



City of Long Beach

ONE WEST CHESTER STREET
LONG BEACH, NEW YORK 11561

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JOHN A. MIRANDO, P.E.
COMMISSIONER
DEPARTMENT OF PUBLIC WORKS

August 8, 2019

Robin Putnam
Director
Bureau of Environmental Protection
Nassau County Department of Health
200 County Seat Drive
Mineola, NY 11501

Re: Level 2 Assessment-Revised Total Coliform Rule
June 18, 2019 Positive e-coli Sample

Dear Ms. Putnam:

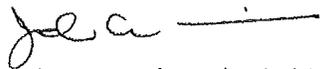
Please find attached:

- Level 2 Assessment Form
- Memorandum regarding action taken
- Photo of residential properties where testing was done.

At this time I respectfully request that Nassau County Department of Health allow the City to reduce the treatment plant effluent chlorine residual from 1.5mg/l to 1.0 mg/l.

If you have any questions and/or require any further information, please contact this office.

Sincerely yours,



John A. Mirando, P.E.

JAM/cm

cc: Lawrence Eisenstein, M.D. Commissioner, Nassau County Department of Health
William Provoncha, Nassau County Department of Health
Donald P. Irwin, Director, Division of Environmental Health
Christine Westerman, MPH, Regional Environmental Health Director
Andy Tse, MARO, Region Coordinator
Robert Agostisi, Acting City Manager
Joseph Febrizio, Dep. Commissioner, Public Works
Kevin McCarthy, Chief Plant Operator, Water Purification

Revised Total Coliform Rule Level 2 Assessment Form

Public Water System Name	Date Trigger Exceeded	Date of Assessment	Source Water Type(s)
City of Long Beach	06/21/2019	7/18/19	<input type="checkbox"/> Surface
Public Water System ID #	County	Town, Village, or City	<input checked="" type="checkbox"/> Ground
NY <u>2 9 0 2 8 3 4</u>	Nassau	Long Beach NY	<input type="checkbox"/> GWUDI
			<input type="checkbox"/> Purchase with chlorination
			<input type="checkbox"/> Purchase w/out chlorination

Section A – System Evaluation

Review and evaluate all of the elements listed (#1 - #6). Identify any potential causes of contamination and check all that apply. Each section requires a response. Describe each issue and any corrective actions taken in detail, in sections B and C.

1. GENERAL

If any answers are marked "Yes" in questions a. through h. of this section, provide comments in Section B.

Have any of the following occurred prior to collection of TC samples at related facilities within the PWS?

- | | | |
|--|---|--|
| a. Were there any recent operation and/or maintenance activities that could have introduced total coliforms? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| b. Has there been any vandalism and/ or unauthorized access to facilities? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| c. Are there any visible indicators of unsanitary conditions observed? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| d. Has there been any recent community illness suspected of being waterborne (e.g., local public health official has confirmed that an outbreak occurred.) | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| e. Did the water system receive any total coliform monitoring violations in the past 12 months? If yes, when?
(Provide comments in Section B) | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| f. Has there been any recent heavy rainfall? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| g. Has there been any recent rapid snow melt or flooding? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| h. Has there been any recent extremes in heat or cold? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| i. What was the most recent date on which satisfactory total coliform samples were taken? | Date: | |

Other comments on records and maintenance.

On June 11, 2019 all ten (10) samples were negative. On June 18, 2019 nine (9) samples were negative and one (1) sample tested positive for total coliform triggering three (3) follow up samplings. The original sample station re-sample on Grand Blvd tested negative. The downstream re-sample from the outside tap at 421 Grand tested positive for total coliform and e-coli, the upstream re-sample from the outside tap at 664 West Chester St. tested positive for total coliform bacteria.

2. SAMPLE SITE and SAMPLE PROTOCOL

If any answers are marked "Yes" for questions a. through d. provide comments in Section B.
 If any answers are marked "No" for questions e. through g. provide comments in Section B.

- a. Have there been any plumbing changes or construction after the service connection or in the premise plumbing?
 If yes, when and what was the repair or change? Yes No
- b. Have there been any plumbing breaks or failures after the service connection or in the premise plumbing?
 If yes, when? Yes No
- c. Were there any low pressure events or changes in water pressure after the service connection or in the premise plumbing? If yes, when? Yes No
- d. Are there any treatment devices after the service connection or in premise? Yes No
- e. Have the sample site plan and sample protocols been followed and reviewed? Yes No
- f. Were all of the backflow prevention devices present, operational, and maintained? Yes No
- g. Were the appropriate sampling protocols used (Flush tap, remove aerator, no swivel, fresh sample bottles, and sample storage acceptable)? Yes No
- h. What is the overall condition of the tap?
 (Provide comments) See Table Below
- i. What is the location of the tap?
 (Provide comments) See Table Below
- j. What is the regular use of the tap?
 (Provide comments) See Table Below
- k. List any identified cross connections after the service connection or in premise plumbing.
 (Provide comments) See Table Below

Other comments on records and maintenance.

