



**Needham Public
Health Division**
Prevent. Promote. Protect.



Board of Health AGENDA

**September 19, 2025
9:00 – 11:00 a.m.**

**Select Board Chambers, Needham Town Hall
1471 Highland Avenue
Needham, MA 02492**

Webinar ID: 830 4212 2235

Passcode: 766711

<https://needham-k12-ma-us.zoom.us/j/83042122235?pwd=xcQsejnbAHpsBbUdYelUQGUSL5f5MXa.1>

Pursuant to An Act Extending Certain COVID-19 Measures Adopted During the State of Emergency, meetings of public bodies may be conducted virtually provided that adequate access is provided to the public.

To listen and view this virtual meeting on a phone, computer, laptop, or tablet, download the “Zoom Cloud Meeting” app in any app store or at www.zoom.us. At the above date and time, click on “Join a Meeting” and enter the meeting or click the link below to join the webinar:

Link: <https://needham-k12-ma-us.zoom.us/j/83042122235?pwd=xcQsejnbAHpsBbUdYelUQGUSL5f5MXa.1>

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This is a public meeting of the Needham Board of Health. The meeting is open to the public both in person and via Zoom. Residents are invited to provide comment during the public comment period (if set forth below) and for any item explicitly listed as a public hearing. Public comment is not available during other agenda items.

www.needhamma.gov/health

	9:00	Welcome & Public Comment Period Attendees are encouraged to inform the Needham Public Health Division of their intent to participate in the public comment period in advance via email (healthdepartment@needhamma.gov), telephone (781) 455-7940, or in person by the end of the business day prior to the meeting. The Chair will first recognize those who have communicated in advance their desire to speak for up to three minutes. If time allows, others wishing to speak will be recognized in an order determined by the Chair for up to three minutes.
1.	9:05	Review & Approval of Minutes – August 8, 2025 – <i>Vote Expected</i>
2.	9:10	Synthetic Turf Re-testing – Results and Discussion • Tara Gurge, Assistant Director of Environmental and Community Health • Julie McCarthy, Epidemiologist • Timothy McDonald, Director of Health & Human Services
3.	9:30	Emergency Condemnation on Tillotson Rd: Notification Board of Health Confirmation - <i>Vote Expected</i> • Sai Palani, Environmental Health Agent • Tara Gurge, Assistant Director of Environmental and Community Health
4.	9:40	Adoption of FDA Food Code 2022 – <i>Vote Possible</i> • Tara Gurge, Assistant Director of Environmental and Community Health • Sai Palani, Environmental Health Agent
5.	10:00	100-110 West St. Housing Project • Timothy McDonald, Director of Health & Human Services
6.	10:20	July & August 2025 Staff Reports • Environmental Health – Sai Palani & Tara Gurge • Accreditation – Lynn Schoeff & Alison Bodenheimer • Traveling Meals – Rebecca Hall • Regional Substance Use –Lydia Cunningham • Substance Use Prevention: Needham – Karen Shannon, Karen

		Mullen, Monica DeWinter, Angi MacDonnell, Vanessa Wronski - Public Health Preparedness –Taleb Abdelrahim - Epidemiology – Julie McCarthy - Nursing – Ginnie Chacon-Lopez - Public Health Excellence – Kerry Dunnell
7.	10:50	BOH Regulations – Modernization plus Racial & Health Equity Assessments Timothy McDonald, Director of Health & Human Services
8.	10:55	Other Items

(Please note that all times are approximate)

Next Meeting – October 17, 2025 – Select Board Chambers – Needham Town Hall



Board of Health Meeting Minutes DRAFT

Date: August 8, 2025

Location: Select Board Chambers and via Zoom

Members: Tejal K. Gandhi, MD, MPH; Stephen Epstein, MD, MPP, Member; Robert A. Partridge, MD, MPH, Member; Edward Cosgrove, PhD (Chair); Aarti Sawant-Basak, PhD (Vice Chair)

Staff Present: Timothy Muir McDonald, Director of Health and Human Services; Tara Gurge, Assistant Director of Public Health; Sai Palani; Ginnie Chacon-Lopez; Jenn Gangadharan; Julie McCarthy; Karen Shannon; Lydia Cunningham; Taleb Abdelrahim

Welcome & Public Comment Period

Dr. Cosgrove called the meeting to order at 9:00AM.

According to Chapter 107 of the Acts of 2022, as an act relative to extending certain states of emergency accommodations, as passed by the General Court, and signed into law by Acting Governor Karyn Polito, on July 16, 2022, revised Section 20 of Chapter 20, the Acts of 2021. In so doing, provided modifications to the Massachusetts Open Meeting Law, which allow for flexibility to hold remote only, and hybrid meetings, while preserving public access and, where appropriate, public participation.

There was no public comment at this time.

Review of minutes – June 20, 2025

Upon motion duly made by Dr. Epstein, and seconded by Dr. Gandhi, it was voted to approve the meeting minutes June 20, 2025, as presented. Motion passed by roll call: Epstein – aye; Cosgrove – aye; Gandhi – aye; and Partridge – abstain; 3-0-1.

Public Hearing – Article 1: Regulation Affecting Smoking and the Sales and Distribution of Tobacco Products in Needham

The Board opened the public hearing at 9:10am.

Dr. Sawant-Basak entered the meeting at 9:10am.

Mr. McDonald explained that no additional documentation or comment was received between the last meeting and this one.

The Board reviewed the draft language and made an amendment to Section G.

Upon motion duly made by Dr. Epstein, and seconded by Dr. Partridge, it was voted that the Board of Health close the hearing and adopt the proposed amendments to Article 1, as amended. Motion passed by roll call: Epstein – aye; Cosgrove – aye; Gandhi – aye; Sawant-Basak – aye; and Partridge – aye; 5-0.

Synthetic Turf Re-testing – Results and Discussion

Mr. McDonald explained that this is a follow-up to the last Board of Health meeting presentation given by representatives with Fuss & O'Neill. The Board asked Fuss & O'Neill to add confidence interval data to the arsenic chart that was shared during the presentation. For arsenic, the reporting limit (RL) was 3.35, the excess lifetime cancer risk (ELCR) was 2.5, and the method detection limit (MDL) for this method is 0.5. The arsenic samples were below the MDL, which is why they are considered estimates and confidence intervals cannot be created. The MDL is lower than the ELCR, so the sample is below the cancer risk level.

Dr. Epstein asked what the units being discussed are. Staff stated that this seems unclear. Dr. Gandhi stated that the report seems incomplete, as it does not contain all of the information that the Board requested.

Mr. McDonald said that staff would communicate with Fuss & O'Neill and the lab which carried out the study, and request that lab staff attend the Board's next meeting to clarify these items.

Respiratory Vaccine Recommendations for 2025 – 2026 Season

Staff reviewed the recent upheaval at the CDC, particularly regarding the replacement of members of the Advisory Committee on Immunization Practices (ACIP) and weakening vaccine recommendations. Staff suggested that the Board of Health discuss the importance of vaccination for both individual and public health, and support vaccine recommendations from the American Academy of Pediatrics and the American College of Physicians.

Dr. Epstein suggested that the Board wait to hear the recommendations from The Center for Infectious Disease Research and Policy (CIDRAP) which should be released on the 13th.

Mr. McDonald stated that there is also a concern as to what should be ordered for vaccines this year. Dr. Gandhi said that the Board could put out a memo that it is following a science-based approach and reinforcing that the Board believes vaccinations are valuable to the public.

The Board agreed that it would issue a statement regarding the importance of vaccinations pending additional information.

May & June Staff Reports

Environmental Health – Sainath Palani & Tara Gurge

- Mr. Palani stated that two interns helped create informational materials about risk factor interventions. This information will be distributed to local restaurants.
- Ms. Gurge reported that Pamela Ross-Kung's last day as part-time inspector was on June 30th. Ms. Ross-Kung will still assist with trainings this fall.
- Ms. Gurge also stated that staff intend to adopt the FDA 2022 Food Code next year. Classes on the new food code will be offered in January.

Accreditation – Mr. McDonald

- Mr. McDonald stated that the Public Health Accreditation Board (PHAB) provided feedback on the submitted documents. These documents were amended and resubmitted. There should be a site visit scheduled after Labor Day.

Traveling Meals – Ms. Gurge for Rebecca Hall

- Ms. Gurge stated that Ms. Hall attended a mental health first aid training for older adults and alerted the public that new summer drivers will be starting with the program.
- Mr. McDonald noted that the Town will be moving forward with the design of some renovations at the Center at the Heights, including a redesigned kitchen. There will need to be a study of projected operational costs to run the program from the Center's kitchen.

Regional Substance Use – Lydia Cunningham

- Ms. Cunningham stated that FY26 and 27 contract for BSAS was received at \$125,000 per year. The contract was executed and began July 1st.
- An annual regional meeting was held in June.

Substance Use Prevention: Needham - Karen Shannon

- Ms. Shannon talked about outreach in the community during May and June.
- Staff participated in a panel at the elementary school regarding technology and social media through the view of The Anxious Generation book.
- The Needham Overdose Awareness Day Vigil is being planned for August 28th.
- Angi MacDonnell, Peer Recovery Coach, worked with 8 people.
- Narcan training continues.
- SALSA leaders Kate Black, Isabel Tashie, Luca Pannozzo, Hayden Krug, and Jackie Lancaster were invited to the MA State House to speak with Becca Rausch about issues important to Needham youth. The SALSA youth prevention advocates discussed alcohol policy, nicotine pouches, vaping, and opioid awareness.
- Mr. McDonald stated that he and Ms. Shannon attended a Select Board meeting regarding an alcohol hearing for an underaged sale. The repercussions included three- and four-day suspensions of the business' alcohol sales.

Public Health Preparedness – Taleb Abdelrahim

- Mr. Abdelrahim reported that a survey was sent to 109 volunteers and 35 responses were received. These results will help to improve planning in the future.

- In June, Mr. Abdelrahim completed and submitted documents that were revised to meet the accreditation requirements.

Epidemiology – Julie McCarthy

- Ms. McCarthy stated that Mass DPH has started data collection for the respiratory virus season. COVID-19 in wastewater remains low but the numbers anecdotally appear to be ramping up.
- Sunscreen dispensers were installed at Rosemary Pool, DeFazio Park, and the Town Common. Improvements this year included foot pedal dispensers which are easier to place, move, and maintain, and sunscreen that is easier to apply and goes on clear. Ms. McCarthy has received positive feedback from residents about the improvements and new location.
- Rat sightings are being mapped.
- The heat map will be used to find problem areas in Town.
- Data from emergency departments across Massachusetts show that patients reporting exposure to ticks is higher than it has been in the last three years. Diagnosis of tick-borne disease is also higher than at the same time during the last three years. MDPH sent a clinical advisory on tick bite prophylaxis and staff are working on additional education information.

Nursing - Ginnie Chacon-Lopez

- Ms. Chacon-Lopez stated that staff are working on getting criteria 9 (AED integration) accomplished.
- Five camps have been licensed thus far.

Public Health Excellence – Mr. McDonald for Kerry Dunnell

- Mr. McDonald stated that there are two vacancies in the Shared Service team.

Other Items

None at this time.

Adjournment

Upon motion duly made by Dr. Cosgrove, and seconded by Dr. Gandhi, it was voted to adjourn the meeting. Roll Call Vote: Epstein – aye; Partridge – aye; Cosgrove – aye; Gandhi – aye; and Sawant-Basak – aye; Motion passed 5-0.

The meeting was adjourned at 10:15AM.

Attachment:

August 8, 2025, meeting packet



Board of Health Town of Needham AGENDA FACT SHEET

MEETING DATE: September 19, 2025

Agenda Item	2025 Fuss & O'Neill Synthetic Turf Re-Testing Discussion
Presenter(s)	Tara Gurge, Assistant Public Health Director Juile McCarthy, Epidemiologist Timothy McDonald, Director of Health & Human Services

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
This is a follow-up to the Board of Health meeting presentation given by representatives with Fuss & O'Neill, specifically, Evan Koncewicz, Environmental Geologist and Neal Kelly, Massachusetts Board of Hazardous Waste Site Cleanup Licensed Site Professional (LSP). The Board asked Fuss & O'Neill to answer some additional follow-up questions, noted below – a) Can Fuss O Neil share the SOP used to conduct this analysis? b) Please represent observed data on an X-Y scatter plot for Arsenic, Zinc, and any other analytes deemed of significance during this analysis. This scatter plot should contain 3 horizontal reference lines: a) longitudinal data over past 4-5 measurements (using same assay; if different assay has been used, please denote with a *), b) Minimum detectable limit or Limit of quantitation (LOQ) of the assay, c) Mass limits of cancer risk (represented in appropriate units for fair comparison) c) A tabulated summary of current measurements, LOQ, and cancer risk over past 5 measurements d) Clear summary of conclusions of the current analysis results and whether the levels are above, at or below the cancer risk as per SOP/guidance.	
2.	VOTE REQUIRED BY BOARD OF HEALTH
No vote requested.	
3.	BACK UP INFORMATION:
a) Copy of June 2025 Crumb Rubber Turf Retest report. b) Follow-up email from Fuss & O'Neill dated September 10, 2025	

Crumb Rubber Monitoring Results Memorial Park & DeFazio Park Needham, Massachusetts

Needham Health Department
Needham, Massachusetts

June 2025

June 3, 2025

Ms. Tara Gurge, R.S., C.E.H.T., M.S.
Assistant Public Health Director
Needham Public Health Division
Health and Human Services Department
178 Rosemary Street
Needham, MA 02494

RE: **Crumb Rubber Monitoring Results – June 2025**
Memorial and DeFazio Parks
Needham, Massachusetts
Fuss & O'Neill Project No. 20081266.B51

Dear Ms. Gurge:

Enclosed is the summary report for crumb rubber testing performed at the artificial turf athletic fields located at Memorial Park and DeFazio Park in Needham, Massachusetts in April 2025.

If you should have any questions regarding the contents of this report, please do not hesitate to contact the undersigned below. Thank you for this opportunity to have served your environmental needs.

Sincerely,



Evan Koncewicz
Environmental Geologist
(617) 379-5895



Neal Kelly, LSP
Associate
(781) 987-4323

Enclosure

Table of Contents

Crumb Rubber Monitoring Results
Memorial Park & DeFazio Park
Needham Health Department

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2 Real-Time Measurements

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2 Site Plan – Memorial Park

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Appendix A – Laboratory Analytical Reports & Chain-of-Custody Forms

Appendix B – Sampling Equipment

Appendix C – Field Logs



1 Introduction and Background

Fuss & O'Neill, Inc. (Fuss & O'Neill) was retained by the Needham Health Department (the "Client") to perform periodic monitoring of the crumb rubber used at the artificial turf athletic fields in Needham, Massachusetts. The study involved the collection of field measurements and crumb rubber samples from Memorial Park (Needham High School Field, 92 Rosemary Street) and DeFazio Park (Brock Field and Founders Field, 380 Dedham Avenue) for laboratory analysis. The laboratory data were compared to toxicity reference data from the Massachusetts Department of Environmental Protection (MassDEP).

Historically the crumb rubber samples were submitted for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and total metals. Following detections of zinc above applicable criteria and elevated arsenic detection limits during the October 2024 sampling event, the Client retained Fuss & O'Neill to resample for arsenic and zinc during the April 2025 event.

On April 7, 2025, Mr. Christopher Juliano of Fuss & O'Neill performed the crumb rubber sampling in accordance with our proposal dated March 13, 2025.

2 Methodology and Scope of Testing

On April 7, 2025, Mr. Juliano of Fuss & O'Neill met Ms. Tara Gurge of the Needham Health Department to access the three athletic fields to perform the sampling and monitoring activities. A six-point composite sample of crumb rubber was collected from each artificial turf athletic field using laboratory provided dedicated glass jars. The composite samples contained crumb rubber collected from six locations of each artificial turf athletic field. Approximate discrete locations from which the material was collected to make up the composite samples are indicated on *Figure 1* (Memorial Park) and *Figure 2* (DeFazio Park). Samples were collected from the Needham High School Field in Memorial Park (sample 1643250407-01), from Founders Field (sample 1643250407-02) and Brock Field in DeFazio Park (sample 1643250407-03) as indicated in *Table 1*.

The composite samples were submitted to EMSL Analytical Laboratory of Cinnaminson, New Jersey (EMSL). The crumb rubber was analyzed for trace metals by Environmental Protection Agency (EPA) Methods 6020B (Inductively Coupled Plasma–Mass Spectrometry (ICP-MS). EMSL subcontracted the analysis of trace metals to ALS Laboratories of Holland, Michigan. Copies of the laboratory analytical data packages are included in *Appendix A*.

Real-time ambient conditions were monitored during crumb rubber sampling. Total organic vapors (TOVs) were measured using an Ion Science Tiger Photoionization Detector (PID). Volatile organic compounds (VOCs) are a subset of TOVs. A TSI Q-Trak Air Quality Monitor was used to record ambient temperature and relative humidity (RH). Refer to *Appendix B* for a list of sampling equipment, and *Table 2* for real-time measurements.

3 Results

Analytical data are summarized in *Table 1*. Zinc was detected below applicable criteria in all three samples. Arsenic was not detected in any sample at a reportable concentration, however, the

laboratory reporting limits (MRLs) for arsenic were slightly greater than the risk-based level of 2.5 mg/kg used. The April 23, 2025, laboratory report attributed the elevated MRLs to sample dilution from high concentrations of non-target analytes. Fuss & O'Neill therefore asked the laboratory to provide the laboratory method detection limits (MDLs). The revised May 6, 2025, laboratory package shows the same MRLs however provides the requested MDLs. The revised laboratory report indicated arsenic concentrations reported below MDLs and below the risk-based level, allowing for confident detection at concentrations beneath the applicable criteria. The MDL refers to the minimum concentration of an analyte that can be detected by the laboratory with a degree of confidence.

Real-time measurements provided in *Table 2* indicate TOVs were recorded at concentrations at an average or below 0.1 parts per million by volume (ppmv) in ambient air at each of the fields during sampling activities. Readings recorded as less than or equal to 1.0 ppmv likely were a result of moisture in ambient air effecting the PID detector lamp. The ambient relative humidity at the time of sampling was between 43 and 70 percent, within a 53 to 40.3 degree Fahrenheit environment (recorded within a few inches of the surface).

4 Data Evaluation

The Massachusetts Contingency Plan (MCP; 310 CMR 40.0000) establishes soil standards for a variety of uses based on publicly-available toxicity data for a range of compounds, including VOCs, SVOCs, and metals. The numerical standards and their derivations are publicly-available¹.

MassDEP generally establishes these standards based on four criteria:

- Publicly-available toxicity data, including EPA and MassDEP Office of Research and Standards (ORS) data, and peer-reviewed industry sources.
- Typical background levels in New England soil.
- Ceiling concentrations (i.e. maximum concentrations set for compounds of limited toxicity).
- Practical quantification limits (PQLs), i.e. levels which analytical laboratories can reliably quantify.

In its toxicity calculations for Method 1 S-1 Soil Standards (applicable to sensitive land uses, including residences, schools and day-care facilities), MassDEP considers inhalation and skin-absorption risks over exposures from infancy to adulthood. Fuss & O'Neill evaluated the crumb rubber analytical results relative to MassDEP's published toxicity levels (i.e. the levels which would be used in the absence of ceiling, background or PQL considerations). For metals, concentrations were compared to MassDEP Residential Receptor Direct Contact Risk-Based Soil Concentration Levels. These values are included in *Table 1*.

As noted on *Table 1*, zinc was detected in all samples at concentrations below the MassDEP Risk based level (15,000 mg/kg) and less than the historically reported range. Arsenic was not detected in any of the samples above method detection limits. The MassDEP exposure levels assume continuous high-contact exposure (five days per week, 30 weeks per year) over a multiple-year duration and are therefore conservative with regard to the actual exposures for users of the field.

¹ MassDEP, December 2017, "MCP Numerical Standards." <https://www.mass.gov/doc/mcp-numerical-standards-derivation/download>, accessed May 2025.

Compared to analytical data from October 2024, the concentration of zinc was much less during the April 2025 sampling event. Detected concentrations of zinc in October 2024 ranged from 12,600 to 15,200 mg/kg and had a sample in exceedance of the 15,000 mg/kg risk-based level. The April 2025 sampling event detected concentrations of zinc ranging from 3,160 to 4,240 mg/kg which were beneath the risk-based level. Method detection limits of arsenic were additionally in exceedance of the risk-based level during the October 2024 sampling event and ranged from 12.9 to 13.2 mg/kg. Method detection limits for arsenic were beneath the risk-based level during the May 2025 sampling event, ranging from 0.375 to 0.402 mg/kg.

5 Conclusions

Fuss & O'Neill collected field and analytical data to characterize the crumb rubber at three athletic fields in Needham, Massachusetts in April 2025 following detections of zinc above applicable criteria and elevated arsenic detection limits during the October 2024 sampling event. The analytical results of zinc and arsenic were compared to MassDEP risk-based guidance levels for soil, to evaluate potential health risks associated with the use of the crumb rubber media on these athletic fields. The following conclusions were formed:

- The concentrations of zinc in all three composite samples were less than the MassDEP risk-based threshold value, which is derived from an assumption of high-intensity exposure for a multi-year duration on a consistent basis.
- The laboratory method detection limit concentrations of arsenic in all three samples were less than the MassDEP risk-based threshold value.

Tables

Table 1
Summary of Crumb Rubber Monitoring Results – Collected April 7, 2025

Analyte	Analytical Results			Risk-Based Levels
	Memorial Park	DeFazio Park		
	Needham High School 1643250407-01	Founders Field 1643250407-02	Brock Field 1643250407-03	
Total Metals – dry weight (mg/kg) by method 6020B				
Arsenic	ND < 3.12 (0.375)	ND < 3.31 (0.397)	ND < 3.35 (0.402)	2.5
Zinc	3,990	4,240	3,160	15,000

ND: None Detected

ND<X (X): <X value is the laboratory method reporting limit (MRL) and the X value in the parenthesis is the laboratory reported method detection limit (MDL) where analyte MDLs were not detected above the Risk Based Levels.

Italicized value indicates that the reporting value exceeds the Risk Based Level.

Table 2
Real-Time Measurements, Needham Crumb Rubber Sampling –April 7, 2025

Location	TOVs (ppmv)	Temperature (°F)	RH (%)
Needham High School (HS)	0.1	53	43
Founders Field (D1)	0.0	47.5	49.4
Brock Field (D2)	0.0	40.3	70

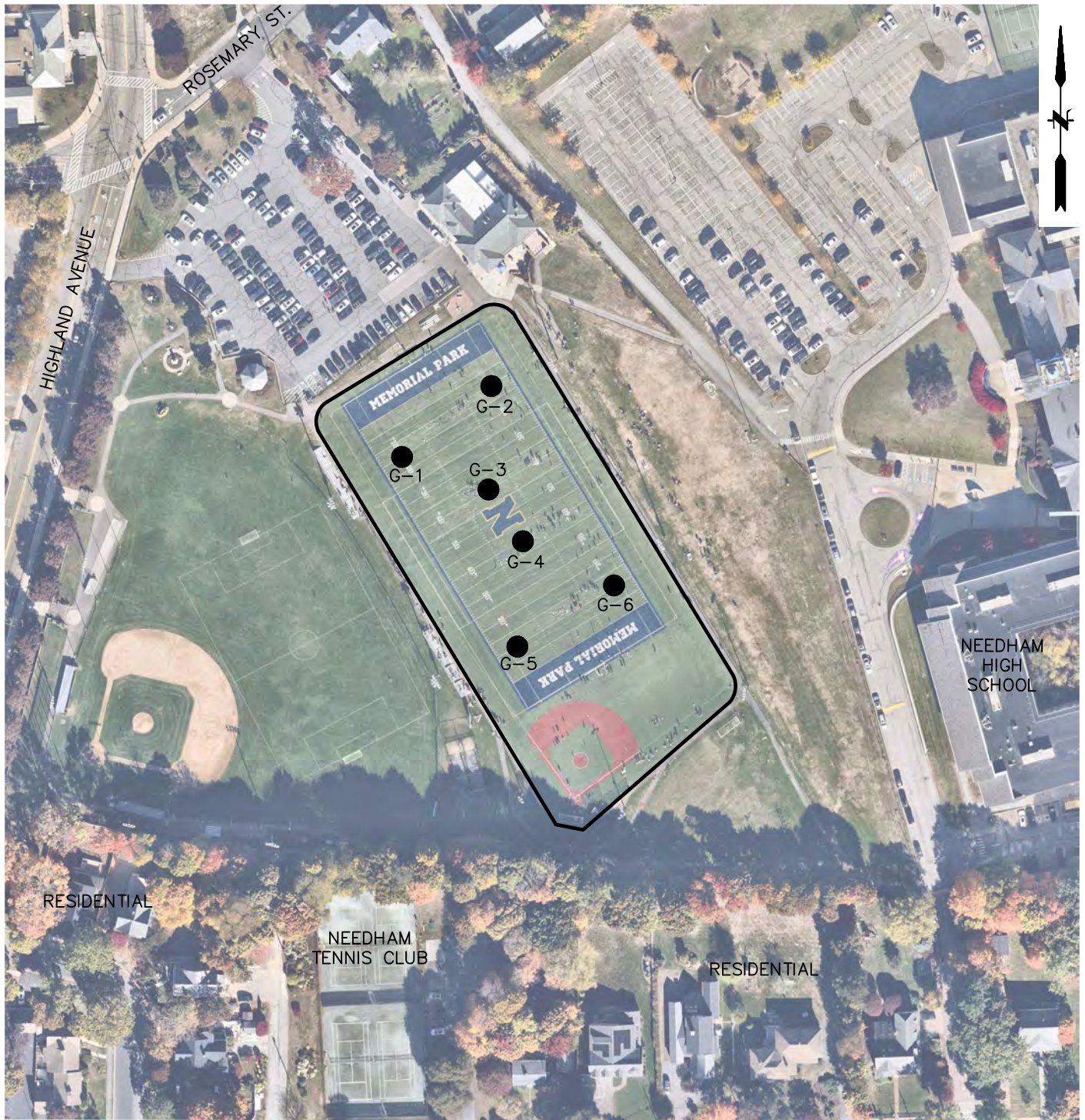
TOVs, temperature and relative humidity were collected from a discrete location at each field.

ppmv: Parts per million by volume

°F: Degrees Fahrenheit

RH: Relative Humidity

Figures



REFERENCES:

1. AERIAL IMAGE WAS TAKEN FROM THE WEBSITE
[HTTP://WWW.NEARMAP.COM](http://www.nearmap.com), DATED 2024.
2. FIELD BOUNDIES APPROXIMATE BASED ON SITE
OBSERVATIONS.

LEGEND

-  PARK BOUNDARY
-  SAMPLE LOCATIONS TO
FORM COMPOSITE

SCALE:	
HORZ.: 1" = 150'	
VERT.: -	
DATUM:	
HORZ.: -	
VERT.: -	
0 125' 150'	
GRAPHIC SCALE	

**FUSS &
O'NEILL**

108 MYRTLE STREET, SUITE 502
QUINCY, MA 02171
617.282.4675
www.fando.com

NEEDHAM HEALTH DEPARTMENT

SITE PLAN

MEMORIAL PARK - 92 ROSEMARY ROAD

NEEDHAM

MASSACHUSETTS

PROJ. No.: 20081266.B51
DATE: MAY 2025

FIGURE 1



REFERENCES:

1. AERIAL IMAGE WAS TAKEN FROM THE WEBSITE
[HTTP://WWW.NEARMAP.COM](http://www.nearmap.com), DATED 2024.
2. FIELD BOUNDARIES APPROXIMATE BASED ON SITE
OBSERVATIONS.

LEGEND

-  FOUNDERS FIELD BOUNDARY
-  BROCK FIELD BOUNDARY
-  SAMPLE LOCATIONS TO
FORM COMPOSITE

SCALE:	
HORZ.:	1" = 200'
VERT.:	-
DATUM:	
HORZ.:	-
VERT.:	-
0 150' 200'	
GRAPHIC SCALE	

**FUSS &
O'NEILL**

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NEEDHAM

NEEDHAM HEALTH DEPARTMENT

SITE PLAN

DEFAZIO PARK - 380 DEDHAM ROAD

MASSACHUSETTS

PROJ. No.: 20081566.B51
DATE: MAY 2025

FIGURE 2

Appendix A

Laboratory Analytical Reports & Chain of Custody Forms



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax: cs@emsl.com
EMSL-CIN-01

EMSL Order ID: 012516803
LIMS Reference ID: AD16803
EMSL Customer ID: ENVI54

April 24, 2025

Chris Lore
Fuss & O'Neill, Inc. [ENVI54]
One Financial Plaza, 15th Floor
Hartford, CT 06103

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 4/10/2025. The results are tabulated on the attached pages for the following client designated project:

Needham Crumb Rubber - 20081266.B51

The reference number for these samples is EMSL Order #: AD16803 . Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact the lab at 856-858-4800.

Owen McKenna Laboratory Manager or other approved signatory

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:cs@emsl.com
EMSL-CIN-01

EMSL Order ID: 012516803**LIMS Reference ID:** AD16803**EMSL Customer ID:** ENVI54

Attention: Chris Lore
Fuss & O'Neill, Inc. [ENVI54]
One Financial Plaza, 15th Floor
Hartford, CT 06103
(860) 646-2469
chris.lore@fando.com

Project Name: Needham Crumb Rubber - 20081266.B51

Customer PO:
EMSL Sales Rep: Jeromy Bish
Received: 04/10/2025 10:30
Reported: 04/24/2025 18:46

Positive Hits Summary

No positive results reported



FUSS & O'NEILL ENVIROSCIENCE, LLC

Disciplines to Deliver

(860) 646-2469 • www.FandO.com

AD116803

- ☒ 146 Hartford Road, Manchester, CT 06040
- ☐ 56 Quarry Road, Trumbull, CT 06611
- ☐ 1419 Richland Street, Columbia, SC 29201
- ☐ 78 Interstate Drive, West Springfield, MA 01089

- ☒ 108 Myrtle Street, #502, North Quincy, MA 02171
- ☐ 317 Iron Horse Way, Suite 204, Providence, RI 02908
- ☐ 80 Washington Street, Suite 301, Poughkeepsie, NY 12601

CHAIN-OF-CUSTODY RECORD

4559

Turnaround

- ☐ 1 Day* ☐ 3 Days* ☐ Other _____ (days)
- ☐ 2 Days* ☒ Standard (____ days) *Surcharge Applies

PROJECT NAME: Needham Crumb Rubber PROJECT LOCATION: Needham MA

PROJECT NUMBER

20081266.B51

LABORATORY

EMSL/ALS

REPORT TO: Evan Korcewicz

INVOICE TO:

P.O. NO.: 20081266.B51

Sampler's Signature:

Date: 4/7/2005

Source Codes:

MW=Monitoring Well

PW=Potable Water

S=Soil

W=Waste

SW=Surface Water

T=Treatment Facility

B=Sediment

A=Air

X=Other Crumb Rubber

Analysis Request

Containers

Item No.	Transfer Check				Sample Number	Source Code	Date Sampled	Time Sampled	Analysis Request										Comments
	1	2	3	4															
1					1643250407 - 01	X	4/7/25	1130	Arsenic/zinc (Prefered 6000 B if only use 6000 B if detection limit can be met)										
2					- 02	X		1230											
3					- 03	X		1300											
									Soil VOA Vial, 1 methanol Soil VOA Vial, 1 water Glass Soil Container (4) oz Glass Soil Container () oz Other: Water VOA Vial, 1 As is 1 HCl Glass Amber () ml, 1 As is 1 HCl Plastic - H ₂ SO ₄ , 1 250 ml 1 500 ml 1 1000 ml Plastic - HNO ₃ , 250 ml 1 500 ml 1 1000 ml Plastic - NaOH, 250 ml 1 500 ml 1 1000 ml										
									Soil VOA Vial, 1 methanol										
									Soil VOA Vial, 1 water										
									Glass Soil Container (4) oz										
									Glass Soil Container () oz										
									Other:										
									Water VOA Vial, 1 As is 1 HCl										
									Glass Amber () ml, 1 As is 1 HCl										
									Plastic - H ₂ SO ₄ , 1 250 ml 1 500 ml 1 1000 ml										
									Plastic - HNO ₃ , 250 ml 1 500 ml 1 1000 ml										
									Plastic - NaOH, 250 ml 1 500 ml 1 1000 ml										
									Unfiltered										

Transfer Number	Relinquished By	Accepted By	Date	Time	Reporting and Detection Limit Requirements:
1	Chris In	Donnelly (FX)	4/10/05	10:30am	please meet detection limits: Arsenic - 2.5 mg/kg zinc 15,000 mg/kg
2					Additional Comments:
3					Send samples to ALS Lab, Holland, Michigan
4					

15.6C



April 23, 2025

Travis Albert
EMSL Analytical
200 Route 130 North
Cinnaminson, NJ 08077

Work Order: **HN2504814**

Re: **AD16803**

Dear Travis,
Enclosed are the results of the sample(s) submitted to our laboratory.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to contact me:
ADDRESS: 3352 128th Avenue, Holland, MI, USA PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Chelsey Cook
/S/ CHELSEY COOK
Project Manager



Client: EMSL Analytical
Project: AD16803

Work Order: HN2504814
Date Received: 15-Apr-2025

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt

3 soil/solid samples were received for analysis at ALS Environmental on 15-Apr-2025. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals

EPA 6020B-3050B-S

Batch ID: 3073778

The concentration in the Method Blank was greater than the quantitation limit. Positive results in the batch may be biased high for this analyte: Cu batch 1956896

The MSD recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: K batch 1956896

The matrix spike recoveries are unavailable due to dilution below the calibration range. K batch 1956896

The RPD between the MS and MSD was outside of the control limit. The corresponding result should be considered estimated for this compound: K batch 1956896

The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb batch 1956896

The MS recovery was outside of the control limit. However, the MSD recovery and the RPD between the MS and MSD was in control. No qualification is required for this analyte: As, Pb batch 1956895

The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb batch 1956896

Batch ID: 3072027

The concentration in the Method Blank was greater than the quantitation limit. Positive results in the batch may be biased high for this analyte: Cu batch 1956896

The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Al Ba Ca Fe Pb Mg Mn Zn batch 1956896

The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Al Ba Ca Fe Pb Mg Mn Zn batch 1956896

HN2504814-001: Arsenic - The reporting limit is elevated due to dilution for high concentrations of non-target analytes. As

HN2504814-002: Arsenic - The reporting limit is elevated due to dilution for high concentrations of non-target analytes. As

HN2504814-003: Arsenic - The reporting limit is elevated due to dilution for high concentrations of non-target analytes. As

SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting limits.

For a full listing of sample results, continue to the Sample Results section of this Report.



CLIENT ID: AD16803-01		Lab ID: HN2504814-001			
Analyte	Results	Flag	MRL	Units	Method
Percent Moisture	11.9		0.1	%	EPA 3550C
Zinc	3990		62.5	mg/kg	EPA 6020B

CLIENT ID: AD16803-02		Lab ID: HN2504814-002			
Analyte	Results	Flag	MRL	Units	Method
Percent Moisture	8.5		0.1	%	EPA 3550C
Zinc	4240		66.2	mg/kg	EPA 6020B

CLIENT ID: AD16803-03		Lab ID: HN2504814-003			
Analyte	Results	Flag	MRL	Units	Method
Percent Moisture	11.0		0.1	%	EPA 3550C
Zinc	3160		67.0	mg/kg	EPA 6020B

SAMPLE SUMMARY



Client: EMSL Analytical
Project: AD16803
Workorder: HN2504814

Laboratory Sample ID	Client Sample ID	Sample Matrix	Collection Date	Date Received
HN2504814-001	AD16803-01	SOIL/SOLID	04/07/25 11:30	04/15/25 09:00
HN2504814-002	AD16803-02	SOIL/SOLID	04/07/25 12:30	04/15/25 09:00
HN2504814-003	AD16803-03	SOIL/SOLID	04/07/25 13:00	04/15/25 09:00

ALS Holland Sample Receiving Checklist

Received by:

Date/Time:

Carrier Name:

Shipping container/cooler in good condition?

Yes / No / Not Present

Custody seals intact on shipping container/cooler?

Yes / No / ~~Not~~ Present

Custody seals intact on sample bottles?

Yes / No / Not Present

Chain of Custody present?

Yes / No

COC signed when relinquished and received?

Yes / No

COC agrees with sample labels?

Yes / No

Samples in proper container/bottle?

Yes / No

Sample containers intact?

Yes / No

Sufficient sample volume for indicated test?

Yes / No

All samples received within holding time?

Yes / No

Container/Temp Blank temperature in compliance?

Yes / No

Temperature(s) (°C):

Thermometer(s):

Sample(s) received on ice?

Yes / ~~No~~

Matrix/Matrices:

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage:

Water – VOA vials have zero headspace?

Yes / No / ~~No Vials~~

Water – pH acceptable upon receipt?

Yes / No / ~~N/A~~

pH strip lot #: < 2 > 12 Other

pH adjusted (note adjustments below)?

Yes / No / ~~N/A~~

pH adjusted by:

Login Notes:

--	--	--

REPORT QUALIFIERS AND DEFINITIONS

*	Value exceeds Regulatory Limit (if MCL displayed)
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
NC	Not Calculated
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
V	The Continuing Calibration Verification was outside of control criteria
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Holland Laboratory Certifications¹

Agency	Type	ID	Issued	Expires
Alabama	Drinking Water (Secondary)	42500	12/17/2024	12/31/2025
Colorado	UST		06/21/2024	06/30/2025
Connecticut	Drinking Water (Secondary)	PH-0155	12/10/2024	12/31/2026
Florida	NELAP (Primary)	E871106	07/01/2024	06/30/2025
Illinois	NELAP (Secondary)	200076	11/14/2024	12/31/2025
Indiana	Drinking Water (Secondary)	C-MI-08	12/31/2024	09/04/2026
Iowa	State Specific	403	09/18/2023	09/01/2025
Kansas	NELAP (Secondary)	E-10411	07/09/2024	07/31/2025
Kentucky	Waste Water	KY98004	12/20/2024	12/31/2025
Kentucky	UST	120474	06/24/2024	06/30/2025
Michigan	Drinking Water (Primary)	0022	12/19/2023	09/04/2026
Minnesota	NELAP (Secondary)	026-999-449	12/17/2024	12/31/2025
Missouri	Drinking Water (Secondary)	01262	11/14/2024	12/30/2027
New Jersey	NELAP (Secondary)	MI015	07/01/2024	6/30/2025
New York	NELAP (Secondary)	12128	04/01/2024	04/01/2025
North Dakota	State Specific	R-192	11/18/2024	06/30/2025
Ohio	Drinking Water (Secondary)	87783	06/25/2024	6/30/2025
Pennsylvania	NELAP (Secondary)	68-03827	06/14/2024	07/31/2025
Texas	NELAP (Secondary)	T104704494	02/12/2025	01/31/2026
USDA	Domestic CA	Soil-MI-007	02/06/2025	08/07/2026
USDA	Soil Import	525-23-62-77572	03/03/2023	03/03/2026
West Virginia	State Specific	355	02/04/2025	08/31/2025
Wisconsin	State Specific	399084510	08/15/2024	08/31/2025

¹ - Scope available upon request

ANALYST SUMMARY



Client: EMSL Analytical
Project: AD16803

Work Order: HN2504814

Sample Name: AD16803-01
Laboratory Code: HN2504814-001
Sample Matrix: SOIL/SOLID

Date Collected: 04/07/25
Date Received: 04/15/25

Analysis Method	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C	1952125		3060436	Jeffrey Blakeman
EPA 6020B	1956896	Elise Poll	3073778	Stephanie Pierson
EPA 6020B	1956896	Elise Poll	3072027	Stephanie Pierson

Sample Name: AD16803-02
Laboratory Code: HN2504814-002
Sample Matrix: SOIL/SOLID

Date Collected: 04/07/25
Date Received: 04/15/25

Analysis Method	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C	1952125		3060436	Jeffrey Blakeman
EPA 6020B	1956896	Elise Poll	3073778	Stephanie Pierson
EPA 6020B	1956896	Elise Poll	3072027	Stephanie Pierson

Sample Name: AD16803-03
Laboratory Code: HN2504814-003
Sample Matrix: SOIL/SOLID

Date Collected: 04/07/25
Date Received: 04/15/25

Analysis Method	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C	1952125		3060436	Jeffrey Blakeman
EPA 6020B	1956896	Elise Poll	3073778	Stephanie Pierson
EPA 6020B	1956896	Elise Poll	3072027	Stephanie Pierson

Analytical Report



Client: EMSL Analytical
Project: AD16803
Matrix: SOIL/SOLID

Work Order: HN2504814
Date Collected: 04/07/25 11:30
Date Received: 04/15/25 09:00

CLIENT ID: AD16803-01

Lab ID: HN2504814-001

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
General Chemistry Parameters								
Percent Moisture	EPA 3550C	11.9		%	0.1	1	04/15/25 13:53	NA
Metals								
Arsenic	EPA 6020B	ND	U	mg/kg	3.12	10	04/22/25 00:21	04/18/25 09:59
Zinc	EPA 6020B	3990		mg/kg	62.5	100	04/22/25 13:58	04/18/25 09:59

Analytical Report



Client: EMSL Analytical
Project: AD16803
Matrix: SOIL/SOLID

Work Order: HN2504814
Date Collected: 04/07/25 12:30
Date Received: 04/15/25 09:00

CLIENT ID: AD16803-02	Lab ID: HN2504814-002
------------------------------	------------------------------

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
General Chemistry Parameters								
Percent Moisture	EPA 3550C	8.5		%	0.1	1	04/15/25 13:53	NA
Metals								
Arsenic	EPA 6020B	ND	U	mg/kg	3.31	10	04/22/25 00:23	04/18/25 09:59
Zinc	EPA 6020B	4240		mg/kg	66.2	100	04/22/25 14:00	04/18/25 09:59

Analytical Report



Client: EMSL Analytical
Project: AD16803
Matrix: SOIL/SOLID

Work Order: HN2504814
Date Collected: 04/07/25 13:00
Date Received: 04/15/25 09:00

CLIENT ID: AD16803-03	Lab ID: HN2504814-003
------------------------------	------------------------------

Analyte	Method	Results	Qual	Units	MRL	Dilution Factor	Date Analyzed	Date Extracted
General Chemistry Parameters								
Percent Moisture	EPA 3550C	11.0		%	0.1	1	04/15/25 13:53	NA
Metals								
Arsenic	EPA 6020B	ND	U	mg/kg	3.35	10	04/22/25 00:24	04/18/25 09:59
Zinc	EPA 6020B	3160		mg/kg	67.0	100	04/22/25 14:01	04/18/25 09:59

QA/QC Report



Client: EMSL Analytical
Project: AD16803
Matrix: SOIL/SOLID
Batch: 1952125

Work Order: HN2504814
Date Collected: NA
Date Received: NA

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-1952125-001
----	-------------------------	------------------------

Method: EPA 3550C **Dilution:** 1 **Analysis Date:** 04/15/25 13:05
Prep Date: NA

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Percent Moisture	ND	%	0.1							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-1952125-002
-----	--------------------------------------	------------------------

Method: EPA 3550C **Dilution:** 1 **Analysis Date:** 04/15/25 13:05
Prep Date: NA

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Percent Moisture	100	%	0.1	100		100	98-102			

DUP	CLIENT ID: Batch QC	Lab ID: QC-1952125-004
-----	---------------------	------------------------

Method: EPA 3550C **Dilution:** 1 **Analysis Date:** 04/15/25 13:05
Prep Date: NA

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Percent Moisture	51.7	%	0.1		51.8			0.0580	10	

DUP	CLIENT ID: Batch QC	Lab ID: QC-1952125-015
-----	---------------------	------------------------

Method: EPA 3550C **Dilution:** 1 **Analysis Date:** 04/15/25 13:54
Prep Date: NA

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Percent Moisture	25.8	%	0.1		25.6			0.779	10	

The following samples were analyzed in this batch:

QA/QC Report



Client: EMSL Analytical
Project: AD16803
Matrix: SOIL/SOLID
Batch: 1956896

Work Order: HN2504814
Date Collected: NA
Date Received: NA

Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-1956896-001
----	-------------------------	------------------------

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 04/21/25 23:53
Prep Date: 04/18/25 10:00

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	ND	mg/kg	0.250							U
Zinc	ND	mg/kg	0.500							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-1956896-002
-----	--------------------------------------	------------------------

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 04/21/25 23:55
Prep Date: 04/18/25 10:00

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	4.94	mg/kg	0.250	5		98.9	80-120			
Zinc	5.23	mg/kg	0.500	5		105	80-120			

MS	CLIENT ID: Batch QC	Lab ID: QC-1956896-004
----	---------------------	------------------------

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 04/21/25 23:59
Prep Date: 04/18/25 10:00

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	6.26	mg/kg	0.341	5.359	1.58	93.6	75-125			
Zinc	507	mg/kg	0.682	5	557	NC	75-125			EO

MSD	CLIENT ID: Batch QC	Lab ID: QC-1956896-005
-----	---------------------	------------------------

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 04/22/25 00:01
Prep Date: 04/18/25 10:00

Analyte	Result	Units	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	5.99	mg/kg	0.336	5.2743	1.58	90.0	75-125	4.44	20	
Zinc	362	mg/kg	0.671	5	557	NC	75-125	33.4	20	EOR

The following samples were analyzed in this batch: HN2504814-001, HN2504814-002, HN2504814-003

May 06, 2025

Travis Albert
EMSL Analytical
200 Route 130 North
Cinnaminson, NJ 08077

Re: **AD16803**

Work Order: **HN2504814**

Revision: **1**

Dear Travis,
Enclosed are the results of the sample(s) submitted to our laboratory.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to contact me:
ADDRESS: 3352 128th Avenue, Holland, MI, USA PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Chelsey Cook

/S/ DALE SCHIPPER on behalf of PM listed above

Project Manager



Client: EMSL Analytical
Project: AD16803

Work Order: HN2504814
Date Received: 15-Apr-2025

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt

3 soil/solid samples were received for analysis at ALS Environmental on 15-Apr-2025. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals

EPA 6020B-3050B-S

Batch ID: 3073778

The RPD between the MS and MSD was outside of the control limit. The corresponding result should be considered estimated for this compound: K batch 1956896

The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb batch 1956896

The concentration in the Method Blank was greater than the quantitation limit. Positive results in the batch may be biased high for this analyte: Cu batch 1956896

The MSD recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: K batch 1956896

The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Pb batch 1956896

The MS recovery was outside of the control limit. However, the MSD recovery and the RPD between the MS and MSD was in control. No qualification is required for this analyte: As, Pb batch 1956895

The matrix spike recoveries are unavailable due to dilution below the calibration range. K batch 1956896

Batch ID: 3072027

The concentration in the Method Blank was greater than the quantitation limit. Positive results in the batch may be biased high for this analyte: Cu batch 1956896

The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Al Ba Ca Fe Pb Mg Mn Zn batch 1956896

The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Al Ba Ca Fe Pb Mg Mn Zn batch 1956896

HN2504814-001: Arsenic - The reporting limit is elevated due to dilution for high concentrations of non-target analytes. As

HN2504814-002: Arsenic - The reporting limit is elevated due to dilution for high concentrations of non-target analytes. As

HN2504814-003: Arsenic - The reporting limit is elevated due to dilution for high concentrations of non-target analytes. As



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting limits.

For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: AD16803-01	Lab ID: HN2504814-001
-----------------------	-----------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Percent Moisture	11.9		0.1	0.1	%	EPA 3550C
Zinc	3990		61.3	62.5	mg/kg	EPA 6020B

CLIENT ID: AD16803-02	Lab ID: HN2504814-002
-----------------------	-----------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Percent Moisture	8.5		0.1	0.1	%	EPA 3550C
Zinc	4240		64.9	66.2	mg/kg	EPA 6020B

CLIENT ID: AD16803-03	Lab ID: HN2504814-003
-----------------------	-----------------------

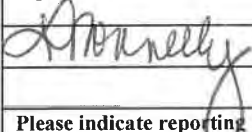
Analyte	Results	Flag	MDL	MRL	Units	Method
Percent Moisture	11.0		0.1	0.1	%	EPA 3550C
Zinc	3160		65.6	67.0	mg/kg	EPA 6020B

SAMPLE SUMMARY



Client: EMSL Analytical
Project: AD16803
Workorder: HN2504814

Laboratory Sample ID	Client Sample ID	Sample Matrix	Collection Date	Date Received
HN2504814-001	AD16803-01	SOIL/SOLID	04/07/25 11:30	04/15/25 09:00
HN2504814-002	AD16803-02	SOIL/SOLID	04/07/25 12:30	04/15/25 09:00
HN2504814-003	AD16803-03	SOIL/SOLID	04/07/25 13:00	04/15/25 09:00

EMSL Analytical, Inc. Environmental Chemistry Lab Service 200 Route 130 North, Cinnaaminson, NJ 08077 TEL: (856) 858-4800 FAX: (856) 786-5974		Chain of Custody / Analysis Request Form Print ALL Information. Incomplete chain of custody could result in the delay of analysis.		EMSL Project # AD16803 Account Rep: ENVI54 Indicate State where samples were collected: MA														
REPORT RESULTS TO:		SEND INVOICE TO:																
Name: Travis Albert PO#:		Name: PO#:																
Company EMSL Analytical, Inc.		Company EMSL Analytical, Inc.		Turnaround Time DUE 4/25 Analytical Laboratory Services 3352 128 th Ave Holland MI 49424 616-403-6136														
Address: 200 Route 130 North		Address: 200 Route 130 North																
City: Cinnaaminson		City: Cinnaaminson																
State: NJ Zip: 08077		State: NJ Zip: 08077		PROJECT NAME:														
Tel: 856-858-4800 ext. 2548 Fax: 856-854-2362		Tel: 856-858-4800 Fax: 856-854-2362																
Email: <u>sublab@emsl.com</u>		# of Samples in Shipment: 3 (3 jars each)		Date of Sample Shipment: 4/14/25														
Sampled by: (Signature) EMSL CLIENT			Matrix	Preservative	Sampling	List Method and Test Needed												
	Lab Sample Number		Waste Water	SOIL	AIR	SLUDGE	OTHER	HCL	HNO3	H2SO4	OTHER	DATE	TIME	Metals by ICP (6020B)				
1.	AD16803-01										X	4/07/25	11:30a	X				
2.	AD16803-02										X	4/07/25	12:30	X				
3.	AD16803-03										X	4/07/25	1300	X				
4.																		
Released By Signature		Date & Time Released	Delivery Method		Received By Signature		Date & Time Received		Condition Noted									
		4/14/25	FedEx				4-15-25 900		164 JRG									
Please indicate reporting requirements: ☐ 1. Results Only ☒ 2. Results and QC ☐ 3. Reduced Deliverables ☐ 4. Disk Deliverable ☐ 5. Other											Environmental Division Holland Work Order Reference HN2504814							
Comments: Analyze for As, Zn by 6020B																		



Telephone : + 1 616 399 6070

REPORT QUALIFIERS AND DEFINITIONS

*	Value exceeds Regulatory Limit (if MCL displayed)
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
NC	Not Calculated
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
V	The Continuing Calibration Verification was outside of control criteria
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Holland Laboratory Certifications¹

Agency	Type	ID	Issued	Expires
Alabama	Drinking Water (Secondary)	42500	12/17/2024	12/31/2025
Colorado	UST		06/21/2024	06/30/2025
Connecticut	Drinking Water (Secondary)	PH-0155	12/10/2024	12/31/2026
Florida	NELAP (Primary)	E871106	07/01/2024	06/30/2025
Illinois	NELAP (Secondary)	200076	11/14/2024	12/31/2025
Indiana	Drinking Water (Secondary)	C-MI-08	12/31/2024	09/04/2026
Iowa	State Specific	403	09/18/2023	09/01/2025
Kansas	NELAP (Secondary)	E-10411	07/09/2024	07/31/2025
Kentucky	Waste Water	KY98004	12/20/2024	12/31/2025
Kentucky	UST	120474	06/24/2024	06/30/2025
Michigan	Drinking Water (Primary)	0022	12/19/2023	09/04/2026
Minnesota	NELAP (Secondary)	026-999-449	12/17/2024	12/31/2025
Missouri	Drinking Water (Secondary)	01262	11/14/2024	12/30/2027
New Jersey	NELAP (Secondary)	MI015	07/01/2024	6/30/2025
New York	NELAP (Secondary)	12128	04/01/2024	04/01/2025
North Dakota	State Specific	R-192	11/18/2024	06/30/2025
Ohio	Drinking Water (Secondary)	87783	06/25/2024	6/30/2025
Pennsylvania	NELAP (Secondary)	68-03827	06/14/2024	07/31/2025
Texas	NELAP (Secondary)	T104704494	02/12/2025	01/31/2026
USDA	Domestic CA	Soil-MI-007	02/06/2025	08/07/2026
USDA	Soil Import	525-23-62-77572	03/03/2023	03/03/2026
West Virginia	State Specific	355	02/04/2025	08/31/2025
Wisconsin	State Specific	399084510	08/15/2024	08/31/2025

¹ - Scope available upon request

ANALYST SUMMARY



Client: EMSL Analytical
Project: AD16803

Work Order: HN2504814

Sample Name: AD16803-01
Laboratory Code: HN2504814-001
Sample Matrix: SOIL/SOLID

Date Collected: 04/07/25
Date Received: 04/15/25

Analysis Method	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C	1952125		3060436	Jeffrey Blakeman
EPA 6020B	1956896	Elise Poll	3073778	Stephanie Pierson
EPA 6020B	1956896	Elise Poll	3072027	Stephanie Pierson

Sample Name: AD16803-02
Laboratory Code: HN2504814-002
Sample Matrix: SOIL/SOLID

Date Collected: 04/07/25
Date Received: 04/15/25

Analysis Method	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C	1952125		3060436	Jeffrey Blakeman
EPA 6020B	1956896	Elise Poll	3073778	Stephanie Pierson
EPA 6020B	1956896	Elise Poll	3072027	Stephanie Pierson

Sample Name: AD16803-03
Laboratory Code: HN2504814-003
Sample Matrix: SOIL/SOLID

Date Collected: 04/07/25
Date Received: 04/15/25

Analysis Method	Preparation Lot	Prepared By	Analysis Lot	Analyzed By
EPA 3550C	1952125		3060436	Jeffrey Blakeman
EPA 6020B	1956896	Elise Poll	3073778	Stephanie Pierson
EPA 6020B	1956896	Elise Poll	3072027	Stephanie Pierson

Analytical Report



Client: EMSL Analytical
Project: AD16803
Matrix: SOIL/SOLID

Work Order: HN2504814
Date Collected: 04/07/25 11:30
Date Received: 04/15/25 09:00

CLIENT ID: AD16803-01	Lab ID: HN2504814-001
------------------------------	------------------------------

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
General Chemistry Parameters									
Percent Moisture	EPA 3550C	11.9		%	0.1	0.1	1	04/15/25 13:53	NA
Metals									
Arsenic	EPA 6020B	<0.375	U	mg/kg	0.375	3.12	10	04/22/25 00:21	04/18/25 09:59
Zinc	EPA 6020B	3990		mg/kg	61.3	62.5	100	04/22/25 13:58	04/18/25 09:59

Analytical Report



Client: EMSL Analytical
Project: AD16803
Matrix: SOIL/SOLID

Work Order: HN2504814
Date Collected: 04/07/25 12:30
Date Received: 04/15/25 09:00

CLIENT ID: AD16803-02	Lab ID: HN2504814-002
------------------------------	------------------------------

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
General Chemistry Parameters									
Percent Moisture	EPA 3550C	8.5		%	0.1	0.1	1	04/15/25 13:53	NA
Metals									
Arsenic	EPA 6020B	<0.397	U	mg/kg	0.397	3.31	10	04/22/25 00:23	04/18/25 09:59
Zinc	EPA 6020B	4240		mg/kg	64.9	66.2	100	04/22/25 14:00	04/18/25 09:59

Analytical Report



Client: EMSL Analytical
Project: AD16803
Matrix: SOIL/SOLID

Work Order: HN2504814
Date Collected: 04/07/25 13:00
Date Received: 04/15/25 09:00

CLIENT ID: AD16803-03	Lab ID: HN2504814-003
------------------------------	------------------------------

Analyte	Method	Results	Qual	Units	MDL	MRL	Dilution Factor	Date Analyzed	Date Extracted
General Chemistry Parameters									
Percent Moisture	EPA 3550C	11.0		%	0.1	0.1	1	04/15/25 13:53	NA
Metals									
Arsenic	EPA 6020B	<0.402	U	mg/kg	0.402	3.35	10	04/22/25 00:24	04/18/25 09:59
Zinc	EPA 6020B	3160		mg/kg	65.6	67.0	100	04/22/25 14:01	04/18/25 09:59



Client: EMSL Analytical
Project: AD16803
Matrix: SOIL/SOLID
Batch: 1952125

Work Order: HN2504814
Date Collected: NA
Date Received: NA

General Chemistry Parameters

MB	CLIENT ID: Method Blank	Lab ID: QC-1952125-001
-----------	--------------------------------	-------------------------------

Method: EPA 3550C **Dilution:** 1 **Analysis Date:** 04/15/25 13:05
Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Percent Moisture	<0.1	%	0.1	0.1							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-1952125-002
------------	---	-------------------------------

Method: EPA 3550C **Dilution:** 1 **Analysis Date:** 04/15/25 13:05
Prep Date: NA

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Percent Moisture	100	%	0.1	0.1	100		100	98-102			

The following samples were analyzed in this batch: HN2504814-001, HN2504814-002, HN2504814-003

QA/QC Report



Client: EMSL Analytical
Project: AD16803
Matrix: SOIL/SOLID
Batch: 1956896

Work Order: HN2504814
Date Collected: NA
Date Received: NA

Metals

MB	CLIENT ID: Method Blank	Lab ID: QC-1956896-001
----	-------------------------	------------------------

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 04/21/25 23:53
Prep Date: 04/18/25 10:00

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	<0.0300	mg/kg	0.0300	0.250							U
Zinc	<0.490	mg/kg	0.490	0.500							U

LCS	CLIENT ID: Laboratory Control Sample	Lab ID: QC-1956896-002
-----	--------------------------------------	------------------------

Method: EPA 6020B **Dilution:** 1 **Analysis Date:** 04/21/25 23:55
Prep Date: 04/18/25 10:00

Analyte	Result	Units	MDL	MRL	Spike Amount	Spike Ref. Amount	% Rec	% Rec Limits	RPD	RPD Limit	Qual
Arsenic	4.94	mg/kg	0.0300	0.250	5		98.9	80-120			
Zinc	5.23	mg/kg	0.490	0.500	5		105	80-120			

The following samples were analyzed in this batch: HN2504814-001, HN2504814-002, HN2504814-003

Appendix B

Sampling Equipment

Sampling Equipment

Analyte	Description	Calibration
Volatile Organic Compounds (VOCs)	Ion Science Tiger Photoionization Detector	Calibrated by Rental Company Verified Prior to Use
Surface Temperature & Relative Humidity	TSI Q-Trak Air Quality Monitor	Verified Prior to Use

Appendix C

Field Logs

Location Needham Crumb Rubber Date 4/7/2025 25

Project / Client 20081206, B51

Tech: C Julian

Task: Crumb Rubber Sampling

Weather: 40's Rain / Hail

Time : Description

830 : C Julian arrived at FEO press for Crumb Rubber Sampling.

0930: C Julian leaves for Needham Memorial Field.

1000 : C Julian meets Tara from town of Needham, Begins Sampling

1130 : C Julian completes memorial Field. moves to Flanders / Brock Field.

1300: C Julian completes Sampling fields. Returns to FEO

1400: C Julian arrives at FEO unloads equipment, composites samples.

