.5	58.0	44.0	
18:45:00	46.6	55.6	48.0	44.0	61.2
19:00:00	46.4	52.4	48.0	43.0	
19:15:00	46.3	62.0	47.0	43.0	46.4
19:30:00	65.1	83.9	67.0	43.0	


Seneca Meadows Inc.
2020 Annual Sound Survey
Location 9 Logging
Sound Level, Leq, dBA
100
90
80
70
60
50
40
30
20
10
0
Rain
7:15:00
10:15:00
13:15:00
16:15:00
19:15:00
22:15:00
1:15:00
4:15:00
7:15:00
10:15:00
13:15:00
16:15:00
19:15:00
22:15:00
1:15:00
4:15:00
7:15:00
10:15:00
13:15:00
16:15:00
19:15:00
22:15:00
1:15:00
4:15:00
7:15:00
10:15:00
13:15:00
16:15:00
19:15:00
22:15:00
1:15:00
4:15:00
7:15:00
10:15:00
13:15:00
16:15:00
Time
July 6 - July 10, 2020
Leq-1hr
Leq-15min

****

Filename LOC9
Test Location 9
Employee Name
Employee No.
Department
Seneca Meadows Inc.
2019 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
Calibrator type Metrosonics CL304 3067
Calibrator calibration date 4/17/2019

****

METROSONICS db-3080 V1.20 SERIAL #3996
Report printed on 7/12/2020 at 15:57:31

Seneca Meadows Inc.
2020 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
East Aurora, New York

Logging started at	7:15:00
Total logging time	4 DAYS 12:02:13
Logging stopped at	19:17:13
Total intervals	433
Interval length	0:15:00
Auto Stop	NO
Clock synch	YES
Response Rate	SLOW
Filter	A-WEIGHTED
Pre-Test Calibration Time	7/3/2020 at 19:15:46
Pre-Test Calibration Range	40.2 to 140.2 dB
Post-Test Calibration Time	7/12/2020 at 15:36:53
Post-Test Calibration Range	40.3 to 140.3
Cut-off used for time history Lav	NONE

<<< SUMMARY REPORT FOR TEST NUMBER 1 OF 1 >>>

Exchange Rate	3dB	
Cutoffs	60dB	60dB
Ceiling	115dB	
DOSE Criterion level	90dB	
DOSE Criterion length	8 hours	
Lav(60)	60.8dB	
Lav(60)	60.7dB	
Lav(60)	60.7dB	
SEL	116.5dB	
TWA	72.1dB	
TWA(60)	71.9dB	
TWA(60)	71.9dB	
Lmax	99.2dB	7/8/2020 at 13:32:59
Lpk	130.5dB	7/8/2020 at 14:43:36
Time over 115 dB	00:00.0	
DOSE(60)	1.54%	
DOSE(60)	1.54%	

<<< TIME HISTORY REPORT FOR TEST NUMBER 1 OF 1 >>>

	START TIME	Leq(15-min) dBA	Lmax dBA	L(10.0) dBA	L(99.0) dBA	Leq(1-hr) dBA
7/6/2020						
	7:15:00	57.3	84.4	49.2	42.2	
	7:30:00	47.5	55.6	49.2	43.2	
	7:45:00	46.6	60.9	48.2	43.2	53.3
	8:00:00	46.7	58.4	48.2	43.2	
	8:15:00	46.7	61.9	48.2	43.2	
	8:30:00	48.2	61.7	50.2	44.2	
	8:45:00	48.2	57.2	50.2	45.2	47.5
	9:00:00	51.6	67.6	53.2	44.2	
	9:15:00	47.1	55.6	48.2	44.2	
	9:30:00	46.6	57.6	48.2	43.2	
	9:45:00	47.9	53.5	49.2	44.2	48.8
	10:00:00	47.1	56.8	49.2	43.2	
	10:15:00	46.9	53.0	48.2	43.2	
	10:30:00	46.7	53.4	48.2	43.2	
	10:45:00	46.5	58.0	48.2	42.2	46.8
	11:00:00	47.1	56.6	49.2	43.2	
	11:15:00	46.8	54.0	48.2	43.2	
	11:30:00	49.1	63.6	52.2	43.2	
	11:45:00	51.0	72.2	49.2	43.2	48.8
	12:00:00	46.1	57.1	47.2	42.2	
	12:15:00	46.4	53.6	48.2	43.2	
	12:30:00	48.7	66.4	50.2	44.2	
	12:45:00	48.4	61.1	49.2	43.2	47.6
	13:00:00	47.0	54.9	49.2	43.2	
	13:15:00	45.9	63.6	47.2	42.2	
	13:30:00	46.6	53.9	49.2	42.2	
	13:45:00	46.7	55.5	48.2	43.2	46.6
	14:00:00	47.4	56.4	50.2	43.2	
	14:15:00	47.1	63.4	48.2	43.2	
	14:30:00	47.5	59.1	49.2	44.2	
	14:45:00	47.1	60.4	48.2	43.2	47.3
	15:00:00	47.5	64.4	49.2	43.2	
	15:15:00	45.8	66.8	46.2	42.2	
	15:30:00	47.9	62.0	50.2	44.2	
	15:45:00	47.2	54.0	50.2	43.2	47.2
	16:00:00	48.6	68.8	50.2	42.2	
	16:15:00	47.5	60.4	50.2	42.2	
	16:30:00	45.8	58.4	47.2	42.2	
	16:45:00	48.7	68.4	51.2	42.2	47.8
	17:00:00	47.9	63.2	49.2	42.2	
	17:15:00	45.6	60.0	46.2	41.2	
	17:30:00	45.2	68.0	44.2	41.2	
	17:45:00	45.5	60.8	46.2	41.2	46.2
	18:00:00	42.8	49.7	44.2	41.2	
	18:15:00	42.6	53.2	43.2	41.2	
	18:30:00	45.3	60.5	47.2	41.2	
	18:45:00	45.8	53.6	50.2	41.2	44.4
	19:00:00	44.3	53.3	46.2	41.2	
	19:15:00	44.2	57.7	44.2	41.2	
	19:30:00	42.6	47.6	43.2	41.2	
	19:45:00	43.2	54.9	44.2	41.2	43.6
	20:00:00	45.2	54.4	48.2	41.2	
	20:15:00	45.4	60.0	47.2	41.2	
	20:30:00	43.0	55.2	44.2	41.2	
	20:45:00	44.1	54.9	46.2	41.2	44.5
	21:00:00	55.8	84.8	42.2	41.2	
	21:15:00	41.6	47.2	42.2	41.2	
	21:30:00	41.5	43.6	42.2	41.2	
	21:45:00	41.7	51.8	42.2	40.2	50.2
	22:00:00	41.6	45.8	42.2	40.2	
	22:15:00	41.6	54.2	42.2	40.2	
	22:30:00	41.8	47.6	42.2	41.2	
	22:45:00	42.8	51.7	43.2	41.2	42.0
	23:00:00	43.0	51.6	43.2	41.2	

	23:15:00	42.1	44.4	42.2	41.2	
	23:30:00	42.1	45.6	43.2	41.2	
	23:45:00	41.7	47.2	42.2	40.2	42.3
7/7/2020	0:00:00	41.5	60.3	41.2	40.2	
	0:15:00	40.9	41.7	41.2	40.2	
	0:30:00	41.0	42.0	41.2	40.2	
	0:45:00	41.1	44.0	41.2	40.2	41.1
	1:00:00	41.2	42.4	41.2	40.2	
	1:15:00	41.1	42.7	41.2	40.2	
	1:30:00	41.2	43.2	41.2	40.2	
	1:45:00	41.3	45.5	41.2	40.2	41.2
	2:00:00	41.5	43.2	42.2	40.2	
	2:15:00	41.2	43.2	41.2	40.2	
	2:30:00	41.1	42.1	41.2	40.2	
	2:45:00	41.1	43.9	41.2	40.2	41.2
	3:00:00	41.5	45.2	42.2	40.2	
	3:15:00	41.4	43.1	41.2	40.2	
	3:30:00	41.6	45.6	42.2	40.2	
	3:45:00	41.3	42.8	41.2	41.2	41.5
	4:00:00	41.8	44.8	42.2	41.2	
	4:15:00	41.4	43.2	41.2	40.2	
	4:30:00	42.1	45.1	42.2	41.2	
	4:45:00	43.6	46.8	44.2	42.2	42.3
	5:00:00	44.7	52.8	46.2	42.2	
	5:15:00	44.1	47.7	45.2	42.2	
	5:30:00	45.3	52.9	46.2	43.2	
	5:45:00	45.7	52.7	47.2	43.2	45.0
	6:00:00	45.2	53.6	46.2	43.2	
	6:15:00	46.8	55.6	48.2	44.2	
	6:30:00	46.8	53.6	48.2	43.2	
	6:45:00	45.2	49.7	46.2	43.2	46.1
	7:00:00	46.3	56.9	48.2	43.2	
	7:15:00	46.2	51.7	47.2	43.2	
	7:30:00	47.2	55.9	48.2	44.2	
	7:45:00	47.6	58.1	49.2	44.2	46.9
	8:00:00	47.7	55.0	49.2	44.2	
	8:15:00	48.1	60.0	50.2	44.2	
	8:30:00	48.2	59.5	50.2	44.2	
	8:45:00	49.3	70.5	49.2	44.2	48.4
	9:00:00	50.7	73.6	48.2	44.2	
	9:15:00	47.7	64.6	49.2	44.2	
	9:30:00	50.9	72.8	48.2	44.2	
	9:45:00	46.6	52.0	48.2	44.2	49.4
	10:00:00	46.9	65.7	47.2	44.2	
	10:15:00	46.3	51.2	47.2	44.2	
	10:30:00	48.0	61.6	49.2	45.2	
	10:45:00	48.3	64.2	49.2	44.2	47.4
	11:00:00	46.5	54.2	48.2	44.2	
	11:15:00	45.9	54.8	47.2	43.2	
	11:30:00	46.9	60.8	48.2	44.2	
	11:45:00	48.2	56.4	50.2	44.2	47.0
	12:00:00	48.3	65.2	50.2	44.2	
	12:15:00	51.2	68.3	51.2	43.2	
	12:30:00	47.0	60.8	49.2	43.2	
	12:45:00	46.7	54.8	48.2	43.2	48.7
	13:00:00	45.4	51.6	47.2	42.2	
	13:15:00	45.5	52.5	47.2	43.2	
	13:30:00	46.7	59.2	48.2	43.2	
	13:45:00	45.4	60.4	46.2	43.2	45.8
	14:00:00	44.8	53.1	46.2	42.2	
	14:15:00	45.0	52.6	46.2	42.2	
	14:30:00	47.2	62.4	48.2	43.2	
	14:45:00	46.4	55.9	48.2	43.2	46.0
	15:00:00	46.3	54.8	48.2	43.2	
	15:15:00	46.1	55.2	47.2	43.2	
	15:30:00	47.1	60.8	48.2	43.2	
	15:45:00	45.0	52.5	46.2	42.2	46.2
	16:00:00	46.1	58.8	47.2	42.2	
	16:15:00	44.8	59.2	46.2	42.2	

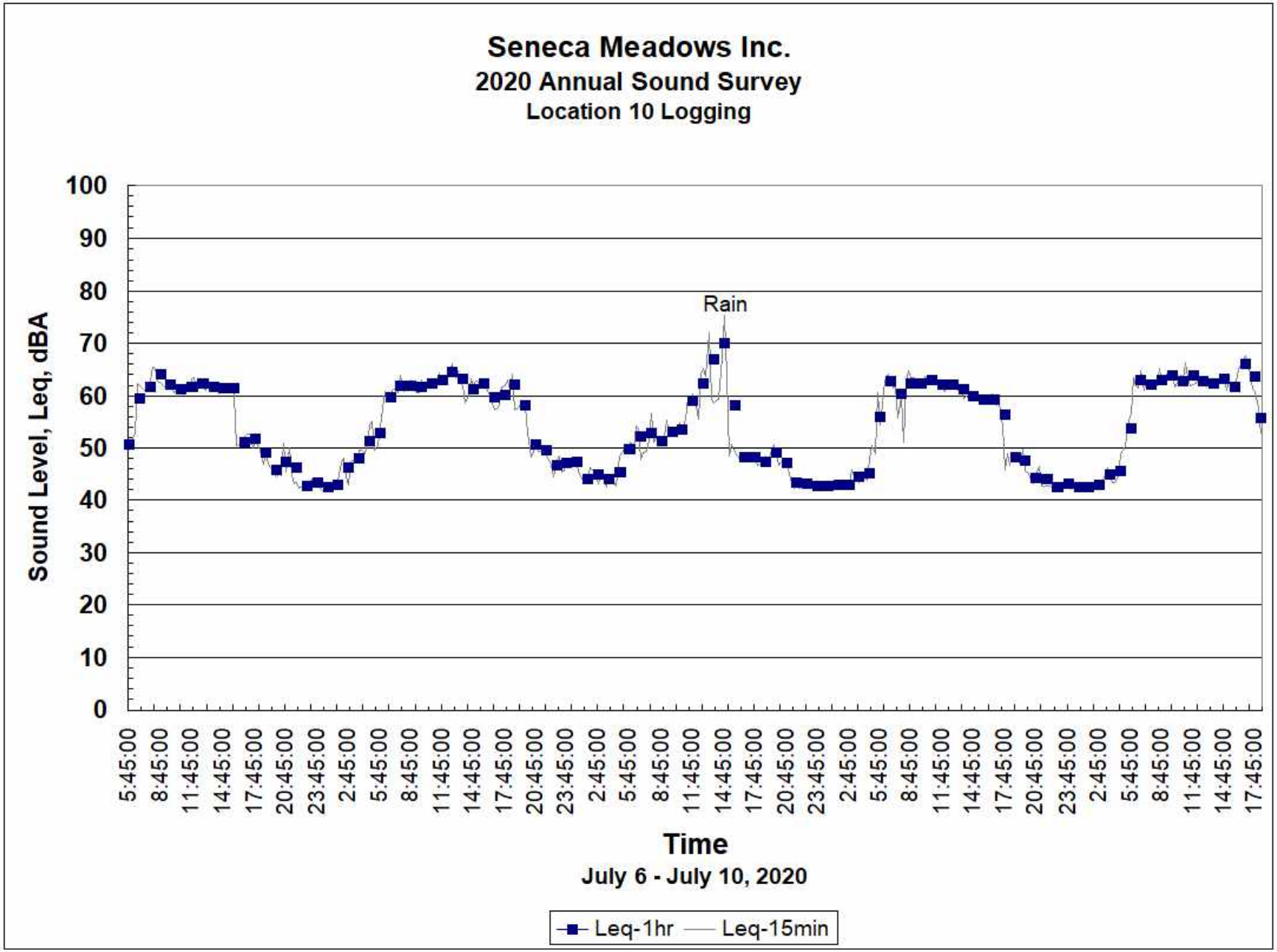
	16:30:00	49.0	70.4	47.2	42.2	
	16:45:00	44.3	51.6	46.2	42.2	46.5
	17:00:00	45.2	68.4	44.2	42.2	
	17:15:00	44.1	61.9	45.2	41.2	
	17:30:00	45.9	66.7	47.2	42.2	
	17:45:00	46.9	60.0	50.2	42.2	45.6
	18:00:00	45.6	53.3	48.2	42.2	
	18:15:00	43.9	53.3	44.2	42.2	
	18:30:00	44.3	59.9	45.2	41.2	
	18:45:00	44.1	63.2	43.2	41.2	44.5
	19:00:00	43.4	48.8	44.2	42.2	
	19:15:00	44.0	49.8	45.2	42.2	
	19:30:00	44.4	60.0	44.2	42.2	
	19:45:00	47.8	64.8	50.2	41.2	45.3
	20:00:00	42.3	47.5	43.2	41.2	
	20:15:00	43.0	48.8	44.2	41.2	
	20:30:00	43.3	54.4	44.2	41.2	
	20:45:00	42.7	47.1	44.2	41.2	42.8
	21:00:00	42.1	50.4	42.2	41.2	
	21:15:00	49.7	66.0	45.2	41.2	
	21:30:00	41.6	45.6	42.2	41.2	
	21:45:00	41.4	44.8	41.2	40.2	45.4
	22:00:00	41.5	45.2	42.2	40.2	
	22:15:00	41.5	56.4	41.2	40.2	
	22:30:00	42.1	45.1	42.2	41.2	
	22:45:00	42.2	44.4	43.2	41.2	41.8
	23:00:00	42.0	48.0	42.2	41.2	
	23:15:00	41.3	46.8	41.2	40.2	
	23:30:00	41.2	44.0	41.2	40.2	
	23:45:00	41.1	42.5	41.2	40.2	41.4
7/8/2020	0:00:00	40.9	43.2	41.2	40.2	
	0:15:00	41.0	42.4	41.2	40.2	
	0:30:00	41.0	42.0	41.2	40.2	
	0:45:00	41.1	46.5	41.2	40.2	41.0
	1:00:00	41.1	41.8	41.2	40.2	
	1:15:00	41.1	42.0	41.2	40.2	
	1:30:00	41.0	42.0	41.2	40.2	
	1:45:00	41.1	42.0	41.2	40.2	41.1
	2:00:00	41.0	42.0	41.2	40.2	
	2:15:00	41.2	42.4	41.2	40.2	
	2:30:00	41.3	42.5	41.2	40.2	
	2:45:00	41.2	42.0	41.2	40.2	41.2
	3:00:00	41.2	42.9	41.2	40.2	
	3:15:00	41.3	43.6	41.2	40.2	
	3:30:00	41.4	42.9	41.2	41.2	
	3:45:00	41.4	42.4	41.2	40.2	41.3
	4:00:00	41.5	42.8	41.2	41.2	
	4:15:00	41.5	42.3	41.2	41.2	
	4:30:00	42.1	47.6	42.2	41.2	
	4:45:00	43.2	48.0	44.2	42.2	42.1
	5:00:00	43.6	52.8	44.2	42.2	
	5:15:00	45.0	55.5	46.2	42.2	
	5:30:00	47.3	59.6	49.2	43.2	
	5:45:00	46.6	57.6	49.2	43.2	45.9
	6:00:00	46.1	55.3	47.2	42.2	
	6:15:00	47.7	62.8	48.2	43.2	
	6:30:00	47.6	70.4	48.2	43.2	
	6:45:00	45.9	54.4	47.2	42.2	46.9
	7:00:00	46.3	57.7	48.2	42.2	
	7:15:00	47.3	54.7	50.2	43.2	
	7:30:00	49.6	69.6	52.2	42.2	
	7:45:00	45.5	53.6	47.2	42.2	47.5
	8:00:00	44.9	53.6	46.2	42.2	
	8:15:00	45.2	54.8	46.2	42.2	
	8:30:00	47.6	67.6	50.2	42.2	
	8:45:00	45.8	53.9	48.2	42.2	46.0
	9:00:00	45.6	57.2	46.2	42.2	
	9:15:00	45.7	55.6	47.2	42.2	
	9:30:00	47.4	57.2	50.2	42.2	

	9:45:00	46.3	55.6	48.2	42.2	46.3
	10:00:00	46.9	57.1	49.2	42.2	
	10:15:00	51.4	70.4	52.2	42.2	
	10:30:00	46.5	57.2	49.2	42.2	
	10:45:00	45.7	57.6	47.2	42.2	48.3
	11:00:00	49.5	68.3	49.2	42.2	
	11:15:00	44.1	53.3	46.2	41.2	
	11:30:00	44.1	54.3	45.2	41.2	
	11:45:00	44.7	54.8	46.2	41.2	46.3
	12:00:00	44.2	49.8	46.2	41.2	
	12:15:00	43.1	56.4	44.2	41.2	
	12:30:00	43.5	52.7	44.2	41.2	
	12:45:00	43.9	59.5	45.2	41.2	43.7
	13:00:00	56.0	80.0	56.2	42.2	
	13:15:00	79.2	96.8	82.2	50.2	
	13:30:00	77.2	99.2	78.2	43.2	
	13:45:00	74.4	95.2	75.2	43.2	76.1
	14:00:00	78.3	97.2	81.2	47.2	
	14:15:00	62.4	85.0	61.2	45.2	
	14:30:00	81.5	97.6	85.2	54.2	
	14:45:00	80.7	97.8	84.2	47.2	79.1
	15:00:00	54.8	79.6	55.2	44.2	
	15:15:00	50.5	76.8	47.2	42.2	
	15:30:00	48.7	66.4	50.2	43.2	
	15:45:00	46.8	54.8	50.2	42.2	51.3
	16:00:00	46.3	54.4	48.2	42.2	
	16:15:00	46.6	58.8	48.2	42.2	
	16:30:00	47.4	57.6	49.2	42.2	
	16:45:00	46.2	54.5	48.2	42.2	46.7
	17:00:00	47.6	61.3	50.2	42.2	
	17:15:00	46.6	57.6	48.2	42.2	
	17:30:00	46.4	59.4	48.2	42.2	
	17:45:00	46.1	57.2	47.2	41.2	46.7
	18:00:00	48.2	64.0	50.2	41.2	
	18:15:00	48.7	61.2	51.2	42.2	
	18:30:00	47.9	56.8	50.2	44.2	
	18:45:00	48.4	60.0	51.2	41.2	48.3
	19:00:00	46.6	56.8	48.2	41.2	
	19:15:00	46.6	54.8	48.2	42.2	
	19:30:00	47.0	55.1	48.2	41.2	
	19:45:00	46.3	54.0	48.2	41.2	46.6
	20:00:00	44.0	52.0	45.2	41.2	
	20:15:00	43.6	52.7	44.2	41.2	
	20:30:00	42.4	46.1	43.2	41.2	
	20:45:00	42.5	51.1	44.2	41.2	43.2
	21:00:00	42.9	56.8	43.2	41.2	
	21:15:00	41.7	44.1	42.2	41.2	
	21:30:00	41.6	50.8	41.2	41.2	
	21:45:00	41.9	54.8	42.2	41.2	42.1
	22:00:00	41.5	47.9	42.2	41.2	
	22:15:00	41.5	47.7	42.2	41.2	
	22:30:00	41.6	46.3	42.2	41.2	
	22:45:00	41.8	56.4	41.2	40.2	41.6
	23:00:00	41.3	44.4	41.2	40.2	
	23:15:00	41.2	42.8	41.2	40.2	
	23:30:00	41.4	44.2	41.2	40.2	
	23:45:00	41.2	42.8	41.2	41.2	41.3
7/9/2020	0:00:00	41.5	47.7	41.2	41.2	
	0:15:00	41.4	45.3	41.2	41.2	
	0:30:00	41.4	44.0	41.2	41.2	
	0:45:00	41.5	47.6	42.2	41.2	41.5
	1:00:00	41.3	43.7	41.2	41.2	
	1:15:00	41.7	59.2	41.2	41.2	
	1:30:00	41.5	42.9	41.2	41.2	
	1:45:00	41.3	46.1	41.2	41.2	41.5
	2:00:00	41.6	42.4	41.2	41.2	
	2:15:00	41.5	49.4	41.2	41.2	
	2:30:00	41.5	42.8	41.2	41.2	
	2:45:00	41.4	47.6	41.2	41.2	41.5

3:00:00	41.4	43.8	41.2	40.2	
3:15:00	41.3	42.9	41.2	40.2	
3:30:00	41.4	44.3	41.2	41.2	
3:45:00	41.5	43.5	42.2	41.2	41.4
4:00:00	41.8	44.0	42.2	41.2	
4:15:00	41.9	49.6	42.2	41.2	
4:30:00	41.9	44.8	42.2	41.2	
4:45:00	44.0	48.8	45.2	42.2	42.5
5:00:00	44.5	46.6	45.2	43.2	
5:15:00	44.6	47.6	45.2	43.2	
5:30:00	45.4	50.0	46.2	43.2	
5:45:00	45.6	55.6	46.2	43.2	45.1
6:00:00	45.1	55.2	46.2	43.2	
6:15:00	45.5	55.9	47.2	43.2	
6:30:00	47.2	56.4	49.2	43.2	
6:45:00	45.9	56.9	46.2	43.2	46.0
7:00:00	47.3	60.0	48.2	43.2	
7:15:00	46.3	56.8	48.2	43.2	
7:30:00	47.4	56.6	50.2	43.2	
7:45:00	46.6	60.0	48.2	43.2	46.9
8:00:00	46.9	57.2	48.2	44.2	
8:15:00	46.7	55.2	48.2	43.2	
8:30:00	46.4	53.4	47.2	44.2	
8:45:00	46.8	55.0	49.2	43.2	46.7
9:00:00	46.5	54.4	49.2	42.2	
9:15:00	45.6	56.0	47.2	42.2	
9:30:00	45.6	60.4	47.2	42.2	
9:45:00	45.8	52.0	47.2	42.2	45.9
10:00:00	46.2	56.0	48.2	42.2	
10:15:00	45.2	50.6	46.2	42.2	
10:30:00	47.4	60.4	49.2	43.2	
10:45:00	45.9	52.9	47.2	42.2	46.2
11:00:00	47.9	60.8	50.2	43.2	
11:15:00	50.4	69.6	50.2	44.2	
11:30:00	45.9	59.0	48.2	42.2	
11:45:00	47.8	58.4	50.2	43.2	48.3
12:00:00	47.0	58.7	48.2	42.2	
12:15:00	47.4	56.8	50.2	43.2	
12:30:00	47.5	69.6	46.2	42.2	
12:45:00	46.3	63.7	47.2	42.2	47.1
13:00:00	45.9	58.0	48.2	42.2	
13:15:00	49.3	56.8	51.2	44.2	
13:30:00	49.8	64.5	52.2	43.2	
13:45:00	48.8	58.0	52.2	42.2	48.7
14:00:00	47.2	56.0	49.2	42.2	
14:15:00	49.0	58.4	51.2	44.2	
14:30:00	48.3	62.9	50.2	45.2	
14:45:00	47.5	55.4	49.2	44.2	48.1
15:00:00	47.7	67.8	49.2	42.2	
15:15:00	48.1	62.8	50.2	43.2	
15:30:00	49.4	67.7	50.2	44.2	
15:45:00	49.1	58.6	51.2	44.2	48.6
16:00:00	45.8	56.8	49.2	41.2	
16:15:00	44.8	56.2	45.2	41.2	
16:30:00	43.6	52.4	44.2	41.2	
16:45:00	43.1	51.4	44.2	41.2	44.5
17:00:00	42.5	47.2	43.2	41.2	
17:15:00	41.8	50.4	42.2	40.2	
17:30:00	42.5	59.0	43.2	40.2	
17:45:00	43.6	53.7	45.2	40.2	42.6
18:00:00	43.9	55.2	45.2	41.2	
18:15:00	42.9	53.2	44.2	41.2	
18:30:00	41.5	45.2	42.2	40.2	
18:45:00	45.1	53.2	48.2	41.2	43.5
19:00:00	44.7	54.3	48.2	41.2	
19:15:00	47.3	64.8	46.2	41.2	
19:30:00	41.9	46.7	42.2	41.2	
19:45:00	43.9	53.6	46.2	41.2	44.9
20:00:00	42.8	51.6	44.2	41.2	

	20:15:00	41.9	44.0	42.2	41.2	
	20:30:00	42.3	48.8	43.2	41.2	
	20:45:00	44.6	60.8	44.2	41.2	43.0
	21:00:00	43.4	56.0	44.2	41.2	
	21:15:00	42.3	50.8	42.2	41.2	
	21:30:00	42.8	56.6	43.2	41.2	
	21:45:00	42.5	50.0	43.2	41.2	42.8
	22:00:00	42.5	50.0	42.2	41.2	
	22:15:00	42.1	47.9	42.2	41.2	
	22:30:00	41.8	49.6	42.2	41.2	
	22:45:00	41.7	48.0	42.2	41.2	42.0
	23:00:00	41.7	43.2	42.2	41.2	
	23:15:00	41.5	42.6	41.2	41.2	
	23:30:00	41.5	44.0	41.2	41.2	
	23:45:00	41.4	45.6	41.2	40.2	41.5
7/10/2020	0:00:00	41.6	46.2	41.2	41.2	
	0:15:00	41.5	42.9	41.2	41.2	
	0:30:00	41.6	42.8	42.2	41.2	
	0:45:00	41.3	43.2	41.2	41.2	41.5
	1:00:00	41.3	42.3	41.2	40.2	
	1:15:00	41.5	43.6	41.2	41.2	
	1:30:00	41.3	43.6	41.2	40.2	
	1:45:00	41.4	43.2	41.2	41.2	41.4
	2:00:00	41.4	42.8	41.2	40.2	
	2:15:00	41.4	42.8	41.2	41.2	
	2:30:00	41.4	49.5	41.2	41.2	
	2:45:00	41.5	43.6	42.2	41.2	41.4
	3:00:00	41.6	48.4	42.2	41.2	
	3:15:00	42.1	55.2	42.2	41.2	
	3:30:00	41.5	45.2	42.2	41.2	
	3:45:00	41.7	55.5	42.2	41.2	41.7
	4:00:00	41.5	45.2	41.2	40.2	
	4:15:00	41.6	43.3	42.2	41.2	
	4:30:00	42.4	46.4	43.2	41.2	
	4:45:00	43.5	46.8	44.2	42.2	42.3
	5:00:00	44.0	50.8	44.2	42.2	
	5:15:00	44.4	47.6	45.2	42.2	
	5:30:00	44.9	54.4	46.2	43.2	
	5:45:00	46.0	52.0	47.2	43.2	44.9
	6:00:00	45.1	49.8	46.2	43.2	
	6:15:00	46.4	53.0	48.2	43.2	
	6:30:00	59.1	76.0	56.2	43.2	
	6:45:00	45.4	54.0	46.2	43.2	53.6
	7:00:00	46.9	66.8	48.2	43.2	
	7:15:00	47.6	56.4	50.2	44.2	
	7:30:00	48.4	55.5	51.2	45.2	
	7:45:00	46.9	58.0	48.2	44.2	47.5
	8:00:00	46.2	55.2	48.2	43.2	
	8:15:00	48.6	65.1	50.2	43.2	
	8:30:00	46.2	52.8	47.2	43.2	
	8:45:00	47.9	59.2	49.2	44.2	47.4
	9:00:00	50.0	63.2	52.2	45.2	
	9:15:00	47.1	56.8	49.2	43.2	
	9:30:00	48.0	58.1	50.2	43.2	
	9:45:00	49.6	67.2	53.2	43.2	48.8
	10:00:00	46.6	57.3	48.2	43.2	
	10:15:00	47.1	55.6	49.2	42.2	
	10:30:00	53.8	75.2	52.2	43.2	
	10:45:00	50.2	66.8	52.2	44.2	50.4
	11:00:00	47.7	58.8	49.2	43.2	
	11:15:00	47.7	55.3	49.2	44.2	
	11:30:00	47.6	54.0	50.2	43.2	
	11:45:00	48.3	57.1	50.2	43.2	47.8
	12:00:00	47.1	56.7	48.2	43.2	
	12:15:00	47.3	55.2	48.2	43.2	
	12:30:00	48.2	60.0	50.2	44.2	
	12:45:00	47.1	57.6	49.2	42.2	47.4
	13:00:00	54.8	81.6	48.2	42.2	
	13:15:00	46.3	51.2	48.2	43.2	

13:30:00	46.4	56.4	48.2	42.2	
13:45:00	47.7	55.2	49.2	42.2	50.5
14:00:00	47.6	64.8	49.2	42.2	
14:15:00	47.9	61.2	49.2	42.2	
14:30:00	51.9	72.5	50.2	43.2	
14:45:00	48.0	58.4	50.2	44.2	49.3
15:00:00	50.8	73.1	50.2	44.2	
15:15:00	48.3	57.2	50.2	44.2	
15:30:00	52.7	66.0	55.2	44.2	
15:45:00	46.6	57.2	49.2	42.2	50.2
16:00:00	48.7	70.4	48.2	43.2	
16:15:00	48.7	57.8	51.2	43.2	
16:30:00	48.6	66.7	50.2	44.2	
16:45:00	46.7	62.8	48.2	43.2	48.3
17:00:00	48.4	68.9	48.2	43.2	
17:15:00	46.6	65.2	46.2	43.2	
17:30:00	45.6	59.2	46.2	42.2	
17:45:00	44.3	52.3	45.2	42.2	46.5
18:00:00	43.3	48.2	44.2	42.2	
18:15:00	44.3	62.7	44.2	41.2	
18:30:00	49.4	72.0	47.2	42.2	
18:45:00	43.7	49.2	45.2	41.2	46.0
19:00:00	45.3	74.0	44.2	41.2	45.3
19:15:00	71.4	85.2	75.2	42.2	


Seneca Meadows Inc.
2020 Annual Sound Survey
Location 10 Logging
Sound Level, Leq, dBA
100
90
80
70
60
50
40
30
20
10
0
Rain
5:45:00
8:45:00
11:45:00
14:45:00
17:45:00
20:45:00
23:45:00
2:45:00
5:45:00
8:45:00
11:45:00
14:45:00
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23:45:00
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5:45:00
8:45:00
11:45:00
14:45:00
17:45:00
20:45:00
23:45:00
2:45:00
5:45:00
8:45:00
11:45:00
14:45:00
17:45:00
Time
July 6 - July 10, 2020
Leq-1hr
Leq-15min

****

Filename LOC10
Test Location 10
Employee Name
Employee No.
Department
Seneca Meadows Inc.
2019 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
Calibrator type Metrosonics CL304 3067
Calibrator calibration date 4/17/2019

****

METROSONICS db-3080 V1.20 SERIAL #4684
Report printed on 8/6/2019 at 15:23:40 15:37:19

Seneca Meadows Inc.
2019 Annual Sound Survey
Aurora Acoustical
Consultants Inc.
East Aurora, New York

Logging started at	7/6/2020 at 5:45:00
Total logging time	4 DAYS 12:47:31
Logging stopped at	7/10/2020 at 18:32:31
Total intervals	436
Interval length	0:15:00
Auto Stop	NO
Clock synch	YES
Response Rate	SLOW
Filter	A-WEIGHTED
Pre-Test Calibration Time	7/3/2020 at 19:21:01
Pre-Test Calibration Range	39.3 to 139.3 dB
Post-Test Calibration Time	7/12/2020 at 15:47:34
Post-Test Calibration Range	39.4 to 139.4 dB
Cut-off used for time history Lav	NONE

<<< SUMMARY REPORT FOR TEST NUMBER 1 OF 1 >>>

Exchange Rate	3dB	
Cutoffs	60dB	60dB
Ceiling	115dB	
DOSE Criterion level	90dB	
DOSE Criterion length	8 hours	
Lav(60)	59.7dB	
Lav(60)	58.9dB	
Lav(60)	58.9dB	
SEL	115.5dB	
TWA	71.0dB	
TWA(60)	70.2dB	
TWA(60)	70.2dB	
Lmax	90.4dB	7/10/2020 at 6:45:53
Lpk	121.9dB	7/8/2020 at 14:51:50
Time over 115 dB	00:00.0	
DOSE(60)	1.03%	
DOSE(60)	1.03%	

<<< TIME HISTORY REPORT FOR TEST NUMBER 1 OF 1 >>>

	TIME	Leq(15-min) dBA	Lmax dBA	L(10.0) dBA	L(99.0) dBA	Leq(1-hr) dBA
7/6/2020						
	5:45:00	50.6	58.9	53.3	42.3	50.6
	6:00:00	51.0	57.8	53.3	44.3	
	6:15:00	52.8	63.4	58.3	44.3	
	6:30:00	62.3	64.8	63.3	59.3	
	6:45:00	61.8	72.9	63.3	59.3	59.5
	7:00:00	61.4	64.2	62.3	59.3	
	7:15:00	61.1	64.0	62.3	58.3	
	7:30:00	61.1	64.2	62.3	58.3	
	7:45:00	63.1	71.6	65.3	59.3	61.8
	8:00:00	65.4	77.3	69.3	60.3	
	8:15:00	65.2	79.5	69.3	52.3	
	8:30:00	62.8	72.8	65.3	58.3	
	8:45:00	62.3	74.5	63.3	58.3	64.1
	9:00:00	61.8	73.3	63.3	57.3	
	9:15:00	61.4	68.4	63.3	57.3	
	9:30:00	62.1	73.8	63.3	57.3	
	9:45:00	63.0	74.8	64.3	58.3	62.1
	10:00:00	60.6	68.3	62.3	56.3	
	10:15:00	61.1	73.3	62.3	56.3	
	10:30:00	60.8	68.4	62.3	57.3	
	10:45:00	61.9	74.8	63.3	56.3	61.1
	11:00:00	60.1	74.4	61.3	55.3	
	11:15:00	61.6	74.2	63.3	56.3	
	11:30:00	60.7	73.2	62.3	55.3	
	11:45:00	63.3	76.4	66.3	56.3	61.6
	12:00:00	63.4	76.0	65.3	56.3	
	12:15:00	61.1	76.7	62.3	55.3	
	12:30:00	62.8	76.8	64.3	57.3	
	12:45:00	61.6	75.0	63.3	56.3	62.3
	13:00:00	61.1	76.5	62.3	55.3	
	13:15:00	61.8	75.6	63.3	56.3	
	13:30:00	62.1	75.5	64.3	56.3	
	13:45:00	61.7	75.5	62.3	56.3	61.7
	14:00:00	61.4	76.4	62.3	56.3	
	14:15:00	60.4	76.4	62.3	55.3	
	14:30:00	62.3	76.5	62.3	56.3	
	14:45:00	61.7	75.4	62.3	56.3	61.5
	15:00:00	61.3	74.0	62.3	56.3	
	15:15:00	62.1	75.4	63.3	56.3	
	15:30:00	61.8	74.8	62.3	56.3	
	15:45:00	60.2	78.0	62.3	44.3	61.4
	16:00:00	50.5	66.8	53.3	43.3	
	16:15:00	50.6	60.0	54.3	44.3	
	16:30:00	50.7	63.2	54.3	44.3	
	16:45:00	52.3	65.8	55.3	44.3	51.1
	17:00:00	52.7	69.0	56.3	44.3	
	17:15:00	52.6	67.2	55.3	44.3	
	17:30:00	50.1	64.9	53.3	43.3	
	17:45:00	51.6	63.6	55.3	43.3	51.9
	18:00:00	50.7	61.6	54.3	44.3	
	18:15:00	49.5	61.6	53.3	43.3	
	18:30:00	46.9	63.6	49.3	42.3	
	18:45:00	48.9	65.2	50.3	42.3	49.2
	19:00:00	46.9	58.6	49.3	42.3	
	19:15:00	46.3	55.2	48.3	42.3	
	19:30:00	45.6	53.6	48.3	42.3	
	19:45:00	44.4	55.2	46.3	41.3	45.9
	20:00:00	45.0	55.2	47.3	41.3	
	20:15:00	44.7	54.0	47.3	41.3	
	20:30:00	50.9	75.6	49.3	41.3	
	20:45:00	45.3	60.0	47.3	41.3	47.4
	21:00:00	49.9	66.9	49.3	41.3	
	21:15:00	45.0	62.6	46.3	41.3	
	21:30:00	43.1	58.8	44.3	41.3	

	21:45:00	43.4	55.5	44.3	41.3	46.3
	22:00:00	42.3	49.0	43.3	41.3	
	22:15:00	42.7	52.1	44.3	41.3	
	22:30:00	42.7	49.4	43.3	41.3	
	22:45:00	43.3	54.1	44.3	41.3	42.8
	23:00:00	43.6	55.0	44.3	41.3	
	23:15:00	44.0	63.8	43.3	41.3	
	23:30:00	42.7	49.8	43.3	41.3	
	23:45:00	42.9	55.7	43.3	41.3	43.3
7/7/2020	0:00:00	42.4	50.4	43.3	41.3	
	0:15:00	41.9	47.2	42.3	41.3	
	0:30:00	42.2	46.6	42.3	41.3	
	0:45:00	43.1	60.3	43.3	41.3	42.4
	1:00:00	42.3	46.0	43.3	41.3	
	1:15:00	43.4	54.2	45.3	41.3	
	1:30:00	42.1	47.8	42.3	41.3	
	1:45:00	43.8	56.0	45.3	41.3	43.0
	2:00:00	47.2	64.4	49.3	41.3	
	2:15:00	48.1	60.5	51.3	42.3	
	2:30:00	44.5	58.4	46.3	41.3	
	2:45:00	43.0	50.4	44.3	41.3	46.2
	3:00:00	47.4	65.4	48.3	42.3	
	3:15:00	47.8	61.2	49.3	43.3	
	3:30:00	47.2	58.1	49.3	43.3	
	3:45:00	49.5	66.6	51.3	43.3	48.1
	4:00:00	49.5	63.1	52.3	43.3	
	4:15:00	48.8	59.8	51.3	43.3	
	4:30:00	50.8	64.0	53.3	44.3	
	4:45:00	54.2	72.4	58.3	43.3	51.4
	5:00:00	55.0	66.3	59.3	44.3	
	5:15:00	49.6	63.6	52.3	42.3	
	5:30:00	50.5	65.1	52.3	44.3	
	5:45:00	53.9	68.4	56.3	45.3	52.8
	6:00:00	57.7	69.6	60.3	48.3	
	6:15:00	60.7	77.4	62.3	56.3	
	6:30:00	59.8	69.7	61.3	56.3	
	6:45:00	60.4	72.0	62.3	56.3	59.8
	7:00:00	61.3	70.6	63.3	55.3	
	7:15:00	61.1	70.9	64.3	55.3	
	7:30:00	60.5	68.8	62.3	55.3	
	7:45:00	63.8	74.0	66.3	57.3	61.9
	8:00:00	60.7	68.4	62.3	56.3	
	8:15:00	61.3	69.7	63.3	56.3	
	8:30:00	62.2	73.2	64.3	57.3	
	8:45:00	63.0	73.2	65.3	58.3	61.9
	9:00:00	62.0	71.7	64.3	56.3	
	9:15:00	60.5	69.7	62.3	56.3	
	9:30:00	60.6	71.6	62.3	56.3	
	9:45:00	63.1	72.8	65.3	57.3	61.7
	10:00:00	61.9	71.1	64.3	56.3	
	10:15:00	62.5	72.0	65.3	56.3	
	10:30:00	62.4	75.8	65.3	56.3	
	10:45:00	62.6	75.6	65.3	56.3	62.4
	11:00:00	62.5	73.0	65.3	57.3	
	11:15:00	62.3	74.6	64.3	57.3	
	11:30:00	64.3	76.6	66.3	58.3	
	11:45:00	62.1	73.3	64.3	56.3	62.9
	12:00:00	62.8	73.2	65.3	56.3	
	12:15:00	63.4	75.0	65.3	57.3	
	12:30:00	64.9	77.2	66.3	60.3	
	12:45:00	66.0	76.2	69.3	60.3	64.5
	13:00:00	63.4	75.0	66.3	56.3	
	13:15:00	64.8	75.2	67.3	58.3	
	13:30:00	62.4	73.2	66.3	55.3	
	13:45:00	61.8	75.8	64.3	54.3	63.3
	14:00:00	58.7	68.8	60.3	54.3	
	14:15:00	59.9	69.8	62.3	53.3	
	14:30:00	63.3	75.0	67.3	54.3	
	14:45:00	61.8	81.9	64.3	54.3	61.3