Location/Question	Condition	Use of Tap	Backflow Device	Cross Connection Noted	Water Filter
421 Grand Blvd.	Normal	Outside Hose Bib	No	No	Yes
664 West Chester St.	Normal	Outside Hose Bib	No	No	Yes
Grand Sample Station	Leaking	System Sample Point	No	No	No

See Attached Map showing relative locations of sample sites.

3. DISTRIBUTION SYSTEM

If any answers are marked "Yes" for questions a, through k, provide comments in Section B.
If any answers are marked "No" for questions l, through n, provide comments in Section B.

- | | | |
|---|---|---|
| a. System pressure: Is there evidence that the system experienced low or negative pressure in the area of the positive samples? If yes, when? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| b. Pump station (if applicable): Are there any sanitary defects in the pump station? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| c. Was there any scheduled flushing of the distribution system? If yes, when? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| d. Fire hydrant/blow off: Are any of these devices located in an area with a high water table or in pits? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| e. Has there been any fires in the area?
Does the fire department use any nearby hydrants for practice?
Has routine flushing been performed recently? | Yes <input type="checkbox"/>
Yes <input type="checkbox"/>
Yes <input checked="" type="checkbox"/> | No <input checked="" type="checkbox"/>
No <input checked="" type="checkbox"/>
No <input type="checkbox"/> |
| f. Have there been any recent repairs or additions in the area of the positive samples? If yes, when, and what was the repair or addition? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| g. Have there been any recent water main breaks? If yes, when? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| h. Are there any known areas of leaks in the distribution system? If so, where? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| i. Are there sections of the distribution system with very low or no water use? (ex. vacant manufacturing areas) | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| j. Vaults: Is the vault subject to flooding? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| k. Vaults: Does the air vent terminate below grade? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| l. Vaults: Is the air vent screened? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| m. Vaults: Is the vent downturned? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| n. Are the backflow prevention devices at nearby high risk sites present, operational and maintained?
(If no, provide comments in Section B.) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| o. Last pump (booster stations) maintenance/service date. | | Date: May 2019 |

Other comments on the distribution system.

2e. Spring Flushing of the distribution system took place between the hours of 9:00 PM to 4:00 AM each night from May 1, 2019 to May 13, 2019. The Area in the vicinity of Grand Blvd was done on May 7, 2019. Hydrants are run until clear.

4. STORAGE TANK(S)

If any answers are marked "Yes" for questions a. through d. provide comments in Section B. If any answers are marked "No" for questions e. through h. provide comments in Section B.

- a. Has there been any recent facility maintenance? (i.e. painting/coating) If yes, when? Yes No
- b. Are there any unsealed openings in the storage facility such as access doors, vents or joints? Yes No
- c. Are there any observed leaks? Yes No
- d. Physical condition of the tank – Are there any observed holes in the tank that could allow contamination in? Yes No
- e. Is adequate O&M being performed per AWWA schedule? Yes No
- f. Are the overflow and vents properly screened? Yes No
- g. Is the vent properly screened and covered? Yes No
- h. Does the drain/overflow line terminate a minimum of 12" above the ground? Yes No
- i. What is the measured chlorine residual (total/free) of the water exiting the storage tank today? Residual: 1.9
- j. Does the tank have a combined inlet/outlet or are there separate inlet and outlet lines? Combined Separate

Other comments on the storage tank(s).

C.) 1 mg standpipe out of service May 22, 2019. Due to a leak. This tank is over 100 years old and will be removed in 2019/2020. New 1.25 mg storage tank to be constructed in 2020/2021. On July 6, 2019 Water Plant Operators made a visual inspection to assure the tank was empty. The Water Distribution Department will be cutting the pipe on the intake side of the valve and cap the valve before the end of August.

5. TREATMENT PROCESS

If any are marked "Yes" for questions a. through f. provide comments in Section B.