Sample ID	Time	Location
1643250407-01	1130	Memorial Field
↓ -02	1230	Flanders Field
↓ -03	1300	Brock Field

CJ

Crumb Rubber Sampling Field Data

Client/Project Name: Needham Crumb Rubber		 FUSS & O'NEILL
Project Location: Needham, MA	PROJECT #: 20081266.B50	
Sample#: 1643250407 1643241002-01	Sample Location ID G-01, G-02, G-03, G-04, G-05, G-06 <i>[Handwritten signature]</i>	

Sample Location Description (include sketch map with location of sample)

Memorial park - See figure

Sample Data

Sample Data	Container	Quantity	Preservative
Date: 11/11/2011 4/7/25 Time: 1130 Sampler: CJ Weather: Ambient Temperature: 53°F 11911 Relative Humidity: 43% Barometric Pressure: — Sampling Device: Auger / Core Sampler / Shovel / Trowel / Other: <u>395</u> Field decon: Yes / No <u>Dedicated</u> Type of Sample: Grab / Composite / Other: _____ PID Reading (ppm): <u>0.1</u>	4oz amber	3	—

Description Data

Generic Sample Description: Crumb rubber

Comments:

Crumb Rubber Sampling Field Data

Client/Project Name: Needham Crumb Rubber		 FUSS & O'NEILL
Project Location: Needham, MA	PROJECT #: 20081266.B50	
1643250407 Sample#: 1643241002 02	<u>Sample Location ID</u> G-7, G8, G9, G10, G11, G12	

Sample Location Description (include sketch map with location of sample)

Founder field - see figure

Sample Data

Date: ~~4/10/2024~~ 4/17/25 Time: 1230
 Sampler: CJ
 Weather: Ambient Temperature: 47.5
 Relative Humidity: 49.4
 Barometric Pressure: _____
 Sampling Device: Auger / Core Sampler / Shovel / Trowel /
 Other: Sur
 Field decon: Yes / No / Dedicated
 Type of Sample: Grab / Composite / Other _____
 PID Reading (ppm): 0.0

Container	Quantity	Preservative
4oz Amber	3	---

Description Data

Generic Sample Description: Crumb rubber

Comments:

Crumb Rubber Sampling Field Data

Client/Project Name: Needham Crumb Rubber		 FUSS & O'NEILL
Project Location: Needham, MA	PROJECT #: 20081266.B50	
Sample #: <u>1643250407-03</u> 1643241002	<u>Sample Location ID</u> G-13, G-14, G-15, G-16, G-17, G-18	

Sample Location Description (include sketch map with location of sample)

Rock Field - See Map

Sample Data

Date: 4/7/25 ~~10/02/2024~~ Time: 1300
 Sampler: CJ
 Weather: Ambient Temperature: 40.3 ~~14.1~~
 Relative Humidity: 70%
 Barometric Pressure: —
 Sampling Device: Auger / Core Sampler / Shovel / Trowel /
 Other —
 Field decon: Yes / No / Dedicated
 Type of Sample: Grab / Composite /
 Other Sers
 PID Reading (ppm): 0.0

Container	Quantity	Preservative
4oz Amber	3	---

Description Data

Generic Sample Description: Crumb rubber

Comments:



MAP REFERENCE

THIS MAP WAS PREPARED FROM USGS ORTHOPHOTOGRAPHY, (c) 2013 MASSGIS.

SOURCE: OFFICE OF GEOGRAPHIC AND ENVIRONMENTAL INFORMATION (MASSGIS), COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS.

MEMORIAL FIELD BOUNDARIES APPROXIMATE BASED ON SITE OBSERVATIONS

LEGEND

PARK BOUNDARY

SAMPLE LOCATIONS TO FORM COMPOSITE

SCALE	
HORIZ	1" = 150'
VERT	
DATUM	
HORIZ	
VERT	
0 75' 150'	
GRAPHIC SCALE	



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NEEDHAM HEALTH DEPARTMENT

SITE PLAN
 MEMORIAL PARK
 92 ROSEMARY ROAD

NEEDHAM

MASSACHUSETTS

PROJ No: 20081266 B10
 DATE: JUNE 2020

FIGURE 1



MAP REFERENCE

THIS MAP WAS PREPARED FROM USGS ORTHOPHOTOGRAPHY, (c) 2013 MASSGIS.

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FIELD BOUNDARIES APPROXIMATE BASED ON SITE OBSERVATIONS

LEGEND

- FOUNDERS FIELD BOUNDARY
- BROCK FIELD BOUNDARY
- SAMPLE LOCATIONS TO FORM COMPOSITE

SCALE:	
HORIZ.:	1" = 150'
VERT.:	
DATUM:	
HORIZ.:	
VERT.:	
0 75' 150'	
GRAPHIC SCALE	



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NEEDHAM HEALTH DEPARTMENT

SITE PLAN
 DEFAZIO PARK
 380 DEDHAM ROAD

NEEDHAM

MASSACHUSETTS

PROJ. No.: 20081266.B10
 DATE: JUNE 2020

FIGURE 2



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☐ 317 Iron Horse Way, Suite 204, Providence, RI 02908
☐ 80 Washington Street, Suite 301, Poughkeepsie, NY 12601

CHAIN-OF-CUSTODY RECORD

4559

Turnaround

☐ 1 Day* ☐ 3 Days* ☐ Other _____ (days)
☐ 2 Days* ☒ Standard (____ days) *Surcharge Applies

PROJECT NAME <i>Needham Crumb Rubber</i>		PROJECT LOCATION <i>Needham MA</i>		PROJECT NUMBER <i>20081266.B51</i>		LABORATORY <i>EMSL/ALS</i>	
REPORT TO: <i>Evan Koncewicz</i>				Analysis Request <i>Arsenic / Zinc (Preferred 6000 B if only use Geloc if detection limit can be met)</i>			
INVOICE TO: <i>↓</i>							
P.O. NO.: <i>20081266.B51</i>							
Sampler's Signature: <i>Chris J.</i> Date: <i>4/7/2025</i>							
Source Codes: MW=Monitoring Well PW=Potable Water S=Soil W=Waste SW=Surface Water T=Treatment Facility B=Sediment A=Air X=Other <i>Crumb Rubber</i>							
Item No.	Transfer Check			Sample Number	Source Code	Date Sampled	Time Sampled
	1	2	3	4			
1					X	4/7/25	1130
2					X	↓	1230
3					X	↓	1300
Containers Soil VOA Vial, [] Methanol Soil VOA Vial, [] water [] Na ₂ SO ₄ Glass Soil Container (4) oz Other: [] Water VOA Vial, [] As is [] HCl Glass Amber () ml, [] As is [] HCl Plastic - As is, [] 250 ml [] 500 ml Plastic - H ₂ SO ₄ , [] 250 ml [] 500 ml Plastic - HNO ₃ , 250 ml [] Filtered [] Unfiltered Plastic - NaOH, 250 ml							
Comments							

Transfer Number	Relinquished By	Accepted By	Date	Time	Reporting and Detection Limit Requirements: <i>please meet detection limits:</i> <i>Arsenic - 2.5 mg/kg zinc 15,000 mg/kg</i> Additional Comments: <i>Send samples to ALS Lab, Holland, Michigan</i>
1	<i>Chris J.</i>				
2					
3					
4					

M E M O R A N D U M

TO: Needham Public Health Division

FROM: Evan Koncewicz
Environmental Geologist
Fuss & O'Neill, Inc.

DATE: September 10, 2025

RE: Needham Board of Health Crumb Rubber Questions

Dear Needham Board of Health,

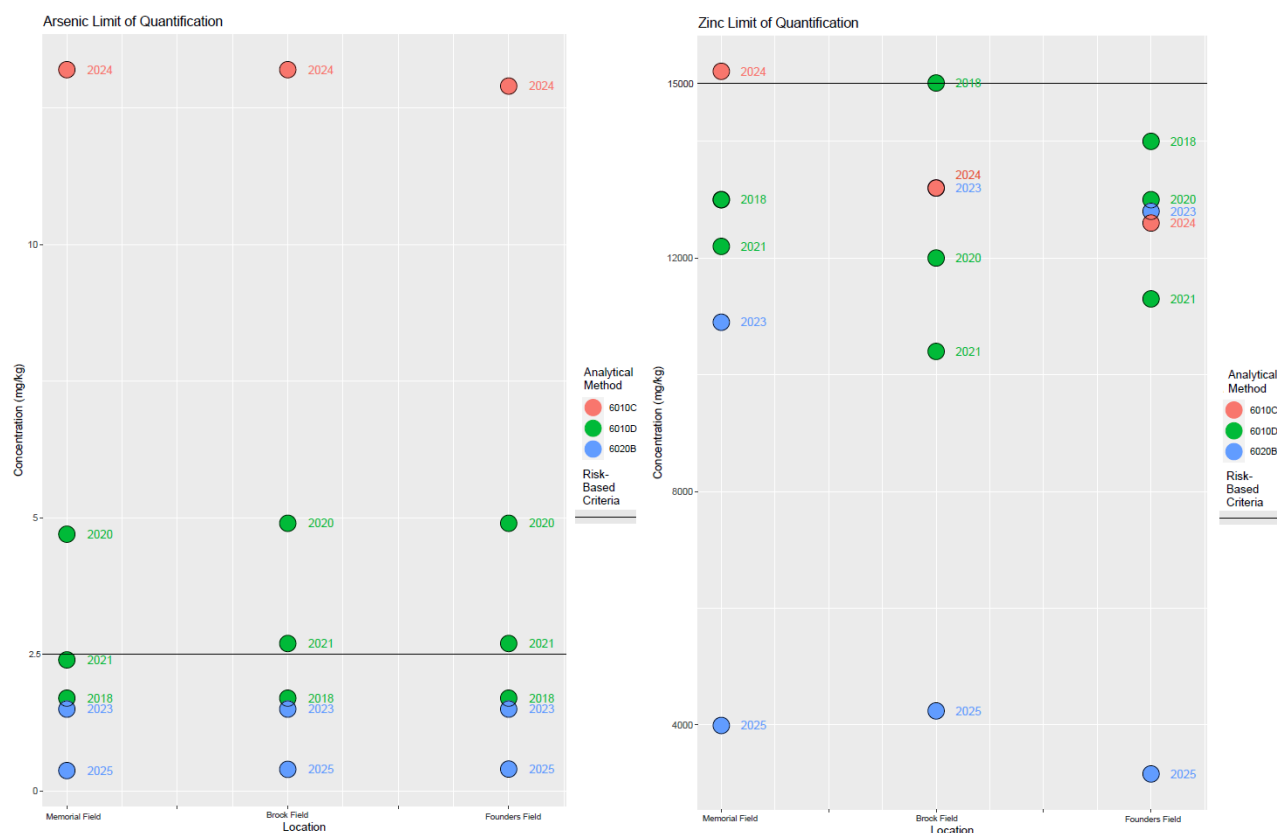
The following questions were provided to Fuss & O'Neill by the Needham Board of Health (BOH). Answers to the questions are provided below.

Can Fuss & O'Neill share the SOP used to conduct the analysis?

Laboratory provided SOPs are attached.

Please represent observed data on an X-Y scatter plot for Arsenic, Zinc, and any other analytes deemed of significance during this analysis. This scatter plot should contain 3 horizontal reference lines: a) longitudinal data over past 4-5 measurements (using same assay; if different assay has been used, please denote with a *), b) Minimum detectable limit or Limit of quantitation (LOQ) of the assay, c) Mass limits of cancer risk (represented in appropriate units for fair comparison):

Scatter Plots are specified, below and attached:



A tabulated summary of current measurements, LOQ, and cancer risk over past 5 measurements:

Tabulated summary is attached.

Clear summary of conclusions of the current analysis results and whether the levels are above, at or below the cancer risk as per SOP/guidance.

Results:

Several Volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) were detected above laboratory limits. However, since 2018, no compounds were above risk-based levels, except for acetone from Brook Field in 2021 and acetaldehyde from all field locations in 2023. Tables including VOC and SVOC analytical results were previously provided in each individual crumb rubber report.

All metals were below risk-based standards, except for arsenic and zinc, which are tabulated above. The limit of quantification (LOQ; lowest analyte reporting limit or method detection limit concentration) for arsenic exceeded the risk-based standard (ELCR) in 2020 and 2024 from all fields, and in 2021 from the fields at DeFazio Park. However, all reporting limits were not detected above laboratory reporting limits. Zinc LOQ exceeded the risk-based standard (HI) in 2024 from Memorial Field in 2024.

Discussion:

Acetone is a known lab contaminant, widely used as a solvent in various laboratory procedures. Its volatility allows it to easily become airborne and potentially contaminate samples or equipment. Acetaldehyde is also a recognized lab contaminant due to its presence in building materials, furniture, paints, finishes, and certain adhesives, which can lead to higher indoor concentrations compared to outdoors.

From 2018 to 2025, arsenic has always consistently been reported as non-detected when analyzed. In 2024, arsenic was reported as non-detected with an elevated reporting limit of 35 mg/kg, while method detection limits were also elevated at approximately 13 mg/kg, above the risk-based standard of 2.5 mg/kg. The elevated reporting limits are likely due to matrix interference and/or laboratory method 6010C, which was not able to achieve reporting limits consistent with the risk-based standards, rather than the real concentration arsenic at the method detection limit. Laboratory matrix interference occurs when components in a sample other than the target analyte (proteins, lipids, salts, sediment, etc.) affect the accuracy of an analytical measurement.

The consistency of non-detects support that a specific laboratory method was not able to achieve desired detection limits. Method detection limits were not run prior to 2024 because the non-detect was within range of the risk-based level, and no follow-up was requested by the Needham Board of Health at the time.

Zinc concentrations appear to be consistent with published literature. Zinc oxide is an important addition to rubber tires, strengthening the rubber (Brown, 2007). In *Artificial Turf; Exposures to Ground-Up Rubber Tires*, zinc levels were high enough to be phytotoxic if they enter the groundwater or soil and it is doubtful that there is any human toxicity from zinc at the levels reported, but such a conclusion would have to be tested more carefully (Brown, 2007). *Synthetic Turf Field Recycle Tire Crumb Rubber Research Under the Federal Research Action Plan Final Report* indicated the following conclusion:

“In general, the findings from the entire synthetic turf field portion of the FRAP activities (both the Tire Crumb Characterization Part 1 and the Tire Crumb Exposure Characterization Part 2 combined) support the conclusion that although chemicals are present (as expected) in the tire crumb rubber and exposures can occur, they are likely limited; for example

- *For metals only small fractions are released from tire crumb rubber into simulated biological fluids (average mean about 3% for gastric fluid and <1% for saliva and sweat plus sebum) compared to a default assumption of 100% bio accessibility” (USEPA & CDC/ATSDR, 2024).*

According to *The Health Implications of Synthetic Turf Fields with Crumb Rubber Infill*, existing information on synthetic turf fields does not suggest that they have a substantive independent effect on human health (McKee, 2015).

Risk-based standard criteria background:

Risk-based standards are based on Massachusetts Department of Environmental Protection (MassDEP) residential soil standards, which themselves are based on (1) publicly available data, (2) typical background in New England soils, (3) ceiling concentrations (maximum concentrations set for compounds of limited toxicity), and practically quantification levels (PQLs). To determine risk-based standards, Fuss & O'Neill utilized MassDEP

Needham Board of Health
September 10, 2025
Page 4 of 4

Excess Lifetime Cancer Risk (ELCR) and Hazard Index (HI) Concentrations, which utilizes MassDEP's Method 3 Residential Shortform for Human Health Risk, where promulgated (MassDEP, 1995). We selected the lowest HI or ELCR per compound (where promulgated) to determine our risk based standard, to be conservative. If an HI or ELCR was not promulgated for a compound, we used the Environmental Protection Agency (EPA) Regional Screening Levels (e.g. Multiple VOCs). Natural background does not apply, considering crumb rubber is not soil.

An Excess Lifetime Cancer Risk (ELCR) is a conservative threshold for cancer risk of one in 1 million. For one in every 1 million people continuously exposed to a specific level of a pollutant over a lifetime (typically 70 years), one person may develop cancer due to that expose, in addition to other potential cancer risks. Note, not all compounds have an ELCR and are not associated with a cancer risk (e.g. zinc).

The Hazard Index (HI) is a cumulative chemical/compound non-cancer risk limit. It is used to assess the total risk from exposure to multiple chemicals that might affect organs or body systems. An HI of 1 or lower suggests that exposure to the contaminants is unlikely to cause adverse non-cancer health effects over a lifetime. HI concentrations are designated to determine contaminant levels at which action should be taken to prevent health effects, not to predict them.

References:

Brown, D. R. (2007). Artificial Turf; Exposures to ground-up rubber tires; Athletic Fields, Playgrounds, Gardening Mulch. Environment and Human Health, Inc. Available at <https://www.ehhi.org/TURF07.pdf>

McKee, G. (2015). The Health Implications of Synthetic Turf Fields with Crumb Rubber Infill; A Human Health Risk Assessment for the Municipality of North Cowichan. Island Health. Available at <https://www.islandhealth.ca/sites/default/files/2018-09/health-risk-assessment-crumb-rubber.pdf>

MassDEP (1995). Interim Final Policy WSC/ORS-95-141; Guidance for Disposal Site Risk Characterization; Method 3 – Human Health. MassDEP. Available at <https://www.mass.gov/doc/wscors-95-141-guidance-for-disposal-site-risk-characterization-chapter-7-0/download>

MassDEP (2025). MCP Numerical Standards Development Spreadsheets; Site Cleanup & Facility Assessment – Regulations; Risk Assessment Information. MassDEP. Available at <https://www.mass.gov/lists/risk-assessment-information#chemical-toxicity->

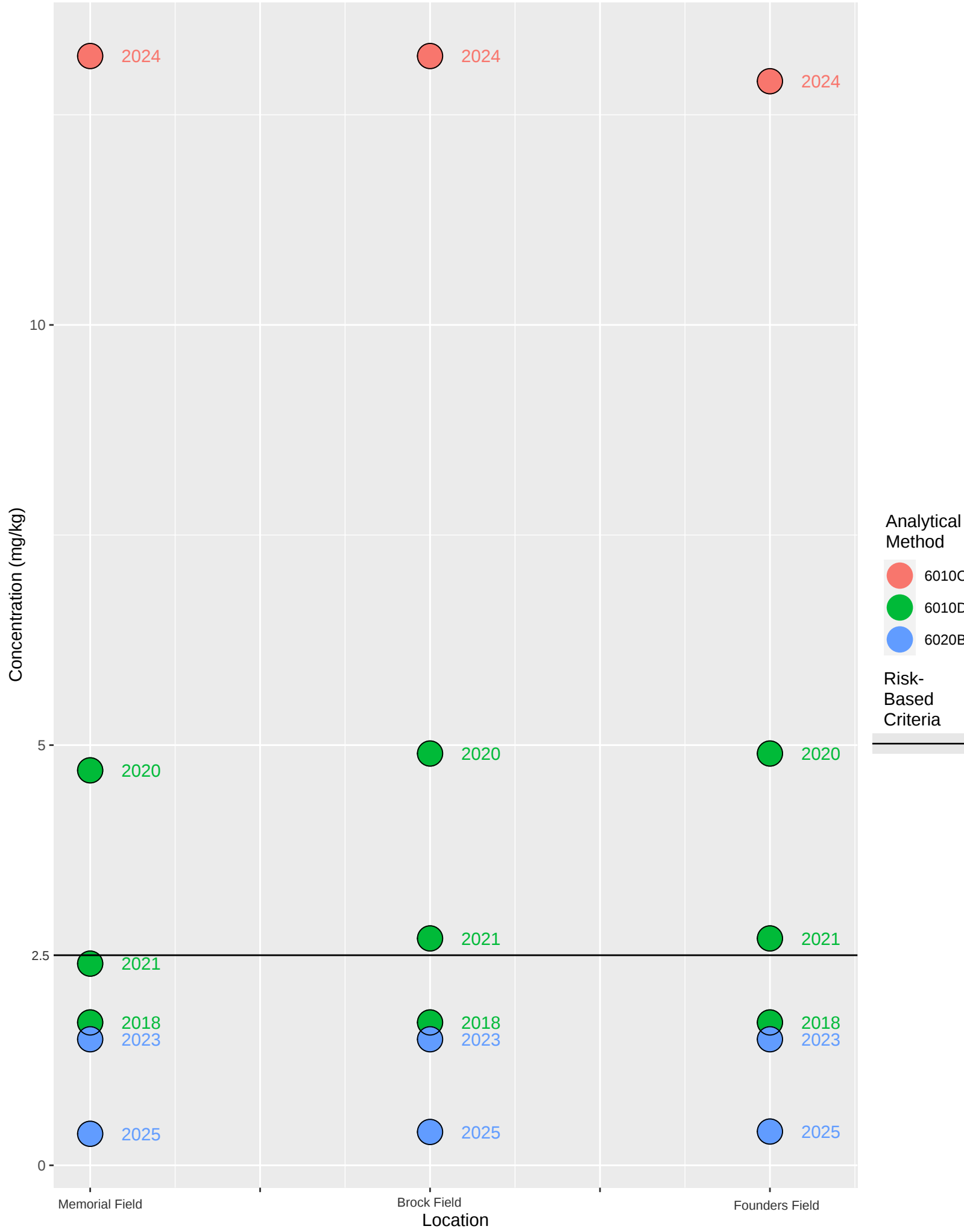
U.S. EPA & CDC/ATSDR (2024). Synthetic Turf Field Recycled Tire Crumb Rubber Research Under the Federal Research Action Plan Final Report: Part 2 -Exposure Characterization (Volumes 1 and 2). (EPA/600/R-24/020). U.S. Environmental Protection Agency, Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry. Available at <https://www.epa.gov/chemical-research/tire-crumb-exposure-characterization-report-volumes-1-and-2>

/

c: Ms. Tara Gurge, Assistant Director of Environmental & Community Health

Figures

Arsenic Limit of Quantification



Zinc Limit of Quantification



Tables



Table 1
Summary of Needham Crumb Rubber LOQ Historical Data
Needham High School and DeFazio Park
Needham, MA 02492

Analyte	Units		Memorial Field - Needham High School						DeFazio Park - Brock Field						DeFazio Park - Founders Field						Risk-Based Levels
			2018	2020	2021	2023	2024	2025	2018	2020	2021	2023	2024	2025	2018	2020	2021	2023	2024	2025	
		Analysis	6010D	6010D	6010D	6020B	6010C	6020B	6010D	6010D	6010D	6020B	6010C	6020B	6010D	6010D	6010D	6020B	6010C	6020B	
Arsenic	mg/kg		ND<1.7	ND<4.7	ND<2.4	ND<1.5	13.2*	0.375*^	ND<1.7	ND<4.9	ND<2.7	ND<1.5	13.2*	0.397*^	ND<1.7	ND<4.9	ND<2.7	ND<1.5	12.9*	0.402*^	2.5
Zinc			13000	13000	12200	10900	15200	3990^	15000	12000	10400	13200	13200	4240^	14000	13000	11300	12800	12600	3160^	15,000

Notes:
Samples were analyzed by ESML Analytical and subcontracted out to ALS Environmental of Holland, Michigan
Shaded values are greater than risk-based levels
Risk based level represents the lowest of promulgated MassDEP Hazard Index concentration for Zinc and ELCR concentration for Arsenic
Years 2018-2023 are ND < RL, 2024-2025 are MDLs
Samples collected using a 3-point composite on the crumb rubber turf field
^ Samples were collected using a 6-point composite sample

Created By: EK
Checked By: EK

ELCR: Excess Lifetime Cancer Risk
LOQ: Limit of Quantification determined as the lowest concentration RL or MDL
*LOQ reported as MDL
MDL: Method Detection Limit
ND < X: Not detected above the laboratory reporting limits shown
RL: Reporting Limit

Laboratory Standard Operating Procedures



STANDARD OPERATING PROCEDURE

Metals by ICP-MS
HN-MET-008-R16
Effective: 02/28/2023
Page 1 of 35

METALS BY ICP-MS EPA 200.8 / SW846 6020B

SOPID: HN-MET-008 Rev. Number: R16 Effective Date: 02/28/2023

Approved By: Denise Gagey
Department Supervisor

Date: 2/14/23

Approved By: [Signature]
QA Manager

Date: 2/14/23

Approved By: _____
Technical Director

Date: 2/14/23

Archival Date: _____ Doc Control ID#: _____ Editor: _____

PROCEDURAL REVIEW

SIGNATURES BELOW INDICATE NO PROCEDURAL CHANGES HAVE BEEN MADE TO THE SOP SINCE THE APPROVAL DATE ABOVE. THIS SOP IS VALID FOR 24 ADDITIONAL MONTHS FROM DATE OF THE LAST SIGNATURE UNLESS INACTIVATED OR REPLACED BY SUBSEQUENT REVISIONS.

Chad Storke
Signature

Quality Manager
Title

2/14/2024
Date

[Signature]
Signature

Quality Assurance Manager
Title

03/25/2025
Date

Signature

Title

Date



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METALS BY ICP-MS

1) Scope and Applicability

- 1.1 Inductively coupled plasma-mass spectrometry (ICP-MS) is applicable to the determination of a large number of elements as either dissolved (aqueous only) or total metals.
- 1.2 This method is applicable to a variety of matrices including: drinking water, non-potable water, solid/chemical materials, and biological tissue.
- 1.3 ICP-MS has been applied to the determination of over 60 elements in various matrices. The method is applicable to analytical ranges of approximately 0.005 mg/L to 900 mg/L for aqueous matrices and 0.5 mg/kg to 900 mg/kg for solid matrices.
- 1.4 Method detection limits, quantitation limits, and linear ranges will vary with matrices, instrumentation, and operating conditions.
- 1.5 SW-846 Method 6020B is used to determine the analytes listed in Tables 20.1-A. This table lists more elements than the current version of Method 6020B. The additional elements are included based upon results of demonstrations of precision and accuracy and completion of method detection limit studies for aqueous and solid matrix.
- 1.6 Method 200.8 is used to determine the analytes listed in Table 20.1-B. This table lists more elements than the current version of Method 200.8. The additional elements are included based upon results of demonstrations of precision and accuracy and completion of method detection limit studies for aqueous matrix.
- 1.7 Internal standards are used for each analyte determined by ICP-MS. The internal standard mix used consists of ^6Li , ^{45}Sc , ^{89}Y , ^{115}In , ^{159}Tb , ^{165}Ho , and ^{209}Bi .

2) Summary of Procedure

- 2.1 Prior to analysis, samples that require total ("acid-leachable") values must be digested using appropriate sample preparation methods as specified in SOP HN-MET-009 and HN-MET-010, *Metal Digestion in Solid and Aqueous Matrices for ICPMS*.
- 2.2 Analyte species originating in a liquid are nebulized and the resulting aerosol transported by argon gas into the plasma torch. Ions are produced by radio frequency inductively coupled plasma, entrained in the plasma gas, and introduced into a mass spectrometer. The ions are sorted according to their mass-to-charge ratios and quantified with a channel electron multiplier. Interferences must be assessed and valid corrections applied. Interference correction must include compensation for background ions contributed by the plasma gas, reagents, and constituents of the sample matrix.

3) Definitions

- 3.1 Laboratory Control Sample (LCS): An analyte-free matrix spiked with known concentrations of all target analytes. This is used to evaluate and document laboratory method performance.
- 3.2 Matrix: The component or substrate (e.g., surface water, groundwater, soil) which contains the analyte of interest.
- 3.3 Matrix Spike (MS): An aliquot of background sample spiked with known concentrations of all target analytes. The spiking occurs prior to sample preparation and analysis. A matrix spike is used to assess the bias of a method in a given sample matrix.



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- 3.4 Matrix Spike Duplicate (MSD): A duplicate aliquot of the background sample spiked with known concentrations of all target analytes. Spiking occurs prior to sample preparation and analysis. The MS/MSD pair are used to assess precision and bias of a method in a given sample matrix.
- 3.5 Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank is carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.
- 3.6 Limit of Quantitation (LOQ): The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The LOQ is also referred to as the method quantitation limit (MQL) or the reporting limit (RL).
- 3.7 Limit of Detection (LOD): an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent.
- 3.8 Method Detection Limit (MDL) study: the procedure, as described in 40CFR part 136, for determining the LOD based on statistical analysis of 7 low-level replicate spikes. The minimum concentration of an analyte that can be identified, measured, and reported with 99% confidence that the analyte concentration is greater than zero.
- 3.9 Standard Curve: A plot of concentrations of known analyte standards versus the instrument response to the analyte.
- 3.10 Internal Standard: A known amount of standard added to a test portion of a sample and carried through the entire measurement process as a reference for evaluating and controlling the precision and bias of the analytical test method.
- 3.11 Linear Dynamic Range (LDR): The concentration range through which the instrument response is linear.
- 3.12 Low-Level Quality Control sample (LLQC): A clean matrix sample spiked at the MQL and carried through the entire preparation and analysis process.
- 3.13 Low-Level Initial Calibration Verification (LLICV): A sample spiked at the MQL, used to validate the lower end of the initial calibration.

4) Health and Safety Warnings

- 4.1 Lab Safety: Due to various hazards in the laboratory, safety glasses and laboratory coats or aprons must be worn at all times while in the laboratory. In addition, gloves and a face shield should be worn when dealing with toxic, caustic, and/or flammable chemicals.
- 4.2 Chemical Hygiene: The toxicity or carcinogenicity of each reagent used has not been precisely defined; however, each chemical used should be treated as a potential health hazard. Exposure to laboratory reagents should be reduced to the lowest possible level. The laboratory maintains a current awareness file of OSHA regulations regarding the safe handling of the chemicals specified in this method. A reference file of data handling sheets (MSDS) is available to all personnel involved in these analyses.
- 4.3 Waste Management: The principal wastes generated by this procedure are the method-required chemicals and standards. It is the laboratory's responsibility to comply with all federal, state, and local regulations governing waste management by minimizing and controlling all releases from fume hoods and bench operations. Compliance with all sewage discharge permits and regulations is required. Laboratory procedures in



SOP HN-SAF-001, Waste Disposal Procedures, must be followed.

- 4.4 Pollution Prevention: The materials used in this method pose little threat to the environment when recycled and managed properly. The quantities of chemicals purchased should be based on the expected usage during its shelf life. Standards and reagents should be prepared in volumes consistent with laboratory use to minimize the volume of expired standards or reagents to be disposed.

5) Cautions

- 5.1 Routine preventative maintenance must be performed as scheduled and documented to assure optimum instrument performance. Typical routine maintenance includes inspection and replacement of sample delivery tubing. Maintenance performed shall be recorded in a dedicated instrument maintenance logbook. Refer to HN-EQ-004 for additional information.

6) Interferences

- 6.1 Isobaric elemental interferences in ICP-MS are caused by isotopes of different elements forming ions with the same nominal mass-to-charge ratio (m/z) as those being monitored. A data system must be used to correct for these interferences. This involves determining the signal for another isotope of the interfering element and subtracting the appropriate signal from the analyte isotope signal. Such corrections will only be as accurate as the accuracy of the isotope ratio used in the elemental equation for data calculations. Isotope ratios should be established prior to the application of any corrections.
- 6.2 Isobaric molecular and doubly charged ion interferences in ICP-MS are caused by ions consisting of more than one atom or charge, respectively. Most isobaric interferences that could affect ICP-MS determinations have been identified in the literature [3,4]. Examples include ArCl^+ ions on the ^{75}As signal and MoO^+ ions on the cadmium isotopes. While the approach used to correct for molecular isobaric interferences is demonstrated below using the natural isotope abundances from the literature [5], the most precise coefficients for an instrument can be determined from the ratio of the net isotope signals observed for a standard solution at a concentration providing suitable (<1 percent) counting statistics. Because the ^{35}Cl natural abundance of 75.77 percent is 3.13 times the ^{37}Cl abundance of 24.23 percent, the chloride correction for arsenic can be calculated (approximately) as follows (where the $^{38}\text{Ar}^{37}\text{Cl}^+$ contribution at m/z 75 is a negligible 0.06 percent of the $^{40}\text{Ar}^{35}\text{Cl}^+$ signal): corrected arsenic signal (using natural isotopes abundances for coefficient approximations) = (m/z 75 signal) - (3.13) (m/z 77 signal) + (2.73) (m/z 82 signal), (where the final term adjusts for any selenium contribution at 77 m/z). A listing of employed correction equations is included in section 21.10.

NOTE: Arsenic values can be biased high by this type of equation when the net signal at m/z 82 is caused by ions other than $^{82}\text{Se}^+$, (e.g., $^{81}\text{BrH}^+$ from bromine wastes [6]).

- 6.3 The accuracy of these types of equations is based upon the constancy of the OBSERVED isotopic ratios for the interfering species. Corrections that presume a constant fraction of a molecular ion relative to the "parent" ion have not been found to be reliable, e.g., oxide levels can vary. If a correction for an oxide ion is based upon the ratio of parent-to-oxide ion intensities, the correction must be adjusted for the degree of oxide formation by the use of an appropriate oxide internal standard previously demonstrated to form a similar level of oxide as the interferent. This type of



correction has been reported for oxide-ion corrections using ThO^+/Th^+ for the determination of rare earth elements. The use of aerosol de-solvation and/or mixed plasma has been shown to greatly reduce molecular interferences. These techniques can be used provided that method detection limits, accuracy, and precision requirements for analysis of the samples can be met.

- 6.4 Physical interferences can be associated with sample nebulization and transport processes as well as with ion-transmission efficiencies. Nebulization and transport processes can be affected if a matrix component causes a change in surface tension viscosity. Changes in matrix composition can cause significant signal suppression or enhancement. Dissolved solids can deposit on the nebulizer tip of a pneumatic nebulizer and on the interface skimmers (reducing the orifice size and the instrument performance). Total solid levels below 0.04% (400 mg/L) are recommended to minimize solid deposition. An internal standard can be used to correct for physical interferences, if it is carefully matched to the analyte so that the two elements are similarly affected by matrix changes. When completing analysis by Method 6020B, if the intensity level of an internal standard falls below 30 percent of the intensity of the calibration standard used for reference, the sample must be reanalyzed after a fivefold (1+4) or greater dilution has been performed. When completing analysis by Method 200.8 and the intensity of the internal standard is less than 60 percent or greater than 125 percent of the intensity of the calibration standard used for reference, the sample must be reanalyzed after a fivefold (1+4) or greater dilution has been performed.
- 6.5 Memory interferences can occur when there are large concentration differences between samples or standards that are analyzed sequentially. Sample deposition on the sampler or skimmer cone, spray chamber design, and the type of nebulizer affects the extent of the memory interferences that are observed. The rinse period between samples must be long enough to eliminate significant memory interference.
- 6.6 Silver has been demonstrated to precipitate out of solution above a raw concentration of 200 ppb. Aqueous samples exceeding this value must be re-digested at a dilution, and solid samples re-digested using a lesser mass, sufficient to bring the instrument raw value under 200 ppb.

7) Personnel Qualifications and Responsibilities

- 7.1 General Responsibilities - This method is restricted to use by or under the supervision of analysts experienced in the method.
- 7.2 Analyst - It is the responsibility of the analyst(s) to:
 - 7.2.1 Read and understand this SOP and follow it as written. Any deviations or non-conformances must be documented and submitted to the QA Manager for approval.
 - 7.2.2 Produce method compliant data that meets all quality requirements using this procedure and the Data Reduction, Review and Validation SOP (HN-QS-009).
 - 7.2.3 Complete the required initial demonstration of proficiency before performing this procedure without supervision.
 - 7.2.4 The analysts must submit data for peer or supervisor review.
- 7.3 Section Supervisor - It is the responsibility of the section supervisor to:
 - 7.3.1 Ensure that all analysts have the technical ability and have received adequate training required to perform this procedure.
 - 7.3.2 Ensure analysts have completed the required initial demonstration of



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- 7.3.3 proficiency before performing this procedure without supervision.
- 7.3.3 Ensure analysts produce method compliant data that meet all quality requirements using this procedure and the Data Reduction, Review and Validation SOP.
- 7.4 Project Manager - It is the responsibility of the Project Manager to ensure that all method requirements for a client requesting this procedure are understood by the laboratory prior to initiating this procedure for a given set of samples.
- 7.5 QA Manager: The QA Manager is responsible for
 - 7.5.1 Approving deviations and non-conformances
 - 7.5.2 Ensuring that this procedure is compliant with method and regulatory requirements,
 - 7.5.3 Ensuring that the analytical method and SOP are followed as written through internal method and system audits.

8) Sample Collection, Handling, and Preservation

- 8.1 Aqueous samples shall be collected in 500 ml plastic containers and preserved to a pH of <2 with HNO₃.
- 8.2 Drinking water samples for the analysis of Lead and Copper, under the EPA Lead and Copper Rule, shall be collected as "first draw" aliquots, in 1L wide mouth, plastic containers and preserved to a pH of <2 with HNO₃.
- 8.3 Dissolved metal analyses shall be field filtered through a 0.45μ filter and preserved to a pH of <2 with HNO₃. Filtering should be completed in the field at time of sampling.
- 8.4 Sample pH should be verified at time of sample receipt and adjusted if necessary.
 - 8.4.1 If adjusted at time of receipt, the sample shall be stored for a period of 24 hours after which the pH adjustment will be verified.
- 8.5 Soil samples should be collected in 4 oz wide mouth plastic containers.
- 8.6 Samples may be stored at room temperature. The holding time is six months for aqueous and solid matrices.

9) Equipment and Supplies

- 9.1 Inductively coupled plasma-mass spectrometer (Agilent 7800): Capable of providing resolution, better than or equal to 1.0 amu at 5% peak height. The system must have a mass range from at least 5 to 250 amu and a data system that allows for corrections of isobaric interferences and the application of the internal standard technique. Use of a mass-flow controller for the nebulizer argon/helium and a peristaltic pump for the sample solution is required.
- 9.2 Various Class A volumetric flasks: 10.0, 25, 50, 100, 250, etc.
- 9.3 Variable volume pipettes: 1.0 and 5.0 ml.
- 9.4 16533Q filter 0.45 micron – Sartorius (or equivalent)

10) Standards and Reagents



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- 10.1 Argon gas supply: High-purity grade (99.99%).
- 10.2 Helium gas supply: High-purity grade (99.99%).
- 10.3 Nitric acid, concentrated (trace metal grade)
- 10.4 Hydrochloric acid, concentrated (trace metal grade)

Note: Acids used in the preparation of standards and samples for ICP-MS must be of high purity. Re-distilled acids are recommended due to the high sensitivity of the instrumentation.

- 10.5 Diluent Solution, ICB, and CCB.

- 10.5.1 Prepare as a solution containing 5% HNO₃ – 1% HCl.
 - 10.5.2 Prepare fresh daily.

- 10.6 Stock Spike Standards:

- 10.6.1 Metals Mix standard w/ Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Li, Mn, Mo, Ni, Pb, Sb, Se, Sn, Sr, Tl, V, and Zn @ 10 mg/L **and** Ca, Fe, K, Mg and Na @ 1000 mg/L **and** B at 50 mg/L. (available from VHGS ZALS LAB1302A or equivalent)

- 10.6.2 Th, Ti, and U Spike Stock @ 1000 ppm and Si at 10,000 ppm (available from Environmental Express or equivalent)

- 10.6.2.1 Working Spike Ti @ 10 mg/L

- 10.6.2.1.1 Add 5 ml Ti to 300 ml DI water in a 500 ml volumetric flask.
 - 10.6.2.1.2 Acidify with 10 ml Nitric and 5 ml Hydrochloric acid.
 - 10.6.2.1.3 Bring to final volume with DI water.

- 10.6.2.2 Working Spike Th and U @ 10 mg/L

- 10.6.2.2.1 Add 5 ml Th and U to 300 ml DI water in a 500 ml volumetric flask.
 - 10.6.2.2.2 Acidify with 10 ml Nitric and 5 ml Hydrochloric acid.
 - 10.6.2.2.3 Bring to final volume with DI water.

- 10.6.2.3 Working Spike Si @ 1000 mg/L

- 10.6.2.3.1 Add 50 ml Si to 300 ml DI water in a 500 ml volumetric flask.
 - 10.6.2.3.2 Acidify with 10 ml Nitric and 5 ml Hydrochloric acid.
 - 10.6.2.3.3 Bring to final volume with DI water.

- 10.6.3 LLQC #1 - w/ As, Ba, Cr, Co, Cu, Pb, Mn, Ni, Se, Ag, Sr, Tl, U, and V @ 0.5 mg/L **and** Be and Cd @ 0.2 mg/L **and** Al, Li, and Zn @ 1.0 mg/L **and** B @ 2.0 mg/L **and** Fe @ 8.0 mg/L **and** Mg, K, and Na @ 20 mg/L **and** Ca @ 50 mg/L. (available from VHGS ZALS LAB1301-100 or equivalent)

- 10.6.4 LLQC #2 - w/ Sn @ 0.2 mg/L **and** Sb, Mo, and Ti @ 0.5 mg/L. (available from VHGS ZALS LAB1104-100 or equivalent)

- 10.6.5 LLQC #3 - w/ Th @ 0.5 mg/L and Si @ 100 mg/L.



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- 10.6.5.1 Add 25 μ L of 1000 ppm Th and 5 ml of 1000 ppm Si to 25 ml of DI water in a 50 ml volumetric flask.
- 10.6.5.2 Acidify with 2 ml Nitric and 0.5 ml Hydrochloric acid.
- 10.6.5.3 Bring to final volume with DI water.
- 10.7 Initial Calibration Stock Standards:
- 10.7.1 ICAL STK #1: 20 mg/L – Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Th, Ti, U, V, Zn (SPEX CL-CAL-1 or equivalent)
- 10.7.2 ICAL STK #2: 1,000 mg/L – Ca, Fe, K, Mg, Na (SPEX CL-CAL-3 or equivalent)
- 10.7.3 1,000 mg/L each of B, Sr, Ti, Sn, Li (Environmental Express or equivalent)
- 10.7.4 10,000 mg/L Si (Environmental Express or equivalent)
- 10.7.5 Stability of stock standards shall be consistent with the manufacturer's expiration date.
- 10.8 Intermediate Stock Standard for Sr, Sn, Ti @ 20 mg/L (ICAL STK #3) and B @ 50 mg/L, Li @ 20 mg/L, Si @ 2000 mg/L (ICAL STK #4):
- 10.8.1 Add approximately 40 mL of DI water to (2) 50 mL volumetric flasks. Acidify each using 2 mL Nitric acid and 0.5 mL Hydrochloric acid.
- 10.8.2 ICAL STK #3 - Quantitatively add 1.0 mL each Sr, Ti, and 1000 mg/L Sn to first flask.
- 10.8.3 ICAL STK #4 - Quantitatively add 2.5 mL of 1000 mg/L B, 1 mL Li, and 10 mL of 10,000 mg/L Si to second flask.
- 10.8.4 Bring each to a final volume of 50 ml with DI water.
- 10.8.5 The intermediate stock standard is stable for a period of 6 months. The expiration date may not exceed that of any parent solution.
- 10.9 Working Initial Calibration Standards:
- 10.9.1 Working Calibration Stock Standard (INT 500)
- 10.9.1.1 Add approximately 125 ml of DI water to a 200 ml Class A volumetric flask. Acidify with 8 ml Nitric acid and 2 ml Hydrochloric acid.
- 10.9.1.2 Add 5 ml of ICAL STK #1 (10.7.1), 10 ml of ICAL STK #2 (10.7.2), 5 ml of ICAL STK #3 (10.8.2), 5 ml of ICAL STK #4 (10.8.3)
- 10.9.1.3 Bring to a final volume of 200 ml with DI water.
- 10.9.1.4 The working standard must be replaced weekly and the expiration date may not exceed that of any parent solution.
- 10.9.2 Calibration Standards
- 10.9.2.1 Prepare, at a minimum, five (5) initial calibration standards and a blank from the Working Calibration Stock Standard (Section 10.9.1) and the CCV (Section 10.16) as detailed in Table 10.9.2.

Table 10.9.2

Standard (Note 1)	Amount of Working Calibration Stock	Final Volume (Note 2)	Final Concentration (Multi)	Final Concentration (B)	Final Concentration (Ca, Fe, K, Mg, Na)
Level I	0 ml	50 ml	0 μ g/L	0 μ g/L	0 μ g/L
Level II	1.0 mL of Level V	50 ml	0.2 μ g/L	0.5 μ g/L	20 μ g/L
Level III	1.0 ml of Level CCV	50 ml	2 μ g/L	5 μ g/L	200 μ g/L
Level IV	2.5 ml of Level CCV	50 ml	5 μ g/L	12.5 μ g/L	500 μ g/L
Level V	5.0 ml of Level CCV	50 ml	10 μ g/L	25 μ g/L	1000 μ g/L



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Level VI	5 ml	50 ml	50 µg/L	125 µg/L	5000 µg/L
Level VII	9 ml	50 ml	90 µg/L	225 µg/L	9000 µg/L
Level VIII	20 ml	50 ml	200 µg/L	500 µg/L	20,000 µg/L

Note (1): Additional standards may be added to extend the calibration range.

Note (2): All standards must be adjusted to a final acid concentration of 4% HNO₃ and 1% HCl solution.

10.10 Stock Calibration Check Solutions (ICV):

10.10.1 ICV1: Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn @ 10 mg/L. (SPEX CL-ICS-1 or equivalent)

10.10.2 ICV2: Ca, Fe, K, Mg, Na @ 200 mg/L. (SPEX CL-ICS-3 or equivalent)

10.10.3 ICV3: Mo, Sn, Sr, Ti @ 10 mg/L. (SPEX CL-ICS-5 or equivalent)

10.10.4 ICV4: B, Li, Th, and U @ 1000 mg/L. (available from Environmental Express or equivalent)

10.10.4.1 ICV 4 Working Solution: B @ 25 mg/L, Li, Th, and U @ 10 mg/L

10.10.4.1.1 Add approximately 40 ml of DI water to a 50 ml Class A volumetric flask. Acidify with 2 ml Nitric acid and 0.5 ml Hydrochloric acid.

10.10.4.1.2 Add 1.25 ml of the 1,000 mg/L Boron standard and 0.5 ml of the 1,000 mg/L Li, Th, and U standards.

10.10.4.1.3 Bring to a final volume of 50 ml with DI water.

10.10.4.1.4 Solution is stable for a period of 6 months

10.10.5 ICV 5: Silicon @ 1,000 mg/L. (Environmental Express or equivalent)

10.11 Initial Calibration Verification (ICV) Solution:

10.11.1 Working ICV Solution @ 80/8000/200

10.11.1.1 Add approximately 40 mL DI water to a 50 mL Class A volumetric flask and acidify with 2 mL Nitric acid and 0.5 mL Hydrochloric acid.

10.11.1.2 Add 400 µl ICV1 (Section 10.10.1), 2 ml ICV2 (Section 10.10.2), 400 µl ICV3 (Section 10.10.3), 400 µl of ICV#4 (Section 10.10.4.1), and 400 µl ICV#5 (Section 10.10.5).

10.11.1.3 Bring to volume with DI water.

10.11.1.4 Prepare fresh daily.

10.11.2 The stock standard(s) for the ICV solution must be obtained from a second source supplier or, if purchased from the same supplier, be a different solution warranted to be prepared from a different lot of parent constituents.

10.12 Low-Level Initial Calibration Verification solution (LLICV) spike @ MQL:

10.12.1 Add approximately 40 mL DI water to a 50 mL Class A volumetric flask and acidify with 2 mL Nitric acid and 0.5 mL Hydrochloric acid.

10.12.2 Pipet 0.5 mL LLQC#1 (section 10.6.3) and 0.5 mL LLQC #2 (section 10.6.4) and 0.5 mL LLQC#3 (section 10.6.5)

10.12.3 Bring to volume with DI water.



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- 10.13 Interference Check Solution A (ICSA) Stock Standard – Available from SPEX: Cl @ 10,000 mg/L; C @ 2,000 mg/L; Al, Ca, Fe, K, Mg, Na, P, S @ 1,000 mg/L; Mo, Ti @ 20 mg/L.
- 10.14 Interference Check Sample A (ICSA) Working Standard
- 10.14.1 Add approximately 40 mL DI water to a 50 mL Class A volumetric flask and acidify with 2 mL Nitric acid and 0.5 mL Hydrochloric acid.
- 10.14.2 Add 2.5 ml of ICSA (Section 10.14).
- 10.14.3 Dilute to 50 ml with DI water.
- 10.14.4 Prepare weekly.
- 10.15 Linear Dynamic Range (LDR) Check Solution
- 10.15.1 LDR Solution #2
- 10.15.1.1 Add 1 ml 1000 mg/L Th, Ti, U, and 0.5 ml of 10,000 mg/L Si to approximately 50 ml DI in a 100 ml volumetric flask.
- 10.15.1.2 Acidify with 4 ml Nitric Acid
- 10.15.1.3 Bring to final volume with DI
- 10.15.2 Add approximately 25 mL DI water to a 50 mL Class A volumetric flask and acidify with 2 mL Nitric acid and 0.5 mL Hydrochloric acid.
- 10.15.3 Add 10 ml Metals Mix (Section 10.6.1) and 10 ml LDR solution #2 (Section 10.15.1).
- 10.15.4 Bring to volume with DI water.
- 10.15.5 This solution should be replaced weekly or if degradation is noted. The expiration date may not exceed that of any parent solution.
- 10.16 Continuing Calibration Verification:
- 10.16.1 Add 10 ml of INT 500 (Section 10.9.1) to a 50 ml volumetric flask.
- 10.16.2 Acidify with 2 ml Nitric Acid and 0.5 ml Hydrochloric Acid
- 10.16.3 Bring to final volume with DI.
- 10.17 Internal Standard Stock Standard:
- 10.17.1 Yttrium @ 1000 mg/L. Available from Environmental Express.
- 10.17.2 Multi-Element Mix containing Bi, Ho, In, Li, Sc, Tb and Y @ 10 mg/L. Available from VHG Labs.
- 10.17.3 Scandium @ 1000 mg/L. Available from Environmental Express.
- 10.18 Internal Standard – Working Solution:
- 10.18.1 Add approximately 75 mL DI water to a 100 mL Class A volumetric flask and acidify with 2 mL Nitric acid.
- 10.18.2 Add 20 ml of Multi-Element Mix (Section 10.17.2), 0.75 ml of Y standard (Section 10.17.1) and 0.5 mL Sc standard (10.17.3).
- 10.18.3 Bring to volume with DI water.
- 10.18.4 This solution should be replaced if degradation is noted. The expiration date may not exceed that of any parent solution.
- 10.19 ICP-MS Tune Stock Solution:
- 10.19.1 Tuning solution containing 10 mg/L of Ba, Be, Ce, Co, In, Li, Mg, Pb, Rh, Tl, U and Y.
- 10.20 ICP-MS Working Tune Solution @ 10 ppb:



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- 10.20.1 Dilute 0.5 ml of the ICP-MS tune stock solution (Section 10.19.1) to 500 mL in 5% Nitric acid.
- 10.20.2 Working tune solution must be replaced every 6 months or if degradation is noted. The expiration date of this solution may not exceed that of its parent.
- 10.21 Stock Spiking Solution:
 - Multi-element standards documented in Sections 10.6.1 and 10.6.2 shall be used for spiking.
 - 10.21.1 Soil Spike:
 - 10.21.1.1 A 500 µl volume of each spike solution is added to 0.8 – 1.0 gram of solid after transfer to the digestion vessel. Following digestion (HN-MET-009), the digestate is brought to a final volume of 50 ml. Theoretical spike value is the 5 mg/kg for the trace metals, 500 mg/kg for Ca/Fe/Mg/Na/K/Si, and 25 mg/kg for B.
 - 10.21.2 Water Spike:
 - 10.21.2.1 A 500µl volume of spike solutions 10.6.1 and 10.6.2 is added to the 50.0 ml volume of aqueous sample after transfer to the digestion vessel. Following digestion (HN-MET-010), the digestate is brought to a final volume of 50.0 ml. Theoretical spike value is 0.1 mg/L for the trace metals, 10 mg/L for Ca/Fe/Mg/Na/K/Si, and 0.5 mg/L for B.

11) Method Calibration

11.1 Start-up Procedure

- 11.1.1 Visual check of instrument:
 - 11.1.1.1 Inspect auto-sampler tubing and peristaltic pump tubing; replace as needed.
 - 11.1.1.2 Inspect sampling cone and skimmer cone for deposit build up; if build up is noticed, either clean or replace cone.
 - 11.1.1.3 Verify argon gas flow; ensure there is 100 PSI coming into the instrument.
 - 11.1.1.4 Check vacuum pressure and oil levels.
 - 11.1.1.5 Check that the heat exchanger unit is turned on.
 - 11.1.1.6 Record maintenance in routine maintenance logbook.
- 11.1.2 Turn plasma on and let the instrument stabilize for approximately 30-45 minutes.
- 11.1.3 During stabilization, verify basic instrument operating parameters. These parameters should be set at approximately:
 - 11.1.3.1 RF power = 1550V
 - 11.1.3.2 RF matching = 1.8V
 - 11.1.3.3 Peristaltic Pump = 0.1 rps
 - 11.1.3.4 S/C Temp = 2° C.



- 11.1.3.5 Small adjustments to the EM voltage and/or maintenance may be required to meet subsequent tuning specification. This may be done using the Autotune function in the software.
- 11.1.4 After instrument stabilization, perform an instrument tune using the ICP-MS Tune solution (Section 10.20). This is a preliminary tune to evaluate performance across the operating mass range of the instrument.
 - 11.1.4.1 Analyze the ICP-MS tune solution in 5 replicates prior to the initial calibration.
 - 11.1.4.2 Adjust mass calibration such that the unit mass falls within ± 0.1 amu of the expected value.
 - 11.1.4.3 Acceptance Criteria:
 - 11.1.4.3.1 Resolution should be ~ 0.75 amu at 5% peak height, and **must** be < 0.90 amu.
 - 11.1.4.3.2 Mass calibration must be ± 0.1 amu from the true value.
 - 11.1.4.3.3 Relative standard deviations (RSD) of absolute signals from the five replicates must be $< 5\%$ for all analytes.
 - 11.1.4.3.4 Internal standard criteria are not applicable to the ICP-MS tune solution.
- 11.1.5 A P/A factor update shall be performed utilizing the 10ug/L standard incorporated in the initial calibration curve. This should be updated on a regular basis when a calibration curve begins to fail, a new calibration curve is used, and after instrument maintenance.
- 11.1.6 A six-point calibration (minimally) must be conducted daily utilizing a calibration blank and five calibration standards (Section 10.9.2).
 - 11.1.6.1 All measurements must be based upon at least three integrations.
 - 11.1.6.2 Reported values must use the average of the multiple integrations.
 - 11.1.6.3 Results of the calibration blank must be $< \frac{1}{2}$ MQL.
 - 11.1.6.4 Internal standard criteria must be achieved for all analyses.

11.2 Initial Calibration Curve:

- 11.2.1 A linear regression (first order fit) of the instrument response versus the concentration of the standards is employed for subsequent quantitation. The instrument response is treated as the dependent variable (y) and the concentration as the independent variable (x). The regression will produce the slope and intercept terms for a linear equation in the form:

$$y = ax + b$$

Where:

- y = instrument response (peak area)
- a = slope of the line (coefficient of x)
- x = concentration of the calibration standard
- b = **calibration blank** intercept

- 11.2.2 The analyst should not force the line through the origin.
- 11.2.3 The regression calculation correlation coefficient (r) must be ≥ 0.995 .
- 11.2.4 The coefficient of determination (r^2) must be ≥ 0.990 .



11.3 Initial Calibration Verification (ICV):

- 11.3.1 The initial calibration must be verified utilizing a second source calibration verification standard at a concentration below the mid-point of the calibration curve (Section 10.11).
- 11.3.2 The ICV must be run after each new initial calibration curve.
- 11.3.3 Must meet accuracy performance criteria of 90-110% as outlined in the applicable LIMS test code.
- 11.3.4 Internal standard criteria must be achieved for the ICV analysis.

11.4 Low-Level Initial Calibration Verification (LLICV):

- 11.4.1 The LLICV is analyzed at the laboratory MQL to verify the lower end of the initial calibration. (Section 10.12)
- 11.4.2 The LLICV must be run after each new initial calibration
- 11.4.3 Must meet accuracy performance criteria of 80-120% as outlined in the applicable LIMS test code.
- 11.4.4 Internal standard criteria must be achieved for the LLICV analysis.

11.5 Interference Check Solution (ICSA):

- 11.5.1 The ICSA (Section 10.14) must be analyzed at the beginning of an analytical sequence and every 12 hours during the analytical run.
- 11.5.2 Must meet accuracy performance criteria of 80-120% as outlined in the applicable LIMS test code.
- 11.5.3 Non-spiked analytes must be <2 times PQL.
- 11.5.4 Internal standard criteria must be achieved for each ICSA analysis.

11.6 Continuing Calibration Verification (CCV):

- 11.6.1 A same source standard must be analyzed prior to sample analysis, after a maximum of 10 samples run (including the Method Blank, LCS, and MS/MSD), and at the end of the analytical run.
- 11.6.2 Must meet accuracy performance criteria of 90-110% as outlined in the applicable LIMS test code.
- 11.6.3 Internal standard criteria must be achieved for each CCV analysis.

12) Sample Preparation/Analysis

12.1 Digestion procedures are presented in the applicable sample preparation SOP (HN-MET-009 and HN-MET-010).

- 12.1.1 Allow particulates to settle prior to analysis. If necessary, filter the digestate to remove particles with a 0.45 µm filter (9.4). If filtration is used, all associated QC must also be filtered to monitor for potential bias and samples narrated.

12.2 When internal standard response falls outside acceptance criteria (<30% for 6020B and <60% or >125% for 200.8), dilute the sample and reanalyze.

12.3 Typical Analytical Sequence:

- 12.3.1 Initial Calibration curve, minimum five standards and a blank
- 12.3.2 Initial Calibration Verification Standard (after each calibration)
- 12.3.3 Initial Calibration Verification Blank (after each calibration)



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- 12.3.4 Low-Level Initial Calibration Verification Standard (after each calibration)
- 12.3.5 Interference Check Solution A (ICSA)
- 12.3.6 Continuing Calibration Verification (CCV)
- 12.3.7 Continuing Calibration Blank (CCB)
- 12.3.8 Method blank (one MB per preparation batch of 20 or less)
- 12.3.9 Laboratory Control Sample (one per preparation batch of 20 or less)
- 12.3.10 Client sample(s)
- 12.3.11 Matrix spike
 - 12.3.11.1 For Method 200.8, prepare at a 10% frequency (one per every 10 samples)
 - 12.3.11.2 For Method 6020B, prepare at a 5% frequency (one per preparation batch of 20 or less)
- 12.3.12 Matrix spike duplicate
 - 12.3.12.1 For Method 200.8, prepare at a 10% frequency (one per every 10 samples)
 - 12.3.12.2 For Method 6020B, prepare at a 5% frequency (one per preparation batch of 20 or less)
- 12.3.13 Continuing Calibration Verification Standard (CCV after every 10 samples)
- 12.3.14 Continuing Calibration Blank (CCB after every ten samples)
- 12.3.15 Client samples and batch QC samples (dilution test sample, PDS, MB, LCS and MS) – total of ten or less samples
- 12.3.16 Continuing Calibration Verification Standard (CCV at end of analytical sequence)
- 12.3.17 Continuing Calibration Blank (CCB at end of analytical sequence)
- 12.4 Dilution test:
 - 12.4.1 If the analyte concentration is within the linear dynamic range of the instrument and sufficiently high (minimally, a factor of at least 50 times greater than the MDL), an analysis of a fivefold dilution must agree within $\pm 20\%$ of the original determination. If not, an interference effect must be suspected.
- 12.5 Post-Digestion Spike (PDS) Addition:
 - 12.5.1 An analyte spike added to a portion of a prepared sample should fall within the laboratory derived acceptance criteria of $\pm 25\%$.
 - 12.5.2 The spike addition should be based on the indigenous concentration of each element of interest in the sample.
 - 12.5.3 If the spike is not recovered within the specified limits, the sample should be diluted and reanalyzed to compensate for the matrix effect.
 - 12.5.4 The use of a standard-addition analysis procedure may also be used if the dilution technique proves inconclusive.
 - 12.5.5 Post Digestion Preparation:
 - 12.5.5.1 To a 10 ml portion of digestion sample, add 100 μ l of Metals mix standard I. (Section 10.6.1)
 - 12.5.5.2 The theoretical spike is 100 ug/L for the trace metals, 10,000 ug/L for minerals, and 500 ug/L for Boron.



12.6 Method of Standard Additions (MSA):

- 12.6.1 When MS/MSD and PDS criteria are not met, the method of standard additions may be used to determine an accurate analyte level.
- 12.6.2 The MSA is an extension of the PDS where three PDS are performed on the same sample.
 - 12.6.2.1 Ideally, the first PDS is spiked at approximately 50% of the estimated analyte concentration. The second PDS is spiked at ~100% and the third at ~150%.
- 12.6.3 The MSA analyte concentration is determined using linear regression using the four data points. An MS Excel spreadsheet calculation is employed to calculate results from MSA.

