

Lead in Drinking Water Report

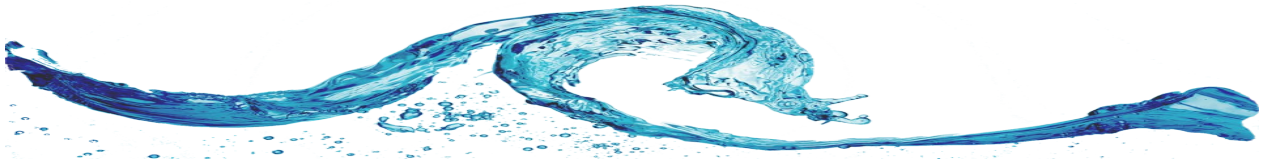
Essex Fells Board of Education
102 Hawthorne Road
Essex Fells, NJ 07021

Essex Fells Elementary School

August 2024

Prepared for:
Essex Fells Board of Education
102 Hawthorne Road
Essex Fells, NJ 07021

Prepared by:
New Wave Engineering, LLC
PO Box 4124
Wayne, New Jersey 07474



New Wave Environmental Engineering Solutions

August 8, 2024

Mr. Steven Lella
Business Administrator
Essex Fells Board of Education
102 Hawthorne Road
Essex Fells, NJ 07021

Re: Lead in Drinking Water Services per NJAC 6A:26
Essex Fells School, 102 Hawthorne Road, Essex Fells, NJ 07021

Dear Mr. Lella,

New Wave is pleased to submit this lead in drinking water report for the Essex Fells Board of Education. This report details the methods and findings of the comprehensive lead in drinking water services as per New Jersey state regulations (amendments to N.J.A.C 6A:26 Educational Facilities) performed at the elementary school in the Essex Fells School District, located at the above referenced addresses on July 19, 2024.

Best Regards,
Nadine Bello
Nadine Bello, MS, RPIH, CIEC, AST
New Wave Engineering, LLC

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Executive Summary of Lead in Drinking Water Services

July 2024

New Wave Engineering was retained to conduct a first draw “lead in drinking water sampling” at the district’s school buildings located within the Essex Fells Board of Education in July 2024. Water samples were collected from designated drinking water outlets at the following schools:

All samples were collected according to the regulatory guidelines outlined in the amendments to the N.J.A.C. 6A:26: Educational Facilities (July 2016) and its supporting documentation.

- **Essex Fells Elementary School**

First draw sample results indicated that water sources sampled at locations from the above noted schools, exhibited no lead levels above the Regulatory Action Level of 15ppb. All potable drinking water sources tested can continue to resume regular usage. The next required testing of drinking water sources in NJ schools will need to be completed in three (3) years unless any plumbing changes are made to the water system.

1.0 PROJECT BACKGROUND

New Wave Engineering was contacted by the Essex Fells Board of Education (the "Client") to perform lead in drinking water sampling to determine the lead content of drinking water from sources throughout the school facilities. Additionally, as per State regulations, New Wave was contracted to update a Quality Assurance Project Plan (QAPP) and a Sampling Plan (SP), including: a Drinking Water Outlet Inventory, Filter Inventory, and Outlet Location Schematic in conjunction with the District’s Buildings and Grounds Director.

The purpose of lead in drinking water sampling is to determine if any sampled drinking water sources exhibit lead levels exceeding the Regulatory Action Level of 15 parts per billion (ppb). Drinking water concentration points included: any water sources from which a student, staff, or faculty may reasonably drink or from which the water may be used for cooking or beverage preparation, including, but not limited to, water coolers/bubblers, kitchen faucets, Nurse's Office faucets, and Faculty/Staff lounges.

For further information on guidance protocols and Action Levels that were followed please refer to: The EPA's Revised Technical Guidance - *"3Ts for Reduced Lead in Drinking Water in Schools"* and the Guidance Document from NJDEP Division of Water Supply and Geoscience — *"Lead in Drinking Water: Guidance for Schools and Child Care Facilities Served by Public Water"*.