- a. Was there any recent installation or repair of treatment equipment? Yes No
- b. Were there any recent changes in the treatment process? If yes, when, and what was the change? Yes No
- c. Were there any interruptions of treatment (lapses in chemical feed, turbidity excursions, disinfection)? If yes which part, when and for how long? Yes No
- d. Did a review of the compliance turbidity readings reveal any anomalies? Yes No
- e. Were there any failures to meet the CT calculations? Yes No
- f. Were the flow rates above the rated capacity? Yes No
- g. Are treatment devices operational and maintained? (If no, provide comments in Section B.) Yes No
- h. What is the free chlorine residual measured at the point where CT is calculated? Residual: 2.0 mg/l

Other comments on the treatment process.

6. SOURCE

General

- a. Have any inactive sources recently been introduced into the system (e.g., emergency/auxiliary sources)? Yes No
(If yes, provide comments in Section B.)
- b. Have there been any new sources introduced into the system? Yes No
(If yes, provide comments in Section B.)

Well

If any questions are marked "Yes" in questions a. through c. provide comments in Section B.
If any questions are marked "No" in questions d. through f. provide comments in Section B.

- a. Are there any unprotected cross connections at the wellhead(s)? Yes No
- b. Is there evidence of standing water near the wellhead(s)? Yes No
- c. Have there been any sewage spills, chemical spills or other disturbances near the well(s)? Yes No
- d. Is the casing in good condition with no evidences of breaks? Yes No
- e. Are well caps vented? Yes No
- f. Do all wells meet the construction standards in Appendix 5-B? Yes No

Other comments on the well system.

Presently wells 17 and 16 are O.O.S New pump being installed at well 16 in August 2019.

Spring

- a. What is the condition of the area surrounding the spring box?
(Provide comments) N/A
- b. What is the condition of the spring box (Used to collect flow from spring; should be water tight vermin-proof)?
(Provide comments)
- c. Are overflow pipes screened? Yes No
(If no, provide comments in Section B.)

Other comments on the spring system.

Surface Water Supply

If any are marked "Yes" in questions a. through c. provide comments in Section B.

- a. Have there been any sewage spills, chemical spills or other disturbances near the source? Yes No
- b. Has source water turnover occurred recently? Yes No
- c. Have there been any recent algal blooms near the intake? Yes No

Other comments on the surface water supply.

Section B – Issue Description

In this section, use the space provided to describe the event and provide additional information on potential causes of contamination identified during the assessment. Include corresponding dates whenever possible. If more space is needed attach additional sheets of paper.

An "Incident Report" is attached

Check this box if there were no known causes for this contamination.

Section C – Corrective Action Taken or to be Taken

In this section, describe corrective actions (completed or proposed), and any additional measures the public water system plans to implement prior to the completion of any corrective actions, including specific dates. If more space is needed attach additional sheets of paper.

Chlorine residual at plant raised to 2.0 mg/l. Distribution system was flushed on June 21, 2019 and June 22, 2019. Follow up samples taken. See attached report.

Certification

Please fill in the information below after completing this form.

Print name John A. Miranda

Date July 18, 2019

Signature

Reserved for State (or Local Health Department) Use Only

- 1. Assessment has been successfully completed Yes No
- 2. Likely reason total coliform positives is identified Yes No
- 3. System has corrected the problem Yes No
- 4. Name of State (Local Health Department) Reviewer

Additional Notes

Directions

1. Completely fill in the public water supply information in the first section of the form, including: Public Water Supply Name, Public Water Supply ID #, Date Trigger Exceeded, Date of Assessment, County, Town, Village/City, Source Water Type(s)
2. This form must be completed based on data and documents available to the Public Water System and maintained on file for a minimum of five years.
3. Complete all sections (A – C) and check each item that applies. If no issue was identified, check the appropriate box.
4. Sign and date the form.
5. This form must be completed by the State (Local Health Department) within 30 days of a Public Water System triggering a Level 2 Assessment.
6. A completed copy of this form shall be given to the Public Water System.

TO: Nassau County Department of Health
FROM: John A. Mirando 
DATE: Revised August 7, 2019 from July 18, 2019 Original Report
RE: Level 2 Assessment – Revised Total Coliform Rule
June 18, 2019 Positive e-coli Sample

Bacteriological Sampling Schedule

Each month the City takes forty (40) microbiological samples from sampling points throughout the city, ten (10) per week. The samples are from locations and a plan approved by the Nassau County Department of Health (NCDOH). In addition, a microbiological sample is taken Quarterly from each well, monthly from the plant effluent and quarterly from the storage tanks. In the month of June when the sample taken at the Grand sample tap tested positive each well that was used in June had a microbiological sample taken. These samples are tested for total coliforms which can be indicators of fecal or e-coli. It takes 18 to 24 hours for a sample to be analyzed once received at our certified lab.