	15:00:00	62.7	74.9	65.3	55.3	
	15:15:00	62.5	77.5	65.3	56.3	
	15:30:00	62.1	74.8	64.3	56.3	
	15:45:00	62.2	72.4	65.3	56.3	62.4
	16:00:00	61.4	74.9	64.3	55.3	
	16:15:00	60.6	71.2	63.3	55.3	
	16:30:00	58.5	70.0	61.3	50.3	
	16:45:00	57.3	70.0	60.3	48.3	59.7
	17:00:00	57.4	73.4	60.3	49.3	
	17:15:00	58.1	72.8	61.3	48.3	
	17:30:00	61.6	74.3	65.3	49.3	
	17:45:00	62.0	75.2	65.3	49.3	60.2
	18:00:00	63.0	78.4	66.3	48.3	
	18:15:00	61.3	76.4	64.3	49.3	
	18:30:00	64.0	77.8	67.3	50.3	
	18:45:00	57.3	68.5	60.3	47.3	62.0
	19:00:00	57.7	70.8	62.3	46.3	
	19:15:00	58.3	72.4	62.3	44.3	
	19:30:00	58.5	74.0	62.3	46.3	
	19:45:00	57.9	71.2	60.3	46.3	58.1
	20:00:00	52.9	67.0	56.3	44.3	
	20:15:00	48.3	59.8	50.3	42.3	
	20:30:00	49.1	62.2	51.3	43.3	
	20:45:00	51.1	64.4	55.3	43.3	50.7
	21:00:00	49.3	61.0	52.3	42.3	
	21:15:00	49.3	61.9	52.3	42.3	
	21:30:00	50.4	69.0	53.3	42.3	
	21:45:00	48.7	61.2	51.3	43.3	49.5
	22:00:00	47.7	61.0	51.3	42.3	
	22:15:00	46.6	62.0	48.3	42.3	
	22:30:00	44.6	54.3	46.3	42.3	
	22:45:00	47.6	67.4	49.3	42.3	46.8
	23:00:00	48.5	65.2	51.3	42.3	
	23:15:00	45.4	57.9	47.3	42.3	
	23:30:00	45.7	59.1	48.3	41.3	
	23:45:00	48.1	62.8	50.3	42.3	47.1
7/8/2020	0:00:00	46.4	59.8	48.3	41.3	
	0:15:00	47.4	59.4	49.3	42.3	
	0:30:00	48.3	60.0	51.3	43.3	
	0:45:00	46.8	58.2	49.3	42.3	47.3
	1:00:00	44.9	57.5	46.3	41.3	
	1:15:00	43.9	57.7	45.3	41.3	
	1:30:00	43.2	52.0	44.3	41.3	
	1:45:00	44.1	51.3	46.3	41.3	44.1
	2:00:00	46.2	56.2	48.3	42.3	
	2:15:00	45.5	55.9	47.3	42.3	
	2:30:00	44.4	54.8	46.3	41.3	
	2:45:00	43.2	51.5	44.3	41.3	45.0
	3:00:00	44.1	59.1	45.3	42.3	
	3:15:00	44.7	55.2	46.3	42.3	
	3:30:00	42.5	47.2	43.3	41.3	
	3:45:00	44.6	58.6	46.3	41.3	44.1
	4:00:00	43.5	54.8	45.3	41.3	
	4:15:00	43.7	56.2	45.3	41.3	
	4:30:00	42.7	49.2	43.3	41.3	
	4:45:00	48.5	61.2	51.3	41.3	45.3
	5:00:00	49.2	60.3	51.3	43.3	
	5:15:00	49.7	63.5	52.3	42.3	
	5:30:00	49.2	57.6	51.3	43.3	
	5:45:00	51.0	73.6	50.3	43.3	49.8
	6:00:00	50.0	63.8	52.3	42.3	
	6:15:00	54.1	63.3	58.3	46.3	
	6:30:00	53.7	62.4	59.3	45.3	
	6:45:00	47.8	54.8	49.3	44.3	52.1
	7:00:00	49.2	55.6	51.3	44.3	
	7:15:00	49.4	63.6	51.3	44.3	
	7:30:00	51.6	62.3	54.3	46.3	
	7:45:00	56.5	69.6	59.3	45.3	52.8
	8:00:00	51.1	59.8	55.3	45.3	

	8:15:00	51.7	60.7	55.3	46.3	
	8:30:00	50.9	59.9	53.3	46.3	
	8:45:00	51.4	59.7	53.3	47.3	51.3
	9:00:00	52.1	59.4	54.3	47.3	
	9:15:00	55.2	70.1	57.3	48.3	
	9:30:00	52.1	61.4	54.3	47.3	
	9:45:00	52.3	60.6	55.3	46.3	53.1
	10:00:00	53.3	68.9	56.3	46.3	
	10:15:00	53.1	69.2	55.3	46.3	
	10:30:00	54.9	65.8	58.3	49.3	
	10:45:00	52.9	63.8	56.3	46.3	53.6
	11:00:00	55.4	66.4	58.3	47.3	
	11:15:00	59.7	74.4	62.3	48.3	
	11:30:00	59.2	72.5	61.3	45.3	
	11:45:00	60.3	77.6	62.3	46.3	59.0
	12:00:00	57.9	68.4	61.3	47.3	
	12:15:00	55.6	66.2	59.3	47.3	
	12:30:00	64.1	71.2	66.3	49.3	
	12:45:00	65.3	71.2	67.3	58.3	62.4
	13:00:00	63.7	71.6	66.3	58.3	
	13:15:00	72.0	85.2	76.3	53.3	
	13:30:00	59.3	79.2	62.3	47.3	
	13:45:00	58.7	73.2	62.3	49.3	66.9
	14:00:00	59.0	75.0	62.3	48.3	
	14:15:00	59.3	73.6	62.3	51.3	
	14:30:00	67.5	81.6	70.3	55.3	
	14:45:00	75.3	86.8	79.3	57.3	70.1
	15:00:00	63.6	83.6	66.3	47.3	
	15:15:00	48.5	64.4	50.3	45.3	
	15:30:00	50.6	61.2	53.3	44.3	
	15:45:00	49.3	58.4	51.3	45.3	58.1
	16:00:00	48.4	56.9	50.3	44.3	
	16:15:00	47.9	55.2	49.3	45.3	
	16:30:00	48.3	56.4	50.3	44.3	
	16:45:00	48.3	61.0	49.3	45.3	48.2
	17:00:00	48.4	55.2	50.3	45.3	
	17:15:00	47.4	55.5	49.3	44.3	
	17:30:00	49.2	55.0	51.3	45.3	
	17:45:00	48.2	56.7	50.3	43.3	48.3
	18:00:00	46.7	51.7	48.3	43.3	
	18:15:00	47.0	57.8	48.3	43.3	
	18:30:00	47.0	52.0	48.3	44.3	
	18:45:00	48.4	54.8	50.3	43.3	47.3
	19:00:00	47.4	55.5	49.3	43.3	
	19:15:00	49.0	57.6	51.3	43.3	
	19:30:00	50.6	62.1	53.3	44.3	
	19:45:00	48.8	64.6	50.3	44.3	49.1
	20:00:00	46.8	58.8	49.3	42.3	
	20:15:00	47.3	55.6	50.3	42.3	
	20:30:00	47.9	58.1	50.3	43.3	
	20:45:00	46.7	67.9	48.3	42.3	47.2
	21:00:00	45.2	56.1	47.3	42.3	
	21:15:00	43.2	50.7	45.3	41.3	
	21:30:00	42.4	46.9	44.3	41.3	
	21:45:00	42.5	48.4	43.3	41.3	43.5
	22:00:00	42.4	47.4	43.3	41.3	
	22:15:00	42.6	49.6	43.3	41.3	
	22:30:00	43.9	52.6	46.3	41.3	
	22:45:00	43.7	54.4	45.3	41.3	43.2
	23:00:00	42.7	49.6	44.3	41.3	
	23:15:00	42.5	52.1	43.3	41.3	
	23:30:00	42.4	48.4	43.3	41.3	
	23:45:00	43.0	48.8	44.3	42.3	42.7
7/9/2020	0:00:00	42.9	49.8	44.3	41.3	
	0:15:00	42.8	49.4	44.3	41.3	
	0:30:00	42.6	47.8	43.3	41.3	
	0:45:00	42.8	48.0	44.3	41.3	42.8
	1:00:00	43.0	48.7	44.3	41.3	
	1:15:00	43.1	50.4	44.3	41.3	

1:30:00	42.7	47.6	44.3	41.3	
1:45:00	42.6	48.0	44.3	41.3	42.9
2:00:00	43.1	49.4	44.3	41.3	
2:15:00	42.9	48.1	44.3	41.3	
2:30:00	43.0	52.1	44.3	41.3	
2:45:00	43.1	50.8	45.3	41.3	43.0
3:00:00	45.9	65.2	44.3	41.3	
3:15:00	44.4	60.8	45.3	41.3	
3:30:00	43.6	51.4	45.3	41.3	
3:45:00	43.3	51.8	44.3	41.3	44.4
4:00:00	43.8	51.1	45.3	41.3	
4:15:00	44.4	52.0	46.3	42.3	
4:30:00	43.8	51.0	45.3	41.3	
4:45:00	47.7	56.2	51.3	41.3	45.3
5:00:00	50.4	64.8	52.3	44.3	
5:15:00	48.8	61.4	50.3	43.3	
5:30:00	60.6	74.0	65.3	43.3	
5:45:00	54.3	69.0	55.3	46.3	56.0
6:00:00	58.4	71.6	61.3	47.3	
6:15:00	63.1	76.2	68.3	48.3	
6:30:00	64.2	78.4	64.3	47.3	
6:45:00	63.1	78.0	59.3	48.3	62.7
7:00:00	61.5	77.2	57.3	48.3	
7:15:00	61.8	77.0	62.3	48.3	
7:30:00	55.8	75.6	56.3	48.3	
7:45:00	59.9	77.7	59.3	47.3	60.3
8:00:00	51.0	59.8	52.3	48.3	
8:15:00	62.1	76.8	60.3	49.3	
8:30:00	64.8	77.2	69.3	51.3	
8:45:00	63.4	76.8	64.3	50.3	62.4
9:00:00	63.4	76.8	66.3	52.3	
9:15:00	61.8	76.0	59.3	51.3	
9:30:00	61.7	76.1	59.3	50.3	
9:45:00	61.9	78.0	59.3	49.3	62.3
10:00:00	63.6	76.9	62.3	56.3	
10:15:00	63.2	77.6	63.3	57.3	
10:30:00	62.4	77.2	62.3	56.3	
10:45:00	62.8	76.4	63.3	57.3	63.0
11:00:00	63.3	76.0	65.3	56.3	
11:15:00	61.6	76.6	62.3	56.3	
11:30:00	61.5	76.8	62.3	56.3	
11:45:00	61.5	75.8	61.3	55.3	62.0
12:00:00	60.8	74.4	62.3	54.3	
12:15:00	63.1	77.6	65.3	56.3	
12:30:00	61.9	75.5	63.3	55.3	
12:45:00	62.0	75.6	63.3	56.3	62.0
13:00:00	61.9	75.6	64.3	56.3	
13:15:00	61.1	72.4	63.3	55.3	
13:30:00	61.9	78.8	62.3	55.3	
13:45:00	59.5	65.6	62.3	54.3	61.2
14:00:00	59.9	73.2	61.3	54.3	
14:15:00	59.4	67.0	61.3	54.3	
14:30:00	59.7	70.0	61.3	54.3	
14:45:00	60.2	67.2	62.3	55.3	59.8
15:00:00	59.1	65.0	61.3	55.3	
15:15:00	58.9	71.1	60.3	54.3	
15:30:00	60.2	66.3	62.3	56.3	
15:45:00	58.8	63.2	60.3	55.3	59.3
16:00:00	58.3	66.0	60.3	53.3	
16:15:00	59.0	63.2	60.3	55.3	
16:30:00	60.4	67.6	62.3	56.3	
16:45:00	59.1	67.2	61.3	55.3	59.3
17:00:00	58.2	64.2	59.3	54.3	
17:15:00	58.7	68.4	60.3	56.3	
17:30:00	54.2	61.6	59.3	43.3	
17:45:00	45.9	52.8	47.3	42.3	56.3
18:00:00	48.9	58.5	52.3	42.3	
18:15:00	46.6	56.8	50.3	41.3	
18:30:00	48.7	59.0	52.3	41.3	

	18:45:00	48.2	57.2	51.3	41.3	48.2
	19:00:00	47.3	67.6	50.3	41.3	
	19:15:00	46.9	59.3	49.3	42.3	
	19:30:00	49.7	63.3	52.3	42.3	
	19:45:00	45.7	57.0	47.3	41.3	47.7
	20:00:00	45.2	58.0	47.3	41.3	
	20:15:00	43.9	54.6	45.3	41.3	
	20:30:00	43.2	51.4	44.3	41.3	
	20:45:00	44.8	66.0	45.3	41.3	44.3
	21:00:00	46.4	61.3	48.3	41.3	
	21:15:00	42.8	58.6	43.3	41.3	
	21:30:00	42.6	58.3	43.3	41.3	
	21:45:00	42.8	50.1	43.3	41.3	44.0
	22:00:00	42.7	46.6	43.3	41.3	
	22:15:00	42.5	46.0	43.3	42.3	
	22:30:00	42.6	45.5	43.3	42.3	
	22:45:00	42.5	45.6	43.3	42.3	42.6
	23:00:00	42.7	47.2	43.3	42.3	
	23:15:00	43.4	54.2	44.3	42.3	
	23:30:00	43.6	49.6	44.3	42.3	
	23:45:00	42.6	50.4	43.3	41.3	43.1
7/10/2020	0:00:00	42.0	45.6	42.3	41.3	
	0:15:00	43.2	49.0	44.3	41.3	
	0:30:00	42.7	46.0	44.3	41.3	
	0:45:00	42.3	53.9	43.3	41.3	42.6
	1:00:00	42.3	46.8	43.3	41.3	
	1:15:00	42.3	47.0	43.3	41.3	
	1:30:00	42.5	47.6	43.3	41.3	
	1:45:00	42.7	47.6	44.3	41.3	42.5
	2:00:00	43.3	50.8	45.3	41.3	
	2:15:00	42.5	56.2	43.3	41.3	
	2:30:00	43.2	50.7	44.3	41.3	
	2:45:00	42.5	46.8	43.3	41.3	42.9
	3:00:00	43.7	61.0	45.3	41.3	
	3:15:00	44.8	54.2	46.3	42.3	
	3:30:00	46.2	56.8	48.3	42.3	
	3:45:00	44.8	55.8	46.3	42.3	45.0
	4:00:00	43.4	48.6	44.3	41.3	
	4:15:00	43.4	54.6	45.3	41.3	
	4:30:00	44.4	54.2	46.3	42.3	
	4:45:00	48.6	58.4	51.3	43.3	45.6
	5:00:00	49.5	60.0	51.3	45.3	
	5:15:00	50.3	65.2	52.3	44.3	
	5:30:00	54.5	71.4	56.3	43.3	
	5:45:00	56.6	71.5	59.3	47.3	53.7
	6:00:00	63.5	74.0	68.3	50.3	
	6:15:00	61.8	74.8	63.3	51.3	
	6:30:00	61.5	74.3	62.3	57.3	
	6:45:00	64.7	90.4	62.3	57.3	63.1
	7:00:00	61.0	75.5	62.3	56.3	
	7:15:00	62.8	74.6	64.3	57.3	
	7:30:00	61.9	75.8	63.3	56.3	
	7:45:00	62.8	77.0	64.3	57.3	62.2
	8:00:00	61.8	76.4	62.3	56.3	
	8:15:00	61.8	75.5	62.3	55.3	
	8:30:00	65.2	82.9	64.3	56.3	
	8:45:00	62.6	75.2	63.3	56.3	63.1
	9:00:00	63.2	76.3	65.3	55.3	
	9:15:00	64.3	74.4	66.3	58.3	
	9:30:00	63.4	75.7	65.3	57.3	
	9:45:00	64.3	79.9	65.3	57.3	63.8
	10:00:00	61.7	76.0	62.3	55.3	
	10:15:00	62.3	75.6	64.3	53.3	
	10:30:00	63.9	78.4	65.3	57.3	
	10:45:00	63.3	75.9	65.3	56.3	62.9
	11:00:00	66.3	77.2	68.3	56.3	
	11:15:00	63.4	72.8	66.3	54.3	
	11:30:00	61.8	80.1	63.3	55.3	
	11:45:00	62.1	78.8	63.3	54.3	63.8

12:00:00	62.3	76.2	64.3	54.3	
12:15:00	63.7	78.4	65.3	56.3	
12:30:00	62.5	74.2	64.3	56.3	
12:45:00	62.5	74.8	65.3	55.3	62.8
13:00:00	61.7	79.4	62.3	54.3	
13:15:00	61.9	77.6	63.3	56.3	
13:30:00	62.5	75.8	64.3	56.3	
13:45:00	62.9	75.0	66.3	55.3	62.3
14:00:00	62.6	70.4	64.3	57.3	
14:15:00	63.0	76.4	65.3	56.3	
14:30:00	63.5	74.8	65.3	56.3	
14:45:00	63.6	76.7	66.3	57.3	63.2
15:00:00	61.0	68.0	63.3	56.3	
15:15:00	62.7	71.8	64.3	56.3	
15:30:00	61.2	69.8	63.3	56.3	
15:45:00	61.6	71.4	64.3	56.3	61.7
16:00:00	63.9	76.0	66.3	56.3	
16:15:00	65.6	77.6	68.3	57.3	
16:30:00	66.3	80.2	70.3	57.3	
16:45:00	67.6	82.4	70.3	59.3	66.0
17:00:00	66.1	84.7	68.3	56.3	
17:15:00	64.2	77.2	67.3	54.3	
17:30:00	61.2	74.4	65.3	49.3	
17:45:00	60.7	72.2	64.3	49.3	63.6
18:00:00	57.6	70.4	61.3	45.3	
18:15:00	52.6	67.8	56.3	42.3	55.8
18:30:00	69.8	84.6	72.3	45.3	

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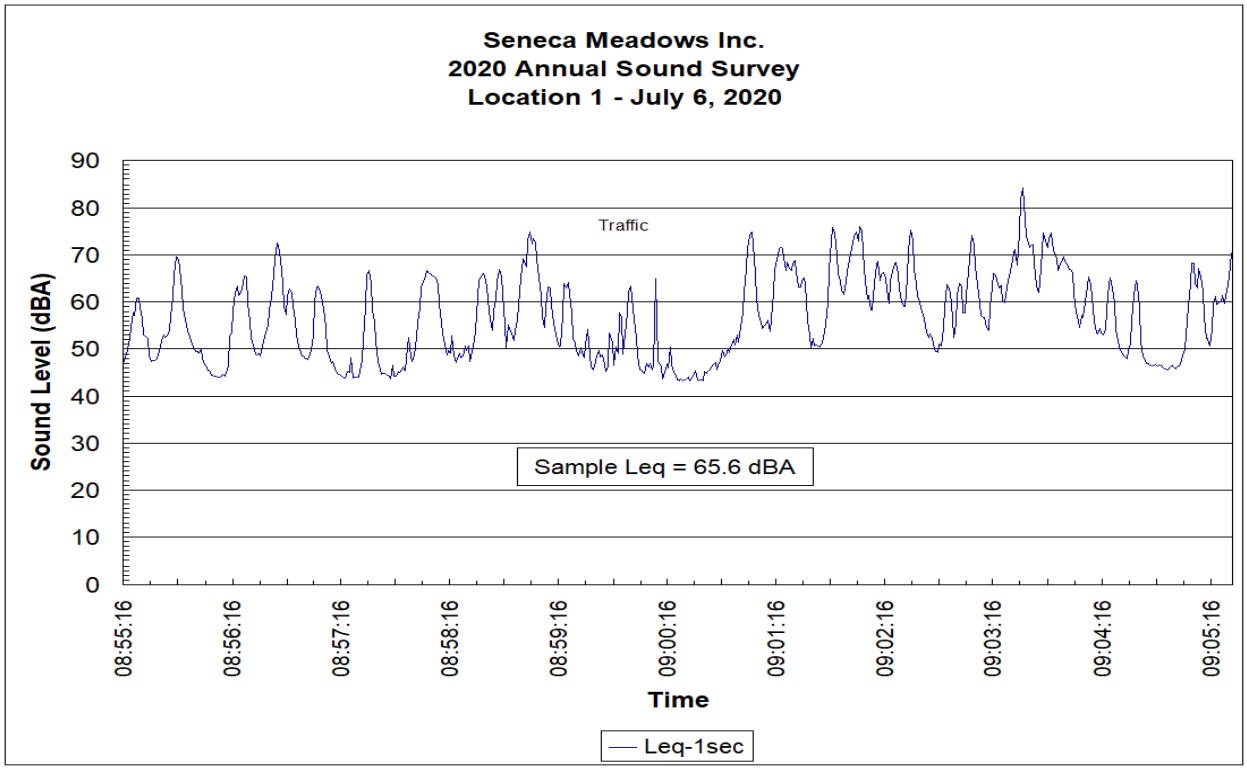
Appendix C

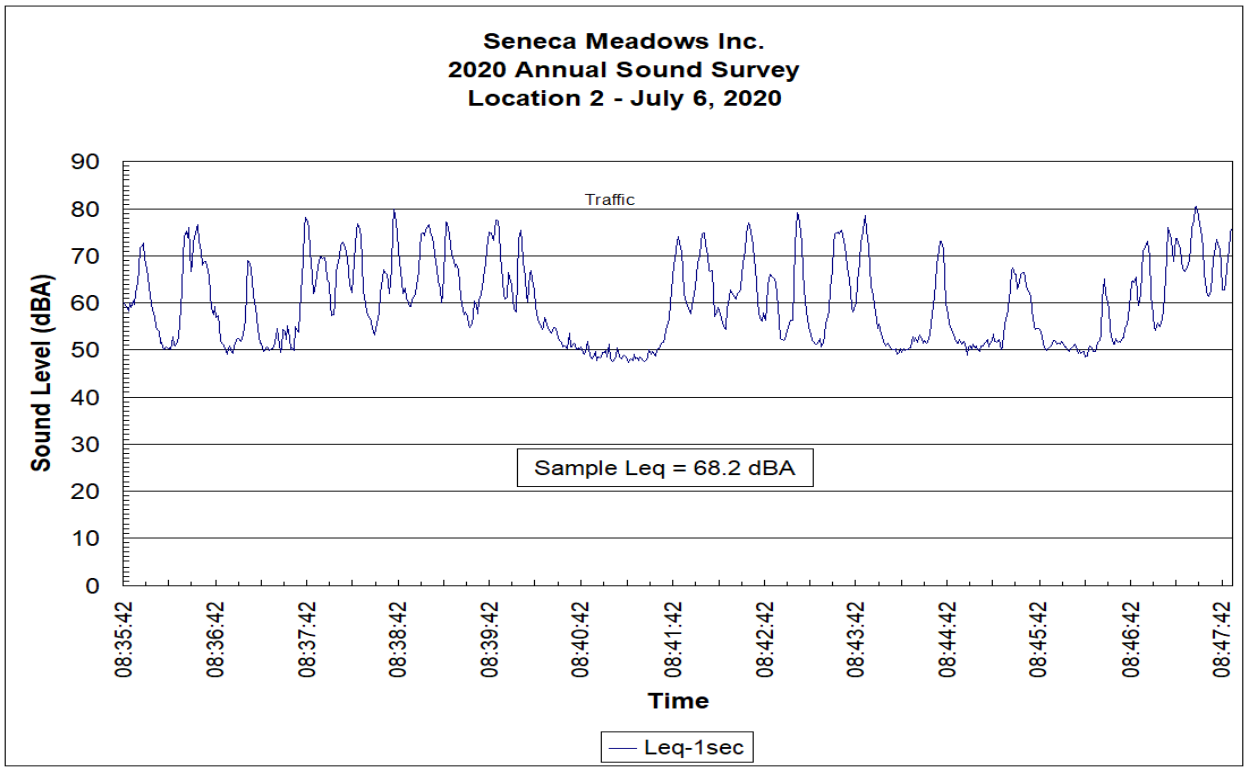
Hand-Held Sound Surveys

July 6, 2020

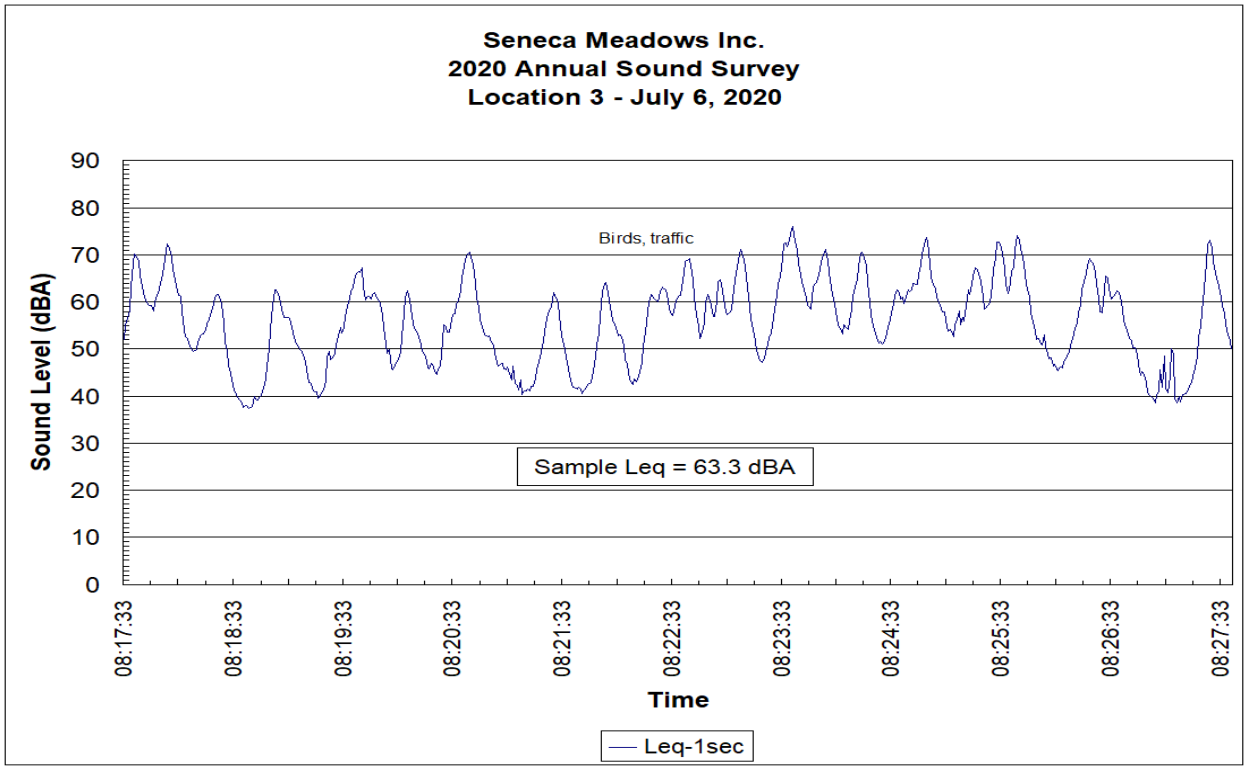
Morning Period



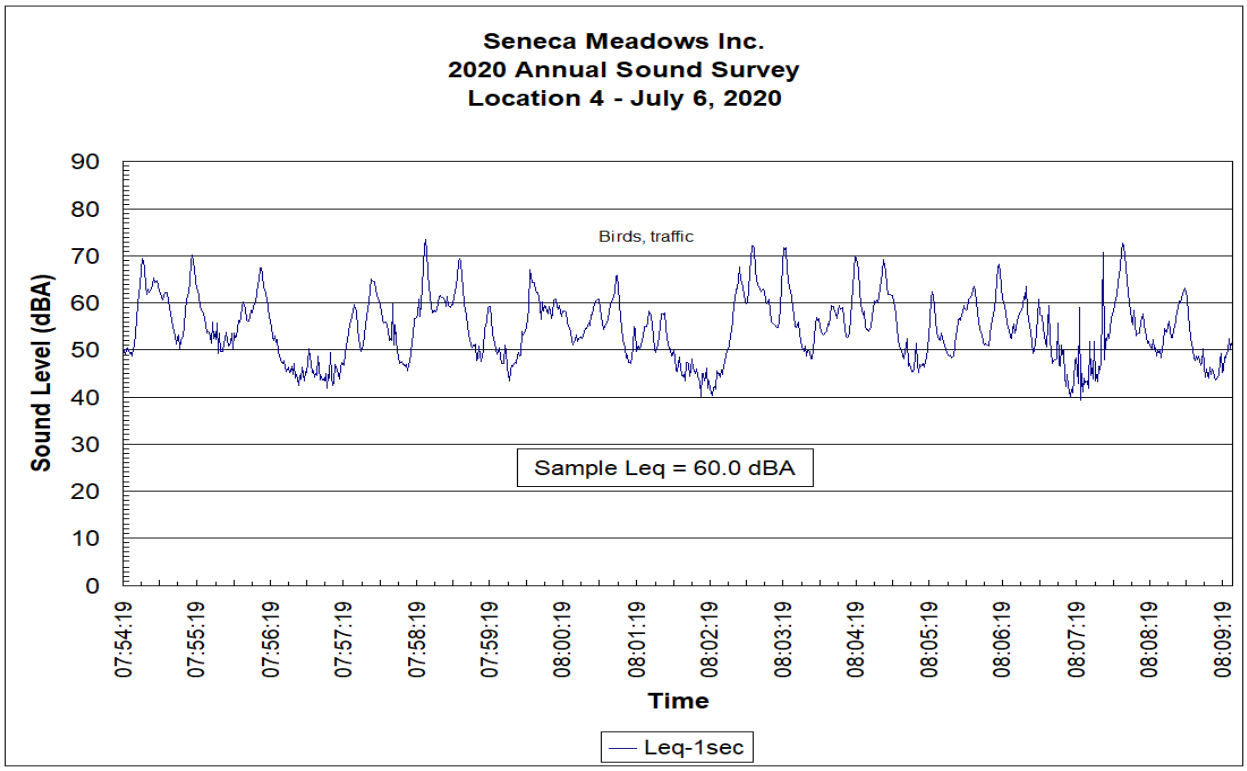
Location 1: Leq = 65.6 dBA
Traffic on Rt. 414, SEI plant.



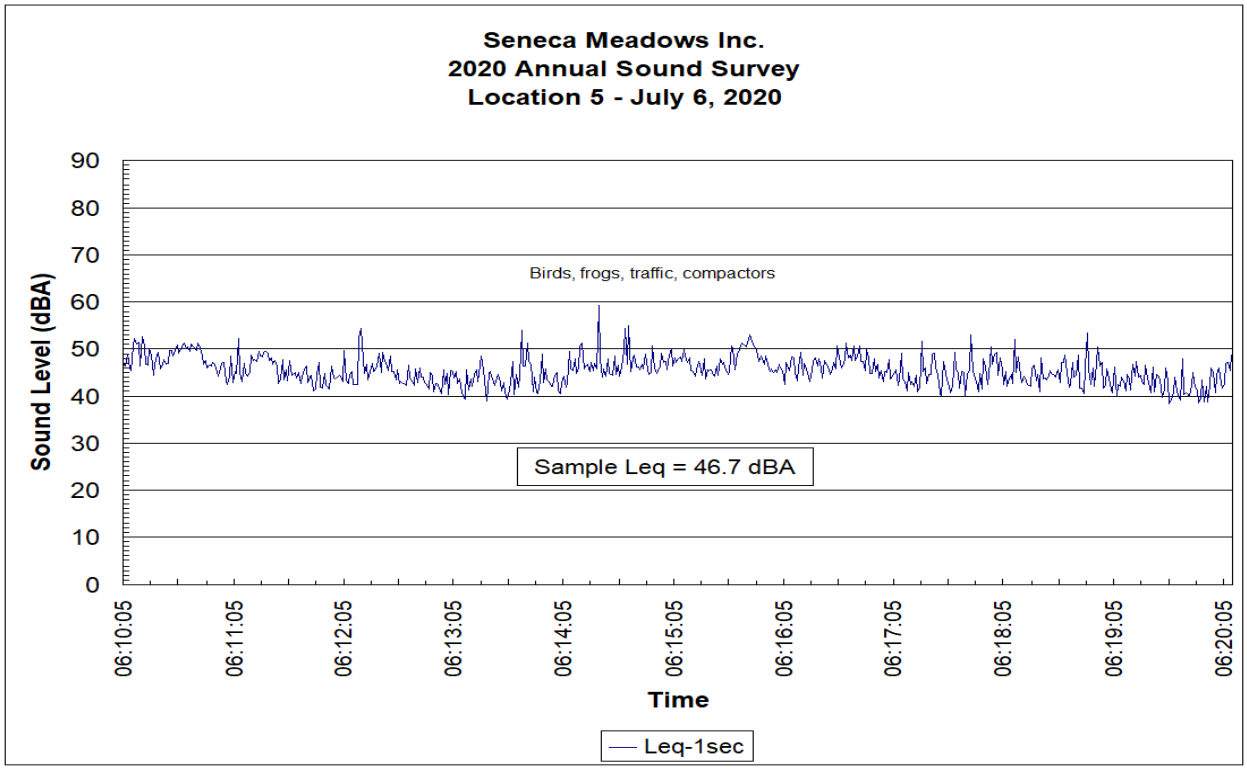
Location 2: Leq = 68.2 dBA
Traffic on Rt. 414, SEI plant.



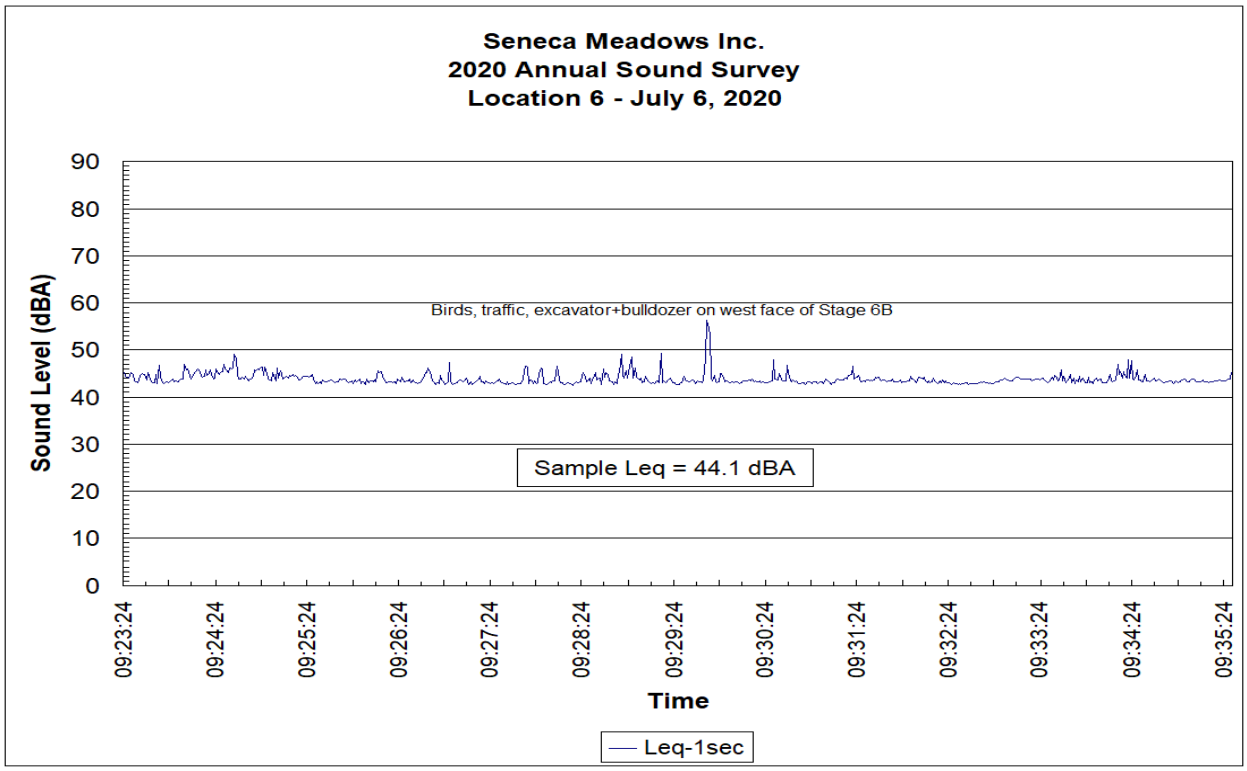
Location 3: Leq = 63.3 dBA
Traffic on Rt. 414, birds.



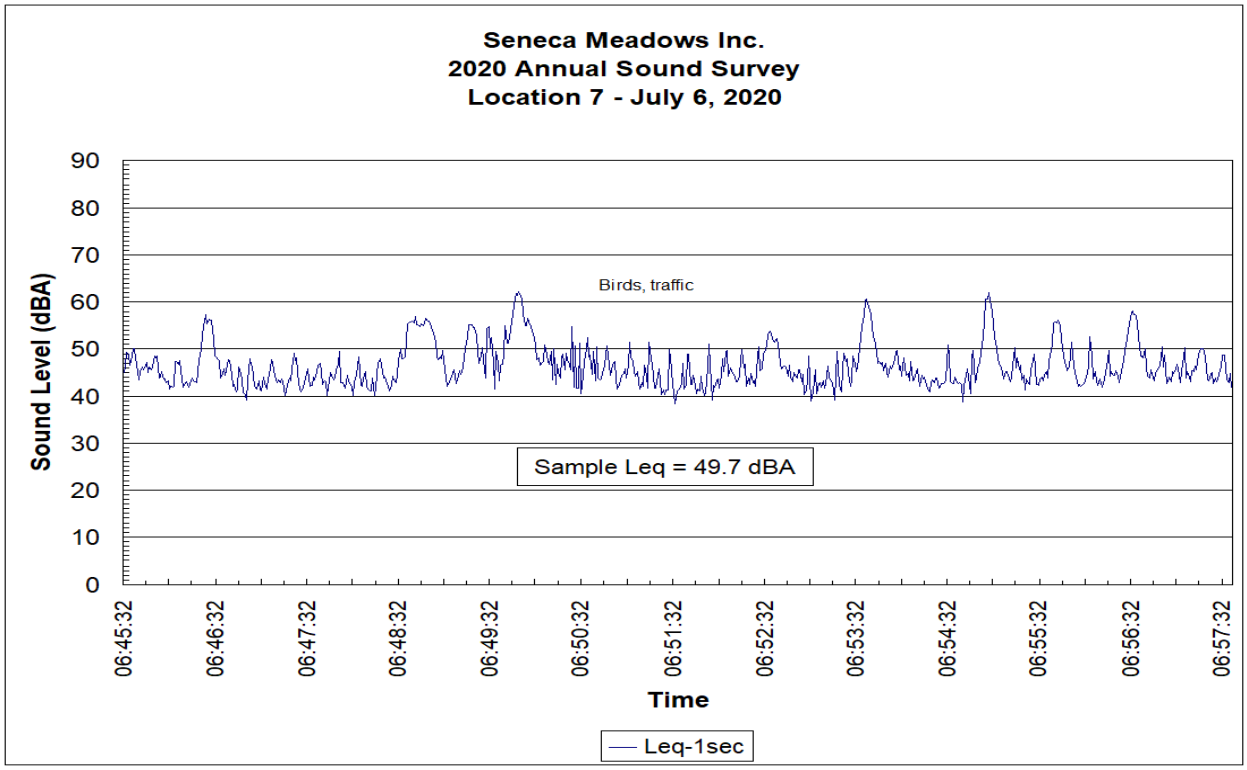
Location 4: Leq = 60.0 dBA
Traffic on Rt. 414, birds.



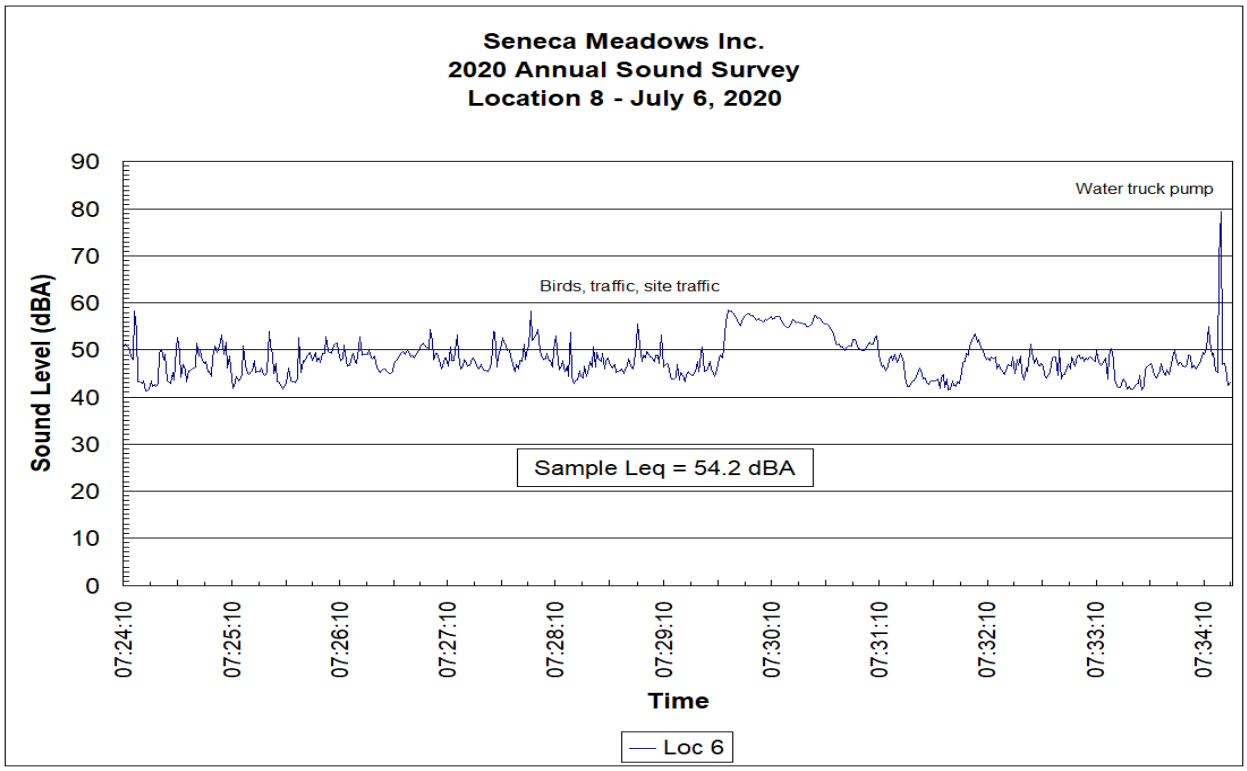
Location 5: Leq = 46.7 dBA
Traffic on Burgess Road and Rt. 414, biological sources, waste compactors.



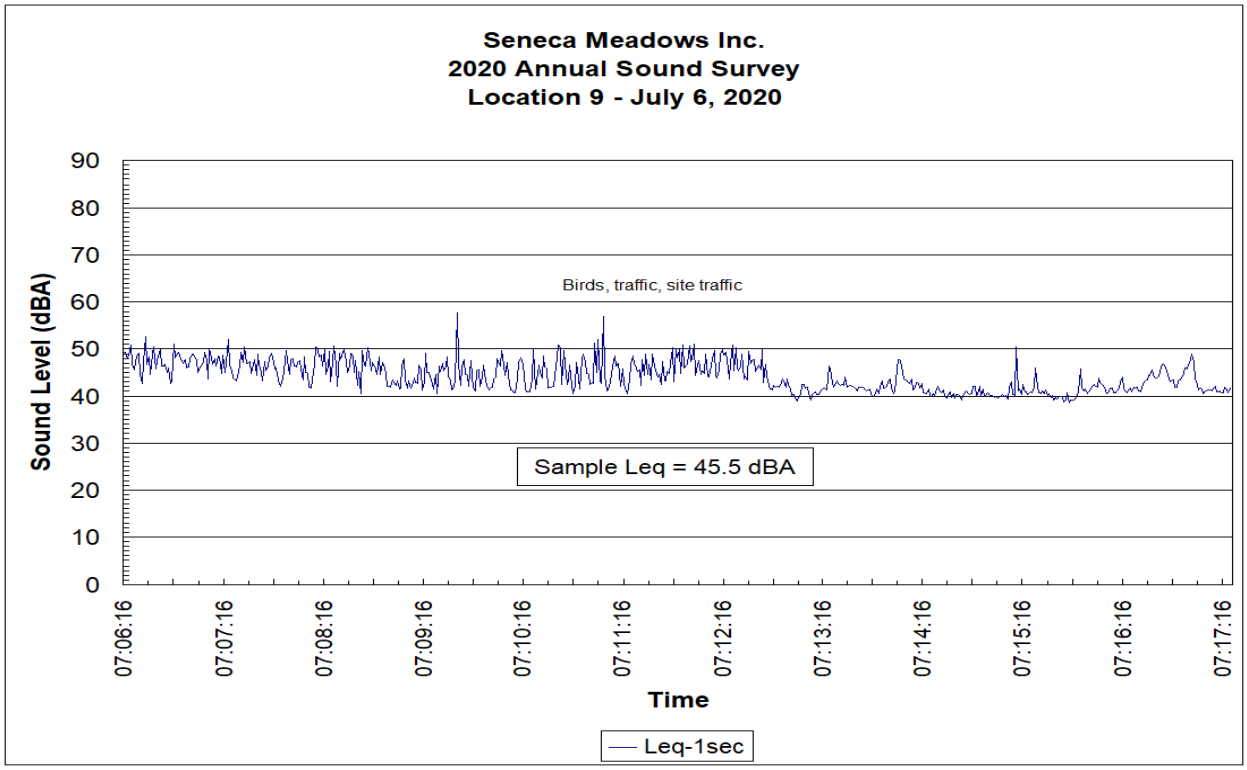
Location 6: Leq = 44.1 dBA
Birds, traffic on Burgess Road, construction equipment on side of berm.