2.0 LEAD IN DRINKING WATER

Lead is a toxic substance that can be harmful to human health. As compared to adults, children are more susceptible to the detrimental health effects of lead, as their nervous systems are not yet fully developed. Exposure to lead can occur in a variety of ways including through food, soil, deteriorating lead-based paint, and drinking water. Lead can leach into drinking water from plumbing materials such as pipes and solders, as well as brass plumbing fixtures. For this investigation, planning, preparation, methodology, sampling, and follow up actions were conducted according to the technical guidance provided by New Jersey following the adoption of amendments to N.J.A.C. 6A:26: *“Educational Facilities, requiring the sampling of drinking water for Lead in Schools”*

3.0 DRINKING WATER SAMPLING METHODOLOGY

New Wave collected drinking water samples from water outlets throughout each school building. At each collection point, New Wave filled a 250 milliliter (ml) wide-mouth high density polyethylene (HDPE) sample collection bottle from the designated water source. Samples were collected after the water in each building had not been used for at least 8 hours, but not more than 48 hours. The initial sample at each collection point represents the first draw sample. The first draw sample is representative of the water from the end point of the water source (i.e., the bubbler/bottle filler or tap).

A field blank using lead-free laboratory reagent water was also collected for each Facility during the sampling event to rule out contamination of samples during the collection and transportation process. All samples were recorded utilizing proper chain of custody documents and couriered to *Garden State Laboratory*, a New Jersey certified laboratory (*NJ Lab ID #20044*) located in Hillside, New Jersey for analysis via EPA method 200.80

During the initial sampling event on July 19, 2024, New Wave collected the following number of samples the Essex Fells Elementary School Building:

Essex Fells Elementary School

1) 1 Field Blank Sample
2) 5 First draw samples

Receipt of the first draw sampling results indicates that no location produced a level greater than 15 ppb. Since no location exceeded the action level, no further action is required.

For a complete drinking water outlet inventory and sampling location diagram for each facility, refer to the Sampling Plan, dated May 2017. Updates to this documentation can be found in the Field Log Book for each facility.

4.0 DRINKING WATER ANALYSIS RESULTS

The analytical “lead in drinking water results” for each first draw sample is listed in Tables below:

Table 1: Analytical Lead Results for First Draw Water Samples
Collected from **The Essex Fells Elementary School-** July 19, 2024

Sample I.D.	Type of Collection Point	Lead Concentration (ppb)	Above Regulatory Action Level?
EFES-24-01	B/F Hallway by BA	<0.00100 mg/l	No
EFES-24-02	B/F Hallway by Gym	<0.00100 mg/l	No
EFES-24-03	B/F Hallway by 208A	<0.00100 mg/l	No
EFES-24-04	Sink in Nurse’s Room	<0.00100 mg/l	No
EFES-24-05	B/F Hallway by 202	<0.00100 mg/l	No
EFES-24-06	FIELDBLANK	<0.00100 mg/l	No

BF= Bottle Filler Station WF=Water Fountain Bub=Bubbler

All laboratory analytical results of first-draw samples were compared to the NJDEP's Regulatory Action Level of 15.0 ppb for lead. Analysis of lead in the first draw drinking water samples indicated that, at the time of the sampling event, no samples exceeded the action level of 15.0 ppb.

5.0 CONCLUSIONS & RECOMMENDATIONS

New Wave collected first draw samples from drinking water sources throughout the Essex Fells Board of Education school facilities. First draw sample results indicated **that no** water samples *exceeded* the regulatory action level of 15.0 ppb.

- Continue to monitor lead in drinking water levels as part of a regular sampling and maintenance plan, per New Jersey State regulations testing for lead in drinking water is required every three (3) years.
- Implement an aerator cleaning maintenance program to prevent the build up of debris behind the aerator screen which may contribute to elevated lead levels.
- Enter all filter maintenance, aerator maintenance, plumbing repairs/changes and any other important information into the ***Field Log Book*** for each School water location.
- Use only cold water for food and beverage preparation, as hot water is more likely to contribute to the corrosion of plumbing materials and therefore may contain a greater level of water contaminants from the plumbing system.

6.0 Disclaimer

This investigation focused on lead in drinking water. No other heavy metals or additional contaminants were sampled for/or analyzed. Note: Lead concentrations in water can change as water continues to move through the water system.

Each sample taken was a “grab sample” and represents lead concentrations only at the specific time of collection and may vary based upon the water usage in the facility. Interpretation of these results is only valid if the facility is serviced by a municipal water supplier or water utility.

Our lead sampling event was in response to recent amendments to N.J.A.C. 6A:26i *Educational Facilities* dated July 13, 2016, which requires testing for lead in drinking water of public and charter school districts.

The Lead Hazard Assessment has limitations with regards to identification of actual health and environmental issues. It is limited to only those items listed in the report and all items reflect conditions at the time of the assessment.