13) Troubleshooting

- 13.1 Refer to Agilent ICP-MS 7800 hardware manual for specific technical troubleshooting guidance.

14) Data Acquisition

- 14.1 Create a prep batch (as applicable) in LIMS.
- 14.2 The data acquired is transferred via Masshunter™ to LIMS electronically. Calculations are performed by Masshunter™ software and LIMS.
- 14.3 Analyst review of data is performed on the raw data and in LIMS prior to being validated. If results are above the analytes detectable range, it will be reported as “-----”----“. Appropriate dilutions must be performed to generate reportable data.

15) Calculation, and Data Reduction Requirements

- 15.1 Calculation of Linear Regression Correlation Coefficient, r

$$r = \frac{\sum XY - \frac{\sum X \sum Y}{n}}{\sqrt{(\sum X^2 - \frac{(\sum X)^2}{n})(\sum Y^2 - \frac{(\sum Y)^2}{n})}}$$

Where:

X = individual values for independent variable
Y = individual values for dependent variable
n = number of pairs of data.
df = n-2

- 15.2 Calculation of the CCV % drift:

- 15.2.1 % Drift= [(Calculated conc - Theoretical conc) x 100] / Theoretical conc



15.3 Calibration Relative Error Calculation

$$\% \text{ Relative Error} = (x'_i - x_i) / x_i * 100$$

Where:

X_i = True value for the calibration standard

X'_i = Measured concentration of the calibration standard

The calibration relative error must be calculated using the low-point and mid-point standards.

15.4 The calibration curve versus sample response data produces the metal concentration in solution.

15.4.1 Equation for water samples:

$$\text{Concentration}(\text{ug} / \text{L}) = \text{SampleResponse}(\text{ug} / \text{L}) \times \text{Dilution Factor (If Applicable)}$$

15.4.2 Equation for soil samples (external calibration):

$$\text{Concentration}(\text{ug} / \text{kg}) = \frac{\text{Sample Response}(\text{ug} / \text{L}) \times \text{FV}}{\text{Weight of Sample}(\text{g})} \times \text{Dil. Factor (If Applicable)}$$

Where:

FV = final volume of digestion, ml

15.4.3 If additional dilutions are used, the result must be multiplied by the total dilution factor.

15.5 QC Calculations: Calculate the percent recovery for various QC samples (MS, MSD, LCS) according to the following equations:

15.5.1 % Recovery, %R (for MS/MSD and LCS)

$$\%R = \frac{(SSR - SR)}{SA} \times 100$$

Where:

SSR = Spiked Sample Result (mg/L or mg/kg).

SR = Sample Result (unspiked)

SA = Spike Amount Added (mg/L or mg/kg).

15.5.2 % Recovery, %R (for standards and CCV)

$$\%R = \frac{(SSR)}{SA} \times 100$$

Where:

SSR = Spiked Sample Result (mg/L or mg/kg).

SA = Spike Amount Added (mg/L or mg/kg).



15.5.3 % RPD (for precision or replication evaluation)

$$\%RPD = \frac{|SR_1 - SR_2|}{\frac{1}{2}(SR_1 + SR_2)} \times 100$$

Where:

SR₁ = Sample result for replicate 1.
SR₂ = Sample result for replicate 2.

16) Quality Control, Acceptance Criteria and Corrective Action

16.1 Instrument Detection Limit (IDL)

- 16.1.1 IDL determinations should be determined upon instrument setup and after performance of any major maintenance. IDLs must be kept on file for each instrument.
- 16.1.2 IDL determinations are to be completed by averaging the standard deviations of seven measurements of a reagent blank, over a minimum of three non-sequential analytical runs.

16.2 Initial Calibration:

16.2.1 A calibration curve must be generated daily or whenever ICV/CCV fail to achieve acceptance criteria.

16.2.2 Acceptance Criteria:

- 16.2.2.1 Curve must be determined from a minimum of five standards and a calibration blank.
- 16.2.2.2 The regression coefficient "r" must be ≥ 0.995
- 16.2.2.3 The coefficient of determination "r²" must be ≥ 0.990
- 16.2.2.4 All responses must be based upon the average of three integrations at a minimum
- 16.2.2.5 The Relative Error at the midpoint shall meet the criteria specified in the method at the midpoint (CCV Criteria) and at the lowest level the criteria shall be +/- 50%

16.2.3 Curve Failure Corrective Action:

- 16.2.3.1 Check standards and/or perform maintenance as necessary to correct problem.
- 16.2.3.2 Process a new initial calibration curve

16.3 Initial Calibration Verification (ICV):

16.3.1 Perform daily after generation of the initial calibration curve.

16.3.2 Acceptance criteria:

- 16.3.2.1 Must meet accuracy performance criteria of 90-110% as outlined in the applicable LIMS test code.

16.3.3 ICV Failure Corrective Action:



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- 16.3.3.1 Evaluate condition and age of standards being used and/or perform any needed system maintenance.
- 16.3.3.2 Reanalyze the ICV and /or generate a new calibration curve as necessary to achieve acceptable calibration criteria.
- 16.4 Low-Level Initial Calibration Verification (LLICV):
 - 16.4.1 Perform daily after generation of the initial calibration curve.
 - 16.4.2 Acceptance criteria:
 - 16.4.2.1 Must meet accuracy performance criteria of 80-120% as outlined in the applicable LIMS test code.
 - 16.4.3 LLICV Failure Corrective Action:
 - 16.4.3.1 Evaluate condition and age of standards being used and/or perform any needed system maintenance.
 - 16.4.3.2 Reprocess the LLICV and /or generate a new calibration curve as necessary to achieve acceptable calibration criteria.
- 16.5 Continuing Calibration Verification (CCV):
 - 16.5.1 The CCV must be run prior to sample analysis, after every 10 samples (including QC samples), and at the end of the analytical sequence.
 - 16.5.2 Acceptance Criteria:
 - 16.5.2.1 Must meet accuracy performance criteria of 90-110% as outlined in the applicable LIMS test code.
 - 16.5.3 CCV failure Corrective Action:
 - 16.5.3.1 If the CCV does not meet the criteria, re-analyze the standard.
 - 16.5.3.2 If subsequent analysis is outside of criteria, perform a new calibration curve.
 - 16.5.3.3 All samples processed following the last acceptable CCV must be re-analyzed.
Note: If the CCV recovery exceeds the upper control limit and the associated sample result is non-detect, the sample may be reported. **This note is not applicable to drinking water samples by method 200.8.**
- 16.6 Continuing Calibration Blank (CCB):
 - 16.6.1 The calibration blank must be run prior to sample analysis, after every 10 samples (including QC samples), and at the end of the analytical sequence.
 - 16.6.2 Acceptance Criteria:
 - 16.6.2.1 All analytes must be less than the MQL.
 - 16.6.3 CCB failure Corrective Action:



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- 16.6.3.1 If the calibration blank does not meet the criteria, re-analyze the blank.
- 16.6.3.2 If subsequent analysis falls outside of criteria, perform any necessary maintenance and perform a new calibration curve.
- 16.6.3.3 All samples processed following the last acceptable CCB must be re-analyzed.

Note: If the CCB concentration exceeds the upper control limit and the associated sample result is non-detect, the sample may be reported. **This note is not applicable to drinking water samples by method 200.8.**

16.7 Linear Dynamic Range (LDR) Assessment

- 16.7.1 A LDR sample can be processed to assess linearity above the highest calibration standard.
- 16.7.2 Acceptance Criteria:
 - 16.7.2.1 All analytes must be within 10% of the true value of the LDR standard.
 - 16.7.2.2 Sample concentrations greater than 90% of the LDR must be diluted and re-analyzed.
 - 16.7.2.3 The LDR shall be analyzed once daily (12 hour shift).
 - 16.7.2.4 Silver has been demonstrated to precipitate out of solution above a raw concentration of 200 ppb. Aqueous samples exceeding this value must be re-digested at a dilution, and solid samples re-digested using a lesser mass, sufficient to bring the instrument raw value under 200 ppb.
- 16.7.3 LDR assessment failure Corrective Action:
 - 16.7.3.1 If the LDR does not meet criteria for an analyte, no data for that analyte exceeding the highest calibration standard can be reported.

16.8 Blanks:

- 16.8.1 Rinse Blank(s)
 - 16.8.1.1 Rinse blanks should be used to flush system components between blanks, standards, and samples.
 - 16.8.1.2 Allow sufficient time to remove traces of the previous sample prior to new sample introduction.
 - 16.8.1.3 Rinse blanks are not to be routinely run before QC samples. If carryover is an issue, rinse-out times may need to be addressed.
- 16.8.2 Calibration Blank(s)
 - 16.8.2.1 See Section 16.6.
- 16.8.3 Method Blank(s)
 - 16.8.3.1 A method blank must be processed with each batch of 20 or fewer samples of the same matrix and prepared on the same working shift.
 - 16.8.3.2 Acceptance Criteria (Non-Potable Water and Soils):
 - 16.8.3.2.1 All analytes of interest must be less than the PQL.



16.8.3.2.2 Method blank values exceeding the PQL indicate laboratory/reagent contamination and should be considered suspect.

16.8.3.2.3 Method blank values exceeding the PQL may be considered useable if:

16.8.3.2.3.1 The blank analyte concentration is < 10% of the sample analyte concentration,

16.8.3.2.3.2 less than 5% of the regulatory limit,

16.8.3.2.3.3 or less than 3 times the MDL (whichever is greater),

16.8.3.2.3.4 All associated samples are appropriately qualified, and Project Management notification/approval is completed.

16.8.3.2.4 Other approved QA program requirements must be followed when the acceptable blank contamination specified in the approved QA project plan differs from the above.

16.8.3.3 Acceptance Criteria (Drinking Water):

16.8.3.3.1 All analytes of interest must be less than 2.2 times the MDL.

16.8.3.3.2 Method blank values exceeding the MDL may indicate laboratory/reagent contamination and should be considered suspect.

16.8.3.3.3 Method blank values exceeding 2.2 times the MDL may be considered useable if the blank concentration is <10% of the sample analyte concentration, and the sample is appropriately narrated.

16.8.3.4 Corrective Action:

16.8.3.4.1 If the method blank results do not meet the acceptance criteria above, then the laboratory must take corrective action to locate and reduce the source of the contamination.

16.8.3.4.2 All samples associated with the contaminated method blank must be reprocessed.

Note: If the MBLK concentration exceeds the upper control limit and the associated sample result is non-detect, the sample may be reported. **This note is not applicable to drinking water samples by method 200.8.**

16.8.3.4.3 If samples cannot be reprocessed due to insufficient sample volume, a non-conformance must be documented in the data checklist for the analytical run. This must provide sufficient detail for project narration and to ensure all appropriate data flags are entered into LIMS.

16.8.3.4.4 Data reported with an associated contaminated method blank must be flagged with a "B".

16.9 Laboratory Control Sample (LCS):

16.9.1 The LCS must be processed with each batch of 20 or less samples of the same matrix and processed on the same shift.

16.9.2 Acceptance Criteria:



16.9.2.1 Must meet accuracy performance criteria as outlined in the applicable LIMS test code.

16.9.3 LCS Corrective Action:

16.9.3.1 If the LCS recovery does not meet acceptance criteria, the sample batch must be reprocessed.

Note: If the LCS recovery exceeds the upper control limit and the associated sample result is non-detect, the sample may be reported. **This note is not applicable to drinking water samples by method 200.8.**

16.9.3.2 If samples cannot be reprocessed due to insufficient sample volume, a non-conformance must be documented in the data checklist for the analytical run. This must provide sufficient detail for project narration and to ensure all appropriate data flags are entered into LIMS.

16.9.3.3 Data reported with a failed LCS must be flagged and narrated as to potential bias characteristics.

16.10 Low-level Quality Control Sample (LLQC):

16.10.1 The LLQC must be processed quarterly and undergo the entire preparation and analytical process.

16.10.2 Acceptance Criteria:

16.10.2.1 Must meet accuracy performance criteria of 65-135% as outlined in the applicable LIMS test code.

16.10.3 LLQC Corrective Action:

16.10.3.1 If the LLQC recovery does not meet acceptance criteria, investigate the cause of the failure.

16.10.3.2 Reprocess the LLQC once the cause of the failure has been identified and corrected.

16.10.3.3 If a cause cannot be identified and corrected, spike LLQC at a higher concentration, process, and adjust MQLs accordingly.

16.11 Matrix Spike and Matrix Spike Duplicate (MS/MSD)

16.11.1 A MS/MSD pair must be processed at a 10% frequency for Method 200.8 and at a 5% frequency for Method 6020B. MS/MSD samples must be of the same matrix and processed during the same working shift.

16.11.2 Acceptance Criteria:

16.11.2.1 Must meet accuracy and precision performance criteria as outlined in the applicable LIMS test code.

16.11.2.2 Recovery values should not be evaluated if the spike concentration is less than 25% of the parent concentration.

16.11.3 MS/MSD Corrective Action:

16.11.3.1 If the MS/MSD pair generates recovery values outside acceptance criteria, the deviation may be due to matrix effects. The LCS, internal standard recoveries, and calibration results must all be evaluated in order to determine if matrix interference is present. (Note that the MS/MSD are used to evaluate the matrix effect, not



to control the analytical process.) If both the MS/MSD fall outside accuracy criteria for the same analyte, a matrix effect is suspected, assuming the LCS achieves accuracy criteria, and all internal standard recoveries are consistent.

As an example, if the matrix spikes exhibit low recovery but good precision, laboratory control samples exhibit acceptable accuracy, and internal standard recovery is consistent, the presence of matrix interference is probable.

- 16.11.3.2 If the MS/MSD pair generates inconsistent recovery values and/or suspect LCS values are present, laboratory error (and not matrix inference) is suspected.

As an example, if precision between the MS/MSD pair is poor and the LCS presents divergent results, the presence of laboratory error is probable.

- 16.11.3.3 If the MS/MSD fails acceptance criteria, the data must be evaluated for error or possible matrix effect.
- 16.11.3.4 If laboratory error is indicated, all associated samples must be reprocessed. If samples cannot be reprocessed due to limited sample volume or other similar circumstances, all reported values must be qualified and narrated as to potential bias or usability.
- 16.11.3.5 If matrix interference is indicated, associated samples may be reported with appropriate qualification and narration.
- 16.11.3.6 A non-conformance must be documented in the data checklist for either scenario and must contain sufficient detail for project narration and to ensure all appropriate data qualifiers have been entered into LIMS.

16.12 Internal Standards (IS):

- 16.12.1 Internal standards must be added to all samples with the exception of the ICPMS tuning solution. We utilize an automatic internal standard introduction system via a peristaltic pump.

16.12.2 Acceptance Criteria:

- 16.12.2.1 For samples processed according to USEPA 6020B, the IS results must be >30% of the original response in the initial calibration.
- 16.12.2.2 For samples processed according to USEPA 200.8, the IS results must fall between 60%-125% of the original response in the initial calibration.
- 16.12.2.3 Analytical results associated with IS failures may not be reported.

16.12.3 IS failure corrective action:

- 16.12.3.1 If criteria are not met, the cause of the problem must be determined, corrected, and the samples re-analyzed.
- 16.12.3.2 The sample must undergo a five-fold (1+4) dilution to alleviate potential matrix interference. Note: Greater dilutions may be necessary for samples contributing significant matrix interference.



16.12.3.3 Samples undergoing a necessary dilution due to IS failure must be notated as such if the target analyte concentration falls below the reporting limit.

16.12.3.4 If samples cannot be re-analyzed, all associated results must be qualified as "Unusable".

16.13 Reported Analyte Concentration

16.13.1 Reported concentrations for applicable analytes must be reported from the least dilute analysis that achieves all required quality control parameters.

16.14 Interference Check Solution:

16.14.1 The interference check solutions must be processed at the beginning of each analytical sequence and every 12 hours during an analytical run.

16.14.2 Acceptance Criteria:

16.14.2.1 Must meet accuracy performance criteria as outlined in the applicable LIMS test code.

16.14.2.2 All non-spiked analytes < 2x PQL.

16.14.2.3 All internal standard criteria must be achieved for the interference check solution analysis.

16.14.3 Interference Check Solution Failure

16.14.3.1 All samples associated with a failure of the ICSA must be reprocessed.

16.14.3.2 If samples cannot be re-analyzed, all sample results must be qualified as unusable.

16.15 Dilution Test Check

16.15.1 When matrix interference is suspected in the analysis of the MS/MSD and if the sample analyte concentration is within the linear dynamic range and sufficiently high (>50 times the MDL), a sample dilution test shall be completed at a five-fold dilution.

16.15.2 Acceptance Criteria

16.15.2.1 Must meet precision performance criteria of $\pm 20\%$ as outlined in the applicable LIMS test code.

16.15.3 Dilution Test Failure

16.15.3.1 In the event of a dilution test failure, the sample must be closely inspected for indications of matrix interference.

16.15.3.2 A post digestion spike or standard addition should be completed on the failed sample to verify matrix interference.

16.16 Post Digestion spike requirements

16.16.1 One post digestion spike (PDS) must be completed for each batch of ≤ 20 samples when matrix interference is suspected through the analysis of the MS/MSD.

16.16.2 The PDS should be spiked at the same level as the MS/MSD.

16.16.3 Acceptance Criteria



16.16.3.1 Must meet accuracy performance criteria within $\pm 25\%$ of the true value as outlined in the applicable LIMS test code.

16.16.4 PDS Failure

16.16.4.1 If the PDS fails the various acceptance criteria, the sample may be processed using standard additions as detailed in Section 12.6, or data must be qualified.

16.17 Deviations and non-conforming events must be documented using a Nonconformance Corrective Action Report (NCAR) or as an Exception Report item on the laboratory review checklist. For mandatory QC failures (e.g. LCS), the NCAR must be submitted to the QA Manager via the NCAR database.

17) Data Records Management

- 17.1 All data is stored for 12 years in compliance with the EPA Lead and Copper Rule.
- 17.2 All analytical sequence IDs and standard preparation information must be recorded in the Run logbook. Records of analytical sequences and raw data must be retained and initialed by the analyst (electronic initials are acceptable). To simplify standard tracking, analyst must attempt to use one lot of reagents and standards with each batch.
- 17.3 Complete all pertinent sections in the respective logbooks. If not-applicable then line out the section. "Z" out or "X" out all large sections of the worksheet that are not used. Make all corrections with single line through, date and initial. Make NO obliterations when manually recording data.
- 17.4 Logbooks are controlled. Never remove a page from a logbook. Completed logbooks are returned to the QA department when filled and no longer needed in the work area.
- 17.5 The effective date of this SOP is the date in the header or last signature date, whichever is most recent.

18) Contingencies for Handling Out of Control Data

- 18.1 When method required QC exceedances occur, in every case where sample data quality are affected, the source of the QC exceedance must be determined, corrected and sample reanalysis carried out when possible.
- 18.2 When affected sample analysis cannot be repeated due to limitations (i.e. sample availability, or if reanalysis can only be performed after expiration of a sample hold time), the reporting of data associated with exceeded QC data must be appropriately flagged and narrated. This documentation is necessary to define for the data user the effect of the error upon the data quality of the results reported (e.g. E flag data indicate the result to be only an estimate).
- 18.3 All analysts must report sufficient comments in laboratory data review checklist for exceeded QC associated with sample results so that project management can further narrate and ensure data qualifiers (flags) are properly assigned to the reported data.
- 18.4 NCARs must be issued for QC system exceedances. Matrix interferences are reported using the analyte reporting comment section in LIMS or using the Laboratory Data review checklist.

19) Method Performance



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19.1 Demonstration of Proficiency:

19.1.1 Initial Demonstration of Proficiency

19.1.1.1 The laboratory must determine linear dynamic range, method detection limits, and evaluation of quality control samples prior to sample analysis by this procedure.

19.1.2 Routine Demonstration of Proficiency

19.1.2.1 Each analyst must demonstrate initial proficiency with sample preparation and/or analytical determination by generating 4 sets of data of acceptable accuracy and precision for target analytes in a clean matrix.

19.1.2.2 Each analyst must demonstrate ongoing proficiency annually with each sample preparation and/or analytical determination method by generating acceptable accuracy and precision for target analytes in a clean matrix or by passing performance in approved PT evaluations.

19.2 Method Detection Limits (MDLs) must be evaluated on an annual basis (at minimum) or whenever major modifications are performed on instrumentation (ex: change detector, auto-sampler, etc.).

19.3 On-going laboratory performance must be documented via performance evaluation studies and shall be completed approximately every 6 months.

20) Summary of Changes

Table 20.1 Summary of Changes

Revision Number	Effective Date	Document Editor	Description of Changes
R06	9/1/12	CES	Sec. 12.3.11 removed; Sec. 16.6.3.3 (<CCV) added; Sec. 16.11.3.1,2,3 amended; removed Sec. Heading 16.12.4
R07	10/1/13	CES	Formatting; Change hold time of lab-filtered samples from 16 hours to 24 hours.
R08	1/15/16	CES	Review Frequency and Data Storage requirement. Update Internal Standard Criteria for 21.7 - 21.8. Removal of ORS Method.
R09	9/15/16	CES	Section 10.14 updated to include Phosphorous
R09	9/15/16	CES	Section 16 updated to include process of reporting non-detect data for samples when Quality Control criteria exceeds the upper limit.
R10	12/15/16	CES	Added interference correction equations.
R11	10/15/17	CES	Removed cover page graphics
R11	10/15/17	CES	Included sampling guidance for Pb and Cu Rule samples.
R11	10/15/17	CES	Included MBLK evaluation criteria for drinking water samples.
R11	10/15/17	CES	Included Thorium and Uranium as measured analytes.
R11	10/15/17	CES	Included record retention criteria for
R12	12/31/18	CES	Major update to include 6020B
R13	04/01/21	CES	Major update of spiking information to accommodate



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			new standard suppliers.
R13	04/01/21	CES	Update to require a minimum of 5 calibration standards plus the calibration blank to meet TNI 2016 criteria.
R13	04/01/21	CES	Updated section 16.5.5.3 to exclude report of non-qualified data for drinking water samples.
R14	07/31/21	LC	Added sections 9.4 and 12.1.2 for filtering digestates
R15	11/30/21	NMW	Added 15.3, relative error calculation; 16.2.2.5, relative error acceptance criteria; 6.6 & 16.7.2.4, Ag LDR acceptance criteria
R16	02/28/23	NMW	Removed ⁸⁹ Y from internal standard mix Section 1.7; Removed annual ongoing demonstration of proficiency Section 7.2.4 and 7.3.3; updated supplier/part # Section 9.4
R16	02/28/23	NMW	Section 10 several updates to standards preparation; Sections 16.16.4.1 and 16.16.4.2 removed
R16	02/28/23	NMW	Several updates to Tables 20.3-A and 20.3-B

21) References and Related Documents

- 21.1 Environmental Protection Agency, "Method 6020B Inductively Coupled Plasma Mass Spectrometry", Test Methods for Evaluating Solid Waste Physical/Chemical Methods, Revision 2, July 2014.
- 21.2 U.S. Environmental Protection Agency, "Method 200.8, Inductively Coupled Plasma – Mass Spectrometry," Methods for Chemical Analysis of Water and Wastes, Revision 5.4, 1994.
- 21.3 ALS Environmental Quality Assurance Manual, Revision (most current)
- 21.4 Table 20.1-A - ICP-MS Analyte Listing for SW 846-6020B
- 21.5 Table 20.1-B - ICP-MS Analyte Listing for Method 200.8
- 21.6 Table 20.2 - LCS Acceptance Criteria
- 21.7 Table 20.3-A - Internal Standard Criteria for SW 846-6020B
- 21.8 Table 20.3-B - Internal Standard Criteria for Method 200.8
- 21.9 Table 20.4 - Calibration and QC Summary
- 21.10 Interference Correction Equations

**Table 20.1-A****Analyte List: SW 846-6020B**

Aluminum	(Al)	7429-90-5
Antimony	(Sb)	7440-36-0
Arsenic	(As)	7440-38-2
Barium	(Ba)	7440-39-3
Beryllium	(Be)	7440-41-7
Boron	(B)	7440-42-8
Cadmium	(Cd)	7440-43-9
Calcium	(Ca)	7440-70-2
Chromium	(Cr)	7440-47-3
Cobalt	(Co)	7440-48-4
Copper	(Cu)	7440-50-8
Iron	(Fe)	7439-89-6
Lithium	(Li)	7439-93-2
Lead	(Pb)	7439-92-1
Magnesium	(Mg)	7439-95-4
Manganese	(Mn)	7439-96-5
Molybdenum	(Mo)	7439-98-7
Nickel	(Ni)	7440-02-0
Potassium	(K)	7440-09-7
Selenium	(Se)	7782-49-2
Silicon	(Si)	7440-21-3
Silver	(Ag)	7440-22-4
Sodium	(Na)	7440-23-5
Thallium	(Tl)	7440-28-0
Thorium	(Th)	7440-29-1
Tin	(Sn)	7440-31-5
Titanium	(Ti)	7440-32-6
Uranium	(U)	7440-61-1
Vanadium	(V)	7440-62-2
Zinc	(Zn)	7440-66-6

(Additional analytes may be added based upon appropriate performance data.)

**Table 20.1-B****Analyte List: Method 200.8**

Aluminum	(Al)	7429-90-5
Antimony	(Sb)	7440-36-0
Arsenic	(As)	7440-38-2
Barium	(Ba)	7440-39-3
Beryllium	(Be)	7440-41-7
Boron	(B)	7440-42-8
Cadmium	(Cd)	7440-43-9
Calcium	(Ca)	7440-70-2
Chromium	(Cr)	7440-47-3
Cobalt	(Co)	7440-48-4
Copper	(Cu)	7440-50-8
Iron	(Fe)	7439-89-6
Lithium	(Li)	7439-93-2
Lead	(Pb)	7439-92-1
Magnesium	(Mg)	7439-95-4
Manganese	(Mn)	7439-96-5
Molybdenum	(Mo)	7439-98-7
Nickel	(Ni)	7440-02-0
Potassium	(K)	7440-09-7
Selenium	(Se)	7782-49-2
Silicon	(Si)	7440-21-3
Silver	(Ag)	7440-22-4
Sodium	(Na)	7440-23-5
Thallium	(Tl)	7440-28-0
Thorium	(Th)	7440-29-1
Tin	(Sn)	7440-31-5
Titanium	(Ti)	7440-32-6
Uranium	(U)	7440-61-1
Vanadium	(V)	7440-62-2
Zinc	(Zn)	7440-66-6

(Additional analytes may be added based upon appropriate performance data.)



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TABLE 20.2 - LCS ACCEPTANCE CRITERIA FOR METALS ANALYSIS BY ICP/MS

Analyte	Water Spike Amt, mg/L	6020B Water Lower %R Limit	6020B Water Upper %R Limit	200.8 Water Lower % R Limit	200.8 Water Upper % R Limit	Soil Spike Amt, mg/Kg	Soil Lower % R Limit	Soil upper % R Limit
Aluminum	0.1	80	120	85.0	115	5	80	120
Antimony	0.1	80	120	85.0	115	5	80	120
Arsenic	0.1	80	120	85.0	115	5	80	120
Barium	0.1	80	120	85.0	115	5	80	120
Beryllium	0.1	80	120	85.0	115	5	80	120
Boron	0.5	80	120	85.0	115	25	80	120
Cadmium	0.1	80	120	85.0	115	5	80	120
Calcium	10.0	80	120	85.0	115	500	80	120
Chromium	0.1	80	120	85.0	115	5	80	120
Cobalt	0.1	80	120	85.0	115	5	80	120
Copper	0.1	80	120	85.0	115	5	80	120
Iron	10.0	80	120	85.0	115	500	80	120
Lead	0.1	80	120	85.0	115	5	80	120
Lithium	0.1	80	120	85.0	115	5	80	120
Potassium	10.0	80	120	85.0	115	500	80	120
Magnesium	10.0	80	120	85.0	115	500	80	120
Manganese	0.1	80	120	85.0	115	5	80	120
Molybdenum	0.1	80	120	85.0	115	5	80	120
Nickel	0.1	80	120	85.0	115	5	80	120
Selenium	0.1	80	120	85.0	115	5	80	120
Silicon	10	80	120	85.0	115	500	80	120
Silver	0.1	80	120	85.0	115	5	80	120
Sodium	10.0	80	120	85.0	115	500	80	120
Strontium	0.1	80	120	85.0	115	5	80	120
Thallium	0.1	80	120	85.0	115	5	80	120
Tin	0.1	80	120	85.0	115	5	80	120
Titanium	0.1	80	120	85.0	115	5	80	120
Thorium	0.1	80	120	85.0	115	5	80	120
Uranium	0.1	80	120	85.0	115	5	80	120
Vanadium	0.1	80	120	85.0	115	5	80	120
Zinc	0.1	80	120	85.0	115	5	80	120



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Table 20.3-A
Metals Analysis by ICP/MS: SW 846-6020B
Internal Standard Criteria for CCV, CCB and
samples

Samples and QC samples	Isotope	Ref IS	Lower %	Upper %
Li6 (IS)	6	-	30	-
Li	7	Li6	-	-
Be	9	Li6	-	-
B	11	Li6	-	-
Na	23	Sc	-	-
Mg	24	Sc	-	-
Al	27	Sc	-	-
Si	29	Sc	-	-
K	39	Sc	-	-
Ca	44	Sc	-	-
Sc (IS)	45	-	30	-
Ti	47	Sc	-	-
V	51	Sc	-	-
Cr	52	Y	-	-
Mn	55	Y	-	-
Fe	56	Y	-	-
Co	59	Y	-	-
Ni	60	Y	-	-
Cu	63	Y	-	-
Zn	66	Y	-	-
As	75	Y	-	-
Se waters	78	Y	-	-
Se soils	82	Y	-	-
Sr	88	Y	-	-
Y (IS)	89	-	30	-
Mo	98	Y	-	-
Ag	107	Y	-	-
Cd	111	Y	-	-
In (IS)	115	-	30	-
Sn	118	In	-	-
Sb	121	Y	-	-
Ba	137	In	-	-
Tl	203	Bi	-	-
Pb	208	Bi	-	-
Bi (IS)	209	-	30	-
Th	232	Bi	-	-
U	238	Bi	-	-



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Table 20.3-B Metals Analysis by ICP/MS: Method 200.8 Internal Standard Criteria for CCV, CCB and samples				
Samples and QC samples	Isotope	Ref IS	Lower %	Upper %
Li (IS)	6	-	60	125
Li	7	Li6	-	-
Be	9	Li6	-	-
B	11	Li6	-	-
Na	23	Sc	-	-
Mg	24	Sc	-	-
Al	27	Sc	-	-
Si	29	Sc	-	-
K	39	Sc	-	-
Ca	44	Sc	-	-
Sc (IS)	45	-	60	125
Ti	47	Sc	-	-
V	51	Sc	-	-
Cr	52	Y	-	-
Mn	55	Y	-	-
Fe	56	Y	-	-
Co	59	Y	-	-
Ni	60	Y	-	-
Cu	63	Y	-	-
Zn	66	Y	-	-
As	75	Y	-	-
Se	78	Y	-	-
Sr	88	Y	-	-
Y (IS)	89	-	60	125
Mo	98	Y	-	-
Ag	107	Y	-	-
Cd	111	Y	-	-
In (IS)	115	-	60	125
Sn	118	In	-	-
Sb	121	Y	-	-
Ba	137	In	-	-
Tl	203	Bi	-	-
Pb	208	Bi	-	-
Bi (IS)	209	-	60	125
Th	232	Bi	-	-
U	238	Bi	-	-



Table 20.4
Summary of Calibration and QC Procedures for Method 200.8 & 6020B

QC Check	Minimum Frequency	Acceptance Criteria	Corrective Action^a
ICPMS tuning sample.	Prior to initial calibration and calibration verification.	RSD < 5%. Amu +/- 0.1 true value.	Retune instrument then reanalyze tuning solution.
Initial calibration (minimum 5 standards and a blank).	Daily initial calibration prior to sample analysis.	$r > 0.995$ $r^2 > 0.990$	N/A.
Initial Calibration verification (second source).	Daily after initial calibration,	All analytes within $\pm 10\%$ of expected value.	Correct problem and repeat initial calibration.
Calibration blank.	Before beginning a sample run, after every 10 samples and at end of the analysis sequence.	No analytes detected > $\frac{1}{2}$ MQL.	Correct problem then analyze calibration blank and previous 10 samples.
Continuing Calibration verification (CCV).	Before beginning a sample run, after every 10 samples and at the end of the analysis sequence.	All analyte(s) within $\pm 10\%$ of expected value.	Correct problem then repeat calibration and reanalyze all samples since last successful calibration.
Demonstrate ability to generate acceptable accuracy and precision using four replicate LCS analyses.	Once per analyst.	All analyte(s) within $\pm 20\%$ of the expected value. RSD of <20%	Recalculate results; locate and fix problem with system and then rerun demonstration for those analytes that did not meet criteria.
Method blank.	One per preparation batch.	NPW/SCM: No analytes detected > MQL. Drinking Water: No analytes detected > 2.2 x MDL.	Correct problem, re-digest and analyze method blank and all samples processed with the contaminated blank.



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Table 20.4
Summary of Calibration and QC Procedures for Method 200.8 & 6020B

QC Check	Minimum Frequency	Acceptance Criteria	Corrective Action ^a
Interference check solution (ICS-A).	At the beginning of an analytical run and every 12 hours.	ICS-A: All non-spiked analytes < 2x PQL; Spiked analytes within $\pm 20\%$ of true value.	Terminate analysis; locate and correct problem; reanalyze ICS; reanalyze all affected samples.
LCS for the analyte.	One LCS per preparation batch.	All analytes within $\pm 15\%$ of the expected value for 200.8 and $\pm 20\%$ for 6020B.	Correct problem, re-digest and reanalyze the LCS and all samples in the affected preparation batch.
Dilution test.	Each preparatory batch, when MS/MSD fails.	5X dilution must agree within $\pm 20\%$ of the original determination for analytes present at concentrations > 50x MDL.	Perform post digestion spike addition for failed analytes.
Post digestion spike addition.	When dilution test fails.	Recovery within 75%-125% of expected results.	Perform MSA or narrate potential bias.
MS/MSD	5% frequency for 6020B, 10% frequency for 200.8.	QC advisory acceptance criteria, 70% - 130% for 200.8. 75% - 125% for 6020B.	Describe in Laboratory Review Checklist.
Internal Standards (ISs).	Every sample.	Sample IS intensity: <i>SW 846-6020B samples must meet >30% criteria. EPA 200.8 samples must meet 60-125% criteria.</i>	Perform corrective action and/or dilution and reprocess all affected samples.
MDL study.	Performed Annually	Detection limits established shall be < MQLs in Tables 21.1	None.
IDL study.	Performed upon instrument setup and after significant maintenance.	Average of standard deviation of reagent blank analyzed 7 times on at least 3 non-consecutive days.	None.



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Table 20.4
Summary of Calibration and QC Procedures for Method 200.8 & 6020B

QC Check	Minimum Frequency	Acceptance Criteria	Corrective Action ^a
Low-level Initial Calibration Verification (LLICV)	Performed daily after Initial calibration	80%-120% of expected value spike at MQL.	Correct problem and repeat initial calibration.
Low-level Quality Control Sample (LLQC)	Quarterly	65%-135% of expected value spike at MQL. Carried through entire preparation process.	Correct problem, re-digest and reanalyze. If problem cannot be corrected, spike at a higher concentration and update PQLs accordingly.

Attachment 21.10 – Interference Correction Equations

Interference Equation

Mass Equation

51 :	$(51) * 1 - (53) * 3.127 + (52) * 0.353351$
75 :	$(75) * 1 - (77) * 3.127 + (82) * 2.548505$
82 :	$(82) * 1 - (83) * 1.009$
98 :	$(98) * 1 - (99) * 0.146$
111 :	$(111) * 1 - (108) * 1.073$
115 :	$(115) * 1 - (118) * 0.016$
208 :	$(208) * 1 + (206) * 1 + (207) * 1$



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METHOD DETECTION AND QUANTITATION LIMITS

SOPID: HN-QS-006 Rev. Number: R07 Effective Date: 03/31/2022

Approved By:

QA Manager

Date:

03/16/22

Approved By:

Technical Director

Date:

3/17/22

Archival Date:

Doc Control ID#:

Editor:

PROCEDURAL REVIEW

SIGNATURES BELOW INDICATE NO PROCEDURAL CHANGES HAVE BEEN MADE TO THE SOP SINCE THE APPROVAL DATE ABOVE. THIS SOP IS VALID FOR 24 ADDITIONAL MONTHS FROM DATE OF THE LAST SIGNATURE UNLESS INACTIVATED OR REPLACED BY SUBSEQUENT REVISIONS.

Signature

Quality Manager

Title

06/18/2024

Date

Signature

Title

Date

Signature

Title

Date



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METHOD DETECTION AND QUANTITATION LIMITS

1) Scope and Applicability

- 1.1 The procedure described provides guidance in determining method detection limits (MDL) and the associated method-quantitation limit (MQL). The procedure for determining the MDL is performed using an interference free matrix, typically reagent water for aqueous samples and a purified matrix for solid samples (e.g. sand, Teflon chips). All sample-processing steps of the analytical method must be carried out when processing the MDL study.
- 1.2 Guidelines are being provided in this procedure to calculate a practical quantitation limit (PQL) after the MDL has been determined. The PQL is labeled as "Report Limit" in final laboratory reports.
- 1.3 The MDL procedure is not applicable to methods that do not produce results with a continuous distribution, such as, but not limited to, presence/absence methods and microbiological methods using colony counting. The MDL procedure is not applicable to measurements such as, but not limited to, biological oxygen demand, color, pH, specific conductance, many titration methods, and methods where low level spike samples cannot be prepared. MDL determinations using spiked samples may not be appropriate for all gravimetric methods (e.g. residue or total suspended solids), but an MDL based on method blanks can be determined in such instances.

2) Summary of Procedure

- 2.1 At a minimum, seven replicate spiked samples and seven replicate method blanks of reagent water or solid matrix are analyzed (spiked ~2 - 10 times the estimated MDL). The absolute standard deviation is calculated and the value multiplied by the student "t" value for the 99% confidence at n-1 degrees of freedom. The result of this calculation is the method detection limit.
- 2.2 To estimate the PQL, the analyte MDL is multiplied by a factor of ten thirds (3.33). The first or second lowest reliable level of calibration may be substituted for a calculated PQL value.
- 2.3 For any values reported $< \text{PQL}$ and $\geq \text{MDL}$, the value is considered an estimated quantity and must be reported with a "J" flag data qualifier.

3) Definitions

- 3.1 Method Detection Limit (MDL): The MDL is defined as the minimum concentration of a substance that can be measured and reported with a one tailed 99% confidence that the analyte concentration is greater than the method blank value. The MDL is determined from analysis of a sample in a given matrix containing the analyte.
- 3.2 Practical Quantitation Limit (PQL): The PQL is defined as the lowest concentration that can be reliably quantitated during routine laboratory operating conditions. (The PQL is also commonly referred to as the Method Reporting Limit [MRL], Method Quantitation Limit [MQL], or Estimated Quantitation Limit [EQL]). The PQL is generally ten thirds (3.33) times the calculated MDL for the target analyte. For any values reported $< \text{PQL}$ and $\geq \text{MDL}$, the value is considered an estimated quantity and is reported with a "J" flag data qualifier.



-
- 3.3 MDL verification standard: A standard having analyte levels at the same level as the initially determined MDL. This standard is run in duplicate on a quarterly basis (or as needed after maintenance, etc.) to verify continued acceptable instrument sensitivity.
 - 3.4 LIMS: Laboratory Information Management System
 - 3.5 MDL_s: Method Detection Limit as calculated from the analysis of spiked samples.
 - 3.6 MDL_b: Method Detection Limit as calculated from the analysis of method blanks.
 - 3.7 Initial MDL: The higher of the MDL_s or the MDL_b.

4) Health and Safety Warnings

- 4.1 None

5) Personnel Qualifications and Responsibilities

- 5.1 Analyst: It is the responsibility of the analyst(s) to produce method compliant data for submittal to the Department Supervisor and QA department.
- 5.2 Section Supervisor: It is the responsibility of the Department Supervisor to:
 - 5.2.1 Ensure that all analysts have the technical ability and have received adequate training required to perform the methods assigned for MDL studies.
 - 5.2.2 Perform an initial review of data prior to submittal to the QA department.
 - 5.2.3 Coordinate all MDL and MDL verification analyses for the department.
- 5.3 QA Department (QAD): It is the responsibility of the QAD to:
 - 5.3.1 Schedule initial MDL studies and quarterly verifications
 - 5.3.2 Recalculate MDLs every 13 months
 - 5.3.3 Perform final review of the calculated MDL determinations
 - 5.3.4 Maintain records of MDL studies performed and update applicable LIMS test codes.
- 5.4 Project Manager: It is the responsibility of the Project Manager to ensure that all contractual requirements for a client can be met using MDL/PQL values produced by this procedure.

6) Procedure

- 6.1 Refer to specific method SOP for all specifications regarding data generation.

Determination of the Initial MDL

- 6.2 Choose a blank spike level that is approximately 2-10 times the estimated MDL using one of the following methods:
 - 6.2.1 Locate a published method detection limit for the analyte by method and multiply by 5.
 - 6.2.2 Determine the concentration that corresponds to a signal to noise ratio of 3-5 and multiply by 5.
 - 6.2.3 Review previous MDL studies and determine the appropriate spiking level to meet the criteria specified in 6.2.



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- 6.3 Process a minimum of 7 spiked aliquots at the appropriate matrix spike level determined in 6.2 **and** 7 method blank samples through all steps of the method.
- 6.3.1 Preparation of the 7 replicates must occur in 3 separate batches, over **3 separate calendar dates**.
- 6.3.2 If for multiple instruments:
- 6.4.2.1 A minimum of **2 spiked samples and 2 method blanks** must be run on each instrument on **separate calendar dates**. Each analytical batch may contain 1 spiked sample and 1 method blank analyzed together.
- 6.4.2.2 All valid measurements are used for the calculation of the MDL (modifying the student-t value for degrees of freedom)
- 6.4 Calculate the analyte result as specified in the applicable SOP and enter into a MDL spreadsheet. Two tabs are included. One for MDL_s and one for MDL_b.
- 6.5 Determine if the replicates meet the following acceptance criteria:
- 6.5.1 If any result for any individual analyte from a spiked sample does not meet the method qualitative identification criteria or does not provide a numerical result greater than zero, then repeat the **spiked samples** at a higher concentration.
- 6.5.2 If **none** of the method blanks give numerical (positive or negative) results (i.e. no peak in the chromatogram), then the MDL_b does not apply. Blanks not meeting method defined qualitative criteria are non-detect.
- 6.5.3 If **some** (but not all) of the method blanks for an individual analyte give a numerical result, set the MDL_b to the highest numerical result.
- 6.5.4 If all of the method blanks for an individual analyte give a numerical result, use the calculation provided in section 7.3 to determine the MDL_b.
- 6.6 Input the Student t Value corresponding for the number of replicates performed (See Table 7).
- 6.6.1 MDL spreadsheet is orientated to the use of 7 replicates. If a higher number is processed, all iterations must be used and the Student t value adjusted accordingly.
- 6.7 The spreadsheet will calculate the mean, standard deviation, method detection limit, and PQL.
- 6.8 For most target analytes, the PQL is determined by multiplying the calculated MDL by a factor of 3.33. Alternatively, a reliable level of calibration may be selected as the PQL.
- 6.9 The Department Supervisor must approve all MDL studies prior to submittal to the QAD. The QAD must maintain copies of all MDL studies.

Quarterly Verification of MDL

- 6.10 During any quarter where samples are analyzed, prepare and analyze a minimum of 2 spiked samples on each instrument, in separate batches, on separate calendar dates, using the same spike concentration used for the initial MDL.



- 6.11 If any analytes are repeatedly not detected in the quarterly spiked sample analyses, or do not meet the qualitative identification criteria of the method, then the spike concentration shall be increased and a new initial MDL study be conducted.

Annual Recalculation of MDL

- 6.12 At least once every thirteen (13) months, recalculate MDL_s and MDL_b from the collected quarterly spiked samples and **all** method blanks, analyzed within the last 24 months. Include the initial MDL study data in the recalculation if it is within the last 24 months. Only use data associated with acceptable calibrations and batch QC (see determinative method for criteria).
- 6.13 MDL verification and recalculation must be completed when instrument sensitivity is altered due to major repair or maintenance or if a new instrument is added to a pooled MDL.
- 6.14 An initial MDL study must be completed following a method modification resulting in a change of sensitivity.
- 6.15 The QAD must update the applicable LIMS test code to reflect annual MDL verifications if the recalculated MDL is less than 0.5 times, or greater than 2.5 times the existing MDL.

7) Calculations

- 7.1 Refer to specific method SOP for all analyte calculations
- 7.2 Calculation of the spiked MDL_(s)

$$\text{MDL}_s = (\text{standard deviation of replicates}) \times (\text{student t value})$$

- 7.3 Calculation of the blank MDL_(b)

$$\text{MDL}_b = X + (t * S_b)$$

Where:

X = Mean of the method blank results (use zero in place of the mean if the mean is negative).

S_b = Standard deviation of the replicate method blank analyses.

Alternatively:

If 100 or more method blanks are available, as an option, MDL_b may be set to the concentration that is greater than or equal to the 99th percentile of the method blank results.

TABLE 7 - STUDENT t VALUES (at one tailed 99% confidence level)	
# REPLICATES	STUDENT t VALUE
7	3.143
8	2.998
9	2.896
10	2.821



STANDARD OPERATING PROCEDURE

MDL / PQL
HN-QS-006-R07
Effective: 03/31/2022
Page 7 of 7

TABLE 7 – STUDENT t VALUES (at one tailed 99% confidence level)	
# REPLICATES	STUDENT t VALUE
11	2.764
12	2.718
13	2.681
14	2.650
15	2.624
16	2.602
17	2.583
18	2.567
21	2.528
26	2.485
31	2.457
32	2.453
48	2.408
50	2.405
61	2.390
64	2.387
80	2.374
96	2.366
100	2.365

8) Quality Assurance and Quality Control

- 8.1 MDL Study raw data and calculated results must be reviewed, approved and maintained by the Department Supervisor and QA Manager.
- 8.2 Method QC procedures are required to successfully demonstrate performance of the method. This should include but is not limited to calibration criteria, method blanks, and surrogates.

9) Summary of Changes

Table 9.1 Summary of Changes

Revision Number	Effective Date	Document Editor	Description of Changes
R04	7/1/13	CES	Formatting
R05	6/1/15	CES	Document Revision Criteria. Inclusion of language allowing a calibration point to serve as the PQL.
R06	1/1/17	CES	Major Revision. Most sections updated.
R07	3/31/22	CES	Change in formatting.

10) References and Related Documents

- 10.1 40 CFR Part 136, Appendix B, EPA 821-R-16-006, Definition and Procedure for the Determination of the Method Detection Limit, Revision 2, December 2016.
- 10.2 ALS Environmental Quality Assurance Manual, Revision (most current)
- 10.3 MDL Spreadsheet Template: \\alshnws001\GlobalDocs\QA Master\Notebook Master\Masterlist Templates



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Board of Health Town of Needham AGENDA FACT SHEET

Board of Health Town of Needham AGENDA FACT SHEET

MEETING DATE: September 19, 2025

Agenda Item	Notification of Emergency Condemnation on Tillotson Rd.
Presenter(s)	Sai Palani, Environmental Health Agent Tara Gurge, Assistant Director of Environmental and Community Health

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
	Environmental health staff were called in after a fire had started in a unit within a multi-unit building that was responded to by emergency services. To help decide on which units could be reoccupied, environmental health staff performed housing inspections within each of the six units in the building. The unit where the fire originated from was the only unit that could not be safely reoccupied. The conditions were so poor within this unit that it was appropriate to condemn the unit on an emergency basis to help prevent the unit from be reoccupied until the unit is gutted and renovated, after which time an inspection can be completed by our office to confirm that any and all conditions deemed to endanger are remedied. No request for a hearing before the Board of Health has been requested by the occupants nor the property owner.
2.	VOTE REQUIRED BY BOARD OF HEALTH
	Board may vote to uphold the orders to condemn and vacate this unit on Tillotson Rd. or revoke it.
3.	BACK UP INFORMATION:
	1. Copy of the redacted Orders to Correct, Inspection Report 2. Emergency Condemnation and Orders to Vacate sent on September 8, 2025



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CORRECTION ORDER

Issued under the provisions of 105 Code of Massachusetts Regulations (CMR) 410.000:
Minimum Standards of Fitness for Human Habitation, State Sanitary Code, Chapter II

September 8, 2025

Needham, MA 02492

Via Email, First Class & Certified Mail #: 7016 3010 0001 0243 3834

RE:

Orders to Correct Inspection Report and Emergency Condemnation Orders and Order to Vacate

Dear

Representatives from Town reached out to our office on September 4, 2025, and requested our presence, to assess the possible sanitary and safety concerns after a significant fire at

An inspection was conducted on the same day after getting permission from the occupant to enter the unit and after the unit was deemed safe to temporary enter to assess the condition. Based on the conditions observed, the unit is not habitable due to several conditions deemed to endanger or materially impair health or safety.

By authority of Chapter I and II of the State Sanitary Code as adopted under Chapter II, section 3 and 127A of the Massachusetts General Laws, this office has performed an inspection at this aforementioned property. Be advised that an agent of the Needham Public Health Division has determined certain portions of this residential property to be in violation of the State Sanitary Code, 105 CMR 410.000. A list of the violations is enclosed based on observations by our office a number of which meet the threshold of Conditions Deemed to Endanger or Materially Impair Health of Safety [105 CMR 410.630 (A)], which are conditions where you make a good faith effort to correct within 24 hours of service of this order.

This letter is to inform you that our office has considered the conditions in the dwelling are so unsafe and dangerous to life or health of the occupant(s) that this dwelling will be immediately condemned without need of a hearing (105 CMR 410.650(E)). The unit must be vacated and remain unoccupied until the Needham Board of Health deems the unit safe for human habitation, which will be verified at a follow-up inspection.

You have a right to request a hearing with the Needham Board of Health by filing a written request within 30 days of this inspection. You have a right to inspect and receive a copy all records concerning the matter. You have the right to be represented by your own legal counsel at any hearings that may occur. Conditions may exist which will allow the occupant of the residence to exercise legal rights outlined in the *Notice of Occupant's Legal Rights and Responsibilities* issued by the Department of Public Health Community Sanitation Program (CSP). You also have a right to request a hearing sooner than this date, provided that our office receives written notice within seven (7) days from receipt of this notice.

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We may be able to offer you resources to assist you in addressing this matter, so please do not hesitate to reach out to our office. If you have any questions, please contact this office and we would be able to discuss this matter in more detail. I may also be reached directly at (781) 455-7940 Ext. 220 or via email at spalani@needhamma.gov.

Sincerely,

Sai Palani

Sainath Palani, MPH
Needham Environmental Health Agent

**105 CMR 410.000
Housing Code Inspection Report**

Inspection(s) Performed: September 4, 2025 @ 2:30PM

Inspector: Sal Palani

Location	Code Citation	Violation	Condition Deemed to Endanger or Materially Impair Health or Safety? [410.630(A)]	Timeframe to Correct
Entire Dwelling Unit	410.130 410.150	Water was turned off or not working in this unit.	✓ 410.630(A)(1)	<u>1 Day</u>
Kitchen	410.100 410.235	Due to the fire stove/oven, refrigerator and sink were damaged to the point where they were not usable.	✓ 410.630(A) (7)	<u>1 Day</u>
Entire Dwelling Unit	410.570(A) 410.570(B) 410.500 (A) 410.530 (A)(C)	Due to a significant fire, entire unit had evidence of fire and smoke damage and debris in all rooms and in the common hallway. Multiple exterior windows were broken in all rooms of the unit. Walls and ceilings had gapping holes and were charred due to the fire.	✓ 410.630(A) (10)(12) (18)	<u>1 Day</u>
Entire Dwelling Unit	410.300	There was no electricity in the unit.	✓ 410.630(A)(3)(4)	<u>1 Day</u>

Notes: (1) Bathroom could not be assessed due to the excessive debris blocking the way. There was poor air quality inside the unit at time of inspection. All utilities in the unit were turned off. (2) There were several pet animals that were in unit at time of fire, some of which were saved and evacuated. (3) Representatives from the police, fire, building, medical reserve corp. and building ownership were present. (4) Pictures taken during the inspections are attached to this report. (5) Unit will be placarded and must be secured by the owner within 7 days of receipt of this order if no request for a hearing is made. The unit may not be reoccupied or lived in until a reinspection is performed, and condemnation is lifted.

This Inspection Report is signed and certified under the pains and penalties of perjury.

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Sainath Palani, MPH
Environmental Health Agent
Needham Public Health Division

Attachments: Emergency Condemnation and Order to Vacate, Occupants Rights and Responsibilities

CC:
Needham Public Health Division
Timothy McDonald & Tara Gurge
178 Rosemary St.
Needham, MA 02494
Via Email

Occupants via Email

Pictures taken September 4, 2025, during inspection of

Common hallways ceiling damage:



Damaged within the Unit (kitchen):



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178 Rosemary Street, Needham, MA 02494

P: (781) 455-7940

E: healthdivision@needhamma.gov

Damaged within unit continued (bathroom, living room, bedroom):



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EMERGENCY CONDEMNATION AND ORDER TO VACATE Finding of Unfitness for Human Habitation and Determination of Immediate Danger 105 CMR 410.650(E)

In accordance with M.G.L. c. 111, §§ 127A and 127B, 105 CMR 400.000: State Sanitary Code, Chapter I: General Administrative Procedures and 105 CMR 410.000: State Sanitary Code, Chapter II: Minimum Standards of Fitness for Human Habitation, **Sainath Palani**, Environmental Health Agent for the Needham Board of Health, on **September 4, 2025** conducted an inspection of a dwelling located at _____ A copy of the inspection report is annexed hereto.

Based on the results of that inspection, the Board of Health ("Board") finds that the dwelling is unfit for human habitation. Pursuant to M.G.L. c. 127 B and 105 CMR 410.650 (E), the Board further finds that the conditions within the dwelling are such that the danger to the life or health of the occupants of the subject dwelling is so immediate that no delay may be permitted in making this finding.

Conditions found within the dwelling, which give rise to the emergency finding of unfitness and determination of immediate danger, include: **No water or hot water (105 CMR 410.130 & 105 CMR 410.150), No power in the unit (105 CMR 410.300), Due to fire in unit the entire unit was covered in soot and had fire damage and there was debris throughout (105 CMR 410.570), Ceiling, windows and other structural elements were physically damaged and/or had fire and smoke damage (105 CMR 410.500 & 105 CMR 410.530)**

Based upon these findings any and all occupants are hereby ordered to vacate immediately and the landlord/owner is ordered to secure the subject dwelling within 24 hours after the delivery of this order.

A public hearing may be scheduled upon request at the next upcoming Board of Health meeting up by filing a written petition that is filed 30 days from the date of this inspection. You have a right to inspect and copy all records concerning the matter to be heard. You have the right to be represented by counsel at the hearing. You also have a right to request a hearing sooner than this date, provided that our office receives written notice within seven calendar days after the day the order was served per 105 CMR 410.800 to 410.860.

You are advised that the Board of Health has taken no action to secure housing for the residents of this dwelling, this is the responsibility of the property owner / agent under 105 CMR 410.940 Correction of Violations by Board of Health: Expense (B) and shall be charging the responsible person or persons with any and all expenses incurred.

Furthermore, anyone who fails to comply with any order of the board of health may be subject to fines ranging from \$10-\$500. Each day's failure to comply with an order shall constitute a separate violation.

If any person refuses to leave a dwelling or portion thereof, which was ordered condemned and vacated s/he may be forcibly removed by the local board of health (MGL. c. 111, §127B), or by

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local police authorities at request of the board of health.

Once vacated this building may not be occupied and the placard removed without the written approval of the board of health.

Signed Lari Palani 09/08/25
Local Board of Health

cc: Public Health Division: Tim McDonald (Director of Health and Human Services), Tara Gurge (Assistant Public Health Director);
Building Department: Joe Prondak (Building Commissioner);
Fire Department: Tom Conroy (Fire Chief);
Council on Aging: Jessica Moss (Asst. Director Social Services & Volunteers), LaTanya Steele (Director of Aging Services)
Town Manager's Office: Katie King (Town Manager), Myles Tucker (Support Services Manager), Christopher Heep (Town Council)

THIS PROPERTY IS NOT FIT FOR HUMAN HABITATION BASED ON VIOLATIONS CITED. THE NEEDHAM PUBLIC HEALTH DIVISION FINDS THAT THIS RESIDENCE IS NOT FIT FOR HUMAN HABITATION AND CONDEMNS THIS RESIDENCE ACCORDING TO 105 CMR 410.831(A & E) UNTIL FULL COMPLIANCE WITH ALL APPLICABLE STATE AND LOCAL REGULATIONS AND CODES IS ACHIEVED.

Corrective Orders and Right to Hearing

The above-described conditions constitute violations of the following provisions of the State Sanitary Code:

410.630: Conditions Deemed to Endanger or Materially Impair Health or Safety(A) The following conditions, when found to exist in a residence, shall always be deemed conditions which may endanger or materially impair the health, or safety and well-being of a person or persons occupying the premises:

- (1) Failure to provide and maintain a supply of water sufficient in quantity, pressure and temperature, both hot and cold, to meet the ordinary needs of the occupant, required by 105 CMR 410.130, 105 CMR 410.140 and 105 CMR 410.150, for a period of 24 hours or longer.**
- (3) Shutoff and/or failure to restore electricity, gas, or water.**
- (4) Failure to provide the electrical facilities required by 105 CMR 410.300(A) through (E).**
- (7) Failure to provide and maintain as required by 105 CMR 410.100(A): (a) A kitchen sink of sufficient size and capacity for washing dishes and kitchen utensils. (b) If supplied by the owner, a conventional cooktop and oven, or a refrigerator with freezer.**
- (10) Failure to comply with any provisions of 105 CMR 410.560 and 105 CMR 410.570, which results in any accumulation of refuse, filth or other causes of sickness which may provide a food source or harborage for rodents, insects or other pests or otherwise contribute to accidents or to the creation or spread of disease.**
- (12) Roof, foundation, or other structural defects in violation of 105 CMR 410.500 that may expose the occupant or anyone else to fire, burns, shock, accident or other dangers or impairment to health or safety.**
- (18) Any other violation of 105 CMR 410.000 not enumerated in 105 CMR 410.630(A) shall be deemed to be a condition which may endanger or materially impair the health or safety and well-being of an occupant.**

410.650: Residences Unfit for Human Habitation; Hearing; Condemnation; Order to Vacate; Demolition

(A) Finding That a Residence or Portion Thereof Is Unfit for Human Habitation. If an inspection conducted pursuant to 105 CMR 400.100 or 105 CMR 410.600 reveals that an occupied residence or portion thereof is unfit for human habitation, the board of health shall, subject to 105 CMR 410.650(B), (C) or (D) issue a written finding that the residence or portion thereof is unfit for human habitation. The finding shall include a statement of the material facts and conditions upon which the finding is based.

(B) Prior Notification to Occupant(s) and Owner. If the residence or portion thereof is occupied, the board of health shall, prior to issuing a finding under 105 CMR 410.650(A), provide written notice to the occupant(s) and owner which shall include: (1) Identification of the residence (address and apartment number, if any); (2) A copy of the inspection report; (3) A statement that the board of health will consider issuing a finding that the residence or a specifically identified portion thereof is unfit for human habitation; (4) A statement that this finding may result in an order of condemnation requiring the owner to secure the residence or portion thereof and requiring the occupant(s) to vacate the residence or portion thereof; and (5) A statement of the time and place of a public hearing which the board of health will conduct in order to determine whether the residence or portion thereof is unfit for human habitation, and whether an order to secure and vacate should be issued.

(C) Service of Notice. The notice shall be served in accordance with 105 CMR 410.680. (D) Hearing If Residence or Portion Thereof Is Occupied. If the residence or portion thereof is occupied, then the board shall, prior to issuing a finding under 105 CMR 410.650(A), and at least five calendar days after service of the notice required by 105 CMR 410.650(B), conduct a public hearing to determine whether the residence or portion thereof is unfit for human habitation and whether an order to secure and to vacate should be issued. At the hearing the occupant(s), owner, or any other affected person shall be given an opportunity to be heard, to present witnesses or documentary evidence and to show why the residence or portion thereof should or should not be found unfit for human habitation, and why an order to vacate and an order to secure should or should not be issued.

