

**New Jersey Department of Environmental Protection
Division of Water Supply & Geoscience**

Water Main Break Guidance Manual

March 2021

Commonly Used Abbreviations and Acronyms

AWWA	American Water Works Association
AWWA C651-14	AWWA Standard for Disinfecting Water Mains
BWA	Boil Water Advisory
BWSE	Bureau of Water System Engineering
NJDEP	Division of Water Supply and Geoscience of the New Jersey Department of Environmental Protection
ANSI/NSF 61	American National Standards Institute/National Sanitary Foundation International Standard 61, Drinking Water System Components
Order	Boil Water Notification Order
SDWA	Safe Drinking Water Act
USEPA	United States Environmental Protection Agency
WMB	Water Main Break

Useful links and References:

- **Division of Water Supply & Geoscience**
All reporting forms referenced in this document are available here:
 - <http://www.nj.gov/dep/watersupply/>
 - <http://www.nj.gov/dep/watersupply/emergency.html>
- **The Federal Safe Drinking Water Act Public Notification Rule**
 - **Basic Information:**
<http://water.epa.gov/lawsregs/rulesregs/sdwa/publicnotification/basicinformation.cfm>
 - **Full text:**
<http://www.ecfr.gov/cgi-bin/text-idx?SID=61efabed989a75a4041d1c024729f1dc&mc=true&node=sp40.23.141.q&rgn=div6>
 - **Handbook:**
<http://water.epa.gov/lawsregs/rulesregs/sdwa/publicnotification/upload/PNrevisedPNHandbookMarch2010.pdf>
- **The American Water Works Association**
 - <http://www.awwa.org/>
 - To purchase a copy of AWWA C651-14:
<http://www.awwa.org/store/productdetail.aspx?productId=45320336>
- **Drinking Water Advisory Communication Toolbox**
<http://www.cdc.gov/healthywater/emergency/drinkingwateradvisory.html>

Please direct questions concerning this document to:
NJDEP, Division of Water Supply & Geoscience
Mail Code 401-04Q
P.O. Box 420
Trenton NJ, 08625-0420
(609) 292-2957
wsemergency@dep.nj.gov

Table of Contents

INTRODUCTION	4
SECTION I: General Requirements and Types of Water Main Breaks	6
1. Notifying NJDEP.....	6
2. Types of Water Main Breaks.....	6
a. Uncontrolled Outage.....	6
b. Controlled Outage.....	8
c. Low Pressure Event:	9
3. Exceptions to Non-Reportable Incidents.....	9
SECTION II: Issuing a Boil Water Advisory	11
SECTION III: Disinfection Procedures	13
SECTION IV: Water Quality Testing.....	14
SECTION V: Lifting a Boil Water Advisory	16
APPENDIX A: Guidelines for a Water Main Break Action Plan & Water Main Break Log.....	17
APPENDIX B: County Health Agency Contacts	18
Quick Reference Resource: Uncontrolled Outage.....	20
Quick Reference Resource: Controlled Outage.....	22
Quick Reference Resource: Low Pressure Event	23

INTRODUCTION

Recognizing that water distribution system pipe breaks, or Water Main Breaks (WMB), are common emergencies encountered by water systems, the Division of Water Supply and Geoscience of the New Jersey Department of Environmental Protection (NJDEP) has developed this guidance document to:

- generally define types of WMBs;
- clarify when notification to the NJDEP is required;
- clarify when a Boil Water Advisory (BWA) should be issued for a WMB;
- explain the regulatory expectations regarding a sanitary repair;
- define sampling procedures that are acceptable to the NJDEP to assure potable drinking water quality following completion of the sanitary repair; and
- assist in determining when to lift a BWA.

During a WMB, it is of foremost importance to minimize the disruption of water supply in order to protect public health by maintaining a water supply sufficient for potable use and fire-fighting. In this regard, water distribution mains should be equipped with a sufficient number of valves to minimize service interruption during repairs. In addition, valves should be periodically exercised to ensure operability. Note that if temporary water service is provided during the water main repair through the use of overland lines (hydrant-to-hydrant connections), the hose utilized must meet the following requirements: 1) be dedicated for potable-use only, 2) be ANSI/NSF 61 compliant as per N.J.A.C. 7:10-8.2, and 3) must be properly disinfected and flushed prior to use. Failure to ensure these requirements will necessitate the issuance of a BWA or “Do Not Drink”.