New Wave Engineering, LLC warrants only that the contents of this report constitute an informed discussion of the assessment at the subject property and is prepared exclusively for the above noted client. New Wave Engineering, LLC assumes no liability with regards to the use of this information or decisions which are made regarding the subject properties. It is at the discretion of the Essex Fells School District, given the results and information in this report, to use their own best judgment to determine any appropriate course of action.

7.0 Closing

The drinking water in the Essex Fells Public Schools is below the action level of 15 ppb. Normal utilization of all potable drinking water sources can continue as usual.

Thank you for utilizing New Wave to assist you with this project. Please do not hesitate to call if you have any questions relating to this report or for any other environmental health and safety concerns.

APPENDIX A
CHAIN OF CUSTODY
AND
LAB RESULTS

Garden State Laboratories, Inc.

Report of Analysis

Mathew Klein, M.S., Founder (1916-1996)
Harvey Klein, M.S., Laboratory Director
Jordan B. Klein, B.A., Exec. Vice President
Sharon Ercoliani, B.A. Laboratory Manager

410 Hillside Ave.
Hillside, NJ 07205

Telephone: 800-273-8901
Email: info@gslabs.com
Internet: www.gslabs.com

Main Lab
NJDEP Lab Cert. #20044

Jersey Shore Lab
NJDEP Lab Cert. #15037

Lakehurst Lab
NJDEP Lab Cert. #15041

For: Essex Fells Board of Education - NW
102 Hawthorne Rd

Essex Fells, NJ 07021

Laboratory Director: Harvey Klein

Attention: Jerry Bello Client Number: ESS02 Report Date: 08/05/2024

Sample ID: Essex Fells School 102 Hawthorne Rd Essex Fells, NJ/ EF-24-01 Hallway by BA B/F Lab Sample ID: 240719059-01
Site: Collection Date/Time: 07/19/2024 07:26
Matrix: Potable water Sample Type: Grab

Analyte	Method	SM YR	DF	Sample Result	MCL	Rep. Limit	MDL	Lab Cert No.	Analysis Date/Time	Qualifiers
Lead, Total Recoverable	EPA 200.9		1	< 0.00100 mg/l	0.015	0.00100	0.00055	20044	07/26/24 16:17	

Sample ID: Essex Fells School 102 Hawthorne Rd Essex Fells, NJ/ EF-24-02 Hallway by GYM B/F Lab Sample ID: 240719059-02
Site: Collection Date/Time: 07/19/2024 07:27
Matrix: Potable water Sample Type: Grab

Analyte	Method	SM YR	DF	Sample Result	MCL	Rep. Limit	MDL	Lab Cert No.	Analysis Date/Time	Qualifiers
Lead, Total Recoverable	EPA 200.9		1	< 0.00100 mg/l	0.015	0.00100	0.00055	20044	07/26/24 16:20	

Sample ID: Essex Fells School 102 Hawthorne Rd Essex Fells, NJ/ EF-24-03 Hallway by 208A B/F Lab Sample ID: 240719059-03
Site: Collection Date/Time: 07/19/2024 07:29
Matrix: Potable water Sample Type: Grab

Analyte	Method	SM YR	DF	Sample Result	MCL	Rep. Limit	MDL	Lab Cert No.	Analysis Date/Time	Qualifiers
Lead, Total Recoverable	EPA 200.9		1	< 0.00100 mg/l	0.015	0.00100	0.00055	20044	07/26/24 16:22	

Sample ID: Essex Fells School 102 Hawthorne Rd Essex Fells, NJ/ EF-24-04 Nurse's Room Sink Lab Sample ID: 240719059-04
Site: Collection Date/Time: 07/19/2024 07:30
Matrix: Potable water Sample Type: Grab

Analyte	Method	SM YR	DF	Sample Result	MCL	Rep. Limit	MDL	Lab Cert No.	Analysis Date/Time	Qualifiers
Lead, Total Recoverable	EPA 200.9		1	< 0.00100 mg/l	0.015	0.00100	0.00055	20044	07/26/24 16:31	

Garden State Laboratories, Inc.