(E) Exception to Notification and Hearing Requirements. If at any time the board of health determines in writing that the danger to the life or health of the occupant(s) is so immediate that no delay may be permitted, then the board of health may immediately issue a finding that an occupied residence or portion thereof is unfit for human habitation without providing the notification or hearing specified in 105 CMR 410.650(B) and (D). This emergency determination must include a written explanation of the conditions presenting an immediate danger. The board of health shall send the owner and each affected person a copy of the finding of unfitness for human habitation and a copy of the determination of immediate danger, which shall include a statement advising of their right to a hearing in accordance with 105 CMR 410.800(A).

(F) Condemnation, Order to Vacate, Order to Secure. (1) At the same time, or at any time

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after the board of health issues a finding that a residence or portion thereof is unfit for human habitation, the board may issue an order condemning the residence or portion thereof and an order to vacate the residence or portion thereof, and an order requiring the owner to secure the residence or portion thereof. (2) If the residence or portion thereof which is ordered to be secured is unoccupied, and therefore no public hearing was conducted prior to the issuance of the order, then the owner or any other affected person shall have the right to request a hearing in accordance with 105 CMR 410.800 through 105 CMR 410.860. (3) No residence or portion thereof which is ordered to be secured shall be occupied without the prior written permission of the board of health based upon the board's written finding that the residence or portion thereof to be occupied is fit for human habitation. (G) Demolition. If, one year after the issuance of an order to secure, compliance with 105 CMR 410.000 has not been achieved, then the board of health may cause the residence or portion thereof to be demolished or removed provided the requirements of 105 CMR 410.800(A) have been met.

410.900: Condemnation, Placarding and Vacating Residences

(A) A residence or portion thereof shall be placarded as unfit for human habitation by the board of health when: (1) A written petition for a hearing is not filed in the office of the board of health within seven calendar days after an order of condemnation of any residence or portion thereof has been issued; or (2) After a hearing, the order of condemnation of a residence or portion thereof is issued. (B) No residence or portion thereof which has been condemned and placarded as unfit for human habitation shall again be used for human habitation until written approval is secured from, and such placard is removed by, the board of health. (C) No person shall deface or remove the placard, except that the board of health shall remove it whenever the defect or defects upon which the condemnation and placarding action was based have been corrected. (D) If any person refuses to leave a residence or portion thereof which has been ordered condemned and vacated and has been placarded in accordance with M.G.L. 111, § 127B and 105 CMR 410.640 through 105 CMR 410.930, such person may be forcibly removed by the board of health or by state or local police authorities upon request of the board of health.

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អ្នកគួរតែឱ្យគេបកប្រែឯកសារនេះ។

دا يو مهم حقوقي سند ښودای شي ستاسو پر حقونو اغېرې. تاسو بايد د دې ژباړه ولرئ.

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Board of Health Town of Needham AGENDA FACT SHEET

Board of Health Town of Needham AGENDA FACT SHEET

MEETING DATE: September 19, 2025

Agenda Item	Adoption of the 2022 FDA Food Code
Presenter(s)	Tara Gurge, Assistant Director of Environmental and Community Health Sai Palani, Environmental Health Agent

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
	The FDA released its latest version of the FDA Food code (2022) on January 11, 2023, based on recommendations from the Conference on Food Protection and the current science. The food code gets updated every 4 years and to stay in compliance with FDA retail standard 1 (regulatory foundation) we need to adopt one of the latest versions of the food code before the next food code gets released (likely in 2026). We are looking to adopt the 2022 FDA Food code along with the supplement, excluding any changes that would supersede or be less conservative than the presently adopted merged state food code. Four other cities/towns have adopted this code. Training courses for the food establishments about the changes in the 2022 FDA food code has been drafted and has been scheduled to occur on October 8, 2025. We are looking for support from the Board and guidance on what sections of the code will be adopted and what possible sections the Board may want to omit from adoption so we can finalize the training for the food establishments.
2.	VOTE REQUIRED BY BOARD OF HEALTH
	None
3.	BACK UP INFORMATION:
	1. Changes between 2013 and 2017 and then changes between 2017 and 2022 FDA Food Code 2. 2022 FDA Food Code Supplement

Summary of Changes In the FDA Food Code

This Summary provides a synopsis of the textual changes from the 2013 FDA Food Code and the Supplement to the 2013 Food Code Chapters and Annexes to the 2017 edition. The primary intent of this record is to capture the nature of the changes rather than to identify every word or editing change. ***This record should not be relied upon as an absolute comparison that identifies each and every change.***

General:

- Numerous editing changes were made throughout the document for internal consistency, to correct some errors in the 2013 Code and for clarification.
- Updated the web links throughout the Code and Annexes.
- Converted several Tables, charts, and images throughout the Code to meet web accessibility requirements under Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d). Section 508 mandates that all federal agencies eliminate the barriers in accessing electronic and information technology.

Preface

Amended Preface sections 5 and 7 to add updated information and revise dates to make current.

Chapter 1 Purpose and Definitions

Added new term “**Intact Meat**”

Revised “**Vending Machine**” to be more inclusive of the diverse means of payment available.

Chapter 2 Management and Personnel

Amended the Food Code and its Annexes, where applicable, to revise the descriptors of illness caused by *Salmonella* Typhi or nontyphoidal *Salmonella*. This change allows the use of plain language descriptors to simplify the restriction and exclusion criteria.

2-102.12

Amended paragraph **2-102.12(A)** to state that the Person in Charge shall be the Certified Food Protection Manager.

2-102.20

Amended paragraph **2-102.20(B)** to state that it is the Person in Charge who must be a Certified Food Protection Manager to comply with Section 2-102.12.

2-103.11

Amended to add new paragraph (I) to address additional duty requirement for the Person in Charge to ensure employees are routinely monitoring food temperatures during hot and cold holding and re-designate paragraphs (I) - (O) as new paragraphs (J) - (P).

2-201.11

Amended subparagraph **2-201.11(A)(2)(e)** to add the illness, Typhoid fever, to the descriptor for reportable diagnosis of illness diagnosed due to *Salmonella* Typhi so that it reads: "Typhoid fever (caused by *Salmonella* Typhi)".

Amended subparagraph **2-201.11(A)(2)(f)** to add the word, "*Salmonella*", to the descriptor for reportable diagnosis of illness diagnosed due to nontyphoidal *Salmonella* so that it reads: "*Salmonella* (nontyphoidal)".

Amended subparagraph **2-201.11(A)(3)** to replace the phrase, "Had a previous illness" with the phrase "Had Typhoid fever" and to delete the phrase "due to *Salmonella* Typhi".

Amended subparagraph **2-201.11(A)(4)(c)** to replace "*Salmonella* Typhi" with "Typhoid fever".

Amended subparagraph **2-201.11(A)(5)(c)** to add in descriptor text for the illness caused by *Salmonella* Typhi so that it reads: ". . . Typhoid fever (caused by *Salmonella* Typhi)."

Amended subparagraph **2-201.11(C)(2)** to correctly cross-reference paragraph 2-201.13(J).

2-201.12

Amended subparagraph **2-201.12(A)(2)** to replace "nontyphoidal *Salmonella*" with "*Salmonella* (nontyphoidal)".

Amended the **margin tagline for subparagraph 2-201.12(C)** to replace "diagnosis or reported previous infection due to *S. Typhi*" with "diagnosis or reported previous illness with Typhoid fever".

Amended paragraph **2-201.12(C)** to replace “diagnosed with an infection from *Salmonella* Typhi” with “diagnosed with Typhoid fever, or reports having had Typhoid fever”.

Amended paragraph **2-201.12(G)** to replace “nontyphoidal *Salmonella*” with “*Salmonella* (nontyphoidal)”.

2-201.13

Amended to:

- revise paragraph (A) to replace “*Salmonella* Typhi” with “Typhoid fever”
- revise subparagraph (A)(5) to replace “nontyphoidal *Salmonella*” with “*Salmonella* (nontyphoidal)”
- revise the margin tag line for paragraph (C) to replace “S. Typhi diagnosis – removing exclusions” with “Typhoid fever diagnosis – removing exclusions”
- revise subparagraph (C)(2) to replace “S. Typhi infection” with “Typhoid fever”
- revise subparagraph (G)(1) to replace “nontyphoidal *Salmonella* infection” with “*Salmonella* (nontyphoidal) infection”
- revise the margin tagline for subparagraph (J)(3) to replace “S. Typhi” with “Typhoid fever (S. Typhi)”
- revise subparagraph (J)(3) to replace “S. Typhi” with “Typhoid fever (caused by *Salmonella* Typhi)”

2-401.13

Added new Section **2-401.13** Use of Bandages, Finger Cots or Finger Stalls

2-501.11

Amended Section **2-501.11** to indicate that procedures for the clean-up of vomiting and diarrheal events for employees to follow shall be written.

Chapter 3 Food

3-302.11

Added new subparagraph **3-302.11(A)(1)(c)** to indicate separating raw animal foods during storage, preparation, holding and display from fruits and vegetables before they are washed and re-designated existing subparagraph 3-302.11(A)(1)(c) as new subparagraph 3-302.11(A)(1)(d).

3-401.11

Amended subparagraph **3-401.11(A)(1)(b)** to include the term intact meat.

Amended subparagraph **3-401.11(A)(2)** to reflect new cooking time in seconds for ratites, mechanically tenderized and injected meats, comminuted fish, comminuted meat, comminuted game animals commercially raised for food or under voluntary inspection, and raw eggs that are not prepared to a consumer’s order from 15 seconds to 17 seconds.

Amended subparagraph **3-401.11(A)(3)** to reflect new cooking time for poultry, baluts, wild game animals, stuffed foods or stuffing containing fish, meat, poultry or ratites from 15 seconds to <1 second (instantaneous).

Amended paragraph **3-401.11(B)** by reversing the order of subparagraphs (B)(1) and (B)(2), where subparagraph (B)(2) is now subparagraph (B)(1).

3-401.13

Amended Section **3-401.13** to delete the phrase “fruits and vegetables” and replace it with the term “plant foods”.

3-402.11

Amended subparagraph **3-402.11(B)(5)** by italicizing the text to correctly indicate it as an exception.

3-402.12

Amended paragraph **3-402.12(C)** to correctly cross reference subparagraph 3-402.11(B)(4).

3-404.11

Amended paragraph **3-404.11(A)** to replace cross reference to paragraphs 8-201.14(B)-(E) with a cross reference to §8-201.14.

3-501.18

Amended subparagraph **3-501.18(A)(3)** by deleting the term “appropriately” and replacing it with “inappropriately”.

3-501.19

Amended subparagraph **3-501.19(A)(1)(a)** to add a missing cross reference to subparagraph 3-501.19(B)(4) in order to correctly reference subparagraphs 3-501.19(B)(1)-(4).

3-502.12

Amended paragraph **3-502.12(B)** and subparagraphs **(B)(6)(c)**, **(D)(1)**, and **(E)(2)** to replace cross reference to paragraphs 8-201.14 (B) and (D) with a cross reference to paragraphs 8-201.14 (C) and (D).

Amended paragraph **3-502.12(C)** to add in additional exception criteria for fish that is reduced oxygen packaged at retail to bear a label indicating that it is to be kept frozen until time of use.

3-801.11

Amended subparagraph **3-801.11(A)(3)** to replace cross reference to paragraphs 8-201.14 (B)-(E) with a cross reference to paragraphs 8-201.14 (C)-(E).

Chapter 4 Equipment, Utensils, and Linens

Part 4-3 Numbers and Capacities

Amended to add **new Subpart 4-303**, Cleaning Agents and Sanitizers.

Amended to add **new Section 4-303.11** Cleaning Agents and Sanitizers, Availability, to require that equipment and utensil cleaning agents and sanitizers be provided and readily accessible for use.

Chapter 5 Water, Plumbing, and Waste

No Changes.

Chapter 6 Physical Facilities

No Changes.

Chapter 7 Poisonous or Toxic Materials

7-204.12

Amended paragraph **7-204.12(A)** to re-designate it as the lead in paragraph for this section.

Amended subparagraphs **7-204.12(A)(1)-(4)** by re-designating them as paragraphs 7-204.12(A)-(D) in order to be inclusive of all washing chemicals and antimicrobial agents that may be used in the washing and treatment of produce as specified in 21 CFR 173.

Deleted existing paragraph **7-204.12(B)**.

Chapter 8 Compliance and Enforcement

8-103.12

Amended paragraph **8-103.12(B)** to replace existing cross reference to paragraphs 8-201.14 (D) and (E) with a cross reference to paragraph 8.201.14 (D) and subparagraph (E)(3).

8-201.14

Amended to:

- add new paragraph (A) to add a new specification for the permit holder or permit applicant to include general information with the HACCP plan submission;
- add a new paragraph (F) that is not a new requirement within §8-201.14, but rather clarifies what was already required under the previous paragraph (E). This new paragraph (F) requires the permit holder to include any other application or submission information required by the regulatory authority;

- delete paragraph (C) and move the food employee and supervisory training plan provision to new paragraph (E);
- redesignate existing paragraph (A) as new paragraph (B) where the intent of paragraph (B) remains the same, although the paragraph was revised to remove the list of examples;
- redesignate existing paragraph (B) (flow diagram) as new paragraph (C) which keeps its original intent, and includes a more descriptive list of what the flow diagram should include;
- revise subparagraph (D)(3) to clarify that a food employee or person in charge may monitor critical control points;
- revise subparagraph (D)(5) to clarify that a person in charge, or a food employee, may be responsible for taking corrective action when a critical limit is not met; and
- revise paragraph (E) to incorporate the food employee and supervisory training plan from deleted paragraph (C) and included a new requirement for the permit holder's or permit applicant's HACCP plan submission to incorporate copies of blank records forms necessary for implementation of the HACCP Plan.

8-402.10

Amended existing paragraph to re-designate into new paragraph **8-402.10(A)**.

Amended by adding a new paragraph **8-402.10(B)** to address the requirement for the Regulatory Authority to ensure that authorized representatives who inspect food establishments or conduct plan reviews for compliance with this Code have access to training and continuing education as needed to properly identify violations and apply the Code.

8-404.11

Amended by adding subparagraphs **8-404.11(C)(1)-(3)** as new exception criteria indicating that the regulatory authority may agree to continuing operations during an extended water or electrical outage if written operational plans have been approved by the regulatory authority.

Annex 1 Compliance and Enforcement

No Changes.

Annex 2 References

2-102.12

Amended to update web link and date for reference (#11- Pathogens Transmitted by Food Contaminated by Infected Persons Who Handle Food, and Modes of Transmission of Such Pathogens).

3. SUPPORTING DOCUMENTS

Amended to add new section, **U. Sanitation Practices Standard Operating Procedures and Good Retail Practices to Minimize Contamination and Growth of *Listeria monocytogenes* within Food Establishments, 2nd Edition.**

Amended to add new section **V. Bad Bug Book 2nd Edition, Foodborne Pathogens Microorganisms and Natural Toxins Handbook.**

4. FOOD DEFENSE GUIDANCE FROM FARM TO TABLE

Guidance on Responding to Food Emergencies:

Amended the References for 4. Food Defense Guidance From Farm To Table under the section on Guidance on Responding to Food Emergencies, to add one new reference (#4), **Conference for Food Protection (CFP) Emergency Action Plan for Retail Food Establishments, 2nd Edition**, and make an editorial correction and a web URL update to the existing bulleted list.

Annex 3 Public Health Reasons/Administrative Guidelines

2-103.11

Amended Public Health Reasons for §2-103.11 Person in Charge (Duties) to add a new paragraph 5 that describes why paragraphs (G), (H) and the new (I) are important to the safe operation of a food establishment and to update the paragraphs referencing (M) and (N) to reflect the updated designations for paragraphs that follow the new (I).

2-201.11

Amended Public Health Reason for §2-201.11, Title I of the Americans with Disabilities Act of 1990 (ADA) in paragraph 3 to replace the term “*Salmonella* Typhi” with “Typhoid fever (caused by *Salmonella* Typhi)”.

Amended Public Health Reason for §2-201.11, Title I of the Americans with Disabilities Act of 1990 (ADA), in paragraph 4 (Example 1) to replace the phrase “a disease caused by *Salmonella* Typhi” with the phrase “Typhoid fever (caused by *Salmonella* Typhi)”.

Amended Public Health Reason for §2-201.11, Title I of the Americans with Disabilities Act of 1990 (ADA), in paragraph 9 to update the CDC weblink

Amended Public Health Reason for §2-201.11, Pathogens Transmitted by Food Contaminated by Infected Persons Who Handle Food, and Mode of Transmission of Such Pathogens, in paragraph 1 to add the word “disposable” before the word gloves.

2-201.12

Amended Section 2-201.12 Table 4: History of Exposure and Absent Symptoms or Diagnosis in the section addressing Hepatitis A virus to replace current term HAC with correct term HAV.

2-401.13

Amended to add new Public Health Reason for §2-401.13 Use of Bandages, Finger Cots, or Finger Stalls

2-501.11

Amended paragraph 8 to address the inclusion of written plans for the clean-up of vomiting and diarrheal events.

Amended paragraph 9 to indicate the availability of EPA registered disinfection products that are sufficient to inactivate norovirus.

3-302.11

Amended paragraph 1 to include unwashed fruits and vegetables as foods to keep separated from raw animal foods during storage, prep, holding and display.

3-401.11

Amended paragraph 10 to address dwell times during cooking.

Amended paragraphs 17 and 21 to reflect time/temperature parameter harmonization with USDA/FSIS guidance.

3-602.11

Amended paragraphs 4 through 8 to add reference of 21 CFR 101.11.

4-303.11

Amended Public Health Reason for Chapter 4 Equipment, Utensils, & Linens, to add public health reasons for new §4-303.11 to address accessibility of cleaning agents and sanitizers for use.

5-202.12

Amended title by replacing the term “facility” with “sink” to correctly reflect the title in the codified text of the Food Code.

8-201.12/8-203.10

Amended Public Health Reason in paragraph 10 (the last paragraph) to update the cross reference to paragraph 2-103.11(L) to now cross reference the paragraph as renumbered, paragraph 2-103.11(N).

8-403.50

Amended Public Health Reason for Chapter 8 Compliance and Enforcement to add public health reasons for §8-403.50 Public Information to encourage the use of websites to disseminate regulatory documents that describe the compliance status of a regulated food establishment.

8-404.11

Amended to add new Public Health Rationale that supports the addition of new exception criteria indicating that the regulatory authority may agree to continuing operations during an extended water or electrical outage if written operational plans have been approved by the regulatory authority.

Annex 4 Management of Food Practices-Achieving Active Managerial Control of Foodborne Illness Risk Factors

Amended **Table 2a Naturally Occurring Chemical Hazards at Retail, Along with Their Associated Foods and Control Measures** to correct the spelling of the term “Tetrodoxin” to “Tetrodotoxin” located in the third row.

Amended **Section 3. HACCP Principles, (C) Principle #3 Establish Critical Limits - (2) What are examples of critical limits and (E) Principle #5 Establish Corrective Actions- (1) What are corrective actions** to reflect updated time/temperature cooking parameters in Section 3-401.11.

Amended **Section 4. The Process Approach – A Practical Application of HACCP at Retail to Achieve Active Managerial Control** to revise **Table 4: Examples of Hazards and Control Measure for Same Day Service Items** to reflect updated time/temperature cooking parameters in Section 3-401.11.

Annex 5 Conducting Risk-Based Inspection

No Changes.

Annex 6 Food Processing Criteria

Amended **Section 2. Reduced Oxygen Packaging, Section (I), Hazard Analysis and Critical Control Point (HACCP) Operation** to revise the introductory paragraph to replace the existing cross reference to paragraph 8-201.14(D) with a cross reference to Section 8-201.14.

Annex 7 Models Forms, Guides, and Other Aids

Guide 3-B, Instructions for Marking the Food Establishment Inspection Report, Including Food Code References for Risk Factors/Interventions and Good Retail Practices

Amended the Instructions for Marking the Food Establishment Report in Sections C (Risk Factors) and D (Good Retail Practices) to capture new or updated cross references based on changes made in this Supplement as follows:

Revised Section C, Supervision, **Item #1**, Applicable Code Section, to revise reference to paragraphs 2-103.11 (A)-(O) to be a reference to paragraphs 2-103.11 (A)-(P).

Revised Section C, Supervision, **Item #2**, Certified Food Protection Manager to reflect new change in paragraph 2-102.12(A) that requires the Person in Charge to be a Certified Food Protection Manager.

Revised Section C, Employee Health/Responding to Contamination Events, **Item #3**, under #1, to update existing cross reference to paragraph 2-103.11(M) Person-in-Charge Duties (*P*), and replace it with a cross reference to paragraph 2-103.11(O) and under Applicable Code Section, to replace reference to paragraph 2-103.11(M) with reference to paragraph 2-103.11(O).

Revised Section C, Employee Health/Responding to Contamination Events, **Item #5** Clean-up of Vomiting and Diarrheal Events to indicate that procedures for the clean up of vomiting and diarrheal events for employees to follow shall be written and available.

Revised Section C, Time Temperature Control for Safety Food (TCS Food), **Item #18** Proper Cooking Time and Temperature to reflect updated time/temperature cooking parameters in Section 3-401.11.

Revised Section D, Prevention of Food Contamination, **Item #40**, Personal Cleanliness to add Section 2-401.13 to the list of Applicable Code Sections.

Revised Section D, Prevention of Food Contamination, **Item #40**, Personal Cleanliness to add guidance that addresses the use of single-use gloves over impermeable bandages, finger cots and finger stalls.

Revised Section D, Prevention of Food Contamination, **Item #44**, Utensils, Equipment and Linens; Properly Stored, Dried, Handled to add Section 4-904.14 to the list of Applicable Code Sections.

Revised Section D, Utensils, Equipment, and Vending, **Item #48**, to reflect compliance instructions for new §4-303.11 and add new §4-303.11 into the list of Applicable Code Sections.

Revised **Chart 4-A** Summary Chart for Minimum Cooking Food Temperatures and Holding Times Required by Chapter 3 to reflect updated time/temperature cooking parameters in Section 3-401.11.

Revised **Chart 4-B** Summary Chart for Minimum Food Temperatures and Holding Times Required by Chapter 3 for Reheating Foods for Hot Holding to reflect updated time/temperature cooking parameters in Section 3-401.11.

Revised **Chart 4-B** Summary Chart for Minimum Food Temperatures and Holding Times Required by Chapter 3 for Reheating Foods for Hot Holding to revise the current cross reference of paragraph 3-401.11(B) to correctly cross reference paragraph 3-403.11(A) under Roasts: Option B.

Summary of Changes in the 2022 FDA Food Code

This Summary provides a synopsis of the textual changes from the 2017 FDA Food Code and the Supplement to the 2017 Food Code Chapters and Annexes to the 2022 edition. The primary intent of this record is to capture the nature of the changes rather than to identify every word or editing change. ***This record should not be relied upon as an absolute comparison that identifies each and every change.***

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General

- Numerous editing changes were made throughout the document for internal consistency, to correct some errors in the 2017 Code and for clarification.
- Updated the web links throughout the Code and Annexes.
- Converted several Tables, charts, and images throughout the Code to meet web accessibility requirements under Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d). Section 508 mandates that all federal agencies eliminate the barriers in accessing electronic and information technology.

Preface

- Amended the Preface to revise Preface sections 3, 5, 6, and 9 to update internal references and to add an explanation of the change in Food Code release frequency from 2021 to 2022.

Chapter 1. Purpose and Definitions

- Amended § 1-201.10 (B) to revise the definition of the term “Certification Number” to include all the certification and permit codes that may be found on a shellfish tag or label.
- Amended § 1-201.10 (B) to revise the definition of the term “Commingle” to align with the NSSP Model Ordinance.
- Amended § 1-201.10 (B) to add new term “In-Shell Product” meaning non-living, processed shellfish with one or both shells present.
- Amended § 1-201.10 (B) to revise the definition of the term “Intact Meat” to clarify that beef products that are vacuum tumbled with solutions are not considered intact meats.
- Amend §1-201.10 (B) to revise the definition of the term “Intact Meat” to add ‘cubing or pounding’. Note: The parenthesis (including injection) was removed in the Supplement to the 2017 Food Code due to the revised definition of the term “Mechanically Tenderized” that includes injection.
- Amended §1-201.10 (B) to revise the definition of the term “Major food allergen” in subparagraph (1)(a) to add Sesame as the 9th major food allergen, effective January 1, 2023.
- Amended § 1-201.10 (B) to revise the definition of the term “Mechanically Tenderized” to be consistent with the USDA FSIS description of “Mechanically Tenderized” in the 2015 final rule titled Descriptive Designation of Needle- or Blade-Tenderized (Mechanically Tenderized) Beef Product (80 FR 28153). The rule established labeling requirements for raw or partially cooked mechanically tenderized beef products and clarified that

products injected with a marinade or solution are considered mechanically tenderized.

- Amended § 1-201.10 (B) to revise the definition of the term “Molluscan Shellfish” to clarify that the term is inclusive of shellstock, in-shell product, and shucked shellfish.
- Amended § 1-201.10 (B) to revise the definition of the term “Poisonous or toxic material” to include a new fifth category “Restricted Use Pesticide”.
- Amended § 1-201.10 (B) to revise the definition of the term “Ready-to-Eat” to replace “Fruits and vegetables” with “Plant foods” in paragraph (2)(c).
- Amended § 1-201.10 (B) to revise the definition of the term “Ready-to-Eat Food” to indicate what Ready-to-eat Food does not include.
- Amended § 1-201.10 (B) to revise the definition of the term “Reduced oxygen- packaging” in subparagraph 2(d) specific to cook chill packaging, to delete the phrase, “which have the air expelled”.
- Amended § 1-201.10 (B) to revise the definition of the term “Shellstock” to clarify that it is live molluscan shellfish in the shell.
- Amended § 1-201.10 (B) to revise the definition of the term “Shucked Shellfish” to clarify that both shells of this product are removed.
- Amended § 1-201.10 (B) to add a new term “Tobacco Product”.

Chapter 2. Management and Personnel

2-101.11

- Amended § 2-101.11 to add new ¶(C) to address situations where the regulatory authority has deemed a food establishment to pose minimal risk of causing, or contributing to, foodborne illness based on the nature of their operation and extent of food preparation.

2-102.20

- Amended ¶¶ 2-102.20(A) & (B) to correct the title of the Conference for Food Protection Standard to remove the “s” at the end of the word ‘Standards’ so it is not indicated as a plural word. The correct title now reads as, ‘*Conference for Food Protection Standard for Accreditation of Food Protection Manager Certification Programs*’.

2-103.11

- Amended to add new paragraph (J) to address additional duty requirement for the Person in Charge to ensure food employees are properly maintaining the temperatures of time/temperature control for safety foods during thawing and redesignated paragraphs (J) – (P) as new paragraphs (K) –(Q).

- Amended ¶ 2-103.11(N) (now ¶2-103.11(O) in the 2022 Food Code) to indicate what food allergy awareness includes.

2-201.11

- Amended sub¶ 2-201.11(D)(1) to remove cross reference to ¶ 2-201.12(G) to correctly indicate conditions under which the food employee should be excluded.
- Amended sub¶ 2-201.11(D)(2) to add a cross reference to ¶ 2-201.12(G) to correctly indicate conditions under which the food employee should be restricted.

2-301.14

- Amended ¶ 2-301.14(D) to include new term “tobacco products”.

2-401.11

- Amended § 2-401.11 to revise title and paragraph (A) to include the new term “tobacco products”.

2-403.11

- Amended ¶ 2-403.11(A) to include a new cross reference to ¶ 6-501.115(D) that addresses allowance for pet dogs in outdoor dining areas.

Chapter 3. Food**3-201.11**

- Amended ¶ 3-201.11(C) to remove the cross reference to § 3-202.17.
- Amended sub¶ 3-201.11(E)(1) to indicate the type of steak to obtain from a food processing plant.
- Amended sub¶ 3-201.11(E)(3)(a) to remove “labeled by” and replace with “received from a” to clarify what is received from a food processing plant.
- Amended to delete existing sub¶ 3-201.11(E)(3)(c) as it is no longer applicable to this paragraph.

3-202.17 / 3-202.18

- Amended to re-number and merge § 3-202.17 with § 3-202.18 as the new § 3-202.18. Revised ¶ (A), added a new ¶ (B) and renumbered existing ¶ (B) to new ¶ (C) to clarify identification provisions under one section and removes redundant listing of all terms/forms/conditions of labeling/tagging and replaces with cross-reference to the model ordinance.

3-202.19

- Amended § 3-202.19 to re-number as the new § 3-202.17 to clarify flow of product from receipt through service and record keeping. Removed the term

“Shellfish” and replaced with “Shellstock.”

3-203.11

- Amended § 3-203.11 to replace the term “Shellstock” with “Molluscan Shellfish” throughout this section.
- Amended ¶ 3-203.11(B) to include language from the previous sub¶ 3-203.12(C)(2)(b) to clarify prohibition of comingling in original containers.
- Amended ¶ 3-203.11(C) to include In-Shell Product.
- Revised new ¶ 3-203.11(E) (old ¶ (3-203.11D) to update cross-reference § 3-202.17 in sub¶¶ (E)(1)-(2) to correctly indicate § 3-202.18.
- Amended ¶¶ 3-203.11(B)-(D) to renumber as new ¶¶ (C) – (E).

3-203.12

- Amended § 3-203.12 title and entire section to replace the phrase “Shellstock and Shucked Shellfish” with the term “Molluscan Shellfish”.
- Amended ¶ 3-203.12(B) and (C) to include an invoice as appropriate documentation.
- Amended ¶ 3-203.12 (C) to revise sub¶ 3-203.12 (C)(2)(a) and re-designate as the new sub¶ 3-203.12 (C)(1) and (2).
- Amended sub¶ 3-203.12 (C)(2) to include in-shell product and shucked shellfish.
- Deleted sub¶ 3-203.12(C)(2)(b) and re-designated as the new ¶ 3-203.11(B).

3-204

- Added new Subpart 3-204, Food Donation, under Part 3-2 Sources, Specifications, and Original Containers and Records.

3-204.10

- Added a new § 3-204.10 titled Food Donation, to indicate when food may be offered for donation.

3-302.11

- Amended sub¶ 3-302.11(A)(1) to add an additional exception indicating instances when raw animal food does not need separation from RTE food.

3-302.15

- Amended ¶ 3-302.15(B) to include reference for the use of Produce Wash testing devices.

3-305.12

- Amended ¶ 3-305.12(B) to revise risk designation from Core to Priority Foundation.

3-401.11

- Revised sub¶ 3-401.11(A)(2) to delete the terms “mechanically tenderized” and “injected” and replace with the term “nonIntact meat”. Also removed the term “meats” from the listing of comminuted meats as it is already included by definition under the term nonIntact meat.
- Amended sub¶ 3-401.11(C)(2) to align with the Food Safety and Inspection (FSIS) labeling requirements of mechanically tenderized beef products.

3-401.15

- Amended to add a new § 3-401.15 addressing manufactured food cooking instructions.

3-501.13

- Amended sub¶ 3-501.13(C)(1) to add a new cross reference under Thawing to the new § 3-401.15.
- Amended ¶¶ 3-501.13(A)-(C) to re-designate from a Core Item to a Priority Foundation (Pf) Item.
- Amend sub¶ 3-501.13(C)(1) to include new cross-reference to new § 3-401.15 Manufacturer Cooking Instructions.

3-501.17

- Amended sub¶ 3-501.17(G)(1) to update the existing cross reference of 21 CFR 110 with 21 CFR 117.

3-501.19

- Added new sub-¶¶ (B)(2)(a), (b), (c), (d) to 3-501.19(B)(2) to address a READY- TO-EAT produce or hermetically sealed FOOD that is rendered TIME/TEMPERATURE CONTROL FOR SAFETY FOOD upon cutting, chopping, or opening of a hermetically sealed container to begin at 21°C (70°F) or less and remain at 21°C (70°F) or less within a maximum of 4 hours.
- Re-designated existing ¶¶ 3-501.19(B)(2)(3) and (4) as new ¶¶ 3-501.19(B)(3)(4) and (5) respectively.

3-502.12

- Amended to add new sub¶ 3-502.12(D)(2)(e)(iii) to address cook chill/sous vide products cooled to 5°C (41°F) in the sealed PACKAGE or bag as specified under §3-501.14 and subsequently cooled to 1°C (34°F) and moved to 5°C (41°F) holding temperature and held for a max of 7 days.

3-602.11

- Amended sub¶ 3-602.11(C)(2) to add a cross reference to sub¶ 3-602.11(B)(5) to address major food allergen labeling in bulk food available for consumer self-dispensing.

3-602.12

- Amended to add new ¶ 3-602.12(C) to inform consumers of major food allergens in unpackaged foods via written means.

3-801.11

- Amended ¶ 3-801.11(C) to add a new sub-¶ (4) with cross-reference to new § 3-401.15 Manufacturer Cooking Instructions.

Chapter 4. Equipment, Utensils, and Linens**4-205.10**

- Amended § 4-205.10 to clarify that equipment that has been certified for conformance to an appropriate American National Standard is deemed to comply with the equipment sanitation provisions contained in Parts 4-1 and 4-2.

4-303.11

- Amended § 4-303.11 to add the risk designation of priority foundation (Pf) item that was inadvertently left off in the 2017 Food Code.

4-401.11

- Amended sub¶ 4-401.11 (A)(2) to revise risk designation from Core to Priority Foundation (Pf) item.

4-903.12

- Amended sub¶ 4-903.12 (A)(2) to revise risk designation from Core to Priority Foundation (Pf) item .

Chapter 5. Water, Plumbing, and Waste**5-202.12**

- Amended ¶ 5-202.12(A) to revise the hot water temperature at the hand sink from at least 38°C (100°F) to at least 29.4°C (85°F).

5-203.11

- Amended § 5-203.11 to delete “¶(C)” and remove any reference to “¶(C)” in this section.

Chapter 6. Physical Facilities

6-403.11

- Amended ¶ 6-403.11(A) to include the new term “tobacco products”.

6-501.115

- Amended § 6-501.115 Prohibiting Animals to add a new exception paragraph (D) to allow for pet dogs in outdoor dining areas, where approved.
- Amended ¶ 6-501.115(A) to add a new cross reference to ¶ 6-501.115(D) to allow for pet dogs in outdoor dining areas, where approved.

Chapter 7. Poisonous or Toxic Materials

7-202.12

- Amended sub¶ 7-202.12(B)(2) to remove “Restricted Use Pesticide” (RUP), as the definition of Poisonous or Toxic Materials has been revised to include RUP as the fifth category.

7-203.11

- Amended to include the prohibition of storage of equipment, utensils, linens, single- service, or single-use articles in containers previously used for storing toxic chemicals. The section previously only mentioned the prohibition of storing food in these containers.

Chapter 8. Compliance and Enforcement

8-101.10

- Amended ¶ 8-101.10(A) to include “or donated” in the application of this Code in public health protection.

8-103.12

- Amended § 8-103.12 to include new ¶(A) addressing maintenance of APPROVED VARIANCE at the FOOD ESTABLISHMENT; Existing ¶¶ (A) and (B) renumbered to ¶¶ (B) and (C).

8-201.12

- Amended ¶8-201.12(C) as part of the sentence was inadvertently left off in the 2017 Food Code.

8-201.14

- Amended §8-201.14 to:
 - Delete sub¶ (C)(2) and add as new sub¶ (E)(2) that speaks to significant

hazards for each critical control point

- Delete sub¶¶ (C)(4) and (C)(5) and merge into newly revised ¶ (D) to highlight documents that should be submitted as a separate document
- Redesignate existing ¶(D) as the new ¶(E)
- Redesignate existing sub¶(D)(5) as the new sub¶ (E)(5) and switched former ¶(E)(4) to follow, so the sequence in new sub¶(E) now follows the sequence of the HACCP Principles of monitoring, corrective actions and verification, where the subparagraphs are now sequenced as:
 - (E)(4) establish *monitoring* procedures,
 - (E)(5) establish *corrective* actions,
 - (E)(6) establish *verification* procedures.
- Redesignated existing ¶(E) as new ¶(F) and existing ¶(F) as new ¶(G)

8-401.10

- Amended sub¶ 8-401.10(B)(1) to reflect updated cross references due to the addition of a new ¶(A) in § 8-103.12.

Annex 1. Compliance and Enforcement

No Changes.

Annex 2. References

1-201.10

- Amended to revise § 1-201.10 to update titles, web links and dates for the following references:
 - #3 - Interactions Affecting the Proliferation and Control of Human Pathogens on Edible Plants.
 - #6 - Code of Federal Regulations, Title 9, Part 301. 2 Terminology; Adulteration and Misbranding Standards Definitions, Livestock.
 - #7 - Code of Federal Regulations, Title 9, Section 590.5 Inspection of Eggs and Egg Products (Egg Products Inspection Act), Terms Defined.
 - #19 - Federal Register: May 7, 2001 (Volume 66, Number 88), Rules and Regulations, Pages 22899-22907, DEPARTMENT OF AGRICULTURE, Food Safety and Inspection Service, 9 CFR Parts 362 and 381, Docket No. 01- 045IF, RIN 0583-AC84, Mandatory Inspection Ratites and Squabs.
 - #20 - Food Allergen Labeling and Consumer Protection Act of 2004. Public Law 108-282.

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- #22 - Food and Drug Administration/U. S. Public Health Service, 2020. National Shellfish Sanitation Program (NSSP).
 - #23 - Food and Drug Administration/U. S. Public Health Service, 2019 revision. Grade "A" Pasteurized Milk Ordinance.
 - #25 - Institute of Food Technologists (IFT) Report, Evaluation and Definition of Potentially Hazardous Foods, Food and Drug Administration Contract No. 223-98-2333, Task Order No. 4, December 31, 2001.
 - #29 - *Salmonella* spp. and *Listeria monocytogenes* Risk Assessment for Production and Cooking of Blade Tenderized Beef Steaks. Kansas State University.
 - #30 - Hazard Analysis and Critical Control Point System.
 - Amended to revise § 1-201.10 to add new reference (#21 - Food Allergy Safety, Treatment, Education, and Research (FASTER) Act of 2021) and renumbered the subsequent references.

2-401.11

- Amended to revise § 2-401.11 title to include new term “tobacco products”.

2-501.11

- Amended to update reference list to include three new references (#2, #11, #12).

3-201.15

- Amended to update web link and date for reference #1 National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish.

3-203.11

- Amended to revise title from “Shellstock” to “Molluscan Shellfish, Original Container”.

3-203.12

- Amended to revise title from “Shellstock” to “Molluscan Shellfish, Maintaining Identification”.

3-204.10

- Amended to add new § 3-204.10 and 3 new corresponding references #1, #2 and #3.

3-401.11

- Amended to update weblink for reference #9 “Draft Risk Assessment of the Public Health Impact of *Escherichia coli* O157:H7 in Ground Beef, Executive Summary”.

3-401.14

- Amended to update weblink for reference #1 Appendix B, Compliance Guidelines for Cooling Heat-Treated Meat and Poultry Products (Stabilization).

3-501.17

- Amended reference #5 Ready-to-Eat, Time/Temperature Control for Safety Food, Date Marking to update the title to 21 CFR 117.
- Amended reference #19 USDA/FSIS Directive 10.240.4 to delete and re-number the remaining references.

3-501.19

- Amended to add five new references in support of the new exception in §3-501.19. Renumbered references alphabetically to align with existing references.

3-502.12

- Amended to update the weblink for reference #20 National Advisory Committee for Microbiological Criteria for Foods.

3. Supporting Documents

- Amended section K. Requirements and Guidance for Retail Facilities Regarding Beef Grinding Logs Tracking Supplier Information to update links and harmonize language based on recent FSIS publications.
- Amended to add new section, W. Minimizing the Risk of *Campylobacter* and *Salmonella* Illnesses Associated with Chicken Livers.
- Amended to add new section X and update section title to Guidance Document for Direct-to-Consumer and Third-Party Delivery Service Food Delivery, 2019.
- Amended to add new section Y. Whole Roaster Pigs: Guidance for Safe Handling and Cooking.
- Amended to add new section Z. National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish.

Annex 3. Public Health Reasons/Administrative Guidelines**1-201.10**

- Amended to add Public Health Reasons for the term “Certification Number” as a new term and description to the alphabetical listing of terms.
- Amended to add Public Health Reasons for the term “In-Shell Product” as a new term and description to the alphabetical listing of the terms.

-
- Amended to add Public Health Reasons for new defined term “Tobacco Product” after the public health reasons for the term “Time/Temperature Control for Safety Food”.
 - Amended Public Health Reasons for §1-201.10 (B) Terms Defined to add new paragraph 7 under the defined term “Time/Temperature Control for Safety Food” to include information about product assessments.

2-101.11

- Amended Public Health Reason for §2-101.11 Assignment, to add new paragraph 3 that addresses newly added exception for ¶2-101.11(C).

2-103.11

- Amended Public Health Reasons for § 2-103.11 Person in Charge, to revise statement in paragraph 6 from “eight major food allergens” to “nine major food allergens”
- Amended Public Health Reasons for §2-103.11 to add a new paragraph 8 addressing employee training on elements associated with food allergy awareness and what topics food establishments can consider including when developing operational- specific allergen training programs for employees.
- Amended Public Health Reasons for §2-103.11 to revise newly designated paragraph 9 to correctly indicate paragraph (P) in the first sentence due to the newly redesignated paragraphs in §2-103.11.
- Amended Public Health Reasons for §2-103.11 to address additional duty requirement for the Person in Charge to ensure food employees are properly maintaining the temperatures of time/temperature control for safety foods during thawing.

2-301.14

- Amended Public Health Reasons for §2-301.14 to reference new defined term “tobacco products”.

2-401.11

- Amended Public Health Reasons for § 2-401.11 to revise title to include new term “tobacco products”.

3-101.11 / 3-201.11

- Amended Public Health Reasons for § 3-101.11 and § 3-201.11 to update paragraphs 15-22 with revised weblinks and updated information regarding meat and poultry.
- Amended Public Health Reasons for § 3-201.11 to revise paragraph 24 to update information regarding labeling of steaks that are non-intact.

3-202.18

- Amended to re-number and merge Public Health Reasons for § 3-202.17 with § 3-202.18 as the new § 3-202.18.
- Amended Public Health Reasons for new § 3-202.18 to place descriptive paragraph from old § 3-202.18 as paragraph one.
- Amended Public Health Reasons for § 3-202.18 to add new paragraph two and three to describe dual-purpose tags.
- Amended Public Health Reasons for § 3-202.18 to place descriptive paragraph from old § 3-202.17 as paragraph four.

3-202.19

- Amended to delete existing Public Health Reasons for § 3-202.19 and re-number as the new § 3-202.17.

3-203.11

- Amended Public Health Reasons for § 3-203.11 paragraph 2 to update citation from § 3-202.17 to § 3-202.18.

3-203.12

- Amended Public Health Reasons for § 3-203.12 to revise title from “Shellstock, Maintaining Identification” to “Molluscan Shellfish, Maintaining Identification.”
- Amended Public Health Reasons for § 3-203.12 paragraphs 1-4 to replace the term “Shellstock” with “Molluscan Shellfish” wherever the term was used.

3-204.10

- Added new public health reasons for § 3-204.10 to address food donation compliance with law and Code applicability.

3-302.11

- Amended Public Health Reasons for § 3-302.11 to revise paragraph 1 to include information on the additional exception provided in subparagraph (A)(1) indicating instances when raw animal food does not need separation from RTE food.
- Amended Public Health Reasons for § 3-302.11 to revise paragraph 2 to appropriately characterize terminology from allergen cross contamination to allergen cross contact in the last sentence.

3-305.12

- Amended Public Health Reasons for § 3-305.12 to add new paragraph 2 that provides reference to the public health reason for § 2-501.11.

3-401.11

- Amended Public Health Reasons for § 3-401.11 to revise paragraphs 3, 10, 12-16 and add a new paragraph 11 to clarify and update information with revised FSIS policies.

3-401.15

- Added Public Health Reasons for new § 3-401.15 Manufacturer Cooking Instructions.

3-501.14

- Amended Public Health Reasons for § 3-501.14 to revise paragraphs 12 -14 in the section addressing the CFSAN/FSIS Joint Position Paper on Cooling to update and harmonize with revised FSIS policies.

3-501.17

- Amended Public Health Reasons for §3-501.17 Ready-to-Eat, Time/Temperature Control for Safety Food, Date Marking, to include reference to a fact sheet developed to assist industry and regulatory authorities to better understand the types of information that may be included on a date marking label and what the disposition time of that product looks like based on the information provided.
- Amended Public Health Reasons for § 3-501.17 to revise the weblink under the “FDA/USDA/CDC *Listeria monocytogenes* Risk Assessment” section in paragraph 1 for the Quantitative Assessment of the Relative Risk to Public Health from the Foodborne *Listeria monocytogenes* Among Selected Categories of Ready-to-Eat Foods.
- Amended Public Health Reasons for § 3-501.17 to revise the weblink under the “*Hard and Semi-soft Cheeses*” section in Paragraph 1 for FDA issuing an exemption from date marking for certain types of hard and semi-soft cheeses.
- Amended Public Health Reasons for § 3-501.17 paragraph 10 (Deli Salads Prepared and Packaged in a Food Processing Plant) to update the existing cross reference of 21 CFR 110 with 21 CFR 117.

3-501.19

- Amended Public Health Reasons for §3-501.19 Time as a Public Health Control to add new paragraph 16 that addresses newly added exception for ¶3-501.19(B)(2).

3-502.12

- Amended Public Health Reasons for §3-502.12, Reduced Oxygen Packaging with One Barrier (Cook-Chill and Sous Vide) to indicate there are “four” options for cooling cook- chill and sous vide TCS foods.

3-602.11

- Amended Public Health Reasons for § 3-602.11 to revise paragraph 1 under the subheading 'Food Allergen Labeling' to clarify how FALCPA amended the FD&C Act and added a new paragraph 2 to provide information on the Food Allergy Safety, Treatment, Education, and Research Act of 2021 (FASTER Act).

3-602.12

- Amended Public Health Reasons for § 3-602.12 to add new paragraph 3 under the subheading "Food Labels and other forms of information" and added a new paragraph 2 and revised existing paragraph 1 under the subheading "Food Allergen Labeling" to address the inclusion of written notification of major food allergens in unpackaged foods.

4-501.114

- Amended Public Health Reasons in § 4-501.114 to clarify intent of paragraph 3 that formulation of food contact surface sanitizers is not limited to chlorine, iodine and quaternary ammonium compounds.

5-202.12

- Amended Public Health Reasons for ¶ 5-202.12(A) to revise paragraphs 1 and 2 to incorporate the revision from the hot water temperature at the hand sink from at least 38°C (100°F) to at least 29.4°C (85°F).

6-501.115

- Amended Public Health Reasons for §6-501.115 Prohibiting Animals to add new paragraph 6 that addresses allowance of pet dogs in outdoor dining areas, where approved.

Annex 4. Management of Food Practices-Achieving Active Managerial Control of Foodborne Illness Risk Factors

- Amended **Section 3. The HACCP Principles, Category (A) (4) Food Allergens As Food Safety Hazards**
 - Amended paragraph 2 to add sesame to the list of major food allergens.
 - Amended paragraph 4 to clarify requirements that are included in FALCPA.
 - Added new paragraph 5 to indicate new requirements as a result of the FASTER Act.
- Amended **Annex 4, Tables 2a-b Common Chemical Hazards at Retail, Along with their Associated Foods and Control Measures**
 - Amended Table 2a. to add "Sesame" in the Associated Foods box

addressing allergens (foods containing or contacted by).

- Amended Table 2b. to remove the columns associated with the flavor enhancer monosodium glutamate (MSG) from the table.
- Amended paragraph 1 in **Section 3. The HACCP Principles. Category (C) Principle #3: Establish Critical Limits (2) What are examples of critical limits** to correctly reference the appropriate pH critical limit for the acidification of sushi rice.

Annex 5. Conducting Risk-Based Inspection

No Changes.

Annex 6. Food Processing Criteria

Amended **Section 2. Reduced Oxygen Packaging, Section (B) Definitions, paragraph (B)(1)** to delete the phrase “which have the air expelled.”.

Annex 7. Models Forms, Guides, and Other Aids

- **Form 3-A Food Establishment Inspection Report**
 - Amended Item #1 Supervision to include an additional compliance status of N/A to address new exception in ¶ 2-101.11(C).
 - Amended Item #6 Proper eating, tasting, drinking or tobacco use to replace “tobacco use” with the new term “tobacco products”.
 - Amended to update Item #14 title to replace the term ‘shellstock tags’ with “molluscan shellfish.”
- **Guide 3-B, Instructions for Marking the Food Establishment Inspection Report, Including Food Code References for Risk Factors/Interventions and Good Retail Practices**

General Marking Instructions. Amended the Instructions for Marking the Food Establishment Report in Sections C (Risk Factors) and D (Good Retail Practices) to capture new or updated cross references based on changes made in this Supplement as follows:

Item #1

Amended Item #1 to include an additional compliance status of N/A to indicate that the item is not applicable for the facility.

Amended Item #1, PIC present, demonstrates knowledge, and performs duties to revise applicable code section for § 2-103.11 to include redesignated paragraphs (A)-(O) and (Q).

Item #3

Amended Item #3, Management and food employee knowledge, and conditional employee; responsibilities and reporting, to revise applicable code section for § 2-103.11 to update it to read as 2-103.11 (P) to match the redesignated paragraph numbering in § 2-103.11.

Item #6

Amended Item #6, Proper, Eating, Tasting, Drinking or Tobacco Use to update the title to include the new term “tobacco products” and include tobacco products in the descriptive narrative and to update the applicable code sections to reflect the revised section title for 2-401.11 to include the new term “tobacco products”.

Item #11

Amended item #11, Approved Source, to rename the title to more appropriately state, “Food From a Source that Complies with Law”.

Amended Item #11 to make an editorial change to clarify the IN/OUT instructions that food must be obtained from sources that comply with Law.

Item #14

Amended Item #14 Required records available: shellstock tags, parasite destruction to revise title and descriptive language to replace the terms “shellstock tags” with “molluscan shellfish identification”.

Amended Item #14 Applicable Code Sections to replace the terms “shellstock tags” with “molluscan shellfish” where applicable.

Item #15

Amended Item #15 Food Separate and Protected to add additional parameters clarifying RTE food may be combined with raw animal food when combined as ingredients for future prep/cooking.

Item #18

Amended Item #18 to update the IN/OUT marking instructions to add additional information about foods bearing manufacturer cooking instructions or a disclosure that the food has not been processed to control pathogens.

Amended Item #18 to update the table of “Internal Cooking Temperature Specifications for Raw Animal Foods” to denote the proper cooking time/temperatures under intact meat and to replace the terms mechanically tenderized and injected with nonIntact Meat to harmonize with the revised definition of Intact meat.

Amended Item #18, Proper cooking time and temperature to add a new Applicable Code Section: 3-401.15 Manufacturer Cooking Instructions.

Item #29

Amended Item #29 to reflect marking the inspection report Out of Compliance when the approved variance in ¶ 8-103.12(A) is not kept at the food establishment.

Item #35

Amended Item #35 to revise the risk designation from a core item to a priority foundation item under the applicable code § 3-501.13 Thawing.

Item #37

Amended Item #37, Food Properly Labeled, Original Container to add guidance that addresses bulk food available for consumer self-dispensing and labeling of major food allergens.

Amended Item #37, Food Properly labeled, Original Container to reflect new addition of consumer written notification of major food allergens as an ingredient in unpackaged foods.

Amended Item #37 Food properly Labeled; Original Container to remove 3-202.17 as an applicable code section.

Item #39

Amended Item #39, Contamination prevented during food preparation, storage and display to add risk designation of Priority Foundation to applicable code section 3-305.12.

Amended Item #39 Contamination prevented during food preparation, storage and display to remove applicable code section 3-202.19 and replace with applicable code section 3-202.17.

Item #44

Amended Item #44, Utensils, equipment and linens; properly stored, dried and handled to add risk designation of Priority Foundation to applicable code section 4-903.12.

Item #47

Amended Item #47, Food and non-food contact surfaces cleanable, properly designed, constructed and used to add risk designation of Priority Foundation to applicable code section 4-401.11.

Item #48

Amended Item #48 to revise the title of § 4-501.110 under the applicable code sections, which was incorrectly written in the 2017 Food Code.

Amended Item #48 to include § 4-501.116 Warewashing Equipment, Determining Chemical Sanitizer Concentration under the applicable code sections that was inadvertently missing in previous versions of the Food Code.

- **Chart 4-D FDA Food Code Mobile Food Establishment Matrix**

- Revised Chart 4-D FDA Food Code Mobile Food Establishment Matrix to delete reference of ¶ 5-203.11(C) from the following categories: “Personnel”, “Water & Sewage” to reflect the deletion made in § 5-203.11.



**U.S. FOOD & DRUG
ADMINISTRATION**

Human Foods Program

Supplement to the 2022 Food Code

U.S. Public Health Service

FDA

**U.S. DEPARTMENT OF HEALTH AND HUMAN
SERVICES**

College Park, MD 20740

IMPORTANT - Save this Supplement. It is intended to keep the 2022 Food Code up-to-date. Changes, additions, deletions, and format modifications listed herein constitute revisions to the 2022 Food Code effective upon issuance.

Supplement to the 2022 Food Code

The Food Code (and its Supplement) is a model for safeguarding public health and ensuring food is unadulterated and honestly presented when offered to the consumer. It represents the Food and Drug Administration's (FDA) best advice for a uniform system of provisions that address safety and protection of food offered at retail and in food service.

This model is offered for adoption by local, state, territorial, tribal, and federal governmental jurisdictions for administration by the various departments, agencies, bureaus, divisions, and other units within each jurisdiction that have been delegated compliance responsibilities for food service, retail food stores, or food vending operations.

This document is available via the internet in PDF at the following link:
www.fda.gov/foodcode

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Introduction

The Food and Drug Administration (FDA) is pleased to issue this Supplement to the 2022 Food Code (hereafter referred to as Supplement). This Supplement updates the 2022 Food Code to address several recommendations made at the 2023 Meeting of the Conference for Food Protection (CFP) with which the FDA, Centers for Disease Control and Prevention (CDC), and United States Department of Agriculture (USDA) concur. The changes contained in this Supplement reflect current science and food safety practices to reduce the incidence of risk factors known to cause foodborne illness.

From 1993 through 2001, the complete Food Code was issued every two years. With the support of the CFP, FDA currently issues a new Food Code every 4 years. The next complete revision of the Food Code will be published in 2025. Until that time, this Supplement provides a means of incorporating into the Food Code several changes with which there is substantial concurrence among the federal agencies and the other stakeholders. The Supplement ensures that the most current food safety provisions are available to agencies planning to initiate rule-making activities prior to 2025. This Supplement provides other users of the Food Code, such as educators, trainers, and the food service, retail food, and vending industries, with up-to-date information of how to best mitigate risk factors that contribute to foodborne illness.

The Supplement has been organized to facilitate the adoption of its provisions by federal, state, local, territorial, and tribal authorities. The Supplement is divided into 3 Parts:

- Part 1 - Summary of Changes - a "quick view" of the modifications
- Part 2 - Amendments, Additions, Deletions to the Preface, Chapters 1-8 and the Annexes - actual language modifications
- Part 3 - New Terms added to the Index to the Food Code

For consistency, drafting conventions used in the Federal Register for announcing proposed changes to federal rules are used to announce changes found in the Supplement to the 2022 Food Code. The standard terms used to describe a change are:

Amend. "Amend" means that an existing Food Code provision has changed. Because it is an introductory term, it is always used with one of the following specific amendatory terms to precisely describe the change to the Food Code provision.

Amendatory Terms

Add - means a new provision has been inserted in the Food Code.

Redesignate - means to modify a Food Code provision by reformatting the text of the provision into a new structural nomenclature designation.

Remove - means an existing provision is being taken out of the Food Code.

Revise - means an existing Food Code provision is replaced in part, or in its entirety.

For example:

Amend Section 4-204.110 to **revise** subparagraph (B)(1) and to **add** subparagraph (B)(3) to read as follows: [text of changed subparagraph and newly added subparagraph]

Modifications are organized by Food Code chapter and are identified by Section (§) number and title, and the paragraph (¶), (e.g., ¶9-101.11(A)) or subparagraph (e.g., 9-101.00(A)(1)) to which the change is made. The full text of a Section is provided only if necessary to provide the proper context. Using Chapter 3 as an example, a change is introduced as follows:

Chapter 3 Food

Amend § 3-202.11 to revise paragraph (D) to read as follows:

***Specifications
for Receiving***

3-202.11 Temperature.*

[text of changed paragraph]

The Supplement also contains changes to the informational annexes of the Food Code. Using Annex 3 as an example, a change to the public health reasons for a Food Code provision in Chapter 4 is introduced as follows:

Annex 3 Public Health Reasons/Administrative Guidelines

4-202.15 Can Openers.

Amend Public Health Reason for §4-202.15 to revise to read as follows:

[text of changed paragraph]

We encourage all jurisdictions to examine the level of food safety protection their current rules and implementation strategies provide and take the steps necessary to increase that level in light of the 2022 Food Code and its Supplement. The adoption and implementation of the Food Code in all jurisdictions is an important strategy for achieving uniform national food safety standards and for enhancing the efficiency and effectiveness of our nation's food safety system.

The Department of Health and Human Services (DHHS) and USDA, along with state, local, tribal and other federal government agencies and the food industry, share responsibility for ensuring that our food supply is safe. DHHS and USDA, in partnership with numerous others, will continue to take progressive steps to strengthen our nation's food safety system. We look forward to achieving uniform and effective standards of food safety for food service, retail stores, and other retail-level establishments nationwide.

IMPORTANT. Changes, additions, deletions, and format modifications listed herein constitute revisions to the 2022 Food Code effective upon issuance via web posting or hard copy release.

Part 1. Summary of Changes

The amendments to the 2022 Food Code and its Annexes contained in the Supplement are summarized below. If an amendment relates directly to a recommendation of the Conference for Food Protection (CFP), the CFP issue number is provided in the parenthesis immediately after the summary entry.

Preface

Amended Preface, Part 3 Public Health and Consumer Expectations to include reference to FOOD DEFENSE.

Chapters, Parts and Subparts

Amended List of Chapters, Parts and Subparts to include new Part 4-10 and Subparts 4-1001, 4-1002, 4-1003 addressing new disinfection provisions.

Chapter 1 Purpose and Definitions

Added a new defined term **ACTIVE MANAGERIAL CONTROL** to clarify and provide consistency in application and understanding of the term. (CFP Issue 2023-II-043)

Added a new defined term **DISINFECTION** to make clear its distinction from sanitizers. (CFP Issue 2023-III-015)

Added new defined term **FOOD DEFENSE** to ensure it is adequately addressed in the Food Code. (CFP Issue 2023-II-039)

Added a new defined term **FOOD SAFETY MANAGEMENT SYSTEM** that promotes a preventative strategy that can help manage and control factors that can contribute to foodborne illness. (CFP-Issue 2023-II-043)

Revised to amend the definition of **POISONOUS OR TOXIC MATERIALS** specifically sub¶¶ 1-201.10(1) and 1-201.10(2) to add the term DISINFECTION to make clear that DISINFECTANTS are indeed POISONOUS OR TOXIC MATERIALS. (CFP Issue 2023-III-015)

Revised to amend the definition of **REDUCED OXYGEN PACKAGING** specifically sub¶¶ 1-201.10(2)(d) cook chill PACKAGING to replace the term bags with PACKAGING to clarify intent. (CFP Issue 2023-III-023)

Added a new defined term **WATER-BASED FIRE PROTECTION SYSTEMS** to be more

encompassing and specific to active fire protection systems that include water-based fire protection, such as standpipes, water mist, and fire sprinklers, as well as other water carrying piping. (CFP Issue 2023-I-024)

Chapter 2 Management and Personnel

2-102.11

Amended ¶ 2-102.11(C) to add sub¶ 2-102.11(C)(18) to include an additional area of knowledge of FOOD DEFENSE as it relates to FOOD ESTABLISHMENTS. (CFP Issue 2023-II-039)

2-103.11

Amended lead in sentence in § 2-103.11 to indicate that the PERSON IN CHARGE has a duty to maintain ACTIVE MANAGERIAL CONTROL by ensuring compliance with the requirements outlined in § 2-103.11. (CFP Issue 2023-II-043)

Amended § 2-103.11 to add a new ¶ 2-103.11(R) that addresses EMPLOYEE training on FOOD DEFENSE. (CFP Issue 2023-II-039)

2-201.13

Amended sub¶ 2-201.13 (E)(1), sub¶ 2-201.13 (F)(1) and sub¶ 2-201.13 (G)(1) to revise the requirement for “2 consecutive negative stool culture tests” with the requirement for “2 consecutive negative laboratory test results from a validated test, using a laboratory accredited or certified to handle clinical specimens”.