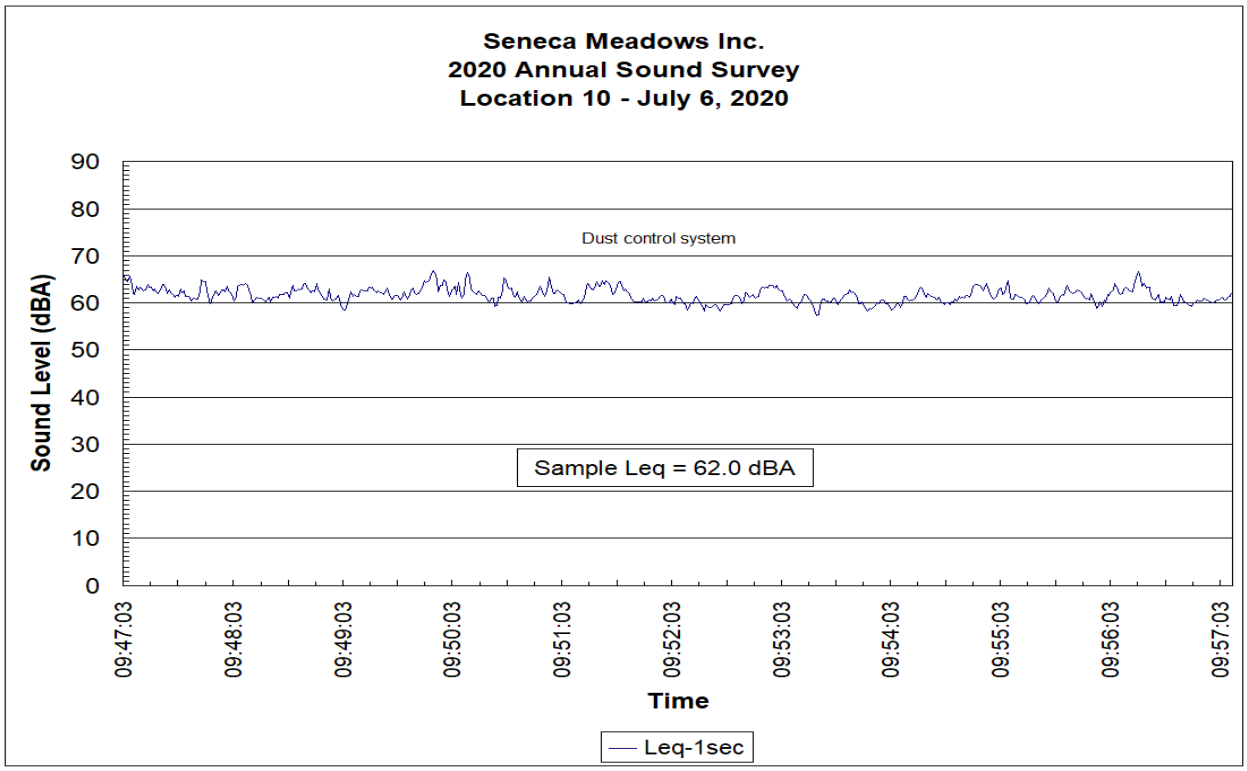
Location 7: Leq =49.7 dBA
Traffic on North and Burgess Roads, birds.



Location 8: Leq = 54.2 dBA
Birds, traffic passes on North Road, landfill traffic.



Location 9: Leq = 45.5 dBA
Birds, traffic on North Road, landfill traffic.



Location 10: Leq = 62.0 dBA
Dust/odor control system on berm, waste compactors, construction equipment.

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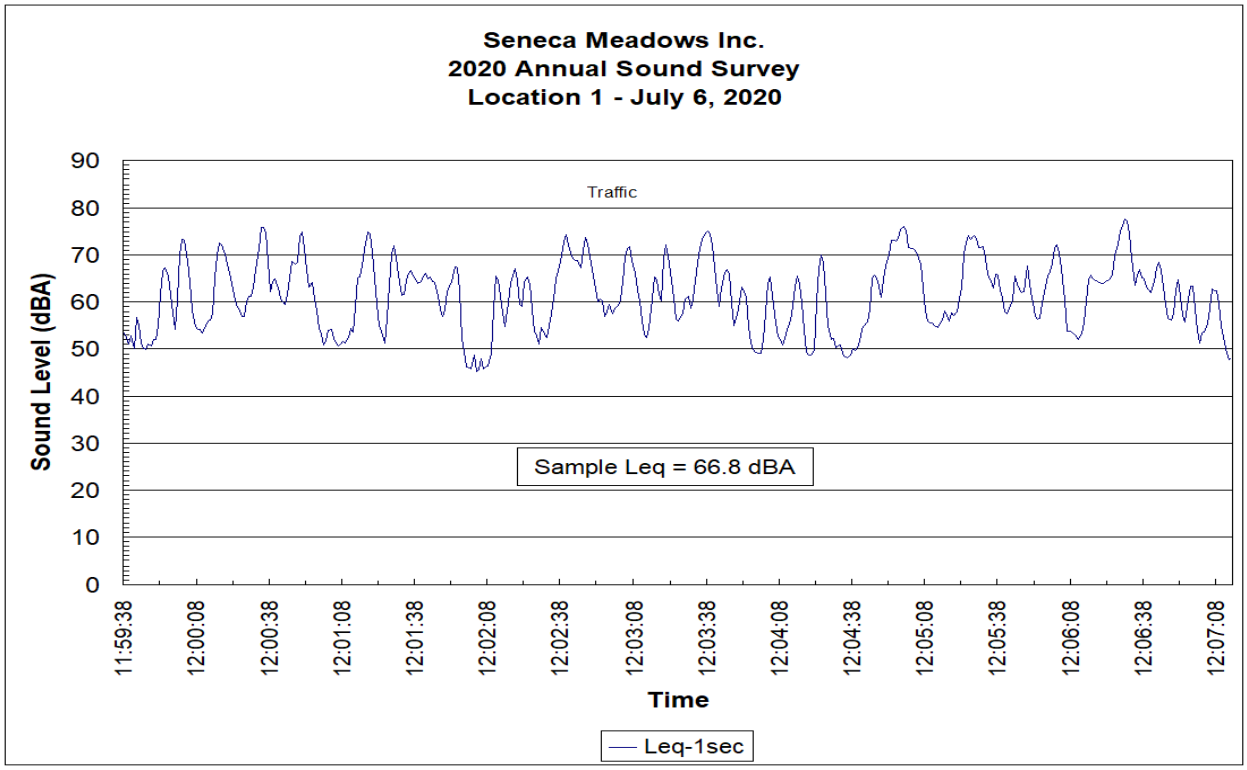
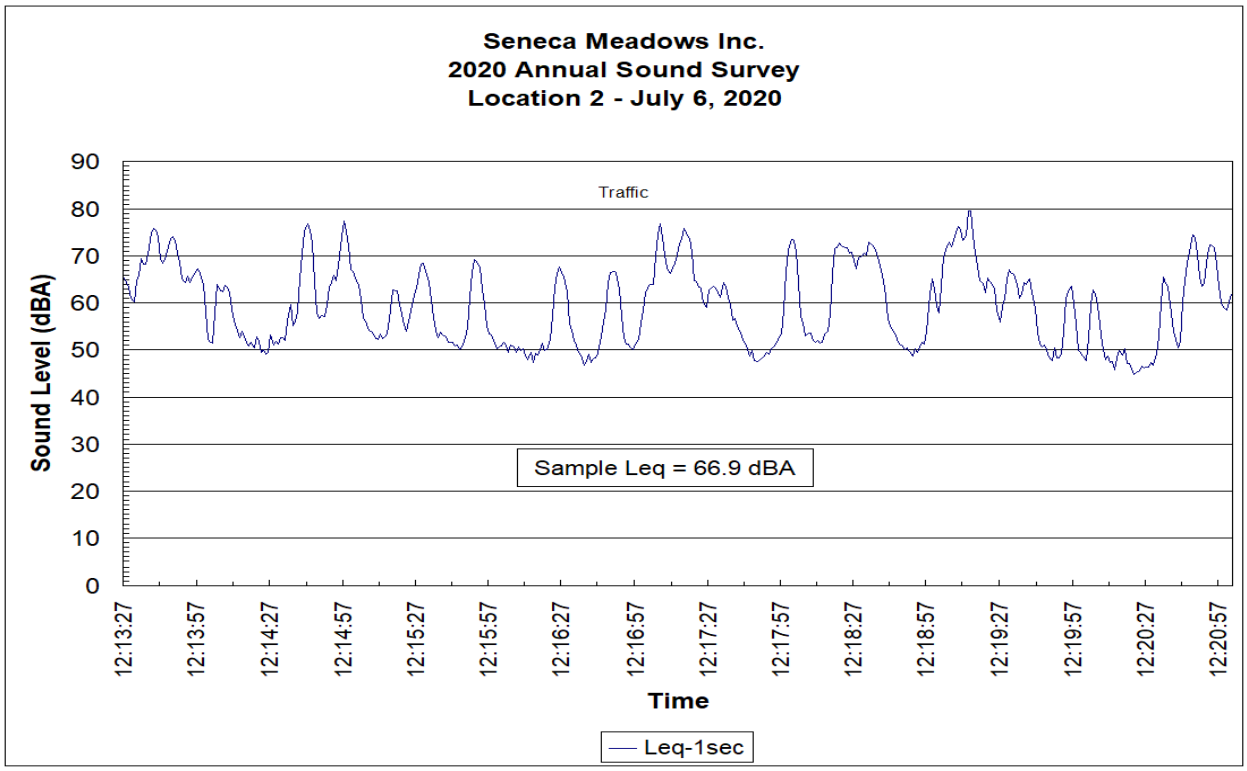
Hand-Held Sound Surveys

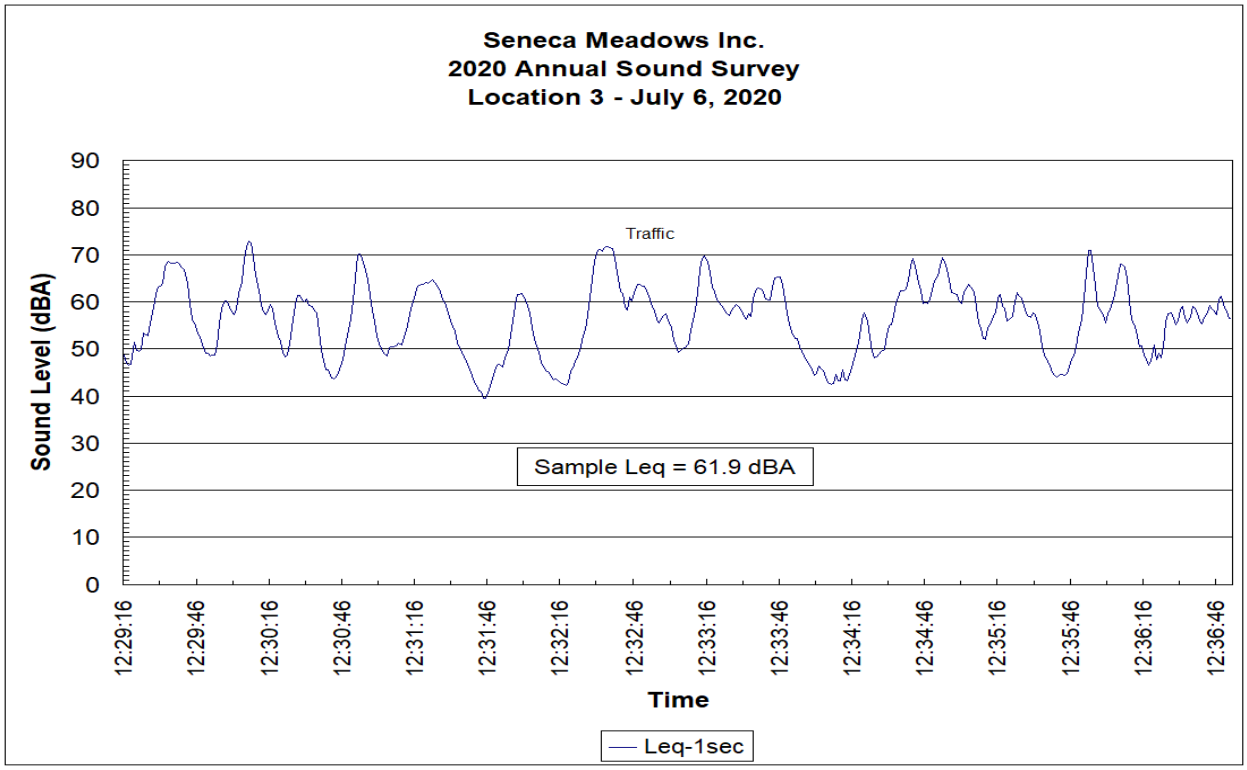
July 6, 2020
Mid-day to Afternoon Period



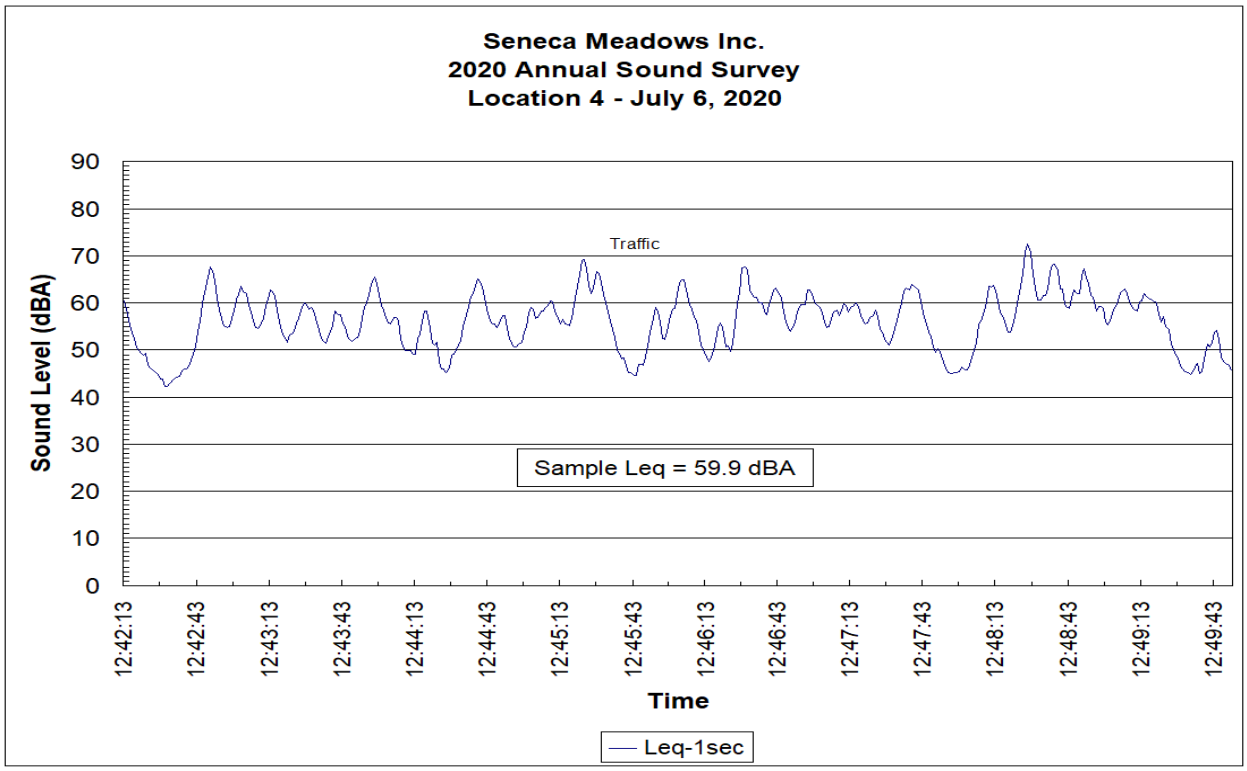
Location 1: Leq = 66.8 dBA
Traffic on Rt. 414; SEI plant.



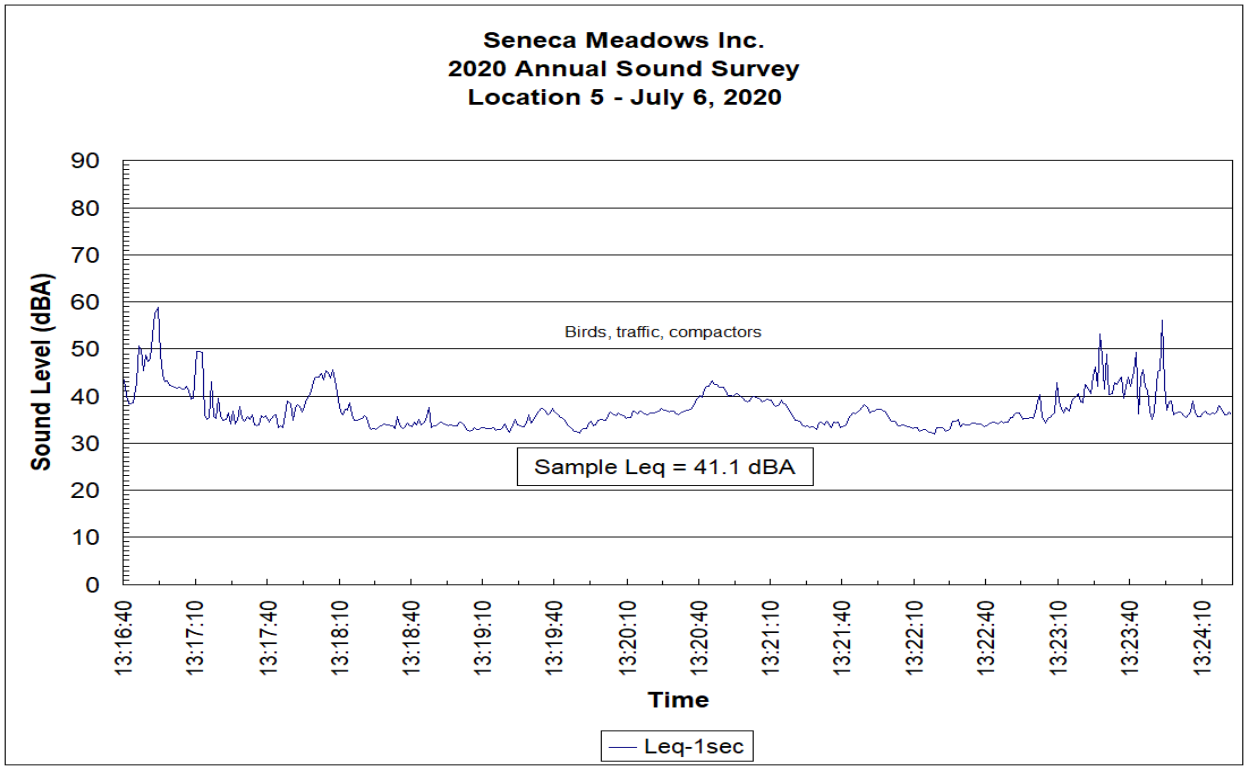
Location 2: Leq = 66.9 dBA
Traffic on Rt. 414, SEI plant.



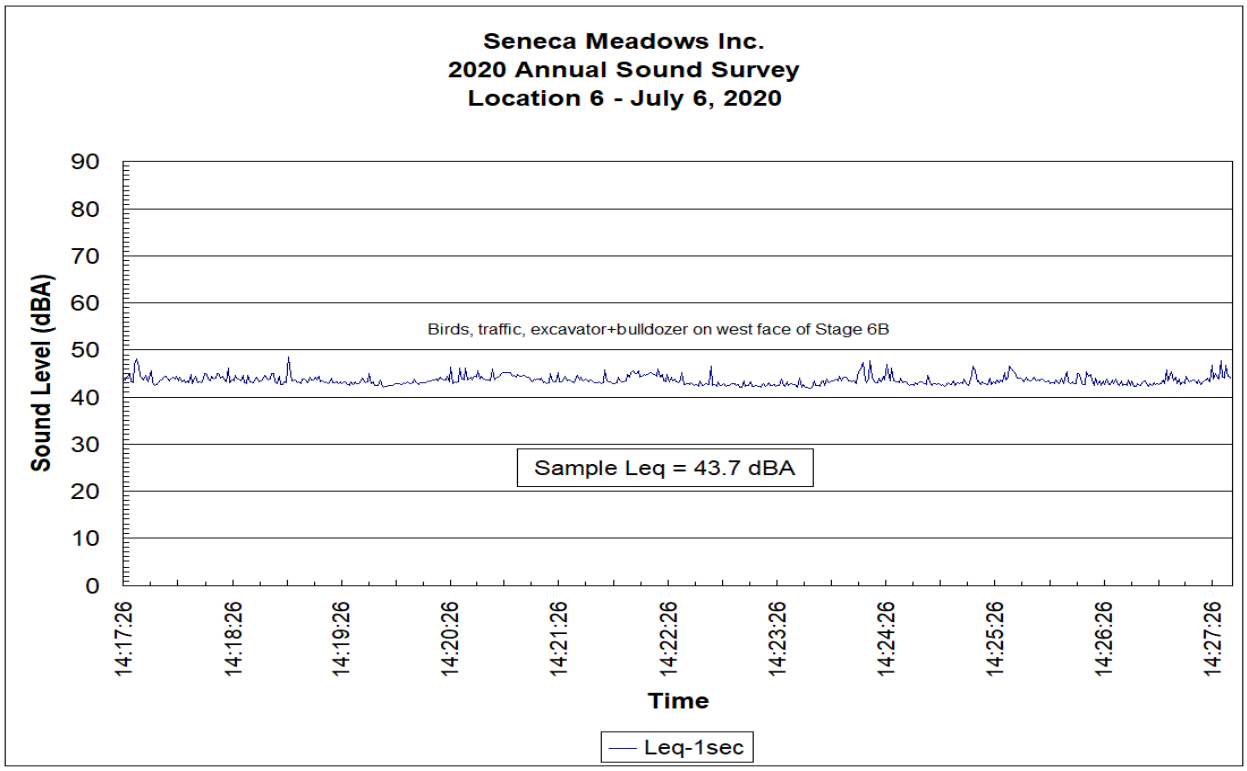
Location 3: Leq = 61.9 dBA
Traffic on Rt. 414.



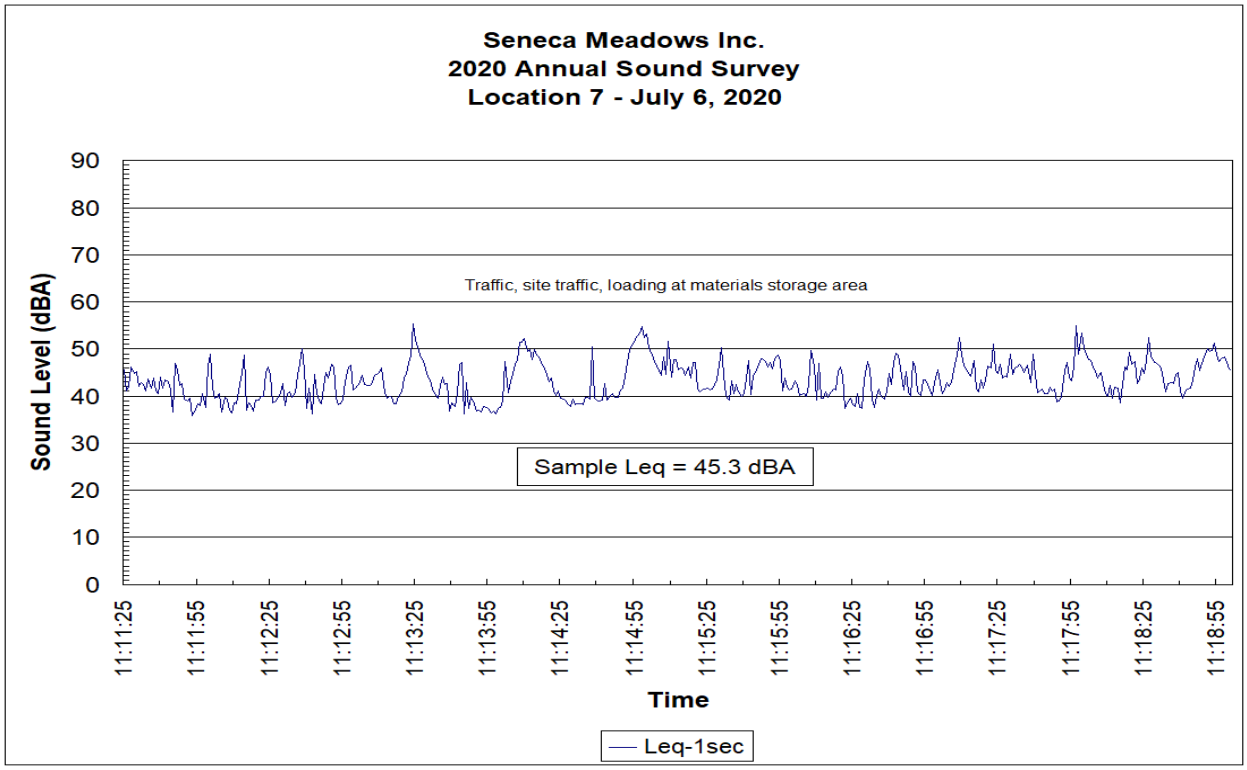
Location 4: Leq = 59.9 dBA
Traffic on Rt. 414.



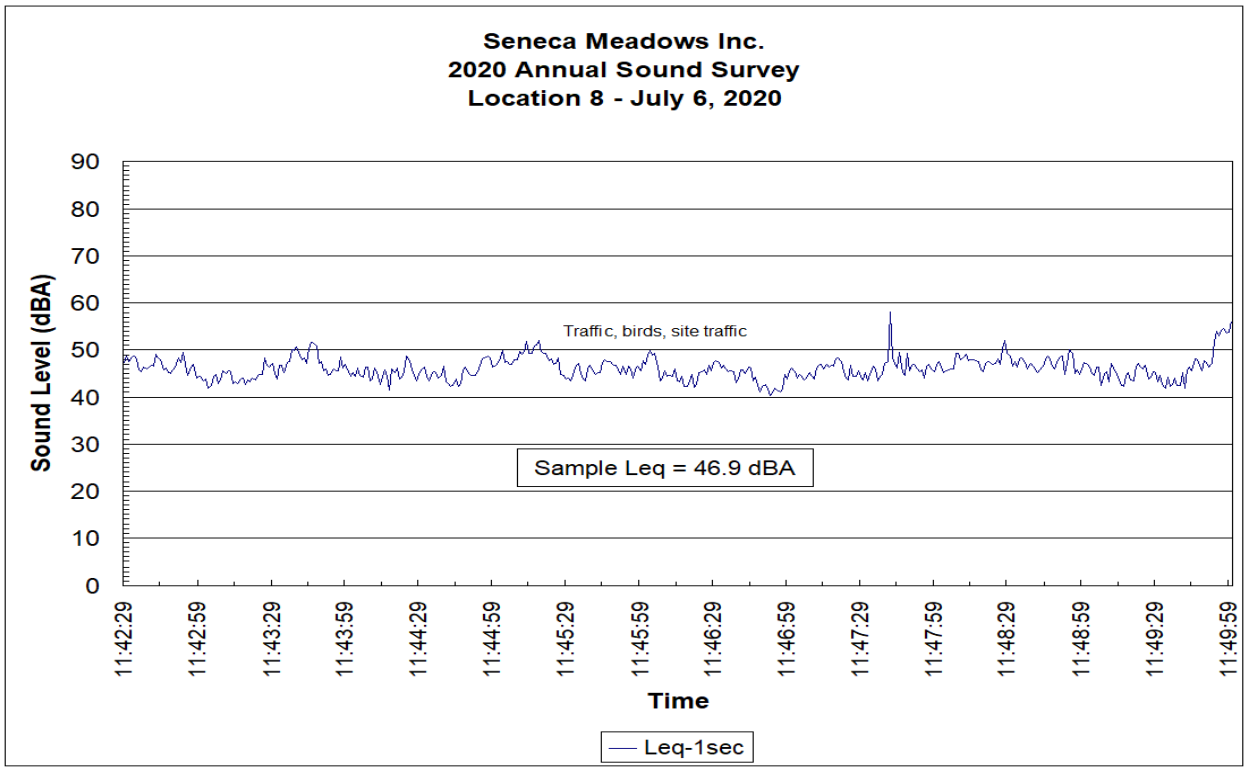
Location 5: Leq = 41.1 dBA
Birds, traffic on Burgess Road and Rt. 414, waste compactors.



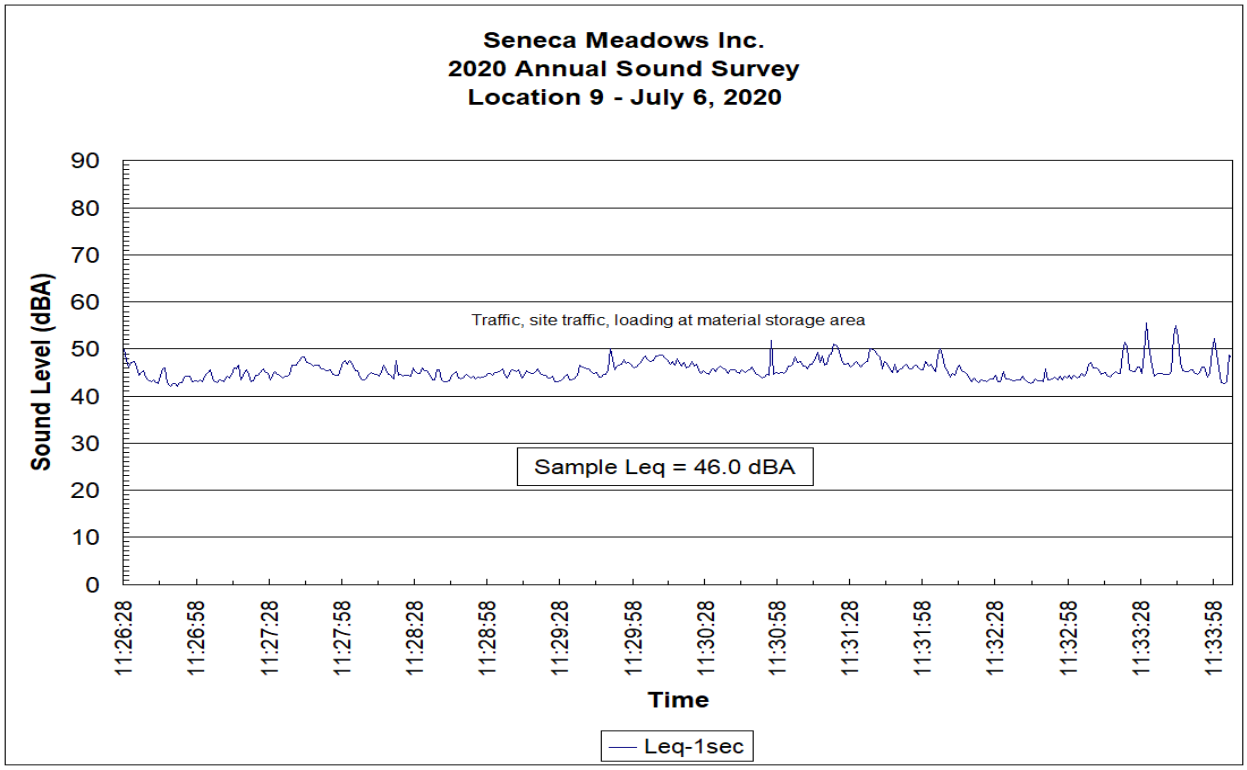
Location 6: Leq = 43.3 dBA
Birds, traffic on Burgess Road, construction equipment on berm.



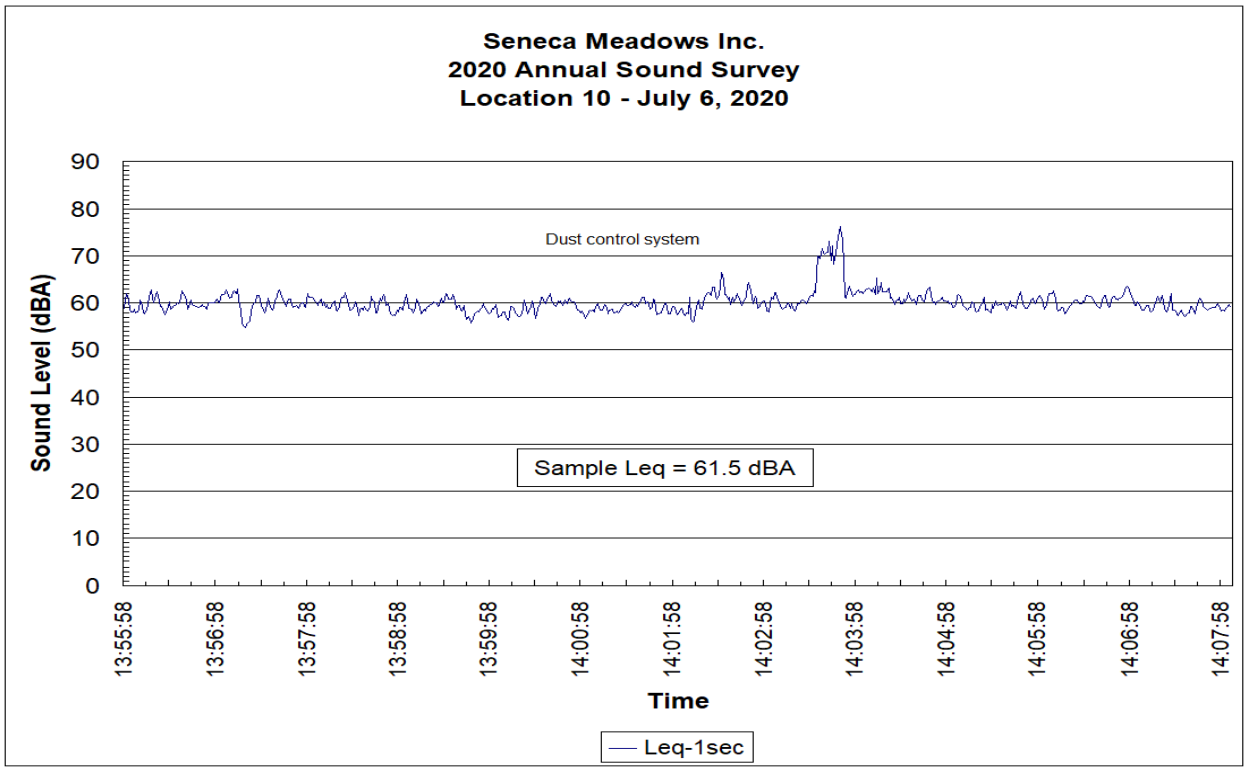
Location 7: Leq = 45.3 dBA
Traffic on North and Burgess Roads, site traffic, materials loading.



Location 8: Leq = 46.9 dBA
Traffic on North Road, birds, site traffic.



Location 9: Leq = 46.0 dBA
Traffic on North Road, site traffic, materials loading.



Location 10: Leq = 61.5 dBA
Odor/dust control system, waste compactors, construction equipment.

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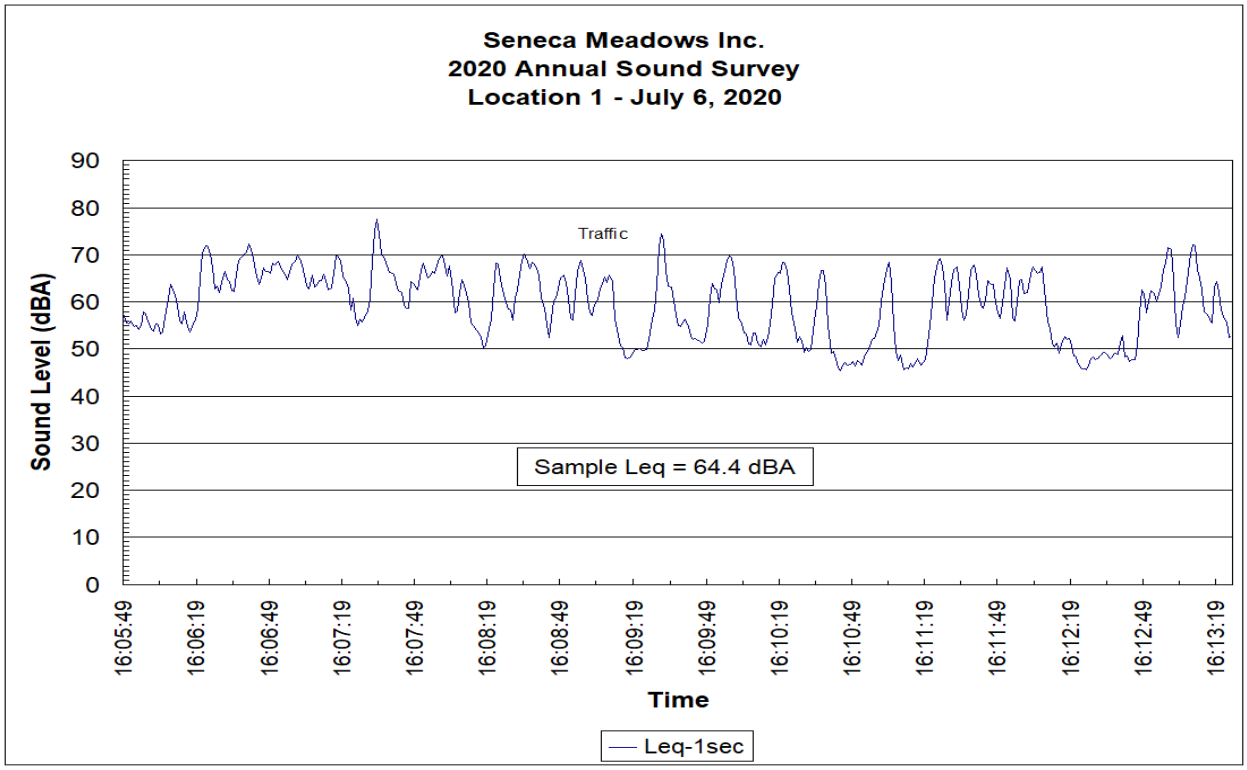
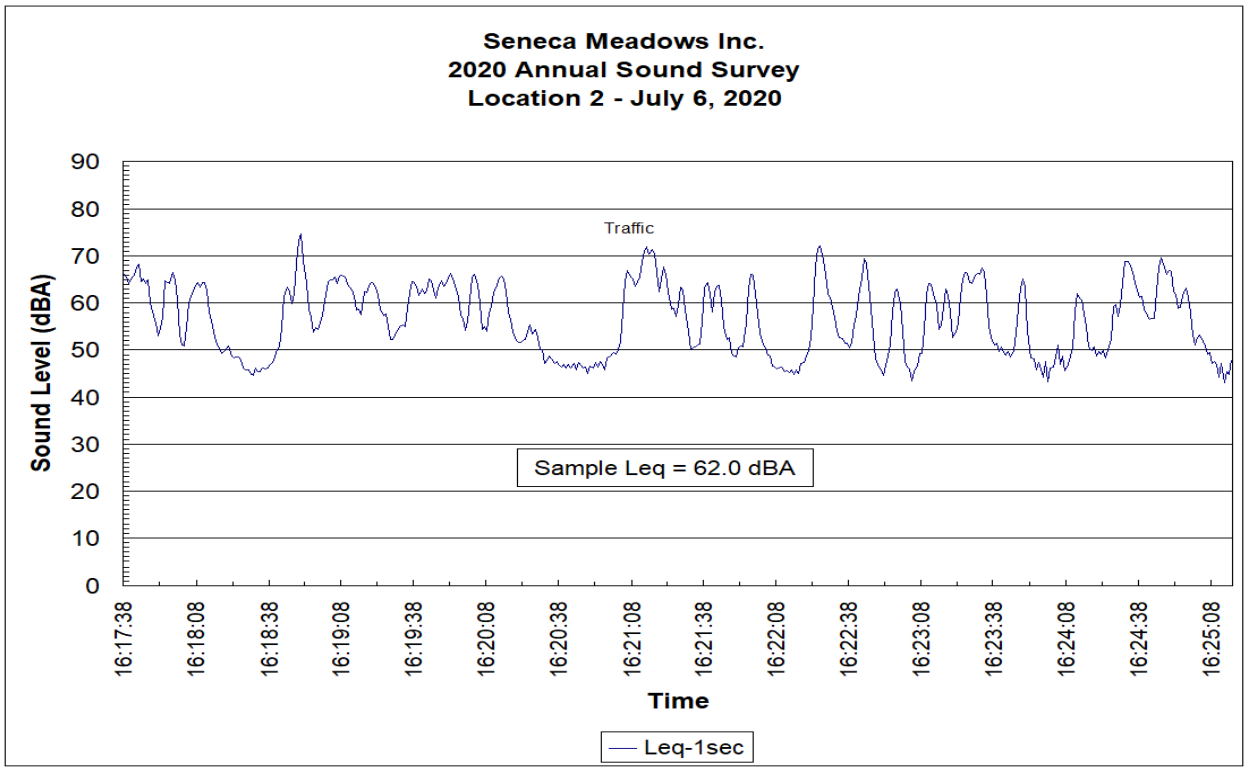
Hand-Held Sound Surveys

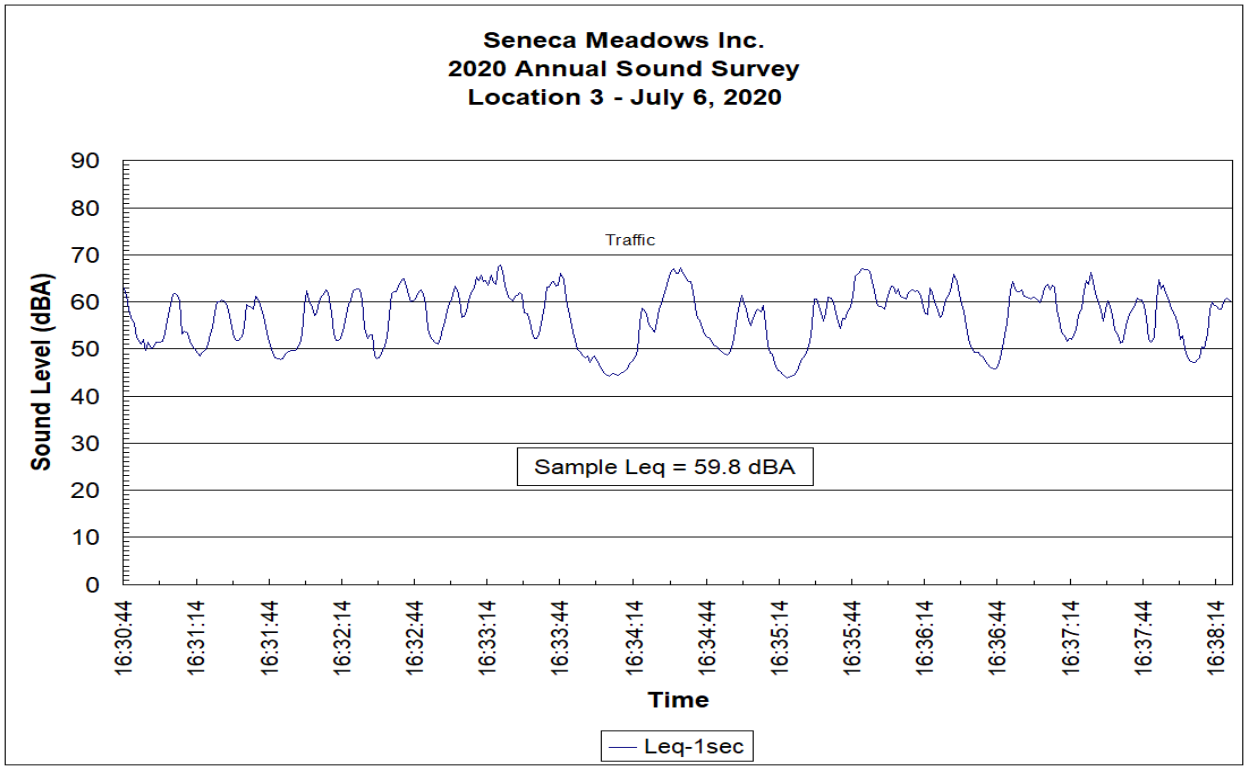
July 6, 2020
Evening Period



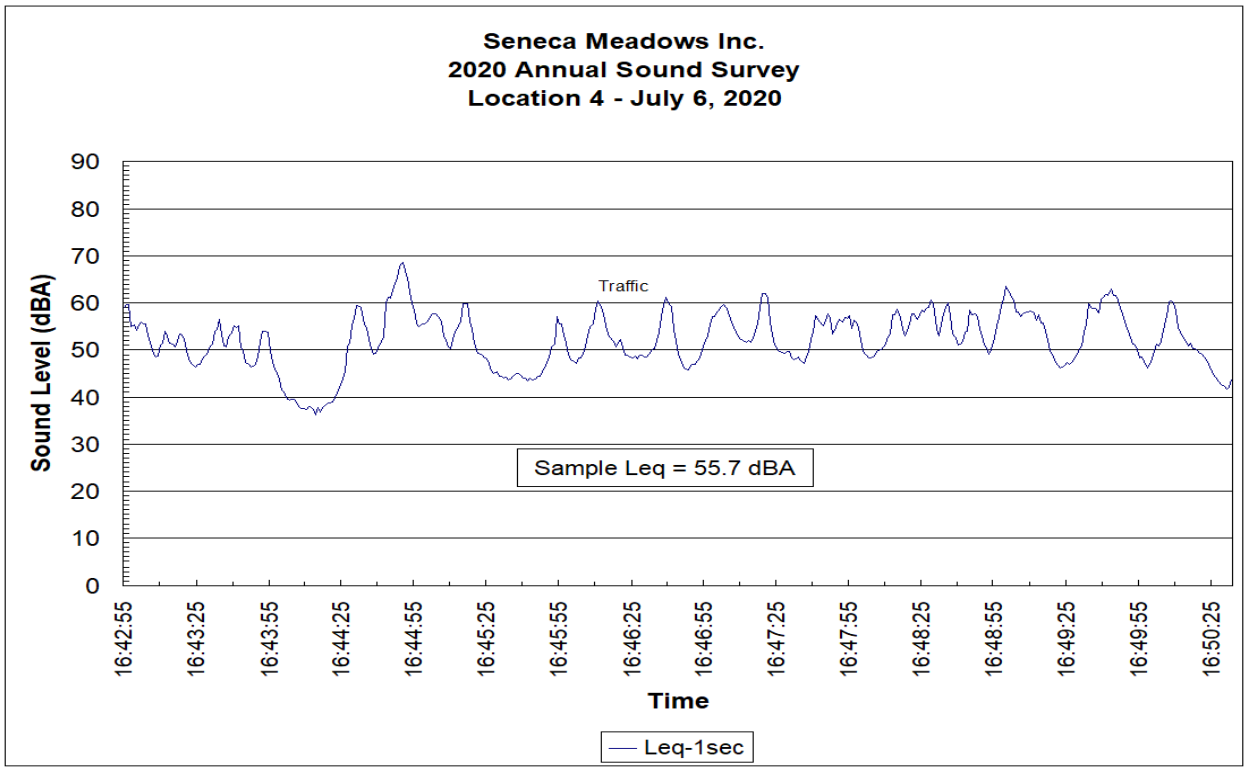
Location 1: Leq = 64.4 dBA
Traffic on Rt. 414, SEI plant.



