



**Environmental  
Protection**

Emily Lloyd  
Commissioner

James J. Roberts, P.E.  
Deputy Commissioner  
Bureau of Water &  
Sewer Operations

59-17 Junction Boulevard  
Flushing, NY 11373

3.1

**Memorandum**

To: Frank McCarton  
Deputy Commissioner  
Office of Emergency Management

From: James J. Roberts, P. E. [REDACTED]  
Deputy Commissioner [REDACTED]  
Bureau of Water & Sewer Operations [REDACTED]

Date: April 4, 2014

Subject: **In Response to Overview – Leak Detection**

**Overview - Leak Detection**

The Department of Environmental Protection's (DEP) Bureau of Water and Sewer Operations (BWSO) maintains several divisions within the bureau. Each division operates both independently and together in efforts to detect and repair water leaks and maintain the water and sewer systems. The following is a brief description of BWSO's Leak Detection Activity.

**Description:**

BWSO's Leak Detection activities include the use of sophisticated electronic leak detection equipment to perform these two important functions:

- Complaint work: crews pinpoint reported/known leaks in an effort to avoid costly exploratory excavations and prolonged leak investigations.
- Programmatic: crews perform programmatic leak surveys and this effort results in a pro-active approach towards the discovery of unreported water leaks through survey of the city's water system according to the schedule outlined below. The resolution of these unreported leaks results in a reduction of water escaping the distribution system.

Although both functions deploy similar leak detection methods, the programmatic activity is specific to locating leaks that do not express themselves at the surface.

**Leak Detection Activity:**

Leak Detection plays a vital role by surveying the entire distribution system programmatically and identifying unreported leaks. Crews are

scheduled and deployed throughout the city utilizing state of the art electronic acoustic leak detection equipment.

The equipment is temporarily affixed to accessible access points (Hydrants, Valves etc.) throughout the water distribution system. The listening devices detect the acoustical sound characteristic of water escaping the pipe. Once a noise indication is received, the area of survey is targeted for a reinvestigation utilizing more sensitive equipment and other investigating techniques.

This second, more intensive investigation results in a specific pin-point location where repair crews will excavate to uncover the leak, identify the pipe defect and perform the prescribed method of repair.

Survey Schedule:

The survey schedule is planned based on drainage areas of waste water treatment plants. The drainage area for three (3) or our larger treatment plants; Wards Island, Newtown Creek and North River are surveyed every nine (9) months; while the following plants, Coney Is. and Bowery Bay are surveyed every twelve (12) months. The remaining nine (9) plants are surveyed once every thirty six (36) months.

NEW YORK CITY ENVIRONMENTAL PROTECTION  
BUREAU OF WATER OPERATIONS

**SURVEY**

BOROUGH: \_\_\_\_\_ MAP: M 59, 63 LIMITS: \_\_\_\_\_

MOD # 3

WORK ORDER: 842388968 DATE: 1-10-12

C.B.# 111 DRAINAGE MODULAR: WF #3 FOOTAGE: 65,000

CREW / VEHICLE: Rosario / Allison / Nickelson ARRIVE: \_\_\_\_\_

DEPART: \_\_\_\_\_

DIST. SUPV. NOTES: LIST VISIBLE LEAKS AND DB RATINGS - RECORD SURVEY LIMITS

REPORT DIRECTLY TO ASSIGNED LOCATION

P.P.E. CHECK (HELMET/GOGGLES/EYE & EAR PROTECTION, ETC.) !!!

D.B.'S:

1) W/S/O 5 Ave 500<sup>th</sup> S/O E 115<sup>th</sup> (BY CURB FFD 1390 5 Ave)

2) N/S/O W 121 W/O Mount Morris Park West

LEAKS:

NONE

LIMITS: MAP 59 - 110<sup>th</sup> to E 118<sup>th</sup> From Lexington to Lenox Ave (complete) mod 3  
MAP 63 - 119 to 124<sup>th</sup> From Lenox Ave to 5 Ave (mod 3 in complete)