(CFP Issue 2023-III-30). *** Note-This change adds lab methods for reinstating ill food employees. It replaces mandatory use of stool cultures and allows for additionally using culture-independent diagnostic test (CIDTs) results such as molecular or enzyme-based methods for reinstating ill food employees.*

2-304.11

Amended § 2-304.11 to fix the convention of the defined terms FOOD, EQUIPMENT, UTENSILS, LINENS and SINGLE-SERVICE and SINGLE-USE ARTICLES into small caps, which was inadvertently left off.

Chapter 3 Food

3-201.11

Amended ¶ 3-201.11(B) to remove duplicate language from ¶ 3-201.11(C) that was inadvertently added in the 2022 Food Code and added in the risk designation of Priority foundation in ¶ 3-201.11(C) that was inadvertently left off.

Amended sub¶ 3-201.11(E)(3)(b) to remove the “and” and correctly place it at the end of sub¶ 3-201.11(E)(3)(a) as it was inadvertently misplaced after removing sub¶ 3-201.11(E)(3)(c). Additionally, fixed spelling error for “received” in sub¶ 3-201.11(E)(3)(a). (CFP Issue 2021-I-032)

3-304.11

Amended ¶ 3-304.11(B) to revise the terms SINGLE-SERVICE and SINGLE-USE ARTICLES as small caps were inadvertently left off.

3-304.17

Amended to re-designate existing ¶ 3-304.17(A) to be a new ¶ 3-304.17(C); added new ¶ 3-304.17(A) to clarify when containers may be refilled with FOOD by a FOOD EMPLOYEE or CONSUMER; revised ¶ 3-304.17(B) to clarify how containers may be refilled with food to prevent contamination of the FOOD and the PREMISES; and re-designated existing ¶ 3-304.17(E) to be the new ¶ 3-304.17(D) which is the exception that nonFOOD containers may be refilled at a water VENDING MACHINE. (CFP Issue 2023-III-012)

3-305.12

Amended ¶ 3-305.12(G) to align with 2024 International Fire Code requirements and new defined term WATER-BASED FIRE PROTECTION SYSTEMS. (CFP Issue 2023-I-024)

3-501.13

Amended ¶ 3-501.13(E) to align with the risk designation for ¶ ¶ 3-501.13 (A), (B), and (C) as an editorial update.

Chapter 4 Equipment, Utensils, and Linens

4-302.14

Amended to add new ¶ 4-302.14(B) and make existing paragraph a new ¶ 4-302.14(A) to add in testing kits or other devices to measure disinfecting solution and to revise the tag line (title) to add in the term Disinfecting. (CFP Issue 2023-III-015)

4-401.11

Amended sub¶ 4-401.11(A)(6) to align with 2024 International Fire Code requirements and new defined term WATER-BASED FIRE PROTECTION SYSTEMS. (CFP Issue 2023-I-024)

4-501.116

Amended § 4-501.116 to revise the tag line (title) to include the term “DISINFECTANT” and to make existing paragraph a new paragraph (¶) 4-501.116(A) and add a new paragraph (¶) 4-501.116(B) indicating when a test kit is used to determine the concentration of a SANITIZING solution, it shall be used in accordance with the manufacturer’s label instructions. (CFP Issue 2023-I-018)

4-903.12

Amended ¶ 4-903.12 (A) to align with 2024 International Fire Code requirements and new defined term WATER-BASED FIRE PROTECTION SYSTEMS. (CFP Issue 2023-I-024)

4-1001.11

4-1002.11

4-1003.11

Amended Chapter 4 to add a new Part 4-10 Disinfection of Equipment and Utensils to include corresponding subparts and sections.

Chapter 5 Water, Plumbing, and Waste

5-203.11

Amended ¶ 5-203.11(B) to revise text into stylized italics as was inadvertently left off.

Chapter 6 Physical Facilities

No Change.

Chapter 7 Poisonous or Toxic Materials

Chapter 7 Heading

Amended chapter heading throughout chapter 7 to correctly state Chapter 7.

POISONOUS OR TOXIC MATERIALS at the top right margin as it was inadvertently labeled as Chapter 8.

7-102.11

Amended § 7-102.11 Common Name to add the term DISINFECTANTS.
(CFP Issue 2023-III-015)

7-201.11

Amended § 7-201.11 as small caps were inadvertently left off the defined terms FOOD, EQUIPMENT, UTENSILS, LINENS and SINGLE-SERVICE and SINGLE-USE ARTICLES in the lead in sentence.

7-202.12

Amended ¶ 7-202.12 (C) as small caps were inadvertently left off the defined term RESTRICTED USE PESTICIDE.

Chapter 8 Compliance and Enforcement

8-103.12

Amended ¶ 8-103.12(C) to reflect updated cross references due to the redesignations of ¶(E) and ¶(F) in § 8-201.14 in the 2022 Food Code.

8-201.12

Amended ¶ 8-201.12(E) to replace the term standard procedures with the term FOOD SAFETY MANAGEMENT SYSTEM. (CFP Issue 2023-II-043)

8-201.15

Amended to add new § 8-201.15 titled When a Food Safety Management System is Required to establish requirements for a FOOD SAFETY MANAGEMENT SYSTEM.
(CFP Issue 2023-II-043)

8-201.16

Amended Subpart 8-201 to add new § 8-201.16 as a reserved provision.

8-402.11

Amended § 8-402.11 heading as the number 8 was inadvertently left off the section number and to remove highlighted box designated for Subparts.

Annex 1 Compliance and Enforcement

No Change.

Annex 2 References

3-304.17

Amended to remove outdated reference 1. Food and Drug Administration, 1985. Food Protection – Refilling of take-home beverage containers (8/29/85). Retail Food Protection Program Information Manual.

Supporting Documents

Amended to add new section, **AA. Guidance for Retail Food Establishments in Developing their Food Safety Management Systems.** (CFP 2023-II-043)

Amended to add new section, **BB. Major Food Allergen Framework.** (CFP Issue 2023-II-051)

Amended to add new section, **CC. Guidance for Safe Use of Reusable Containers.** (CFP Issue 2023-III-010)

Amended to add new section, **DD. Guidance Document for Retail Sushi HACCP Standardization.** (CFP Issue 2023-III-006)

Amended to revise **Section 4. Food Defense Guidance from Farm to Table** to fix outdated and broken links and provide the most updated resources from FDA and USDA. (CFP Issue 2023-II-040)

Annex 3 Public Health Reasons

1-201.10

Amended Public Health Reasons for §1-201.10 to revised the CFP Standard Title by deleting the letter “s” to make the word “Standard” singular rather than plural in paragraph 5 under Accredited Program.

Amended Public Health Reasons for §1-201.10 Statement of Application and Listing of Terms to add 3 new paragraphs that address newly defined term “Food Defense”. (CFP Issue 2023-II-039)

Amended to add Public Health Reasons for §1-201.10 Statement of Application and Listing of Terms to add 5 new paragraphs that address newly defined term “Food Safety Management System”. (CFP Issue 2023-II-043)

2-102.10

Amended Public Health Reason for §2-102.10 Food Protection Manager Certification to replace the term “American National Standards Institute (ANSI)” with new name “ANSI National Accreditation Board (ANAB)” throughout and to revise the CFP Standard Title by deleting the letter “s” to make the word “Standard” singular rather than plural in paragraphs 3-4, 6-10 (including footnote).

2-103.11

Amended Public Health Reason for §2-103.11 Person in Charge to add a new paragraph 1 and make existing paragraph 1 into new paragraph 2 to address the addition of active managerial control. (CFP Issue 2023-II-043)

Amended Public Health Reason for §2-103.11 Person in Charge to add new paragraph 13 that addresses new paragraph R on employee awareness of food defense. (CFP Issue 2023-II-039)

2-201.13

Amended Public Health Reasons for § 2-201.13 to add a new header titled: “Culture-Independent Diagnostic Tests (CIDT) for Medical Clearance” after paragraph 3; add new paragraphs 4 and 5 after existing paragraph 3 to provide rationale for adding the option of using CIDT tests in addition to stool culture tests for reinstatement of food employees diagnosed with STEC, *Shigella* or Non-Typhoidal *Salmonella*; add a new header titled: “Reinstatement of Asymptomatic Food Employees” above new designated paragraph 6 (previous paragraph 4) to provide information to the reader that subsequent paragraphs after the new paragraph 6 return to previous information provided on reinstating asymptomatic diagnosed food employees.

2-301.12

Amended Annex 3 Public Health Reasons for § 2-301.12 to add new paragraphs 3, 5, 8, 9 and shift existing paragraphs 3, 5, 8 to be new paragraphs 4, 5 and 10 respectively to provide more context on hand contamination. (CFP Issue 2023-III-031)

2-301.16

Amended Annex 3 Public Health Reason for § 2-301.16 Hand Antiseptics to revise paragraphs 2 and 3 to clarify the intent of hand antiseptics. (CFP Issue 2023-III-016)

2-501.11

Amended Annex 3 Public Health Reasons for § 2-501.11 Clean-up of Vomiting and Diarrheal Events to revise paragraph 6 to include reference to EPA-registered DISINFECTANTS and to revise paragraph 9 by rearranging bulleted list of items to consider

when developing a written plan to ensure the steps listed reflect the order of actions covered by the plan. (CFP Issue 2023-III-017)

3-201.11

Amended Annex 3 Public Health Reasons for § 3-201.11 to delete the word “not” between “have” and “undergone” in sentence 3 under the section Labeling for Whole-muscle, Intact Beef Steaks. This was a typographical error.

3-301.11

Amended Public Health Reasons for § 3-301.11 to add new paragraphs 3, 4 and 5 to introduce additional control measures, provide more background describing what a double handwash is and to include information on fingernail brushes from the Public Health Reasons found in § 2-301.12. (CFP Issue 2023-I-017)

3-304.17

Amended Annex 3 Public Health Reason for § 3-304.17 Refilling Returnables to add new paragraphs 1-3 and 5-6; revise old paragraph 1 to be new paragraphs 4 and 5 and revise old paragraph 2 to be new paragraphs 7 and 8 to include new language to align with codified text revisions. (CFP Issue 2023-III-010)

3-305.11 Food Storage.

3-305.12 Food Storage, Prohibited Areas.

Amended Annex 3 Public Health Reasons for § 3-305.12 to add pipes, tubes, and hoses to be inclusive of all water carrying piping and correlates to health and plumbing codes. (CFP Issue 2023-I-024)

3-502.11

Amended Annex 3 Public Health Reasons for § 3-502.11 Variance Requirement to add new paragraph 8 that addresses food preservation techniques as it relates to variance requests, (CFP Issue 2023-III-027)

4-302.14

Amended Annex 3 Public Health Reasons for § 4-302.14 Sanitizing Solutions, Testing Devices to revise the section title to add the term “Disinfecting” and revise the paragraph to include language regarding disinfectants and testing devices. (CFP Issue 2023-III-015)

4-501.116

Amended Annex 3 Public Health Reason for § 4-501.116 to revise the section tag line (title) to include the term “Disinfectant” and to update language to include the term disinfectant throughout the paragraph. (CFP Issue 2023-III-015)

4-601.11

Amended Annex 3 Public Health Reasons for § 4-601.11 to revise the term nonfood contact to nonfood-contact to make it grammatically consistent throughout the Food Code.

4-602.13

Amended Annex 3 Public Health Reasons for § 4-602.13 to revise the term nonfood contact to nonfood-contact to make it grammatically consistent throughout the Food Code.

4-1001.11**4-1002.11****4-1003.11**

Added new Annex 3 Public Health Reasons for §§ 4-1001.11, 4-1002.11, 4-1003.11 to address new codified provisions added under new Part 4-10 addressing disinfection. (CFP Issue 2023-III-015)

6-202.15

Amended Public Health Reasons for § 6-202.15 to reference the newest edition of the National Fire Protection Association's NFPA 101, Life Safety Code within paragraph two.

7-102.11

Amended Annex 3 Public Health Reasons for § 7-102.11 Common Name to include the term disinfectants after the term sanitizers in sentence 1. (CFP Issue 2023-III-015)

8-201.12**8-203.10**

Amended Annex 3 Public Health Reasons for §§ 8-201.12 and 8-203.10 to add a new header § 8-201.15 When a Food Safety Management System is Required and revise existing paragraphs 2-4 to reflect new codified language in § 8-201.15. (CFP 2023-II-043)

Annex 4 Management of Food Safety Practices – Achieving Active Managerial Control of Foodborne Illness Risk Factors

No Change.

Annex 5 Conducting Risk-based Inspections

No Change.

Annex 6 Food Processing Criteria**Section 2. Reduced Oxygen Packaging**

Amended Annex 6 Section 2. Reduced Oxygen Packaging, Part (B) Definitions to reflect the revised definition of Reduced Oxygen Packaging and to align with codified text. (CFP 2023-III-023)

Section 4. Acidification (Sushi Rice) - New

Amended Annex 6 Food Processing Criteria to add new Section 4 Acidification (Sushi Rice) to include further explanation in critical limits associated with sushi rice.

(CFP Issue 2023-III-008)

Annex 7 Models Forms, Guides, and Other Aids

Form 3-A Food Establishment Inspection Report

Amended form 3-A Food Establishment Inspection Report, Item #1 Supervision to include an additional compliance status of N/A to address new exception in ¶2-101.11(C). (CFP Issue 2018-I-003)

Guide 3-B, Instructions for Marking the Food Establishment Inspection Report, Item 1

Amended Guide 3B, Section C, Supervision, Item #1, to add new paragraphs for inclusion in B(3) and under applicable code sections §2-102.11 and §2-103.11.

Guide 3-B, Instructions for Marking the Food Establishment Inspection Report, Item 6

Amended Guide 3B, Section C, Proper eating, tasting, drinking, or tobacco products use, Item #6, to revise the term nonfood contact to nonfood-contact to make it grammatically consistent throughout the Food Code in sentence #2.

Guide 3-B, Instructions for Marking the Food Establishment Inspection Report, Item 16

Amended Guide 3B, Section C Item #16 Food-contact surfaces, cleaned and sanitized to revise the title of the section, update the marking instructions and include new applicable Code sections. (CFP Issue 2023-III-015)

Guide 3-B, Instructions for Marking the Food Establishment Inspection Report, Item 28

Amended Guide 3B, Section C. Toxic Substances properly identified, stored, and used; held for retail sale, properly stored, Item #28 to include disinfectant as a toxic substance. (CFP Issue 2023-III-015)

Guide 3-B, Instructions for Marking the Food Establishment Inspection Report, Item 35

Amended Guide 3B, Section D, Approved Thawing Methods Used, Item #35, to add new risk designation to 3-305.13 in the applicable code section.

Guide 3-B, Instructions for Marking the Food Establishment Inspection Report, Item 47

Amended Guide 3B, Section D, Food and nonfood-contact surfaces cleanable, properly designed, constructed and used, Item #47, to remove hyphen between the word non-food throughout; add new marking instructions and add new risk designation of Core to 3-304.17 in the Applicable Code Section.
(CFP Issue 2023-III-012)

Guide 3-B, Instructions for Marking the Food Establishment Inspection Report, Item 48

Amended Guide 3B, Section D, Warewashing Facilities, Installed, Maintained, Used, Test Strips, Item #48 to revise the title of §§ 4-302.14 and 4-501.116 to include the word “disinfecting” under the applicable code sections and to revise the marking instructions to include guidance on when to mark out of compliance when testing solution concentrations. (CFP Issue 2023-I-018)

Part 2. Amendments, Additions, Deletions, to Chapters 1-8 and the Annexes

Preface

Amended Preface, Part 3 Public Health and Consumer Expectations to include reference to food defense to read as follows:

3. Public Health and Consumer Expectations

It is a shared responsibility of the food industry and the government to ensure that food provided to the consumer is safe and does not become a vehicle in a disease outbreak, in the transmission of a communicable disease or part of an intentional act of adulteration or tampering. This shared responsibility extends to ensuring that consumer expectations are met, and that food is safe, unadulterated, prepared in a clean environment, and honestly presented.

Under FDA's Mission Statement the agency is responsible for protecting the public health by ensuring the safety of our nation's food supply...and for advancing the public health by helping the public get accurate, science-based information they need about foods to maintain and improve their health.

Accordingly, the provisions of the Food Code provide a system of prevention and overlapping safeguards designed to minimize foodborne illness; ensure employee health, industry manager knowledge, safe food, nontoxic and cleanable equipment, and acceptable levels of sanitation on food establishment premises; and promote fair dealings with the consumer.

Chapters, Parts, and Subparts

Amended List of Chapters, Parts and Subparts to include new Part 4-10 and subparts 4-1001, 4-1002, 4-1003 addressing new disinfection provisions to read as follows:

...NO CHANGE...

4-10 Disinfection of Equipment and Utensils

4-1001 Objectives

4-1002 Frequency

4-1003 Methods

Chapter 1 Purpose and Definitions

Amend §1-201.10 to revise in paragraph (B) the following defined terms to read as follows:

“Active Managerial Control” means the purposeful incorporation of specific actions or procedures by industry management into the operation of their business to attain control over foodborne illness RISK factors. It embodies a preventive rather than reactive approach to FOOD safety through a continuous system of monitoring and verification.

“Disinfection” means the application of a substance, or mixture of substances, that destroys or irreversibly inactivates bacteria, fungi, and viruses, but not necessarily bacterial spores.

“Food Defense” is the effort to protect FOOD from acts of intentional ADULTERATION or tampering.

Food Safety Management System

(1) **“FOOD SAFETY MANAGEMENT SYSTEM”** means a specific set of actions taken by the EMPLOYEE to prevent the occurrence of foodborne illness RISK factors based on the type of operation, type of FOOD preparation, and FOODS prepared within the FOOD ESTABLISHMENT.

(2) **“FOOD SAFETY MANAGEMENT SYSTEM”** includes written procedures, training plans, and monitoring records to control specific operational steps in a FOOD ESTABLISHMENT that contribute to foodborne illness.

“Poisonous or toxic materials” means substances that are not intended for ingestion and are included in 5 categories:

- (1) Cleaners, SANITIZERS and DISINFECTANTS, which include cleaning, SANITIZING and DISINFECTING agents and agents such as caustics, acids, drying agents, polishes, and other chemicals;
- (2) Pesticides, except SANITIZERS and DISINFECTANTS, which include substances such as insecticides and rodenticides;
- (3) – (5) NO CHANGE

Reduced Oxygen Packaging

(2) **“Reduced oxygen packaging”** includes:

- (a) – (c) NO CHANGE
- (d) Cook chill PACKAGING, in which cooked FOOD is hot filled into impermeable PACKAGING (such as a bag or film on trays) that is then sealed or crimped closed. The PACKAGED FOOD is rapidly chilled and refrigerated at temperatures that inhibit the growth of psychotropic pathogens; or
- (e) NO CHANGE

“Water-based fire protection systems” means automatic or manual fire systems using water as a primary agent, which are used to detect, extinguish, or control a fire.

Chapter 2 Management and Personnel

Amend ¶ 2-102.11(C) to add new sub¶ (C)(18) to read as follows:

2-102.11 Demonstration.

Based on the RISKS inherent to the FOOD operation, during inspections and upon request the PERSON IN CHARGE shall demonstrate to the REGULATORY AUTHORITY knowledge of foodborne disease prevention, application of the HAZARD Analysis and CRITICAL CONTROL POINT principles, and the requirements of this Code. The PERSON IN CHARGE shall demonstrate this knowledge by:

(A) Complying with this Code by having no violations of PRIORITY ITEMS during the current inspection;^{Pf}

(B) Being a certified FOOD protection manager who has shown proficiency of required information through passing a test that is part of an ACCREDITED PROGRAM;^{Pf} or

(C) Responding correctly to the inspector's questions as they relate to the specific FOOD operation. The areas of knowledge include:

...NO CHANGE...

(18) Explaining steps that are taken to prevent intentional ADULTERATION by CONSUMERS, EMPLOYEES, or other PERSONS including monitoring operations, ingredients, supplies, and finished products for unusual or suspicious activities, or other FOOD DEFENSE activities.^{Pf}

Amend §2-103.11 to revise the lead in sentence and to add new ¶ (R) to read as follows:

2-103.11 Person in Charge.

The PERSON IN CHARGE shall maintain ACTIVE MANAGERIAL CONTROL of foodborne illness RISK factors by ensuring that:

...NO CHANGE...

(R) EMPLOYEES are aware of FOOD DEFENSE, such as signs of intentional acts of ADULTERATION as it relates to their assigned duties, and report suspicious activity to the PERSON IN CHARGE.^{Pf}

Amend sub-¶¶¶ 2-201.13 (E)(1) and 2-201.13 (F)(1) and 2-201.13 (G)(1) to replace the requirement for 2 consecutive negative stool culture tests with: 2 consecutive negative laboratory test results from a validated test, using a laboratory

accredited or certified to handle clinical specimens as an additional option to allow for the use of culture-independent diagnostic test results to read as follows:

Managing Exclusions and Restrictions

2-201.13 Removal, Adjustment, or Retention of Exclusions and Restrictions.

The person in charge shall adhere to the following conditions when removing, adjusting, or retaining the exclusion or restriction of a food employee:

...NO CHANGE...

Shigella spp. Diagnosis - Removing Exclusion or Restriction

(E) Reinstate a FOOD EMPLOYEE who was EXCLUDED as specified under Subparagraphs 2201.12(A)(2) or (E)(1) or who was RESTRICTED under Subparagraph 2201.12(E)(2) if the PERSON IN CHARGE obtains APPROVAL from the REGULATORY AUTHORITY and one of the following conditions is met:

- (1) The EXCLUDED or RESTRICTED FOOD EMPLOYEE provides to the PERSON IN CHARGE written medical documentation from a HEALTH PRACTITIONER stating that the FOOD EMPLOYEE is free of a *Shigella* spp. infection based on 2 consecutive negative laboratory test results from a validated test, using a laboratory accredited or certified to handle clinical specimens and obtained from stool specimens that are taken:
 - (a) Not earlier than 48 hours after discontinuance of antibiotics, ^P and
 - (b) At least 24 hours apart; ^P
- (2) The FOOD EMPLOYEE was EXCLUDED or RESTRICTED after symptoms of vomiting or diarrhea resolved, and more than 7 calendar days have passed since the FOOD EMPLOYEE became ASYMPTOMATIC: ^P or
- (3) The FOOD EMPLOYEE was EXCLUDED or RESTRICTED and did not develop symptoms and more than 7 calendar days have passed since the FOOD EMPLOYEE was diagnosed. ^P

STEC Diagnosis - Removing Exclusion or Restriction

(F) Reinstate a FOOD EMPLOYEE who was EXCLUDED or RESTRICTED as specified under Subparagraphs 2-201.12(A)(2) or (F)(1) or who was RESTRICTED under Subparagraph 2-201.12(F)(2) if the PERSON IN CHARGE obtains APPROVAL from the REGULATORY AUTHORITY and one of the following conditions is met:

- (1) The EXCLUDED or RESTRICTED FOOD EMPLOYEE provides to the PERSON IN CHARGE written medical documentation from a HEALTH PRACTITIONER stating that the FOOD EMPLOYEE is free of an infection from SHIGA TOXIN-PRODUCING *ESCHERICHIA COLI* based on 2 consecutive negative laboratory test results from a validated test, using a laboratory accredited or certified to handle clinical specimens, and obtained from stool specimens that are taken:

- (a) Not earlier than 48 hours after discontinuance of antibiotics; ^P and
- (b) At least 24 hours apart; ^P
- (2) The FOOD EMPLOYEE was EXCLUDED or RESTRICTED after symptoms of vomiting or diarrhea resolved and more than 7 calendar days have passed since the FOOD EMPLOYEE became ASYMPTOMATIC : ^P or
- (3) The FOOD EMPLOYEE was EXCLUDED or RESTRICTED and did not develop symptoms and more than 7 days have passed since the FOOD EMPLOYEE was diagnosed. ^P

Nontyphoidal Salmonella - Removing Exclusion or Restriction

(G) Reinstate a FOOD EMPLOYEE who was EXCLUDED as specified under Subparagraph 2-201.12(A)(2) or who was RESTRICTED as specified under ¶ 2-201.12(G) if the PERSON IN CHARGE obtains APPROVAL from the REGULATORY AUTHORITY and one of the following conditions is met:

- (1) The EXCLUDED or RESTRICTED FOOD EMPLOYEE provides to the PERSON IN CHARGE written medical documentation from a HEALTH PRACTITIONER stating that the FOOD EMPLOYEE is free of a *Salmonella* (nontyphoidal) infection based on test results showing 2 consecutive negative laboratory test results from a validated test, using a laboratory accredited or certified to handle clinical specimens and obtained from stool specimens that are taken:
 - (a) Not earlier than 48 hours after discontinuance of antibiotics, ^P and
 - (b) At least 24 hours apart; ^P
- (2) The FOOD EMPLOYEE was RESTRICTED after symptoms of vomiting or diarrhea resolved, and more than 30 days have passed since the FOOD EMPLOYEE became ASYMPTOMATIC: ^P or
- (3) The FOOD EMPLOYEE was EXCLUDED or RESTRICTED and did not develop symptoms and more than 30 days have passed since the FOOD EMPLOYEE was diagnosed. ^P

...NO CHANGE...

Amend §2-304.11 to revise convention of defined terms into small caps to read as follows:

2-304.11 Clean Condition.

FOOD employees shall wear clean outer clothing to prevent contamination of FOOD, EQUIPMENT, UTENSILS, LINENS, and SINGLE-SERVICE and SINGLE-USE ARTICLES.

Chapter 3 Food

Amend ¶ 3-201.11 (B) to remove duplicate language and add in the risk designation of Priority foundation in ¶ 3-201.11(C) and amend sub¶ 3-201.11(E)(3)(b) to remove the “and” and correctly place it at the end of sub¶ 3-201.11(E)(3)(a) and fix spelling error for “received” in sub¶ 3-201.11(E)(3)(a) to read as follows:

3-201.11 Compliance with Food Law.

(A) FOOD shall be obtained from sources that comply with LAW.^P

(B) FOOD prepared in a private home may not be used or offered for human consumption in a FOOD ESTABLISHMENT. ^P

(C) PACKAGED FOOD shall be labeled as specified in LAW, including 21 CFR 101 FOOD Labeling, 9 CFR 317 Labeling, Marking Devices, and Containers, and 9 CFR 381 Subpart N Labeling and Containers, and as specified under § 3-202.18. ^{Pf}

...NO CHANGE...

(E) WHOLE-MUSCLE, INTACT BEEF steaks that are intended for consumption in an undercooked form without a CONSUMER advisory as specified in ¶ 3-401.11(C) shall be:

(1) Obtained from a FOOD PROCESSING PLANT that does not MECHANICALLY TENDERIZE, vacuum tumble with solutions, reconstruct, cube or pound these WHOLE-MUSCLE, INTACT BEEF STEAKS, ^{Pf} or

(2) Deemed acceptable by the REGULATORY AUTHORITY based on other evidence, such as written buyer specifications or invoices, that indicates that the steaks meet the definition of WHOLE-MUSCLE, INTACT BEEF, ^{Pf} and

(3) If individually cut in a FOOD ESTABLISHMENT:

(a) Cut from WHOLE-MUSCLE INTACT BEEF that is received from a FOOD PROCESSING PLANT as specified in Subparagraph (E)(1) of this section or identified as specified in Subparagraph (E)(2) of this section, ^P and

(b) Prepared so they remain intact. ^{Pf}

...NO CHANGE...

Amend ¶ 3-304.11(B) as small caps were inadvertently left off the defined terms SINGLE-SERVICE and SINGLE-USE ARTICLES to read as follows:

3-304.11 Food Contact with Equipment and Utensils.

Food shall only contact surfaces of:

(A) EQUIPMENT and UTENSILS that are cleaned as specified under Part 4-6 of this Code and SANITIZED as specified under Part 4-7 of this Code; ^P

(B) SINGLE-SERVICE and SINGLE-USE ARTICLES; ^P or

(C) LINENS, such as cloth napkins, as specified under § 3-304.13 that are laundered as specified under Part 4-8 of this Code. ^P

Amend to re-designate existing ¶ 3-304.17(A) to be a new ¶ 3-304.17(C); added new ¶ 3-304.17(A); revised ¶ 3-304.17(B); and re-designated existing ¶ 3-304.17(E) to be the new ¶ 3-304.17(D) to read as follows:

3-304.17 Refilling Returnables.

(A) Containers may be refilled with FOOD either by a FOOD EMPLOYEE or the CONSUMER, if:

(1) The container is designed and constructed for multiuse in accordance with the requirements specified under § 4-101.11, § 4-201.11, and 4-202.11 of this Code, and

(2) The container is cleaned and SANITIZED following procedures as specified under § 4-601.11, § 4-602.11, § 4-701.10, § 4-702.11 and §4-703.11 of this Code prior to refilling, and,

(3) The container is visually inspected by a FOOD EMPLOYEE to verify that the container, as returned, meets the requirements specified prior to use. ^{Pf}

(B) Except as specified in ¶ (D) of this section, containers refilled in a FOOD ESTABLISHMENT shall be refilled so that:

(1) The container is refilled in a contamination-free transfer process; ^{Pf}

(2) The container is handled to prevent direct contact with FOOD-CONTACT SURFACES; and ^{Pf}

(3) FOOD-CONTACT SURFACES are cleaned as specified under Part 4-6 and SANITIZED as specified under Part 4-7 of this Code by a FOOD EMPLOYEE. ^{Pf}

(C) Containers returned to a FOOD ESTABLISHMENT for cleaning and refilling in a regulated FOOD PROCESSING PLANT shall not be refilled at a FOOD ESTABLISHMENT.

(D) CONSUMER-owned containers that are not FOOD-specific may be filled at a water VENDING MACHINE or system.

Amend ¶ 3-305.12 (G) to align with 2024 International Fire Code requirements and new defined term WATER-BASED FIRE PROTECTION SYSTEMS to read as follows:

3-305.12 Food Storage, Prohibited Areas.

FOOD may not be stored:

- (A) In locker rooms;
- (B) In toilet rooms; ^{Pf}
- (C) In dressing rooms;
- (D) In garbage rooms;
- (E) In mechanical rooms;
- (F) Under sewer lines that are not shielded to intercept potential drips;
- (G) Under leaking or where water is condensed on pipes, tubes, or hoses, including plumbing, heating, air conditioning and WATER-BASED FIRE PROTECTION SYSTEMS.
- (H) Under open stairwells; or
- (I) Under other sources of contamination.

Amend ¶ 3-501.13 (E) to align with the risk designation for ¶ ¶ 3-501.13 (A), (B), and (C) as an editorial update to read as follows:

3-501.13 Thawing.

Except as specified in ¶ (D) of this section, TIME/TEMPERATURE CONTROL FOR SAFETY FOOD shall be thawed:

...NO CHANGE...

(E) REDUCED OXYGEN PACKAGED fish that bears a label indicating that it is to be kept frozen until time of use shall be removed from the reduced oxygen environment:

- (1) Prior to its thawing under refrigeration as specified in ¶(A) of this section; ^{Pf} or
- (2) Prior to, or immediately upon completion of, its thawing using procedures specified in ¶ (B) of this section. ^{Pf}

Chapter 4 Equipment, Utensils, and Linens

Amend § 4-302.14 to add new ¶ 4-302.14(B) and make existing paragraph into new ¶ 4-302.14(A) and to add in the term Disinfecting to the Tag line (title) to read as follows:

4-302.14 Sanitizing and Disinfecting Solutions, Testing Devices.

(A) A test kit or other device that accurately measures the concentration in MG/L of SANITIZING solutions shall be provided. ^{Pf}

(B) A test kit of other device that accurately measures the concentration of DISINFECTING solutions shall be provided. ^{Pf}

Amend ¶ 4-401.11(A) to align with 2024 International Fire Code requirements and new defined term WATER-BASED FIRE PROTECTION SYSTEMS to read as follows:

4-401.11 Equipment, Clothes Washers and Dryers, and Storage Cabinets, Contamination Prevention.

(A) Except as specified in ¶ (B) of this section, EQUIPMENT, a cabinet used for the storage of FOOD, or a cabinet that is used to store cleaned and SANITIZED EQUIPMENT, UTENSILS, laundered LINENS, and SINGLE-SERVICE and SINGLE-USE ARTICLES may not be located:

- (1) In locker rooms;
- (2) In toilet rooms; ^{Pf}
- (3) In garbage rooms;
- (4) In mechanical rooms;
- (5) Under sewer lines that are not shielded to intercept potential drips;
- (6) Under leaking or where water is condensed on pipes, tubes, or hoses, including plumbing, heating, air conditioning and WATER-BASED FIRE PROTECTION SYSTEMS;

...NO CHANGE...

Amend § 4-501.116 to revise the tag line (title) to include the term “DISINFECTANT” and to make existing paragraph a new paragraph (¶) (A) and add a new paragraph (¶) (B) to read as follows:

4-501.116 Warewashing Equipment, Determining Chemical Sanitizer or Disinfectant Concentration.

(A) Concentration of the SANITIZING or DISINFECTING solution shall be accurately determined by using a test kit or other device. ^{Pf}

(B) A test kit, used to determine the concentration of a SANITIZING or DISINFECTING solution shall be used in accordance with the manufacturer’s label instructions.

Amend ¶ 4-903.12 (A) to align with 2024 International Fire Code requirements and new defined term WATER-BASED FIRE PROTECTION SYSTEMS to read as follows:

4-903.12 Prohibitions.

(A) Except as specified in ¶ (B) of this section, cleaned and SANITIZED EQUIPMENT, UTENSILS, laundered LINENS, and SINGLE-SERVICE and SINGLE-USE ARTICLES may not be stored:

- (1) In locker rooms;

- (2) In toilet rooms; ^{Pf}
- (3) In garbage rooms;
- (4) In mechanical rooms;
- (5) Under sewer lines that are not shielded to intercept potential drips;
- (6) Under leaking or where water is condensed on pipes, tubes, or hoses, including plumbing, heating, air conditioning and WATER-BASED FIRE PROTECTION SYSTEMS.

...NO CHANGE...

Amend Chapter 4 to add a new Part 4-10 Disinfection of Equipment and Utensils to include corresponding subparts and sections to read as follows:

CHAPTER 4 EQUIPMENT, UTENSILS, AND LINENS

Parts:

- 4-1 Materials for Construction and Repair
- 4-2 Design and Construction
- 4-3 Numbers and Capacities
- 4-4 Location and Installation
- 4-5 Maintenance and Operation
- 4-6 Cleaning of Equipment and Utensils
- 4-7 Sanitization of Equipment and Utensils
- 4-8 Laundering
- 4-9 Protection of Clean Items
- 4-10 Disinfection of Equipment and Utensils

...NO CHANGE...

4-10 Disinfection of Equipment and Utensils

4-1001 Objective

4-1001.11 Food-Contact, nonFood-Contact Surfaces and Utensils

EQUIPMENT, FOOD-CONTACT SURFACES, nonFOOD-CONTACT SURFACES, and UTENSILS shall be DISINFECTED when pathogens of concern are not controlled by available SANITIZERS.^P

4-1002 Frequency

4-1002.11 Disinfectant Use

When pathogens of concern are not controlled by available SANITIZERS, EQUIPMENT, FOOD-CONTACT SURFACES, nonFOOD-CONTACT SURFACES, and UTENSILS shall be DISINFECTED:

- (A) When contaminated with vomitus, fecal matter, blood, or any other bodily fluid that can lead to disease transmission;^P or
- (B) During a FOODBORNE DISEASE OUTBREAK or IMMINENT HEALTH HAZARD.^P

4-1003 Methods

4-1003.11 Chemical

- (A) FOOD-CONTACT SURFACES and nonFOOD-CONTACT SURFACES shall be DISINFECTED in accordance with the EPA-registered label use directions.^P
- (B) DISINFECTANTS applied to a FOOD-CONTACT SURFACE shall be rinsed with potable water, unless otherwise specified on the EPA-registered label use directions.^P

Chapter 5 Water, Plumbing, and Waste

Amend ¶5-203.11(B) to revise text into stylized italics to read as follows:

5-203.11 Handwashing Sinks.

(A) Except as specified in ¶¶ (B) of this section, at least 1 HANDWASHING SINK, a number of HANDWASHING SINKS necessary for their convenient use by EMPLOYEES in areas specified under § 5-204.11, and not fewer than the number of HANDWASHING SINKS required by LAW shall be provided.^{Pf}

(B) If APPROVED and capable of removing the types of soils encountered in the FOOD operations involved, automatic handwashing facilities may be substituted for HANDWASHING SINKS in a FOOD ESTABLISHMENT that has at least 1 HANDWASHING SINK.

Chapter 6 Physical Facilities

No Change.

Chapter 7 Poisonous or Toxic Materials

Amend Chapter 7 Chapter heading at the top right margin throughout Chapter 7 to read as follows:

Chapter 7. Poisonous or Toxic Materials

Amend § 7-102.11 to add the term DISINFECTANTS to read as follows:

7-102.11 Common Name.

Working containers used for storing POISONOUS OR TOXIC MATERIALS such as cleaners, SANITIZERS and DISINFECTANTS taken from bulk supplies shall be clearly and individually identified with the common name of the material. ^{Pf}

Amend § 7-201.11 as small caps were inadvertently left off the defined terms to read as follows:

7-201.11 Separation.

POISONOUS OR TOXIC MATERIALS shall be stored so they can not contaminate FOOD, EQUIPMENT, UTENSILS, LINENS, and SINGLE-SERVICE and SINGLE-USE ARTICLES by:

...NO CHANGE...

Amend ¶ 7-202.12 (C) as small caps were inadvertently left off the defined term RESTRICTED USE PESTICIDE to read as follows:

7-202.12 Conditions of Use.

POISONOUS OR TOXIC MATERIALS shall be:

...NO CHANGE...

(C) A RESTRICTED USE PESTICIDE shall be applied only by an applicator certified as defined in 7 USC 136 Definitions, (e) Certified Applicator, of the Federal Insecticide, Fungicide, and Rodenticide Act, or a PERSON under the direct supervision of a certified applicator. ^{Pf}

Chapter 8 Compliance and Enforcement

Amend ¶ 8-103.12(C) to reflect updated cross references due to the redesignations of ¶(E) and ¶(F) in § 8-201.14 in the 2022 Food Code to read as follows:

8-103.12 Conformance with Approved Procedures.

...NO CHANGE...

(C) Maintain and provide to the REGULATORY AUTHORITY, upon request, records specified under ¶ 8-201.14(E) and sub¶ 8-201.14(F)(3) that demonstrate that the following are routinely employed;

- (1) Procedures for monitoring the CRITICAL CONTROL POINTS, ^{Pf}
- (2) Monitoring of the CRITICAL CONTROL POINTS, ^{Pf}
- (3) Verification of the effectiveness of the operation or process, ^{Pf} and
- (4) Necessary corrective actions if there is failure at a CRITICAL CONTROL POINT. ^{Pf}

Amend ¶8-201.12(E) to replace the term standard procedures with the term food safety management system to read as follows:

8-201.12 Contents of the Plans and Specifications.

The plans and specifications for a FOOD ESTABLISHMENT, including a FOOD ESTABLISHMENT specified under § 8-201.13, shall include, as required by the REGULATORY AUTHORITY based on the type of operation, type of FOOD preparation, and FOODS prepared, the following information to demonstrate conformance with Code provisions:

...NO CHANGE...

(E) Evidence that a FOOD SAFETY MANAGEMENT SYSTEM that ensures compliance with the requirements of this Code are developed or are being developed; and

...NO CHANGE...

Amend to add new § 8-201.15 titled When a Food Safety Management System is Required to establish requirements for a food safety management system to read as follows:

8-201.15 When a Food Safety Management System is Required.

(A) Within 4 years of the REGULATORY AUTHORITY'S adoption of this Code, a written FOOD SAFETY MANAGEMENT SYSTEM shall be:

- (1) Developed and maintained to ensure compliance with requirements of this Code as specified in 2-103.11.
- (2) Implemented in the FOOD ESTABLISHMENT during all hours of operation, and
- (3) Made available to the REGULATORY AUTHORITY upon request.

(B) This section does not apply to certain types of FOOD ESTABLISHMENTS deemed by the REGULATORY AUTHORITY to pose minimal RISK of causing, or contributing to, foodborne illness based on the nature of the operation and extent of the FOOD preparation.

Amend Subpart 8-201 to add new § 8-201.16 as a reserved provision to read as follows:

8-201.16 Contents of a food safety management system.

RESERVED.

Amended § 8-402.11 heading as the number 8 was inadvertently left off of the section number and to remove highlighted box designated for Subparts to read as follows:

8-402.11 Allowed at Reasonable Times after Due Notice.

...NO CHANGE...

Annex 1 Compliance and Enforcement

No Change.

Annex 2 References

Amend 2. Bibliography to remove outdated reference 1. Food and Drug Administration, 1985. Food Protection – Refilling of take-home beverage containers (8/29/85)-Retail Food Protection Program Information Manual to read as follows:

**Reference outdated, removed and no longer available

Amend 3. Supporting Documents to add the following new sections AA., BB., CC., DD. to read as follows:

3. SUPPORTING DOCUMENTS

FDA is providing the following guidance documents for reference. A brief summary for each document is provided.

...No Change...

AA. Guidance for Retail Food Establishments in Developing their Food Safety Management Systems

USDA Food Nutrition Service (FNS) in partnership with the Institute of Child Nutrition (ICN) developed HACCP-based food safety management tools for child nutrition

professionals and serve as a good resource for food establishments that need to develop or enhance their current food safety management systems. The resources include a workshop that provide helpful training and tools that food establishments can refer to as they work to build their food safety management system. The materials can be used as a model to build checklists, activities, standard operating procedures, SOPs, and log templates. The workshop to aid in writing, updating, and revising a HACCP-Based Food Safety Plan is located at <https://theicn.org/icn-resources-a-z/writing-a-haacp-based-food-safety-plan-for-schools/>. In addition, there are Food Safety SOP Resources that incorporate HACCP-based Standard Operating Procedures located at: <https://theicn.org/icn-resources-a-z/food-safety/#66da58d4edcafd35f>. This resource may be used as a template to design or evaluate a food establishment's current food safety management systems. The materials serve as a model for example standard operating procedures, logs, templates, and SOP summary tables.

BB. Major Food Allergen Framework

The need for effective management of major food allergens within food establishments is ever-growing. This document provides a voluntary operational framework for food allergy prevention and control for food establishments. This document outlines practices that may assist food establishments in allergen control including topics such as training of food handlers, food handling policies and practices, tools to notify consumers about major food allergens, food allergy reaction and emergency response, and equal consideration for other community food sources.

This document and summary document are available for download at:

<http://www.foodprotect.org/media/guide/major-food-allergen-framework.pdf>

<http://www.foodprotect.org/media/guide/major-food-allergen-framework-summary.pdf>

CC: Guidance Document for Safe Use of Reusable Containers, Conference for Food Protection.

This document is designed to guide the safe use of reusable containers for retail food establishment operators intending to use these types of containers and to provide guidance to regulatory authorities evaluating or approving retail refilling operations.

At the 2023 Conference for Food Protection meeting the Safe Use of Reusable Containers committee conveyed the concern that the Food Code did not align with practices in the field as it pertains to refilling reusable containers at retail. The committee agreed the filling of customer-owned containers and third-party supplied reusable containers in retail food establishments was common despite limited allowance in the Food Code. The committee also agreed that local, national, and global legislation and movements to reduce solid waste from disposable food containers would increase reuse requirements and the demand for reusable container options from consumers,

businesses, and environmental groups. In addition, legislative bodies will likely look toward reusable container options for food service packaging to help address issues of waste, human health, and climate change.

This document is accessible for download at:

[Guidance Document for the Safe Reuse of Containers | Conference-Developed Guides and Documents | Conference for Food Protection](https://www.foodprotect.org/guides-documents/guidance-document-for-the-safe-reuse-of-containers/)
(<https://www.foodprotect.org/guides-documents/guidance-document-for-the-safe-reuse-of-containers/>)

DD. Guidance Document for Retail Sushi HACCP Standardization

The Guidance for Retail Sushi HACCP Standardization document has been developed as a tool for the purpose of assisting regulatory and industry personnel. In achieving greater uniformity. This document was created to supplement the templates and guidance provided for acidified rice that are part of the Conference for Food Protection Conference-developed Guides and Documents. The goal of this guidance is to help jurisdictions achieve a more standardized review of HACCP Plans.

This document can be accessed at the following web site:

<http://www.foodprotect.org/media/guide/final-doc-cfp-c3-sushi-rice-standardization-5-2023.pdf>.

Amend 4. Supporting Documents to revise Section 4. Food Defense Guidance from Farm to Table with updated content to read as follows:

4. FOOD DEFENSE GUIDANCE FROM FARM TO TABLE

The following is a summary of available resources on food defense that is of interest to the retail and food service food community. This listing is provided below and is not all inclusive. It contains links to websites and describes publications from federal agencies (primarily FDA, CDC, and USDA) and industry groups with information of interest for regulators, industry, and consumers. Responsibility for updating the web pages lies with the listed organization and those listed are up to date as of the release of the current Food Code.

U.S. Food and Drug Administration:

The FDA has developed food defense tools, resources, and regulation and guidance documents to help food establishments and food facilities prevent, prepare for, respond to, and recover from acts of intentional adulteration of the food supply.

These resources can be found by visiting Food Defense | FDA (www.fda.gov/food/fooddefense) website or by searching U.S. Food and Drug Administration (fda.gov) on the FDA website includes:

- **Guidance for Industry: Food Security Preventive Measures Guidance for Retail Food Stores and Food Service Establishments:** This guidance is designed as an aid to operators of retail food stores and food service establishments (for example, bakeries, bars, bed-and-breakfast operations, cafeterias, camps, child and adult day care providers, church kitchens, commissaries, community fundraisers, convenience stores, fairs, food banks, grocery stores, interstate conveyances, meal services for home-bound persons, mobile food carts, restaurants, and vending machine operators). This guidance identifies the kinds of preventive measures they may take to minimize the risk that food under their control will be subject to tampering or other malicious, criminal, or terrorist actions.
- **Food Defense 101 - Front-line Employee Training:** The web-based course provides front-line employees with simple procedures to protect the food supply against an intentional attack.
- **Food Defense Plan Builder:** This is a user-friendly tool designed to help owners and operators of a food facility in the development of a food defense plan that is specific to their facility. The plan builder is designed for food manufacturers and processors but can also be used by retail and foodservice operators to develop food defense plans.
- **Food Related Emergency Exercise Bundle (FREE-B):** Exercise scenarios based on both intentional and unintentional food contamination events. FREE-B assists government regulatory and public health agencies in assessing the readiness of their entity to respond to a food contamination event. The FREE-B is designed to allow for multiple jurisdictions and organizations (medical community, private sector, law enforcement, first responder communities) to 'play' with the host agency, or, quite simply, for an individual agency to test their own plans, protocols, and procedures independently.
- **Food Defense Mitigation Strategies Database (FDMSD):** Online database designed to help owners and operators of a food facility with identifying mitigation strategies to protect the food against intentional adulteration. The FDMSD includes mitigation strategies for some common points, steps, and procedures that are often found at food facilities.
- **"See Something, Say Something" Poster:** FDA collaborated with partner agencies in the Food and Agriculture Sector Council to develop a poster for food facilities and food establishments to raise awareness of the indicators of terrorism and terrorism related crime, as well as the importance of reporting suspicious activity to state and local law enforcement.

Other FDA Resources:

- To report an emergency involving food, drugs, medical devices, dietary supplements, or cosmetics, call 1-866-300-4374 or 1-301-796-8240.
- To report a problem with FDA-regulated products by phone: Call 1-888-INFO-FDA (1-888-463-6332) or Consumer Complaint Coordinators | FDA.
- Use the MedWatch Online Voluntary Reporting Form ([fda.gov](https://www.fda.gov/medwatch)) to report adverse events with human food and medical products.
- Use the Safety Reporting Portal ([hhs.gov](https://www.hhs.gov)) online form to report problems with pet food, dietary supplements, and tobacco products. This form also accepts mandatory reports, such as Reportable Food Registry for Industry.

U.S. Department of Agriculture:

USDA Food Safety and Inspection Service (FSIS) promotes food defense by encouraging establishments to voluntarily adopt a functional food defense plan; implement food defense practices (including inside, outside, and personnel security measures); and conduct training and exercises to ensure preparedness. (Note: resources may be found by searching [Home | Food Safety and Inspection Service](https://www.fsis.usda.gov) ([fsis.usda.gov](https://www.fsis.usda.gov)) for keywords Food Defense, Security, and other similar keywords or visiting [Food Defense | Food Safety and Inspection Service](https://www.fsis.usda.gov/food-safety/food-defense-and-emergency-response/food-defense) ([fsis.usda.gov/food-safety/food-defense-and-emergency-response/food-defense](https://www.fsis.usda.gov/food-safety/food-defense-and-emergency-response/food-defense))).

[Food Defense | Food Safety and Inspection Service](https://www.fsis.usda.gov/food-safety/food-defense-and-emergency-response/food-defense) ([fsis.usda.gov/food-safety/food-defense-and-emergency-response/food-defense](https://www.fsis.usda.gov/food-safety/food-defense-and-emergency-response/food-defense)): This site discusses a comprehensive approach that addresses food defense.

- Food Defense for In-Commerce Firms: Provides resources and information on food defense for in-commerce firms.
- Food Defense Guidelines for the transportation and Distribution of Meat, Poultry and Processed Egg Products: The FSIS Food Defense Guidelines for the Transportation and Distribution of Meat, Poultry, and Processed Egg Products is designed to assist those handling food products during transportation and storage. These guidelines provide a list of defense measures that can be taken to prevent intentional contamination of meat, poultry, and processed egg products during loading, unloading, transportation, and in-transit storage.

USDA Food and Nutrition Resources (FNS) for Schools:

- A Biosecurity Checklist - School Foodservice Programs | Missouri Department of Elementary and Secondary Education ([mo.gov](https://www.mo.gov)): USDA FNS has prepared a Biosecurity Checklist for School Foodservice Programs for developing a biosecurity management

plan. Its purpose is to help protect the health of the children and adults in the school by strengthening the safety of the foodservice operation.

- [Emergency_readiness_plan_a_guide_for_the_school_foodservice_operation.pdf](#) (hhs.gov): Emergency Readiness Plan: Forms for the School Foodservice Operation includes several prototype forms to assist foodservice professionals when writing an emergency readiness plan.
- [Responding_Food_Recall_FNS_05302014.pdf](#) (azureedge.us): Provides an overview of the recall process for USDA foods with a focus on school meals programs. Particular attention is given to the roles of various entities in communicating information to ensure that recalls are handled in a timely and effective manner.

Other USDA Resources:

- USDA Meat & Poultry Hotline: 1-888-MPHotline (1-888-674-6854).

Industry Publications:

A variety of resource are available from industry groups. *(Note: these documents may also be found by searching for keywords Food Defense, Security, and other similar keywords):*

- National Restaurant Association | National Restaurant Association: provides access to security information and guidelines targeted specifically the restaurant industry.
- FMI | The Food Industry Association: provides access to security information and guidelines targeted specifically to food retailers.
- FMI | Voice of The Food Industry Blog: provides access to information.
- Conference-Developed Guides and Documents | Conference for Food Protection: Provides guidance documents related to retail food safety.

Guidance on Responding to Food Emergencies

- Environmental Health Services Program Home | EHS | CDC: This site provides free tools and guidance, training, and research for environmental health practitioners and programs serving states, tribes, localities, and territories.
- Information on Specific Types of Emergencies| Emergency Preparedness and Response (cdc.gov): Provides resources for preparedness and response to specific types of emergencies.

- Conference for Food Protection: Provides resources, specifically emergency action plan information: Emergency Action Plan for Retail Food Establishments | Conference of Food Protection)

Annex 3 Public Health Reasons/Administrative Guidelines

Amend Public Health Reasons § 1-201.10 to remove the “s” in the title Standards for Accreditation of Food Protection Manager Certification Programs in paragraph 5 under Accredited Program to read as follows:

1-201.10 Statement of Application and Listing of Terms

...NO CHANGE...

Accredited Program.

...NO CHANGE...

Program accreditation standards known to be relevant to food protection manager certification programs include those contained in the *Standard for Accreditation of Food Protection Manager Certification Programs* available from the Conference for Food Protection, 2792 Miramar Lane, Lincoln, CA 95648 and found at <http://www.foodprotect.org/>

...NO CHANGE...

Amend Public Health Reasons § 1-201.10 to add new public health reason for defined terms “Food Defense” and “Food Safety Management System” after the term “Food establishment and food processing plant” and before the term “In-Shell Product” to read as follows:

1-201.10 Statement of Application and Listing of Terms

...NO CHANGE...

Food Defense.

Food defense was added as a defined term to address the recommendations made by the Conference for Food Protection Food Defense Committee during the 2021-2023 biennium. Adding the definition of food defense broadens the scope of the Food Code and addresses the desires from the retail food stakeholders to protect our food supply.

While intentional adulteration occurs infrequently, its consequences when it does occur, can be impactful on those involved. There have been several intentional adulteration events related to food establishments in the United States. Examples include:

- 1984 Intentional adulteration by the Rajneeshee group of 10 salad bars in Oregon

- 2002-2003 Intentional adulteration of meat in grocery stores with nicotine in Michigan
- 2009 Intentional adulteration of salsa with pesticides at a restaurant in Kansas
- 2016 Intentional adulteration of produce at local grocery stores in Michigan
- 2016 Intentional adulteration of food at restaurants in South Lake Tahoe in California

The development and implementation of food defense measures may prevent or minimize acts of intentional adulteration.

Food Safety Management System.

The definition of food safety management system includes tools such as operating procedures, training plans, and monitoring functions and components that are developed and implemented to address the Person in Charge duties under § 2-103.11 that contribute to foodborne illness. Food safety management systems will vary among food establishments because they are based on the specific operations that will be conducted.

Procedures are a set of actions adopted by management for accomplishing a task in a way that minimizes food safety risks. These can be in the form of, but not limited to, instructions/illustrations, recipe cards with process instructions, wall charts, standard operating procedures, wallet cards, employee health policies, etc. so food employees can use them as a reference when performing operational tasks. The goal is to have well-documented systems that include written procedures describing who, what, where, when, and how the activity must be performed.

Training educates employees on food safety tasks/procedures within the food establishment and how to implement them. Information may be presented in various formats such as computer-based training, on-the-job training, instructions/illustrations, recipe cards with instructions, wall charts, wallet cards, live demonstration, or other methods used to familiarize and train the food employees on the procedures used within the food establishment. The goal is to provide and document training for all food safety tasks in a format and frequency adequate to ensure employees have the knowledge to carry out the procedures consistently and effectively.

Monitoring encompasses routine observations and measurements to determine if food safety procedures are being followed. Monitoring systems may include but are not limited to automated systems, digital thermometers, logs, charts, checklists, and other job aids and tools to monitor the critical limits. The monitoring system should also include who, what, where when and how monitoring is to be performed. The goal is to have a well-documented system that can be verified.

Overall, maintaining documentation of activities within a food safety management system is vital to its success.

Amend Public Health Reasons for § 2-102.10 to replace the term “American National Standards Institute (ANSI)” with new name “ANSI National Accreditation Board (ANAB)” and removed the “s” in the word “Standard” in paragraphs 3-4, 6-10 (including footnote) to read as follows:

2-102.20 Food Protection Manager Certification.

Many food protection manager certification programs have shared a desire to have the food manager certificates they issue universally recognized and accepted by others – especially by the increasing number of regulatory authorities that require food manager certification.

Needed has been a mechanism for regulatory authorities to use in determining which certificates should be considered credible based on which certificate issuing programs meet sound organizational and certification procedures and use defensible processes in their test development and administration.

After a multi-year effort involving a diversity of stakeholder groups, the Conference for Food Protection (CFP) completed work on its ***Standard for Accreditation of Food Protection Manager Certification Programs*** found at: <http://www.foodprotect.org/food-protection-manager-certification/>. In 2002 the Conference entered into a cooperative agreement with the ANSI National Accreditation Board (ANAB) to provide independent third-party evaluation and accreditation of certification bodies determined to be in conformance with these Conference standards. ANAB published its first listing of accredited certifiers in 2003.

The Acting Commissioner of the Food and Drug Administration, in his address before the 2004 biennial meeting of the Conference for Food Protection, commended this Conference achievement and encouraged universal acceptance based on the ANAB-CFP Accreditation Program.

Distributed at this meeting was the following letter addressed to the Conference Chair and signed by the Director of FDA’s Center for Food Safety and Applied Nutrition. The letter puts forth the Agency’s basis for its support of universal acceptance of food protection manager certifications.

“The 2004 biennial meeting of the **Conference for Food Protection** is a fitting occasion for FDA’s Center for Food Safety and Applied Nutrition to commend the Conference for its significant achievements in support of State and local food safety programs.

The FDA in a Memorandum of Understanding recognizes the Conference for Food Protection as a voluntary national organization qualified to develop standards to promote food protection. Conference recommendations contribute to improvements in the model FDA Food Code and help jurisdictions justify, adopt and implement its provisions.

Conference mechanisms involving active participation by representatives

of diverse stakeholder groups produce consensus standards of the highest quality. An excellent example is the Conference's ***Standard for Accreditation of Food Protection Manager Certification Programs***, and its announcement of the new on-line listing of accredited certifiers of industry food protection managers. Many years in their development, these Conference standards identify the essential components necessary for a credible certification program. Components cover a wide range of requirements such as detailed criteria for exam development and administration, and responsibilities of the certification organization to candidates and the public.

FDA applauds the Conference for this significant achievement and encourages agencies at all levels of government to accept certificates issued by listed certifiers as meeting their jurisdictions' food safety knowledge and certification requirements. The ANSI National Accreditation Board (ANAB) has independently evaluated these certification programs under an agreement with the Conference for Food Protection. Governments and industry widely recognize and respect ANSI as an accrediting organization. ANAB has found certifiers it lists as accredited (<http://www.ansi.org/>) under "conformity assessment" – "personnel certification accreditation" to conform to the Conference's ***Standard for Accreditation of Food Protection Manager Certification Programs***.*

The Food Code states the person in charge of a food establishment is accountable for developing, carrying out, and enforcing procedures aimed at preventing food-borne illness. Section 2-102.11 states that one means by which a person in charge may demonstrate required knowledge of food safety is through certification as a food protection manager by passing an examination that is part of an accredited program.**

FDA encourages food regulatory authorities and others evaluating credentials for food protection managers to recognize the Conference for Food Protection/ANAB means of accrediting certification programs. This procedure provides a means for universal acceptance of individuals who successfully demonstrate knowledge of food safety. The procedure provides officials assurance that food safety certification is based on valid, reliable, and legally defensible criteria. In addition, universal acceptance eliminates the inconvenience and unnecessary expense of repeating training and testing when managers work across jurisdictional boundaries.

FDA, along with State, local, tribal, and other Federal agencies and the food industry, share the responsibility for ensuring that our food supply is safe. It is anticipated that this new Conference for Food Protection/ANAB program will lead to enhanced consumer protection, improve the overall level of food safety, and be an important component of a seamless national food safety system.

Footnote:

*The ANAB-CFP Accreditation Program list of accredited organizations utilizing the Conference for Food Protection (CFP) Standards may be viewed on-line by going to: <https://www.ansica.org/wwwversion2/outside/ALLdirectoryListing.asp?menuID=8&prgID=8&status=4>

** Accredited program does not refer to training functions or educational programs.

Amend Public Health Reasons § 2-103.11 to add a new paragraph 1 and make existing paragraph 1 into new paragraph 2; and add new paragraph 13 to read as follows:

2-103.11 Person in Charge.