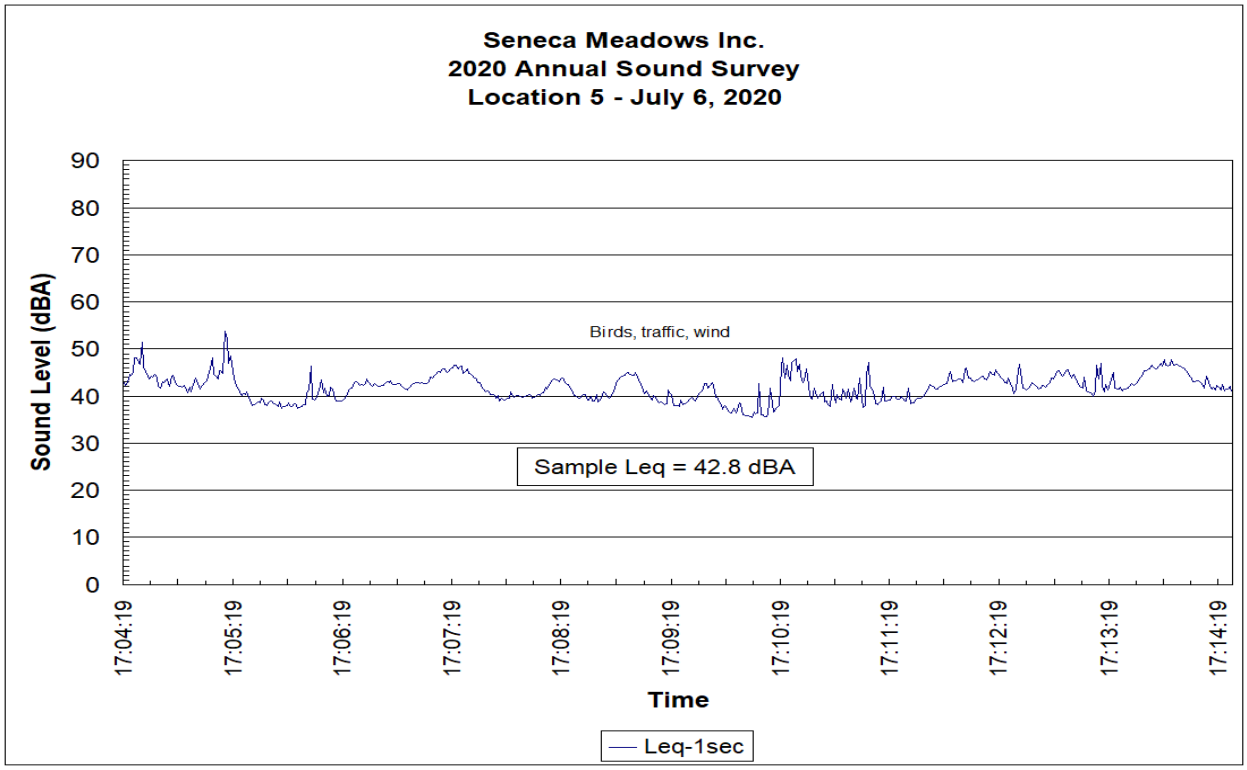
Location 2: Leq = 62.0 dBA
Traffic on Rt. 414, SEI plant.



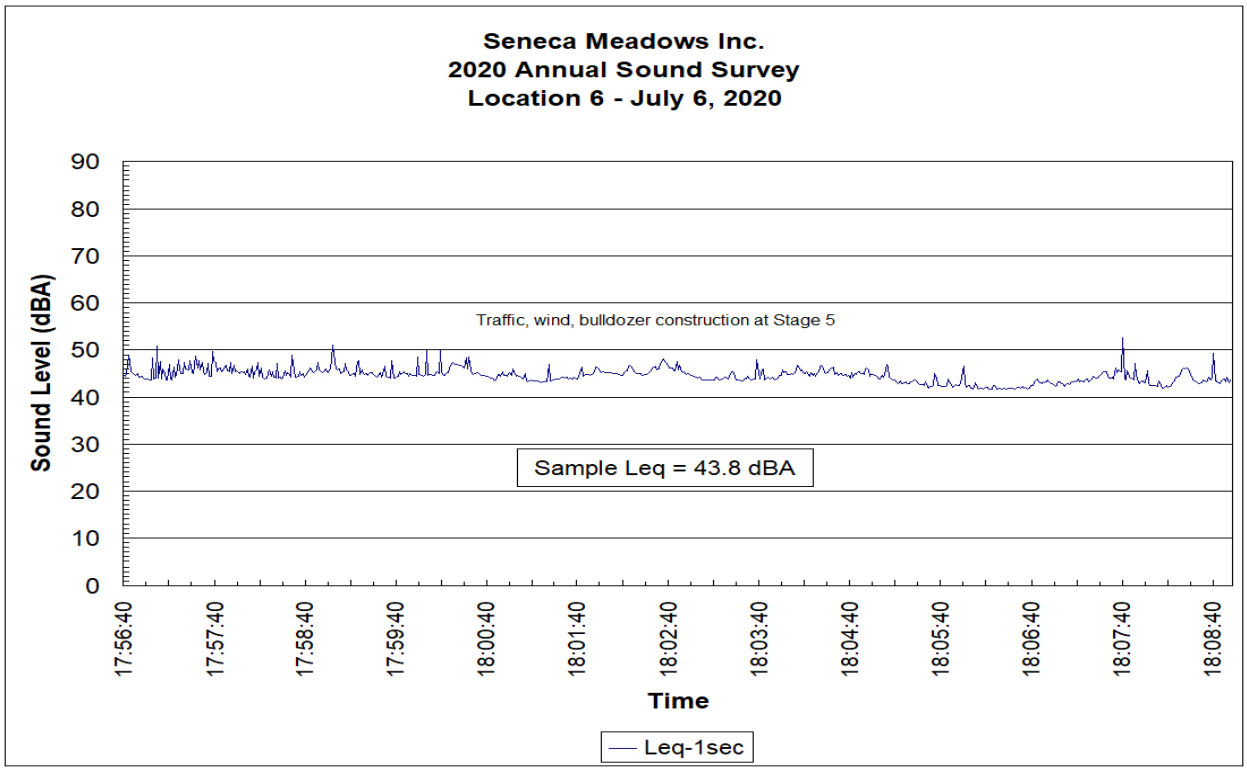
Location 3: Leq = 59.8 dBA
Traffic on Rt. 414.



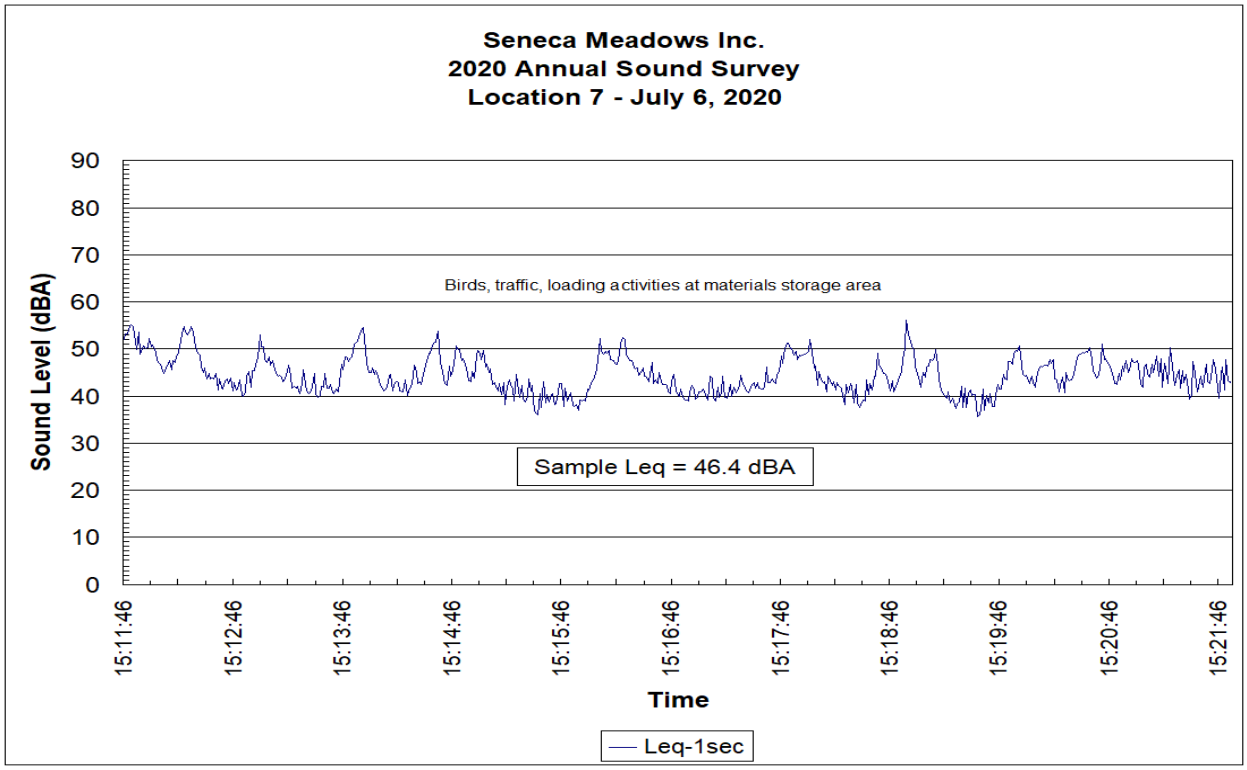
Location 4: Leq = 55.7 dBA
Traffic on Rt. 414.



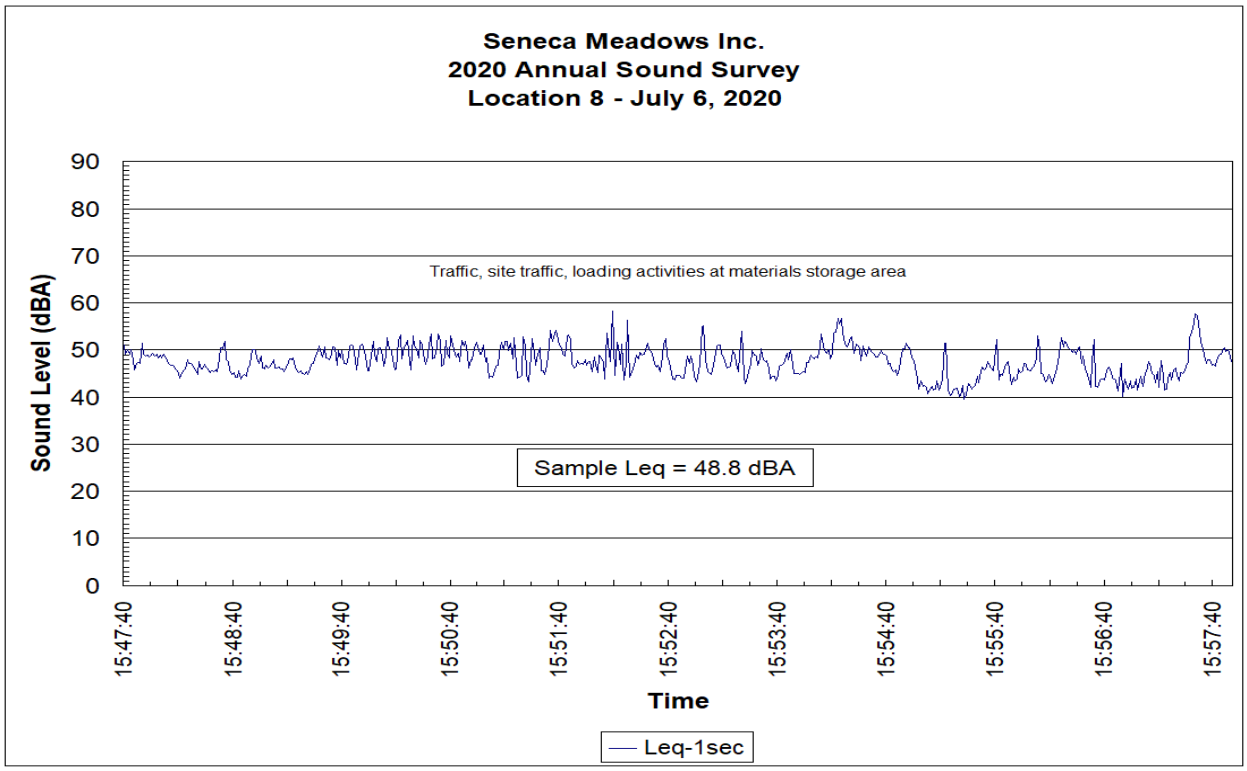
Location 5: Leq = 42.8BA
Birds, traffic on Burgess Road and Rt. 414, wind



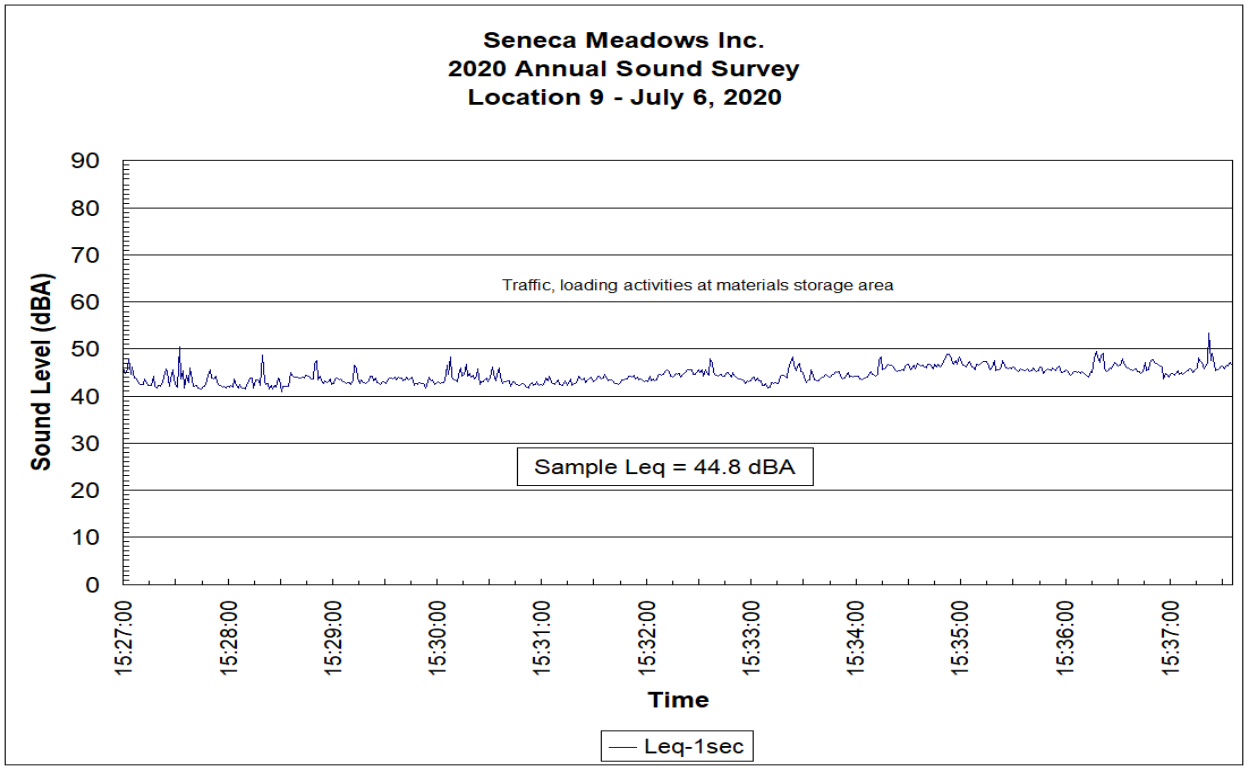
Location 6: Leq = 43.8 dBA
Traffic on Burgess Road, wind, construction equipment.



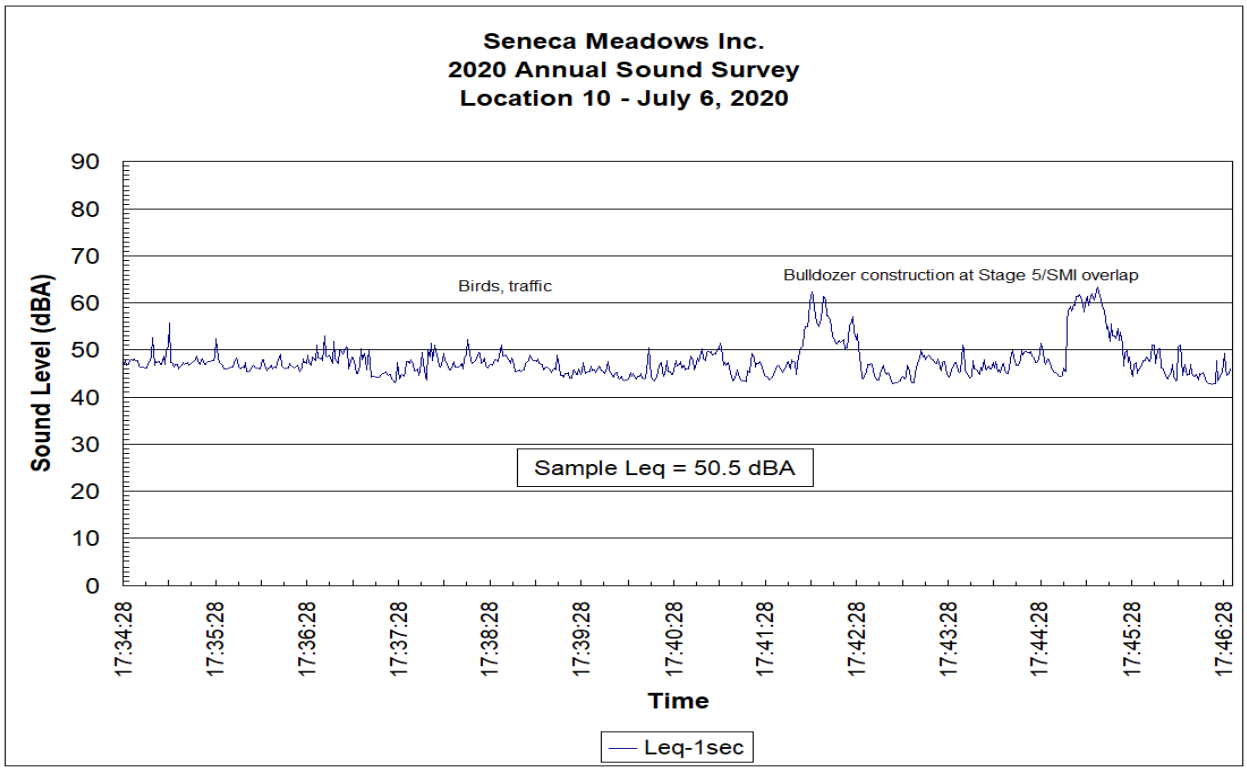
Location 7: Leq = 46.4 dBA
Birds, traffic on North and Burgess Roads, materials loading.



Location 8: Leq = 48.8 dBA
Traffic on North Road, site traffic, materials loading.



Location 9: Leq = 44.8 dBA
Traffic on North Road, materials loading.



Location 10: Leq = 50.5 dBA
Birds, traffic on Burgess Road and Rt. 414, construction equipment.

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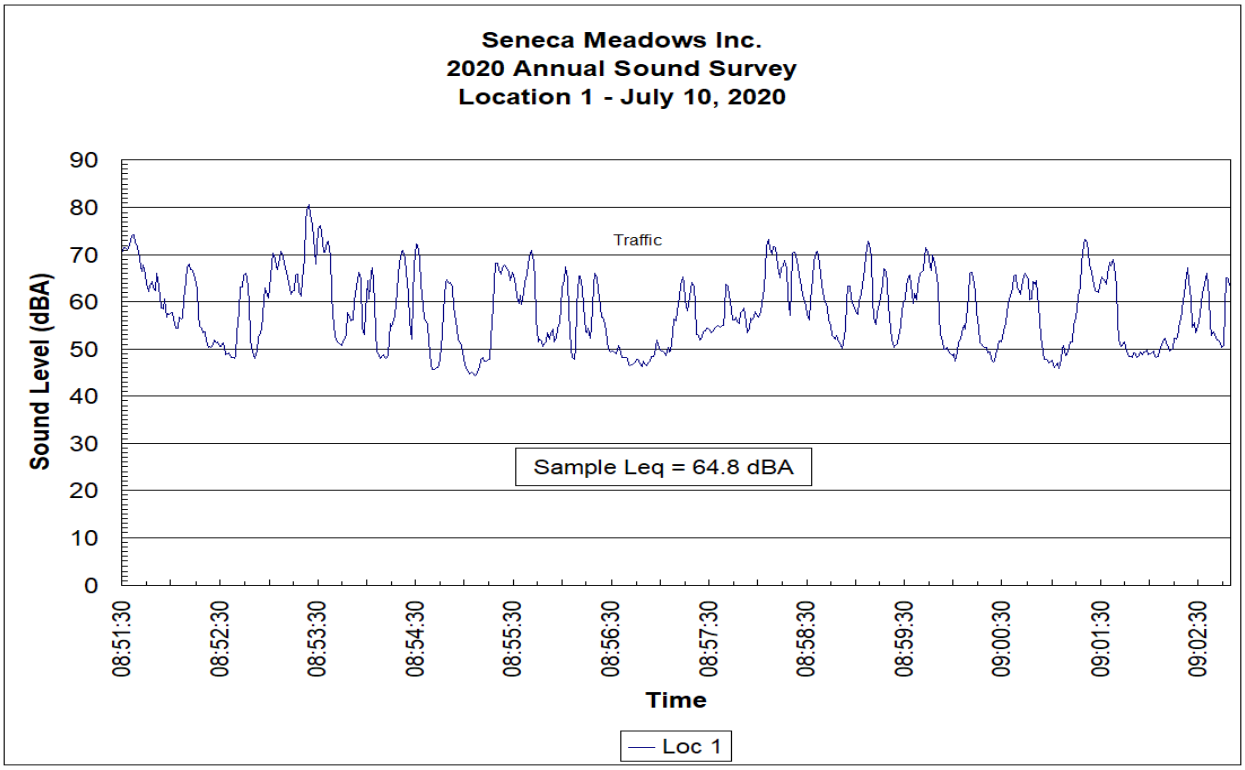
Appendix D

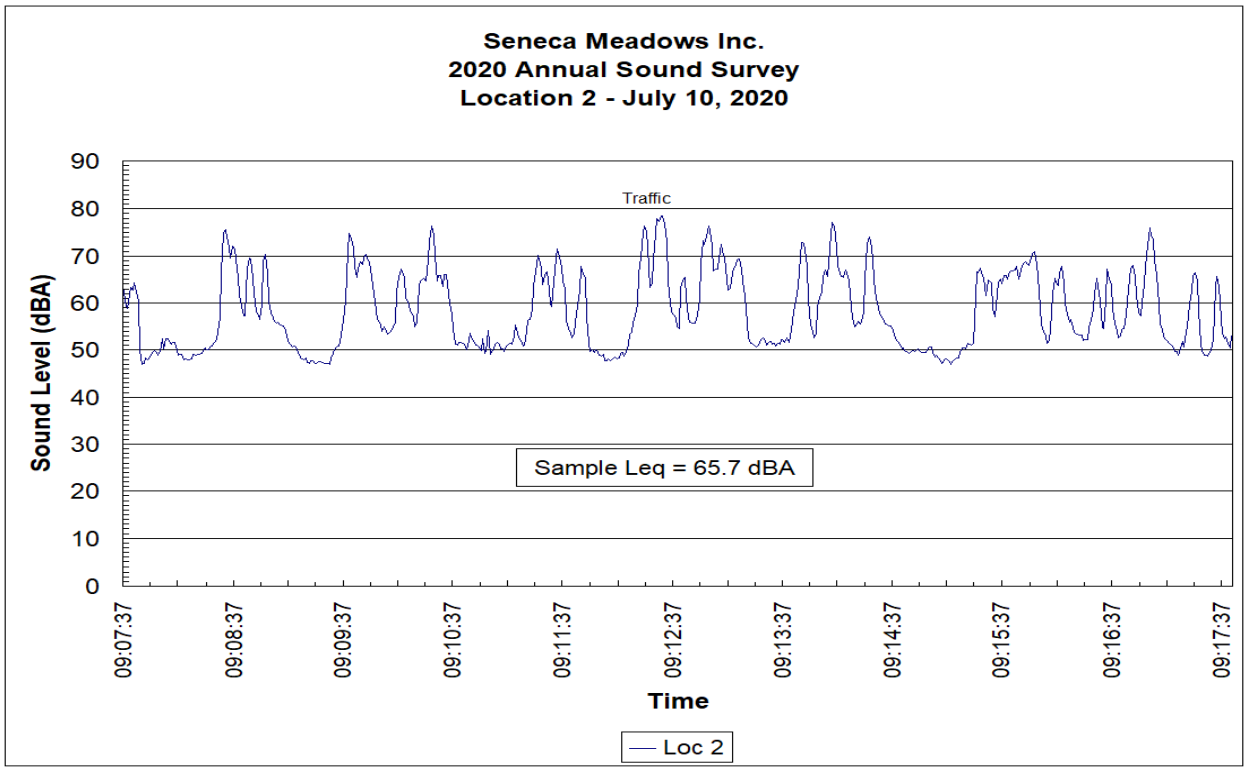
Hand-Held Sound Surveys

July 10, 2020

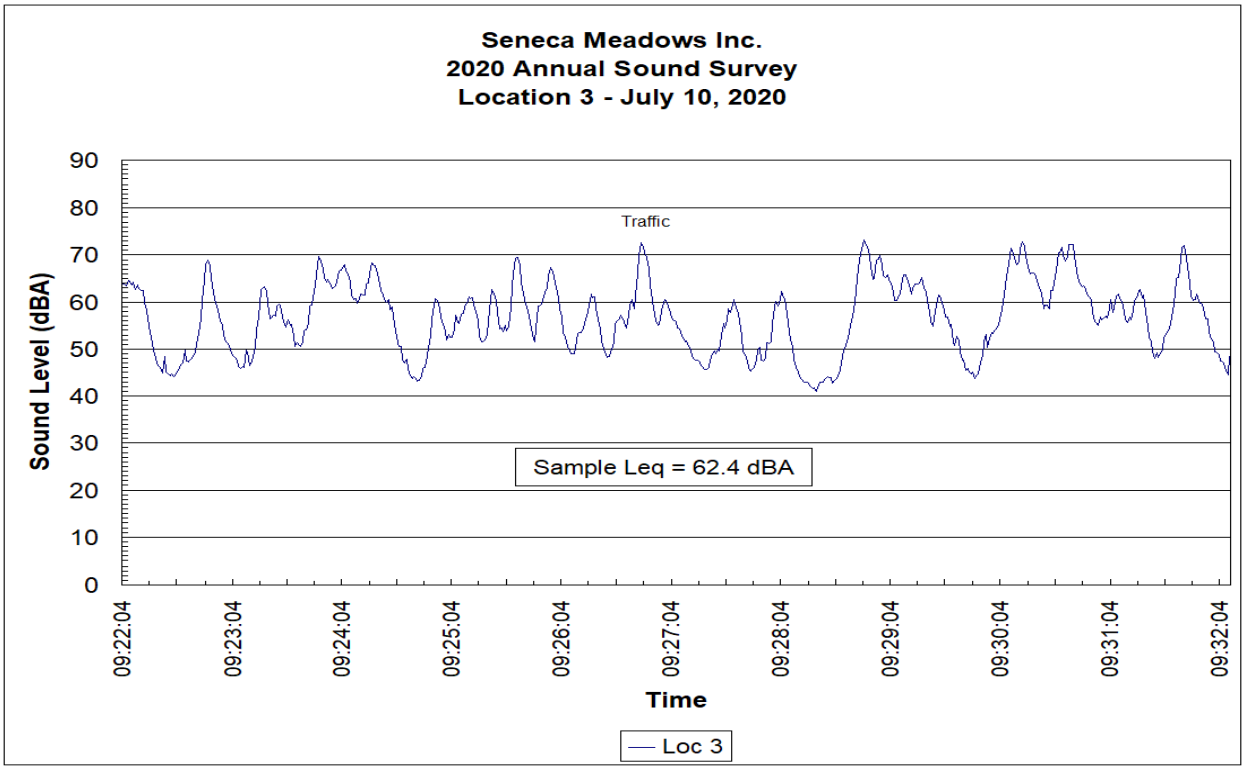
Morning Period



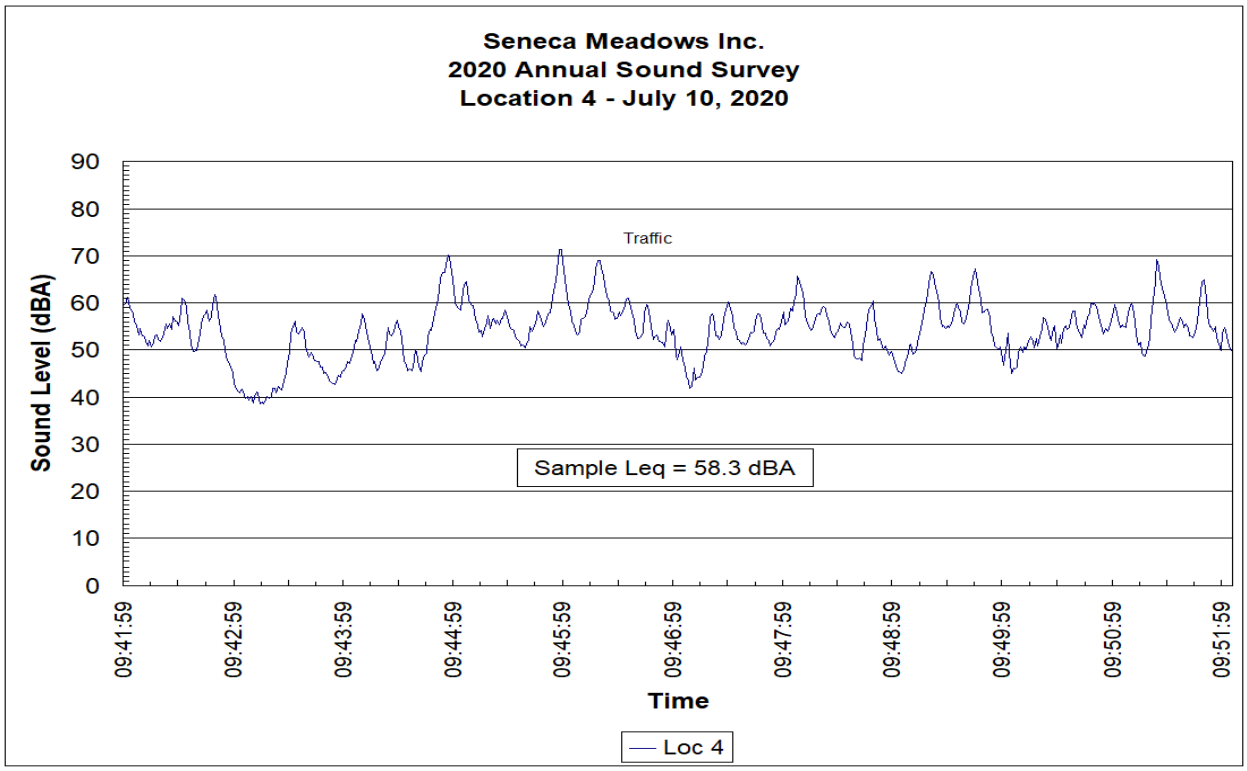
Location 1: Leq = 64.8 dBA
Traffic on Rt. 414, SEI plant.



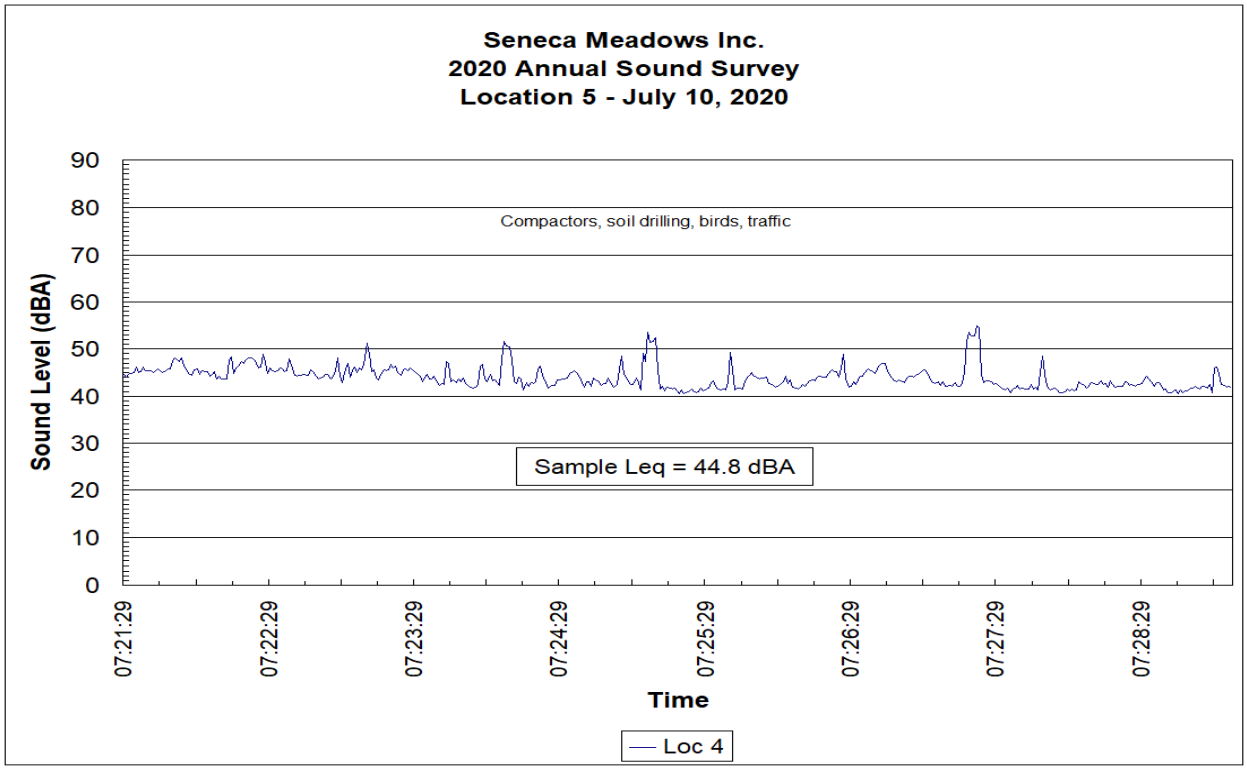
Location 2: Leq = 65.7 dBA
Traffic on Rt. 414, SEI plant.



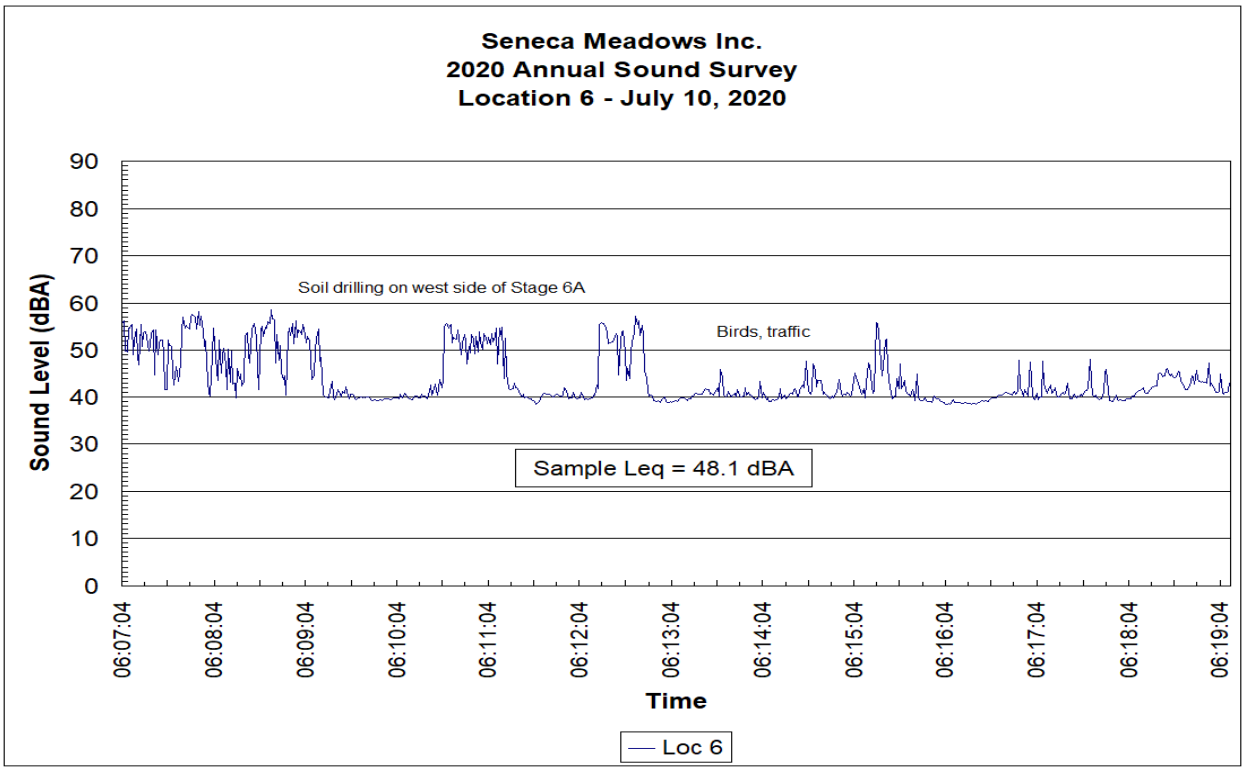
Location 3: Leq = 62.4 dBA
Traffic on Rt. 414.



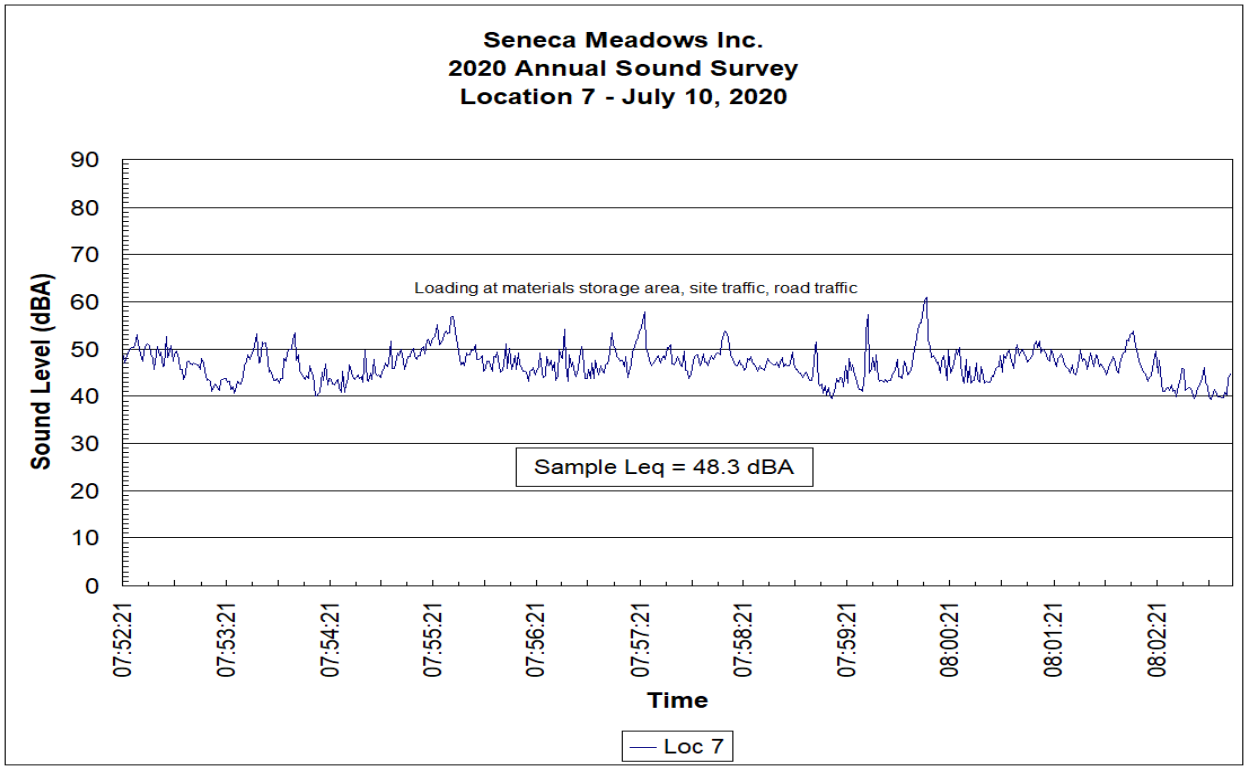
Location 4: Leq = 58.3 dBA
Traffic on Rt. 414.