Sample ID:	Essex Fells School 102 Hawthorne Rd Essex Fells, NJ/ EF-24-05 Hallway by 202 B/F	Lab Sample ID:	240719059-05
Site:		Collection Date/Time:	07/19/2024 07:31
Matrix:	Potable water	Sample Type:	Grab

Analyte	Method	SM YR	DF	Sample Result	MCL	Rep. Limit	MDL	Lab Cert No.	Analysis Date/Time	Qualifiers
Lead, Total Recoverable	EPA 200.9		1	< 0.00100 mg/l	0.015	0.00100	0.00055	20044	07/26/24 16:34	

Sample ID:	Essex Fells School 102 Hawthorne Rd Essex Fells, NJ/ EF-24-06 Field Blank	Lab Sample ID:	240719059-06
Site:		Collection Date/Time:	07/19/2024 07:31
Matrix:	Potable water	Sample Type:	Grab

Analyte	Method	SM YR	DF	Sample Result	MCL	Rep. Limit	MDL	Lab Cert No.	Analysis Date/Time	Qualifiers
Lead, Total Recoverable	EPA 200.9		1	< 0.00100 mg/l	0.015	0.00100	0.00055	20044	07/26/24 16:42	

DF=Dilution factor, <=less than, MCL=Maximum Contaminant Level, Rep. Limit=Reporting Limit,
MDL=Method Detection Limit, SM YR=Standard Methods Publication Year, and NC=Not Certified.
The liability of Garden State Laboratories, Inc. for services rendered shall in no event exceed the amount of the invoice.
Main Lab certified by NJDEP #20044-TNI, NY Dept. of Health #11550 and PADEP #68-03680.

Garden State Laboratories, Inc.

Main Lab - 410 Hillside Avenue, Hillside NJ 07205 - NJDEP Lab Cert. #20044
Jersey Shore Lab - 54 Main Street, Waretown NJ 08758 - NJDEP Lab Cert. #15037
Tel. 800-273-8901/908-688-8900 Fax 908-688-8966 www.gslabs.com info@gslabs.com

Office and Drop off Locations
North Jersey Office: 225 Sparta Avenue, Sparta, NJ 07871 Tel. 973-729-1827
West Jersey Office: 2050 Route 31 North, Glen Gardner, NJ 08826 Tel. 908-537-7414

FOR SAMPLE RECEIVING USE ONLY
DATE/TIME/TEMP. REC'D AT LAB: 7/19/24 12:10 25.4°C
No EDC
Page of
GSL CLIENT # ESS02
MICRO #
CHEM. # 2407190S9-01-05
SAMPLE REC'D BY:
☐ GSL FIELD SAMPLER/PICK-UP
☐ PICK-UP AT DROP OFF LOCATION
☒ DELIVERED BY CLIENT

CHAIN OF CUSTODY RECORD - PRESS HARD AND PRINT CLEARLY - USE BALL POINT PEN
IMPORTANT: PRINTED NAMES & SIGNATURES ARE REQUIRED

CLIENT INFORMATION (REPORT TO BE SENT TO)
Name: Essex Fells School Bd of Education Contact/Authorized by: JERRY Bello
Mailing Address: 102 Hawthorne Road Phone: 973-981-4850
City/State/Zip: Essex Fells, NJ 07021 Email: Jerry@newwave environmental.com

SAMPLE INFORMATION
SAMPLE TYPE: DW
SAMPLE LOCATION: Essex Fells School 102 Hawthorne Rd Essex Fells, NJ

Grab	Comp.	SAMPLE ID	SAMPLE COLLECTION Date	Time	AM	PM	ANALYSIS REQUIRED (Print Legibly) ☐ List attached Total Pages _____	CONTAINER INFORMATION No.	Type*	Size	Pres.*
X		EF-24-01 Hallway by BA B/F	07-19-24	7:26	X		LEAD-FIRST DRAW 059-01	1	P	250ml	A
X		EF-24-02 Hallway by GYM B/F	07-19-24	7:27	X		LEAD FIRST DRAW 059-02	1	P	250ml	A
X		EF-24-03 Hallway by 208A B/F	07-19-24	7:29	X		LEAD FIRST DRAW 059-03	1	P	250ml	A
X		EF-24-04 Nurse's Room Sink	07-19-24	7:30	X		LEAD FIRST DRAW 059-04	1	P	250ml	A
X		EF-24-05 Hallway by 202 B/F	07-19-24	7:31	X		LEAD FIRST DRAW 059-05	1	P	250ml	A

⇨ *Container Type: P = Plastic G = Glass A = Amber Glass T = Sterile Thio V = Vial Other/Specify: _____
⇨ *Preservation Code: A = Non Preserved B = Sulfuric Acid C = Sodium Hydroxide D = Nitric Acid E = Hydrochloric Acid F = Zinc Acetate G = Sodium Thiosulfate H = Ascorbic Acid I = Cooled Other/Specify: _____