A primary responsibility of the person in charge is to ensure compliance with Code requirements. During an inspection, the inspector needs to determine the systems or controls the PIC has put into practice regarding oversight and/or routine monitoring of the Duties listed in § 2-103.11 Person in Charge. This is accomplished by having discussions with the PIC and verified through observation that the systems or controls are being implemented. This concept is commonly referred to as Active Managerial Control.

Any individual present in areas of a food establishment where food and food-contact items are exposed presents a potential contamination risk. By controlling who is allowed in those areas and when visits are scheduled and by assuring that all authorized persons in the establishment, such as delivery, maintenance and service personnel, and pest control operators, comply with the Code requirements, the person in charge establishes an important barrier to food contamination.

...NO CHANGE...

Paragraph (R) "EMPLOYEES are aware of food defense, such as signs of intentional acts of adulteration as it relates to their assigned duties..." allows for flexibility in the operation to develop and implement operational-specific awareness programs for food employees to make sure they are aware of food defense and the role the employee plays in protecting our food supply from intentional adulteration. Food establishments may consider reviewing topics such as, but not limited to:

- Understanding what food defense is and the difference between food safety and food defense;
- Recognizing the importance of the role of the employee and how it can play into food defense measures;
- Implementation of food defense measures;

- Identifying signs of potential suspicious activities or threats; and
- Actions employees should take if a suspicious activity or threat is identified within the food establishment.

Amend Annex 3 Public Health Reasons § 2-201.13 to add a new header titled: “Culture-Independent Diagnostic Tests (CIDT) for Medical Clearance” after paragraph 3; add new paragraphs 4 and 5 after existing paragraph 3; add a new header titled: “Reinstatement of Asymptomatic Food Employees” above newly designated paragraph 6 (previous paragraph 4) to read as follows:

2-201.13 Removal of Exclusions and Restrictions.¹

Food employees diagnosed with Norovirus, hepatitis A virus, *Shigella spp.*, *E. coli* O157:H7 or other STEC, nontyphoidal *Salmonella* and symptomatic with diarrhea, vomiting, or jaundice, are excluded under subparagraph 2-201.12 (A)(2) or 2-201.12(B)(2). However, these symptomatic, diagnosed food employees differ from symptomatic, undiagnosed food employees in the requirements that must be met before returning to work in a full capacity after symptoms resolve.

The person in charge may allow undiagnosed food employees who are initially symptomatic and whose symptoms have resolved to return to work in a full capacity 24 hours after symptoms resolve.

However, diagnosis with a listed pathogen invokes additional requirements before the person in charge may allow diagnosed food employees to return to work in full capacity.

Culture-Independent Diagnostic Tests (CIDT) For Medical Clearance

Detection of Shiga-toxin producing *Escherichia coli*, Shiga-toxin producing species, and nontyphoidal *Salmonella* Stool culture tests have largely been replaced by culture-independent diagnostic tests (CIDT) (tests that determine microbial presence without growing the bacterium in the laboratory). These tests have a higher degree of specificity than culture-based testing and are generally much faster than culture-based tests, and are more likely to have false positive test results than false-negative results, since they capture all microbes, including non-viable microbes. The use of these tests is less likely to allow infected asymptomatic employees back to work while still shedding pathogenic microbes, and allow another more widely accessible, faster test option for all.

¹In order to comply with Title I of the Americans with Disabilities Act, an exclusion must also be removed if the employee is entitled to a reasonable accommodation that would eliminate the risk of transmitting the disease. Reasonable accommodation may include reassignment to another position in which the individual would not work around food. The steps an employer must take when an excluded employee requests reasonable accommodation are briefly described in Annex 3, § 2-201.11. However, it is not possible to explain all relevant aspects of the ADA within this Annex. When faced with an apparent conflict between the ADA and the Food Code's exclusion and restriction requirements, employers should contact the U.S. Equal Employment Opportunity Commission.

The allowance of these tests as an option for medical clearance does not replace stool culture tests, but instead provides other options for the employee that provide the same degree of public health protection from infected employees.

Reinstatement of Asymptomatic Food Employees

Asymptomatic food employees diagnosed with Norovirus, *Shigella* spp., *E. coli* O157:H7 or other STEC may not return to work in a full capacity for at least 24 hours after symptoms resolve. The person in charge shall only allow these food employees to work on a restricted basis 24 hours after symptoms resolve and they shall only allow this if not in a food establishment that serves a highly susceptible population. These restricted food employees remain restricted until they are medically cleared or otherwise meet the criteria for removal from restriction as specified under subparagraphs 2-201.13(D) (1)-(2); 2-201.13(E)(1)-(2); or 2-201.13(F)(1)-(2).

...NO CHANGE...

Amend Public Health Reasons § 2-301.12 Cleaning Procedure, to add new paragraphs 3, 5, 8, 9; revised old paragraph 3 to be new paragraph 4; revised old paragraph 5 to be new paragraph 6; paragraph 7 remained the same; revised old paragraph 8 to be new paragraph 10 to read as follows:

2-301.12 Cleaning Procedure.

Handwashing is a critical factor in reducing fecal-oral pathogens that can be transmitted from hands to RTE food as well as other pathogens that can be transmitted from environmental sources. Many employees fail to wash their hands as often as necessary and even those who do may use flawed techniques.

In the case of a food worker with one hand or a hand-like prosthesis, the Equal Employment Opportunity Commission has agreed that this requirement for thorough handwashing can be met through reasonable accommodation in accordance with the Americans with Disabilities Act. Devices are available which can be attached to a lavatory to enable the food worker with one hand to adequately generate the necessary friction to achieve the intent of this requirement.

Hand Contamination:

Food contaminated by the hands of food employees is a major source of foodborne illness outbreaks traced to retail food establishments. Hand contamination in the food service industry can result from a variety of activities, such as exposure to raw animal products, raw produce products with soil contamination, organic refuse, and bodily fluid residue (e.g., human saliva, mucus, sweat, vomitus, or feces) from other food employees or consumers. The types of activities conducted by food service employees may also lead to increased levels of fatty and proteinaceous material contamination of their hands. This fatty and proteinaceous material and all other types of hand contamination may or may not be visible on the hands.

The greatest concentration of microbes exists around and under the fingernails of the hands. The area under the fingernails, known as the “subungal space”, has by far the largest concentration of microbes on the hand and this is also the most difficult area of the hand to decontaminate. There are two different types of microbes on the hands, transient and resident microbes. A moderate number of these organisms can be removed with adequate handwashing. Resident microbes consist of a relatively stable population that survive and multiply on the skin, and they are not easily washed off the hands. Resident microbes on the hands are usually not a concern for potential contamination of food and food-contact surfaces, but in some cases when food employees are exposed to foodborne pathogenic microbes on a long-term basis, these pathogens have been found also as residents on food employee hands^{1,2}.

Handwashing:

Soap, friction, and running water effectively remove proteinaceous and fatty material contamination from hands and reduce pathogens of concern. Soap has a surfactant effect in removing grease, soil, and debris from the hands. Most of the soil contamination on food employee hands is insoluble or oil soluble, rather than water soluble soil. Soap is necessary to remove this insoluble soil from the hands, through what is known as “emulsification” of this oily film. Transient microorganisms are part of this insoluble soil on the hands and are removed through this emulsification process. The emulsification, or mechanical “scrubbing” of the hands has been reported to play a greater role in removing transient pathogens from the hands, than the actual “bactericidal” action of any soap³. The temperature of the water used in handwashing is an important variable in the solubility or emulsification of the soil since the solubility of most types of soil increases as the temperature is increased. Generally, solubility increases with warmer water temperatures, however, skin damage can occur with repeated handwashing using high water temperatures.

All aspects of proper handwashing are important in reducing microbial transients on the hands. However, friction and water have been found to play the most important role. This is why the amount of time spent scrubbing the hands is critical in proper handwashing. It takes more than just the use of soap and running water to remove the transient pathogens that may be present. It is the abrasive action obtained by vigorously rubbing the surfaces being cleaned that loosens the transient microorganisms on the hands.

The amount of soap required is equivalent to the amount necessary to emulsify the soil or oil and organic contaminants on the hands. When an antimicrobial soap is used, at least 3-5 ml is recommended for best results⁴. Research has shown a minimum 10-15 second scrub is necessary to remove transient pathogens from the hands and when an antimicrobial soap is used, a minimum of 15 seconds is required⁴.

Every stage in handwashing has an additive effect in transient microbial reduction. Therefore, effective handwashing must include scrubbing, rinsing, and drying the hands. When done properly, each stage of handwashing further decreases the

transient microbial load on the hands. It is equally important to avoid recontaminating hands by avoiding direct hand contact with heavily contaminated environmental sources, such as manually operated handwashing sink faucets, paper towel dispensers, and rest room door handles after the handwashing procedure. This can be accomplished by obtaining a paper towel from its dispenser before the handwashing procedure, then, after handwashing, using the paper towel to operate the hand sink faucet handles and restroom door handles.

Poorly maintained bulk soap dispensers have also been identified as a potential source of food employee hand contamination^{5,6,8}. Practices such as “topping off” a bulk soap dispenser, or refilling a used bulk soap dispenser, or even diluting a used soap dispenser without prior dismantling, cleaning and sanitization of the dispenser before refilling, are likely to become the source of biofilm formation within the dispenser and result in contaminated soap. This microbial contamination in bulk soap dispensers has been traced to contaminated hands after handwashing with the contaminated soap⁶.

Unless the bulk soap dispenser and the pump within the dispenser can be completely dismantled, cleaned, and sanitized between refills, the soap dispenser should be discarded and replaced with a new dispenser and/or soap pump, to ensure the prevention of biofilm formation and soap free of contamination⁷. Also soap in a bulk soap dispenser that has been diluted with water more than soap manufacturer recommended levels, will not adequately emulsify organic and fatty proteinaceous contamination of the hands, and is also more likely to be highly contaminated. Diluting soap containers with water beyond manufacturers recommendations or refilling bulk soap dispensers without dismantling, cleaning, and sanitizing prior to refilling should be considered a violation of providing adequate soap for handwashing in a food establishment.

Handwashing done properly can result in a 2-3 log reduction in transient bacteria and a 2-log reduction in transient viruses and protozoa. With heavy contamination of transient microbial pathogens, (i.e., > 10⁴ microbes, as found on hands contaminated with bodily wastes and infected bodily fluids) handwashing may be ineffective in completely decontaminating the hands. Therefore, a further intervention such as a barrier between hands and ready-to-eat food is necessary.

Footnote References:

1. Kerr, K.G., Birkenhead, D., Seale, K., Major, J., and Hawkey, P.M., 1993. Prevalence of *Listeria* spp. on the hands of food workers. J.F.P., 56(6): 525-527.
2. Seligmann, R., and S. Rosenbluth. 1975. Comparison of bacterial flora on hands of personnel engaged in non-food and in food industries: a study of transient and resident bacteria. J. Milk Food Technol. 38: 673-677.
3. Lane, C.G., and Blank, I.H., 1942. Cutaneous Detergents. J.A.M.A. 118 (10): 804-816.
4. Larson, E.L., 1995. APIC Guideline for handwashing and hand antisepsis in health care settings, AJIC, 23(4): 251-269.

5. Schaffner, D.W., Jensen, D., Gerba, C.P., Shumaker, D., and Arbogast, J.W., 2018. Influence of soap characteristics and food service facility type on the degree of bacterial contamination of open, refillable bulk soaps. J.F.P. 81 (2): 218-225.

6, Zapka, C.A., Campbell, E.J., Maxwell, S.L., Gerba, C.P., Dolan, M.J., Arbogast, J.W., and Macinga, D.R., 2011. Bacterial hand contamination and transfer after use of contaminated bulk-soap-refillable dispensers. App. Env. Microbiol., May, 2898-2904. Doi:10.1128/AEM.02632-10.

7. Lorenz, L.A., B.D. Ramsey, D.M. Goeres, M.W. Fields, C.A. Zapka, and D.R. Macinga. 2012. Evaluation and remediation of bulk Soap dispensers for biofilm. Biofouling. 28: 99-109.

Amend Public Health Reasons § 2-301.16 to revise paragraphs 2 and 3 to read as follows:

2-301.16 Hand Antiseptics

...NO CHANGE...

The term “sanitizer” is typically used to describe control of bacterial contamination of inert objects or articles, or equipment and utensils, and other cleaned food-contact surfaces. The Food Code definition of “sanitizer” (a form of the defined term “sanitization”) requires a minimum microbial reduction of 5 logs, which is equal to a 99.999% reduction. The FDA bases the 5-log reduction on the AOAC International’s “Official Methods of Analysis 2003,” which requires a minimum 5-log reduction in microorganisms to achieve “sanitization.”

Reducing microorganisms from human skin is a totally different process than sanitizing surfaces and sterilization of human skin is nearly impossible to achieve without damaging the skin. Many antimicrobial hand agents typically achieve a much smaller reduction in microorganisms on hands than the 5-log reduction required for “sanitization.” Therefore, the effect achieved from using antimicrobial hand agents (often called “hand sanitizers”) is not consistent with the definition of “sanitization” in the Food Code.

...NO CHANGE...

Amend Public Health Reasons § 2-501.11 to revise paragraphs 6 and 9 to read as follows:

2-501.11 Clean-up of Vomiting and Diarrheal Events.

...No Change...

Effective clean-up of vomitus and fecal matter in a food establishment should be handled differently from routine cleaning procedures. It should involve a detailed cleaning and disinfecting process. Some compounds that are routinely used for sanitizing food-contact and nonfood-contact surfaces may not be effective against some viruses such as norovirus. It is therefore important that food establishments have

procedures for the cleaning and disinfection of vomitus and/or diarrheal contamination events that include the use of EPA-registered disinfectants against norovirus.

Consumers are at risk of contracting Norovirus illness from direct exposure to vomitus or from exposure to airborne Norovirus from vomitus. Additionally, exposed food employees are also at risk of contracting Norovirus illness and can subsequently transfer the virus to ready-to-eat food items served to consumers.

The Food Code specifies that the Person in Charge is to exclude or restrict a food employee who exhibits, or reports a symptom, or who reports a diagnosed illness or a history of exposure to Norovirus. A clean-up and response plan is intended to address situations where a food employee or other individual becomes physically ill in areas where food may be prepared, stored or served. Once such an episode has occurred, timely effective clean-up is imperative. Key to achieving an appropriate, timely response by food employees is the availability and access to a written plan upon which to refer to for reference.

When developing a written plan that addresses the need for the cleaning and disinfection of a vomitus and/or diarrheal contamination event, a food establishment should consider:

- The conditions under which the plan will be implemented;
- The availability of effective disinfectants, such as EPA registered disinfection products sufficient to inactivate norovirus, personal protective equipment, and other cleaning and disinfecting tools (such as mops, buckets, etc.) intended for response and their proper use;
- The circumstances under which a food employee is to wear personal protective equipment for cleaning and disinfecting of a contaminated area;
- Notification to food employees on the proper use of personal protective equipment and procedures to follow in containing, cleaning, and disinfecting a contaminated area;
- The procedures for minimizing risk of disease transmission through the prompt removal of ill customers and others from areas of food preparation, service, and storage;
- The segregation of areas that may have been contaminated so as to minimize the unnecessary exposure of employees, customers, and others in the facility to the discharges or to surfaces or food that may have become contaminated;
- The procedures for containment and removal of any discharges, including airborne particulates;
- The procedure for cleaning and disinfecting of any surfaces that may have become contaminated;
- The procedures for the evaluation and disposal of any food that may have been exposed to discharges;
- Procedures for the disposal and/or cleaning and disinfection of tools and equipment used to clean up vomitus or fecal matter; and

- The procedures for minimizing risk of disease transmission through the exclusion and restriction of ill employees as specified in §2-201.12 of the Food Code.

...NO CHANGE...

Amend Annex 3 Public Health Reasons for § 3-201.11 under the section Labeling for Whole-muscle, Intact Beef Steaks to delete the word “not” between “have” and “undergone” in sentence 3 to read as follows:

3-201.11 Compliance with Food Law.

...NO CHANGE...

Labeling for Whole-muscle, Intact Beef Steaks

In the past, some steaks were labeled “intact” in order for a food establishment operator to determine a steak is a whole muscle, intact cut of beef that could therefore be undercooked and served without a consumer advisory. Processors could accommodate this need at the retail level by developing proposed labels, obtaining the necessary USDA Food Safety Inspection Service review and approval, and appropriately affixing the labels to their products. However, such intact labeling in practice was very rare. Rather, FSIS regulations and policies identify steaks that are non-intact (i.e., steaks that have undergone mechanical tenderization including injection, vacuum tumbling with solutions, reconstruction, cubing, or pounding). Therefore, Section 3-201.11 has been revised to better reflect that a food establishment operator should obtain steaks that are either not labeled as non-intact (e.g., mechanically tenderized, blade tenderized, needle tenderized, contains X% added solutions, or formed) or do not appear non-intact due to cubing or pounding. FDA has also developed an intact steak decision-tree to help food establishment operators determine whether a steak is intact or non-intact and can be found at the following link: www.fda.gov/media/163808/download

Amend Public Health Reasons § 3-301.11 to add new paragraphs 3, 4 and 5 to follow existing paragraph 2 to read as follows:

3-301.11 Preventing Contamination from Hands.

...NO CHANGE...

3-301.11(E) Prior Approval for Food Employees to Touch Ready-to-Eat Food with Bare Hands

...NO CHANGE...

In the rare situations when a barrier between the hands and ready-to-eat food will not be feasible, it is vital to add additional measures to the handwashing procedure as outlined in ¶3-301.11(E) as an additional layer of protection to prevent the spread of

pathogenic microbes from the hands to ready-to-eat food items. In addition to other required control measures, food employees must utilize at least two of the five listed additional control measures, including: 1. Double handwashing; 2. Nail brush use; 3. Hand antiseptic after handwashing as specified under §2-301.16; 4. Incentive programs such as paid sick leave that assist or encourage food employees not to work when ill; or 5. Other control measures approved by the regulatory authority.

Using a second handwash, or “double handwashing” can result in decreasing the level of contamination on the hands beyond what could be achieved from a single handwash procedure. Using a second handwash procedure can reduce microbial contamination on the hands by an additional half-log to 1 log from that achieved with a single handwash procedure. Double handwashing, as listed in ¶3-301.11(E)(6)(a), means handwashing 2 times (subsequentially) and at the same location immediately before handling RTE food with bare hands. This is in addition to other required handwashing events for food employees, such as after using the restroom. The double handwash technique involves washing and drying the hands at the handwashing sink as described in §2-301.12, and immediately repeating the handwash procedure (including rinsing, applying a hand cleanser, scrubbing, rinsing, and drying the hands with an approved hand drying device) at the same handwashing sink.

Fingernail brushes, if used properly, have been found to be effective tools in decontaminating the area under fingernails on the hand. Proper use of single-use, disposable fingernail brushes, or designated individual fingernail brushes for each employee, during the handwashing procedure can achieve up to a 5-log reduction in microorganisms on the hands. If fingernail brushes are used, they must be for individual use only, and not shared by other employees. Fingernail brushes cannot be shared by employees because they may become the source of spreading microbial pathogens from one employee to the next employee without a means to disinfect the used brush between employees.

...NO CHANGE...

Amend Public Health Reasons § 3-304.17 to add new paragraphs 1-3 and 5-6; revise old paragraph 1 to be new paragraphs 4 and 5 and revise old paragraph 2 to be new paragraphs 7 and 8 to read as follows:

3-304.17 Refilling Returnables

The CFP convened the 2020 Biennial Meeting and three issues related to refillable containers submitted to CFP Council I were transferred to Council III at the 2021 meeting. Issue 2020 I-024 Creation of a Committee to Address Reusable Scenarios in Food Retail was combined with Issue 2020 I-022, Amend Food Code to Harmonize the Definition of Reusable Container and Issue 2020 I-023, Amend Food Code to Address New Reusable Scenarios in Food Retail. Council III voted, and subsequently approved, to create the Safe Use of Reusable Containers Committee.

At the 2023 Conference for Food Protection meeting the committee conveyed the

concern that the Food Code did not align with practices in the field as it pertains to refilling reusable containers at retail. The committee agreed the filling of customer-owned containers and third-party supplied reusable containers in retail food establishments was common despite limited allowance in the Food Code. The committee also agreed that local, national, and global legislation and movements to reduce solid waste from disposable food containers would increase reuse requirements and the demand for reusable container options from consumers, businesses, and environmental groups. In addition, legislative bodies will likely look toward reusable container options for food service packaging to help address issues of waste, human health, and climate change.

With this feedback, FDA agreed to amend §3-304.17 Refilling Returnables to provide guidance on the minimum standards that must be met to protect food safety when refillable containers are used and allow wider and more standardized use of reusable containers.

Food establishments may allow the use of reusable containers for refilling, such as consumer owned containers, third-party provided containers, or an in-house program for return and exchange for cleaned and sanitized containers. Containers pose a risk of cross-contamination and must be cleaned, sanitized, inspected, and care must be given to prevent contamination of the premises. If not handled correctly, pathogens or chemicals may be transferred to food by consumers or employees directly, or indirectly.

The existing provisions in the Food Code, specifically the cleaning and sanitization provisions in Parts 4-6 and 4-7, if carried out properly, are sufficient to ensure that the container is safe to refill or reuse if performed in conjunction with a visual inspection by a food employee to verify that the container still meets the intent of the provisions in Parts 4-1 and 4-2.

As amended, §3-304.17 requires the minimum standards that the container be appropriate for reuse, via cross-reference to Parts 4-1 and 4-2, cleaned and sanitized via cross-reference to Parts 4-6 and 4-7, and visually inspected by a food employee. Reusing single-service and single-use articles is prohibited by the Food Code.

Paragraphs (A) and (B) of §3-304.17 are written with flexibility in mind as three common sources of reusable containers exist: consumer-owned, facility owned, and third-party owned. If a facility chooses to refill a container, they may ask for necessary information on materials, condition, and cleaning and sanitizing methods used to meet the intent of these paragraphs. This can be done in conjunction with the required visual inspection by a food employee. These requirements can also be written into a contract or certificate of analysis (COA) if a third-party is utilized. Depending on the information gathered by the employee or listed in the contract or COA, the container may be deemed ready for use, rejected for use, or needing additional cleaning and sanitizing. This method ensures a risk-assessment is made and appropriate actions are taken to ensure the container meets minimum standards

and poses little risk for cross-contamination before refilling.

Additionally, equipment must be designed to prevent the contamination of the premises when refilling. This could be done through equipment design, the use of utensils, secondary containers, or other effective means as outlined in ¶3-304.17(B).

Amend Public Health Reasons § 3-502.12 to revise paragraph 1 to read as follows:

3-305.11 Food Storage.

3-305.12 Food Storage, Prohibited Areas.

Pathogens can contaminate and/or grow in food that is not stored properly. Leaks and drips of condensate from pipes, tubes, and hoses, and drafts of unfiltered air can be sources of microbial contamination for stored food. Shoes carry contamination onto the floors of food preparation and storage areas. Even trace amounts of refuse or wastes in rooms used as toilets or for dressing, storing garbage or implements, or housing machinery can become sources of food contamination. Moist conditions in storage areas promote microbial growth.

Refer also to the public health reasons for § 2-501.11.

Amend Public Health Reasons §3-502.11 to add new paragraph 8 to read as follows:

3-502.11 Variance Requirement.

...NO CHANGE...

Section 3-502.11 describes specialized processes in which a variance must be obtained from the regulatory authority before preparing the food product in such a manner. Specialized processes such as smoking, using food additives or components such as vinegar, or curing food are examples of food preservation techniques used to prevent spoilage in food. There may be other technologies that are emerging as alternatives for extension of product shelf life and reduction of pathogenic organisms and may require prior approval through a variance. Traditionally, the most popular preservation techniques used for the reduction of microbial contamination of food have been the manipulation of the water activity and/or pH, heat treatment, the addition of chemical preservatives, and the control of storage temperature of foods. Whether the specialized processing methods in §3-502.11 are referred to as food preservation or not, an establishment is required to provide scientific evidence or analysis that shows the rationale for how the potential public health hazards will be addressed and how food safety would not be compromised along with the actual variance request. Refer to Annex 6: Food Processing Criteria for more detailed information on food preservation techniques such as smoking and curing.

Amend Annex 3 Public Health Reasons § 4-302.14 to revise the section title to add the term “Disinfecting” and revise the paragraph to include language regarding

disinfectants and testing devices to read as follows:

4-302.14 Sanitizing and Disinfecting Solutions, Testing Devices.

Testing devices to measure the concentration of sanitizing and disinfecting solutions are required for 2 reasons:

1. The use of chemical sanitizers or disinfectants require minimum concentrations of the sanitizer or disinfectant during the sanitization or disinfectant step to ensure sanitization or disinfection.
2. Too much sanitizer or disinfectant in the final step could be toxic.

Amend Annex 3 Public Health Reasons § 4-501.116 to revise the section tag line (title) to include the term “Disinfectant” and to update language to include the term disinfectant throughout the paragraph to read as follows:

4-501.116 Warewashing Equipment, Determining Chemical Sanitizer or Disinfectant Concentration.

The effectiveness of chemical sanitizers and disinfectants are determined primarily by the concentration and pH of the sanitizer or disinfectant solution. Therefore, a test kit is necessary to accurately determine the concentration of the chemical sanitizer or disinfectant solution.

Amend Annex 3 Public Health Reasons § 4-601.11 to revise the term nonfood contact to nonfood-contact to make it grammatically consistent throughout the Food Code to read as follows:

4-601.11 Equipment, Food-Contact Surfaces, Nonfood-Contact Surfaces, and Utensils.

The objective of cleaning focuses on the need to remove organic matter from food-contact surfaces so that sanitization can occur and to remove soil from nonfood-contact surfaces so that pathogenic microorganisms will not be allowed to accumulate, and insects and rodents will not be attracted.

Amend Annex 3 Public Health Reasons §4-602.13 to revise the term nonfood contact to nonfood-contact to make it grammatically consistent throughout the Food Code to read as follows:

4-602.13 Nonfood-Contact Surfaces.

The presence of food debris or dirt on nonfood-contact surfaces may provide a suitable environment for the growth of microorganisms which employees may inadvertently transfer to food. If these areas are not kept clean, they may also provide harborage for insects, rodents, and other pests.

Add Annex 3 Public Health Reasons § 4-1001.11 to address disinfection to read as follows:

Objective

4-1001.11 Food-Contact Surfaces, Non-Food-Contact Surfaces, and Utensils.

Food establishments must be able to control microorganisms that pose a risk to employees and patrons to protect public health within their establishment. Since sanitizers only reduce, as opposed to eliminate, the number of microorganisms on a surface and do not control all types of microorganisms, i.e., bacteria, fungi, viruses, and spores, a disinfectant with an appropriate EPA-registered efficacy claim may be required.

Several examples of situations when a higher level of antimicrobial efficacy may be warranted are listed below:

- Clean-up of bodily fluid spills
- Microorganism of concern is not listed on the product label, (i.e., viruses, biofilm, fungus)
- A higher level of antimicrobial efficacy is warranted
- When required by a regulatory authority

Add Annex 3 Public Health Reasons § 4-1002.11 to address disinfection to read as follows:

Frequency

4-1002.11 Disinfectant Use

Frequency of disinfection varies depending on circumstances at the time of disinfection. During outbreaks surfaces should be disinfected at the frequency recommended by public health officials or other regulatory authorities. Surfaces should also be disinfected immediately after a bodily fluid event.

Add Annex 3 Public Health Reasons § 4-1003.11 to address disinfection to read as follows:

Methods

4-1003.11 Chemical.

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Amend Annex 3 Public Health Reasons § 6-202.15 to revise paragraph 2 to read as follows:

6-202.15 Outer Openings, Protected.

...NO CHANGE...

In the National Fire Protection Association's NFPA 101, Life Safety Code, 2024 Edition, doors to exit enclosures such as stairs, horizontal exits, or exit passageways are required to be self closing. The Life Safety Code does not require exterior doors used as exits to be self closing, but they can be.

...NO CHANGE...

Amend Annex 3 Public Health Reasons § 7-102.11 to include the term disinfectants after the term sanitizers in sentence 1 to read as follows:

7-102.11 Common Name.

It is common practice in food establishments to purchase many poisonous or toxic materials including cleaners, sanitizers, and disinfectants in bulk containers. Working containers are frequently used to convey these materials to areas where they will be used, resulting in working containers being stored in different locations in the establishment. Identification of these containers with the common name of the material helps prevent the dangerous misuse of the contents.

Amend Annex 3 Public Health Reasons §§ 8-201.12 and 8-203.10 to add new header and revise paragraphs 2-4 to read as follows:

Construction inspection and approval

8-201.12 Contents of the Plans and Specifications.

8-201.15 When a Food Safety Management System is Required.

8-203.10 Preoperational Inspections.

In conjunction with the Conference for Food Protection Plan Review committee, FDA has participated in developing a document that is intended to assist regulators in reviewing food establishment plans, and industry in understanding what is expected in the plan review process. For several years, this FDA/CFP Food Establishment Plan Review Guide – 2000 has been used in the FDA State Training Team Plan Review courses. It can be accessed through

<http://www.fda.gov/Food/GuidanceRegulation/RetailFoodProtection/IndustryandRegulatoryAssistanceandTrainingResources/ucm101639.htm>.

At the plan review stage, the regulatory authority may be dealing with an agent of the permit applicant who is seeking a building permit and who is not in a position to discuss plans for safely conducting the food operation. Nonetheless, the plan review step presents a unique

opportunity to lay a foundation that enables the proposed operation to proactively sustain compliance with the Code over time. Food Safety Management Systems (FSMSs) are a part of that foundation and, ideally, are developed in tandem with designing the facility. Consequently, as an integral part of the plan review process, discussion needs to occur about FSMSs and their scope.

FSMSs play an important role in controlling hazards in retail food establishments by incorporating a specific set of actions (e.g. procedures, training and monitoring) to help achieve active managerial control of foodborne illness risk factors. The Conference for Food Protection requested that FSMSs as defined be incorporated into the Food Code. FDA Retail Food Risk Factor Study results found that food establishments with well-developed and documented systems (i.e., a FSMS that is complete, consistent, and primarily written) had the greatest impact on compliance and maintaining the FSMS documentation was vital to its success. To further support this conclusion, the study results revealed that FSMSs were the strongest predictor of data items being out-of-compliance in both fast food and full-service restaurants and those with well-developed FSMSs had significantly fewer food safety behaviors/practices out-of-compliance than those with less developed FSMSs.

Food safety management systems should be developed or in the process of being developed by the time of the preoperational inspection and put into effect when the food operation begins. Within 4 years of the regulatory authority's adoption of this Code, § 8-201.15 requires food safety management systems to be developed and maintained, available for reference by the person in charge, conveyed to the appropriate employees, and available for review by the regulatory authority during inspections. Operating procedures, training plans, and monitoring records should include definitive practices and expectations that ensure compliance with the requirements of this Code as specified in § 2-103.11.

During the plan review stage, the regulatory authority and a management representative of the proposed food establishment should discuss available training options that may be used to train food employees and the person in charge regarding food safety as it relates to their assigned duties. By the time of the preoperational inspection, operating procedures for training should include definitive practices and expectations of how the management of the proposed food establishment plans to comply with paragraph 2-103.11(O) of this Code which requires the person in charge to assure that food employees are properly trained in food safety as it relates to their assigned duties.

Annex 4 Management of Food Safety Practices – Achieving Active Managerial Control of Foodborne Illness Risk Factors

No Change in Annex 4.

Annex 5 Conducting Risk-based Inspections

No Change in Annex 5.

Annex 6 Food Processing Criteria

Amended Section 2. Reduced Oxygen Packaging, Part (B)(1) Definitions to read as follows:

2. Reduced Oxygen Packaging

(A) Introduction

...NO CHANGE...

(B) Definitions

The term ROP can be used to describe any packaging procedure that results in a reduced oxygen level in a sealed package. The term is often used because it is an inclusive term and can include packaging options such as:

(1) *Cook-chill* packaging, in which cooked food is hot filled into impermeable packaging (such as bag or film on trays) that are then sealed or crimped closed. The packaged food is rapidly chilled and refrigerated at temperatures that inhibit the growth of psychrotrophic pathogens.

...NO CHANGE...

Amended Annex 6 Food Processing Criteria to add new Section 4 Acidification (Sushi Rice) to read as follows:

Annex 6 Food Processing Criteria

1. Introduction

2. Reduced Oxygen Packaging

3. Smoking and Curing

4. Acidification (Sushi Rice)

...NO CHANGE...

4. Acidification (Sushi Rice)

Rice and potatoes have a history of association with foodborne illness caused by *Bacillus cereus*, therefore products containing rice, or potatoes should be evaluated for time/temperature control requirements. Rice is often used as a basis for sushi, which can include a combination of sushi rice, cooked and uncooked seafood, vegetables, and seaweed in various shapes and sizes.

Cooked rice is a Time/temperature control for safety food (TCS) with known hazards associated with it. For a TCS product to be stored without temperature control, there

must be processes in place to assure that the rapid and progressive growth or toxin production of infectious or toxigenic microorganisms cannot occur. This is commonly done by modifying the pH of the cooked rice to a pH of <4.2 or below. Proper acidification and distribution of acid is essential to prevent bacterial growth, especially *Bacillus cereus*.

Acidification of TCS foods with the intent of making them non-TCS is considered a special process in the Food Code. In the case of sushi rice, this process takes a TCS food (cooked rice) and adds acid (typically vinegar) to drop the pH and allow the cooked rice to be held without time or temperature controls. This acid addition needs to adjust the equilibrium pH to less than 4.2 to control the identified hazards. Addition of vinegar for flavor only, when pH is not monitored, is not considered a special process and rice must be temperature controlled just like any other TCS food. It is also important to remember once the acidified rice is combined with other sushi ingredients the final product would be considered TCS again requiring time and temperature control.

Retail food establishments that wish to handle food outside the Food Code parameters can do so by use of a Variance and HACCP Plan. HACCP plans specify the process and how food safety hazards will be controlled. §8-103.11 Documentation of Proposed Variance and Justification outlines criteria for obtaining a regulatory variance, and §8-201.14 Contents of a HACCP Plan identifies required elements needed in a HACCP plan. The variance issued by the regulatory authority allows the food establishment to implement the HACCP plan which controls food safety hazards in an alternate manner. Refer to §8-103.10 Modifications and Waivers for additional information about variances.

Most HACCP Plans for sushi rice have a critical limit of 4.2 pH or less. A critical limit is a prescribed parameter (e.g. minimum and/or maximum value) that must be met to ensure that food safety hazards are controlled at each critical control point (CCP). A critical limit is used to distinguish between safe and unsafe operating conditions at a CCP. Each control measure at a CCP has one or more associated critical limits. Critical limits may be based upon factors like temperature, time, moisture level, water activity or pH. They must be scientifically based and measurable.

When establishing a critical limit using pH, a food establishment can refer to the interaction tables in §1-210.10 under the definition for Time/Temperature Control for Safety Food. The tables show whether a food can support microbial growth based on the interaction between pH and A_w .

The critical limit for acidification of cooked rice is a pH of 4.2 or less. This assumes that the cooking process destroys all the vegetative pathogens, and the only concern is either recontamination or spores that survive the cooking process, which can germinate and produce toxin. *Clostridium botulinum* is not generally the concern with rice because it requires an anaerobic environment. *Salmonella* and *Staphylococcus aureus* could be contaminants in rice but are typically destroyed with normal cooking processes. *Bacillus cereus* is of concern. Several sources of information show the lower growth

limit for *Bacillus cereus* at pH 4.6 – 5.0 but the National Advisory Committee On Microbiological Criteria For Foods (NACMCF) (https://www.fsis.usda.gov/sites/default/files/media_file/documents/JFP-Parameters-Determining-Inoculated-Pack-Challenge-Study-2009.pdf) uses the more conservative growth limit at pH of 4.3.

In addition, even though the rice is acidified, the pH of the cooked rice has little impact on acidifying raw fish or fillings for the sushi roll so these sushi rolls will still require refrigeration if they contain other fillings that are considered TCS.

The Conference for Food Protection Single Hazard Special Processes HACCP Committee created a guidance document and standardized template for preparing sushi rice. It is currently available on the CFP website at: <http://www.foodprotect.org/guides-documents/single-hazard-special-process-haccp-template-guidance-document-and-sample-templates/> along with the Guidance Document for Retail Sushi HACCP Standardization: <https://www.foodprotect.org/guides-documents/guidance-document-for-retail-sushi-haccp-standardization/>.

Reference:

Center for Agriculture and Food Security and Preparedness. nd. Cultural Food Safety App [Smartphone and Tablet Application | The Center for Agriculture and Food Security and Preparedness](#)

Annex 7 Model Forms, Guides, and Other Aids

Amend Form 3-A Food Establishment Inspection Report Item #16 to add in the term “disinfectant” to read as follows:

Food Establishment Inspection Report										Page ____ of ____	
As Governed by State Code Section XXX.XXX Do Good County 12344 Any Street, Our Town, State 11111				No. of Risk Factor/Intervention Violations				Date			
				No. of Repeat Risk Factor/Intervention Violations				Time In _____			
				Score (optional)				Time Out _____			
Establishment			Address			City/State			Zip Code		
License/Permit #			Permit Holder			Purpose of Inspection			Est. Type		
									Risk Category		
FOODBORNE ILLNESS RISK FACTORS AND PUBLIC HEALTH INTERVENTIONS											
Circle designated compliance status (IN, OUT, N/O, N/A) for each numbered item Mark "X" in appropriate box for COS and/or R IN=in compliance OUT=not in compliance N/O=not observed N/A=not applicable COS=corrected on-site during inspection R=repeat violation											
Compliance Status						COS		R			
Supervision											
1	IN	OUT	Person in charge present, demonstrates knowledge, and performs duties								
2	IN	OUT	N/A	Certified Food Protection Manager							
Employee Health											
3	IN	OUT	Management, food employee and conditional employee; knowledge, responsibilities and reporting								
4	IN	OUT	Proper use of restriction and exclusion								
5	IN	OUT	Procedures for responding to vomiting and diarrheal events								
Good Hygienic Practices											
6	IN	OUT	N/O	Proper eating, tasting, drinking, or tobacco use							
7	IN	OUT	N/O	No discharge from eyes, nose, and mouth							
Preventing Contamination by Hands											
8	IN	OUT	N/O	Hands clean & properly washed							
9	IN	OUT	N/A	N/O	No bare hand contact with RTE food or a pre-approved alternative procedure properly allowed						
10	IN	OUT	Adequate handwashing sinks properly supplied and accessible								
Approved Source											
11	IN	OUT	Food obtained from approved source								
12	IN	OUT	N/A	N/O	Food received at proper temperature						
13	IN	OUT	Food in good condition, safe, & unadulterated								
14	IN	OUT	N/A	N/O	Required records available: shellstock tags, parasite destruction						
Protection from Contamination											
15	IN	OUT	N/A	N/O	Food separated and protected						
16	IN	OUT	N/A	Food-contact surfaces; cleaned, sanitized & disinfected							
GOOD RETAIL PRACTICES											
Good Retail Practices are preventative measures to control the addition of pathogens, chemicals, and physical objects into foods. Mark "X" in box if numbered item is not in compliance Mark "X" in appropriate box for COS and/or R COS=corrected on-site during inspection R=repeat violation											
Safe Food and Water						COS		R			
30			Pasteurized eggs used where required								
31			Water & ice from approved source								
32			Variance obtained for specialized processing methods								
Food Temperature Control											
33			Proper cooling methods used; adequate equipment for temperature control								
34			Plant food properly cooked for hot holding								
35			Approved thawing methods used								
36			Thermometers provided & accurate								
Food Identification											
37			Food properly labeled; original container								
Prevention of Food Contamination											
38			Insects, rodents, & animals not present								
39			Contamination prevented during food preparation, storage & display								
40			Personal cleanliness								
41			Wiping cloths: properly used & stored								
42			Washing fruits & vegetables								
Proper Use of Utensils											
43			In-use utensils: properly stored								
44			Utensils, equipment & linens: properly stored, dried, & handled								
45			Single-use/single-service articles: properly stored & used								
46			Gloves used properly								
Utensils, Equipment and Vending											
47			Food & non-food contact surfaces cleanable,								

[illegible]

[illegible]

Amend Guide 3B, Section C, Supervision, Item #1, to add new paragraphs for inclusion in B(3) and under applicable code sections §2-102.11 and §2-103.11 to read as follows:

Guide 3B

Instructions for Making the Food Establishment Inspection Report, Including Food Code References for Risk Factors/Interventions and Good Retail Practices

Supervision

1. PIC present, demonstrates knowledge, and performs duties

IN/OUT This item must be marked IN or OUT of compliance. The person in charge (PIC) has three assigned responsibilities – Presence; Demonstration of Knowledge; and Duties. This item is marked OUT of compliance if any **one** of the responsibilities is not met.

- A. **Person in charge** is present. This item is marked OUT of compliance if there is no PIC per 2-101.11(A) and (B).
 - B. **Demonstration of Knowledge.** The PIC has three options for demonstrating knowledge. This item is marked **IN** compliance if the PIC meets at least **one** of the options. The three options for demonstration of knowledge allowed by the Food Code are:
 - 1. Certification by an ACCREDITED PROGRAM as specified in 2-102-20.
 - 2. Complying with this Code by having no violations of priority items during the current inspection; or
 - 3. Correct responses to the inspector's questions regarding public health practices and principles applicable to the operation. The inspector should assess this item by asking open-ended questions that would evaluate the PIC's knowledge in each of the areas enumerated in ¶ 2-102.11(C)(1), (4)-(16) and (18). Questions can be asked during the initial interview, menu review, or throughout the inspection as appropriate. The Inspector should ask a sufficient number of questions to enable the inspector to make an informed decision concerning the PIC's knowledge of the Code requirements and public health principles as they apply to the operation. The dialogue should be extensive enough to reveal whether or not that person is enabled by a clear understanding of the Code and its public health principles to follow sound food safety practices and to produce foods that are safe, wholesome, unadulterated, and accurately represented.
 - C. **Duties of the PIC.** This item must be marked IN or OUT of compliance based on the interaction and observation with the PIC and food employee. The inspector needs to determine the systems or controls the PIC has put into practice regarding oversight and/or routine monitoring of the Duties listed in § 2-103.11. This is accomplished by 1) discussion with the PIC, and 2) verified through observation that the systems or controls are actually being implemented. This concept is commonly referred to as Active Managerial Control. This item must be marked OUT of compliance when there is a pattern of non-compliance and obvious failure by the PIC to ensure employees are complying with the duties listed in § 2-103.11. Since marking this item out of compliance requires judgment, it is important that this item not be marked for an isolated incident, but rather for an overall evaluation of the PIC's ability to ensure compliance with the duties described in § 2-103.11.
- N.A.** This item may be marked N.A. if the establishment is deemed by the Regulatory Authority to not apply due to the minimal risk of causing, or contributing to foodborne illness based on the nature

of the operation and extent of the food operation.
N.O. Do Not Mark this item N.O.

Applicable Code Section:

2-101.11 Assignment ^(Pf)

2-102.11(A), B) and (C)(1), (4)-(16) (18) Demonstration ^{(Pf), (C)}

2-103.11 (A)-(O) and (Q-R) Person-In-Charge-Duties ^(Pf)

Amend Guide 3B, Section C, Proper eating, tasting, drinking, or tobacco products use, Item #6, to revise the term nonfood contact to nonfood-contact to read as follows:

Good Hygienic Practices

6. Proper eating, tasting, drinking, or tobacco products use

IN/OUT This item should be marked IN or OUT of compliance based on direct observations or discussions of the appropriate hygienic practices of food employees. This item should be marked IN compliance when a food employee is observed drinking from a closed beverage container subsequently stored on a nonfood-contact surface and separate from exposed food, clean equipment, and unwrapped single-service and single-use articles. This item should be marked OUT of compliance when food employees are observed improperly tasting food, eating, drinking, or using tobacco products, or there is supporting evidence of these activities taking place in non-designated areas of the establishment. An open container of liquid in the kitchen preparation area does not necessarily constitute marking this item OUT. Further discussion with a food employee or the PIC may be needed to determine if the liquid, if labeled, is used as an ingredient in food, or may be an employee beverage that is consumed in another designated area. If the liquid is an open beverage that is consumed in a designated area, it must still be stored in a manner to prevent the contamination of food, equipment, utensils, linens and single-service/single-use articles.

...NO CHANGE...

Amend Guide 3B, Section C, Supervision, Item #16, to revise the title of the section, update the marking instructions and include new applicable Code sections to read as follows:

16. Food-contact and nonfood-contact surfaces: cleaned, sanitized and disinfected

IN/OUT This item must be marked IN or OUT of compliance based on direct observations of food-contact surfaces and non food-contact surfaces (when required) of equipment and utensils; actual measurements/readings of chemical sanitizer concentration, hot water sanitizing temperature, pH, hardness, water pressure, etc. using test strips, heat-sensitive tapes, and equipment gauges; observations of disinfecting when required and cleaning and sanitizing procedures; and discussion of disinfecting, cleaning and sanitizing procedures and frequency with the PIC or other food employees. This item must be marked IN compliance when manual and/or mechanical methods of disinfecting, cleaning and sanitizing are effective and performed at the prescribed frequency. There should be an overall assessment of the food-contact surfaces of equipment and utensils in clean storage and in use to determine compliance. For example, this item is not marked OUT of compliance based on one visibly soiled utensil, such as a plate or knife. This item must be marked OUT of compliance when manual and/or mechanical methods of cleaning, sanitizing and disinfecting (when required) of food-contact surfaces of equipment and utensils are ineffective, or if one multiuse piece of equipment such as a slicer or can opener is visibly soiled and being used at the time of the inspection. This item is also marked OUT if it is observed that equipment or utensils that have

come into contact with a major food allergen such as fish was not cleaned and sanitized prior to use for other types of raw animal foods or food-contact and non-food contact equipment come in contact with a bodily fluid.

N.A. This item may be marked N.A. only when there is no requirement to clean equipment and utensils such as when only prepackaged foods are sold.

N.O. **Do Not Mark** this item N.O.

Applicable Code Sections:

...NO CHANGE...

4-1001.11 Food-Contact, nonFood-Contact Surfaces and Utensils ^(P)

4-1002.11 Disinfectant Use ^(P)

4-1003.11 Chemical ^(P)

Amend Guide 3B, Section C, Food/Color Additives and Toxic Substances, Item #28, to include disinfection to read as follows:

28. Toxic substances properly identified, stored, and used; held for retail sale, properly stored

IN/OUT This item should be marked IN or OUT of compliance based on direct observations of food labeling, storage, reconstitution, and application of bulk and working containers of cleaning agents, sanitizers, and disinfectants, personal care items, first aid supplies, medicines, pesticides, and potential toxic and poisonous substances. This item should be marked IN compliance when bulk and working containers of cleaning agents, sanitizers and disinfectants are labeled; sanitizing and disinfecting solutions are not exceeding the maximum concentrations; personal care items, first aid supplies, medicines, and chemicals are stored separate from and not above food, equipment, utensils, linens, and single-service and single-use articles; and restricted use pesticides are applied only by or under the supervision of a certified applicator. This item should be marked OUT of compliance if a cleaning agent, sanitizer or disinfectant is not properly identified and stored; if a sanitizing or disinfecting solution has a higher concentration than prescribed and medicines and first aid kits are improperly labeled and stored. Violations of solutions exceeding the recommended concentration in chemical washes for fruits and vegetables (§7-204.12) would be marked under Item #42.

Amend Guide 3B, Section D, Approved Thawing Methods Used, Item #35, to add new risk designation to 3-305.13 in the applicable code section to read as follows:

35. Approved thawing methods used

Observing and then gaining an understanding of the establishment's thawing method(s) will help in determining whether a violation exists from the approved thawing methods found under § 3-501.13 as well as the level of risk imposed. Keep in mind that various food products especially those destined for deep-fat frying are often slacked (not thawed) prior to cooking.

Applicable Code Sections:

3-501.12 Time/Temperature Control for Safety Food, Slacking (C)

3-501.13 (A), (B), (C), and (E) Thawing ^(Pf)

Amend Guide 3B, Section D, Food and nonfood-contact surfaces cleanable, properly designed, constructed and used, Item #47, to remove hyphen between the terms non-food; to add new marking instructions; and to add new risk designation to 3-304.17 in the applicable code section to read as follows:

Utensils, Equipment and Vending

47. Food and nonfood-contact surfaces cleanable, properly designed, constructed and used

Equipment and utensils must be properly designed and constructed, and in good repair. Refillable containers must be cleaned, sanitized, and inspected prior to filling, and must not contaminate the premises. Proper installation and location of equipment in the food establishment are important factors to consider for ease of cleaning in preventing accumulation of debris and attractants for insects and rodents. The components in a vending machine must be properly designed to facilitate cleaning and protect food products (e.g., equipped with automatic shutoff, etc.) from potential contamination. Equipment must be properly used and in proper adjustment, such as calibrated food thermometers.

Applicable Code Sections:

3-304.16 Using Clean Tableware for Second Portions and Refills ^(C)

3-304.17 Refilling Returnables ^{(Pf)(C)}

...NO CHANGE...

Amend Guide 3B, Section D, Warewashing facilities, installed, maintained, used, test strips, Item #48, to revise the marking instructions and Applicable Code Sections to read as follows:

48. Warewashing facilities, installed, maintained, used, test kit or other device

Adequate Warewashing facilities must be available and used for the cleaning and sanitization of food-contact surfaces, including the availability of means to monitor its use and the effectiveness of the sanitization. For example, an irreversible registering temperature indicator is provided and readily accessible for measuring the utensil surface temperature for establishments that have a hot water mechanical Warewashing operation. Observation of manual and mechanical Warewashing methods are made to assess the procedure for cleaning and sanitizing equipment and utensils. This item is marked OUT of compliance when cleaners and sanitizers are not available for use within the food establishment or when the concentration of the sanitizing or disinfecting solution is not accurately determined by using a test kit or other device in accordance with the manufacturer's label instructions.

Applicable Code Sections:

...NO CHANGE...

4-302.14 Sanitizing and Disinfecting Solutions, Testing Devices ^(Pf)

...NO CHANGE...

4-501.116 (A-B) Warewashing Equipment, Determining Chemical Sanitizer or Disinfectant Concentration ^{(Pf) (C)}

...NO CHANGE...

Amend Guide 3B, Section D, Non-food-contact surfaces clean, Item #49, to remove hyphen between the terms non-food in the Item number title and in the applicable code section title to read as follows:

49. Nonfood-contact surfaces clean

Observations should be made to determine if the frequency of cleaning is adequate to prevent soil accumulations on non-food-contact surfaces.

Applicable Code Sections:

- 4-601.11(B) and (C) Equipment, Food-Contact Surfaces, Nonfood-Contact Surfaces, and Utensils ^(C)
- 4-602.13 Nonfood-Contact Surfaces ^(C)

Part 3. New Terms Added to the Index to the Food Code

Active Managerial Control

Disinfection

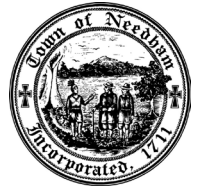
Food Defense

Food Safety Management System

Medical Clearance

Laboratory tests for reinstatement after exclusion with STEC, *Shigella* or *Non-Typhoidal Salmonella*

Water-based Fire Protection System



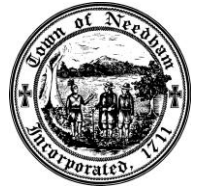
Board of Health

AGENDA FACT SHEET

September 19, 2025

Agenda Item	100-110 West Street Housing Project
Presenter(s)	Timothy Muir McDonald, Director of Health & Human Services

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
Mr. McDonald will brief the Board of Health on a proposed housing development intended for 100-1100 West Street (the old Carter's building). The discussion will include a briefing airing of community concerns related to pests, dust control during demolition and construction, traffic impacts, and the removal of trees.	
2.	VOTE REQUIRED BY BOARD OF HEALTH (with Suggested Motion)
None expected.	
3.	BACK UP INFORMATION:
• The 100-110 West Street Housing Project is the subject of a Planning Board meeting and Public Hearing on Tuesday 9/16/2025. The meeting information is available here, and the packet from the meeting is available here. • Packet of information from Susan and Michael Herman. Packet includes a memo to the Board of Health, lists of questions and concerns, and additional information on pests from the Town of Stoughton	



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RODENT CONTROL

To: The Needham Board of Health
From: Susan and Michael Herman, 13 Carey Road
Re: Rat and Dust Control – 100 West Street (Carter Building)
Date: September 10th, 2025

We respectfully request that the Board of Health condition approval of the demolition, construction, and ongoing use of 100 West Street on the developer's compliance with the following health concerns:

- **Rat Control**

There is a growing rat problem in the neighborhood, with sightings (both dead and alive) on Longfellow Road, Mellen Street, Carey Road, and Highland Avenue. The developer's refuse plan is vague and must be clarified to specify where trash is stored, how often it is collected, and how infestations will be prevented. Outdoor grills and kitchens near a children's play area present added risk; alternative amenities should be considered. Rat populations rise during construction due to vibrations. We request a binding agreement requiring rigorous pest control from demolition through occupancy. An example of a binding agreement is attached.

- **Dust Control**

Dust generated during demolition and construction poses a direct health hazard, particularly as trees that once provided a buffer are removed. Residents already face higher costs for air filters and reduced air quality in their homes in our neighborhood. The Board should require strict dust mitigation measures throughout the demolition and construction of 100 West. .

- **Board of Health Authority**

We believe rat and dust control fall directly under the Board's jurisdiction. If local by-laws do not provide sufficient authority, state regulations should apply. We ask that your conclusions and agreements with the developer be shared with the Planning Board, Planning Department, and the Town Manager.

Thank you,


Susan and Michael Herman.

Attachments:

Town of Stoughton Rodent Informational Guide (why construction brings rats)
Needham Board of Health Comments regarding 1688 Central Avenue

TREES

Needham's identity is closely tied to its trees. The town promotes its Tree City designation and supports both planting new trees and preserving existing ones. Trees provide multiple benefits, including calming traffic, offering shade, and cleaning the air. These benefits are needed in Needham Heights. The 100 West Street project in particular, would greatly benefit from the addition of larger and more trees.

- **Observations from Existing Greystar Sites**

While Greystar did not originally develop an apartment complex in Natick, they purchased it in mid-2022. Ground-level plantings cover an adequate amount of space within the courtyard, but there are only a limited number of narrow trees surrounding the building. In the parking lot, small trees are widely spaced. Because the development is roughly six years old, the small current size of the trees indicates they were planted quite small initially. We urge Planning and Design Review Board members to visit existing sites developed by Greystar before approving landscaping for this project.

- **Building Footprint and Visual Impact**

The existing building footprint is 62,500 sq. ft., while the proposed footprint is 68,875 sq. ft., an approximate 10% increase. Although the existing building is three floors, only 2.5 stories are visible due to a full basement. The new building will appear roughly 20% larger to the eye (3 stories vs. 2.5 stories). Residents and visitors will see a substantially larger building, both relative to other Avery Square buildings and the surrounding single- and multi-family neighborhoods. Large tree plantings and retention of existing mature trees can significantly soften the building's visual impact. The development should include:

- Trees larger than 2" in diameter.
- Planting beds greater than 4 feet, particularly along Highland Avenue.
- Retention of all large existing trees on the site
- Removal of bike racks replaced with trees on Highland Avenue (bike racks are shown on Highland in one of the drawings)

This site benefits from the residential-zoned area on the south side that will be incorporated into the project. Increasing green space within and around the project will enhance the town's environment and overall aesthetics of the project.

TRAFFIC

There are serious concerns with the applicant's traffic study.

An independent study should be conducted - one that evaluates both current and future conditions and offers practical and fair solutions. Without solutions, the burden of increased traffic falls squarely on all Needham Heights neighborhoods and residents. The applicant's study does not adequately recognize or address the issues listed below.

- **Lack of future development considerations**

The study does not account for other major projects in the area, including the Muzi property, the demolished Highland Avenue office site, and housing developments on Hillside Avenue (either unoccupied or nearly planned). A forward-looking study is needed so it incorporates these projects as well as differentiates between types of traffic—commercial, residential, and service-related.

- **School vacation timing**

The study was conducted in April, when Needham schools (4,000+ students and ~900 staff) were on vacation. That means traffic volume was reduced by roughly 25%—yet I did not see this either noted nor adjusted for in the analysis.

- **Failing intersection at West Street/Highland Avenue**

This intersection is already failing for both vehicles and pedestrians. Trucks are unable to turn right onto West Street from Highland Avenue, railroad gates block traffic causing backups on West and Highland, heavy traffic both north and south causes back up on Highland, and traffic backups on the East side of West street. Pedestrians do not use the proper signal as it's better than waiting up to 2 minutes. Pedestrians often cut through live traffic to reach businesses such as Starbucks and Trader Joes. This intersection failure has forced drivers - both autos and trucks into adjacent residential neighborhoods.

- **Cut-through traffic in neighborhoods**

On Carey Road, which is South of the proposed project, we already see heavy cut-through traffic including flatbeds carrying cars, delivery trucks, septic cleaning trucks (although I don't know of septic properties), town vehicles, Amazon, buses, landscapers, trash trucks, and more. These vehicles are traveling both East and West on Carey avoiding signaled intersections on Highland or access to Webster Street. A further increase in diverted traffic worsens conditions for residents.

- **Added truck traffic from the proposed development**

The new project will generate more ongoing truck traffic: postal vans, contractors, the landscaping crew and refuse hauler hired by the owner, snow plows, and service vehicles—on top of the daily flow of Amazon and other delivery trucks. None of this appears to be addressed in the study.

- **Risk of neighborhood spillover**

Vehicles exiting the site onto Highland will struggle to turn left without a signal. The easier option will be to turn right, driving more traffic into residential neighborhoods. We also note that prior to Town Meeting May 2025, a Morton Street resident requested special traffic consideration—perhaps signage that limits access to Morton Street. Other neighborhoods along and including Highland Avenue south of the development should also be considered for signage. That's fair. Carey Road, in particular, is experiencing some of the worst deterioration in traffic conditions outside of Highland Avenue itself.

ADDITIONAL QUESTIONS

Why is there a need to reduce the number of parking spaces? Why don't they fit? The project is in line with all other parameters set forth in the zoning adopted by Town Meeting.

What is the percentage decline in landscaping in the parking area? What is the location of the reduction?

Can you become tenants in the building if you own two vehicles? If so, where will parking be provided for the additional vehicles? A second vehicle can be a car or motorcycle.

On street parking is not allowed overnight anywhere in Needham, but it happens. What is the plan for off site overnight parking?

Are there plans to utilize various lots in Needham Heights for overflow parking such as visitors, staff, service vehicles, or a second car?

Can you become tenants in the building if you do not own a bicycle? What will be the definition of bicycles? Will Bluebikes and Cargo Bikes be allowed?

Will the building be constructed as a modular building? If so, does the town have any distinct requirements or need input for modular construction?

Will color design for the building be discussed with the Design Review Board so the building on Highland Avenue fits with the Southern end single family zone? There are also two family residences to the West of the site on Hillside Avenue and West Street.

Why was the month of April selected for the traffic study? April is a month with school vacation. The schools have over 4,000 students plus approximately 900 staff members none of which need to travel on 25% of the weekdays for this month.

Why isn't an independent traffic analysis being conducted by the Town?

The existing street lights on Highland Avenue in front of the existing building are not well maintained. Will these remain?

What is and how large is the electrical infrastructure that is proposed for one of the courtyard areas? Is this in the front of the building?

Is it realistic that the sewer discharge is the same for studios and one bedrooms? If this proves too low, can the sewer system handle the additional flow?

Town of Stoughton

10 Pearl Street • Stoughton, MA 02072 • (781) 341-1300 ext 9273 • FAX (781) 341-1086

www.stoughton-ma.gov

Board of Health

Rodent Informational Guide

History

Rats are and have been a part of the Massachusetts ecosystem since the area was originally settled in the early 17th century. They are a “cosmopolitan” species and are commonly found in most urban areas, including Stoughton and neighboring communities.

Current rat population in Stoughton:

Over the past several years the Stoughton Board of Health and Animal Control have received an increased number of reports for outdoor rat activity. Most live in the ground near food sources. Female rodents can have an average litter 8 pups monthly, as the gestation period is only 3 weeks. Experts claim that several factors may be contributing to the uptick in the population. One investigation reports that the population has increased due to climate change with warmer & shorter winter months. Rats are typically less active during the colder parts of the year and are less likely to breed. With a warmer winter, they can breed more and have more offspring that will eventually increase the size of the population we see during the summer and fall although the average lifespan of a wild rat is typically one year. Additional reasons for increased in rat sightings may include:

- Construction- vibrations disrupting their below ground habitat
- Lack of natural predators such as coyotes, foxes, and birds of prey, due to ever expanding development and decreasing green spaces.