Water outages, as well as low water pressure, interfere with typical potable water uses (e.g. drinking, cooking, food preparation), and maintenance of sanitary conditions (e.g. bathing, hand washing, toilet flushing) within the home or business. In addition, the loss of positive pressure within a potable water pipe may allow disease-causing microorganisms from surrounding soil or groundwater to be drawn into the pipe, and thus into contact with the potable water due to pressure differences. Lastly, during the process of repair, contamination of potable water may occur if the interior surface of the pipe has come into direct contact with groundwater or soil.

To address these sanitary concerns, the New Jersey Safe Drinking Water Act (SDWA) regulations at N.J.A.C. 7:10-11.6(d) require that upon the completion of construction (including repairs) all surfaces that come in contact with potable water shall be disinfected in accordance with the American Water Works Association Standard for Disinfecting Water Mains – AWWA C651-14, as amended and supplemented.

While WMBs are unplanned, the NJDEP does not consider all WMBs to be reportable incidents. Section I of this guidance document provides clarification of which events trigger reporting requirements, consistent with the New Jersey SDWA regulations (N.J.A.C. 7:10-2.4(b)). Should a BWA be needed for a WMB, Section II describes how to issue the BWA to comply with State and Federal requirements. Section III describes disinfection procedures, Section IV describes water quality testing requirements, and Section V describes requirements for lifting the BWA.

To appropriately address WMBs, each community water system is encouraged to develop a Water Main Break Action Plan, so that affected parties know their roles and responsibilities during an incident. In addition, a licensed operator of a community water system shall maintain a “[Water Main Break Log](#)” which provides incident details such as the occurrence date of WMB, remedial actions taken, and water quality results; this log should also include those WMB incidents that do not result in boil water advisories. Refer to Appendix A for guidelines regarding the contents of a Water Main Break Action Plan and Water Main Break Log.

This document generally applies to community water systems as the vast majority of non-community water systems do not have distribution systems for the delivery of drinking water and would not experience the types of incidents described herein. However, the guidance and materials presented may be used by non-community water systems as appropriate.

Any uncertainty regarding these guidelines and the applicability to a specific incident should be reviewed with staff from the Bureau of Safe Drinking Water (BSDW), Water System Assistance Section in a timely manner (within six (6) hours of occurrence) by contacting (609) 292-5550. Outside of normal business hours, you should contact the NJDEP Hotline (1-877-WARNDEP / 1-877-927-6337) to report your incident and request immediate consultation as well as email wsemergency@dep.nj.gov.

Please note that the requirements presented in this guidance document apply only to Water Main Breaks. For other emergency situations that may require notification, sampling and/or issuance of a Boil Water Advisory, consultation with the NJDEP is required.

SECTION I

General Requirements and Types of Water Main Breaks

This guidance document recognizes three (3) distinct types of WMBs: Uncontrolled Outage, Controlled Outage, and Low Pressure Event. This section addresses the expectations involving notification requirements to the NJDEP, applicability of issuing a BWA or Water Main Break Advisory, sanitary repair procedures, water quality sampling, and return to service procedures (normal operating conditions). Finally, this section outlines the exceptions to the general requirements.

The NJDEP recognizes that there is standardized industry nomenclature for describing WMBs (Type 1, Type 2, etc.) However, to avoid confusion, the NJDEP expects water systems to report, when applicable, and maintain logs of incidents by providing a description of the service impact resulting from the main break, such as Uncontrolled Outage, Controlled Outage, or Low Pressure Event. These scenarios and corresponding expectations are detailed below.

Quick Reference Resources that outline the following steps for each WMB type are located at the end of this document. They are designed as “rip & run” sheets for your convenience.

1. Notifying NJDEP

If notification is required for a WMB, pursuant to the following guidelines as outlined in “2. Types of Water Main Breaks” below, water systems shall contact NJDEP:

- Within 6 hours of the occurrence of the incident:
 - *During Business Hours* by contacting the:
 - NJDEP Hotline at 1-877-WARN DEP (1-877-927-6337)
 - BSDW at (609) 292-5550
 - *Outside of Normal Business Hours* by contacting the:
 - NJDEP Hotline at -877-WARN DEP (1-877-927-6337) requesting consultation with a NJDEP Enforcement Duty Officer.
 - Email wsemergency@dep.nj.gov
- Note that subsequent reports and updates should be directed during business hours to BSDW at (609) 292-5550. After hours, updates may be emailed to wsemergency@dep.nj.gov, or as otherwise directed.
- Please contact your local/county health department for their reporting requirements (See Appendix B for contact information).