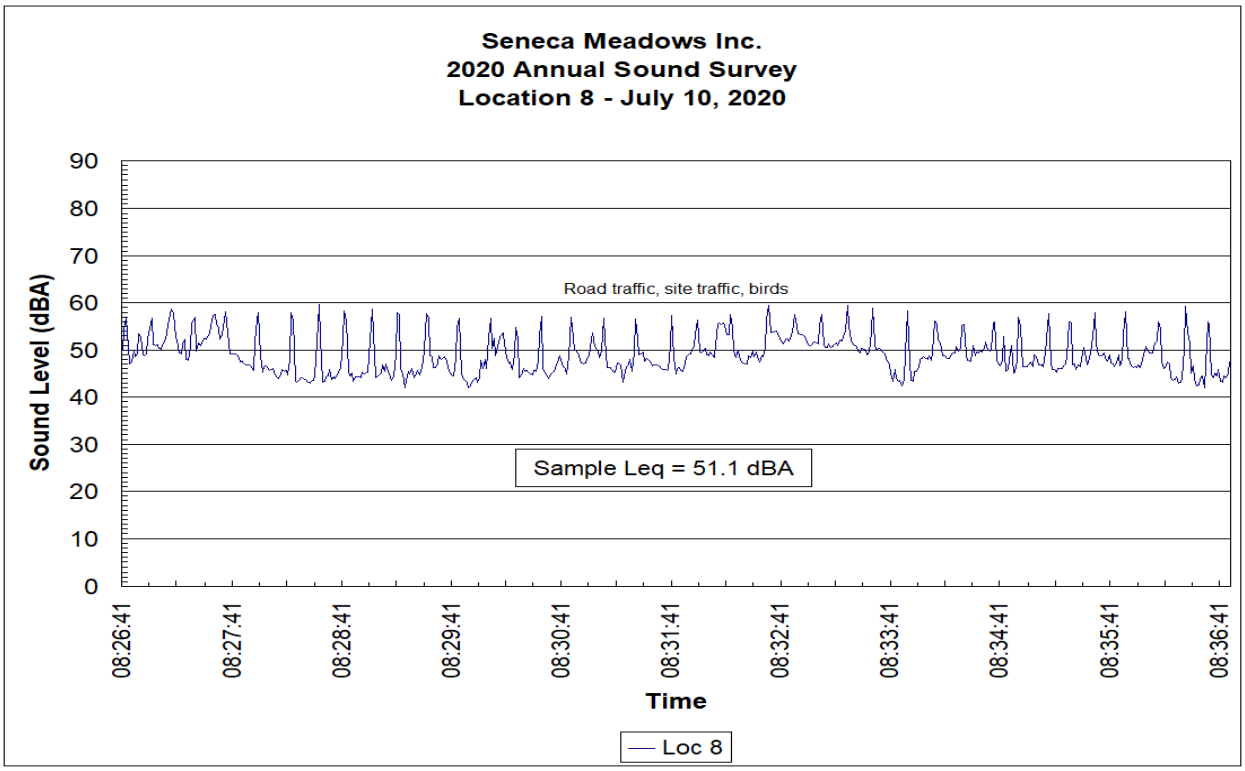
Location 5: Leq = 44.8 dBA
Traffic on Burgess Road and Rt. 414, biological sources, waste compactors.



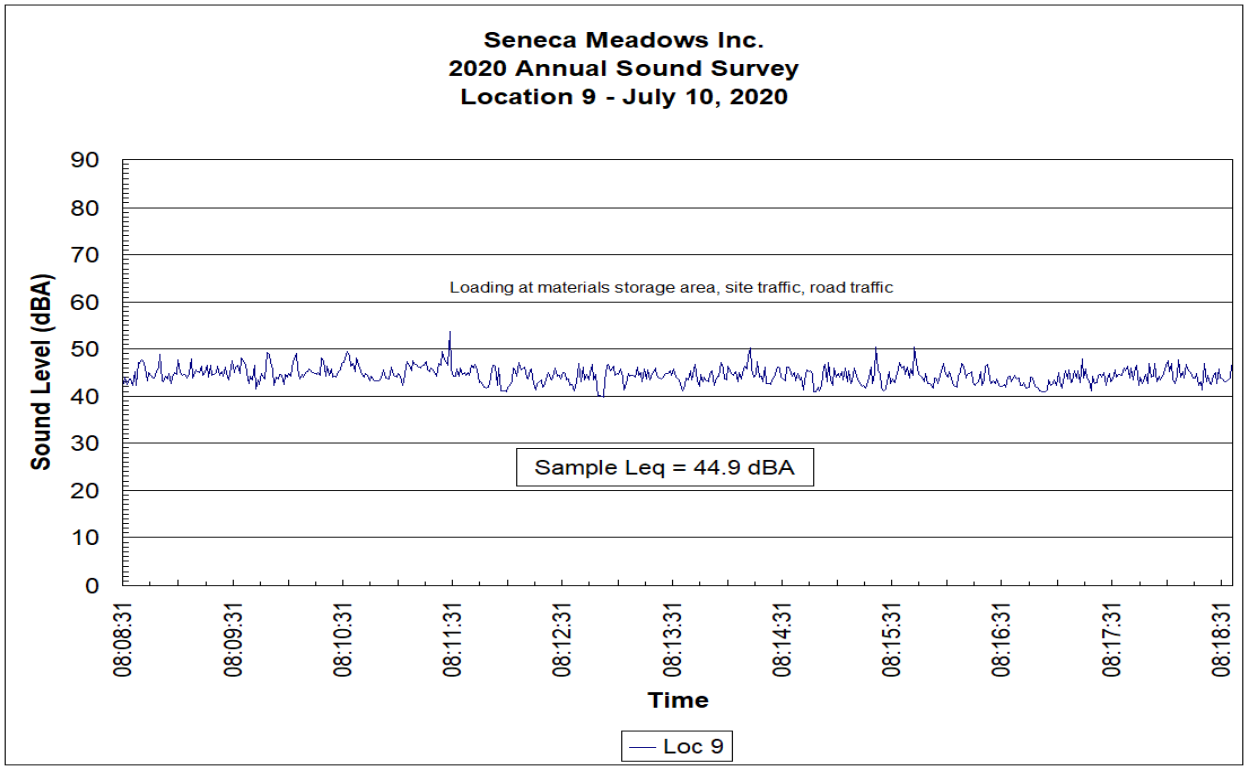
Location 6: Leq = 48.1 dBA
Birds, traffic on Burgess Road, construction equipment on side of berm.



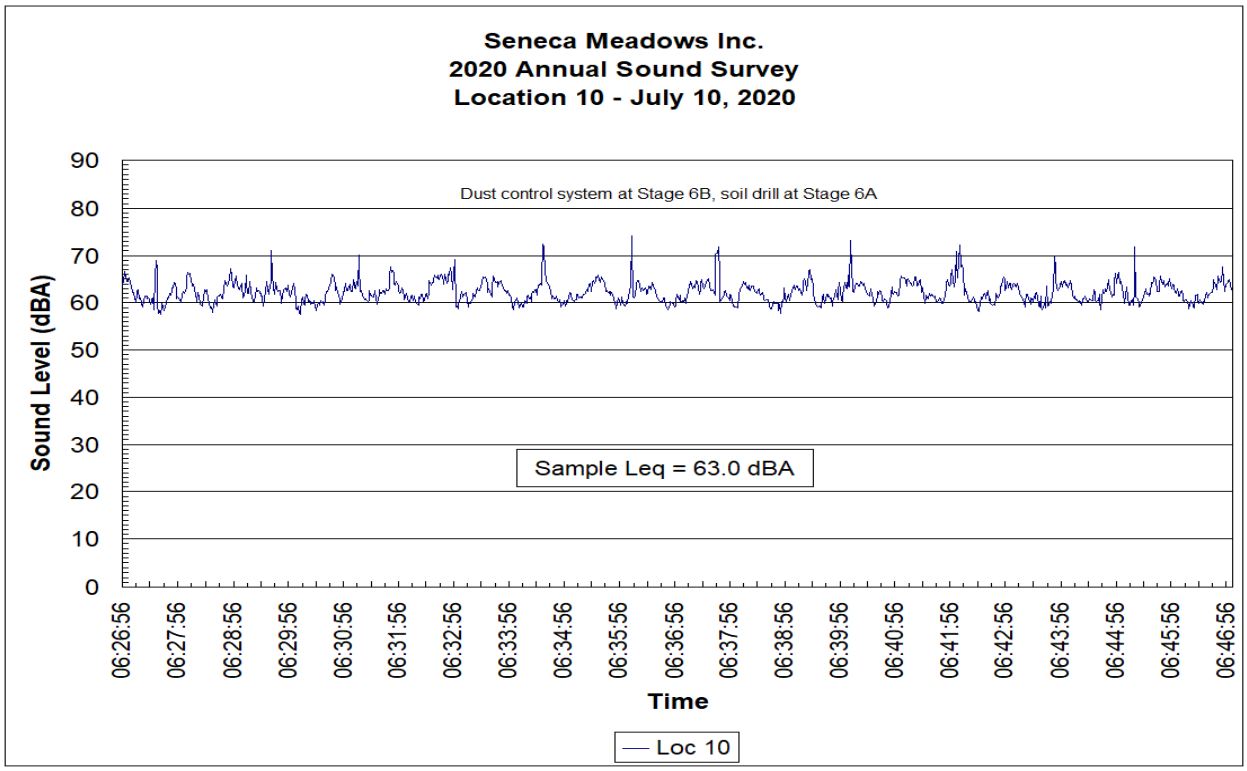
Location 7: Leq =48.3 dBA
Traffic on North and Burgess Roads, site traffic, materials loading.



Location 8: Leq = 51.1 dBA
Traffic passes on North Road, site traffic, birds.



Location 9: Leq = 44.9 dBA
Traffic on North Road, site traffic, materials loading.



Location 10: Leq = 63.0 dBA
Dust/odor control system on berm, waste compactors, construction equipment.

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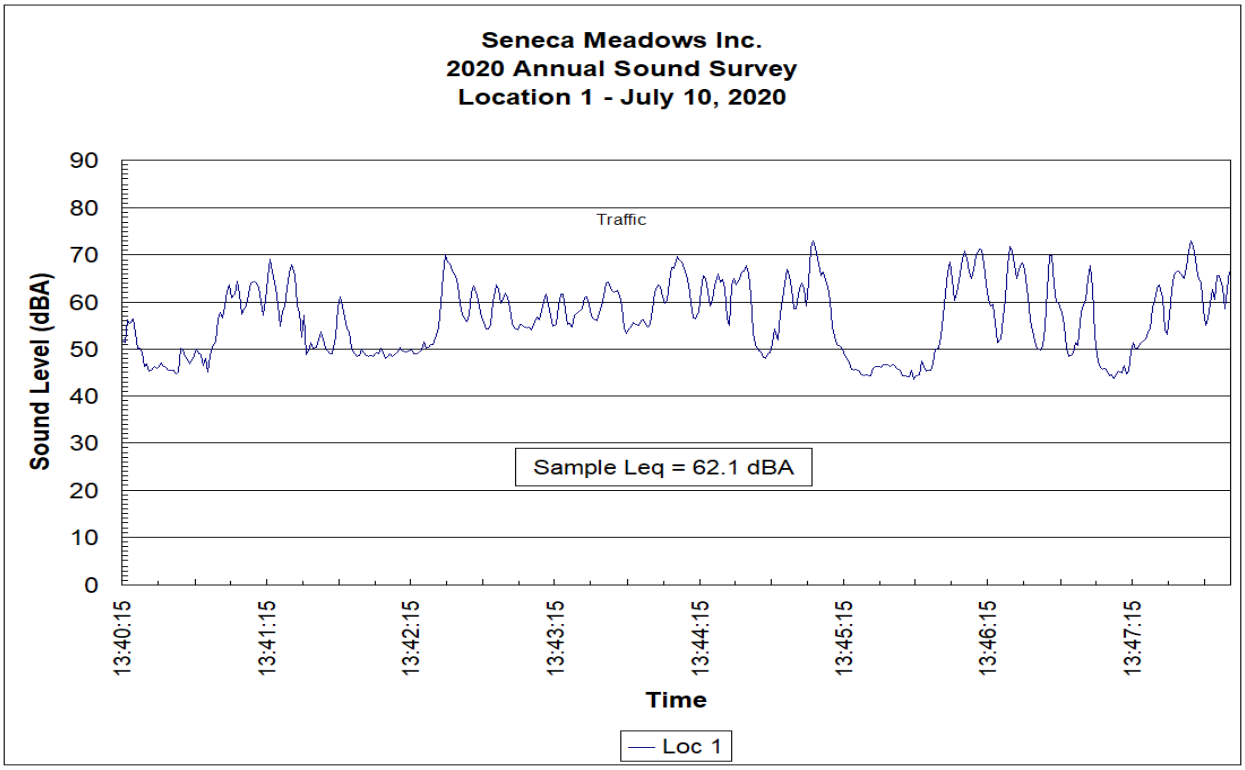
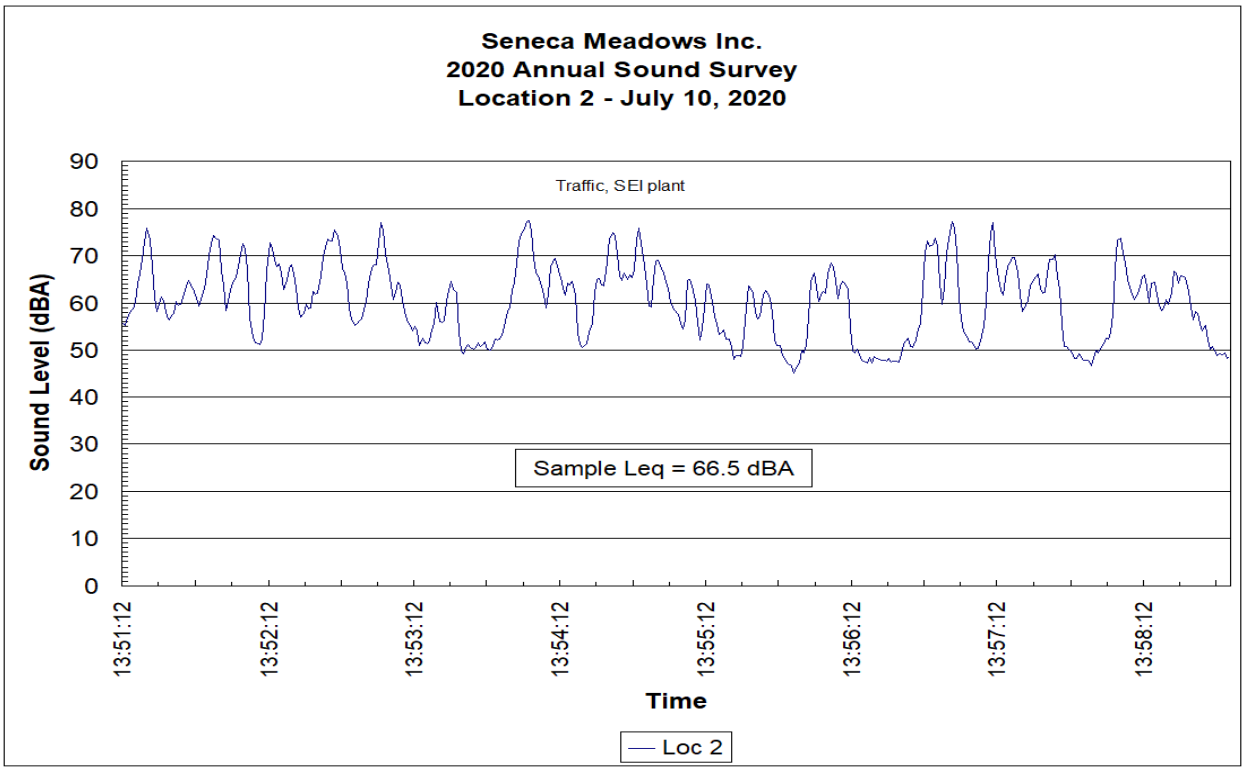
info@auroraacoustical.com

Hand-Held Sound Surveys

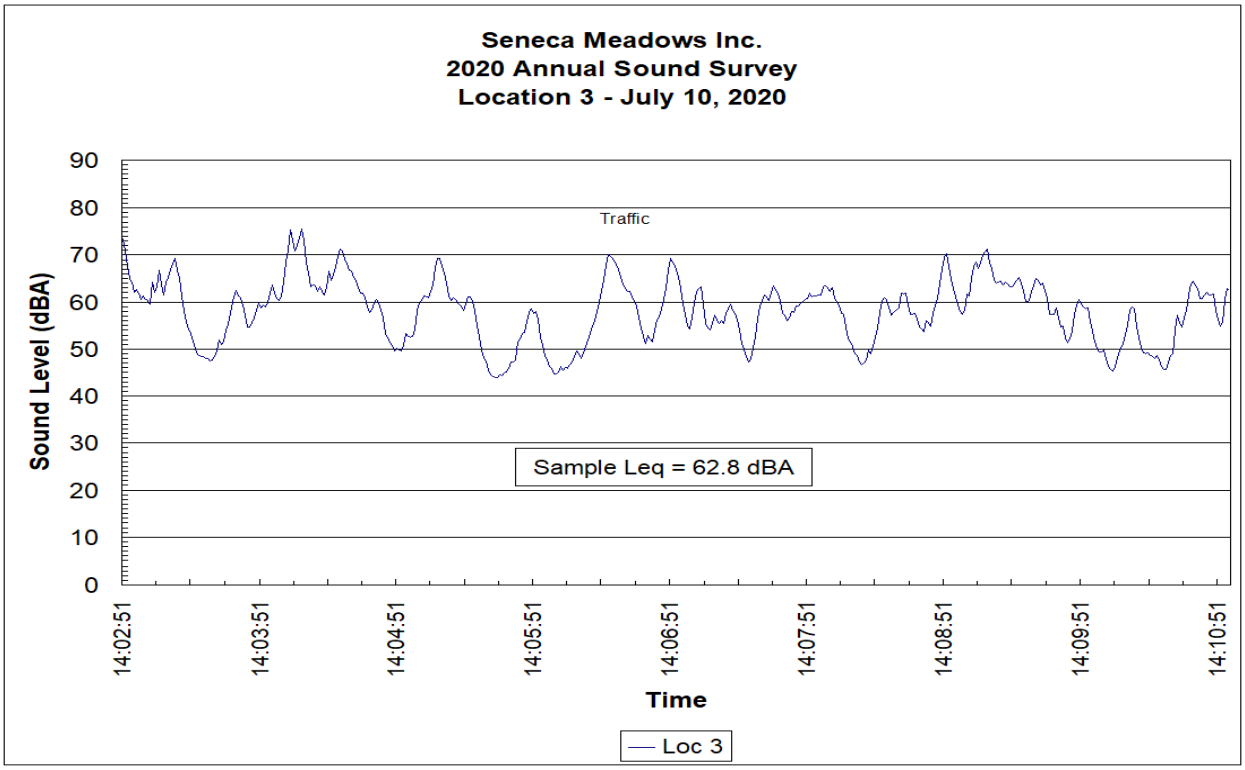
July 10, 2020
Mid-day to Afternoon Period



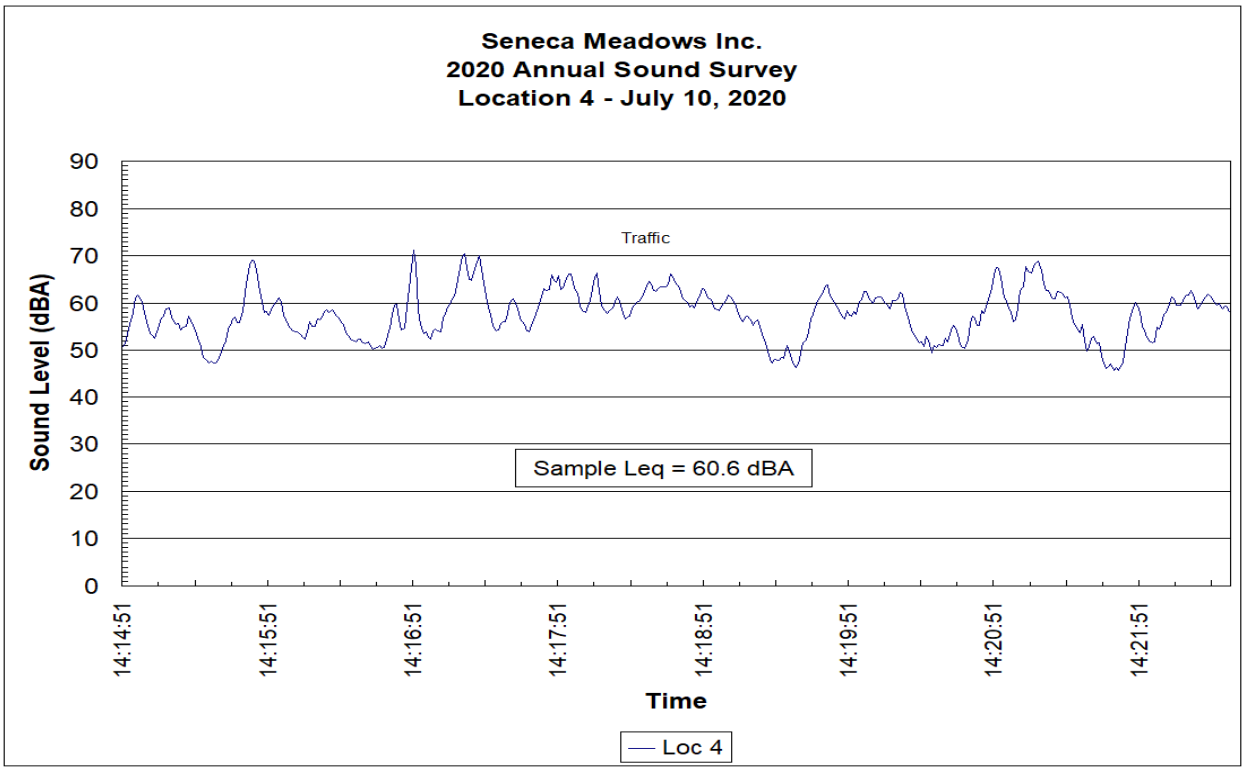
Location 1: Leq = 62.1 dBA
Traffic on Rt. 414; SEI plant.



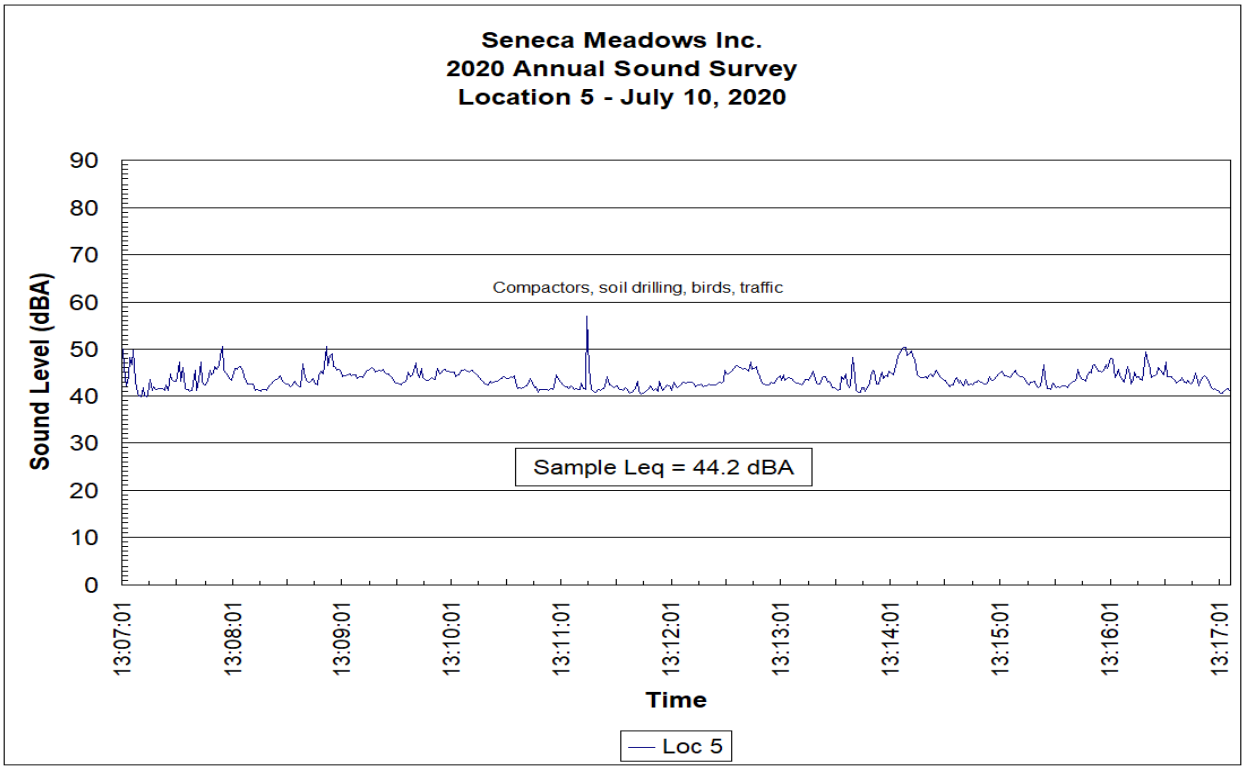
Location 2: Leq = 66.9 dBA
Traffic on Rt. 414, SEI plant.



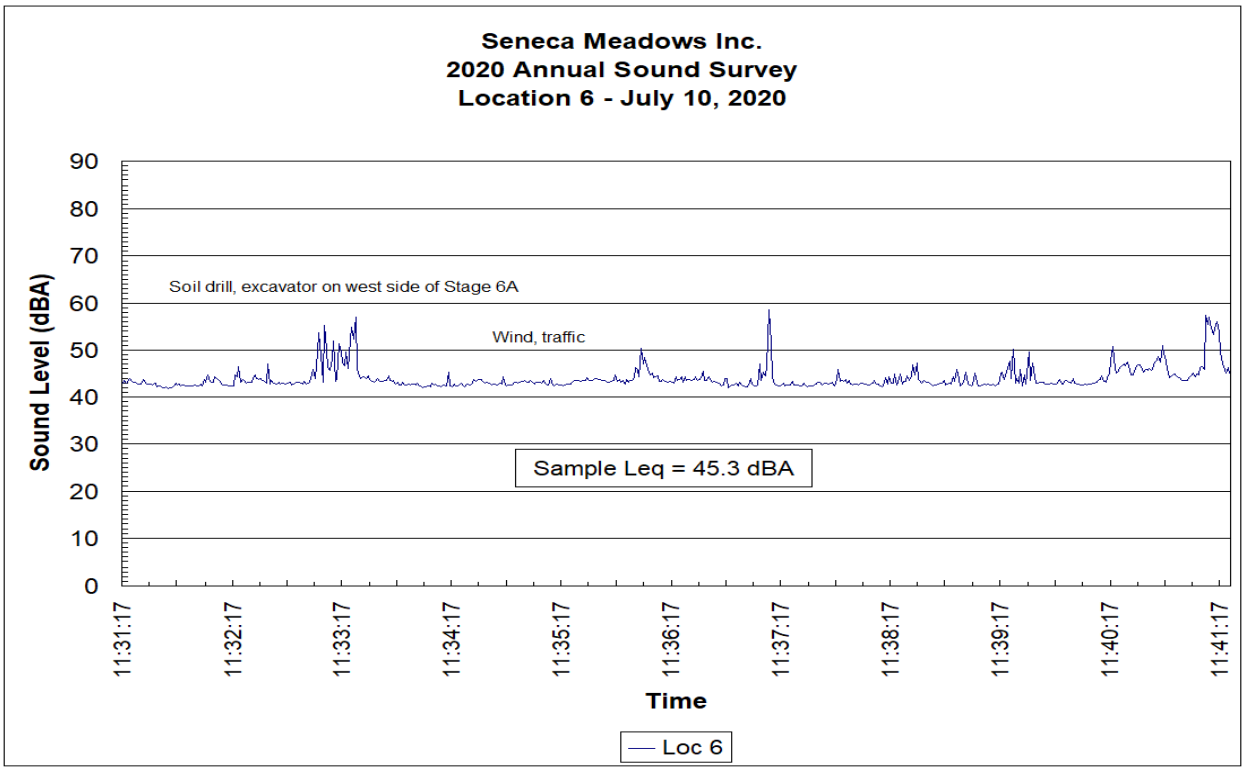
Location 3: Leq = 62.8 dBA
Traffic on Rt. 414.



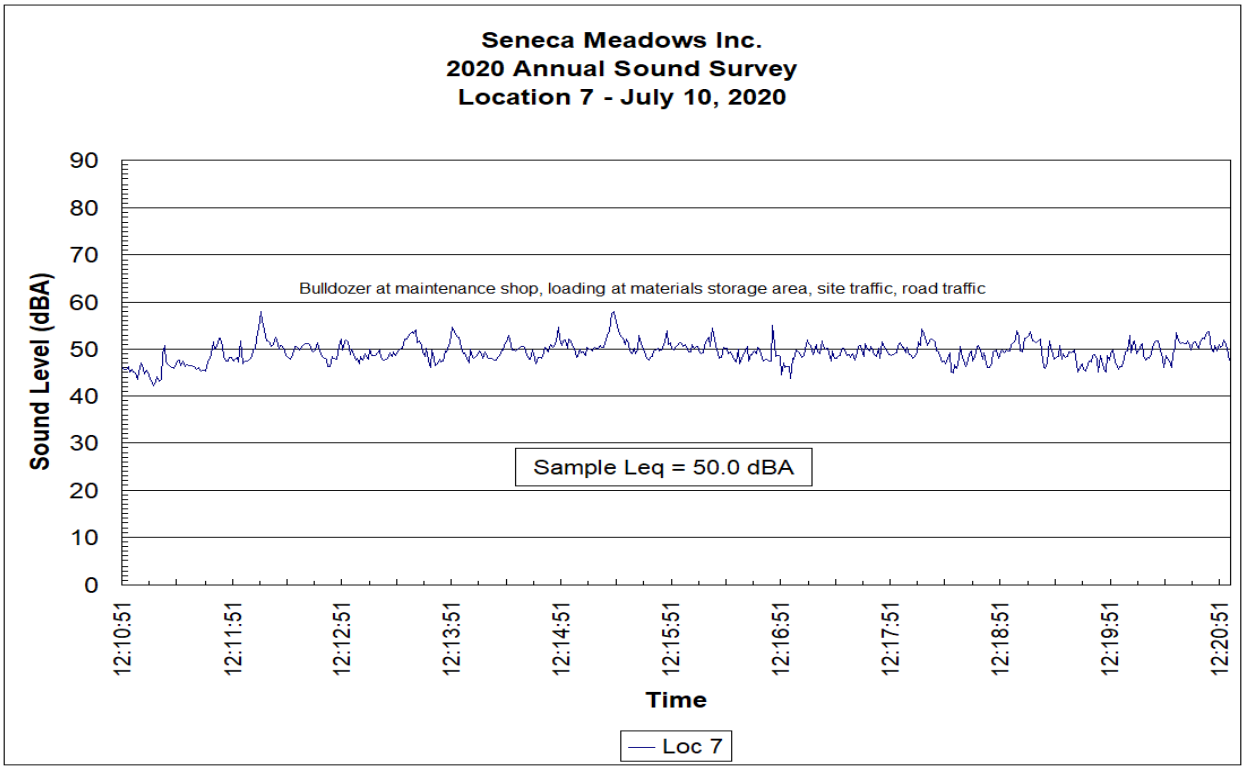
Location 4: Leq = 60.6 dBA
Traffic on Rt. 414.



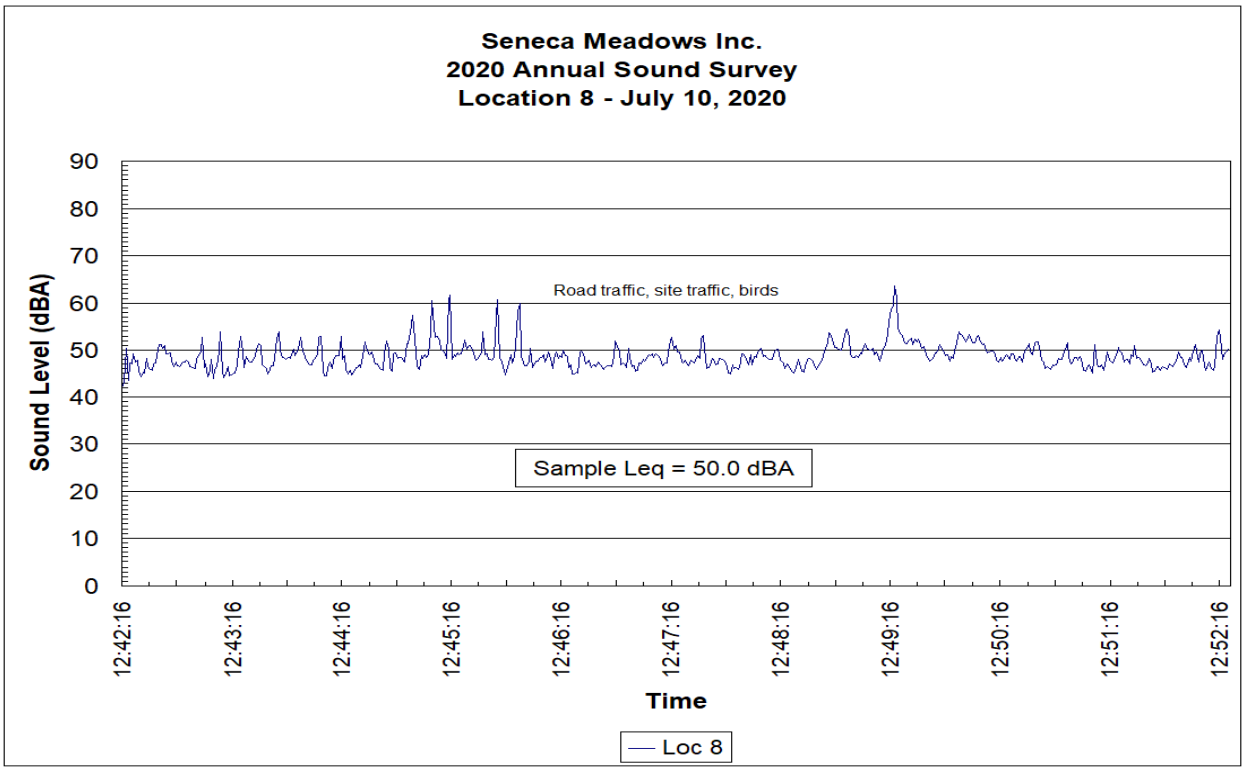
Location 5: Leq = 44.2 dBA
Waste compactors, construction equipment, birds, traffic on Burgess Road and Rt. 414.



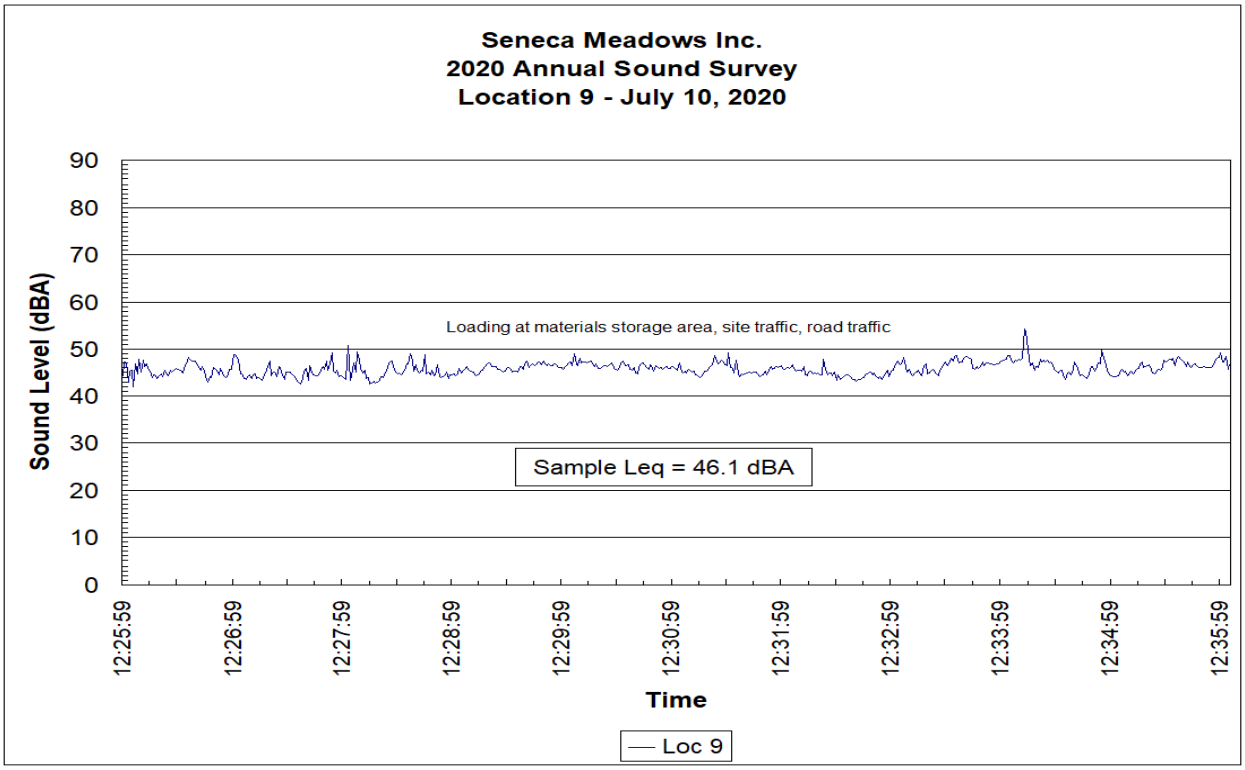
Location 6: Leq = 45.3 dBA
Wind, traffic on Burgess Road, construction equipment on berm.



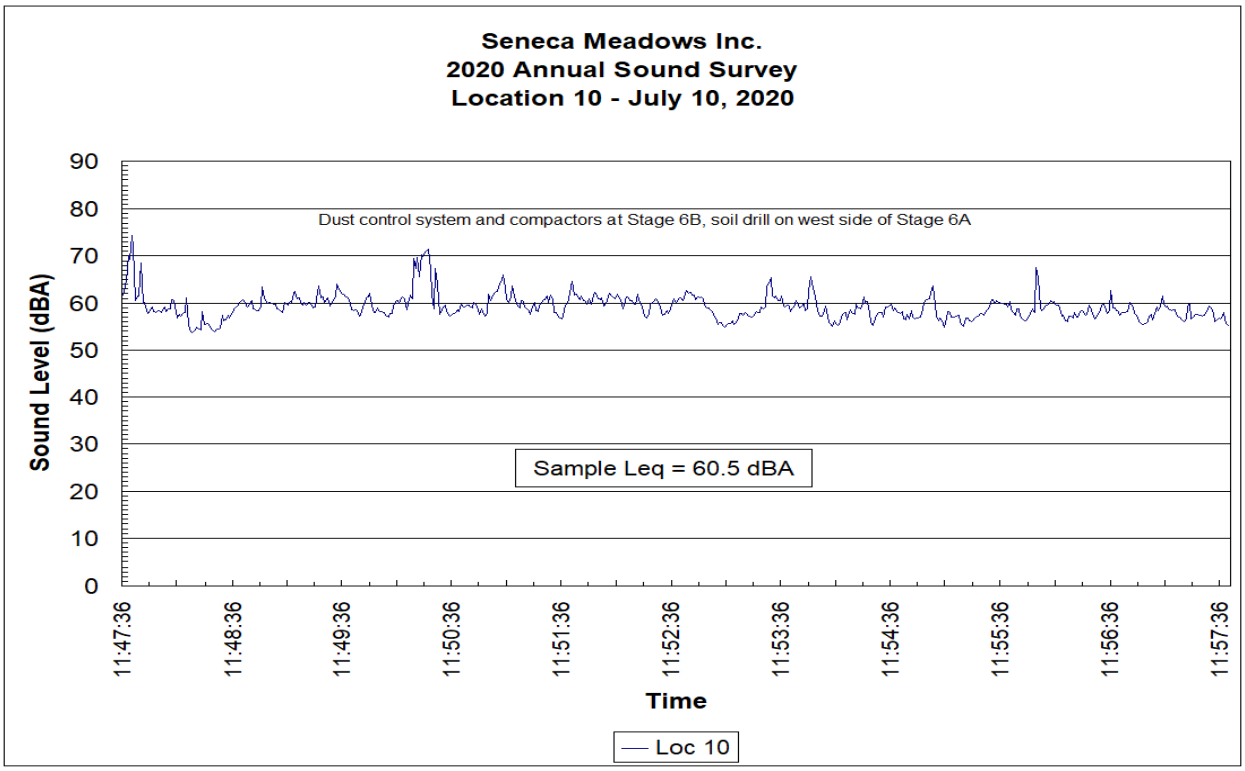
Location 7: Leq = 50.0 dBA
Construction equipment, materials loading, traffic on North and Burgess Roads, site traffic.



Location 8: Leq = 50.0 dBA
Traffic on North Road, site traffic, birds.



Location 9: Leq = 46.1 dBA
Materials loading, traffic on North Road, site traffic.



Location 10: Leq = 60.5 dBA
Odor/dust control system, waste compactors, construction equipment.