D. NOTIFICATION / HYDRANT: DATE: \_\_\_\_\_ SHUT OFF AT: \_\_\_\_\_ BY: \_\_\_\_\_ F.D.# \_\_\_\_\_

BACK ON AT: \_\_\_\_\_ BY: \_\_\_\_\_ F.D.# \_\_\_\_\_

**NEW YORK CITY ENVIRONMENTAL PROTECTION  
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# SURVEY

BOROUGH: \_\_\_\_\_ MAP: 995230 LIMITS: \_\_\_\_\_

WF # 3 on
Both Maps

WORK ORDER: 842532870 DATE: 8/29/12

C.B.# \_\_\_\_\_ DRAINAGE MODULAR: WF # 3 FOOTAGE: 40,800

CREW / VEHICLE: Piccinini, Santonasto, Allison #80 ARRIVE: 8:00

DEPART: 1:00

**DIST. SUPV. NOTES:** LIST VISIBLE LEAKS AND DB RATINGS - RECORD SURVEY LIMITS

REPORT DIRECTLY TO ASSIGNED LOCATION

P.P.E. CHECK (HELMET/GOGGLES/EYE & EAR PROTECTION, ETC.) !!!

**D.B.'S:**

S/W CORNER E 116<sup>th</sup> SIDEWALK & 5 Ave

**LEAKS:**

LIMITS: 110 ST TO 121 ST B/R PARK AVE TO ADAM CROWE BLVD

F.D. NOTIFICATION / HYDRANT: DATE: \_\_\_\_\_ SHUT OFF AT: \_\_\_\_\_ BY: \_\_\_\_\_ F.D.# \_\_\_\_\_

BACK ON AT: \_\_\_\_\_ BY: \_\_\_\_\_ F.D.# \_\_\_\_\_

**NEW YORK CITY ENVIRONMENTAL PROTECTION  
BUREAU OF WATER OPERATIONS**

## SURVEY

BOROUGH: Manhattan MAP: 000230 LIMITS: ALL of maps

WORK ORDER: 842536764 DATE: 9/5/12

C.B.# 111 DRAINAGE MODULAR: W# 3,4 FOOTAGE: 28,775  
20,000

CREW / VEHICLE: PanDo, Allison, H. D. M. G. ARRIVE: 9-

DEPART: 2-

DIST. SUPV. NOTES: LIST VISIBLE LEAKS AND DB RATINGS - RECORD SURVEY LIMITS

REPORT DIRECTLY TO ASSIGNED LOCATION

P.P.R. CHECK (HELMET/GOOGLES/EYE & EAR PROTECTION, ETC.) !!!

D.B.'S:

- N/A/C E. 128 & Lape. - N/A/C E. 128 & Park
- N/A/C E. 115 & Park Ave

LEAKS:

N/A

LIMITS: E. 128 - E. 115 6/4 F.D.R. DR. - Madison

Completed

D. NOTIFICATION / HYDRANT: DATE: \_\_\_\_\_ SHUT OFF AT: \_\_\_\_\_ BY: \_\_\_\_\_ F.D.# \_\_\_\_\_

BACK ON AT: \_\_\_\_\_ BY: \_\_\_\_\_ F.D.# \_\_\_\_\_



**NEW YORK CITY ENVIRONMENTAL PROTECTION  
BUREAU OF WATER OPERATIONS**

## SURVEY

BOROUGH: \_\_\_\_\_ MAP: 995230 997230 LIMITS: mod # 3 on  
maps

WORK ORDER: 842654625 DATE: 2-21-13

C.B.# \_\_\_\_\_ DRAINAGE MODULAR: W 5 # 3 FOOTAGE: 6500

CREW / VEHICLE: Perez, Browne, Castillo ARRIVE: 0<sup>00</sup>  
 DEPART: 6<sup>00</sup>

DIST. SUPV. NOTES: LIST VISIBLE LEAKS AND DB RATINGS - RECORD SURVEY LIMITS

REPORT DIRECTLY TO ASSIGNED LOCATION

P.P.E. CHECK (HELMET/GOGGLES/EYE & EAR PROTECTION, ETC.) !!!

D.B.'S:

*N/A*

LEAKS:

*N/A*

*W 120 St to W 112 St 8/17 7 AM to Madison Ave  
Lenox to 7 AM 8/17 W 118 St to CPN*

LIMITS: Park Ave, E 119, E 113, Madison Ave, E 121, E 112, 5 Ave, W 120, W 111, Central  
Lenox, W 121, Central Park N, Adam Clark Powell, W 119, Central Park N