2. Types of Water Main Breaks

a. Uncontrolled Outage

An uncontrolled water outage from a WMB is the loss of positive water pressure in the entire drinking water distribution system, or portions of the service area, at street level before implementation of corrective action, and/or the loss of positive pressure which results in intermittent water service, regardless of the size of the water main and number of service connections affected.

General requirements:

- **Notification:** The water system is required to notify the NJDEP as described in “1. Notifying NJDEP” above.
- **Reporting:** A detailed incident report must be prepared using the [Water Supply Emergency Incident Report](#) and submitted via email to wsemergency@dep.nj.gov or as directed. This report should be submitted after all repairs are completed and service has returned to normal, unless more frequent reports are requested. A copy of the water quality sample results is to be included with the report. This should also be provided to County and/or local health departments (See Appendix B for contact information).

Interim status reports, via email or phone call, should address updates on repairs/extent of service interruption, completion of appropriate remedial measures, and the lifting of a BWA.

- **Boil Water Advisory:** The water system is required to issue a [BWA](#) to the impacted population (refer to Section II), as soon as possible based on the severity of the incident but in no case later than 24 hours after learning of the incident in accordance with the delivery requirements specified for a Tier 1 public notice (40 CFR 141.201 et seq.) Refer to the Useful Links at the beginning of this document for more information.

In addition, per [Chapter 279](#), the water system must notify the mayor and municipal clerk of each affected municipality no later than one hour after the system becomes aware of the emergency. This notification must be given by both telephone and electronic mail.

Copies of the *Boil Water Advisory* and the required [Tier 1 Public Notification Certification Form](#) must be submitted to the NJDEP within ten (10) calendar days of issuing the BWA via the NJDEP’s dedicated water supply emergency email at wsemergency@dep.nj.gov unless otherwise specified.

- **Disinfection:** Following the repairs to the water main(s), chlorination and de-chlorination procedures must be followed in accordance with AWWA-C651-14. (See Section III)
- **Water Quality Testing:** Water quality testing (total coliform & chlorine residual) is necessary to verify the effectiveness of the sanitary repair, and to lift the BWA; the number of samples required depends on the extent of the water outage and is based on the population affected. Water quality testing and results are discussed in Section IV.

Following the receipt of satisfactory results, the water system is required to notify the mayor, municipal clerk, or an authorized designee of each of the affected municipalities ([Boil Water Advisory Lift Notice](#)). This notice should be provided by both telephone and electronic mail. A BWA can be lifted by the affected water system by following procedures addressed in Section V of this document. Copies of

water test results should be submitted with the final emergency incident report.

b. Controlled Outage

A controlled water outage from a WMB is the partial loss of water pressure (positive pressure is maintained) within the system or portions of the system, that requires a section of water main to be isolated and wholly or partially dewatered to facilitate the repair. The water outage in this scenario is due to implementation of corrective actions and not directly caused by the WMB.

General requirements:

- **Notification:** The water system is not required to notify the NJDEP provided sanitary repairs are performed in accordance with AWWA Standard C651-14 as noted in “Disinfection” below. However, if the water system opts to issue a *precautionary* Boil Water Advisory as described immediately below, NJDEP must be notified (See “1. Notifying NJDEP” above) and a [Water Supply Emergency Incident Report](#) must be submitted with copies of water quality sample results. Please note “3. Exceptions to Non-Reportable Incidents” below for instances that may require courtesy notification.

It is recommended that the water system consult with their local and/or county health department concerning reporting requirements they may have.

- **Boil Water Advisory:**
 - NO BWA Required: A water system following AWWA Standard C651-14, for this scenario is not required to issue a BWA but is expected to notify customers affected by the repair to keep them informed and provide guidance regarding appropriate measures to take upon restoration of water service ([Water Main Break/Water Service Restored](#)).
 - Precautionary BWA: Although the issuance of a BWA is not required for a Controlled Outage, a water system may elect to issue a precautionary BWA due to site-specific sanitary concerns or other issues. If issued the water system must notify NJDEP (See “1. Notifying NJDEP”) and submit a Water Supply Emergency Incident Report.
 - BWA Required: A BWA is required if temporary water service is provided during the water main repair through the use of overland lines (hydrant-to-hydrant connections) via a hose that is not properly disinfected and flushed prior to use. A Do Not Drink Advisory is required when the overland lines used are not dedicated for potable-use only and/or are not ANSI/NSF 61 compliant. In addition, due to concerns of water quality, the issuance of a BWA may be necessary if temporary water service is provided from an unapproved water source and/or water tanker. (See Section II)
- **Disinfection:** Following the repairs to the affected water main(s), chlorination and de-chlorination procedures must be followed in accordance with AWWA-C651-14. (See Section III)