Timeline of the positive sample from Tuesday 6/18/2019

Tuesday June 18th water plant operators collected 10 samples from the distribution system and delivered these samples to Pace Analytical, a New York State Certified lab the City has engaged.

Wednesday June 19th Pace Analytical notified the Chief Plant Operator that a sample from Grand Blvd. sampling station tested positive for Total Coliforms. All other nine (9) samples taken that day were negative. Based on the positive sample NCDOH regulations requires the Operator to collect a resample from that positive location and one sample upstream and one downstream and from the three wells that were operational on the date of the positive sample, June 18th.

Thursday June 20th the three resamples and well samples were taken and delivered to the lab for analysis.

Friday June 21 at 9:30 AM the Lab Notified the City that one of the resamples from the downstream residence, 421 Grand Blvd tested positive for total coliforms and e-coli. The upstream sample from 664 West Chester Street tested positive for total coliforms but negative for e-coli. The Staff met with the City Manager at 10:30 AM and at 11:00 AM a Boil Water Notice was issued, a notice which was approved by the NCDOH prior to issuing.

Friday June 21 Operators took another 15 samples 12 throughout the distribution system and 1 from the elevated water storage tank, ground level water storage tank and finished water leaving the water treatment plant. On June 22nd the Lab reported that the results of those samples were negative.

Saturday June 22 Operators took another 15 samples 12 throughout the distribution system and 1 from the elevated water storage tank, ground level water storage tank and finished water leaving the water treatment plant. On June 23rd the Lab reported the results of those samples, all were negative.

On Sunday June 23rd Operators took another 15 samples 12 throughout the distribution system and 1 from the elevated water storage tank, ground level water storage tank and the finished water leaving the water treatment plant. On June 24 the results of those were negative.

In addition to the City sampling on Friday June 21st the NCDOH took 5 distribution samples. One of those samples taken from the LIRR Station Bathroom tested positive for total coliforms.

On Saturday June 22nd the NCDOH took 7 more distribution samples including a resample at the LIRR Station Bathroom which all tested negative.

Based on the results of two consecutive rounds of samples (38 samples) collected on June 22nd and June 23rd, which all tested negative for total coliforms including e-coli the boil water order was lifted by the NYSDOH and NCDOH on Monday morning June 24th.

Other Actions Taken:

At the direction of the NCDOH the chlorine residual leaving the Park Place Water Plant was raised to 2 ppm in order to maintain a 1.5 ppm chlorine residual in the distribution system. This will remain in effect until the next 4 weekly rounds of routine sampling take place.

The distribution system was flushed on Friday June 21 and Saturday June 22 to assure a good chlorine residual throughout the system

On June 25th, July 2nd, July 9th and July 16th, ten (10) distribution samples were taken and the results of all 40 samples were negative.

My evaluation of the issue

I would offer the following evaluation of the incident and the actions taken by the City:

- It is not unusual for a water system to experience a positive microbiological sample with the cause often undetermined. There are many reasons a sample could have tested positive:
 - Sample tap was contaminated
 - Sample bottle was compromised
 - Contamination within the building which the sample was taken
 - A cross connection in the building
- There was only one sample that tested positive for e-coli which indicates this was not a system wide issue as all other samples that day, June 18th were negative for total coliforms
- The residence where the only sample tested positive for e-coli had a water filter
- Negative samples from the wells and treatment plant indicate that this was not from the supply source or caused by the operation of the treatment plant
- The City followed all the NCDOH regulations and procedures required to safe guard the public in a timely manner

- Increasing the supply chlorine residual to 2 mg/l and flushing the system towards the location of the positive sample was appropriate to safeguard public health

Follow ups:

On June 24th The Chief and Asst. Chief Plant Operators met with a team of Engineers from the NYS and NC Departments of Health. They reviewed our procedures, reviewed our tanks, wells, treatment plant and sampling stations. The City has not yet received that report. The only verbal recommendation we received was to convert our sampling stations from copper to stainless steel and raise them 48 inches. The Chief Plant Operator is presently working on those plans.

The Chief Plant Operator and I have prepared the Level 2 Assessment along with this memorandum which we are submitting to the NCDOH as an attachment.

Google Maps 664 West Chester Street, Long Beach, NY to 421 Grand Blvd, Long Beach, NY 11561

Walk 262 ft, 1 min



Imagery ©2019 Google, Map data ©2019 20 ft

SAMPLE STATION - GRASS BLVD