Additional reports believe the COVID-19 pandemic also played a factor into the increasing rat population in residential areas due to more people remaining home & generating more household trash. Rats are a natural part of the urban and rural environments in Stoughton and the surrounding greater Boston area. Rats have been with us for a very long time and will thrive in places where they can find food, water, and shelter. In general, where there are people, rats will often follow. We have heard from colleagues in many neighboring communities that they are experiencing a similar uptick in rat sightings/reports. Stoughton is not unique in this trend.

FAQ's

What is Stoughton doing?

The Stoughton Board of Health, Animal Control & the Environmental Affairs Officer work with other Stoughton departments, residents & business owners to promote better understandings of rat behavior & how to minimize their presence & impact on the community. With the increased rat activity in town, these departments have been educating the public, businesses & construction project managers with information to promote & ensure best practices in the area of pest management & control. The Facilities Department pretreats for rodents on town projects & monitors for rodent presence throughout projects, taking appropriate pest control steps as needed. Also many Town buildings including the schools receive routine pest control service. The Stoughton BOH has enforcement authority for “interior” building infestations. The Town can also send violation notices to residents who do not store their outside putrescible trash properly, which is required to be stored in dumpsters or cans with tight fitting animal proof covers. The BOH has permitting & enforcement authority for garbage dumpsters as well.

Continued on Page 2

I have seen rats in my home or yard. Who should I call?

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Will the construction I see in my neighborhood increase rodent activity?

Construction doesn't lead to an increase in rats, but it can lead to a displacement with major land clearing projects or during demolition of existing buildings. Demolition permits are issued from the Stoughton Building Department but only after documentation that pest control companies have been hired to place bait stations onsite to decrease the onsite population prior to the actual demolition, to mitigate potential displacement of rodents. Increasing prevention strategies by owners & abutters working together with pest control companies ongoing throughout the projects, will help remediate rodent activity during extensive demolition or excavation projects.

Why do rats have such a bad reputation?

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How to Help Prevent a Rodent Infestation

1. Maintain your property in a sanitary manner.
 - Keep grills clean
 - Store woodpiles neatly with a 12-inch ground clearance
 - Remove dog and cat feces promptly
2. Rodent proof all foundations, building structures (ex. sheds) and garages using durable materials such as ¼ inch mesh, metal hardware, or sheet metal. Eliminate &/or seal all gaps greater than ¼ inch.
3. Reduce or eliminate rodent accessible food, water, and harborage (potential shelter).
 - Do not leave pet food out at night or any other food debris out for local wildlife
 - Remove birdfeeders that rodents can access.
 - All garbage should be stored with watertight receptacles made of metal or other durable, rodent proof material.
 - Remove water sources, this also helps eliminate mosquito breeding habitats
 - Keep compost securely covered
4. Thin vegetation and keep up with grass and shrubbery trimming.
5. Routinely inspect your property for evidence of rodents, including burrows, tracks, droppings, & chew marks.
6. If you live in rental housing & you see signs of rodents, tell your landlord. If your building has a dumpster, make sure to close all dumpster doors after depositing your garbage within which. Do not leave garbage outside of a dumpster.
7. Uncovered barrels or bags may be put out on the morning of your scheduled municipal garbage pickup day, but anything put out the night before must be stored in covered pest resistant receptacles.
8. Share this information with your neighbors. Rodent problems are a community issue. Working together will help eliminate this problem.

If you discover rodent infestation on your property, contact a licensed pest control company for assistance.

From: Tara Gurge
To: Alexandra Clee
Cc: Lee Newman
Subject: Public Health Division's reply to Planning Boards Request for comment - 1688 Central Avenue
Date: Wednesday, March 24, 2021 2:12:41 PM
Attachments: [ALL APPLICATION materials minus Stormwater reduced.pdf](#)
[Neighborhood Petition Regarding Development of 1688 Central Avenue in Needham.docx](#)
[image002.png](#)
[image003.png](#)
Importance: High

Alex –

Here are the Public Health Division comments for the **Project Site Plan Special Permit proposal at 1688 Central Avenue**. See below:

- Prior to demolition, we will need to ensure that the applicant fills out the online Demolition permit form, through the Building Dept., via ViewPoint Cloud online permitting system, and submits the Demolition review fee along with uploading the required supplemental demolition report documents online, including septic system abandonment form and final pump report, for our review and approval (as noted on the form.)
- Ensure that a licensed pest control service company is contracted and will conduct routine site visits to the site, first initially to bait the interior/exterior of each structure to be raised prior to demolition, and also continue to make routine site visits (to re-bait/set traps) throughout the duration of the construction project. Pest reports must be submitted to the Health Division on an on-going basis for our review.
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- Please ensure that sufficient exterior space is provided to accommodate an easily accessible Trash Dumpster and a separate Recycling Dumpster, per Needham Board of Health Waste Hauler regulation requirements. These covered waste containers must be kept clean and maintained, and be placed on a sufficient service schedule in order to contain all waste produced on site. These containers may not cause any potential public health and safety concerns with attraction of pest activity due to improper cleaning and maintenance.
- As noted in the proposal, the applicant will be required to connect to the municipal sewer line, once it's brought up to the property, prior to building occupancy. A copy of the completed signed/dated Sewer Connection application, which shows that sewer connection fee was paid, must be forwarded to the Public Health Division for our record.
- No public health nuisance issues (i.e. odors, noise, light migration, standing water/improper on site drainage, etc.), to neighboring properties, shall develop on site during or after construction. We are in support of an extensive landscaping plan be developed on site to screen and enhance the site, and to ensure that noise and visual impacts are minimized for the benefit of the neighboring residential properties in this location. Additional buffering, by the addition of new vegetation, along with new plantings, is strongly encouraged.

- Proposed lighting on site shall not cause a public health nuisance, with lighting being allowed to migrate on to other abutting properties. If complaints are received, lighting may need to be adjusted so it will not cause a public health nuisance.
- The applicant must meet current interior/exterior COVID-19 Federal, state and local requirements for spacing of seating, HVAC/ventilation, face covering requirements, sanitation requirements and occupancy limit requirements, etc. Please ensure that proper occupancy limits are met in order to accommodate the most updated state COVID-19 requirements for this proposed facility to ensure the health and safety for the number of proposed students and staff on site.
- The Public Health Division is also in support of the comments and concerns noted in the letter entitled, 'Neighborhood Petition Regarding Development of 1688 Central Avenue in Needham,' that was received and distributed by the Planning Board, including the excerpt on the neighboring abutters' concerns regarding the previous uses of the property with reference to potential soil contamination that may be present. We conducted a file check for this property address and we support the neighbors request for a soil test based on a concern that was investigated by the Fire Dept. that was filed back on June 24, 2003. The applicant must ensure that the property is safe, which includes conducting proper soil testing of the site prior to construction, and also follow through with any necessary mitigation measures as found to be necessary, as part of this project approval.

Please let us know if you need additional information or have any follow-up questions on those requirements.

Thanks,



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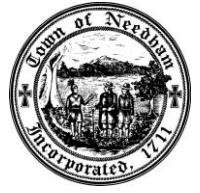
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Board of Health

AGENDA FACT SHEET

September 19, 2025

Agenda Item	100-110 West Street Housing Project
Presenter(s)	Timothy Muir McDonald, Director of Health & Human Services

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
Mr. McDonald will brief the Board of Health on a proposed housing development intended for 100-1100 West Street (the old Carter's building). The discussion will include a briefing airing of community concerns related to pests, dust control during demolition and construction, traffic impacts, and the removal of trees.	
2.	VOTE REQUIRED BY BOARD OF HEALTH (with Suggested Motion)
None expected.	
3.	BACK UP INFORMATION:
• The 100-110 West Street Housing Project is the subject of a Planning Board meeting and Public Hearing on Tuesday 9/16/2025. The meeting information is available here, and the packet from the meeting is available here. • Packet of information from Susan and Michael Herman. Packet includes a memo to the Board of Health, lists of questions and concerns, and additional information on pests from the Town of Stoughton	

RODENT CONTROL

To: The Needham Board of Health
From: Susan and Michael Herman, 13 Carey Road
Re: Rat and Dust Control – 100 West Street (Carter Building)
Date: September 10th, 2025

We respectfully request that the Board of Health condition approval of the demolition, construction, and ongoing use of 100 West Street on the developer's compliance with the following health concerns:

- **Rat Control**

There is a growing rat problem in the neighborhood, with sightings (both dead and alive) on Longfellow Road, Mellen Street, Carey Road, and Highland Avenue. The developer's refuse plan is vague and must be clarified to specify where trash is stored, how often it is collected, and how infestations will be prevented. Outdoor grills and kitchens near a children's play area present added risk; alternative amenities should be considered. Rat populations rise during construction due to vibrations. We request a binding agreement requiring rigorous pest control from demolition through occupancy. An example of a binding agreement is attached.

- **Dust Control**

Dust generated during demolition and construction poses a direct health hazard, particularly as trees that once provided a buffer are removed. Residents already face higher costs for air filters and reduced air quality in their homes in our neighborhood. The Board should require strict dust mitigation measures throughout the demolition and construction of 100 West. .

- **Board of Health Authority**

We believe rat and dust control fall directly under the Board's jurisdiction. If local by-laws do not provide sufficient authority, state regulations should apply. We ask that your conclusions and agreements with the developer be shared with the Planning Board, Planning Department, and the Town Manager.

Thank you,


Susan and Michael Herman.

Attachments:

Town of Stoughton Rodent Informational Guide (why construction brings rats)
Needham Board of Health Comments regarding 1688 Central Avenue

TREES

Needham's identity is closely tied to its trees. The town promotes its Tree City designation and supports both planting new trees and preserving existing ones. Trees provide multiple benefits, including calming traffic, offering shade, and cleaning the air. These benefits are needed in Needham Heights. The 100 West Street project in particular, would greatly benefit from the addition of larger and more trees.

- **Observations from Existing Greystar Sites**

While Greystar did not originally develop an apartment complex in Natick, they purchased it in mid-2022. Ground-level plantings cover an adequate amount of space within the courtyard, but there are only a limited number of narrow trees surrounding the building. In the parking lot, small trees are widely spaced. Because the development is roughly six years old, the small current size of the trees indicates they were planted quite small initially. We urge Planning and Design Review Board members to visit existing sites developed by Greystar before approving landscaping for this project.

- **Building Footprint and Visual Impact**

The existing building footprint is 62,500 sq. ft., while the proposed footprint is 68,875 sq. ft., an approximate 10% increase. Although the existing building is three floors, only 2.5 stories are visible due to a full basement. The new building will appear roughly 20% larger to the eye (3 stories vs. 2.5 stories). Residents and visitors will see a substantially larger building, both relative to other Avery Square buildings and the surrounding single- and multi-family neighborhoods. Large tree plantings and retention of existing mature trees can significantly soften the building's visual impact. The development should include:

- Trees larger than 2" in diameter.
- Planting beds greater than 4 feet, particularly along Highland Avenue.
- Retention of all large existing trees on the site
- Removal of bike racks replaced with trees on Highland Avenue (bike racks are shown on Highland in one of the drawings)

This site benefits from the residential-zoned area on the south side that will be incorporated into the project. Increasing green space within and around the project will enhance the town's environment and overall aesthetics of the project.

TRAFFIC

There are serious concerns with the applicant's traffic study.

An independent study should be conducted - one that evaluates both current and future conditions and offers practical and fair solutions. Without solutions, the burden of increased traffic falls squarely on all Needham Heights neighborhoods and residents. The applicant's study does not adequately recognize or address the issues listed below.

- **Lack of future development considerations**

The study does not account for other major projects in the area, including the Muzi property, the demolished Highland Avenue office site, and housing developments on Hillside Avenue (either unoccupied or nearly planned). A forward-looking study is needed so it incorporates these projects as well as differentiates between types of traffic—commercial, residential, and service-related.

- **School vacation timing**

The study was conducted in April, when Needham schools (4,000+ students and ~900 staff) were on vacation. That means traffic volume was reduced by roughly 25%—yet I did not see this either noted nor adjusted for in the analysis.

- **Failing intersection at West Street/Highland Avenue**

This intersection is already failing for both vehicles and pedestrians. Trucks are unable to turn right onto West Street from Highland Avenue, railroad gates block traffic causing backups on West and Highland, heavy traffic both north and south causes back up on Highland, and traffic backups on the East side of West street. Pedestrians do not use the proper signal as it's better than waiting up to 2 minutes. Pedestrians often cut through live traffic to reach businesses such as Starbucks and Trader Joes. This intersection failure has forced drivers - both autos and trucks into adjacent residential neighborhoods.

- **Cut-through traffic in neighborhoods**

On Carey Road, which is South of the proposed project, we already see heavy cut-through traffic including flatbeds carrying cars, delivery trucks, septic cleaning trucks (although I don't know of septic properties), town vehicles, Amazon, buses, landscapers, trash trucks, and more. These vehicles are traveling both East and West on Carey avoiding signaled intersections on Highland or access to Webster Street. A further increase in diverted traffic worsens conditions for residents.

- **Added truck traffic from the proposed development**

The new project will generate more ongoing truck traffic: postal vans, contractors, the landscaping crew and refuse hauler hired by the owner, snow plows, and service vehicles—on top of the daily flow of Amazon and other delivery trucks. None of this appears to be addressed in the study.

- **Risk of neighborhood spillover**

Vehicles exiting the site onto Highland will struggle to turn left without a signal. The easier option will be to turn right, driving more traffic into residential neighborhoods. We also note that prior to Town Meeting May 2025, a Morton Street resident requested special traffic consideration—perhaps signage that limits access to Morton Street. Other neighborhoods along and including Highland Avenue south of the development should also be considered for signage. That's fair. Carey Road, in particular, is experiencing some of the worst deterioration in traffic conditions outside of Highland Avenue itself.

ADDITIONAL QUESTIONS

Why is there a need to reduce the number of parking spaces? Why don't they fit? The project is in line with all other parameters set forth in the zoning adopted by Town Meeting.

What is the percentage decline in landscaping in the parking area? What is the location of the reduction?

Can you become tenants in the building if you own two vehicles? If so, where will parking be provided for the additional vehicles? A second vehicle can be a car or motorcycle.

On street parking is not allowed overnight anywhere in Needham, but it happens. What is the plan for off site overnight parking?

Are there plans to utilize various lots in Needham Heights for overflow parking such as visitors, staff, service vehicles, or a second car?

Can you become tenants in the building if you do not own a bicycle? What will be the definition of bicycles? Will Bluebikes and Cargo Bikes be allowed?

Will the building be constructed as a modular building? If so, does the town have any distinct requirements or need input for modular construction?

Will color design for the building be discussed with the Design Review Board so the building on Highland Avenue fits with the Southern end single family zone? There are also two family residences to the West of the site on Hillside Avenue and West Street.

Why was the month of April selected for the traffic study? April is a month with school vacation. The schools have over 4,000 students plus approximately 900 staff members none of which need to travel on 25% of the weekdays for this month.

Why isn't an independent traffic analysis being conducted by the Town?

The existing street lights on Highland Avenue in front of the existing building are not well maintained. Will these remain?

What is and how large is the electrical infrastructure that is proposed for one of the courtyard areas? Is this in the front of the building?

Is it realistic that the sewer discharge is the same for studios and one bedrooms? If this proves too low, can the sewer system handle the additional flow?

Town of Stoughton

10 Pearl Street • Stoughton, MA 02072 • (781) 341-1300 ext 9273 • FAX (781) 341-1086

www.stoughton-ma.gov

Board of Health

Rodent Informational Guide

History

Rats are and have been a part of the Massachusetts ecosystem since the area was originally settled in the early 17th century. They are a “cosmopolitan” species and are commonly found in most urban areas, including Stoughton and neighboring communities.

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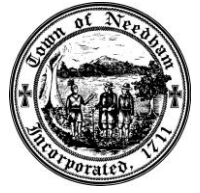
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Board of Health

AGENDA FACT SHEET

September 19, 2025

Agenda Item	July & August Staff Reports
Presenter(s)	Public Health Division staff members

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
Each program area within the Public Health Division will give a brief update on current topics, projects, events, accomplishments, and more.	
2.	VOTE REQUIRED BY BOARD OF HEALTH
Discussion only.	
3.	BACK UP INFORMATION:
a) Environmental Health – Sai Palani & Tara Gurge b) Accreditation – Lynn Schoeff & Alison Bodenheimer c) Traveling Meals – Rebecca Hall d) Substance Use Prevention: Regional – Lydia Cunningham e) Substance Use Prevention: Needham – Karen Shannon, Karen Mullen, Monica DeWinter, Angi MacDonnell, Vanessa Wronski f) Public Health Preparedness –Taleb Abdelrahim g) Epidemiology – Julie McCarthy h) Nursing – Ginnie Chacon-Lopez Shared i) Public Health Services – Kerry Dunnell	



Needham Public Health Division

Prevent. Promote. Protect.



Type text here

July 2025

Assist. Health Director - Tara Gurge
Full-time Health Agent – Sainath Palani
Part-time Health Agent/Food Inspector – Monica Pancare
Part-time Interns – Alexandra Diener and Xinran Wang (Nelly)

Unit: Environmental Health

Date: September 19, 2025

Staff members: Tara Gurge, Sainath Palani, Monica Pancare, Alexandra Diener and Xinran Wang (Nelly)

Activities and Accomplishments

Activity	Notes
Staff/Intern Project - Updates	The position for the part-time Env. Health Inspector was posted, and the application deadline was on July 30th. We received many job applications and will be conducting interviews for this position in mid-August. MDPH Summer intern, Xinran Wang (Nelly) started with our group on June 3rd and will working with our team until August 12th. Nelly finished a draft of brochures that reviewed all the most common risk factor violations for each establishment type and also drafted a slide show and recorded a training that will be distributed as the intervention for Standard 9. Nelly was also able to complete a few farmers market check-ins independently and also shadowed the health agent on a variety of inspections. Alexandra has been assisting with uploading health inspection reports to our website and has also been shadowing Sai on various inspections and has been assisting as she can on those inspections. She has also been helping create now online applications and is helping revise some of the applications that are starting to have bugs emerge. This includes creating new applications for body art practitioners, establishment and beaver removal, and helping revise our food permit and animal permit applications.
Staff Conferences/ Trainings	Tara attended the virtual National Environmental Health Association (NEHA) annual conference from July 14 – 17th.

Other Public Health Division activities this month: (See report below.)

Activities

<i>Activity</i>	<i>Notes</i>
Body Art	0 – Permits Issued
Demo Reviews/ Approvals	6 - Demolition signoffs: -#18 Avon Circle -#18 Crescent Rd. -#23 Yale Rd. -#21 Winslow Rd. -#73 Pleasant St. -#22 Savoy Rd.
Disposal of Sharps Permits	0 – Disposal of Sharps Permits issued.
Septage/Grease/ Medical Waste Hauler Permits Issued	0 – Septage/Grease & Medical Waste Hauler Permits Issued.
Trash/Recycling Waste Hauler Permit issued	2 - Trash and Recycling Waste Hauler Permits issued: -Black Earth Composting -Agri-Cycle
Food - Plan reviews/Follow- ups/Pre-operation inspections	1 – Plan Review Meetings/Initial Pre-operation inspections conducted for: - Noodle Doodle: Pre-opening inspections and permit to operate issued on July 23, 2025.
Food – Temporary Food Event Permits issued	8– Temporary Food event online permit application reviews and permits issued to: - Cushing Amusements for Town Carnival (July 24-27 th) at High School. There were six food booths permitted. - Frosty Ice Cream truck for Pan Mass Challenge at Oline (August 1st) - Sunita Williams PTC Back to School Picnic (September 12 th)
Food Complaints/ Follow-ups	2 – Food Complaints/Foodborne illness cases receive for: - FBI case reported on MAVEN- Individual ate at several establishments. No other connected cases. -Complaint received that the dining area was too hot at McDonald's.
Housing - Complaints/Follow- ups, etc.	(2/5) - New Housing Complaints/Follow-ups conducted at: – <u>Chambers St. (Needham Housing Authority/NHA) (0/1) - Update:</u> Housing court approved eviction orders and occupant has been evicted from the home in mid-July. NHA facilities changed the locks and removed all items out of the unit. Health agent witnessed the unit after it was emptied at which point the condemnation

	orders were lifted. The unit had very unsanitary odor and staining. Once the unit is back into a rentable state, the NHA will contact our office for a final inspection. – <u>Seabed's Way (0/0)</u> – Complaint received about fine dust forming on floors in unit creating unsafe air quality in their unit and causing health issues. <u>Update:</u> NHA facilities manager was scheduling with occupant to rewax the flooring in the unit. They will contact our office once completed to perform a reinspection. No update on a date and time of this rewaxing. – <u>Pickering St. (0/1)</u> – EMS services reported extreme unsanitary and unsafe conditions during responding to an emergency at a property. <u>Update:</u> Reinspection performed on July 16th which a fire inspector. Fire inspector gave input where additional detectors will be needed in the house to be compliant. Conditions were getting better, however there were still conditions that could endanger the occupants present. Occupants were provided with the paperwork to apply for a small repair grant which they will work with their lawyer to complete. A follow up check in about the grant application is scheduled for August 5th. – <u>2nd Ave. (0/1)</u> - There were reports of mouse activity in one of the units. The occupant requested an inspection. Mouse activity was observed and orders to correct were sent to the property manager. Recent pest control reports were sent to our office and a reinspection has been scheduled to occur in the month of July. <u>Update:</u> Inspections were performed twice in July, and in both instances facilities had sealed up openings but by the time of the inspection the mice had chewed through the exclusionary material. Some suggestions were made to the property manager and once it is done, the occupant will work with our office to clean entire unit of existing droppings. – <u>Greendale Ave. (1/1)</u> – Occupant complained that they had mold due an historic leak, that one of their smoke detectors was out of order and their air vents were not working. After an inspection was performed, there were no conditions that were in violations of the state sanitary code. No further action is needed. – <u>Chambers St. (1/1)</u> – Complaint received about large potholes and other safety conditions at the property. Housing inspection was performed and orders to correct were sent out.
Housing Pre-occupancy inspections	0 – Housing pre-occupancy inspections conducted.
Nuisance complaints/Follow-ups	(7/9) – New Nuisance Complaints/Follow-ups: - <u>Central Ave (1/1)</u> – Report of rats on a property. Shared services staff went out and did not observe any activity and just witnessed some construction materials piled up which can be a harborage condition. - <u>Crestview Rd. (1/1)</u> – Complaint received about overgrown vegetation. Site visit was performed and health agent spoke with homeowner's in person. The house was undergoing major renovation, and the property owners will work with their existing contractor to clean up the excessive vegetive growth in their front yard. - <u>West St./Fenton Rd. (1/2)</u> - Commercial property had overflowing trash on their property due to waste hauling strike. Orders to correct were sent to the responsible party. Trash was moved into a large trailer on the property.

	Responsible party was advised to hire a different waste hauler and were provided with the list of permitted waste haulers. They were also ordered to apply for a dumpster permit. - <u>Glover Rd. (1/1)</u> – Neighbor called about some potential dust and debris blowing around a house that was being actively renovated. Health agent contact the contractor and property owners and they agreed to keep the work site clean and to forward the asbestos paperwork for the abatement work for the renovations in the basement. No further action is needed. - <u>Cleveland Rd. (1/1)</u> – Pest concern received, and health agent met with home owner. A pest control company was contracted with, and several rats were observed to be caught in snap traps in the garage. There were some burrow homes on the property. Some recommendations were given to the homeowner but they were informed to continue to treat. Health agent attempted to reach out to each abutting house and informational brochures were provided. - <u>Emerson Rd. (1/1)</u> – Passerby complained that there was asbestos siding and roofing being stripped for the house and piled in front yard. A site visit was performed, and entire house was already gutted. Building permit application indicated scope of work was minor. At time of inspection contractors stated they took over the property after the house was fully gutted and had no knowledge about anything done prior. No signs of asbestos containing materials present. - <u>Dedham Ave. (1/2)</u> – Meeting held at Public Health Division to discuss reported pest concern at First Parish/Needham Children's Center – Follow-up joint site visit conducted with Assist. DPW Director and rep from First Parish. We will be receiving an estimate from a DPW vendor to exclude an additional area with stainless steel mesh and gravel, along a gap that is present (right up against the previous rodent exclusion) along the Town line and the church/daycare property fence line. We will also be coordinating the gassing of the area prior to this pending exclusion installation, with our town pest control service, Modern Pest Control.
Indoor/Outdoor Pool plan reviews/ spot checks and annual permit renewal inspections	– Indoor/Outdoor plan reviews and pool spot checks conducted: -Charles River Landing (Chlorine levels set too high by lifeguards and CPO will send records to our office) -Modera -Needham Pool and Racquet Club (Pool was cloudy and a reinspection is required) -The Kendrick (Chlorine levels set too high by lifeguards and CPO will send records to our office.)
Planning Board Special Permit reviews	0 - Planning Board reviews conducted.
Septic Certificate of Compliance (COC)	1 – Septic Certificate of Compliance final signoffs issued: - #111 Windsor Rd.

Septic – Construction Repair permit issued	0 – Septic Construction Permits issued.
Septic Failure Letters	0 – Septic system failure letters sent.
Septic Installation inspections	4 – Septic installation inspections conducted: - #260 Charles River St. (x4)
Septic Deed Restrictions	0 – Septic Deed Restrictions received.
Septic Installer Exam/Permit Issued	1 - Septic System Installer exam and permits issued. -Environic Solutions, Inc.
Septic Addition/Reno. to a Home on a Septic reviews	0 – Addition/Reno. to a Home on a Septic reviews conducted.
Septic Plan Reviews/Approvals issued	1– Septic Plan reviews conducted/approvals issued for: - #106 Windsor Rd.
Septic – Soil/Perc Tests	1– Septic Soil/Perc Tests conducted: -#1695 Central Ave.
Septic Trench permit issued	1 – Septic Trench permits issued: -#1695 Central Ave.
Septic – Abandonment Forms	0 – Septic abandonment/connection to sewer forms received.
Tobacco Compliance Checks/Hearing Scheduled/ Retail inspections	0 – Tobacco retail routine compliance checks conducted at all permitted establishments.
Well Permit online applications/plan reviews/ inspections	2 – Well permit online applications/plan reviews conducted: - #626 South St. (Proposal approved by our office, permission to drill letter to be sent) - #73 Pleasant St. (Proposal approved by our office, permission to drill letter to be sent)
Zoning Board of Appeals plan reviews	0 – Zoning Board of Appeals plan reviews conducted.

FY 25 Priority FBI Risk Violations of Interest

Establishment	Date	Violation(s)	Corrective Action/Follow-up
North Hill- Bakery and Cafe	July 1, 2025	-The mechanical dishwasher machine was reaching the minimum temperature of 160f. -A spray bottle with an all-purposed cleaner was stored next to food	Facilities will have this machine serviced and alternative method to sanitize food contact surfaces would be used in the interim. Spray bottle was moved to appropriate location.
North Hill- Necessities Store	July 1, 2025	-The TCS foods in the fridge and the entire fridge was above 41F.	-All TCS food was moved out of this unit and moved into the café temporarily.
Fuji	July 12, 2025	-Raw chicken was stored improperly next to other food types in one of the units. -Interior of the ice machine had mildew/mold that was in contact with the ice.	-Chicken and other items in the fridge were reorganized. -Inside of the ice machine was cleaned.
Ray's New Garden	July 19, 2025	-Parts of the slicer including the knobs, sides, etc. were soiled to the touch. -Staff appear to not be following the HACCP plan as written.	Follow up not yet performed
North Hill-Main Kitchen	July 19, 2025	-Duck was stored above seafood in the walk in.	-Items were reorganized so poultry was stored down below.
Needham Pool and Racquet Club	July 21, 2025	Spray bottle used to sanitize food contact surfaces had a concentration of chlorine that well above 100ppm.	-This solution was remade by the PIC and PIC will make sure that only managers are allowed to create the solutions and that a test strip will be used to test it.
Needham Golf Club	July 24, 2025	-The temperature of red sauce in the walk-in cooler was at 48f and sauce was made the day prior.	- PIC voluntarily discarded the sauce as they did not know why the sauce was warm or how long it was out of temperature for.



Needham Public Health Division

Prevent. Promote. Protect.



August 2025

Assist. Health Director - Tara Gurge
Full-time Health Agent – Sainath Palani
Part-time Health Agent/Food Inspector – Monica Pancare
Part-time Interns – Alexandra Diener and Xinran Wang (Nelly)

Unit: Environmental Health

Date: September 19, 2025

Staff members: Tara Gurge, Sainath Palani, Monica Pancare, Alexandra Diener and Xinran Wang (Nelly)

Activities and Accomplishments

Activity	Notes
Staff/Intern Project - Updates	The position for the 10 hr./week part-time Env. Health Inspector was posted, and the application deadline was on July 30th. We received many job applications and conducted interviews. We hired Cameron Bishop who will be starting with us the week of September 15th. We are also in the process of hiring up to 3-4 per Diem part-time Environmental Health Inspectors that will be able to work up to 5 hrs./week assisting us with conducting food and housing inspections and other work. MDPH Summer intern, Xinran Wang (Nelly) last day with us was on August 12th. Nelly finished a draft of brochures that reviewed all the most common risk factor violations for each establishment type and also drafted a slide show and recorded a training that will be distributed as the intervention for Standard 9. Nelly then participated in a poster session that went over this main project that she worked with us on. Alexandra's last day as an intern was on August 21st and started her MPH program at Boston University. She showed interest in rejoining us in one of the available per Diem positions. Alexandra was a dedicated worker and helped edit some of the EH online permit applications that were overdue on being revised and then also helped create drafts for new applications still have yet to be put into our OpenGov system. If she returns to assist, she would mainly assist with getting our applications serviceable for our permits which renew at the end of this calendar year and continue to assist in adding new permit applications, and possibly also help us review these applications during our busiest permit renewal time. And she can also assist with helping to draft social media posts and develop educational pamphlets for the upcoming 2022 Food Code adoption.

Adoption of 2022 FDA Food Code	As we briefly mentioned at our previous BOH meeting, we would like to hear the Boards thoughts on the adoption of the FDA 2022 Food Code, which has been on our list of items to accomplish over the past couple of years. It has been postponed due to other food safety initiatives that we have rolled out, including the adoption of our Food Code Policy and our food establishment inspection report scoring initiative. Adopting the 2022 FDA food code and its associated annexes will help us stay in compliance and exceed FDA Retail Program Standard 1 and stay on par with the current recommendation from the FDA. Standard 1 is the regulatory foundation for our jurisdiction and it confirms that we are following at least one of the 3 most recent versions of the food code. The next version of the food code may be coming out soon and to continue to meet this standard we would be required to adopt a more recent version of the Food Code. The only other towns in Massachusetts that we are aware that have independently adopted this food code are Quincy, Westford, Wakefield and Lynnfield, whose Boards of Health all adopted them soon after the release of the new code with the idea of staying in line with the current recommendations that come from the Conference of Food Protection and the FDA.
Staff Conferences/ Trainings	Tara and Sai are scheduled to attend the annual Massachusetts Environmental Health Association (MEHA) Yankee Conference this year in Plymouth, MA from Sept. 10 – 11th.
Pest Control at Chestnut St./Lincoln St Parking Lot	The Town of Needham and Needham Public Health Division has been involved with the identification and treatment of rats in the Chestnut St./Lincoln St. parking lot. This was especially the case after rats and rat burrows were noted abutting the First Parish Church in Needham property located at 23 Dedham Ave. after the rat activity was observed by the daycare center which rents out part of the church. Considerable efforts have been made by the town to date since 2019, in order to combat and respond to the pest concerns in this area after the problem was recognized. Most recently, last month, the church and daycare reached out about new burrows appearing. This past month, the Town DPW, Health Division, and church folks met to discuss plans to address the new burrows. DPW staff was able to have an outside contractor out to the site to determine an estimated cost to perform additional pest exclusion work to address a gap that was identified between the town and church properties, which would require removing the fence line, and adding additional stainless steel wire mesh and stone.

	The Public Health Division also was able to work with the town pest control company in acquiring a quote to conduct additional gassing of the burrows to be completed right before the additional exclusion is conducted.
Update on Medical Marijuana Treatment Center	Sira Naturals/Ayr Wellness closed on Sunday, August 24th. The Compliance Manager notified us on Monday, August 18th, and he stated that their parent company, AYR Wellness, had entered into a debt restructuring arrangement (RSA) and as a result would be exiting the Massachusetts market. They also stated that their closure on 8/24/25 allowed them the time required to compliantly and safely remove products and equipment from their 29 Franklin Street location. They stated that the Cannabis Control Commission (CCC) had also been notified, and a closing inspection of the facility was conducted by them on August 29th. We received copies of the final closure paperwork for our file.

Other Public Health Division activities this month: (See report below.)

Activities

<i>Activity</i>	<i>Notes</i>
Body Art	0 – Permits Issued
Demo Reviews/ Approvals	11 - Demolition signoffs: -#41 Lee Rd. -#42 Woodbine Cir. -#78 Birds Hill Ave. -#120 Whitman Rd. -#115 Bird St. -#77 Wellesley Ave. -#70 Woodbine Cir. -#6 Tower Ave. -#35 Meadowbrook Rd. -#387 High Rock St. -#24 Aldridge Rd.
Disposal of Sharps Permits	0 – Disposal of Sharps Permits issued.
Septage/Grease/ Medical Waste Hauler Permits Issued	0 – Septage/Grease & Medical Waste Hauler Permits Issued.
Trash/Recycling Waste Hauler Permit issued	0 - Trash and Recycling Waste Hauler Permits issued:

Food - Plan reviews/Follow-ups/Pre-operation inspections	0 – Plan Review Meetings/Initial Pre-operation inspections conducted for:
Food – Temporary Food Event Permits issued	3 – Temporary Food event online permit application reviews and permits issued to: - Fidelity Bank Ice Cream Truck at Library (August 14th) - India Day at Powers Hall (August 17th) - National Night Out at Town Hall (August 5th)
Food Complaints/ Follow-ups	1 – Food Complaints/Foodborne illness cases receive for: - Complaint received related to Mandarin Cuisine serving food different from what was ordered.
Housing - Complaints/Follow-ups, etc.	(2/6) - New Housing Complaints/Follow-ups conducted at: – <u>Chambers St. (Needham Housing Authority/NHA) (0/0) - Update:</u> No change from previous month. Unit is still being cleaned and reinspection will be performed prior to it being rented to another individual. – <u>Seabed's Way (0/1) –</u> Complaint received about fine dust forming on floors in unit creating unsafe air quality in their unit and causing health issues. <u>Update:</u> NHA stripped flooring and had it rewaxed. There will be an attempt to keep an indoor wheelchair and then an outdoor one so that the salt on the wheels do not grind up the floor waxing. Reinspection completed and compliance letter was sent out. – <u>Pickering St. (0/1) –</u> EMS services reported extreme unsanitary and unsafe conditions during responding to an emergency at a property. <u>Update:</u> Health was unable to reschedule follow up inspection with occupants as one of the them has been sent away to a medical facility and the other occupant has not been responsive. Information about the small repair grant was given to the occupants which can be used to repair the plumbing fixtures and electrical issues in the house which is now the focus. Health agent will continue to try to make attempts to meet with occupants and encourage compliance. – <u>2nd Ave. (0/1) -</u> There were reports of mouse activity in one of the units. The occupant requested an inspection. Mouse activity was observed and orders to correct were sent to the property manager. Recent pest control reports were sent to our office. <u>Update:</u> Inspection was performed in August and there was substantial progress and few to no new droppings were observed. Facilities needed to repair opening one more time and then compliance letter could be sent out. – <u>Chambers St. (0/1) –</u> Complaint received about large potholes and other safety conditions at the property. Housing inspection was performed and orders to correct were sent out. <u>Update:</u> Reinspection performed and all violations noted were corrected. Compliance letter was sent out. – <u>Rosemary St. (1/1) –</u> Referral was received from NPD of squaller like conditions within a home. After several attempts were made by health agents to make contact with homeowner, finally with the help of a neighbor it was discovered that the

	occupant had already sold the home and would be moving out during the last week of August. No further action is needed. - Highland Ave. (1/1) – Occupant filed complaint of property management not doing anything about an active wasp nest on their balcony and occupant had been stung multiple times. Health agent contacted property management and met with facilities manager where it was discovered that they had been there to treat but had entered unit without getting permission from occupant. This was discussed with property management that this is not permissible as it is trespassing, however they disagreed. Wasp nest was treated at time of inspection by facilities manager and if problem continued a pest control profession would be contacted to perform the work.
Housing Pre-occupancy inspections	0 – Housing pre-occupancy inspections conducted.
Nuisance complaints/Follow-ups	(8/10) – New Nuisance Complaints/Follow-ups: - West St./Fenton Rd. (1/1) - Commercial property had overflowing trash on their property due to waste hauling strike. Orders to correct were sent to the responsible party. Trash was moved into a large trailer on the property. Responsible party was advised to hire a different waste hauler and were provided with the list of permitted waste haulers. They were also ordered to apply for a dumpster permit. Update: Waste hauling services were resumed however per evidence supplied by residential neighbors the dumpster was being serviced between 1-4 am, waking them up. Waste hauling company had been directly contacted to see if they have the capability to change the hours in which this dumpster gets picked up. In addition, commercial business has yet to apply for a dumpster permit. - Dedham Ave. (0/1) – Meeting held at Public Health Division to discuss reported pest concern at First Parish/Needham Children’s Center – Follow-up joint site visit conducted with Assist. DPW Director and rep from First Parish. We will be receiving an estimate from a DPW vendor to exclude an additional area with stainless steel mesh and gravel, along a gap that is present (right up against the previous rodent exclusion) along the Town line and the church/daycare property fence line. We will also be coordinating the gassing of the area prior to this pending exclusion installation, with our town pest control service, Modern Pest Control. Update: NPHD met one time at site to discuss scope of work with contractor, DPW and a representative from First Parish. - Yale Rd. (1/1) – Neighbor called to report seeing many mosquitos in the area and hearing frogs all night long. They referenced their neighbor who had an unkempt swimming pool whom our office had dealt with the year prior. The neighbor agreed to have Norfolk County Mosquito Control Division treat the standing water in their pool again. - Lindbergh Ave. (1/1) – A residential property owner right behind the Mitchell Elementary school report seeing many moles in their backyard around their bird feeder. A site visit was performed to discover many rats running around. Recommendations were provide to the homeowner and to the immediate abutting

	property who also had signs of nesting on their property as well and the bird feeder was taken down. Follow up may be necessary. - <u>Linden St. (1/1)</u> - A resident at one of the NHA owned properties reported smelling an odd soapy odor over the past few months contact our office at least once a month. In addition, she has been reporting the smell to the NHA, police and fire departments who have also responded. She had also called the MADPH who also contacted our office in August to confirm that we are responding to the complaint in hand. Health agent went out to respond as the resident believed the smell was coming from the raised bed gardens from the neighbors. After meeting with the neighbor and looking at all the fertilizers being used, no odors were observed. - <u>Dedham Ave. (1/2)</u> - A complaint was received of rooster sounds coming from property across the street from the DeFazio fields. Health agent visited property and met with homeowner and discovered 22 adult chickens being kept in a makeshift fenced off area and in a poorly ventilated garden shed. Health agent informed homeowner that a permit would need to be pulled to keep chickens and that a well ventilated coop that is larger would need to be acquired. A joint inspection was then scheduled with the animal control officer and conservation staff to discuss what would be needed to get in compliance. Only 3 chickens remained and post meeting the homeowner decided to remove the remaining 3 chickens. - <u>Great Plain Ave. (1/1)</u> – Due to strikes at Republic Services, trash had not been picked up for weeks at the Bird’s Hill Pharmacy. Workers were taking trash home themselves. - <u>Petrini Circle (1/1)</u> – Neighbor to a property with an unkempt yards reports having a mouse infestation within their house and had to hire pest control services. Health agent spoke with property owner in question who agreed clean up their property or hire someone to clean up the leaf litter and overgrowth from the past year - <u>Central Ave. (1/1)</u> – Neighbor complaint received related to standing water and excessive birdseed outside. In addition, there are cars parked in the drive filled with items and there is evidence of items packed in the garage. This is a repeat complaint from 2024. An attempt was made to connect with homeowner in August who did not answer the door. Staff will reattempt to make contact in September.
Indoor/Outdoor Pool plan reviews/ spot checks and annual permit renewal inspections	4 – Indoor/Outdoor plan reviews and pool spot checks conducted: -Family and Lap Town Pools - Rosemary Ridge - Needham Pool & Racquet Club (reinspection)
Planning Board Special Permit reviews	0 - Planning Board reviews conducted.
Septic Certificate of Compliance (COC)	1 – Septic Certificate of Compliance final signoffs issued: - #260 Charles River St.

Septic – Construction Repair permit issued	0 – Septic Construction Permits issued.
Septic Failure Letters	0 – Septic system failure letters sent.
Septic Installation inspections	6 – Septic installation inspections conducted: - #300 Charles River St. (x4) - #1266 South St. (x2)
Septic Deed Restrictions	0 – Septic Deed Restrictions received.
Septic Installer Exam/Permit Issued	0 - Septic System Installer exam and permits issued.
Septic Addition/Reno. to a Home on a Septic reviews	0 – Addition/Reno. to a Home on a Septic reviews conducted.
Septic Plan Reviews/Approvals issued	0– Septic Plan reviews conducted/approvals issued for:
Septic – Soil/Perc Tests	0– Septic Soil/Perc Tests conducted:
Septic Trench permit issued	0 – Septic Trench permits issued:
Septic – Abandonment Forms	2 – Septic abandonment/connection to sewer forms received. -#300 Charles River St. -#77 Wellesley Ave.
Tobacco Compliance Checks/Hearing Scheduled/ Retail inspections	0 – Tobacco retail routine compliance checks conducted at all permitted establishments.
Well Permit online applications/plan reviews/ inspections	1 – Well permit online applications/plan reviews conducted: - #73 Pleasant St. (Permission to drill letter sent)
Zoning Board of Appeals plan reviews	3 – Zoning Board of Appeals plan reviews conducted. - #115 Highgate St. - #10 Riverside St. - #136-140 Hillside Ave.

FY 26 Priority FBI Risk Violations of Interest

Establishment	Date	Violation(s)	Corrective Action/Follow-up
Trip Advisor	August 13, 2025	-Several items in the walk-in cooler we and self-service bar were out of safe cold holding temperatures.	-Entire walk-in cooler was warm at time of inspection. All TCS foods were moved into another working fridge and walk-in freezer door was opened to help cool down the walk-in cooler. PIC was ordered to keep logs for the self-service bar and to send logs daily to our office and to try to make adjustments and corrective actions if TCS food continued to stay out of temperature.
Micromarket at the Exchange	August 19, 2025	-Multiple units and TCS food items were out of safe holding temperatures at time of inspection. - Multiple RTE TCS food products were either not properly date marked or the date marking indicated product was kept for over one week.	-TCS foods that were out of temperature for over two hours were voluntarily discarded. Daily logs were ordered to be kept and then emailed to our office. Certain cold holding units were ordered not to be used. Reinspection will occur in early September. -RTE TCS Products that were missing date marking voluntarily discard. Health agent discussed with new PIC that these products require use-by date marking and this will be checked at time of reinspection.

Category	Jul	Aug	Sep	FY'26	FY'25	FY'24
Food Establishment						
Annual/Seasonal Permits	1	1		2	124	128
Mobile Food Truck Permits	0	1		1	4	5
Temp. food permits	8	3		11	45	51
Farmers Market permits	2	2		4	13	15
Frozen Dessert Permits	0	0		0	4	-
Food Variances	0	0		4	4	4
Food Service Plan Reviews	1	0		1	11	21
Food Service Pre-op. Insp.	2	2		4	20	23
Food Service Routine insp.	13	13		26	240	224
Food Service Re-insp.	8	2		10	135	114
Residential Kitchen insp.	1	2		3	13	5
Mobile Routine insp.	0	1		1	4	5
Temp. food inspections	8	0		8	16	24
Farmers Market insp.	12	6		18	26	65
Enforcment action (fine, admin meeting, etc.)	0	0		0	-	-
Fines Issued (\$)	0	0		0	350	-
Food Complaints	2	1		3	25	25
Follow-up food complaints	0	1		1	18	18
Biosafety Permits	0	0		0	4	4
Biosafety Inspections	0	0		0	4	4
Biosafety Plan Review/Meetings	0	0		0	2	7
Body Art Establishment Permits	0	0		0	1	-
Body Art Practitioner Permits	0	0		0	1	-
Body Art Insp.	0	1		0	2	-
Bodywork Estab. Permits	0	0		0	7	5
Bodywork Pract. Permits	0	0		0	8	10
Bodywork Estab. Insp.	0	0		0	7	8
Demo Sign offs	6	11		17	67	96
Domestic Animal permits	0	0		0	13	17
Domestic Animal Inspections/New permits	0	2		2	0	2
Dumpster Permits	0	5		5	84	-
Funeral Home Director	0	0		0	2	-
Grease/ Septage Hauler Permits	0	0		0	28	25
Housing New Complaints	2	2		4	22	38
Housing Inspections	2	1		3	-	-
Housing Reinspections	3	3		6	-	-
Housing Follow-ups (non- inspections)	0	2		2	72	107

Category	Jul	Aug	Sep	FY'26	FY'25	FY'24
Housing Orders to Correct Sent	1	0		1	-	-
Condemnations	0	0		0	-	-
Compliance letters issued	0	2		2	-	-
Pre-Rental Housing Insp.	0	0		0	-	-
Hotel Inspections	0	0		0	4	5
Marijuana Permits	0	0		0	1	1
Marijuana Inspections	0	0		0	1	3
Marijuana Plan Review	0	0		-	-	-
Medical Waste Hauler permits	0	0		0	9	6
Nuisance Complaints (non-rat)	4	7		11	37	53
Nuisance Investigations	4	5		9	-	-
Nuisance Follow-ups	5	4		9	60	89
Nuisance Orders to Correct	1	0		1	-	-
Nuisance Compliance Letters	0	0		0	-	-
Nuisance Rat Complaints	3	4		7	-	-
Nuisance -Rat Investigations/meetings	4	2		6	-	-
Pool inspections	4	3		7	22	30
Pool Follow up inspections	0	1		1	11	6
Pool permits	0	0		0	14	14
Pool-Wading/Special Purpose	1	1		0	3	3
Pool plan reviews	0	0		0	0	0
Pool variances	0	0		0	7	5
Septic Soil Test Witnessing	1	0		1	3	6
Septic Plan reviews	1	0		0	5	13
Septic Const. permits	0	0		0	6	4
Septic Install. Insp.	4	6		10	20	26
Septic COC for New Construction	1	1		2	2	6
Septic COC for Repair	0	0		0	1	0
Septic COC for Component	0	0		0	4	1
Septic Trench permits	1	0		1	11	9
Septic Installer permits	1	0		1	10	7
Septic Installer Tests	1	0		1	3	5
Septic Abandonment Forms	0	2		2	1	4
Septic Info. requests	0	3		3	48	60
Disposal of Sharps permits	0	0		0	10	10
RTS Site Inspection	0	0		0	1	1

Category	Jul	Aug	Sep	FY'26	FY'25	FY'24
Planning Board Subdivision Sp Permit Plan reviews/Insp. of lots	0	0		0	20	10
Subdivision Bond Releases	0	0		0	5	2
Special Permit/Zoning	0	3		3	23	16
Tobacco permits	0	0		0	6	6
Tobacco Routine insp	0	0		0	12	12
Tobacco Follow-up insp.	0	0		0	12	3
Tobacco Compliance checks	0	0		0	18	12
Tobacco complaints	0	0		0	0	0
Trash Hauler permits	2	0		2	22	16
Well - Plan Reviews, Permission to drill letters, Insp.	2	1		3	9	11
Well Permits (Completion)	0	0		0	3	0
Monthly Totals	112	107	0	219	1488	1505



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Unit: Accreditation

Date: July 2025

Staff: Lynn Schoeff and Alison Bodenheimer

Activities and Accomplishments

Activity	Notes
Responding to PHAB feedback	- Reviewed PHAB feedback regarding 26 documents that have to be modified and resubmitted. - Assignments to appropriate staff member - Finalized documents submitted by July 24 deadline
Performance Management	- Ongoing progress tracking in the performance management dashboard in collaboration with staff - Now that resubmissions to PHAB have been completed, we are turning our attention to FY26 planning
Policies	<u>Finalized</u> Infectious Disease Surveillance (Nursing) Request & Provide Mutual Aid (Emergency Preparedness) Nuisance Complaint Investigation (Environmental Health) Reportable Diseases (Nursing) Duty to Warn (HHS) Food Permits (EH) Waste Hauler Permits (EH) Mobile Food Vendors (EH) Housing – Occupant Complaints (EH) Nuisance Complaints (EH) Food Samples Offered to the Public (EH) Biosafety Regulation (EH) Body Work Permits (EH) Body Art Permits (EH) Infectious Disease Surveillance (Nursing) MRC Management and Deployment (Emergency Preparedness) <u>In Process</u> Medical Marijuana Treatment Center Permits (EH) Temporary Food Permit (EH)



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Unit: Accreditation

Date: August 2025

Staff: Lynn Schoeff and Alison Bodenheimer

Activities and Accomplishments

Activity	Notes
Preparation for PHAB site visit	- Preparing documentation for site visit - Updating and writing additional policies & procedures - Reviewing and updating major plans (emergency communications, continuity of operations) - Reviewing material about the site visit and preparing to conduct a mock site visit
Performance Management	- Ongoing progress tracking in the performance management dashboard in collaboration with staff, planning for close out and archive FY25 Strategic Plan and CHIP - Shared FY26 activity planning templates with staff, holding meetings with various staff to plan their activities - Reviewed Goal and Objective level indicator tracking sheet with Accreditation Steering Committee, holding meetings with staff to adjust indicators as needed and populate this tracking sheet
Policies	<u>Finalized</u> Anaphylaxis Protocol (PHN) Rapid Testing for COVID (PHN) Demolition Reviews (EH) Temporary Food Permit (EH) Off-Street Drainage Bonds (EH) Mitigating Bed Bugs in Group Homes (EH) Duty to Warn (all HHS) Payroll (all HHS) Beaver & Muskrat Removal Permit (EH) <u>In Process</u>

	Legal Notice (ADM) Posting BOH agenda (ADM) Closing Old Files (ADM) Board of Health Orientation (ADM) Staff Orientation (ADM) Evidence of Authenticity (ADM) Program Evaluation (ADM) Customer Feedback (ADM) Updating Documents (ADM) Body Art permit forms (EH) Medical Marijuana Treatment Center (EH) Septic Installer Permits (EH) Monitoring Synthetic Turf (EH) Vaccine Inventory Management (PHN)
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Unit: Traveling Meals Program

Date: July 2025

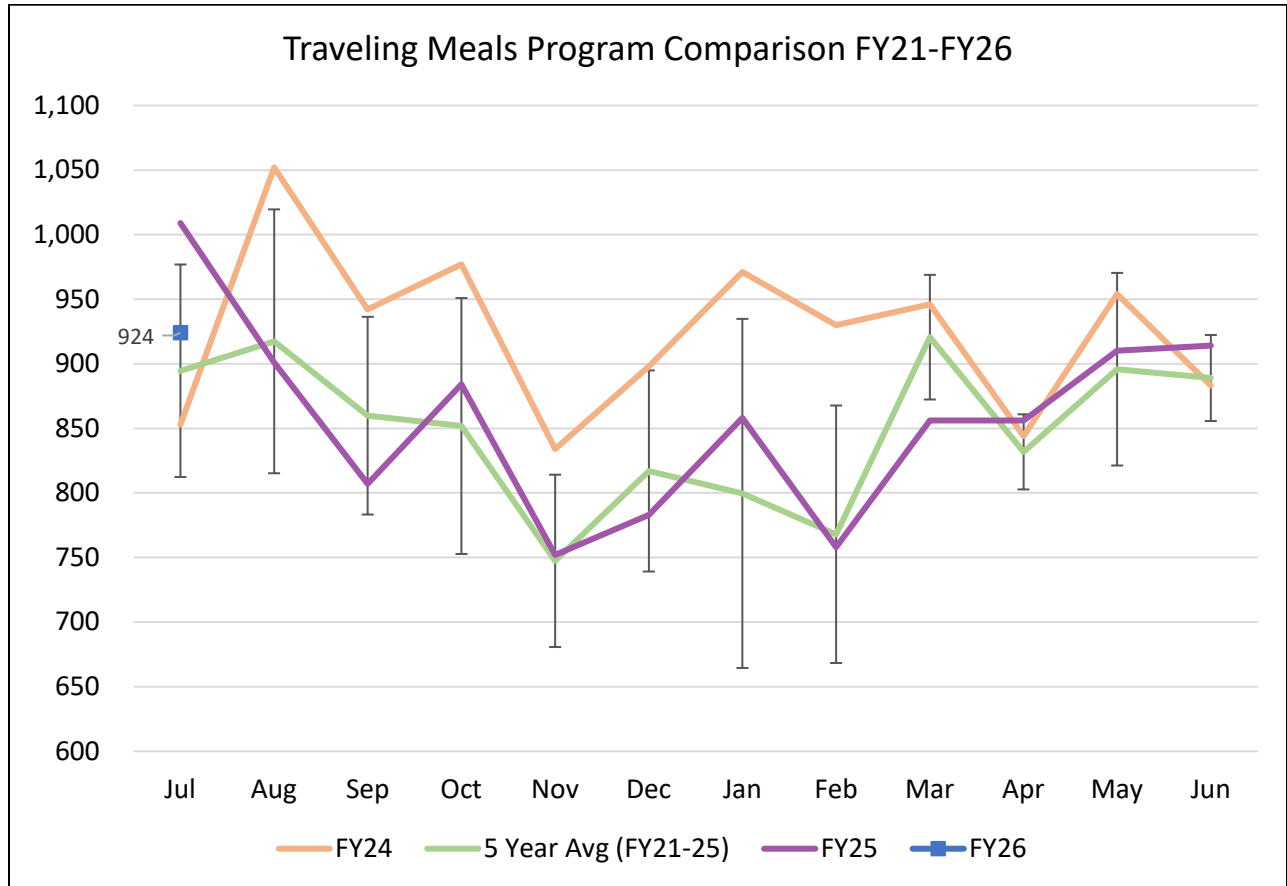
Staff: Rebecca Hall

Activities and Accomplishments

Activity	Notes
<i>Volunteers and Seasonal Drivers delivered meals to homebound Needham residents in need of food.</i>	<i>Meal delivery by 3 Seasonal Drivers and 2 Substitute Drivers</i>
<i>924 Meals delivered in July 2025</i> <i>48 Clients at end of July:</i> <i>40 Springwell Consumers</i> <i>8 Private Pay Consumers</i> <i>No New Clients</i> <i>2 Cancelled Program (1 Springwell, 1 Private)</i>	<i>No 911 calls initiated</i>
<i>Included flyer about Small Repair Grant Program in meal bags to 19 clients</i>	<i>Grants of up to \$7,000 available from Needham Affordable Housing Trust for income-eligible seniors or disabled homeowners</i>
<i>Included flyers from MA Executive Office of Aging & Independence about Extreme Heat in meal bags</i>	<i>Flyers included "Steps to protect yourself and those you care about from potential heat-related illness" and symptoms to look for that indicate heat-related illness</i>

Other Public Health Division activities this month:

Summary overview for the month: **Graph of Meal Deliveries for the month July 2025**





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Unit: Traveling Meals Program

Date: August 2025

Staff: Rebecca Hall

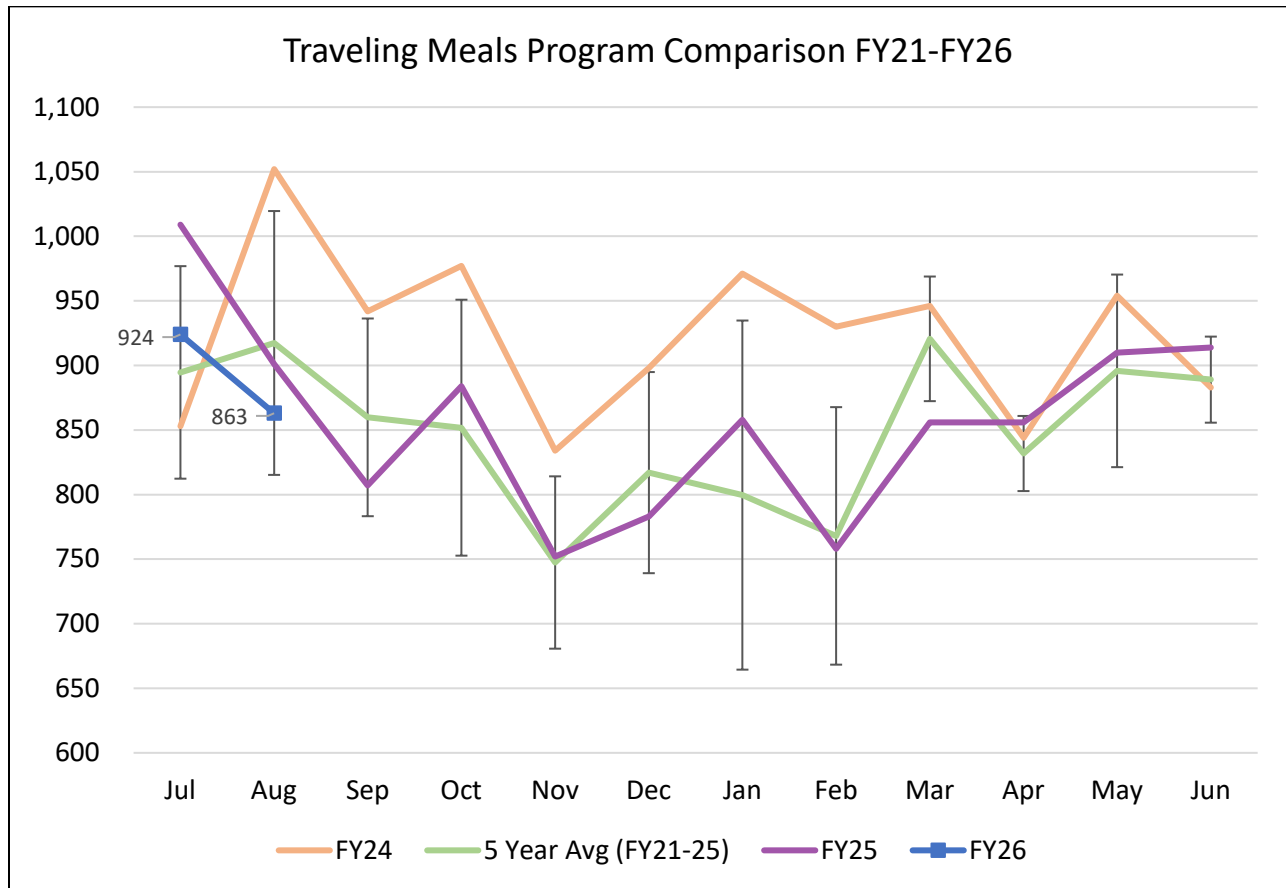
Activities and Accomplishments

Activity	Notes
<i>Volunteers and Seasonal Drivers delivered meals to homebound Needham residents in need of food.</i>	<i>Meal delivery by 3 Seasonal Drivers and 2 Substitute Drivers</i>
<i>863 Meals delivered in August 2025</i> <i>49 Clients at end of August:</i> <i>40 Springwell Consumers</i> <i>9 Private Pay Consumers</i> <i>1 New Clients (1 Springwell, 1 Private)</i> <i>1 Cancelled Program (Springwell)</i>	<i>No 911 calls initiated</i>
<i>Included for Dual Recovery Anonymous Meetings in meal bags</i>	<i>Weekly meeting held at CATH; 12-Step self-health program for individuals with both an addiction and a psychiatric challenge</i>

Other Public Health Division activities this month:

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Summary overview for the month: **Graph of Meal Deliveries for the month August 2025**





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Unit: Substance Use Prevention MassCALL3 grant: Dedham, Needham, Walpole, Westwood

Date: July 2025

Staff members: Lydia Cunningham, MPH, CHES®, CPS

Activity	Notes
MassCALL3 Connections Monthly Meeting- 7/1 Regional prevention staff, public health nurses, public health directors and assistant directors, human services staff.	-Review of MassCALL3 Prevention Partners annual meeting. -DPH-Bureau of Substance Addiction Services (BSAS) updates: new mission and vision statements, HOPE Framework. -The Montana Institute webinars, available for viewing. -MetroWest Adolescent Health Survey 2025 administration: reminder to select Drug-Free Communities optional questions, possible parent survey. -Review of President's Fiscal Year 2026 Budget Request and possible implications on the substance use prevention field.
Massachusetts Alcohol Policy Coalition (MAPC)- 7/2 Elizabeth Parsons, Chair & David Jernigan, PhD, Boston University School of Public Health	-Local Alcohol Policy Guide discussion: draft has been sent to BSAS for review, need for training to go along with guide. -Review of PTTC resource: Implementing Policy to Prevent Alcohol, Tobacco, and Other Drug Misuse Guidebook -Youth capacity building: preparing to create alcohol excise tax toolkit for communities- will include op-ed letter template, testimony template, training tools, and more. -Alcohol policy updates: Senator Keenan has co-sponsored alcohol excise tax bill.
Mae Mears, Program Director, Dedham Organization for Substance Awareness, Town of Dedham- 7/1, 7/15, 7/29	-Capacity building and data collection planning and initiatives for Dedham Organization for Substance Awareness and MassCALL3 grants. -Planning: MassCALL3 and DOSA aligned strategy implementation.
Kelsey Ober, Program Director, Drug-Free Communities Grant, Town of Walpole- 7/2, 7/23, 7/31	-Capacity building and data collection planning for Walpole Prevention Coalition and MassCALL3. -Preparation/planning: adult social marketing campaign, positive community norms campaign.
Westwood Cares Coalition- 7/14, 7/28 Danielle Sutton, Director of Human Services, Town of	-Reconvening of Westwood Cares Coalition following the submission of Drug-Free Communities grant application in April.