- **Water Quality Testing:** Water quality testing (total coliform & chlorine residual) is necessary to verify the effectiveness of the sanitary repair; the number of samples required depends on the extent of the water outage and is based on the population affected. Water quality testing and results are discussed in detail in Section IV.

c. Low Pressure Event:

A Low Pressure Event is an incident during which positive pressure is maintained in the water main during repair through the use of full circle clamps, sleeves, etc. As long as the water main is pressurized and water is observed to flow continuously from the rupture, it is unlikely that the water main has become contaminated.

For Low Pressure Events, notification is not required (to NJDEP or to customers), a BWA is not required, and water quality testing is not required. Please note “3. Exceptions to Non-Reportable Incidents” below for instances that may require courtesy notification.

3. Exceptions to Non-Reportable Incidents:

Although WMBs may result in a “Controlled Outage” or “Low-Pressure Event,” which do not typically require notification to the NJDEP, the incident may warrant NJDEP awareness due to other significant infrastructure impacts.

Notification: Water systems are encouraged to notify NJDEP at wsemergency@dep.nj.gov, **not the NJDEP Hotline**, if any of the following impacts are observed as a result of the WMB, or repairs:

- The closure of one or more lanes of a major roadway (U.S. Route, Interstate Highway, State Highway, Major Toll Road, or 500 Series County Roadway) coupled with a significant impact to traffic flow (such as adversely affecting “rush hour” commutes) and/or requiring traffic to be rerouted or detoured around the area due to flowing water or repair mobilization efforts. Maps indicating applicable major roadways are available at the following links:
 - Interstate Highways, U.S. Routes, State Highways and Toll Roads in New Jersey: <http://www.nj.gov/transportation/gis/maps/hwysyst.pdf>
 - 500 Series County Routes in New Jersey, also called state secondary routes (to the state highway system): <http://www.nj.gov/transportation/gis/map.shtm#countymaps>
- Repair operations that will cause water service or operation disruptions lasting *more than 2 hours* for any of the following facilities:
 - Large Commercial Facilities (e.g. Shopping Malls, Hotels, Convention Centers, etc.)
 - Large Public Health Care or Educational Institutions (e.g. Hospitals, Colleges, Universities)
 - Large Recreational or Entertainment Facilities (e.g. Sports Venues, Casinos)
 - Correctional Facilities

NJDEP may initiate inquiries, on a case-by-case basis, to determine the impact and recovery status for WMBs having the significant infrastructure impacts as described above.

SECTION II

Issuing a Boil Water Advisory

A [Boil Water Advisory](#) is a timely public notification issued by a water system which advises customers to boil drinking water before use due to an incident that has a significant potential to cause serious adverse health effects. Boiling kills disease-causing microorganisms that may cause diarrhea, nausea and/or stomach cramps and is the surest method to ensure water is microbiologically safe to drink.

A BWA is required when there is a failure or significant interruption in the treatment or delivery of potable water. Other types of water use advisories, such as Do Not Drink, and Do Not Use, may be appropriate for main breaks or other infrastructure impacts that compromise (or have the potential to compromise) water service or water quality. The USEPA, in cooperation with other organizations have prepared the "[Drinking Water Advisory Communication Toolbox](#)" for water systems. The Toolbox addresses a range of scenarios that result in drinking water advisories, and provides information regarding the planning, development, implementation and evaluation of drinking water advisories.

The water system and/or health departments have the authority and responsibility to issue a BWA based on the severity of the incident and to ensure timely notification to affected customers and may use their discretion to do so. However, the water system is required to notify the NJDEP of incidents affecting water quality and the issuance of the BWA. Subsequent lifting of the BWA only requires NJDEP approval *if the water system is subject to a NJDEP issued Boil Water Notification Order (Order)*. Additional information regarding Orders may be found below.

Community water systems are required to follow the Federal SDWA regulations (40 CFR 141.201 et seq.) for a Tier 1 public notification and issue a BWA in a timely (within 1 hour) and effective (explained below) manner based on the severity of the incident. In addition, per [Chapter 279](#), the water system must notify the mayor and municipal clerk of each affected municipality no later than one hour after the system becomes aware of the emergency. This notification must be given by both telephone and electronic mail.