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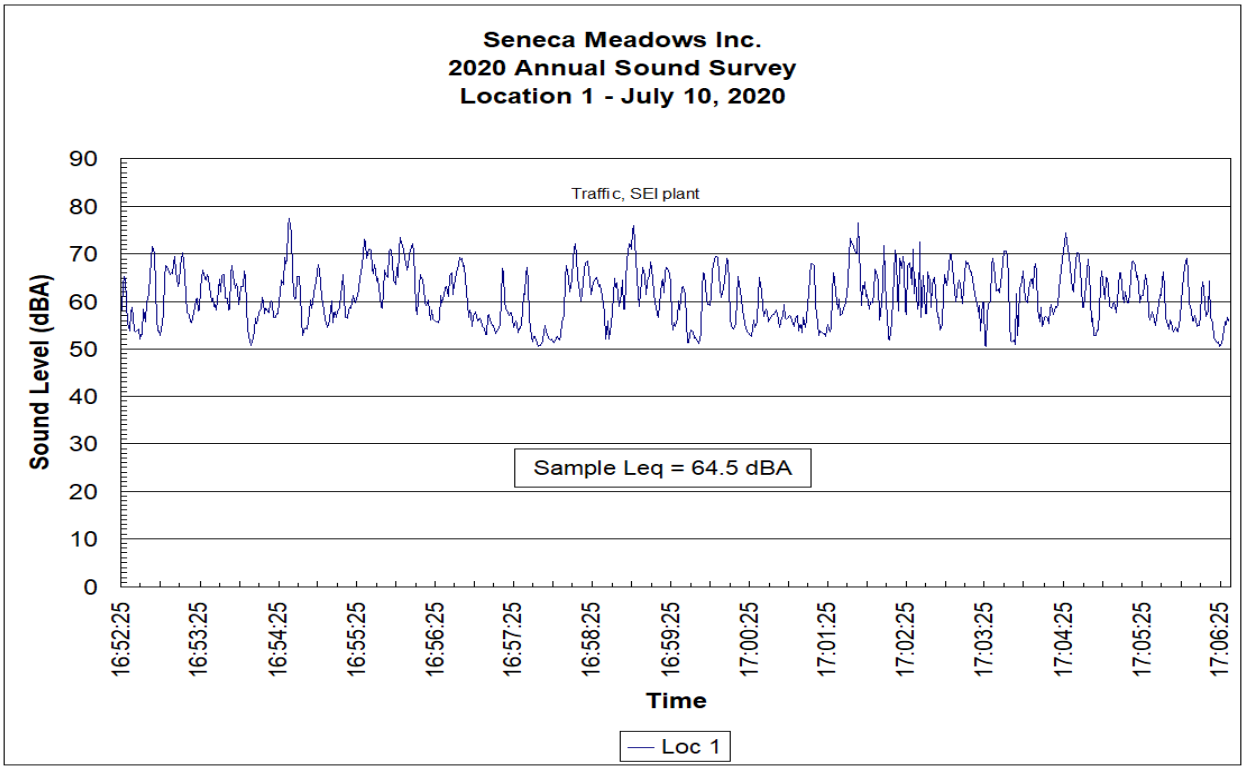
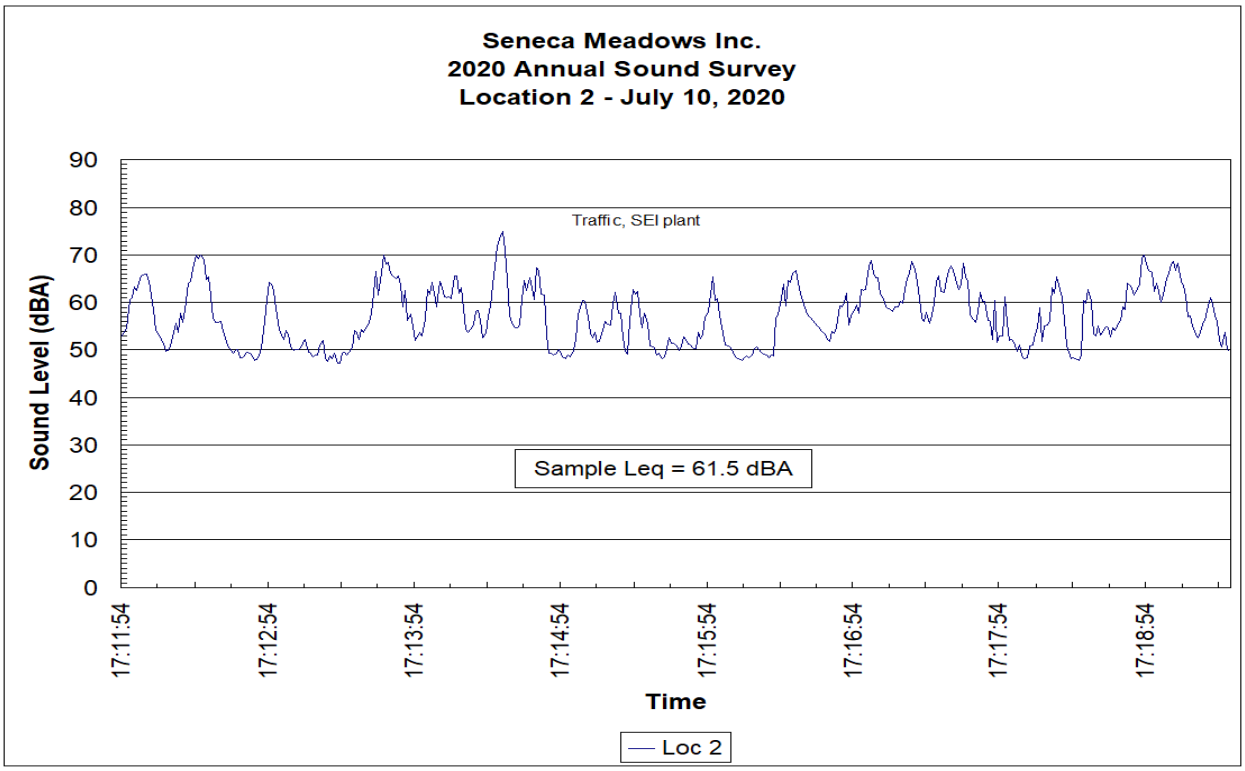
Hand-Held Sound Surveys

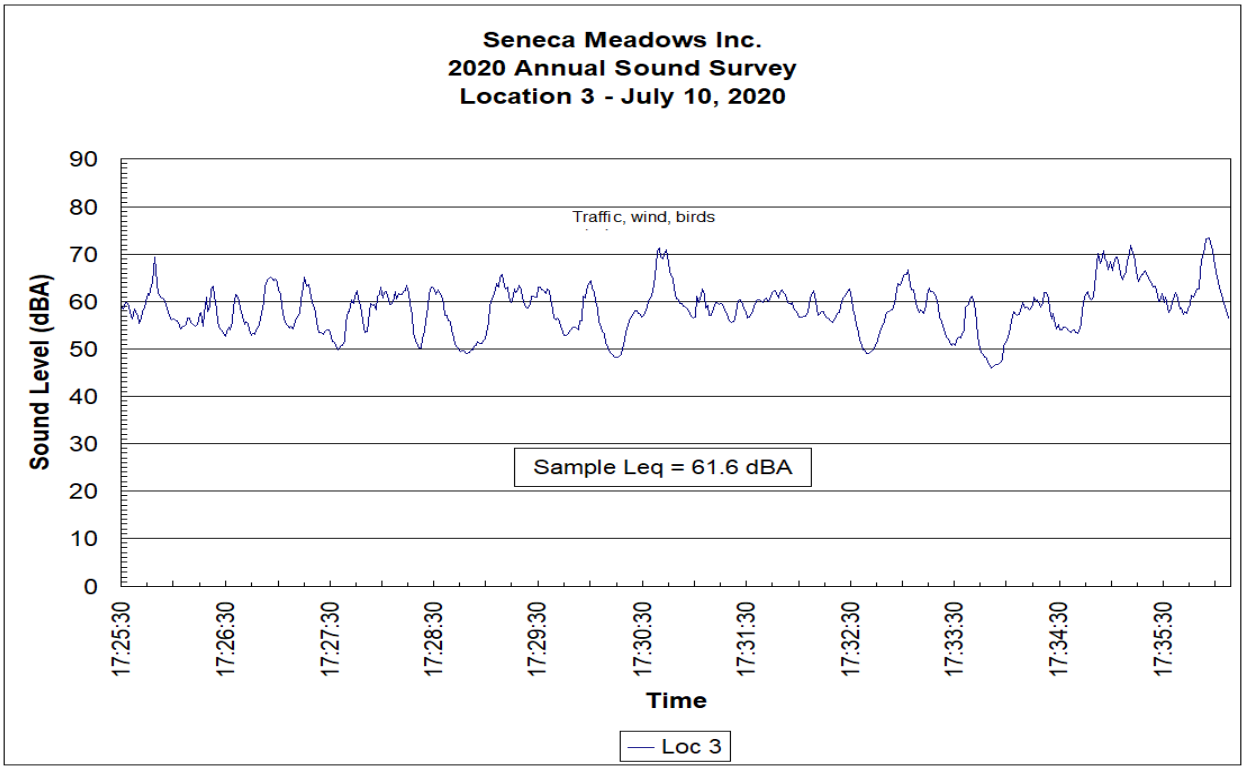
July 10, 2020
Evening Period



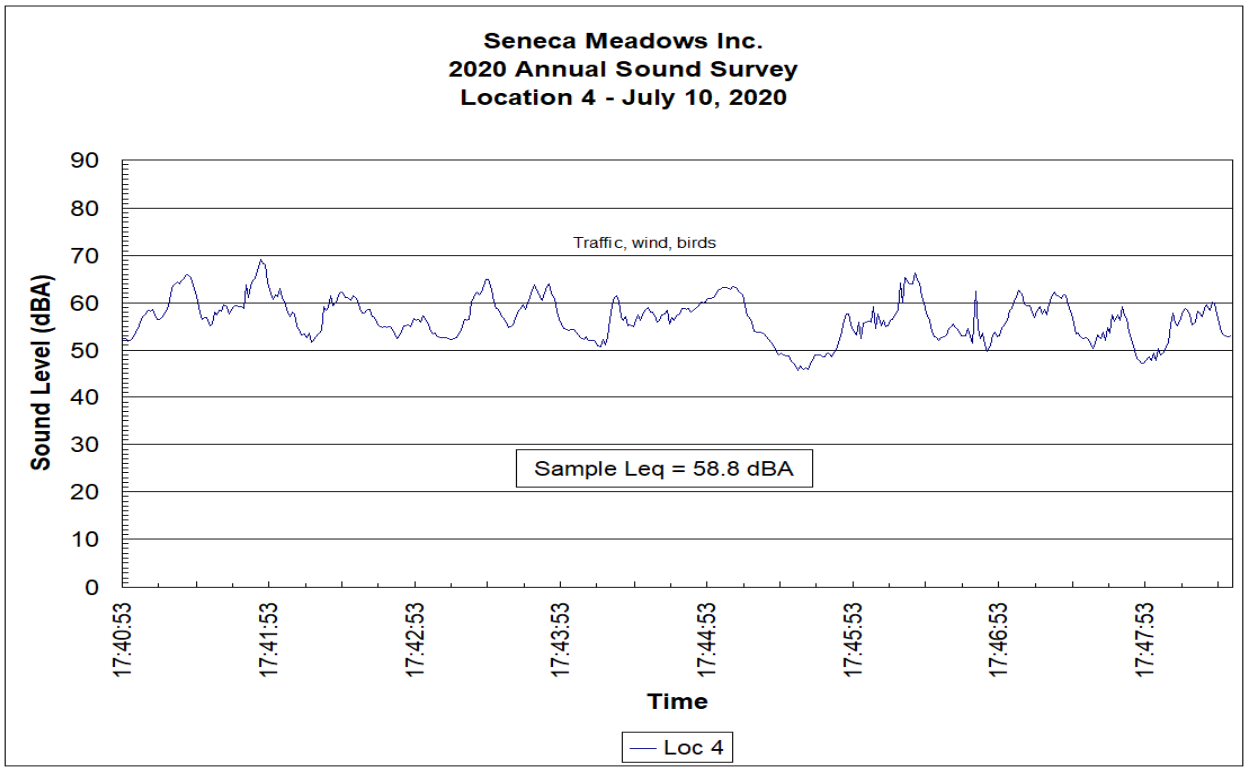
Location 1: Leq = 64.5 dBA
Traffic on Rt. 414, SEI plant.



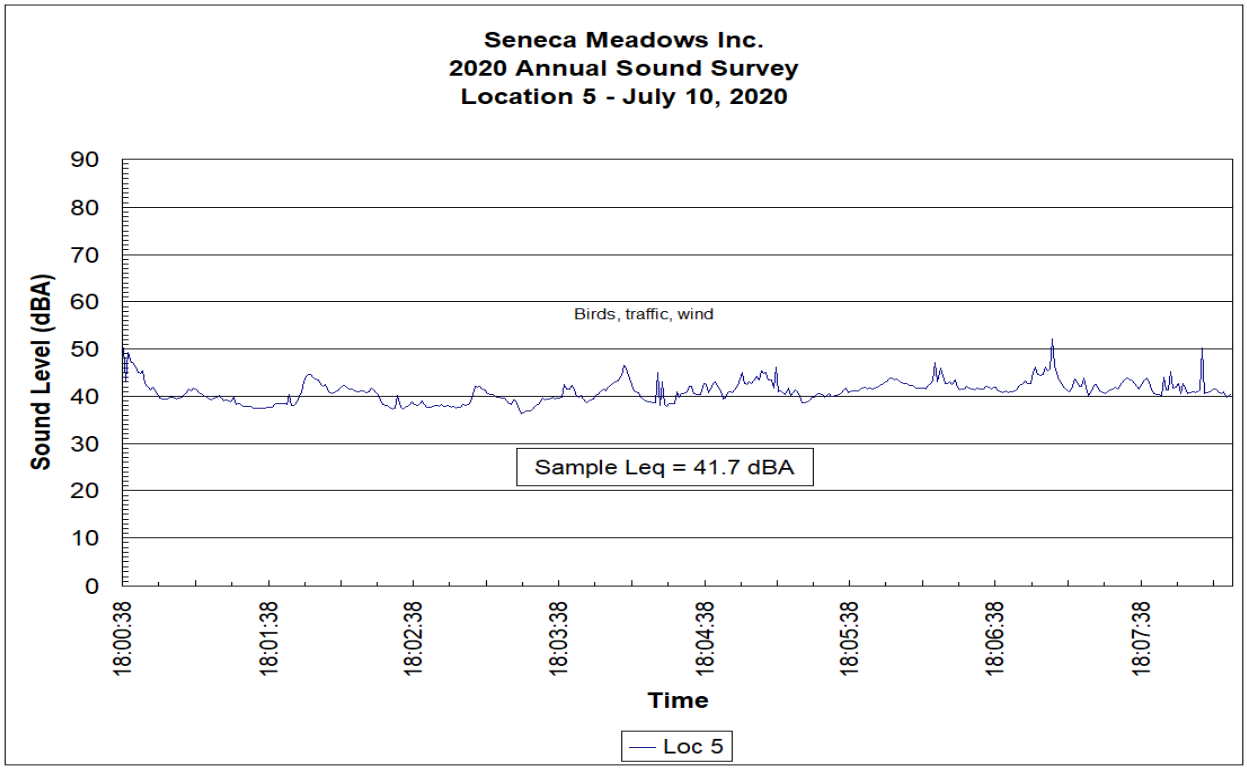
Location 2: Leq = 61.5 dBA
Traffic on Rt. 414, SEI plant.



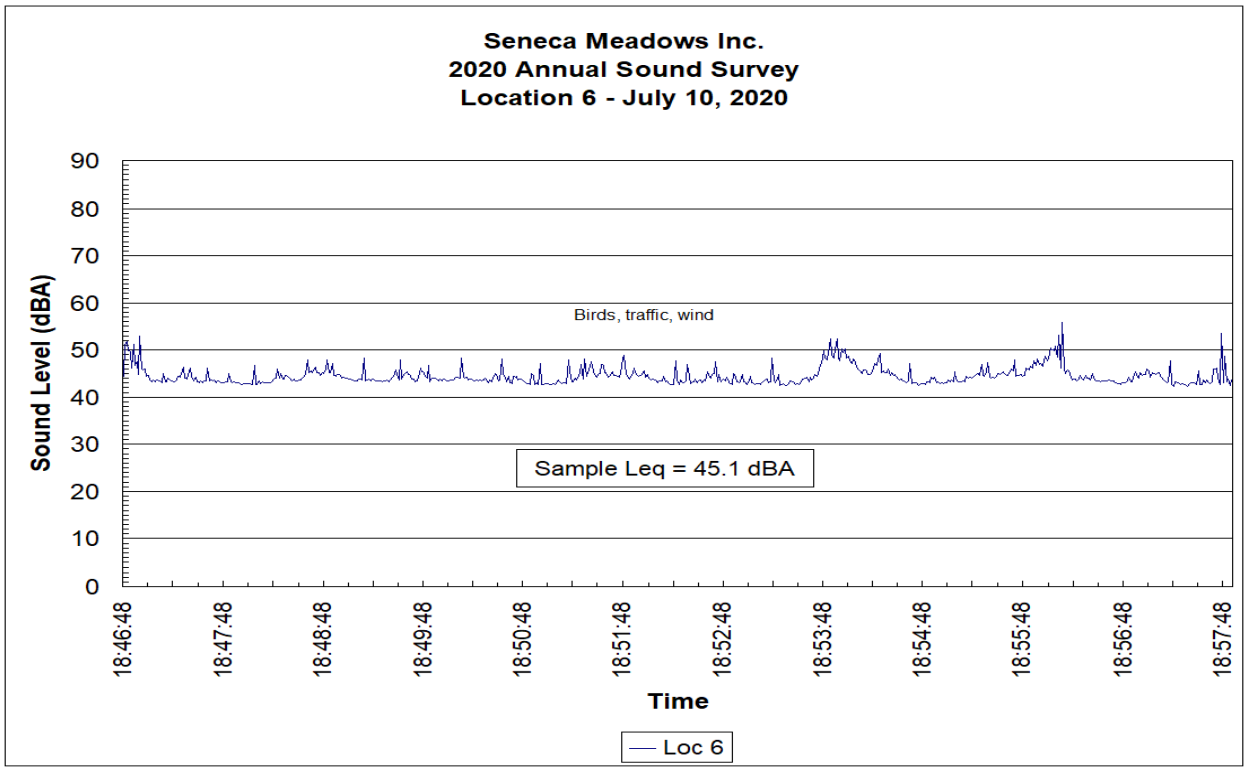
Location 3: Leq = 61.6 dBA
Traffic on Rt. 414, wind, birds.



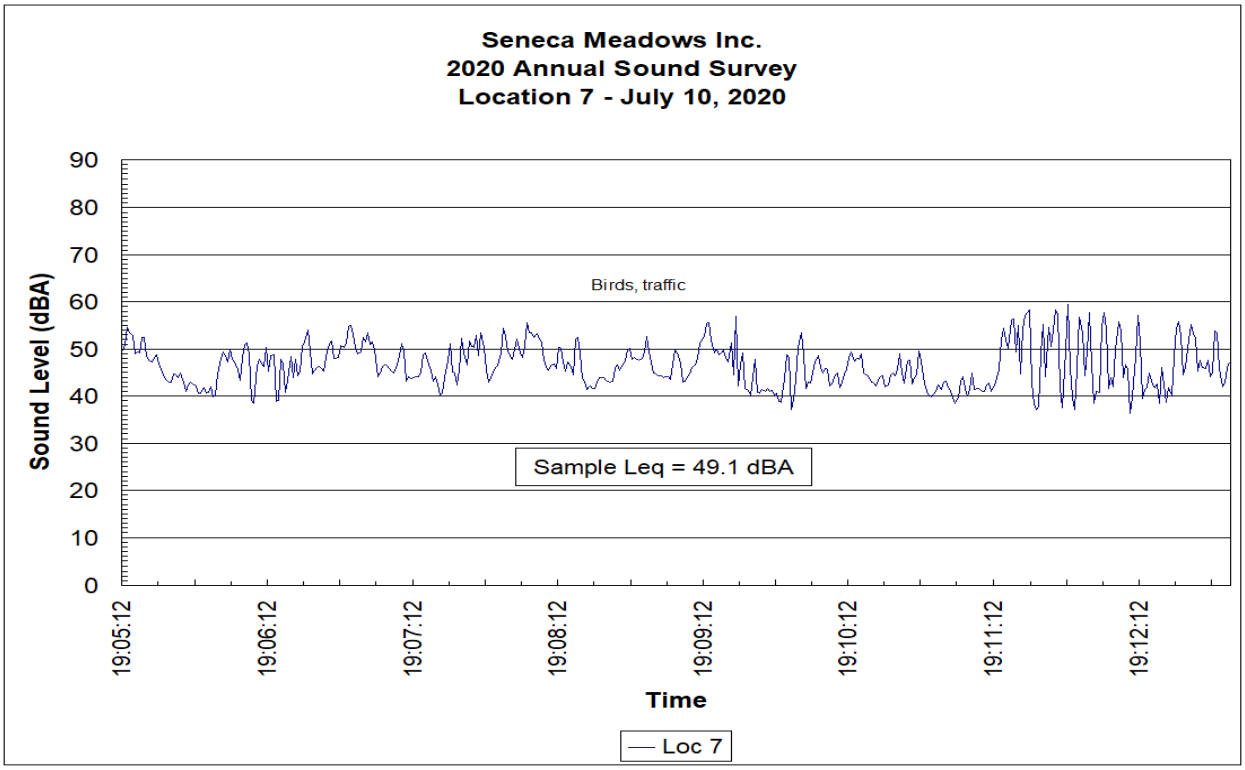
Location 4: Leq = 58.8 dBA
Traffic on Rt. 414, wind, birds.



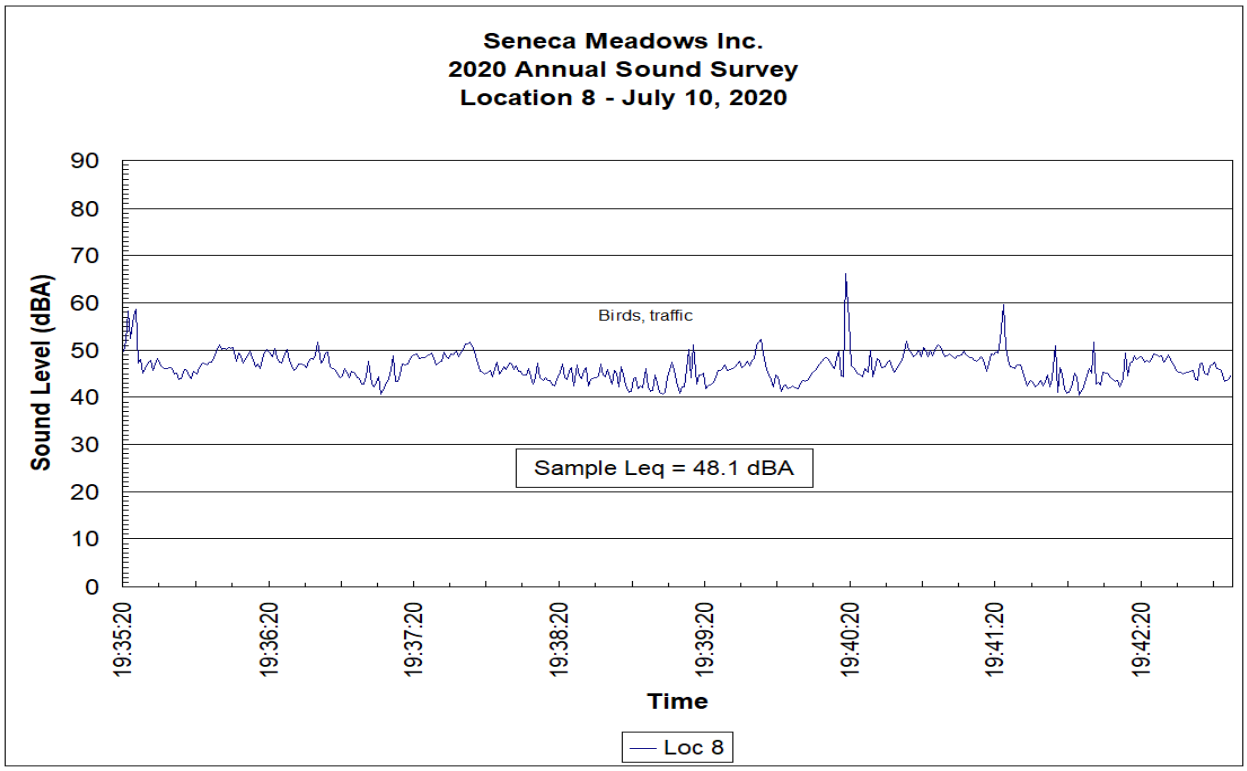
Location 5: Leq = 41.7 dBA
Birds, traffic on Burgess Road and Rt. 414, wind.



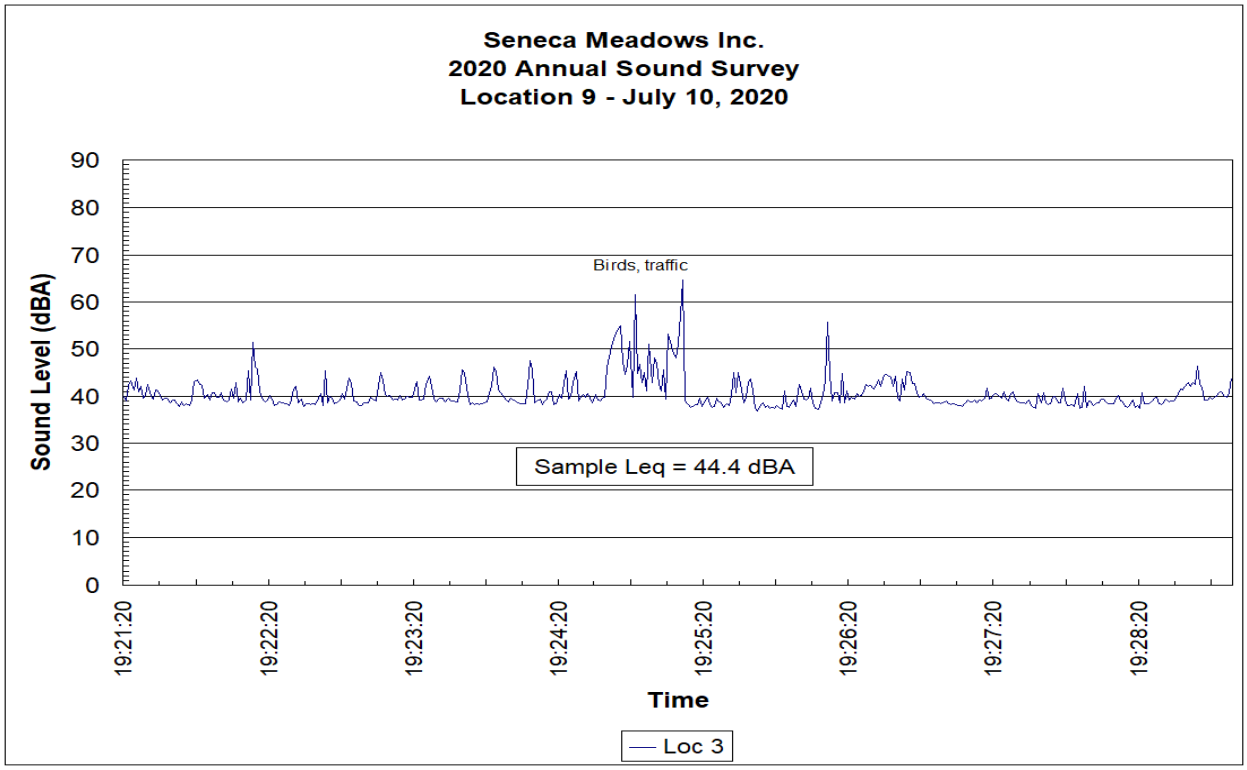
Location 6: Leq = 45.1 dBA
Birds, traffic on Burgess Road, wind.



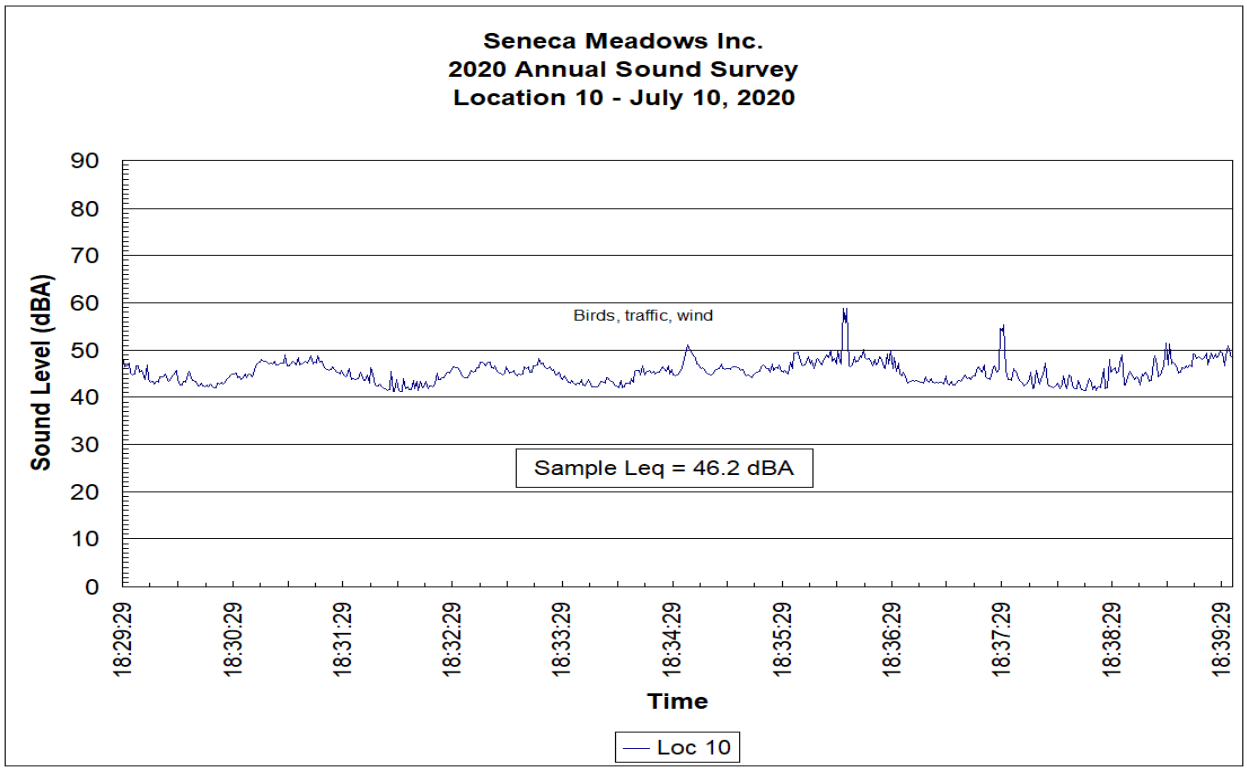
Location 7: Leq = 49.1 dBA
Birds, traffic on North and Burgess Roads.



Location 8: Leq = 48.1 dBA
Birds, traffic on North Road.



Location 9: Leq = 44.8 dBA
Birds, traffic on North Road.



Location 10: Leq = 50.5 dBA
Birds, traffic on Burgess Road and Rt. 414, wind.

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Appendix E

Detailed Weather Data

NOAA Weather Data
July 5 - July 11, 2020

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data, and Information Service
Current Location: Elev: 903 ft. Lat: 42.6425° N Lon: -77.0564° W
Station: **PENN YAN AIRPORT, NY US WBAN: 72519454778 (KPEO)**

Local Climatological Data
Daily Summary
July 2020

Generated on 01/22/2021

National Centers for Environmental Information
151 Patton Avenue
Asheville, North Carolina 28801

Date	Temperature (F)							Degree Days (base 65F)		Sun (LST)		Weather	Precipitation (in)			Pressure (inHg)		Wind	Maximum Wind Speed = MPH / Direction = Degrees			
	Max	Min	Avg	Dep	ARH	ADP	AWB	Heat	Cool	Rise	Set	Weather Type	TLC	Snow Fall	Snow Depth	Avg Stn	Avg SL	Avg Speed	Peak Speed	Peak Dir	Sust. Speed	Sust. Dir
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01	83	63	73	2.9				0	8	0435	1950		0.00			28.98		4.7	19	330	14	320
02	92	65	79	8.7				0	14	0435	1950		0.00			28.95		7.6	21	310	14	300
03	87	68	78	7.6				0	13	0436	1949		T			28.95		5.6	19s	330s	13	330
04	88	61	75	4.4				0	10	0436	1949	RA	T			29.00		3.3	21	280	15	330
05	90	62	76	5.3				0	11	0437	1949		0.00			29.03		5.0	14	310	10	310
06	92	66	79	8.1				0	14	0438	1948		0.00			29.07		4.0	13	210	10	200
07	93	67	80	9.0				0	15	0438	1948	TS	0.00			29.04		7.8	26	210	18	210
08	90	71	81	9.9				0	16	0439	1948	TS RA BR	0.35			29.00		7.3	25	290	17	320
09	96*	70	83	11.8				0	18	0440	1947		0.00			29.00		6.0	14	220	12	240
10	91	72	82	10.7				0	17	0440	1947	RA	0.01			28.94		6.3	26	150	20	150
11	85	70	78	6.6				0	13	0441	1946	TS RA FG BR	1.92			28.67		8.5	35	210	24	210
12	83	67	75	3.5				0	10	0442	1946		0.01			28.77		9.0	22	240	16	240
13	77	64	71	-0.5				0	6	0443	1945	RA	0.01			28.90		6.5	19	270	14	270
14	81	63	72	0.4				0	7	0444	1944		0.00			29.07		5.6	18	310	14	320
15	85	62	74	2.4				0	9	0444	1944		0.00			29.18		3.9	12	120	9	180
16	77	69	73	1.3				0	8	0445	1943	RA	0.06			29.15		10.1	30	170	23	180
17	84	67	76	4.3				0	11	0446	1942		0.00			29.11		7.4	27	190	21	190
18	90	66	78	6.3				0	13	0447	1941		0.00			29.10		5.0	15	250	12	260
19	94	70	82	10.3				0	17	0448	1941	TS RA	0.05			28.92		10.5	37s	260s	26	260
20	86	66	76	4.3				0	11	0449	1940		0.00			28.94		8.2	24	250	18	240
21	80	60	70	-1.7				0	5	0450	1939		0.00			29.08		2.4	11	360	7	360
22	84	64	74	2.3				0	9	0451	1938	RA	0.02			29.04		3.4	12	350	9	190
23	83	65	74	2.3				0	9	0452	1937	TS RA BR	0.32			29.05		3.5	17	340	13	330
24	84	63	74	2.4				0	9	0453	1936	FG BR	0.00			29.15		2.2	13	010	8	040
25	85	64	75	3.4				0	10	0454	1935		0.00			29.15		2.6	12	300	9	320
26	88	67	78	6.5				0	13	0455	1934		0.00			29.06		8.4	22	230	15	250
27	94	70	82	10.5				0	17	0456	1933		0.00			28.87		10.7	30	250	22	270
28	84	68	76	4.6				0	11	0457	1932	RA BR	0.21			28.88		7.0	27s	300s	17	300
29	85	67	76	4.6				0	11	0458	1931	TS RA BR	0.24			28.95		8.0	42	310	24	310
30	81	61	71	-0.3				0	6	0459	1930	RA	T			28.94		3.6	13	310	9	300
31	82	60*	71	-0.2				0	6	0500	1929		T			28.93		3.3	16	330	10	330
	86.3	65.7	76.0							Monthly Averages | Totals			3.20s			29.00	29.94	6.0				
	5.1	4.3	4.7							Departure from Normal (1981-2010)			-0.71s									

Degree Days

	Monthly		Season-to-date	
	Total	Departure	Total	Departure
Heating	0	-9	0	
Cooling	340	136	563	

Number of days with...

Temperature				Precipitation		Snow	Weather	
Max		Min						
>=90°	<=32°	<=32°	<=0°	>=0.01"	>=0.1"	>=1"	T-Storms	Heavy Fog
10	0	0	0	11	5			

Date of 5-sec to 3-sec wind equipment change	Sea Level Pressure			
			Date	Time
2005-11-07	Maximum	30.18	15	1123
	Minimum	29.52	11	1650

Greatest...		
24-Hr...		Snow Depth
Precip	Snowfall	
1.93		
Date		
11-12		

Station Augmentation

Name:N/A Lat: N/A Lon: N/A Elevation: N/A Distance: N/A Elements: N/A Equipment: N/A

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data, and Information Service
Current Location: Elev: 903 ft. Lat: 42.6425° N Lon: -77.0564° W
Station: **PENN YAN AIRPORT, NY US WBAN: 72519454778 (KPEO)**

Local Climatological Data
Hourly Precipitation
July 2020

Generated on 01/22/2021

National Centers for Environmental Information
151 Patton Avenue
Asheville, North Carolina 28801

Date	For Hour (LST) Ending at																							Date
	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	NOON	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	MID	
01																									01
02																									02
03					T	T																			03
04				T	T							T	T												04
05																									05
06																									06
07																									07
08													0.20s	0.13	0.02										08
09																									09
10																				T	T	0.01	T	T	10
11													0.27	0.04	T	T	0.08	0.42	1.02	0.08	0.01	T	T	T	11
12	T	0.01																							12
13																	0.01	T							13
14																									14
15																									15
16															T	0.01	0.02	0.01	0.02	T					16
17																									17
18																									18
19																0.05	T								19
20																									20
21																									21
22											T	T	0.02												22
23	T	T	0.03	0.06	T							0.03	0.20		T	T	T								23
24																									24
25																									25
26																									26
27																									27
28		T	0.21	T		T	T																		28
29													0.11	0.04		0.09	T								29
30											T	T												M	30
31								T																	31

Maximum Short Duration Precipitation

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (inches)	0.33	0.50	0.62	0.75	1.04	1.25	1.39	1.43	1.46	1.48	1.52	1.57
Ending Date Time (yyyy-mm-dd hh:mi)	2020-07-11 18:10	2020-07-11 18:12	2020-07-11 18:18	2020-07-11 18:10	2020-07-11 18:17	2020-07-11 18:32	2020-07-11 18:46	2020-07-11 19:02	2020-07-11 19:26	2020-07-11 19:44	2020-07-11 18:53	2020-07-11 19:26

Hourly, daily, and monthly totals on the Daily Summary page and the Hourly Precipitation Table are shown as reported by the instrumentation at the site. However, NWS does not edit hourly values for its ASOS sites, but may edit the daily and monthly totals for selected sites which will be reflected on the Daily Summary page.

T = Trace
s = Suspect
* = Erroneous
blank = No precipitation observed
M = Missing

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data, and Information Service
Current Location: Elev: 903 ft. Lat: 42.6425° N Lon: -77.0564° W
Station: **PENN YAN AIRPORT, NY US WBAN: 72519454778 (KPEO)**

Local Climatological Data
Hourly Observations
July 2020

Generated on 01/22/2021

National Centers for Environmental Information
151 Patton Avenue
Asheville, North Carolina 28801

Date	Time (LST)	Station Type	Sky Conditions	Visibility	Weather Type (see documentation)	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Hum %	Wind Speed (MPH)	Wind Dir (Deg)	Wind Gusts (MPH)	Station Press (inHg)	Press. Tend	Net 3-Hr Change (inHg)	Sea Level Press. (inHg)	Report Type	Precip Total (in)	Altimeter Setting (inHg)
					AU | AW | MW	(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
05	0053	7	CLR:00	10.00		66	18.9	62	16.7	59	15.0	78	7	220		29.03	0	-0.01	29.97	FM-15	0.00	30.00
05	0153	7	CLR:00	10.00		64	17.8	61	16.1	59	15.0	84	6	230		29.03			29.96	FM-15	0.00	29.99
05	0253	7	CLR:00	10.00		64	17.8	60	15.6	58	14.4	81	7	230		29.03			29.97	FM-15	0.00	29.99
05	0353	7	CLR:00	10.00		63	17.2	60	15.6	58	14.4	84	6	220		29.03	5	0.00	29.97	FM-15	0.00	30.00
05	0453	7	CLR:00	10.00		62	16.7	60	15.6	58	14.4	86	5	250		29.05			29.99	FM-15	0.00	30.01
05	0553	7	CLR:00	10.00		64	17.8	60	15.6	58	14.4	81	7	240		29.05			30.00	FM-15	0.00	30.02
05	0653	7	CLR:00	10.00		68	20.0	62	16.7	58	14.4	70	7	220		29.06	1	-0.03	30.00	FM-15	0.00	30.03
05	0753	7	CLR:00	10.00		73	22.8	63	17.2	57	13.9	57	7	210		29.06			30.01	FM-15	0.00	30.03
05	0853	7	CLR:00	10.00		78	25.6	66	18.9	58	14.4	50	6	230		29.05			30.00	FM-15	0.00	30.02
05	0953	7	CLR:00	10.00		83	28.3	68	20.0	59	15.0	44	0	000		29.05	8	+0.01	30.00	FM-15	0.00	30.02
05	1053	7	CLR:00	10.00		85	29.4	66	18.9	55	12.8	36	5	VRB		29.05			29.99	FM-15	0.00	30.01
05	1153	7	CLR:00	10.00		87	30.6	67	19.4	55	12.8	34	7	260		29.05			29.98	FM-15	0.00	30.01
05	1253	7	CLR:00	10.00		90	32.2	68	20.0	55	12.8	31	5	320		29.03	8	+0.02	29.97	FM-15	0.00	30.00
05	1353	7	CLR:00	10.00		88	31.1	67	19.4	55	12.8	33	7	260		29.03			29.96	FM-15	0.00	29.99
05	1453	7	CLR:00	10.00		89	31.7	67	19.4	54	12.2	30	6	VRB		29.02			29.95	FM-15	0.00	29.98
05	1553	7	CLR:00	10.00		90	32.2	68	20.0	56	13.3	32	8	300		29.00	8	+0.02	29.94	FM-15	0.00	29.97
05	1653	7	CLR:00	10.00		88	31.1	68	20.0	57	13.9	35	6	340		29.00			29.93	FM-15	0.00	29.96
05	1753	7	CLR:00	10.00		86	30.0	70	21.1	61	16.1	43	7	340		29.02			29.95	FM-15	0.00	29.98
05	1853	7	CLR:00	10.00		82	27.8	67	19.4	58	14.4	44	3	070		29.03	3	-0.02	29.97	FM-15	0.00	29.99
05	1953	7	CLR:00	10.00		77	25.0	66	18.9	59	15.0	54	0	000		29.03			29.98	FM-15	0.00	30.00
05	2053	7	CLR:00	10.00		69	20.6	63	17.2	59	15.0	70	0	000		29.05			29.99	FM-15	0.00	30.01
05	2153	7	CLR:00	10.00		69	20.6	62	16.7	58	14.4	68	0	000		29.05	1	-0.02	29.99	FM-15	0.00	30.01
05	2253	7	CLR:00	10.00		69	20.6	64	17.8	60	15.6	73	5	240		29.05			30.00	FM-15	0.00	30.02
05	2353	7	CLR:00	10.00		71	21.7	65	18.3	61	16.1	71	6	230		29.06			30.00	FM-15	0.00	30.03

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data, and Information Service
Current Location: Elev: 903 ft. Lat: 42.6425° N Lon: -77.0564° W
Station: **PENN YAN AIRPORT, NY US WBAN: 72519454778 (KPEO)**

Local Climatological Data
Hourly Remarks
July 2020

Generated on 01/22/2021

National Centers for Environmental Information
151 Patton Avenue
Asheville, North Carolina 28801

Date	Time (LST)	Remarks
05	0053	MET10807/05/20 00:53:02 METAR KPEO 050553Z 22006KT 10SM CLR 19/15 A3000 RMK AO2 SLP150 T01890150 10278 20161 50002
05	0153	MET09007/05/20 01:53:02 METAR KPEO 050653Z 23005KT 10SM CLR 18/15 A2999 RMK AO2 SLP147 T01780150
05	0253	MET09007/05/20 02:53:02 METAR KPEO 050753Z 23006KT 10SM CLR 18/14 A2999 RMK AO2 SLP148 T01780144
05	0353	MET09607/05/20 03:53:02 METAR KPEO 050853Z 22005KT 10SM CLR 17/14 A3000 RMK AO2 SLP150 T01720144 55000
05	0453	MET09007/05/20 04:53:02 METAR KPEO 050953Z 25004KT 10SM CLR 17/14 A3001 RMK AO2 SLP155 T01670144
05	0553	MET09007/05/20 05:53:02 METAR KPEO 051053Z 24006KT 10SM CLR 18/14 A3002 RMK AO2 SLP159 T01780144
05	0653	MET10807/05/20 06:53:02 METAR KPEO 051153Z 22006KT 10SM CLR 20/14 A3003 RMK AO2 SLP160 T02000144 10200 20167 51009
05	0753	MET09007/05/20 07:53:02 METAR KPEO 051253Z 21006KT 10SM CLR 23/14 A3003 RMK AO2 SLP161 T02280139
05	0853	MET09007/05/20 08:53:02 METAR KPEO 051353Z 23005KT 10SM CLR 26/14 A3002 RMK AO2 SLP159 T02560144
05	0953	MET09607/05/20 09:53:02 METAR KPEO 051453Z 00000KT 10SM CLR 28/15 A3002 RMK AO2 SLP158 T02830150 58003
05	1053	MET09007/05/20 10:53:02 METAR KPEO 051553Z VRB04KT 10SM CLR 29/13 A3001 RMK AO2 SLP155 T02940128
05	1153	MET09007/05/20 11:53:02 METAR KPEO 051653Z 26006KT 10SM CLR 31/13 A3001 RMK AO2 SLP152 T03060128
05	1253	MET10807/05/20 12:53:02 METAR KPEO 051753Z 32004KT 10SM CLR 32/13 A3000 RMK AO2 SLP148 T03220128 10322 20200 58008
05	1353	MET09007/05/20 13:53:02 METAR KPEO 051853Z 26006KT 10SM CLR 31/13 A2999 RMK AO2 SLP147 T03110128
05	1453	MET09007/05/20 14:53:02 METAR KPEO 051953Z VRB05KT 10SM CLR 32/12 A2998 RMK AO2 SLP143 T03170122
05	1553	MET09607/05/20 15:53:02 METAR KPEO 052053Z 30007KT 10SM CLR 32/13 A2997 RMK AO2 SLP140 T03220133 58008
05	1653	MET09007/05/20 16:53:02 METAR KPEO 052153Z 34005KT 10SM CLR 31/14 A2996 RMK AO2 SLP137 T03110139
05	1753	MET09007/05/20 17:53:02 METAR KPEO 052253Z 34006KT 10SM CLR 30/16 A2998 RMK AO2 SLP142 T03000161
05	1853	MET10807/05/20 18:53:02 METAR KPEO 052353Z 07003KT 10SM CLR 28/14 A2999 RMK AO2 SLP148 T02780144 10322 20278 53007
05	1953	MET09007/05/20 19:53:01 METAR KPEO 060053Z 00000KT 10SM CLR 25/15 A3000 RMK AO2 SLP152 T02500150
05	2053	MET09007/05/20 20:53:01 METAR KPEO 060153Z 00000KT 10SM CLR 21/15 A3001 RMK AO2 SLP157 T02060150
05	2153	MET09607/05/20 21:53:01 METAR KPEO 060253Z 00000KT 10SM CLR 21/14 A3001 RMK AO2 SLP156 T02060144 51008
05	2253	MET09007/05/20 22:53:02 METAR KPEO 060353Z 24004KT 10SM CLR 21/16 A3002 RMK AO2 SLP159 T02060156
05	2353	MET10007/05/20 23:53:02 METAR KPEO 060453Z 23005KT 10SM CLR 22/16 A3003 RMK AO2 SLP160 T02170161 403220167