☐ SUBCONTRACTED WORK

TURNAROUND TIME: ☒ Standard ☐ Rush (If RUSH REQUESTED) Rush Due by:
REPORT FORMAT: ☒ Standard Report ☐ Other/Specify:
☐ Standard Report + E2 PWS ID#:

SEND TO:
DATE/TIME:
METHOD OF SHIPMENT:

PAYMENT INFORMATION
☐ Sampling/Pick-up Fee: $ ☐ Composite Fee: $ ☐ Rush Fee: $ Amount Due: $
Payment Method: ☐ Credit Card Type: ☐ Check # ☐ Other: See Quote

Note:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION
PLEASE PRINT YOUR NAME LEGIBLY, USE FULL LEGAL SIGNATURE, DATE AND TIME

Sampled by (PRINT): NADINE Bello	Signature:	Date/Time: 07-19-2024
Client/Client's Representative (PRINT): NADINE Bello	Signature:	Date/Time: 07-19-2024 12:10
1. Received/Relinquished by (PRINT): V. Schiglik	Signature: Viktoriya Schiglik	Date/Time: 7/19/24 12:10
2. Received/Relinquished by (PRINT):	Signature:	Date/Time:

The liability of Garden State Laboratories, Inc. for services rendered shall in no event exceed the amount of the invoice.
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FOR SAMPLE RECEIVING USE ONLY

DATE/TIME/TEMP. REC'D AT LAB: 7/19/24 12:10 25.4°C

No Ice

Page of

GSL CLIENT # ESS02

MICRO #

CHEM. # 2407190S9-06

SAMPLE REC'D BY:
- ☐ GSL FIELD SAMPLER/PICK-UP
- ☐ PICK-UP AT DROP OFF LOCATION
- ☑ DELIVERED BY CLIENT

CHAIN OF CUSTODY RECORD - PRESS HARD AND PRINT CLEARLY - USE BALL POINT PEN

IMPORTANT: PRINTED NAMES & SIGNATURES ARE REQUIRED

CLIENT INFORMATION (REPORT TO BE SENT TO)

Name: ESSEX Fells Bd of Education Contact/Authorized by: Jerry Bello

Mailing Address: 102 HAWTHORNE Road Phone: 973-981-4850

City/State/Zip: Essex Fells, New Jersey 07021 Email: Jerry@newwave environmental.com

SAMPLE INFORMATION

SAMPLE TYPE: DW

SAMPLE LOCATION: Essex Fells School 102 Hawthorne Road Essex Fells NJ

Grab	Comp	SAMPLE ID	SAMPLE COLLECTION Date	Time	AM	PM	ANALYSIS REQUIRED (Print Legibly) ☐ List attached Total Pages _____	CONTAINER INFORMATION No.	Type*	Size	Pres.*
X		EF-24-06 Field Blank	07-19-24	7:31	X		Field Blank Lead 059-06	1	P	250ML	

⇨ *Container Type: P = Plastic G = Glass A = Amber Glass T = Sterile Thio V = Vial Other/Specify: _____

⇨ *Preservation Code: A = Non Preserved B = Sulfuric Acid C = Sodium Hydroxide D = Nitric Acid E = Hydrochloric Acid F = Zinc Acetate G = Sodium Thiosulfate H = Ascorbic Acid I = Cooled Other/Specify: _____

☐ SUBCONTRACTED WORK

TURNAROUND TIME: ☒ Standard ☐ Rush (If RUSH REQUESTED) Rush Due by:

REPORT FORMAT: ☒ Standard Report ☐ Other/Specify:

☐ Standard Report + E2 PWS ID#:

SEND TO:

DATE/TIME:

METHOD OF SHIPMENT:

PAYMENT INFORMATION

☐ Sampling/Pick-up Fee: $ ☐ Composite Fee: $ ☐ Rush Fee: $ Amount Due: $

Payment Method: ☐ Credit Card Type: ☐ Check # ☐ Other: See Quote

Note:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION
PLEASE PRINT YOUR NAME LEGIBLY, USE FULL LEGAL SIGNATURE, DATE AND TIME

Sampled by (PRINT): NADINE Bello	Signature: NBello	Date/Time: 07-19-2024
Client/Client's Representative (PRINT): NADINE Bello	Signature: NBello	Date/Time: 07-19-2024 12:10
1. Received/Relinquished by (PRINT): V. Schiglik	Signature: Viktoriya Schiglik	Date/Time: 7/19/24 12:10
2. Received/Relinquished by (PRINT):	Signature:	Date/Time:

The liability of Garden State Laboratories, Inc. for services rendered shall in no event exceed the amount of the invoice.