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Westwood & Amanda Decker, Bright Solutions LLC	-Human Services and Health Department updates, funding updates, efforts that can be taken by coalition members to build prevention capacity and grow the coalition. -Talk They Hear You campaign material sharing by Westwood Cares coalition members and sector representatives (digital and print media).
BSAS MassCALL3 Needham Check-in- 7/15 Amal Marks, Contract Manager, MA Dept. of Public Health BSAS	-MassCALL3 FY26-27 fully executed contract package received: funding of \$125,000.00 per year. -Updates on cluster town capacity building and strategic plan implementation progress.
Anna Marie Trester & Daniel Ginsburg- 7/16	-Review of goals and next steps for MassCALL3 adult social marketing campaign strategy. -Project will consist of messaging to address parent/guardian attitudes favorable/permissive toward youth substance use. Messages will be created and piloted through focus group testing.
Middlesex County District Attorney Marian Ryan Opioid Task Force- 7/17	-Review of substance use in older adult population: trends and data, strategies and interventions. -Presentation on strategies from MA Department of Public Health Bureau of Substance Addiction Services and staff at new mobile care program in Lowell: "Community Care in Reach," which provides care for those who can't or don't feel comfortable visiting health center (substance use, homelessness, other health needs).
988 Day Activation Workshop- 7/24 Substance Abuse and Mental Health Services Administration (SAMHSA)	-Meeting in preparation of the 988 lifeline's second annual "988 activation day" to promote the service, increase access, and spread awareness that the service can be used by anyone in emotional distress, having drug/alcohol use problems, or experiencing loneliness. -Discussion: strategies for sharing information on 988 on social media.
Berlin Awach & Ania Amedee, Milton MassCALL3 Coalition- 7/28	-Introductions: MassCALL3 grant staff in Needham and Milton coalitions. -Overview and history of MassCALL3 grant and other prevention work in Needham and across Massachusetts.
Adolescents, Substance Use, and Prevention: Trends and Reflections from Gateway Drugs to Overdoses- 7/29 Laura Hinds, MSW, LCSW	-Review of research, trends, and neuroscience of substance use in adolescents. -Threats, impacts, and opportunities related to substance use with youth.



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	-Impact of history of substance use on today's outreach methods. Review of best practices.
New England PTTC: Harm Reduction and Prevention- 7/29	-Technical assistance session: review of philosophy and practices of harm reduction; effectiveness of harm reduction in supporting positive behavior change. -Discussion: harm reduction strategies that can be used by prevention professionals to promote healthy living.
Faith Leaders Forum: Interfaith Prevention- 7/30 Rev. Johnny Riley Jr, Chair, Bridging the GAPS of the United States of America	-Training for faith leaders, prevention professionals, and community partners. -Review of examples of faith-based organizations addressing substance use and strategies for faith-driven prevention efforts.
Ethics & Social Media: What You Need to Know- 7/31 Sandra Del Sesto, M.Ed., ACPS, PTTC-NCO.	-Review of the Prevention Code of Ethics and application of the code's principles to social media interaction. -Review of ethical issues in prevention related to social media and guidelines for using social media in prevention work.

*NPHD June Report- monthly activities

*BSAS Quarterly Report- April, May, June

*Time off: Lydia Cunningham, Substance Use Prevention Coordinator, July 7-11.

*Time dedicated to in-person collaboration and capacity building in cluster communities

This report is part of a larger quarterly report to BSAS and is not considered finalized for purposes of the BSAS report. A later version will be available.

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END



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Unit: Substance Use Prevention: MassCALL3 Grant (Dedham, Needham, Walpole, & Westwood)

Date: August 2025

Staff: Lydia Cunningham, MPH, CHES®, CPS

Activities and Accomplishments

Activity	Notes
Prevention Capacity Building	• Time spent weekly in-person in cluster community health departments: Town of Dedham and Town of Walpole. • Participation in “Prevention Professionals Picnic” networking and collaboration event. • Communication with faith leaders in Westwood: conversation and resource sharing. • Annual renewal of Health Education Specialist certification.
Strategic Plan Implementation	• <u>Parent/caregiver social marketing campaign</u>: social marketing/linguist consultants engaged to support campaign, scope of work and project timeline generated, graphic designer engaged, focus group questions development initiated, promotional materials developed and distributed. • <u>Alcohol and cannabis curriculum programs for middle and high school</u>: additional outreach conducted to cluster community school administrative and health education staff offering support with curriculum review and implementation. • <u>iDECIDE (Drug Education Curriculum: Intervention, Diversion, and Empowerment)</u>: outreach conducted to iDECIDE staff regarding “Implementation Roadmap” and documents to support fidelity of implementation, as well as status of program implementation in cluster

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	towns. Technical assistance received at PTTC Peer-to-Peer Consultancy session.
Communication & Community Outreach	• MassCALL3 Connections Monthly Meeting held August 5th, featuring a presentation on the Massachusetts Behavioral Health Helpline by Boston area representative Leah Arteaga. • Talk They Hear You Campaign: postcards and holders distributed to Westwood Prevention Coalition members and cluster community residents. • Social media: prevention messages delivered weekly on Prevention Partners Instagram and Facebook. • Website updates: Prevention Partners website transition to more user-friendly platform, allowing for easier updates by grant staff. • Outreach to North East Health Services in Dedham to request information for leadership team members.
Meetings and Trainings	• DPH Local Public Health Monthly webinars- 8/5 • Prevention First: Impact of Alcohol Home Delivery Policies on Alcohol Consumption- 8/6 • Middlesex County District Attorney Ryan: Anti-Hate Anti-Bias Taskforce- 8/7 • Prevention Professionals Picnic- 8/7 • Needham Board of Health meeting- 8/8 • Needham Public Health Division staff meeting- 8/12 • Town of Needham Accounting: July MassCALL3 Reimbursement- 8/14 • County Health Rankings & Roadmaps: Meeting the Moment: From Data to Impact- 8/19 • BSAS MassCALL3 Check-in Meeting with Amal Marks, CPS, Contract Manager- 8/19 • CADCA Competencies in Focus: Policy with Public Policy Consultant Sue Thau- 8/21 • MetroWest Substance Awareness & Prevention Alliance- 8/26

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	• Operation Parent: Talk Early, Talk Often: Prevent Underage Substance Use- 8/26 • MassCALL3 Evaluation Support: Jessica Goldberg, MPH, MSW, Education Development Center- 8/27 • Technical assistance session: Prevention Technology Transfer Center (PTTC) Peer-to-Peer Consultancy: Dilemmas Impacting Our Success- 8/27
NPHD (Fiscal Agent)	• Needham Community Health Survey discussion. • Accreditation: Completion of FY26 Action Plan and finalization of FY25 Action Plan tracking in VMSG. • Review of updated/finalized Article 1: Regulation Affecting Smoking and the Sale and Distribution of Tobacco Products in Needham prior to distribution. • Participation in memorial flag installation for Needham's Overdose Awareness Initiative (SPAN).

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END



Unit: Substance Use Prevention

Date: July and August, 2025

Staff: Karen Shannon, Karen Mullen, Monica De Winter, Angi MacDonnell, Vanessa Wronski

Activities and Accomplishments

Activity	Notes
SPAN Projects & Events	SPAN in the community: Needham Overdose Awareness Day Vigil, August 28 – the 4th annual vigil was held at the Memorial Park gazebo. The event drew approximately xx community members who heard three speakers, received Narcan training en masse, and browsed resources at tables from 10 organizations. SPAN at National Night Out, August 5 – Angi MacDonnell and Karen Shannon shared SPAN resources at this event hosted by the Needham Police Department. A prize wheel with health and wellness questions appropriate for youth was very popular and generated an opportunity for staff to engage with families. Presentation to Needham High Athletic Coaches, August 12 – Angi, Karen and NHS Senior and SALSA Leader Isabel Tashie presented to the NHS coaches. They shared information about SPAN and SALSA's community prevention work and reinforced how coaches are a protective factor for students. Meeting with Denise Domnarski, August 12: The Prevention Team met with Ms. Domnarski, Needham Public Schools Director of Wellness for K-12, to share updates on SPAN, learn about the status of the NPS Wellness Curriculum, and identify areas of opportunity where the Prevention Team and the Director can collaborate. SPAN Policy & Advocacy: The Prevention Team met with Amy Turncliff of the Ashland coalition, Decisions at Every Turn, and Lexi Polokoff and Ilana Gerjuoy, coalition leaders from Western MA, to gather information about creating a formal Coalition policy team. Updates to SPAN website: Prevention Team reviewed and edited the Coalition website for updates to resources, page design, and archiving of SPAN events. SPAN social media: https://www.facebook.com/SPANNeedham/

Opioid Settlement Funds	Karen and Angi met to discuss the opioid settlement funds strategic plan and are tracking goals and progress made toward activities. The plan was developed under the guidance of the former Assistant Director of Public Health and the Needham Opioid Settlement Steering Committee. Metrowest Opioid Abatement working group: Angi and Karen have joined this recently-created working group of Metrowest communities who meet to share information and discuss challenges and solutions to spending the MA opioid abatement funds. The group is led by the Framingham Public Health Department.
Needham Public Health Peer Recovery Coach	During July and August, Angi MacDonnell, Peer Recovery Coach engaged in the following: July: worked with 10 people and received 2 new referrals. August: worked with 6 people, no new referrals. Average Age of those receiving services: 53 years. • Attended meeting of Metrowest Opioid Abatement Collaborative • Developed plan with Transportation Coordinator for the Center at the Heights to provide transportation for peers to Needham Overdose Awareness Day vigil and the Needham Harvest Fair • IOAD Vigil marketing and planning • Opioid Settlement Funds Strategic Plan implementation: - o Create Needham Recovery Community Support Fund; - o Create Opioid Settlement Strategic Plan Action Team - o Harm Reduction for young adults – pending data to be collected from new community health survey under development by the NPHD Epidemiologist Angi accepted an invitation to sit on the Elliot House Advisory Committee. Elliot house is an employment and recovery center that offers people with mental health challenges hope and opportunities to achieve their full potential. The Clubhouse offers support in: Work-Ordered Days, employment, education, housing, health and wellness, dual recovery, and social opportunities. The Advisory Committee supports the clubhouse by connecting it to the community. Last month, Angi was able to connect the clubhouse with the community benefits director at BID Needham.
Needham Public Health Dept. Accreditation	Karen S. worked with NPHD staff to revise several documents that required re-submission for the accreditation application. Those documents included measures for quality improvement, fostering innovation and strategic partnership.

STOP Act grant + Alcohol Compliance	SAMHSA grant: STOPing Underage Access and Use of Alcohol: Codifying Youth, Parent and Retailer Education and Compliance in Needham, MA: Grant closeout: Monica De Winter and Karen Shannon completed the STOP Act grant closeout reports required by SAMHSA. Those included additional reports added by SAMHSA as part of their migration to a new grantee reporting system. The Town Accountant to prepared and submitted the final financial report to SAMHSA. Alcohol compliance – On July 22, the Needham Select Board held a hearing with The James, a Needham restaurant that failed the March 2025 alcohol compliance check conducted by the Needham Police by selling alcohol to an underage operative. This was their third sales to minor violation since 2021. The Select Board voted for a 7 day suspension of the restaurant’s alcohol license (1 day for state law violation and 6 days for Needham regulation violation), to be served in one 3-day period and a 4-day period. Monica De Winter and Karen Shannon met with a manager from ServSafe to discuss exam translation options for Needham licensees taking the ServSafe Alcohol exam during the in-person responsible beverage service trainings hosted by Needham Public Health.
SALSA	During the months of July and August, SALSA leaders contributed 69 hours of service in Needham. August highlights include: SALSA leader Isabel Tashie, Class of 2026, is co-producing a podcast on tobacco education. Isabel and her student partner and co-producer from Natick High School interviewed Karen Mullen and Karen Shannon about the substance use prevention work SALSA and SPAN are completing. They completed 20 interviews with individuals from the local, state and federal level and expect to launch the podcast in the fall. - SALSA leader Isabel Tashie spoke at the NHS Coaches meeting about SALSA’s prevention work. Needham Overdose Awareness Vigil, 8/28: One member, spoke at the event about how addiction personally affected their family. 4 SALSA members staffed a SALSA information table.

Summary for July and August 2025: Focus included STOP Act grant closeout reporting, Needham Overdose Awareness Day vigil planning, Accreditation documentation, and opioid settlement funds planning.



Unit: Emergency Preparedness

Date: July 2025

Staff: Taleb Abdelrahim

Activities and Accomplishments

Activity	Notes
Medical Reserve Corps (MRC)	- Continued supporting the Norfolk County-8 (NC-8) MRC team to host the MRC Training Day (9/13th at CATH). - Needham medical volunteers helped with the town's Blood Pressure clinics. - We shared a refresher training by the COLOR system to help volunteers prepare for flu season and support upcoming clinics. - Attended the NC-8 MRC Advisory Group meeting.
Emergency Preparedness	Drafted wording about Needham's MRC role in the community and shared with the town's Emergency Management Administrator to link to EM page.
Accreditation	Edited MRC Volunteer Management and Deployment Policy to meet the PHAP requirement.



Unit: Emergency Preparedness

Date: August 2025

Staff: Taleb Abdelrahim

Activities and Accomplishments

Activity	Notes
Medical Reserve Corps (MRC)	- Assisted the nurse unit in coordinating medical and non-medical volunteers for upcoming Flu Clinics. - Continued supporting the Norfolk County-8 (NC-8) MRC team to host the MRC Training Day in Needham. - Attended the NC-8 MRC Advisory Group meeting.
Emergency Preparedness	- Started drafting an Event Action Plan (EAP) for upcoming Flu Clinics. - Reviewed the After-Action Report Policy and NPHD's Continuity of Operations Plan (COOP).



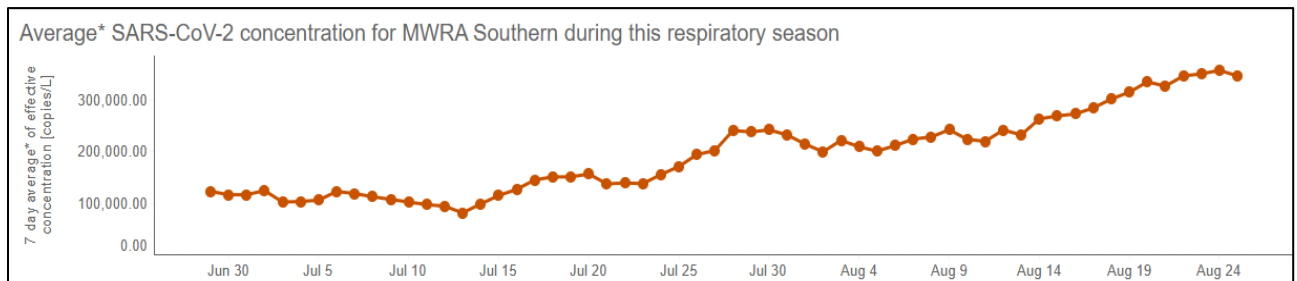
Unit: Epidemiology

Date: July & August 2025

Staff: Julie McCarthy

Upcoming respiratory virus season updates:

- MDPH has begun making routine updates to their Covid-19 reporting dashboards. Covid-19 in wastewater is considered Moderate in Massachusetts (<https://www.cdc.gov/nwss/rv/COVID19-statetrend.html?stateval=Massachusetts>).



SOURCE: <https://www.mass.gov/info-details/wastewater-surveillance-reporting>

Activities and Accomplishments

Activity	Notes
Rats	Heatmap of rat sightings is back up and available to the public HERE and is also embedded into rat education website . Continuing to work with Tara and Sai to get complaints into survey to get data into 1 place.
Fall vaccines	Hosted coffee talk with Ginnie at the CATH in August to debunk common vaccine myths and answer questions about fall respiratory vaccines.
WNV/EEE	Mass Department of Public Health Arbovirus updates began in June. No mosquitoes have tested positive for WNV or EEE in Needham; Needham's risk level elevated to moderate in August due to mosquitoes found in nearby communities. Neighbors Newton and Boston are in High Risk level (and we know mosquitoes don't respect town lines!). There have been 2 human cases of West Nile virus in MA this year: 1 in Essex County and 1 in Middlesex County.

Activity	Notes
Community Health Survey	Identifying topic areas to include in a Community Health Survey to residents. Soliciting input from Public Health, Youth and Family Services, Aging Services, Emergency Preparedness. Will come to BOH meeting this fall with a draft of survey asking for specific feedback.
Sustainability	Worked with Sai and Sustainability Coordinator Gabby Queenan to create a site for Food Waste diversion resources .

Massachusetts Fall 2025 vaccines

	Respiratory Syncytial Virus (RSV)			Influenza (flu)	COVID-19
	Infants	Pregnant Women	Older Adults		
WHO	Infants <8 months old and children 8-19 months with risk factors	Pregnant women at 32 to 36 weeks of pregnancy	Adults aged 75+ or adults 50-74 with risk factors	Everyone 6 months and older	Everyone 6 months and older*
WHY	Reduces risk of hospitalization by 80-96%	82% efficacy in preventing hospitalization in first 3 months of life. 69% after 6 months	Reduces risk of severe disease by 82-86%	Reduces risk of going to the doctor by 30-60%	30-60% additional protection against illness and severe disease
WHAT	Monoclonal antibody nirsevimab or clesrovimab (these are not vaccines; they provide antibodies against RSV)	Pfizer vaccine ABRYVO	GSK and Pfizer (protein) or Moderna (mRNA)	A shot that targets 3 strains of seasonal flu . Older adults may want to receive high dose; children under 9 years receive 2 shots for first vaccination	Updated vaccine formula targeting Omicron subvariants. Moderna and Pfizer (mRNA) or Novavax (Protein)
WHEN	October to March if maternal vaccine not received. Protection lasts 4-6 months	September to January during 32-36 weeks of pregnancy	Now! Protection is long lasting	October is best time, but anytime in the fall or early winter to prevent severe disease during highest uptick in cases	Fall or early winter , to prevent severe disease during highest uptick in cases. Wait 6 months if recently infected.

*Talk to your primary care provider if you have questions about eligibility. Children under 5 are not able to receive vaccine at a pharmacy.

Adapted from [Your Local Epidemiologist Substack](#). Recommendations from [American Academy of Pediatrics](#), [American College of Obstetricians and Gynecologists](#)



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Unit: Public Health Nursing

Date: July and August 2025

Staff: Hanna Burnett and Ginnie Chacon-Lopez

Activities and Accomplishments

Activity	Notes
Community Outreach	- Six CPR classes held - MOB classes advertised for the Fall - BP clinics continue at CATH and NHA Seabeds and Linden/Chambers - Coffee Talk at CATH to discuss vaccine truths and myths - Participated in Needham Community Council's planning of a Memory Café
Education	Ginnie: various webinars
DVAC	- Planning for October cable event continues - Several domestic violence survivors were given resources
HEARTSafe	Waiting for the software upgrade and CARES enrollment before submitting application
Additional Notes	- Camps licensed: - Revolution Soccer Academy - PUDDLESTOMPERS Nature Explorers - Needham Soccer Club - Arrows Hockey Clinic at St. Sebastian's - Flu vaccine clinics have been scheduled and more to be added - COVID-19 order is pending

Potential Foodborne Illnesses	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2026	2025	2024
Calicivirus/Norovirus													0	9	5
Campylobacteriosis															
Confirmed/Probable	<5												<5	7	10
Cryptosporidiosis		<5											<5	0	<5
Cyclosporiasis													0	0	<5
Enterovirus													0	<5	0
Giardiasis													0	<5	0
Salmonellosis	<5												<5	<5	<5
Shiga Toxin Producing Organism													0	<5	<5
Shigellosis	<5												<5	<5	0
Vibrio spp													0	0	<5
Arbovirus	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2026	2025	2024
Babesiosis	<5												<5	<5	<5
HGA/Anaplasmosis													0	<5	<5
Lyme Disease Suspect													0	9	45

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Lyme Disease Probable	<5	<5											5	9	35
Other Communicable Illnesses	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2026	2025	2024
Group A streptococcus													0	<5	0
Group B streptococcus													0	0	<5
Haemophilus influenzae													0	<5	<5
Hepatitis B Confirmed/Probable													0	5	5
Hepatitis C Confirmed/Probable													0	5	<5
Influenza Confirmed	<5												<5	347	155
Malaria													0	0	<5
Legionellosis	<5												<5	0	<5
Novel Coronavirus Confirmed	12	15											27	200	308
Novel Coronavirus Probable		<5											<5	0	54
Pertussis (Bordetella spp.)		<5											<5	<5	0
Streptococcus pneumoniae													0	<5	0
TB Infection Confirmed													0	12	45
TB Infection Contact													0	<5	<5
Varicella													0	<5	6
Totals	25	19	0	0	0	0	0	0	0	0	0	0	44	632	690

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2026	2025	2024
Immunizations/Injections															
B12	1	2											3	18	8
Influenza													0	533	771
Tdap													0	2	0
Covid-19													0	76	208
VFC		8											8	11	0
Other													0	13	3
Total	1	10	0	0	0	0	0	0	0	0	0	0	11	653	990

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2026	2025	2024
Animal-to-Human Bites															
Dog	1												1	0	3
Cat													0	0	1
Bat					1			3					4	4	0
Total Bites	1	0	0	0	1	0	0	3	0	0	0	0	5	4	4

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2026	2025	2024
Assistance Programs															
Food Pantry													0	0	0
Friends													0	1	0
Gift of Warmth	1	2											3	17	29
GoW Amount	300	600											900	8675	16843
Parks & Rec													0	0	0
Self Help													0	0	2

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	2026	2025	2024
Education															
CPR Education	6	26											32	479	243

www.needhamma.gov/health

Matter of Balance Graduates													0	16	15
Narcan	2	34											36	201	174

Donations:	\$0
Gift Cards Distributed:	5

July 2025 Report

Unit: Public Health Excellence - Shared Services, Contact Tracing & Local Public Health Training Hub

Date: 8/6/2025

Staff members: Kerry Dunnell, Jennifer Casey, Jennifer Gangadharan & Padraig Martin

Activities and Accomplishments

Activity	Notes
Shared Services- Charles River Public Health District (Towns of Dover, Medfield, Needham, and Sherborn)	Staff members: Kerry Dunnell, Jennifer Casey, Jennifer Gangadharan Community Support & Engagement <i>Environmental Health -- Regional environmental health agents support environmental health activities and conduct inspections in all member communities as requested</i> Pat Martin conducted field inspections for temporary food and rodent issues to support one of the Charles River Public Health District (CRPHD) communities. Inspections in communities are limited until Regional Health Agent position is filled. <i>Public Health Nursing--</i> - July 1 met with Emily Dellaglio new Medfield public health nurse for intro/onboard document review - July 3 provided MAVEN Coverage for Dover and Sherborn - July 8 Met with Emily Dellaglio to support/orient to MAVEN - July 10 and 11 provided MAVEN Coverage for Needham - July 14th Needham Camp Inspection with Needham public health nurse - July 14th Kickoff Regional public health nurse connection group which will happen monthly going forward. Shared tracking spreadsheet to track all the work the public health nurses are doing each month. - July 15th Hands Only CPR in Sherborn with Dover and Medfield public health nurses. Twenty residents attended. - July 29th met with Needham Health & Human Services Director, public health nurse and epidemiologist about upcoming respiratory season.

- Notified Dover, Medfield and Sherborn that Needham is willing to host flu and covid vaccine clinics in each community.
- July 31 created educational content to be distributed to all 4 communities on August National Vaccination Awareness Month
- July 30 and 31 MAVEN coverage for Needham

Projects

- Kick off meeting with Caravan Consulting for a communications training project.
- Submitted fiscal year end fiscal and program final reports.

Training Hub- North Central & MetroWest Local Public Health Training Hub Serving the 40 communities in the Charles River Health District, Greater Boroughs, MetroWest Public Health Coalition, Nashoba Associated Boards of Health, Norfolk County-8 Public Health shared services arrangements, and the communities of Bellingham, Holliston and Marlborough.	Staff members: Kerry Dunnell, Jennifer Casey, Jennifer Gangadharan, Padraig (Pat) Martin Training Delivery Updates Pat Martin conducted an EH Workshop for Hub Inspectors on conducting sound level surveys and conducted field inspections for temporary food and rodent issues to support one of our hub communities. <i>Documentation Review</i> • No new requests in July. <i>Local Public Health Intensive Training (LPHIT) Food Inspection Training Tier 3</i> Completed Tier 3 Food Training Inspections with two Framingham Public Health Department inspectors. Tier 3 Food trainees are assessed by trainers on their work during five different types of inspections. Some trainees may meet all requirements after five inspections; some may require more than five inspections to do so. Once this step is complete, trainees are eligible to receive certification of completion. <i>Local Public Health Intensive Training (LPHIT) Food Inspection Training Tier 2</i> No new courses offered <i>LPHIT Housing Tier 3</i> July 24th Coordinated planning meeting for Tier 3 Housing Training with support from Fall River-based Bay State Public Health Training Hub. <i>LPHIT Pools (developing)</i> Course development continues at the state level. We are all eagerly anticipating release of the curriculum. <i>Funder Communication and Collaboration</i> Attended the Office of Local and Regional Health Training Academy Strategic Discussion session. <i>A series of meetings are organized to gather input from public health representatives from training hubs and professional organizations (MA Association of Health Boards, MA Public Health Association, MA Environmental Health Association, MA</i>
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	<i>Health Officers Association, Western MA Public Health Association) about the needs and priorities for a training academy for local public health workforce.</i>
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August 2025 Report

Unit: Public Health Excellence - Shared Services, Contact Tracing & Local Public Health Training Hub

Date: 9/6/2025

Staff members: Kerry Dunnell, Jennifer Casey, Jennifer Gangadharan & Padraig Martin

Activities and Accomplishments

Activity	Notes
Shared Services- Charles River Public Health District (Towns of Dover, Medfield, Needham, and Sherborn)	Staff members: Kerry Dunnell, Jennifer Casey, Jennifer Gangadharan Staff Updates Regional Environmental Health Agent position was posted. We received twenty-four applications and a panel comprised of Tara Gurge, Asst Dir Needham, Jason Belmonte, Health Director, Dover, and Kerry Dunnell, Program Manager, conducted three interviews. After consideration, the panel agreed to repost the position in September. Community Support & Engagement <i>Environmental Health -- Regional environmental health agents support environmental health activities and conduct inspections in all member communities as requested</i> Inspections in communities are limited until Regional Health Agent position is filled. <i>Public Health Nursing--</i> • Hosted Charles River Public Health District monthly nurse meeting in Needham to discuss areas where nurses can collaborate and support each other. • Started creating educational flyers on Canva for August which is National Immunization Awareness Month • Met with epidemiologist and Needham public health nurse to discuss community health assessment survey questions • Provided one week MAVEN coverage for Dover/Sherborn, and 1 week MAVEN for Medfield • Attended a Dover Board of Health public hearing on 8.19.2025 related to parent reports of code violations at Camp Grossman Projects • Canva template development and training for all Charles River Public Health District communities. Caravan Consulting interviewed staff from Sherborn,

Medfield, and shared services staff.

Staff Continuing Education & Training updates

- Attended regional public health nurse meeting hosted by UMASS consultants to discuss topics relevant to the Regional public health nurse role
- Attended vaccine and vaccination related meetings
 - o 08.13.25 Commissioner Goldstien
 - o 08.18.25 Needham Team Discussion on Upcoming Respiratory Virus Season
 - o 08.19.25 From Data to Decisions: The Evidence Base for 2025 Fall/Winter Immunizations
 - o 08.26.25 Building Trust the Fall: Effective Vaccine Communications for Local Health Professionals
 - o 08.26.25 FPHS Showcase: Communicable Disease Prevention and Immunization Access
- Attended a meeting about Memory Café in Needham 08.19.25, which is something many communities now offer. Will be useful info to share with other CRPHD Communities.

Training Hub- North Central & MetroWest Local Public Health Training Hub Serving the 40 communities in the Charles River Health District, Greater Boroughs, MetroWest Public Health Coalition, Nashoba Associated Boards of Health, Norfolk County-8 Public Health shared services arrangements, and the communities of Bellingham, Holliston and Marlborough.	Staff members: Kerry Dunnell, Jennifer Casey, Jennifer Gangadharan, Padraig (Pat) Martin Training Delivery Updates Conducted an EH Workshop for Hub Inspectors This workshop gave me the opportunity to directly engage with our hub members and share information on conducting sound level surveys. Completed a Tier 3 Food Training Inspections with two Framingham Public Health Department inspectors. <i>This experience continues to build my confidence and skills in conducting Tier 3 food inspections.</i> Attended the Training Academy Strategic Discussion Meeting <i>The meeting provided insight into the state's potential training academy for local public health and offered a chance to contribute to the discussion around its development.</i> Conducted Field Inspections for Temporary Food and Rodent Issues <i>These inspections helped me further hone my inspectional skills while supporting one of our hub communities.</i> Local Public Health Intensive Training (LPHIT) Food Inspection Training Tier 3 Pat Martin continues to work with two individuals to complete their on-site Tier 3 requirements. Tier 3 Food trainees are assessed by trainers on their work during five different types of inspections. Some trainees may meet all requirements after five inspections; some may require more than five inspections to do so. Once this step is complete, trainees are eligible to receive certification of completion. Local Public Health Intensive Training (LPHIT) Food Inspection Training Tier 2 No offerings in August Documentation Review No new requests in August. LPHIT Housing Tier 3 Staff met on 08.21.25 with Bay State Training Hub team from Fall River to plan Tier 3 Category 1 Housing course to be offered in September. Pat Martin and
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Jennifer Gangadharan will be taking the class so that our hub can then offer the course.

LPHIT Pools (developing)

Course development continues at the state level. We are all eagerly anticipating release of the curriculum.

LPHIT Wastewater/Title V (developing)

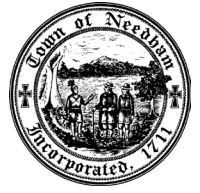
- MA Department of Environmental Protection (MA DEP) has filled one full-time position for a subject matter expert and trainer. This role enables the development of a training curriculum.

Training Hub outreach, communication & support activities

Funder Communication & Collaboration

MA DPH OLRH has organized a work group to develop a mission, vision and values for something called the Public Health Training Academy. The Academy will include offerings from the training hubs, and other public health training needs. The workgroup will meet nine times over four months to identify what the training needs are, and whose training needs will be met by the Academy. Workgroup participants include representatives from each of the ten local public health training hubs, each of the six professional public health organizations, the Coalition for Local Public Health (CLPH) and members of MA DPH staff from Office of Local and Regional Health, Bureau of Climate and Environmental Health and others.

Pat Martin will represent the North Central Metrowest Training Hub. Kerry Dunnell also will participate representing the MA Environmental Health Association.



Board of Health

AGENDA FACT SHEET

September 19, 2025

Agenda Item	BOH Regulations – Modernization plus Racial & Health Equity Assessments
Presenter(s)	Timothy Muir McDonald, Director of Health & Human Services

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
Mr. McDonald will brief the Board of Health on a years-long project, aligned with the Board's strategic priorities and goals, to update and modernize the Board's existing regulations and to assess those regulations using the HHS Racial & Health Equity policy framework. During FY2025, the Public Health Division staff worked with the talented consultants from BME Strategies to research and develop revision recommendations for the following regulations: <u>Modernization</u> • Article 2: Disposal of Refuse • Article 3: Public Nuisance • Article 4: Keeping of Domestic Animals • Article 6: Offensive Traders, Occupations, and Practices • Article 7: Body Art • Article 18: Regulation for Excavation and Trench Safety AND Trench Additional Information <u>Racial & Health Equity</u> • Article 3: Public Nuisance • Article 6: Offensive Traders, Occupations, and Practices • Article 7: Body Art Over the next six months, the Public Health Division wishes to engage the Board	

of Health to review and, if approved, enact changes to the above regulations according to the following schedule:

- September 2025 – Project Overview for Board of Health
- October 2025 – Detailed review of FY25 process
- November 2025 – Noticed Public Hearing on initial set of three BOH regulations
- December 2025 – Continued hearings and BOH Votes
- January 2026 – Noticed Public Hearing on second set of three BOH regulations
- February 2026 – Continued hearings and BOH Votes

2. VOTE REQUIRED BY BOARD OF HEALTH
(with Suggested Motion)

None expected.

3. BACK UP INFORMATION:

- Needham Health & Human Services – Racial & Health Equity Policy
- Needham Public Health Division Strategic Plan – February 9, 2024



NEEDHAM DEPARTMENT OF HEALTH AND HUMAN SERVICES

POLICY or PROCEDURE TITLE: **Racial and Health Equity**

Number: **HHS-ALL-116**

Policy Type: Administrative

Original Date: June 3, 2022

Date Reviewed or Revised: **September 3, 2025**

Effective Date: **September 3, 2025**

BACKGROUND:

Racism is a pervasive condition that causes health disparities and has been recognized by health and mental health professionals for many years as a serious public health crisis. Other factors contributing to health disparities are poverty, immigration status, gender, gender identity, disabilities, and ethnicity. This crisis demands that public health and social services strive toward overcoming disparities through policies, programs, actions, and self-reflection. The Department of Health and Human Services is obligated and committed to tackling racial and health inequities in all its work.

PURPOSE:

Institutional racism and other social conditions are systemic, cultural, and interpersonal threats to public health and mental health. While public health and social service organizations have recognized the problems of health inequity and racial injustice, policies have lagged behind statements and thus have failed to institutionalize efforts to promote health equity and racial justice. It is imperative for the Department of Health and Human Services to continue to combat inequality and biases that are based on sexual orientation, sex or gender identity, ability, age, immigration status, socioeconomic status, ethnicity, national origin, religion, and marital status.

The purpose of this policy is to support and to expect all staff members to be intentional in addressing all forms of health inequities. This is a challenge, and yet much more critical, in this predominantly White town.

POLICY: All Needham Health and Human Services divisions will design and provide outreach and programs to benefit groups of people who are marginalized by such things as race, socioeconomic status, immigration status, disability, and gender identity.

DEFINITIONS:

Diversity is the range of human differences and identities. It includes race, ethnicity, gender, age, national origin, religion, disability, sexual orientation, gender identity, socioeconomic status, education, marital status, language, veteran status, and physical appearance. It also involves different ideas, perspectives, and values.

Equity is the fair treatment, access, opportunity, and advancement for all people, while striving to identify and eliminate barriers that prevent the full participation of some groups. In an

equitable environment, an individual or group would be given what was needed for equal advantage.

Inclusion authentically bringing traditionally excluded individuals and groups into processes, activities, decision making, and policy making and creating an environment in which any individual or group will be welcomed, respected, supported, and valued as a fully participating member.

PROCEDURE: The department will engage staff, colleagues, and residents in conversations and actions to promote equitable and inclusive practices and programs,ⁱ to ensure equal access to services.

1. Staff members will be intentional in addressing all forms and causes of health inequities.
2. Division directors will ensure that staff use a racial equity assessment approach to evaluate new policies for the potential positive and negative impacts on equity (see addendum).
3. Directors will review their division's mission and vision and will review existing policies and procedures through a lens of equity and inclusion and revise where necessary.
4. Educational material and reports published by Needham Health and Human Services programs will be translated into the most common languages of the community or the schools, and interpreters will be engaged for community presentations.
5. Educational material will be written with gender-neutral language whenever practical.

References:

[The Massachusetts Public Health Association Health Equity Policy Framework](#)
[Government Alliance on Race and Equity Toolkit](#) (GARE)
[Race Forward Racial Equity Impact Assessment Kit](#)
[Needham Public Schools REAL Coalition](#)

Addendum: Equity assessment questions

Note: The links to the MPHA Health Equity Framework and the GARE Toolkit were updated on May 16, 2025.

Prepared by: Lynn Schoeff with members of the DHHS Racial Equity Committee (Karen Shannon, Diana Acosta, Tiffany Zike, LaTanya Steele, Jess Moss, Aicha Kelley, Jess Rice, Sara Shine,

Signatures on the following page.



NEEDHAM DEPARTMENT OF HEALTH AND HUMAN SERVICES

Approved by:

Timothy Muir McDonald

Director of Health and Human Services

September 3, 2025

Date

Latanya Michelle Steele

Director of Aging Services

September 3, 2025

Date

Sam Slin

Director of Youth & Family Services

September 3, 2025

Date

Position Vacant

Assistant Director of Public Health, Nursing & Clinical

Date

Sara Slin

Assistant Director of Public Health
Environmental & Community Health

September 3, 2025

Date

Addendum

Key assessment questions:

1. What is the policy under consideration?
 - a. Desired results and outcomes
 - b. How the proposed policy will change existing racial & other inequities
 - c. How it will address historic or contemporary inequities
2. What are the racial and other equity impacts of this decision?
 - a. Who is most impacted?
3. Who will benefit from or be burdened by the decision?
 - a. Which racial, ethnic, or gender groups may be most affected by and concerned with the issues related to this proposal?
 - b. Are there potential negative impacts or unintended consequences?
 - c. Are there strategies to mitigate the unintended consequences?
4. Have affected community members or leaders been engaged in the development or vetting of the proposal?
5. Can the policy be successfully implemented and evaluated for impact?

Abbreviated tool suggested by GARE:

- What are the racial equity impacts of this particular decision?
- Who will benefit from or be burdened by the particular decision?
- Are there strategies to mitigate the unintended consequences?

For more detailed assessment tools, see the references cited in the policy.

¹ From Needham REAL Coalition



NEEDHAM PUBLIC HEALTH DIVISION

2024 – 2028 STRATEGIC PLAN

**APPROVED DECEMBER 12, 2023
FOR BOARD OF HEALTH REVIEW FEBRUARY 9, 2024**

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EXECUTIVE SUMMARY

CONTEXT

The Needham Public Health Division engaged in a comprehensive strategic planning process to support its application to the Public Health Accreditation Board (PHAB). This strategic plan establishes the division's 2024 – 2028 priorities, provides a roadmap for the work, and is a tool to aid leadership and staff decision-making. The process was led by the Needham Strategic Planning Team and supported by the consulting team of [BME Strategies](#) and [Copper Strategic](#). It began in June 2023 and concluded in December 2023.

MISSION

The Needham Board of Health and its Public Health Division promote and protect the public health and social well-being of all Needham's residents, especially the most vulnerable. The division seeks to prevent and control the spread of disease, address environmental issues, promote healthy lifestyles, and embrace its role in regional health initiatives.

STRATEGIC PRIORITIES

The following six priorities will guide the work of the division:

	1	Ensure equitable access to care.
	2	Address the impacts of social determinants of health on the Needham community.
	3	Use lessons learned during the pandemic to improve emergency preparedness and response.
	4	Collaborate closely with other Town departments and regional partners to address intersecting community needs.
	5	Prioritize responses to and prevention of mental health crises, substance use, and chronic conditions.
	6	Invest in workforce development.

GOALS, OBJECTIVES, AND DELIVERABLES

A detailed set of measurable and time-bound targets has been established to operationalize the strategies outlined above. Each strategy is linked to an overarching Board of Health governance priority, broken down into defined tasks, and assigned to an owner.

IMPLEMENTATION AND PERFORMANCE MANAGEMENT

Implementation planning began with an analysis of the division's strengths and weaknesses, an assessment of external trends, events, and other factors that may impact community health or the health division, and consideration of the division's capacity needs.

The first step upon formal adoption of the plan is to build out a detailed performance management plan. This will serve as the division's primary tool for managing workflow, driving accountability, and celebrating success. The Performance Management Plan will follow the fiscal year and be synchronized with the division's CHIP (Community Health Improvement Plan) timeline.

STAKEHOLDER INVOLVEMENT

Feedback and input from the Board of Health and division staff was sought throughout the process. In addition, focus groups were conducted with representatives of community and advocacy groups, other Town departments, partner organizations, and elected officials.

SECTION 1: THE PLANNING PROCESS

A. Participants

Needham's strategic planning process was directed by the Needham Strategic Planning Team (see below) and supported by the consulting team of BME Strategies and Copper Strategic. The planning team represented knowledge and perspectives from across the health division.

The group met monthly and conducted work in between meetings. The process began in June 2023 and concluded in December 2023.

Timothy McDonald and Tiffany Benoit were in frequent communication with the Needham Board of Health about the process. The strategic plan was discussed at the June 9, July 14, September 8, October 13, and December 8, 2023 Board of Health meetings. In addition, an in-depth discussion was conducted with Board Chair Tejal Gandhi, M.D., MPH, and Board member Kathleen Ward Brown, Sc.D., on November 27, 2023. In each case board feedback was solicited and incorporated into the development of the plan.

Strategic Planning Team:

Timothy McDonald, Director of Health and Human Services

Tiffany Benoit, Assistant Director of Public Health

Tara Gurge, Assistant Director of Public Health

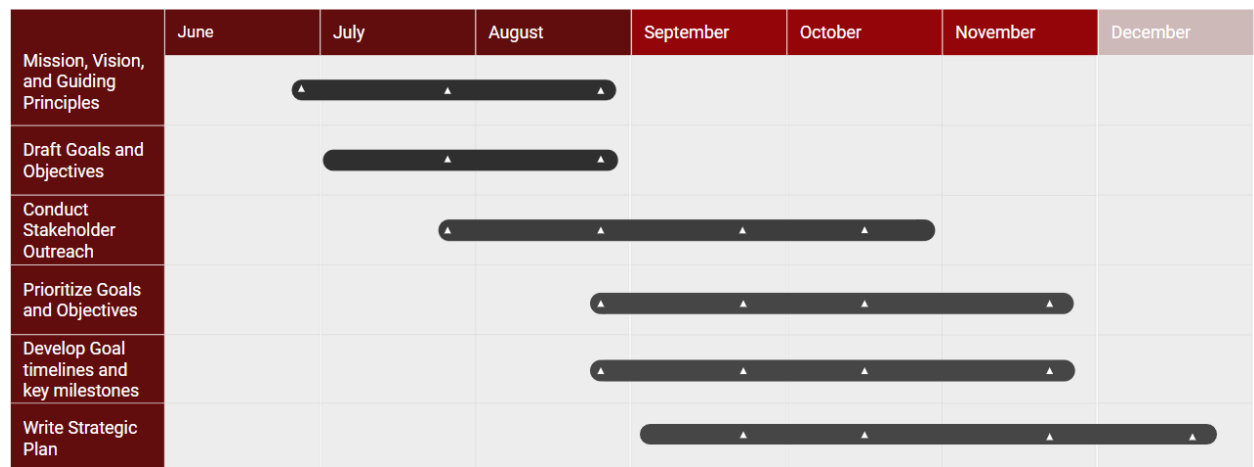
Lynn Schoeff, Accreditation Coordinator

Julie McCarthy, Epidemiologist

Kerry Dunnell, Program Manager

B. Sequence of the Process

The team began by crafting an outline informed by PHAB standards. From there, they built out iterative drafts in the following sequence:



▲ Meeting

C. Stakeholder Engagement

Key stakeholders were engaged throughout the process.

- As noted above, the Board of Health was kept apprised of progress regularly and was asked for input.
- In addition, focus groups were conducted with representatives of:
 - Community and advocacy groups
 - Other departments in the Town of Needham
 - Partner organizations
 - Elected officials
- Finally, the plan was developed to ensure it is widely understood by staff. In addition to informal discussions with staff throughout the process, an all-hands meeting was held on November 30, 2023, dedicated to discussion of the plan. The strategic plan was updated based on feedback generated during this meeting.

Please see the Appendix for stakeholder lists.

D. Board Approval

On February 9, 2024, the plan will be introduced to the Needham Board of Health for approval.

SECTION 2: OUR PRIORITIES & DIRECTION 2024 - 2028

A. Mission, Vision, Values, and Guiding Principles

Mission

The Needham Board of Health and its Public Health Division promote and protect the public health and social well-being of all Needham's residents, especially the most vulnerable. The division seeks to prevent and control the spread of disease, address environmental issues, promote healthy lifestyles, and embrace its role in regional health initiatives.

Vision

The vision of the Needham Board of Health and its Public Health Division is a community where all residents can live, work, play, and grow in an environment conducive to optimal health and well-being through all stages of life.

Values

- Integrity, Reliability, and Trust: We are a trusted resource, communicating accurate and concise information. We are professional, direct, honest, and flexible, listening and responding to community concerns with patience and respect. Our services are based on evidence and best practices. We are responsible stewards of limited resources.
- Dedication and Collaboration: We advocate for the health and well-being of the community. We demonstrate dedication, passion, and empathy while collaborating with community partners. We are motivated by the belief that people are empowered by knowledge that allows them to make informed decisions.
- Professional and Supportive: We provide a professional, collaborative, and respectful work environment. Staff members act as team players, supporting each other by sharing the work and being considerate of others.

Guiding Principles

1. We are guided by the fundamental belief that everyone has the right to live a healthy, safe lifestyle.
2. As public health professionals, we view it as our responsibility to:
 - Protect the public, especially the most vulnerable;
 - Prevent when possible, respond when necessary;
 - Contribute to individual and societal well-being;
 - Ensure people can live to their fullest capacity;
 - Make government work better, more efficiently, and more responsively.
3. We approach our work:
 - Acknowledging the social determinants of health, i.e., the conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks, as defined in Healthy People 2030;
 - With a commitment towards advancing racial and health equity;
 - Promoting evidence-based health practices and data-driven program management;
 - In partnership with residents, community organizations, other Town departments, and federal, regional, state, and local agencies;
 - As good stewards of public resources, using Town operating funds, grant resources, and donations efficiently;
 - Striving to provide as many public health resources as possible to residents and community organizations.

B. Strategic Priorities

The division's priorities were selected based on a current understanding of community needs. They were developed to reflect Needham's Community Health Assessment (CHA) and Community Health Improvement Plan (CHIP). In consultation with the Board of Health, governance and oversight priorities were established in alignment.

		Needham Public Health Division Strategic Priority	Needham Board of Health Governance & Oversight Priority
	1	Ensure equitable access to care	Utilize all legal and regulatory actions available to improve and protect the public's physical and mental health
	2	Address the impacts of social determinants of health on outcomes	Augment the knowledge and information staff has to help inform best approaches to addressing social determinants of health
	3	Use lessons learned during the pandemic to improve emergency preparedness and response	Build confidence and trust of public health officials within the community; act as a champion for the division
	4	Collaborate closely with other Town departments and regional partners to address intersecting community needs	Promote community activities that increase health and wellness, including building community partnerships
	5	Prioritize responses to and prevention of mental health crises, substance use, and chronic conditions	Support the strategic use of remediation funds as determined by the division's strategic planning process
	6	Invest in workforce development	Support the budget process with the Select Board; ensure the necessary resources for staff, services, and training

C. Goals and Objectives

To operationalize these strategic priorities, the Needham team will execute a detailed set of measurable and time-bound targets. These goals were developed to be:

Strategically cohesive, i.e.:

- Logically linked to the strategic priorities
- Developed through the lens of social determinants of health
- Consistent with our Community Health Assessment (CHA) and Community Health Improvement Plan (CHIP)
- Specific, measurable, and time-bound
- Matched to an owner, with specific deliverables and deadlines identified

and anchored on:

- Closing gaps between residents' needs and the division's current efforts
- Connecting residents to physical and mental health care resources
- Refining standard operating procedures to respond to emerging needs
- Developing a Behavioral Health Emergency Response Plan in collaboration with other Town departments and community organizations
- Developing health promotion/health education campaigns with other Town departments and community partners
- Expanding training opportunities for NPHD staff

Board Priority	Divisional Strategic Priority	Goal	1-Year Strategies and Deliverables (additional years to be developed by NPHD as the strategic plan is implemented)	Deadline (subject to change)	Owner (subject to change)
1. Utilize all legal and regulatory actions available to improve and protect the public's health.	Ensure equitable access to care	Conduct a gap analysis of Standard Operating Procedures (SOPs)/protocols to identify missing and outdated plans or protocols that do not reflect the current procedures of Needham Public Health	Update existing insurance enrollment and school vaccine protocols with Needham Public Schools (NPS) to prepare for large numbers of migrant families/children	Late summer 2024	Nursing Staff working with Needham Public Schools (NPS)
		Better connect residents to physical and mental health care resources	Host "health fairs" at various community locations with access to an interpreter to educate and connect residents to physical and mental health resources Promote local shuttle services that can help decrease barriers to healthcare access such as the Needham Community Council and Aging Services Division amongst others	Late summer 2024	NPHD Staff with Community Based Organizations (CBOs)
		Develop SOPs and educational materials to respond to migrant family public health needs (mental and physical health) from notice to referral	Develop an SOP to respond to arriving migrant families and their needs Develop a "welcome" one-pager prepared in different languages that can be distributed to new arrivals.	Early summer 2024	NPHD Staff with community-based organizations (and NPS)
2. Augment the knowledge and information staff have to help inform best approaches to addressing social determinants of health (SDOH).	Address the impacts of social determinants of health on outcomes	All goals will be developed with the SDOH in mind	As determined in other strategic planning goals	-	NPHD staff
3. Build confidence and trust within the community in NPHD; act as a champion for the division.	Use lessons learned during the pandemic to improve emergency preparedness	Develop a Behavioral Health Emergency Response Plan by working with other Town of Needham departments and community organizations	Identify training needs that can help Needham Medical Reserve Corps (MRC) to respond effectively to community mental health needs during an emergency.	Late summer 2024	NPHD/HHS mental health staff, emergency management personnel / leadership, Riverside - mental health clinicians

Board Priority	Divisional Strategic Priority	Goal	1-Year Strategies and Deliverables (additional years to be developed by NPHD as the strategic plan is implemented)	Deadline (subject to change)	Owner (subject to change)
4. Promote community activities that increase health and wellness, including building community partnerships.	Collaborate closely with other Town departments and regional partners to address intersecting community needs	Develop health promotion/health education campaigns with other Town departments and community partners	Continue and expand partnership with Police for tobacco product and substance use prevention Advocate for the hiring of another clinician to work with Needham youth in various community settings to connect to resources, such as the interface referral system, and perform screenings	Winter 2024	NPHD Staff, HHS, community-based organizations, other Town of Needham departments, Charles River Regional Staff
5. Use remediation funds strategically as determined by the division's strategic planning process.	Prioritize response to mental health, substance use, and chronic conditions	Design opioid-specific programming using public engagement feedback from various ongoing outreach efforts.	Connect with members of the community to identify which community resources or interventions would make the most impact on residents to address the opioid crisis	Starting in spring 2024	NPHD leadership
6. Support the budget process with the Select Board; ensure the necessary resources for staff, services, and training.	Encourage and facilitate workforce development	Expand training opportunities for NPHD Staff and equip NPHD staff with Mental Health-specific skills	Update the Workforce Development Plan Offer Adult Mental Health First Aid training to NPHD staff and offer the training to municipal partners.	Winter 2024 Winter 2024	NPHD leadership

D. External Factors

External trends, events, or other factors that may impact the health division include:

- Reliability of funding streams
- Statewide efforts to transform local public health infrastructure in Massachusetts through the Public Health Excellence grant program and additional legislation pending in the Massachusetts State House
- Lingering impact of the COVID-19 pandemic in terms of residents' perception (positive and negative) of public health officials as trusted messengers
- Tight job market, impacting recruitment and retention
- Imperfect tools to ensure all community members are aware of the range of services provided by the division
- Nationwide mental health and opioid crises and their impacts on Needham residents
- The tight housing market and increased cost of living make it difficult for elderly residents to stay in their homes and increases the support needed from NPHD
- Due to the recent influx of migrants to the state of Massachusetts, hotels across the state have been used as temporary housing. While no hotels in Needham are in use right now, the NPHD needs to prepare for this eventual likelihood and the public health needs that will arise from it.

Other constraints exist within the Town but are outside the purview of the Health Division:

- Capacity of Town-wide services that the division does not have control over, such as human resources and information technology
- Restrictions on the use of indirect grant funding
- Lack of data, and access to and ease of use of data collected by other Town departments and local hospital partners

E. Divisional Strengths and Weaknesses

Strengths / Key Assets

- Degree of commitment and mission-alignment across leadership and staff
- Staff capabilities and skill level; depth of experience and subject matter expertise
- Team culture and cohesion
- Strong foundation built over time to access a breadth of funding sources
- Political and policy-maker relationships
- Relationships and collaboration with other Health and Human Services (HHS) divisions and Town of Needham departments
- Orientation toward long-range planning, transparency
- Dual assistant directors' structure which increases capacity and continuity
- Established infrastructure to bring in grant funding, increase the division's resources and capacity

Gaps to address / opportunities for improvement

- Staff capacity – people are stretched across multiple projects
- Inconsistent practices around document sharing and knowledge management
- Program management capacity – both people-power and technical tools
- Lack of full visibility into what is happening enterprise-wide with respect to IT
- Speed of hiring
- Need to synchronize and be more cohesive division-wide (esp. with stakeholder outreach, but not limited to that) (some silo effect)
- Need an internal dashboard to show progress and/or better tools to improve project integration
- Stakeholder networks – we often go back to the same well
- Opportunity to turn temporary funding sources into permanent, sustainable funding sources
- Additional way to assess and evaluate the needs of the community beyond online surveys

F. Linkages

This strategic plan was designed to complement and build upon other guiding documents, plans, initiatives, and coalitions already in place to improve the health of Needham residents. Rather than conflicting with or duplicating the recommendations and actions of existing frameworks and coalitions, the participants of the strategic planning process identified potential partners and resources wherever possible. This was done explicitly with the Community Health Assessment (CHA) and Community Health Improvement Plan (CHIP), Substance Prevention Alliance of Needham (SPAN), Massachusetts Collaboration for Action, Leadership, and Learning (MassCALL3), and opioid abatement work underway, along with other initiatives.

SECTION 3: IMPLEMENTATION AND CAPACITY PLANNING

As we transition to implementation planning, we have reviewed our existing capacity and our capacity needs.

A. Information Management

The Needham Public Health Division currently utilizes three different document-sharing functionalities – a shared drive, Microsoft Teams, and OneDrive. The need is to better coordinate the use of these systems to share information more efficiently and effectively.

The Town of Needham plans to remove the shared drive in the coming years, leaving in place Microsoft Teams and OneDrive. NPHD is currently devising a staff survey to better understand how each staff member uses the current systems. This will provide the baseline data to develop a plan to organize a standardized and consistent approach to information management.

B. Workforce Development

The Needham Public Health Division participated in the 2021 – 2022 PH WINS workforce development survey. This survey provided data on NPHD staff training needs. Through this survey NPHD developed a set of goals to increase the type and amount of training each employee attends on an annual basis. These are detailed in the Workforce Development Plan. NPHD plans to participate in the PH WINS workforce survey each cycle that it is offered to track progress against these training goals.

C. Communications and Branding

The Needham Public Health Division has retained the services of MORE Advertising to develop a comprehensive brand strategy, including a logo update, brand and style guide, and standardized templates for documents and social media posts.

Improving internal communications remains an area of need and opportunity. Specific to strategic planning implementation, discussions with staff are underway to update the meeting and reporting cadence and to more broadly evaluate and improve how information is shared internally.

D. Financial Sustainability

The Needham Public Health Division is well-resourced through a combination of funds provided by the annual municipal budget, revolving funds, donations, trust funds, and grants. Approximately half of the Public Health Division's spending comes from its operating budget, with the other 50% supported by non-profit, foundation, state, and federal sources. NPHD also relies upon other types of accounts – donation accounts, revolving funds, trust funds, and financial warrant articles – to support smaller programs or very targeted activities.

Our fiscal strategy includes spending non-durable sources first, maximizing potential earnings, and limiting costs. Two specific needs moving forward are:

- Increased support from the Board of Health in pursuing new funding opportunities, especially those that can be made permanent rather than temporary
- Greater flexibility in using indirect grant funds.

SECTION 4: PERFORMANCE MANAGEMENT

The division will track progress in achieving its goals using a methodical process, a tracking tool, and quarterly in-person status review meetings.

The forthcoming Performance Management Plan will follow the fiscal year, will align CHIP and Strategic Plan timelines, and will establish:

- Individual and team priorities aligned with overall organizational priorities
- Priorities broken down by quarter
- An effective pattern of well-organized weekly, monthly, quarterly, and annual meetings to monitor progress toward achieving objectives, maintain alignment, and drive accountability
- What data sets will be reviewed and at what intervals
- Key activities by owner
- Deliverables and timelines
- Resource allocation
- The system/platform used to track progress, including:
 - Identifying the primary owner(s) or user(s) of the system
 - How data is entered into the system
 - How data will be used to guide decision-making, programming decisions, and continuous quality improvement

APPENDIX: STAKEHOLDER FOCUS GROUPS

Advocacy Groups – October 30, 2023

Hanna Burnett, Domestic Violence Action Committee (NPHD staff)
Nancy Irwin, Friends of Needham Board of Health
Sandra Robinson, Needham Community Council
Lt. Belinda Carroll, Police DVAC Co-Chair (invited)
Colleen Schaller, Council on Aging (invited)
Tatiana Swanson, Disability Commission (invited) (Town staff)

Peer Departments – October 31

Deputy Chief Chris Baker, Community Crisis Intervention Team
Chief Thomas Conroy, Fire Department
Lee Newman, Planning & Community Development
Sara Shine, Youth & Family Services
Stacey Mulroy, Parks and Recreation (invited)
Lt. John McGrath, Police Department (invited)
LaTanya Steele, Aging Services (invited)

Customers – October 31

Laurie Blake, Needham Housing Authority
Steve Volante, Volante Farms

Community Partners - November 1

Jill Carter, Beth Israel Lahey Hospital
Susannah Hann, Needham Public Schools
Emily Turnbull, Needham Police (invited)

Elected Officials – To Be Scheduled

Denise Garlick – 13th Norfolk

KEY THEMES:

Appreciated the outreach and being involved in the process

Compliments:

- Very thorough, logical, covers all the pillars of public health
- Priorities are well thought out
- Reads as inclusive doc; the priority around people and compassion, caring for each other – that value really came through
- Mission statement captures what the department is trying to do
- Really liked and understood the mission, vision, and values (esp. “prevent when possible, respond when necessary”)

Questions / Curious for more information

- How much of this is new? How much is ongoing/continuation of existing work?
- Hadn’t seen BOH/staff areas of focus divided so starkly in the past

Encouragements

- ID any gaps in awareness of public health services within the general public
- Communications are good between our divisions – keep doing this!
- ID how some of the goals overlap between departments
- Involve other departments in the goal-planning process
- Mental health cannot be emphasized enough
- Involve staff to a greater degree and make it readable/accessible to them
- Consider naming the schools as a key partner