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data, and Information Service
Current Location: Elev: 903 ft. Lat: 42.6425° N Lon: -77.0564° W
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Local Climatological Data
Hourly Observations
July 2020

Generated on 01/22/2021

National Centers for Environmental Information
151 Patton Avenue
Asheville, North Carolina 28801

Date	Time (LST)	Station Type	Sky Conditions	Visibility	Weather Type (see documentation)	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Hum %	Wind Speed (MPH)	Wind Dir (Deg)	Wind Gusts (MPH)	Station Press (inHg)	Press. Tend	Net 3-Hr Change (inHg)	Sea Level Press. (inHg)	Report Type	Precip Total (in)	Altimeter Setting (inHg)
					AU | AW | MW	(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
06	0053	7	CLR:00	10.00		68	20.0	64	17.8	61	16.1	78	5	230		29.06	0	-0.01	30.00	FM-15	0.00	30.03
06	0153	7	CLR:00	10.00		67	19.4	63	17.2	61	16.1	81	5	250		29.06			30.00	FM-15	0.00	30.03
06	0253	7	CLR:00	10.00		67	19.4	64	17.8	62	16.7	84	3	230		29.05			30.00	FM-15	0.00	30.02
06	0353	7	CLR:00	10.00		67	19.4	64	17.8	62	16.7	84	7	230		29.05	5	0.00	30.00	FM-15	0.00	30.02
06	0453	7	CLR:00	10.00		66	18.9	63	17.2	61	16.1	84	3	240		29.07			30.01	FM-15	0.00	30.04
06	0553	7	FEW:02 75	10.00		67	19.4	63	17.2	61	16.1	81	5	230		29.09			30.03	FM-15	0.00	30.06
06	0653	7	FEW:02 80	10.00		71	21.7	66	18.9	63	17.2	76	3	250		29.10	1	-0.04	30.04	FM-15	0.00	30.07
06	0753	7	CLR:00	10.00		75	23.9	67	19.4	63	17.2	66	5	VRB		29.10			30.05	FM-15	0.00	30.07
06	0853	7	CLR:00	10.00		79	26.1	68	20.0	62	16.7	56	0	000		29.10			30.05	FM-15	0.00	30.07
06	0953	7	CLR:00	10.00		84	28.9	70	21.1	62	16.7	48	3	VRB		29.10	1	0.00	30.05	FM-15	0.00	30.07
06	1053	7	CLR:00	10.00		86	30.0	70	21.1	61	16.1	43	6	VRB		29.10			30.04	FM-15	0.00	30.07
06	1153	7	CLR:00	10.00		88	31.1	70	21.1	60	15.6	39	5	VRB		29.10			30.03	FM-15	0.00	30.07
06	1253	7	CLR:00	10.00		90	32.2	70	21.1	60	15.6	37	5	VRB		29.08	8	+0.02	30.02	FM-15	0.00	30.05
06	1353	7	CLR:00	10.00		90	32.2	70	21.1	59	15.0	35	3	VRB		29.07			30.01	FM-15	0.00	30.04
06	1453	7	CLR:00	10.00		92	33.3	70	21.1	57	13.9	31	6	VRB		29.06			30.00	FM-15	0.00	30.03
06	1553	7	CLR:00	10.00		92	33.3	69	20.6	56	13.3	30	6	VRB		29.05	8	+0.04	29.98	FM-15	0.00	30.01
06	1653	7	CLR:00	10.00		91	32.8	70	21.1	59	15.0	34	6	VRB		29.05			29.98	FM-15	0.00	30.01
06	1753	7	SCT:04 75	10.00		88	31.1	71	21.7	62	16.7	42	0	000		29.06			30.00	FM-15	0.00	30.03
06	1853	7	CLR:00	10.00		84	28.9	70	21.1	62	16.7	48	3	290		29.05	0	-0.01	30.00	FM-15	0.00	30.02
06	1953	7	CLR:00	10.00		81	27.2	69	20.6	62	16.7	53	0	000		29.06			30.01	FM-15	0.00	30.03
06	2053	7	CLR:00	10.00		76	24.4	67	19.4	62	16.7	62	3	280		29.07			30.02	FM-15	0.00	30.04
06	2153	7	CLR:00	10.00		70	21.1	65	18.3	62	16.7	76	0	000		29.07	0	-0.02	30.01	FM-15	0.00	30.04
06	2253	7	CLR:00	10.00		73	22.8	67	19.4	64	17.8	74	6	230		29.08			30.02	FM-15	0.00	30.05
06	2353	7	CLR:00	10.00		73	22.8	67	19.4	63	17.2	71	9	210		29.08			30.03	FM-15	0.00	30.05

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Hourly Remarks
July 2020

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National Centers for Environmental Information
151 Patton Avenue
Asheville, North Carolina 28801

Date	Time (LST)	Remarks
06	0053	MET10807/06/20 00:53:02 METAR KPEO 060553Z 23004KT 10SM CLR 20/16 A3003 RMK AO2 SLP159 T02000161 10278 20200 50004
06	0153	MET09007/06/20 01:53:02 METAR KPEO 060653Z 25004KT 10SM CLR 19/16 A3003 RMK AO2 SLP160 T01940161
06	0253	MET09007/06/20 02:53:02 METAR KPEO 060753Z 23003KT 10SM CLR 19/17 A3002 RMK AO2 SLP158 T01940167
06	0353	MET09607/06/20 03:53:02 METAR KPEO 060853Z 23006KT 10SM CLR 19/17 A3002 RMK AO2 SLP158 T01940167 55001
06	0453	MET09007/06/20 04:53:02 METAR KPEO 060953Z 24003KT 10SM CLR 19/16 A3004 RMK AO2 SLP164 T01890161
06	0553	MET09307/06/20 05:53:02 METAR KPEO 061053Z 23004KT 10SM FEW075 19/16 A3006 RMK AO2 SLP171 T01940161
06	0653	MET11107/06/20 06:53:02 METAR KPEO 061153Z 25003KT 10SM FEW080 22/17 A3007 RMK AO2 SLP173 T02170172 10217 20189 51014
06	0753	MET09007/06/20 07:53:02 METAR KPEO 061253Z VRB04KT 10SM CLR 24/17 A3007 RMK AO2 SLP176 T02390172
06	0853	MET09007/06/20 08:53:02 METAR KPEO 061353Z 00000KT 10SM CLR 26/17 A3007 RMK AO2 SLP175 T02610167
06	0953	MET09607/06/20 09:53:02 METAR KPEO 061453Z VRB03KT 10SM CLR 29/17 A3007 RMK AO2 SLP175 T02890167 51001
06	1053	MET09007/06/20 10:53:02 METAR KPEO 061553Z VRB05KT 10SM CLR 30/16 A3007 RMK AO2 SLP174 T03000161
06	1153	MET09007/06/20 11:53:02 METAR KPEO 061653Z VRB04KT 10SM CLR 31/16 A3007 RMK AO2 SLP171 T03110156
06	1253	MET10807/06/20 12:53:02 METAR KPEO 061753Z VRB04KT 10SM CLR 32/16 A3005 RMK AO2 SLP167 T03220156 10322 20217 58007
06	1353	MET09007/06/20 13:53:02 METAR KPEO 061853Z VRB03KT 10SM CLR 32/15 A3004 RMK AO2 SLP162 T03220150
06	1453	MET09007/06/20 14:53:02 METAR KPEO 061953Z VRB05KT 10SM CLR 33/14 A3003 RMK AO2 SLP159 T03330139
06	1553	MET11407/06/20 15:53:02 METAR KPEO 062053Z VRB05KT 10SM CLR 33/13 A3001 RMK AO2 LTG DSNT S AND SW SLP152 T03330133 58014
06	1653	MET10507/06/20 16:53:02 METAR KPEO 062153Z VRB05KT 10SM CLR 33/15 A3001 RMK AO2 LTG DSNT SE-SW SLP153 T03280150
06	1753	MET09307/06/20 17:53:02 METAR KPEO 062253Z 00000KT 10SM SCT075 31/17 A3003 RMK AO2 SLP158 T03110167
06	1853	MET10807/06/20 18:53:02 METAR KPEO 062353Z 29003KT 10SM CLR 29/17 A3002 RMK AO2 SLP158 T02890167 10333 20289 50004
06	1953	MET09007/06/20 19:53:01 METAR KPEO 070053Z 00000KT 10SM CLR 27/17 A3003 RMK AO2 SLP161 T02720167
06	2053	MET09007/06/20 20:53:01 METAR KPEO 070153Z 28003KT 10SM CLR 24/17 A3004 RMK AO2 SLP165 T02440167
06	2153	MET09607/06/20 21:53:01 METAR KPEO 070253Z 00000KT 10SM CLR 21/17 A3004 RMK AO2 SLP164 T02110167 50006
06	2253	MET09007/06/20 22:53:02 METAR KPEO 070353Z 23005KT 10SM CLR 23/18 A3005 RMK AO2 SLP166 T02280178
06	2353	MET10007/06/20 23:53:02 METAR KPEO 070453Z 21008KT 10SM CLR 23/17 A3005 RMK AO2 SLP168 T02280172 403330189

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data, and Information Service
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Hourly Observations
July 2020

Generated on 01/22/2021

National Centers for Environmental Information
151 Patton Avenue
Asheville, North Carolina 28801

Date	Time (LST)	Station Type	Sky Conditions	Visibility	Weather Type (see documentation)	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Hum %	Wind Speed (MPH)	Wind Dir (Deg)	Wind Gusts (MPH)	Station Press (inHg)	Press. Tend	Net 3-Hr Change (inHg)	Sea Level Press. (inHg)	Report Type	Precip Total (in)	Altimeter Setting (inHg)
					AU | AW | MW	(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
07	0053	7	CLR:00	10.00		72	22.2	66	18.9	63	17.2	73	9	210		29.07	0	0.00	30.01	FM-15	0.00	30.04
07	0153	7	CLR:00	10.00		71	21.7	67	19.4	64	17.8	79	3	110		29.06			30.01	FM-15	0.00	30.03
07	0253	7	CLR:00	10.00		69	20.6	66	18.9	64	17.8	84	7	130		29.05			30.00	FM-15	0.00	30.02
07	0353	7	CLR:00	10.00		69	20.6	66	18.9	64	17.8	84	5	160		29.06	5	+0.01	30.00	FM-15	0.00	30.03
07	0453	7	CLR:00	10.00		68	20.0	65	18.3	64	17.8	87	0	000		29.08			30.02	FM-15	0.00	30.05
07	0553	7	CLR:00	10.00		70	21.1	67	19.4	65	18.3	84	0	000		29.09			30.03	FM-15	0.00	30.06
07	0653	7	CLR:00	10.00		73	22.8	68	20.0	65	18.3	76	0	000		29.08	0	-0.02	30.02	FM-15	0.00	30.05
07	0753	7	CLR:00	10.00		76	24.4	69	20.6	65	18.3	69	9	200		29.08			30.02	FM-15	0.00	30.05
07	0853	7	CLR:00	10.00		79	26.1	70	21.1	66	18.9	65	9	180		29.07			30.02	FM-15	0.00	30.04
07	0953	7	CLR:00	10.00		82	27.8	71	21.7	66	18.9	58	8	VRB		29.06	8	+0.01	30.01	FM-15	0.00	30.03
07	1053	7	CLR:00	10.00		84	28.9	73	22.8	67	19.4	57	0	000		29.05			29.99	FM-15	0.00	30.02
07	1153	7	CLR:00	10.00		88	31.1	74	23.3	67	19.4	50	7	190		29.05			29.98	FM-15	0.00	30.01
07	1253	7	CLR:00	10.00		90	32.2	74	23.3	66	18.9	45	7	190		29.03	6	+0.03	29.97	FM-15	0.00	30.00
07	1353	7	CLR:00	10.00		91	32.8	72	22.2	63	17.2	39	8	200		29.03			29.96	FM-15	0.00	29.99
07	1404	7	FEW:02 75	10.00	VCTS:7 ||	91	32.8	72	22.2	63	17.2	39	7	190		29.03				FM-16		29.99
07	1419	7	BKN:07 70	10.00		86	30.0	73	22.8	67	19.4	53				29.03				FM-16		29.99
07	1453	7	BKN:07 75 BKN:07 90	10.00		88	31.1	74	23.3	67	19.4	50	6	VRB		29.02			29.95	FM-15	0.00	29.98
07	1553	7	CLR:00	10.00		89	31.7	75	23.9	68	20.0	50	5	090		29.00	8	+0.04	29.93	FM-15	0.00	29.96
07	1653	7	CLR:00	10.00		88	31.1	74	23.3	68	20.0	52	13	140		28.99			29.93	FM-15	0.00	29.95
07	1753	7	CLR:00	10.00		86	30.0	74	23.3	68	20.0	55	13	160		28.99			29.93	FM-15	0.00	29.95
07	1853	7	BKN:07 95	10.00		84	28.9	73	22.8	68	20.0	59	13	190		29.00	3	-0.01	29.94	FM-15	0.00	29.97
07	1953	7	CLR:00	10.00		81	27.2	72	22.2	67	19.4	62	15	180	23	29.00			29.94	FM-15	0.00	29.97
07	2053	7	CLR:00	10.00		79	26.1	70	21.1	66	18.9	65	10	190		29.02			29.95	FM-15	0.00	29.98
07	2153	7	CLR:00	10.00		77	25.0	68	20.0	63	17.2	62	16	200		29.03	3	-0.02	29.96	FM-15	0.00	29.99
07	2253	7	CLR:00	10.00		76	24.4	68	20.0	63	17.2	64	11	210		29.03			29.96	FM-15	0.00	29.99
07	2353	7	FEW:02 90	10.00		75	23.9	68	20.0	64	17.8	69	13	210		29.02			29.95	FM-15	0.00	29.98

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data, and Information Service
Current Location: Elev: 903 ft. Lat: 42.6425° N Lon: -77.0564° W
Station: **PENN YAN AIRPORT, NY US WBAN: 72519454778 (KPEO)**

Local Climatological Data
Hourly Remarks
July 2020

Generated on 01/22/2021

National Centers for Environmental Information
151 Patton Avenue
Asheville, North Carolina 28801

Date	Time (LST)	Remarks
07	0053	MET10807/07/20 00:53:02 METAR KPEO 070553Z 21008KT 10SM CLR 22/17 A3004 RMK AO2 SLP164 T02220172 10289 20211 50001
07	0153	MET09007/07/20 01:53:02 METAR KPEO 070653Z 11003KT 10SM CLR 22/18 A3003 RMK AO2 SLP162 T02170178
07	0253	MET09007/07/20 02:53:02 METAR KPEO 070753Z 13006KT 10SM CLR 21/18 A3002 RMK AO2 SLP158 T02060178
07	0353	MET09607/07/20 03:53:02 METAR KPEO 070853Z 16004KT 10SM CLR 21/18 A3003 RMK AO2 SLP160 T02060178 55003
07	0453	MET09007/07/20 04:53:02 METAR KPEO 070953Z 00000KT 10SM CLR 20/18 A3005 RMK AO2 SLP167 T02000178
07	0553	MET09007/07/20 05:53:02 METAR KPEO 071053Z 00000KT 10SM CLR 21/18 A3006 RMK AO2 SLP170 T02110183
07	0653	MET10807/07/20 06:53:02 METAR KPEO 071153Z 00000KT 10SM CLR 23/18 A3005 RMK AO2 SLP166 T02280183 10228 20194 50006
07	0753	MET09007/07/20 07:53:02 METAR KPEO 071253Z 20008KT 10SM CLR 24/18 A3005 RMK AO2 SLP166 T02440183
07	0853	MET09007/07/20 08:53:02 METAR KPEO 071353Z 18008KT 10SM CLR 26/19 A3004 RMK AO2 SLP166 T02610189
07	0953	MET09607/07/20 09:53:02 METAR KPEO 071453Z 20007KT 10SM CLR 28/19 A3003 RMK AO2 SLP161 T02780189 58005
07	1053	MET09007/07/20 10:53:02 METAR KPEO 071553Z 00000KT 10SM CLR 29/19 A3002 RMK AO2 SLP156 T02890194
07	1153	MET09007/07/20 11:53:02 METAR KPEO 071653Z 19006KT 10SM CLR 31/19 A3001 RMK AO2 SLP153 T03110194
07	1253	MET10807/07/20 12:53:02 METAR KPEO 071753Z 19006KT 10SM CLR 32/19 A3000 RMK AO2 SLP150 T03220189 10328 20228 56010
07	1353	MET10207/07/20 13:53:02 METAR KPEO 071853Z 20007KT 10SM CLR 33/17 A2999 RMK AO2 LTG DSNT NE SLP145 T03280172
07	1404	MET09107/07/20 14:04:02 SPECI KPEO 071904Z 19006KT 10SM VCTS FEW075 33/17 A2999 RMK AO2 T03280172
07	1419	MET08607/07/20 14:19:02 SPECI KPEO 071919Z KT 10SM BKN070 30/19 A2999 RMK AO2 T03000194
07	1453	MET10007/07/20 14:53:02 METAR KPEO 071953Z VRB05KT 10SM BKN075 BKN090 31/19 A2998 RMK AO2 SLP142 T03110194
07	1553	MET09607/07/20 15:53:02 METAR KPEO 072053Z 09004KT 10SM CLR 32/20 A2996 RMK AO2 SLP136 T03170200 58014
07	1653	MET09007/07/20 16:53:02 METAR KPEO 072153Z 14011KT 10SM CLR 31/20 A2995 RMK AO2 SLP134 T03110200
07	1753	MET09007/07/20 17:53:02 METAR KPEO 072253Z 16011KT 10SM CLR 30/20 A2995 RMK AO2 SLP134 T03000200
07	1853	MET11107/07/20 18:53:02 METAR KPEO 072353Z 19011KT 10SM BKN095 29/20 A2997 RMK AO2 SLP138 T02890200 10339 20289 53002
07	1953	MET09307/07/20 19:53:01 METAR KPEO 080053Z 18013G20KT 10SM CLR 27/19 A2997 RMK AO2 SLP138 T02720194
07	2053	MET09007/07/20 20:53:01 METAR KPEO 080153Z 19009KT 10SM CLR 26/19 A2998 RMK AO2 SLP141 T02610189
07	2153	MET09607/07/20 21:53:01 METAR KPEO 080253Z 20014KT 10SM CLR 25/17 A2999 RMK AO2 SLP146 T02500172 53008
07	2253	MET09007/07/20 22:53:02 METAR KPEO 080353Z 21010KT 10SM CLR 24/17 A2999 RMK AO2 SLP147 T02440172
07	2353	MET10307/07/20 23:53:02 METAR KPEO 080453Z 21011KT 10SM FEW090 24/18 A2998 RMK AO2 SLP143 T02390178 403390194

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data, and Information Service
Current Location: Elev: 903 ft. Lat: 42.6425° N Lon: -77.0564° W
Station: **PENN YAN AIRPORT, NY US WBAN: 72519454778 (KPEO)**

Local Climatological Data
Hourly Observations
July 2020

Generated on 01/22/2021

National Centers for Environmental Information
151 Patton Avenue
Asheville, North Carolina 28801

Date	Time (LST)	Station Type	Sky Conditions	Visibility	Weather Type (see documentation)	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Hum %	Wind Speed (MPH)	Wind Dir (Deg)	Wind Gusts (MPH)	Station Press (inHg)	Press. Tend	Net 3-Hr Change (inHg)	Sea Level Press. (inHg)	Report Type	Precip Total (in)	Altimeter Setting (inHg)
					AU | AW | MW	(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
08	0053	7	FEW:02 75	10.00		74	23.3	68	20.0	64	17.8	71	11	210		29.02	8	+0.01	29.95	FM-15	0.00	29.98
08	0153	7	CLR:00	10.00		74	23.3	69	20.6	66	18.9	76	10	220		29.00			29.94	FM-15	0.00	29.97
08	0253	7	CLR:00	10.00		73	22.8	68	20.0	66	18.9	79	9	210		29.00			29.94	FM-15	0.00	29.97
08	0353	7	SCT:04 100	10.00		73	22.8	68	20.0	66	18.9	79	8	200		29.02	3	0.00	29.95	FM-15	0.00	29.98
08	0453	7	FEW:02 75 BKN:07 90 BKN:07 110	10.00		73	22.8	69	20.6	67	19.4	81	8	220		29.02			29.96	FM-15	0.00	29.98
08	0553	7	FEW:02 110	10.00		74	23.3	69	20.6	67	19.4	79	11	210		29.03			29.97	FM-15	0.00	30.00
08	0653	7	FEW:02 100	10.00		76	24.4	70	21.1	67	19.4	74	8	210		29.03	2	-0.02	29.97	FM-15	0.00	30.00
08	0753	7	CLR:00	10.00		79	26.1	71	21.7	67	19.4	67	8	190		29.03			29.97	FM-15	0.00	30.00
08	0853	7	CLR:00	10.00		82	27.8	73	22.8	68	20.0	63	6	220		29.03			29.97	FM-15	0.00	30.00
08	0953	7	CLR:00	10.00		84	28.9	73	22.8	68	20.0	59	11	240		29.03	8	+0.01	29.96	FM-15	0.00	29.99
08	1053	7	CLR:00	10.00		86	30.0	74	23.3	68	20.0	55	8	230		29.02			29.95	FM-15	0.00	29.98
08	1153	7	CLR:00	10.00		88	31.1	74	23.3	67	19.4	50	7	220		29.00			29.94	FM-15	0.00	29.97
08	1229	7	FEW:02 49 BKN:07 90	10.00	TS:7 |TS TS |	89	31.7	73	22.8	65	18.3	45	9	230		29.00				FM-16		29.96
08	1246	7	FEW:02 42 SCT:04 70 OVC:08 90	1.75	TS:7 RA:02 |RA TS TS |RA	76	24.4	72	22.2	70	21.1	82	9	290	24	29.00				FM-16	0.07	29.97
08	1251	7	SCT:04 38 BKN:07 70 OVC:08 90	0.75	VCTS:7 +RA:02 |RA |RA	75	23.9	72	22.2	70	21.1	83	5	340	17	28.99				FM-16	0.17	29.95
08	1253	7	SCT:04 38 BKN:07 55 OVC:08 90	0.75	VCTS:7 +RA:02 |RA |RA	75	23.9	72	22.2	70	21.1	84	5	300	17	28.99	8	+0.04	29.93	FM-15	0.20s	29.95
08	1303	7	BKN:07 42 BKN:07 60 OVC:08 90	2.00	VCTS:7 RA:02 |RA |RA	75	23.9	72	22.2	70	21.1	84	6	320		28.99				FM-16	0.03	29.95
08	1306	7	BKN:07 42 BKN:07 55 OVC:08 95	3.00	VCTS:7 -RA:02 |RA |RA	75	23.9	72	22.2	70	21.1	84	3	VRB		28.99				FM-16	0.03	29.95
08	1336	7	SCT:04 55 BKN:07 70 OVC:08 90	2.50	TS:7 RA:02 BR:1 |RA TS |RA	72	22.2	69	20.6	68	20.0	87	13	VRB	23	29.03				FM-16	0.09	30.00
08	1353	7	SCT:04 55 BKN:07 70 OVC:08 110	3.00	TS:7 RA:02 |RA TS TS |RA	71	21.7	68	20.0	66	18.9	84	5	070		29.03			29.98	FM-15	0.13	30.00
08	1414	7	FEW:02 90 BKN:07 110	10.00	-RA:02 |RA |RA	72	22.2	69	20.6	67	19.4	84	10	200		29.03				FM-16	T	29.99
08	1453	7	FEW:02 41 SCT:04 90 BKN:07 110	10.00		74	23.3	69	20.6	67	19.4	79	8	210		28.99			29.93	FM-15	0.02	29.95
08	1553	7	CLR:00	10.00		81	27.2	72	22.2	67	19.4	62	6	190		28.99	0	0.00	29.93	FM-15	0.00	29.95
08	1653	7	CLR:00	10.00		82	27.8	72	22.2	67	19.4	60	6	210		28.97			29.91	FM-15	0.00	29.93
08	1753	7	CLR:00	10.00		83	28.3	73	22.8	68	20.0	61	5	260		28.97			29.90	FM-15	0.00	29.93
08	1853	7	CLR:00	10.00		80	26.7	73	22.8	70	21.1	71	5	110		28.99	5	0.00	29.93	FM-15	0.00	29.95
08	1953	7	CLR:00	10.00		79	26.1	72	22.2	69	20.6	72	5	160		28.99			29.92	FM-15	0.00	29.95
08	2053	7	CLR:00	10.00		78	25.6	73	22.8	70	21.1	76	7	220		29.00			29.94	FM-15	0.00	29.97
08	2153	7	CLR:00	10.00		78	25.6	72	22.2	69	20.6	74	8	210		29.00	3	-0.01	29.94	FM-15	0.00	29.97
08	2253	7	CLR:00	10.00		74	23.3	71	21.7	70	21.1	88	8	220		29.00			29.93	FM-15	0.00	29.96
08	2353	7	CLR:00	10.00		74	23.3	71	21.7	69	20.6	85	8	210		29.00			29.94	FM-15	0.00	29.97

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08	0053	MET11107/08/20 00:53:02 METAR KPEO 080553Z 21010KT 10SM FEW075 23/18 A2998 RMK AO2 SLP142 T02330178 10289 20233 58004
08	0153	MET09007/08/20 01:53:02 METAR KPEO 080653Z 22009KT 10SM CLR 23/19 A2997 RMK AO2 SLP138 T02330189
08	0253	MET09007/08/20 02:53:02 METAR KPEO 080753Z 21008KT 10SM CLR 23/19 A2997 RMK AO2 SLP139 T02280189
08	0353	MET09907/08/20 03:53:02 METAR KPEO 080853Z 20007KT 10SM SCT100 23/19 A2998 RMK AO2 SLP143 T02280189 53001
08	0453	MET10707/08/20 04:53:02 METAR KPEO 080953Z 22007KT 10SM FEW075 BKN090 BKN110 23/19 A2998 RMK AO2 SLP145 T02280194
08	0553	MET09307/08/20 05:53:02 METAR KPEO 081053Z 21010KT 10SM FEW110 23/19 A3000 RMK AO2 SLP148 T02330194
08	0653	MET11107/08/20 06:53:02 METAR KPEO 081153Z 21007KT 10SM FEW100 24/19 A3000 RMK AO2 SLP150 T02440194 10244 20228 52007
08	0753	MET09007/08/20 07:53:02 METAR KPEO 081253Z 19007KT 10SM CLR 26/19 A3000 RMK AO2 SLP150 T02610194
08	0853	MET09007/08/20 08:53:02 METAR KPEO 081353Z 22005KT 10SM CLR 28/20 A3000 RMK AO2 SLP149 T02780200
08	0953	MET09607/08/20 09:53:02 METAR KPEO 081453Z 24010KT 10SM CLR 29/20 A2999 RMK AO2 SLP146 T02890200 58004
08	1053	MET09007/08/20 10:53:02 METAR KPEO 081553Z 23007KT 10SM CLR 30/20 A2998 RMK AO2 SLP142 T03000200
08	1153	MET09007/08/20 11:53:02 METAR KPEO 081653Z 22006KT 10SM CLR 31/19 A2997 RMK AO2 SLP138 T03110194
08	1229	MET11307/08/20 12:29:02 SPECI KPEO 081729Z 23008KT 10SM TS FEW049 BKN090 32/18 A2996 RMK AO2 LTG DSNT W TSB29 T03170183
08	1246	MET14207/08/20 12:46:02 SPECI KPEO 081746Z 29008G21KT 1 3/4SM TSRA FEW042 SCT070 OVC090 24/21 A2997 RMK AO2 LTG DSNT W-N RAB37 TSB29 P0007 T02440211
08	1251	MET13707/08/20 12:51:02 SPECI KPEO 081751Z 34004G15KT 3/4SM VCTS +RA SCT038 BKN070 OVC090 24/21 A2995 RMK AO2 LTG DSNT W-N RAB37 TSB29E47 P0017
08	1253	MET17807/08/20 12:53:02 METAR KPEO 081753Z 30004G15KT 3/4SM VCTS +RA SCT038 BKN055 OVC090 24/21 A2995 RMK AO2 LTG DSNT W-N RAB37 TSB29E47 SLP134 P0018 60018 T02390211 10322 20239 58013
08	1303	MET12707/08/20 13:03:02 SPECI KPEO 081803Z 32005KT 2SM VCTS RA BKN042 BKN060 OVC090 24/21 A2995 RMK AO2 LTG DSNT W-NE P0003 T02390211
08	1306	MET12807/08/20 13:06:02 SPECI KPEO 081806Z VRB03KT 3SM VCTS -RA BKN042 BKN055 OVC095 24/21 A2995 RMK AO2 LTG DSNT W-NE P0003 T02390211
08	1336	MET14407/08/20 13:36:02 SPECI KPEO 081836Z 32011G20KT 2 1/2SM TSRA BR SCT055 BKN070 OVC090 22/20 A3000 RMK AO2 LTG DSNT NE AND W TSB36 P0009 T02220200
08	1353	MET13507/08/20 13:53:02 METAR KPEO 081853Z 07004KT 3SM TSRA SCT055 BKN070 OVC110 22/19 A3000 RMK AO2 LTG DSNT NE TSB36 SLP153 P0015 T02170189
08	1414	MET12007/08/20 14:14:02 SPECI KPEO 081914Z 20009KT 10SM -RA FEW090 BKN110 22/19 A2999 RMK AO2 LTG DSNT S TSE09 P0000 T02220194
08	1453	MET13607/08/20 14:53:02 METAR KPEO 081953Z 21007KT 10SM FEW041 SCT090 BKN110 23/19 A2995 RMK AO2 LTG DSNT S RAE52 TSE09 SLP136 P0002 T02330194
08	1553	MET10207/08/20 15:53:02 METAR KPEO 082053Z 19005KT 10SM CLR 27/19 A2995 RMK AO2 SLP134 60017 T02720194 50000
08	1653	MET09007/08/20 16:53:02 METAR KPEO 082153Z 21005KT 10SM CLR 28/19 A2993 RMK AO2 SLP127 T02780194
08	1753	MET09007/08/20 17:53:02 METAR KPEO 082253Z 26004KT 10SM CLR 28/20 A2993 RMK AO2 SLP126 T02830200
08	1853	MET11407/08/20 18:53:02 METAR KPEO 082353Z 11004KT 10SM CLR 27/21 A2995 RMK AO2 SLP134 60017 T02670211 10283 20217 55001
08	1953	MET09007/08/20 19:53:01 METAR KPEO 090053Z 16004KT 10SM CLR 26/21 A2995 RMK AO2 SLP132 T02610206
08	2053	MET09007/08/20 20:53:01 METAR KPEO 090153Z 22006KT 10SM CLR 26/21 A2997 RMK AO2 SLP138 T02560211
08	2153	MET09607/08/20 21:53:01 METAR KPEO 090253Z 21007KT 10SM CLR 26/21 A2997 RMK AO2 SLP138 T02560206 53005
08	2253	MET09007/08/20 22:53:02 METAR KPEO 090353Z 22007KT 10SM CLR 23/21 A2996 RMK AO2 SLP137 T02330211
08	2353	MET10007/08/20 23:53:02 METAR KPEO 090453Z 21007KT 10SM CLR 23/21 A2997 RMK AO2 SLP139 T02330206 403220217

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Date	Time (LST)	Station Type	Sky Conditions	Visibility	Weather Type (see documentation)	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Hum %	Wind Speed (MPH)	Wind Dir (Deg)	Wind Gusts (MPH)	Station Press (inHg)	Press. Tend	Net 3-Hr Change (inHg)	Sea Level Press. (inHg)	Report Type	Precip Total (in)	Altimeter Setting (inHg)
					AU | AW | MW	(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
09	0053	7	CLR:00	10.00		72	22.2	70	21.1	69	20.6	91	6	230		29.00	0	0.00	29.94	FM-15	0.00	29.96
09	0153	7	CLR:00	10.00		72	22.2	70	21.1	69	20.6	91	7	220		29.00			29.94	FM-15	0.00	29.96
09	0253	7	CLR:00	10.00		72	22.2	70	21.1	69	20.6	91	7	220		29.00			29.94	FM-15	0.00	29.96
09	0353	7	CLR:00	10.00		71	21.7	69	20.6	68	20.0	90	5	220		29.00	5	0.00	29.94	FM-15	0.00	29.96
09	0453	7	CLR:00	10.00		70	21.1	69	20.6	68	20.0	93	5	240		29.02			29.95	FM-15	0.00	29.98
09	0553	7	CLR:00	10.00		71	21.7	69	20.6	68	20.0	90	5	230		29.03			29.97	FM-15	0.00	30.00
09	0653	7	CLR:00	10.00		74	23.3	70	21.1	68	20.0	82	7	230		29.05	1	-0.04	29.98	FM-15	0.00	30.01
09	0753	7	CLR:00	10.00		77	25.0	72	22.2	69	20.6	77	8	220		29.05			29.99	FM-15	0.00	30.01
09	0853	7	CLR:00	10.00		82	27.8	74	23.3	70	21.1	67	5	240		29.05			29.98	FM-15	0.00	30.01
09	0953	7	CLR:00	10.00		85	29.4	75	23.9	71	21.7	63	5	280		29.03	8	+0.01	29.97	FM-15	0.00	30.00
09	1053	7	CLR:00	10.00		88	31.1	74	23.3	68	20.0	52	3	270		29.03			29.96	FM-15	0.00	29.99
09	1153	7	CLR:00	10.00		90	32.2	74	23.3	67	19.4	47	5	VRB		29.02			29.95	FM-15	0.00	29.98
09	1253	7	CLR:00	10.00		92	33.3	74	23.3	65	18.3	41	6	250		29.00	8	+0.03	29.94	FM-15	0.00	29.97
09	1353	7	CLR:00	10.00		93	33.9	73	22.8	63	17.2	37	9	240		29.00			29.92	FM-15	0.00	29.96
09	1453	7	CLR:00	10.00		94	34.4	73	22.8	62	16.7	35	8	230		28.97			29.91	FM-15	0.00	29.94
09	1553	7	FEW:02 70	10.00		94	34.4	72	22.2	60	15.6	32	6	230		28.97	6	+0.04	29.90	FM-15	0.00	29.93
09	1653	7	OVC:08 70	10.00		91	32.8	75	23.9	67	19.4	45	9	120		28.96			29.89	FM-15	0.00	29.92
09	1753	7	SCT:04 75	10.00		92	33.3	74	23.3	66	18.9	43	7	130		28.97			29.90	FM-15	0.00	29.93
09	1853	7	FEW:02 75	10.00		87	30.6	73	22.8	67	19.4	51	5	150		28.97	5	0.00	29.90	FM-15	0.00	29.93
09	1953	7	FEW:02 75	10.00		82	27.8	71	21.7	66	18.9	58	3	130		28.97			29.90	FM-15	0.00	29.93
09	2053	7	CLR:00	10.00		84	28.9	72	22.2	66	18.9	55	7	160		28.99			29.92	FM-15	0.00	29.95
09	2153	7	CLR:00	10.00		82	27.8	71	21.7	66	18.9	58	5	200		28.99	1	-0.02	29.92	FM-15	0.00	29.95
09	2253	7	CLR:00	10.00		80	26.7	71	21.7	67	19.4	64	7	200		28.99			29.92	FM-15	0.00	29.95
09	2353	7	CLR:00	10.00		79	26.1	72	22.2	68	20.0	69	8	210		29.00			29.93	FM-15	0.00	29.96

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Asheville, North Carolina 28801

Date	Time (LST)	Remarks
09	0053	MET10807/09/20 00:53:02 METAR KPEO 090553Z 23005KT 10SM CLR 22/21 A2996 RMK AO2 SLP140 T02220206 10267 20222 50000
09	0153	MET09007/09/20 01:53:02 METAR KPEO 090653Z 22006KT 10SM CLR 22/21 A2996 RMK AO2 SLP139 T02220206
09	0253	MET09007/09/20 02:53:02 METAR KPEO 090753Z 22006KT 10SM CLR 22/21 A2996 RMK AO2 SLP139 T02220206
09	0353	MET09607/09/20 03:53:02 METAR KPEO 090853Z 22004KT 10SM CLR 22/20 A2996 RMK AO2 SLP139 T02170200 55000
09	0453	MET09007/09/20 04:53:02 METAR KPEO 090953Z 24004KT 10SM CLR 21/20 A2998 RMK AO2 SLP143 T02110200
09	0553	MET09007/09/20 05:53:02 METAR KPEO 091053Z 23004KT 10SM CLR 22/20 A3000 RMK AO2 SLP150 T02170200
09	0653	MET11407/09/20 06:53:02 METAR KPEO 091153Z 23006KT 10SM CLR 23/20 A3001 RMK AO2 SLP154 70035 T02330200 10233 20211 51015
09	0753	MET09007/09/20 07:53:02 METAR KPEO 091253Z 22007KT 10SM CLR 25/21 A3001 RMK AO2 SLP155 T02500206
09	0853	MET09007/09/20 08:53:02 METAR KPEO 091353Z 24004KT 10SM CLR 28/21 A3001 RMK AO2 SLP153 T02780211
09	0953	MET09607/09/20 09:53:02 METAR KPEO 091453Z 28004KT 10SM CLR 29/22 A3000 RMK AO2 SLP149 T02940217 58004
09	1053	MET09007/09/20 10:53:02 METAR KPEO 091553Z 27003KT 10SM CLR 31/20 A2999 RMK AO2 SLP145 T03110200
09	1153	MET09007/09/20 11:53:02 METAR KPEO 091653Z VRB04KT 10SM CLR 32/19 A2998 RMK AO2 SLP143 T03220194
09	1253	MET10807/09/20 12:53:02 METAR KPEO 091753Z 25005KT 10SM CLR 33/18 A2997 RMK AO2 SLP138 T03330183 10333 20233 58010
09	1353	MET09007/09/20 13:53:02 METAR KPEO 091853Z 24008KT 10SM CLR 34/17 A2996 RMK AO2 SLP133 T03390172
09	1453	MET09007/09/20 14:53:02 METAR KPEO 091953Z 23007KT 10SM CLR 34/17 A2994 RMK AO2 SLP128 T03440167
09	1553	MET09907/09/20 15:53:02 METAR KPEO 092053Z 23005KT 10SM FEW070 34/16 A2993 RMK AO2 SLP125 T03440156 56012
09	1653	MET09307/09/20 16:53:02 METAR KPEO 092153Z 12008KT 10SM OVC070 33/19 A2992 RMK AO2 SLP123 T03280194
09	1753	MET09307/09/20 17:53:02 METAR KPEO 092253Z 13006KT 10SM SCT075 33/19 A2993 RMK AO2 SLP124 T03330189
09	1853	MET11107/09/20 18:53:02 METAR KPEO 092353Z 15004KT 10SM FEW075 31/19 A2993 RMK AO2 SLP125 T03060194 10356 20306 55001
09	1953	MET09307/09/20 19:53:01 METAR KPEO 100053Z 13003KT 10SM FEW075 28/19 A2993 RMK AO2 SLP126 T02780189
09	2053	MET09007/09/20 20:53:01 METAR KPEO 100153Z 16006KT 10SM CLR 29/19 A2995 RMK AO2 SLP132 T02890189
09	2153	MET09607/09/20 21:53:01 METAR KPEO 100253Z 20004KT 10SM CLR 28/19 A2995 RMK AO2 SLP132 T02780189 51008
09	2253	MET09007/09/20 22:53:02 METAR KPEO 100353Z 20006KT 10SM CLR 27/19 A2995 RMK AO2 SLP132 T02670194
09	2353	MET10007/09/20 23:53:02 METAR KPEO 100453Z 21007KT 10SM CLR 26/20 A2996 RMK AO2 SLP134 T02610200 403560211

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data, and Information Service
Current Location: Elev: 903 ft. Lat: 42.6425° N Lon: -77.0564° W
Station: **PENN YAN AIRPORT, NY US WBAN: 72519454778 (KPEO)**

Local Climatological Data
Hourly Observations
July 2020

Generated on 01/22/2021

National Centers for Environmental Information
151 Patton Avenue
Asheville, North Carolina 28801

Date	Time (LST)	Station Type	Sky Conditions	Visibility	Weather Type (see documentation)	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Hum %	Wind Speed (MPH)	Wind Dir (Deg)	Wind Gusts (MPH)	Station Press (inHg)	Press. Tend	Net 3-Hr Change (inHg)	Sea Level Press. (inHg)	Report Type	Precip Total (in)	Altimeter Setting (inHg)
					AU | AW | MW	(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
10	0053	7	CLR:00	10.00		79	26.1	71	21.7	67	19.4	67	9	210		29.00	3	-0.01	29.93	FM-15	0.00	29.97
10	0153	7	CLR:00	10.00		76	24.4	71	21.7	68	20.0	77	3	240		29.00			29.93	FM-15	0.00	29.96
10	0253	7	CLR:00	10.00		73	22.8	70	21.1	68	20.0	84	0	000		28.99			29.92	FM-15	0.00	29.95
10	0353	7	CLR:00	10.00		75	23.9	71	21.7	69	20.6	82	5	210		28.99	8	+0.02	29.91	FM-15	0.00	29.95
10	0453	7	CLR:00	10.00		74	23.3	71	21.7	69	20.6	85	3	210		29.00			29.93	FM-15	0.00	29.96
10	0553	7	CLR:00	10.00		75	23.9	72	22.2	70	21.1	84	5	230		29.00			29.93	FM-15	0.00	29.96
10	0653	7	CLR:00	10.00		78	25.6	72	22.2	69	20.6	74	7	220		28.99	0	0.00	29.92	FM-15	0.00	29.95
10	0753	7	CLR:00	10.00		81	27.2	73	22.8	70	21.1	69	8	230		28.99			29.93	FM-15	0.00	29.95
10	0853	7	CLR:00	10.00		84	28.9	73	22.8	68	20.0	59	9	240		28.97			29.91	FM-15	0.00	29.94
10	0953	7	BKN:07 39	10.00		86	30.0	74	23.3	69	20.6	57	6	VRB		28.96	8	+0.02	29.89	FM-15	0.00	29.92
10	1053	7	FEW:02 46	10.00		86	30.0	73	22.8	67	19.4	53	10	140		28.96			29.89	FM-15	0.00	29.92
10	1153	7	CLR:00	10.00		86	30.0	74	23.3	68	20.0	55	9	140		28.96			29.89	FM-15	0.00	29.92
10	1253	7	FEW:02 44	10.00		87	30.6	73	22.8	67	19.4	51	7	150		28.93	8	+0.03	29.86	FM-15	0.00	29.89
10	1353	7	CLR:00	10.00		89	31.7	72	22.2	64	17.8	43	7	100		28.90			29.82	FM-15	0.00	29.86
10	1453	7	SCT:04 60	10.00		90	32.2	73	22.8	64	17.8	42	6	VRB		28.88			29.81	FM-15	0.00	29.84
10	1553	7	FEW:02 50 FEW:02 60	10.00		84	28.9	73	22.8	68	20.0	59	18	150	25	28.89	5	+0.05	29.82	FM-15	0.00	29.85
10	1653	7	CLR:00	10.00		82	27.8	71	21.7	66	18.9	58	13	150		28.87			29.80	FM-15	0.00	29.83
10	1753	7	CLR:00	10.00		80	26.7	71	21.7	67	19.4	64	7	160		28.86			29.80	FM-15	0.00	29.82
10	1853	7	FEW:02 46 SCT:04 110	10.00		78	25.6	71	21.7	67	19.4	69	8	180		28.86	5	+0.02	29.80	FM-15	0.00	29.82
10	1953	7	FEW:02 110	10.00	-RA:02 |RA |RA	76	24.4	71	21.7	68	20.0	77	3	170		28.85			29.78	FM-15	T	29.81
10	2053	7	FEW:02 110	10.00		75	23.9	71	21.7	69	20.6	82	5	220		28.83			29.76	FM-15	T	29.79
10	2153	7	FEW:02 110	10.00	-RA:02 |RA |RA	73	22.8	70	21.1	69	20.6	87	0	000		28.82	6	+0.04	29.75	FM-15	0.01	29.78
10	2253	7	FEW:02 90 BKN:07 110	10.00		73	22.8	71	21.7	70	21.1	90	3	230		28.79			29.72	FM-15	T	29.75
10	2353	7	FEW:02 100 SCT:04 120	10.00		72	22.2	71	21.7	70	21.1	94	0	000		28.76			29.70	FM-15	T	29.72