F.D. NOTIFICATION / HYDRANT: DATE: \_\_\_\_\_ SHUT OFF AT: \_\_\_\_\_ BY: \_\_\_\_\_ F.D.# \_\_\_\_\_

BACK ON AT: \_\_\_\_\_ BY: \_\_\_\_\_ F.D.# \_\_\_\_\_

NEW YORK CITY ENVIRONMENTAL PROTECTION  
BUREAU OF WATER OPERATIONS

# SURVEY

BOROUGH: Manhattan

MAP: 000230

LIMITS:

m.0 # 3

WORK ORDER: 842686946

DATE: 4-17-13

C.B.# 111

DRAINAGE MODULAR: WS#3

FOOTAGE: 50,000

CREW / VEHICLE: Percy brown, Benjamin

ARRIVE: 12<sup>20</sup>

DEPART: 5<sup>40</sup>

DIST. SUPV. NOTES: LIST VISIBLE LEAKS AND DB RATINGS - RECORD SURVEY LIMITS

REPORT DIRECTLY TO ASSIGNED LOCATION

P.P.E. CHECK (HELMET/GOGGLES/EYE & EAR PROTECTION, ETC.) !!!

D.B.'S:

N/A

LEAKS:

N/A

E125 ST to E116 ST b/r Madison Ave to 2 Ave

LIMITS: 1 Ave, E118, E120, 2 Ave, E117, E126, 3 Ave, E115, E126, Lexington  
E115, E126, Park Ave, E115, E126, Madison, E118, E124

F.D. NOTIFICATION / HYDRANT: DATE:

SHUT OFF AT:

BY:

F.D.#

BACK ON AT:

BY:

F.D.#

NEW YORK CITY ENVIRONMENTAL PROTECTION  
BUREAU OF WATER OPERATIONS

## SURVEY

BOROUGH: MAN. MAP: 997230 LIMITS:

# 3 on map

WORK ORDER:

842851721

DATE:

3/5/14

C.B.#

11

DRAINAGE MODULAR:

WS # 3

FOOTAGE:

52,000

CREW / VEHICLE:

Roeue / Santonas / Acosta

ARRIVE:

12:15

DEPART:

6:00

DIST. SUPV. NOTES:

LIST VISIBLE LEAKS AND DB RATINGS - RECORD SURVEY LIMITS

REPORT DIRECTLY TO ASSIGNED LOCATION

P.P.E. CHECK (HELMET/GOGGLES/EYE &amp; EAR PROTECTION, ETC.) !!!

D.B.'S:

None

LEAKS:

none

LIMITS:

St. Nicholas Ave - Park Ave ; W. 121<sup>st</sup> - W. 111<sup>st</sup>

F.D. NOTIFICATION / HYDRANT: DATE:

SHUT OFF AT:

BY:

F.D.#

BACK ON AT:

BY:

F.D.#



**Memorandum**

**Emily Lloyd**  
*Commissioner*

**James J. Roberts, P.E.**  
*Deputy Commissioner*  
Bureau of Water &  
Sewer Operations  
[Redacted]

59-17 Junction Boulevard  
Flushing, NY 11373

To: Frank McCarton  
Deputy Commissioner  
Office of Emergency Management

From: James J. Roberts, P.E. [Redacted]  
Deputy Commissioner [Redacted]  
Bureau of Water and Sewer Operations  
[Redacted]

Date: March 28, 2014

Subject: Leak Detection Equipment Manufacturer

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Please be advised that the attached email reflects a conversation between a Department of Environmental Protection (DEP) manager and representatives of the leak detection equipment manufacturer, specifically speaking to the question of equipment calibration. As per the manufacturer's representative, no routine calibration is required.

Carrieri, Donna

**From:** Doug Sangermano <[REDACTED]>  
**Sent:** Friday, March 21, 2014 2:16 PM  
**To:** Nelson, Rick  
**Subject:** FCS

Rick,

In regards to our phone conversation today:

There is no manufacture's recommended calibration for ANY of our equipment.

**Survey Tools:**

With the S20 and S30, you will either get sound or you will not. If after changing the batteries, there is still no sound present, the unit would need to be sent in to us for repair. A "tickle test" can also be performed to see if the transducer is working properly. If not, the unit would need to be sent in for repair.

**Correlators:**

With the AC Digital, Tricorr Touch and Accucorr, the units will self-check the sensors and battery levels.

If the unit does not turn on, it will need to be sent it for repair. If the correlator shows a defective transducer, the transducer will need to be repaired or replaced.

If after re-setting the correlator, it still does not function properly, the unit would need to be sent in for repair.

And once again, there is nothing that needs to be "calibrated" with any of our equipment.

Doug Sangermano  
Customer Support Manager  
Fluid Conservation Systems Inc.  
502 Technecenter Drive, Suite B  
Milford, Oh 45150  
Cell: [REDACTED]  
Office: [REDACTED]  
Fax: [REDACTED]  
E-Mail: [REDACTED]

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