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
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Current Location: Elev: 903 ft. Lat: 42.6425° N Lon: -77.0564° W
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Local Climatological Data
Hourly Remarks
July 2020

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National Centers for Environmental Information
151 Patton Avenue
Asheville, North Carolina 28801

Date	Time (LST)	Remarks
10	0053	MET10807/10/20 00:53:02 METAR KPEO 100553Z 21008KT 10SM CLR 26/19 A2997 RMK AO2 SLP137 T02610194 10306 20250 53004
10	0153	MET09007/10/20 01:53:02 METAR KPEO 100653Z 24003KT 10SM CLR 24/20 A2996 RMK AO2 SLP137 T02440200
10	0253	MET09007/10/20 02:53:02 METAR KPEO 100753Z 00000KT 10SM CLR 23/20 A2995 RMK AO2 SLP133 T02280200
10	0353	MET09607/10/20 03:53:02 METAR KPEO 100853Z 21004KT 10SM CLR 24/21 A2995 RMK AO2 SLP130 T02390206 58006
10	0453	MET09007/10/20 04:53:02 METAR KPEO 100953Z 21003KT 10SM CLR 23/21 A2996 RMK AO2 SLP134 T02330206
10	0553	MET09007/10/20 05:53:02 METAR KPEO 101053Z 23004KT 10SM CLR 24/21 A2996 RMK AO2 SLP135 T02390211
10	0653	MET10807/10/20 06:53:02 METAR KPEO 101153Z 22006KT 10SM CLR 26/21 A2995 RMK AO2 SLP131 T02560206 10261 20222 50000
10	0753	MET09007/10/20 07:53:02 METAR KPEO 101253Z 23007KT 10SM CLR 27/21 A2995 RMK AO2 SLP134 T02720211
10	0853	MET09007/10/20 08:53:02 METAR KPEO 101353Z 24008KT 10SM CLR 29/20 A2994 RMK AO2 SLP129 T02890200
10	0953	MET09907/10/20 09:53:02 METAR KPEO 101453Z VRB05KT 10SM BKN039 30/21 A2992 RMK AO2 SLP122 T03000206 58008
10	1053	MET09307/10/20 10:53:02 METAR KPEO 101553Z 14009KT 10SM FEW046 30/19 A2992 RMK AO2 SLP122 T03000194
10	1153	MET09007/10/20 11:53:02 METAR KPEO 101653Z 14008KT 10SM CLR 30/20 A2992 RMK AO2 SLP121 T03000200
10	1253	MET11107/10/20 12:53:02 METAR KPEO 101753Z 15006KT 10SM FEW044 31/19 A2989 RMK AO2 SLP112 T03060194 10311 20256 58009
10	1353	MET09007/10/20 13:53:02 METAR KPEO 101853Z 10006KT 10SM CLR 32/18 A2986 RMK AO2 SLP099 T03170178
10	1453	MET09307/10/20 14:53:02 METAR KPEO 101953Z VRB05KT 10SM SCT060 32/18 A2984 RMK AO2 SLP095 T03220178
10	1553	MET10907/10/20 15:53:02 METAR KPEO 102053Z 15016G22KT 10SM FEW050 FEW060 29/20 A2985 RMK AO2 SLP097 T02890200 55016
10	1653	MET09007/10/20 16:53:02 METAR KPEO 102153Z 15011KT 10SM CLR 28/19 A2983 RMK AO2 SLP093 T02780189
10	1753	MET09007/10/20 17:53:02 METAR KPEO 102253Z 16006KT 10SM CLR 27/19 A2982 RMK AO2 SLP090 T02670194
10	1853	MET11807/10/20 18:53:02 METAR KPEO 102353Z 18007KT 10SM FEW046 SCT110 26/19 A2982 RMK AO2 SLP091 T02560194 10328 20256 55007
10	1953	MET10907/10/20 19:53:01 METAR KPEO 110053Z 17003KT 10SM -RA FEW110 24/20 A2981 RMK AO2 RAB41 SLP086 P0000 T02440200
10	2053	MET10507/10/20 20:53:01 METAR KPEO 110153Z 22004KT 10SM FEW110 24/21 A2979 RMK AO2 RAE13 SLP078 P0000 T02390206
10	2153	MET12107/10/20 21:53:01 METAR KPEO 110253Z 00000KT 10SM -RA FEW110 23/21 A2978 RMK AO2 RAB02 SLP076 P0001 60001 T02280206 56014
10	2253	MET11807/10/20 22:53:02 METAR KPEO 110353Z 23003KT 10SM FEW090 BKN110 23/21 A2975 RMK AO2 RAE00B16E47 SLP064 P0000 T02280211
10	2353	MET12507/10/20 23:53:02 METAR KPEO 110453Z 00000KT 10SM FEW100 SCT120 22/21 A2972 RMK AO2 RAB31E41 SLP056 P0000 T02220211 403280222

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July 2020

Generated on 01/22/2021

National Centers for Environmental Information
151 Patton Avenue
Asheville, North Carolina 28801

Date	Time (LST)	Station Type	Sky Conditions	Visibility	Weather Type (see documentation)	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Hum %	Wind Speed (MPH)	Wind Dir (Deg)	Wind Gusts (MPH)	Station Press (inHg)	Press. Tend	Net 3-Hr Change (inHg)	Sea Level Press. (inHg)	Report Type	Precip Total (in)	Altimeter Setting (inHg)
					AU | AW | MW	(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
11	0053	7	BKN:07 80 OVC:08 110	10.00		72	22.2	71	21.7	70	21.1	94	0	000		28.74	6	+0.08	29.67	FM-15	0.00	29.70
11	0153	7	FEW:02 100	10.00		72	22.2	70	21.1	69	20.6	91	0	000		28.72			29.65	FM-15	0.00	29.68
11	0216	7	FEW:02 4 SCT:04 45	10.00		72	22.2	70	21.1	69	20.6	91	6	220		28.72				FM-16		29.68
11	0253	7	BKN:07 55	10.00		72	22.2	71	21.7	70	21.1	94	3	200		28.71			29.65	FM-15	0.00	29.67
11	0353	7	FEW:02 65	10.00		71	21.7	69	20.6	68	20.0	90	6	210		28.70	6	+0.04	29.64	FM-15	0.00	29.66
11	0453	7	SCT:04 120	10.00		71	21.7	69	20.6	68	20.0	90	5	220		28.70			29.64	FM-15	0.00	29.66
11	0553	7	CLR:00	10.00		72	22.2	70	21.1	69	20.6	91	3	250		28.70			29.63	FM-15	0.00	29.66
11	0653	7	CLR:00	10.00		74	23.3	70	21.1	68	20.0	82	7	210		28.70	8	+0.01	29.63	FM-15	0.00	29.66
11	0753	7	CLR:00	10.00		77	25.0	71	21.7	68	20.0	74	9	200		28.70			29.63	FM-15	0.00	29.66
11	0853	7	FEW:02 23 SCT:04 31 BKN:07 46	10.00		80	26.7	72	22.2	68	20.0	67	8	220		28.70			29.63	FM-15	0.00	29.66
11	0953	7	FEW:02 43 SCT:04 70 BKN:07 120	10.00		81	27.2	72	22.2	67	19.4	62	5	240		28.69	8	+0.01	29.62	FM-15	0.00	29.65
11	1053	7	FEW:02 100	10.00		84	28.9	73	22.8	67	19.4	57	7	200		28.69			29.61	FM-15	0.00	29.64
11	1151	6	SCT:04 39	10.00	VCTS:7 ||	84	28.9	74	23.3	70	21.1	62	10	130		28.64				FM-16		29.60
11	1153	7	SCT:04 39	10.00	VCTS:7 ||	84	28.9	74	23.3	69	20.6	61	10	110		28.64			29.57	FM-15	0.00	29.60
11	1208	7	FEW:02 22 SCT:04 43 BKN:07 75	4.00	TS:7 -RA:02 |RA TS TS |RA	79	26.1	72	22.2	69	20.6	72	18	200	29	28.67				FM-16	0.04	29.63
11	1210	7	FEW:02 26 SCT:04 41 BKN:07 80	1.50V	TS:7 -RA:02 |RA TS TS |RA	76	24.4	72	22.2	70	21.1	82	16	220	29	28.67				FM-16	0.10	29.63
11	1217	7	SCT:04 18 BKN:07 42 BKN:07 75	0.50	+RA:02 FG:2 |FG RA |RA	73	22.8	71	21.7	70	21.1	90	9	250	29	28.66				FM-16	0.27	29.62
11	1222	7	SCT:04 18 BKN:07 60 OVC:08 75	1.00	VCTS:7 -RA:02 BR:1 |RA |RA	74	23.3	72	22.2	71	21.7	91	3	270		28.66				FM-16	0.27	29.61
11	1225	7	FEW:02 20 SCT:04 47 BKN:07 75	5.00	VCTS:7 -RA:02 BR:1 |RA |RA	75	23.9	72	22.2	71	21.7	88	0	000		28.66				FM-16	0.27	29.61
11	1239	7	FEW:02 17 SCT:04 80	10.00		79	26.1	73	22.8	70	21.1	74	0	000		28.64				FM-16	0.27	29.60
11	1253	7	CLR:00	10.00		81	27.2	75	23.9	72	22.2	74	5	VRB		28.64	6	+0.05	29.56	FM-15	0.27	29.59
11	1353	7	SCT:04 43 BKN:07 50 OVC:08 100	2.50	RA:02 |RA |RA	74	23.3	71	21.7	69	20.6	85	14	210	28	28.63			29.56	FM-15	0.04	29.58
11	1400	7	FEW:02 41 BKN:07 70 OVC:08 110	7.00	-RA:02 |RA |RA	75	23.9	71	21.7	69	20.6	82	7	190	25	28.61				FM-16	T	29.57
11	1453	7	CLR:00	10.00		81	27.2	73	22.8	69	20.6	67	9	190		28.61			29.54	FM-15	T	29.57
11	1553	7	FEW:02 47 SCT:04 65 OVC:08 95	10.00		78	25.6	70	21.1	66	18.9	67	11	210		28.60	8	+0.04	29.52	FM-15	T	29.55
11	1632	7	FEW:02 48 BKN:07 65	2.00	+RA:02 |RA |RA	73	22.8	69	20.6	67	19.4	81	13	210	23	28.60				FM-16	0.03	29.55
11	1646	7	SCT:04 45 OVC:08 60	2.50	-RA:02 |RA |RA	72	22.2	69	20.6	67	19.4	84	10	220	26	28.60				FM-16	0.05	29.55

11	1651	6	BKN:07 50 OVC:08 65	3.00	-RA:02 BR:1 |RA |RA	72	22.2	69	20.6	68	20.0	88	14	240		28.60				FM-16		29.55
11	1653	7	BKN:07 50 OVC:08 65	3.00	RA:02 BR:1 |RA |RA	72	22.2	69	20.6	68	20.0	87	13	240		28.60			29.53	FM-15	0.08	29.55
11	1730	7	FEW:02 11 BKN:07 23 OVC:08 50	4.00	-RA:02 BR:1 |RA |RA	71	21.7	69	20.6	68	20.0	90	7	330	18	28.61				FM-16	0.02	29.56
11	1748	7	FEW:02 11 BKN:07 28 OVC:08 38	1.75V	RA:02 BR:1 |RA |RA	72	22.2	69	20.6	68	20.0	88	11	VRB	21	28.61				FM-16	0.08	29.57
11	1751	6	FEW:02 11 BKN:07 18 OVC:08 26	0.75V	+RA:02 BR:1 |RA |RA	70	21.1	69	20.6	68	20.0	94	14	300	21	28.61				FM-16		29.57
11	1753	7	FEW:02 11 BKN:07 18 OVC:08 26	0.50	+RA:02 FG:2 |FG RA |RA	70	21.1	69	20.6	68	20.0	93	14	310	21	28.61			29.55	FM-15	0.42	29.57
11	1807	7	FEW:02 8 BKN:07 13 OVC:08 27	0.25	+RA:02 FG:2 |FG RA |RA	70	21.1	69	20.6	69	20.6	97	13	320	21	28.63				FM-16	0.46	29.58
11	1830	7	FEW:02 7 OVC:08 13	1.75	+RA:02 BR:1 |RA |RA	70	21.1	69	20.6	68	20.0	93	11	310	24	28.63				FM-16	0.95	29.58
11	1840	7	FEW:02 7 FEW:02 12 OVC:08 17	1.00	+RA:02 BR:1 |RA |RA	70	21.1	69	20.6	68	20.0	93	13	260	24	28.63				FM-16	1.12	29.58
11	1845	7	FEW:02 7 SCT:04 12 OVC:08 19	2.50	RA:02 BR:1 |RA |RA	71	21.7	69	20.6	68	20.0	90	13	280	24	28.64				FM-16	1.14	29.59
11	1851	6	SCT:04 14 OVC:08 23	4.00	+RA:02 BR:1 |RA |RA	72	22.2	69	20.6	68	20.0	88	17	270	28	28.64				FM-16		29.59
11	1853	7	SCT:04 13 BKN:07 19 OVC:08 23	4.00	RA:02 BR:1 |RA |RA	71	21.7	68	20.0	67	19.4	87	15	270	28	28.64	1	-0.04	29.56	FM-15	1.02	29.59
11	1907	7	SCT:04 17 BKN:07 34 OVC:08 75	7.00	-RA:02 |RA |RA	71	21.7	68	20.0	67	19.4	87	15	270	28	28.64				FM-16	0.01	29.60
11	1953	7	FEW:02 25 BKN:07 110	9.00	-RA:02 |RA |RA	71	21.7	68	20.0	67	19.4	87	11	270	24	28.66			29.59	FM-15	0.08	29.61
11	2029	7	BKN:07 20 BKN:07 50 BKN:07 110	10.00	-RA:02 |RA |RA	71	21.7	68	20.0	67	19.4	87	11	270	23	28.67				FM-16	0.01	29.63
11	2049	7	SCT:04 20 BKN:07 110	10.00	-RA:02 |RA |RA	72	22.2	68	20.0	66	18.9	83	14	270	22	28.69				FM-16	0.02	29.64
11	2053	7	FEW:02 18 BKN:07 120	10.00	-RA:02 |RA |RA	70	21.1	67	19.4	66	18.9	87	13	270	23	28.69			29.61	FM-15	0.01	29.64
11	2134	7	SCT:04 17 BKN:07 23 BKN:07 120	10.00	-RA:02 |RA |RA	70	21.1	68	20.0	67	19.4	90	13	250		28.70				FM-16	T	29.66
11	2153	7	OVC:08 17	10.00		71	21.7	68	20.0	66	18.9	84	10	260	23	28.70	1	-0.05	29.64	FM-15	T	29.66
11	2235	7	SCT:04 20 BKN:07 38 OVC:08 60	10.00		71	21.7	68	20.0	66	18.9	84	10	260		28.70				FM-16	T	29.66
11	2242	7	BKN:07 23 BKN:07 34 OVC:08 45	10.00		71	21.7	68	20.0	66	18.9	84	10	250		28.70				FM-16	T	29.66
11	2253	7	BKN:07 23 BKN:07 30 OVC:08 60	10.00		71	21.7	68	20.0	66	18.9	84	13	240		28.70			29.64	FM-15	T	29.66
11	2353	7	OVC:08 23	10.00		70	21.1	67	19.4	65	18.3	84	14	260		28.71			29.65	FM-15	T	29.67

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data, and Information Service
Current Location: Elev: 903 ft. Lat: 42.6425° N Lon: -77.0564° W
Station: **PENN YAN AIRPORT, NY US WBAN: 72519454778 (KPEO)**

Local Climatological Data
Hourly Remarks
July 2020

Generated on 01/22/2021

National Centers for Environmental Information
151 Patton Avenue
Asheville, North Carolina 28801

Date	Time (LST)	Remarks
11	0053	MET12407/11/20 00:53:02 METAR KPEO 110553Z 00000KT 10SM BKN080 OVC110 22/21 A2970 RMK AO2 SLP049 60001 T02220211 10256 20222 56026
11	0153	MET09307/11/20 01:53:02 METAR KPEO 110653Z 00000KT 10SM FEW100 22/21 A2968 RMK AO2 SLP041 T02220206
11	0216	MET09307/11/20 02:16:02 SPECI KPEO 110716Z 22005KT 10SM FEW004 SCT045 22/21 A2968 RMK AO2 T02220206
11	0253	MET09307/11/20 02:53:02 METAR KPEO 110753Z 20003KT 10SM BKN055 22/21 A2967 RMK AO2 SLP039 T02220211
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11	0553	MET09007/11/20 05:53:02 METAR KPEO 111053Z 25003KT 10SM CLR 22/21 A2966 RMK AO2 SLP035 T02220206
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11	0753	MET09007/11/20 07:53:02 METAR KPEO 111253Z 20008KT 10SM CLR 25/20 A2966 RMK AO2 SLP035 T02500200
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11	1153	MET10907/11/20 11:53:02 METAR KPEO 111653Z 11009KT 10SM VCTS SCT039 29/21 A2960 RMK AO2 LTG DSNT E SLP015 T02890206
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11	1210	MET14707/11/20 12:10:02 SPECI KPEO 111710Z 22014G25KT 1 1/2SM -TSRA FEW026 SCT041 BKN080 24/21 A2963 RMK AO2 VIS 1/2V5 RAB04 TSB02 PRESRR P0010 T02440211
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11	1222	MET13207/11/20 12:22:02 SPECI KPEO 111722Z 27003KT 1SM VCTS -RA BR SCT018 BKN060 OVC075 23/22 A2961 RMK AO2 RAB04 TSB02E17 P0027 T02330217
11	1225	MET13207/11/20 12:25:02 SPECI KPEO 111725Z 00000KT 5SM VCTS -RA BR FEW020 SCT047 BKN075 24/22 A2961 RMK AO2 RAB04 TSB02E17 P0027 T02390217
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11	1748	MET13007/11/20 17:48:02 SPECI KPEO 112248Z 31010G18KT 1 3/4SM RA BR FEW011 BKN028 OVC038 22/20 A2957 RMK AO2 VIS 1/2V5 LTG DSNT NW P0008
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11	1907	MET11207/11/20 19:07:01 SPECI KPEO 120007Z 27013G24KT 7SM -RA SCT017 BKN034 OVC075 22/19 A2960 RMK AO2 P0001 T02170194
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11	2153	MET12007/11/20 21:53:01 METAR KPEO 120253Z 26009G20KT 10SM OVC017 22/19 A2966 RMK AO2 RAE47 SLP036 P0000 60009 T02170189 51017
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11	2353	MET10307/11/20 23:53:02 METAR KPEO 120453Z 26012KT 10SM OVC023 21/18 A2967 RMK AO2 SLP039 T02110183 402940211

13.0 CONSTRUCTION/DEMOLITION WASTE AND RECYCLING PROGRAM

The annual review of Construction/Demolition Waste and Recycling Program was prepared by SMI. SMI's report summarizes program activities for 2020 as required by SMI's 6 NYCRR Part 360-62(A.)(B.)(C.) Operating Permit and is included in this section of the Report.

SENECA MEADOWS, INC.

CONSTRUCTION/DEMOLITION WASTE AND RECYCLING PROGRAMS

IN ACCORDANCE WITH THE PERMIT CONDITION 6 NYCRR PART 360-62(A.) (B.) (C.)

February 2021

SECTION 1

INTRODUCTION

Seneca Meadows, Inc. (SMI) owns and operates a New York State permitted 6 NYCRR Part 360 Solid Waste facility in the Town of Seneca Falls, Seneca County, New York. The New York State Department of Environmental Conversation (NYSDEC) issued a Part 360 landfill permit (Permit ID 8-4532-00023/00001-0) for expansion of the Seneca Meadows landfill on August 7, 2007, modified November 26, 2008, and renewed October 31, 2017.

Condition 62.a(1) of the NYSDEC 6NYCRR Part 360 Permit requires that SMI construct a Community Education Center and staff it up to 20 hours per week for environmental and waste (reduction reuse, recycling, and composting techniques) related classes.

The Center opened in the Fall 2008 and includes a fully equipped science laboratory and an educational exhibit room; housed in a gold level LEED (Leadership in Energy & Environmental Design) certified building. Programming for the Center includes:

1. Adult and children's programs that educate the local community on environmental issues through entertaining events and activities;
2. High school science programs that satisfy State standards and enhance curriculums by giving students' hands-on field and laboratory experience in the study of a brook, pond and wetlands that surround the Center.

Condition 62.a(2) of the NYSDEC 6NYCRR Part 360 Permit (*Fund a staff position for environmental educational outreach*)

Staffing of the Seneca Meadows Environmental Education Center is provided through a partnership with the Montezuma Audubon Center and SMI's on staff, full-time Public Relations and Environmental Program Coordinator.

Condition 62.a(3) (*Provide technical assistance to the University of Buffalo's Center for integrated waste management with respect to the reuse of waste tire chips*)

The NYS Tire Derived Aggregate (TDA) Program was established at the UB Center for Integrated Waste Management through the support of the New York State Department of Economic Development, Empire State Development. The NYS TDA Program is designed to help the state fulfill its priorities for scrap tire management as set forth in the New York State Tire Management & Recycling Act of 2003. *(This mission of the New York State Tire Derived Aggregate Program is to expand the beneficial use of recycled tire products in civil engineering applications through Education, Research and Product Development Support.)*

As a member of the Technical Advisory Board (TAB), SMI has served as an important resource to help the NYS TDA Program carry out its mission along with a select group of representatives from the tire industry, state agencies, local government and academia members.

SMI has hosted numerous meetings for the Technical Advisory Board and has been a major sponsor for its annual conference as well as hosting a technical training course on the use of TDA in septic systems. This included hosting field construction demonstrations on using TDA in the installation of residential on-site wastewater treatment systems and the adoption of NYS specifications/standards for their usage. This group has been disbanded with the completion of the identified scoped issues and priorities, which were previously established in its mission statement.

Condition 62.a(4) (*Identify additional opportunities to further beneficially utilize waste tire chips in civil engineering applications*)

Tire Chip Re-Use Practices

SMI's tire processing facility (TPF) aids in the management of waste tires in the state of New York, where waste tires have been identified by the NYSDEC as an area where additional program effort and resources are needed. The TPF is registered with the NYSDEC as a manufacturing facility which uses tires in the manufacture of a new product. The TPF includes a tire shredder and derimmer, interim storage areas for whole tires and tire chips, a contingency storage area, a roll-off or other appropriate container for recyclable tires, and a stormwater containment system. Tire chips/shreds

are a recognized product with multiple beneficial uses. SMI has received approval for the use of tire chips for various functions including:

- As a substitute for the top 12 inches of the primary soil drainage layer in the leachate collection system.
- As backfill for the landfill gas collection piping.
- As daily cover on the sloping portions of the working face of the landfill (but restricted from the outside slopes of the landfill).
- As an aggregate for road base materials or asphalt pavements.
- As use as a lightweight fill for embankments.
- Lightweight backfill for residential foundation.

As shown above, tire chips provide an effective substitute for natural materials and conserve valuable natural resources.

In addition to the Tire Processing Facility, SMI on occasion will rent a mobile tire shredder which can be used to process tires at the working face. All waste tires need to be derimmed before processing at the facility. The rims removed from the tires are collected and shipped offsite for metal recycling.

Recognized markets for the use of tire chips also exist in other areas. Shredded tires and tire chips have been used successfully in civil engineering for many years as an aggregate for road base materials and similar applications.

In 2009, SMI worked with the Board, initiated a live scale demonstration project, used tire chips as a foundation backfill on a new construction residential home in lieu of natural stone material. This demonstration was to assess the long-term settlement and insulation value of this product and determine its long-range benefits (refer to the overview that follows). The data collection has been completed; the analysis and their findings are being readied for future technical papers.

Condition 62.b of the NYSDEC 6NYCRR Part 360 Permit (*SMI to sponsor at least two Household Hazardous Waste (HHHW) collection days annually*)

SMI is involved in the HHHW Day for both the Seneca County Department of Health (SCDOH) and the joint Town of Seneca Falls and Waterloo events. SMI provides technical support and coordination, staffing, waste disposal services, safety equipment, advertising, tire collection/recycling, and financial assistance for these community events based on the event's needs.

The Towns of Seneca Falls and Waterloo have decided to postpone the annual events due to declining volumes of material received. They will schedule future events on an as-needed basis. SMI has set up drop-off locations to accept electronics, batteries, cell phones, tires, and source separate recyclables at the facility on Saturday's and Sunday's.

Condition 62.c of the NYSDEC 6NYCRR Part 360 Permit requires that:

SMI develop a "Construction and Demolition Waste Recycling Program" that would be designed to minimize the use of natural earth materials as daily cover, to the extent practicable. Specifically, this permit condition requires that a construction and demolition (C&D) debris management plan be developed to evaluate equipment and handling procedures to maximize the beneficial reuse of C&D debris for landfill construction and operation.

Minimization of the use of natural earthen materials for daily cover is not limited to the management of C&D material, as C&D material represents only a portion of the approved materials that are suitable for use as alternative daily cover (i.e., beneficial use determination (BUD) materials). Moreover, additional material handling practices are currently implemented at the SMI landfill which result in the minimization of natural resource use (i.e., use of tire chips as landfill leachate collection system drainage material and as a BUD daily cover). As such, while this plan addresses C&D debris management it also integrates other SMI practices which serve to minimize the use of natural resources.

The section that follows constitutes a plan for beneficial reuse material management for the goal of natural resource minimization.

SECTION 2

WASTE ACCEPTANCE PRACTICES

SMI, under its current operating permit, is permitted to accept an annualized average of 6,000 tons of solid waste per operating day, excluding BUD material. The incoming waste stream to the landfill is comprised of mixed municipal solid waste, construction and demolition debris, non-hazardous sludges, and various types of industrial wastes. In addition, other non-hazardous waste streams are accepted in accordance with the SMI waste approval process. The waste acceptance data from the 2020 annual report prepared in accordance with the facility's Part 360 permit indicates the following general breakdown of beneficial use materials used on site:

Table 2-1
BUDs Utilized by Category

Operational BUDs	Grand Total	Daily Average (tons)
Ash	-	-
Auto Fluff	2780.3	7.7
Processed C&D	288,160.5	802.7
Contaminated Soil	15,171.8	42.3
Foundry Sand	412.1	1.1
Hard Fill	34.1	0.1
Paper Sludge	-	-
Industrial Waste-Other	278.0	0.8
Industrial Ash	9,439.3	26.3
B/R Tire Cover	10,679.5	26.3
Yard Debris	566.8	1.6
Z9500 (Tire Chips for Cover)	-	-
TOTAL	**327,522.3**	**912.3**
Construction BUDs		
Tire Chips Processed for Construction Related Activities*	946	
GRAND TOTAL	**328,468.29**	

* Reported quarterly/annually for tire facility registration #50K03

Number of working days 360.0

SMI expects the distribution of incoming materials suitable for beneficial use for the continued operation of the landfill under the Part 360 permit issued for the expansion to be similar to what has previously been reported; however, the availability of tires to be processed is less certain.

The following sections describe SMI's acceptance practices for controlling the beneficial waste material and the various materials, not accounted for in the above list, which can be beneficially used in the construction and operation of the landfill. SMI maintains a complete Operations, Maintenance, and Monitoring Plan for the facility, in accordance with the terms of its Part 360 operating permit.

2.1 BENEFICIAL USE DETERMINATION MATERIAL

A Beneficial Use Determination (BUD) is a designation made by the NYSDEC as to whether a waste material which is to be beneficially used is governed by the Part 360 Solid Waste Management Facilities regulations. Materials that are granted BUD status are no longer considered solid waste and their associated volume is not counted towards the receiving facility's daily permitted waste acceptance rate. Sixteen pre-determined BUDs are listed in 6 NYCRR Part 360-1.15(b). The items listed in Part 360-1.15(b) are not self-implementing and may require a Part 360 permit or demonstration testing and approval from the NYSDEC before they can be used as BUDs. Pre-determined BUDs include the following types of materials:

- Unadulterated wood chips
- Uncontaminated newspaper and glass
- Uncontaminated, non-hazardous soils
- Fly ash
- Tire chips used as aggregate for road base materials or asphalt pavement

In addition to the pre-determined BUDs described above, generators and potential users can petition the NYSDEC for a case-specific BUD. The material must have a proposed use that constitutes a beneficial use based on the criteria outlined in Subpart 360-1.15(d). To be designated as a BUD, in general, the nature of the proposed use of the material must constitute reuse rather than disposal. In addition, the material must be intended to function or to serve as an effective substitute for an analogous raw material. SMI has received approval in their Part 360 permit in Condition 48(b) for the following waste streams to be beneficially used as daily cover material:

- Construction and Demolition (C&D) Debris
- Shredder Fluff
- Contaminated soil (which is not classified as hazardous waste)
- Coal Bottom Ash
- Resource Recovery Ash
- Paper Processing Sludge
- Chipped Tires
- Foundry Sand
- N-Viro Soil

The use of the above materials as daily cover and stone substitutes reduces the need for the use of natural earthen materials at the landfill. In addition, the use of these materials at the SMI landfill provides for safe and effective permanent re-use of these materials.

SECTION 3

BENEFICIAL REUSE PROGRAM

SMI uses and will continue to use various practices at the SMI landfill to minimize the use of natural resources, including the use of BUDs, waste tire chips, and yard waste. The sections below describe these practices.

3.1 BENEFICIAL USE DETERMINATION MATERIAL PRACTICES

3.1.1 General

To successfully implement a program for beneficial reuse of waste materials, first requires that a dependable supply of such materials be available at the landfill. Seneca Meadows marketing department actively pursues available beneficial use materials to provide such a supply. The BUD market is a competitive, "spot market" where different materials with beneficial uses are available during certain times of the year or based on projects that generate such materials. For example, waste such as contaminated soil and construction and demolition debris are generated on a project-by-project basis. As such, the Seneca Meadows marketing staff maintains customer relations and solicits landfill disposal and hauling services in order to be in the position to receive these materials, once they become available, to offset the use of natural resources for landfill construction and operations. SMI continuously maintains marketing efforts for alternative daily cover materials.

SMI currently obtains daily cover material from NYSDEC permitted local borrow pits in proximity to the landfill. BUD material is used on-site as an alternative to native soil for daily cover. At the end of each operating day, a minimum of 6 inches of BUD material or soil is placed over the exposed waste to control vectors, fires, odors, blowing litter and scavenging. In general, daily cover BUD materials consist of materials which can readily drain standing water. Placement of these BUD materials is confined to areas of the landfill that overlay a leachate collection system or as limited in the permit conditions for the approved material usage. Run-off and run-on controls, such as berms and swales, are placed around storage areas to control the potential for erosion of BUD materials into surrounding drainage features.

In the past, BUD materials used for daily cover were covered with additional waste or clean soil within 24 hours of placement, in accordance with the landfill's Part 360 permit requirements. Based on SMI's successful implementation of BUD materials as a daily cover, SMI requested and the NYSDEC approved an extension of this timing requirement for placement of additional waste or clean soil to 48 hours after BUD material placement. This results in a further reduction of use of clean soil, particularly for weekends. For example, formerly BUDs placed as daily cover on Saturday morning would have required the placement of additional clean soil before the receipt of waste on the following Monday. With the 48-hour time frame, the use of the clean soil cover can be eliminated and waste placement simply resume on Monday morning over the previously placed BUD daily cover.

Specific waste streams that have been approved for beneficial use as daily cover at the SMI landfill and usage practices are presented below.

3.1.2 Construction and Demolition (C&D) Debris

Construction and demolition debris practices will be optimized for use of this material as an alternative daily cover. These practices may be summarized as follows:

- Incoming material identified as construction and demolition debris is weighed and directed to a designated processing area on the landfill. BUD materials are used only on existing landfill areas that are lined and have an installed leachate collection system.
- Unacceptable materials and tires are sorted and placed into roll-offs, eventually being sent to outside vendors for proper handling and/or recycling (where practical).
- Larger C&D material is then crushed on site utilizing landfilling equipment. As is discussed in more detail subsequently, SMI maintains compaction equipment among the most effective available in the industry, which is equally effective in the processing of C&D debris so that it can be used as alternative daily cover with a minimum of residuals that must be disposed as waste.
- Processed C&D debris used for daily cover is limited to placement on sloping portions of the working face and is restricted from use on the outside slopes of the landfill, in accordance with the landfill's Part 360 permit. These restrictions limit the potential for erosion of materials outside of the landfill footprint. Processed C&D debris may also be

used for the flat portions of the working area by first blending it with sand or soil to achieve 50/50 mix of C&D debris and soil.

In addition to the use of processed C&D material as daily cover, SMI has received approval from the NYSDEC to use the six-inch minus processed material for landfill roadways and ramps within the footprint of the landfill, primarily on in-place waste to provide travel lanes for access to the working face. When used as sub-base for access roads and ramps, the C&D material is covered with a clean soil wearing surface (i.e., stone or aggregate material) to prevent rubber tire punctures and off-site tracking.

3.1.3 Other BUDs

In addition to processed construction and demolition debris, the following materials are approved at SMI for and beneficially re-used as daily cover, as available:

- Shredder Fluff. Shredder fluff may be used on sloping potions of the working face but is restricted from use on the outside slopes of the landfill. The shredder fluff is blended with equal amounts of soil or other approved daily cover material when applied.
- Contaminated Soil. Contaminated soil, which is not classified as a hazardous waste, can be used alone or blended with clean soil on sloping portions of the working face but is restricted from use on the outside slopes on the landfill. The SMI Environmental Engineering and Compliance Manager reviews the incoming contaminated soil data to determine if it qualifies to be beneficially re-used. In the process, the Environmental Engineering and Compliance Manager instructs the Operations Foreman to check the first few loads of a group of loads from the same generator to determine if the soil is suitable for daily cover. If the soil is not suitable, those loads are not used as daily cover and are landfilled.

- Coal Bottom Ash. Coal bottom ash, which is not classified as a hazardous waste, can be used alone or blended with clean soil as daily cover on the sloping portions of the working face but is restricted from use on the outside slopes of the landfill. Periodically, the SMI Waste Approval Manager will require analytical data on the ash to establish that it is non-hazardous.

- Resource Recovery Ash. The beneficial use of resource recovery ash as a daily cover has been approved in the recently issued Part 360 landfill expansion permit. Resource recovery ash material is defined as non-hazardous ash generated by permitted resource recovery facilities in New York State. The ash can be used alone as daily cover on the sloping portions of the working face but is restricted from use on the outside slopes of the landfill. Analytical sampling results of accepted ash are provided in SMI's annual report and made available to the NYSDEC upon request. Ash which contains unburned wastes, ash with a probability of becoming airborne or eroded into surface water drainage ways is not used as daily cover and is landfilled on the day it is accepted at the facility. Ash determined to be suitable for use as daily cover is placed adjacent to the working face and is not placed on or near the outside perimeter slopes or near surface water drainage ways. Resource recovery ash is not stockpiled for reuse but is used on the same day as it is received at the landfill.

- Paper Processing Sludge. Paper Processing Sludge can be used alone as daily cover on the sloping portions of the working face. When used on flat portions of the working face, paper processing sludge is blended with equal amounts of clean soils.

- Chipped Tires. Chipped or shredded tires may be used on sloping potions of the working face but are restricted from use on the outside slopes of the landfill. Other beneficial uses of chipped tires are discussed further subsequently.

- Foundry Sand. Foundry sand may be used on sloping potions of the working face but is restricted from use on the outside slopes of the landfill. Periodically, the SMI Waste Approval Manager will require analytical data on the ash to establish that it is non-hazardous

3.2 WASTE PLACEMENT AND COMPACTION PRACTICES

SMI uses a number of techniques to maximize waste compaction, which in turn reduces the amount of cover soil needed for a given quantity of waste (i.e., the higher the compaction, the less surface area occupied by a given waste quantity). In addition, optimal compaction rates in conjunction with leachate recirculation maximize air space usage, which again minimizes the quantity of soil required for operation and closure per a given quantity of waste. Increases in density have been shown to increase from the $\pm$ 0.75 tons per cubic yard range to approaching $\pm$ 1.0 cubic yard range. The actual average in-place density is highly dependent on various other factors such as initial select waste placement on liner systems, settlement, moisture, and waste type.

Leachate Recirculation

Leachate recirculation is the reintroduction of landfill leachate into the lined landfill cells. Leachate recirculation provides a means of optimizing environmental conditions within the landfill to provide enhanced stabilization of landfill waste, as well as treatment of moisture moving through the waste mass.

Proper leachate recirculation provides benefits to the landfill beyond the offset of disposal or treatment costs including: increased compaction and settlement, provides liquid necessary for a more uniform degradation of waste and nutrients for the anaerobic bacteria that generate methane.

The rationale for implementing moisture addition is primarily to take advantage of the storage attenuation capacity of the landfilled waste as an interim measure to manage leachate. Moisture addition will result in achieving a steady state in moisture content, settlement and leachate quality, in a somewhat accelerated manner, but not to the extent of a rapid acceleration program. A steady-state condition for a large site that is landfilled relatively quickly is normally achieved subsequent to closure of a particular area or cell. The proposed approach will simply bring the site into a steady-state condition that would naturally be achieved over time, at an earlier date than would otherwise have taken place.

The continued use of leachate recirculation is being specifically proposed to provide the following benefits:

- Attenuation of leachate organic strength and quantity;
- Increased rate of landfill stabilization;
- Immobilization of metals from landfilled material;
- Improved landfill settling rate; and,
- Increased landfill compaction rates;
- Reduced discharges to off-site treatment facilities.

The introduction of additional moisture in the waste mass leads to the improved contact between the bacteria, the biodegradable component of the refuse, and the necessary nutrients. The additional loss of solids, quicker decomposition and resultant consolidation leads to a more rapid stabilization of the waste mass.

In terms of general practices for waste placement and compaction, solid waste is off-loaded from haul vehicles at the working face of the landfill. Upon being unloaded, the solid waste is spread out in layers approximately two feet thick to enhance compactive effort throughout the lift thickness. Field experience and in-cab GPS confirmation are used to establish the number of passes to achieve optimal compaction. Two factors directly contributing to the degree of solid waste compaction are monitored, which are the thickness of waste which has been spread out and the condition of the compactor wheel teeth.

Other Beneficial Re-Use Program Practices

Yard waste (i.e., leaves, grass, brush/branches and stumps/tree sections) are banned from disposal in the landfill, expect for yard waste which is contaminated by excessive pesticides, hazardous substances, or other items that would make the yard waste unsuitable for composting or chipping. Yard waste contained in plastic bags, however, is not banned from landfilling.

SMI manages a source separated yard waste area. Suitable yard waste, as previously described, is chipped and stored before its on-site or off-site use. The chipped material is used on site for erosion

and sedimentation control. In addition, the yard waste operation has the capability to use aerated static pile composting technology; however, currently composting is not practiced at the site.

SMI has set up facilities for electronic waste collection, batteries, mobile phones and various other source-separated materials suitable for recycling purposes (plastics, papers, cardboard, etc.)

E-Waste Collection

Seneca Meadows, Inc. (SMI) instituted a free, e-waste recycling drop-off service for residents and businesses in the Finger Lakes Region in collaboration with 2trg, an electronics recycling company in Geneva, New York, in 2011 and in 2015 a multi-year contract was signed with Sunnking in Brockport, NY for recycling the electronic materials. SMI is registered in accordance with the New York State Electronic Equipment Recycling and Reuse Act (Environmental Conservation Law, Article 27, Title 26 under Registration #00566.

Sunnking is a fully permitted, Brockport, NY based company specializing in computer and technology reuse and recycling, CRT de-manufacturing, secure data destruction, cabling, and technology deployments. It provides these services to small businesses, schools and governments, Fortune 500 companies, value-added resellers, electronics manufacturers, other recyclers, and local residents.

Sunnking's Brockport facility is one of a limited number of recyclers in the country to have qualified for the independently audited R2 (EPA Responsible Recycling Certification) and is also certified by RIOX (Recycling Industry Operating Standard). Sunnking is also registered with NYS Electronics Equipment Recycling & Reuse Act along with the U.S. EPA (Environmental Protection Agency). Sunnking follows NIST 800-88 guidelines to clear or destroy data on hard drives and to provide laws like HIPAA, FACTA, SBA, GLBA, and CERCLA. R2 and RIS requirement also assure that electronic waste is recycled, re-manufactured, or destroyed in a responsible manner and is not disposed of in MSW landfills or shipped to third world countries.

Currently, the e-waste service includes drive-through unloading of acceptable* electronics for secure processing. The collection of e-waste is available on Saturdays from 6:00 a.m. to 11:30 a.m. and Sundays from 8 a.m. to 11:00 a.m.

We reported 58,780 lbs. of items collected and sent off site, which includes computers, computer peripherals, small electronic equipment, and televisions to the New York State Department of Environmental Conservation in our 2020 Annual Report for NYS Electronic Waste Collection Sites.

*ACCEPTABLE E-WASTE ITEMS

AC/DC Adapters	I-Pods	Satellite Receivers
Audio Equipment	Keyboards	Scanners
Cables/Wires/Cords	Laptops/Laptop Accessories	Security/Surveillance Equipment
Calculators	Media (tapes, disks)	Servers
Cardboard	Medical Equipment (non-hazardous)	Shredders (Document)
Cell Phones	Metals	Slot Processors
Circuit Boards	Mice	Speakers (Plastic ONLY)
Computers – All-In-One	Microwaves	Stereo Equipment (Plastic ONLY)
Computers – Desktop	Modems/Cable Modems	Surge Protector
Computers – Laptops	Monitors (CRT and LCD)	Telephones (LAN Line, systems)
Computers – Main Frames	MP3 Players	Turntables
Computers – Tablets	Networking Equipment	TVs
Computer Components/Accessories	Optical Drives	TV Cable Boxes
Computer Fans	PC Cards (finger boards, etc.)	UPS – Battery Back-up
Copiers	PDAs	Video Equipment
Digital Memory Cards	Plastics (computer, medical)	
Docking Stations	Power Supplies	
Electric Motors	Power Tools	
Electronic Game Devices	Printers (desktop, laser)	
Electronic Office Equipment	Processor Chips	
e-Readers	Projectors	
Fax Machines	Radios	
GPS Units	RAM/Memory	
Hard Drives	Routers/Hubs	

COUNTY RECYCLING BOX

The Seneca County Recycling Department, WeCARE Waste & Recycling, LLC and Seneca Meadows, Inc. coordinate a free, household recycling drop-off service at the Seneca Meadows Landfill to encourage collection rates in the County. The program, which has become popular with residents, is geared toward households producing more than the allowable quantity of recyclables, or that miss a recycling pick-up.

RECHARGEABLE BATTERIES RECYCLING DROP-OFF

On December 5, 2011, it became illegal for residents of New York State to dispose of rechargeable batteries with their waste. To provide for the convenient recycling of these products in our community, SMI has partnered with Call2Recycle, a free, North American rechargeable battery program to offer an on-site drop-off. Approximately 351 lbs. of rechargeable dry cell batteries were collected and shipped to Call2Recycle in 2020.

CELL PHONE RECYCLING DROP-OFF

Cell Phones for Soldiers is a national, non-profit organization that recycles cell phones to benefit United States veterans. Funds collected for the recycled cell phones are used by the group to purchase calling cards for soldiers to help them keep in contact with their families. SMI provides a full-time collection site at our landfill facility to collect the phones. In 2020 zero cell phones and cell phone accessories were collected and shipped to Cell Phones for Soldiers in 2020.