The affected community water system is responsible for the delivery of the BWA to customers by employing the most effective means to expeditiously reach its customers. Effective methods include: telephone notification systems, such as reverse 911, TV/radio broadcasts, door-to-door hand delivery of written notices, mobile broadcasts (sound truck), etc. Notices should be multi-lingual as appropriate.

Water systems, as part of emergency response planning, are tasked with identifying their sensitive/critical customers (i.e. hospitals, nursing homes, assisted living facilities, dialysis centers, surgical centers, schools, colleges, daycare facilities, etc.) and are encouraged to communicate with these affected users *within an hour* of a water system's awareness of any incident that may lessen the quality or pressure of delivered water. However, *in no case should notification exceed the 24 hours* prescribed by Tier 1 public notice requirements.

Water systems as part of their initial notification procedures should also provide notification of

the emergency incident to county health departments (Refer to Appendix B for county health agency contacts).

In addition, the water system should provide direct notification to other affected local/county officials, such as police, fire, public works, offices of emergency management, and school districts as applicable, *as soon as practical, but at least within six-hours* of a water system's awareness of the incident. Water systems should also contact any consecutive systems or bulk purchasers that may be impacted.

Water systems as part of their initial notification procedures should also provide notification of the emergency incident to local and county health departments (Refer to Appendix B for county health agency contacts).

NJDEP – Boil Water Notification Order

In the unusual circumstance that a water system is recalcitrant, unresponsive, or demonstrates a lack of technical ability to implement appropriate corrective actions, NJDEP may issue a Boil Water Notification Order (Order) to the affected community water system. The Order requires the issuance of a BWA and the implementation of appropriate corrective actions utilizing the system's resources or the resources of a contracted third party.

Examples of a lack of technical ability to implement corrective actions include the use of an improperly sanitized water tanker, the use of non- ANSI/NSF compliant overland lines, or the use of overland lines that are not dedicated for potable water service to provide temporary water service. An Order may also be issued as a result of unsatisfactory results from water quality sampling (*E.coli* positive), which may indicate that the sanitary repair procedures were ineffective and microbiological contamination exists. **In any scenario that a BWA is issued as a result of an Order, the NJDEP's approval is required to lift the BWA.**

SECTION III

Disinfection Procedures

Any water main shut down and depressurized during repair may allow contamination to enter the potable water distribution system by cross-connection contamination, groundwater seepage, animals, dirt, etc. Appropriate procedures for the sanitary repair, disinfection and flushing of the water main must be followed in accordance with the American Water Works Association Standard for Disinfecting Water Mains – AWWA C651-14, as amended and supplemented.

The New Jersey SDWA regulations at N.J.A.C. 7:10-11.6(d) require that all surfaces that come in contact with potable water be disinfected in accordance with AWWA C651-14, as amended and supplemented, upon the completion of construction (including repairs). The rules also require that in any instance where the repair of the water main has to be isolated and wholly or partially dewatered to repair it, the water main must be disinfected before being placed back into service.

Water main leaks or breaks repaired in-service with clamping devices (or other devices), while the water main remains pressurized, present little danger of contamination and do not require disinfection.

De-chlorination of highly chlorinated waters is required prior to the discharge to either sanitary or storm sewers or any surface or groundwater.

SECTION IV

Water Quality Testing

Water quality testing is an essential component of the sanitary repair and must be performed to ensure the effectiveness of the disinfection procedures. In general, sampling should be performed at consumer taps to determine the effectiveness of the sanitary repair and the quality of delivered water.

When there is a loss of positive pressure due to an uncontrolled outage or the implementation of corrective action to repair a controlled outage, the minimum number of samples to be collected and analyzed for total coliform and chlorine residual is based on population affected by the WMB. The number of samples is specified in the chart below:

Population affected by the WMB	Minimum # of Samples
25-1000	3
1001-2000	4
2001-3000	5
3001-4000	6
4001-7000	7
7001-10,000	8
10,001-50,000	9
50,001-130,000	10
> 130,000	As directed by NJDEP (Contact BSDW at 609-292-5550)

For WMBs that affect less than 25 persons, at least one sample should be collected downstream of the repair, or one sample from each end of the repaired break if flow direction is uncertain/unknown (consistent with AWWA C651-14). Chlorine residuals must be analyzed at the same locations in the distribution system where samples were drawn from.

Samples must be analyzed by a New Jersey certified drinking water laboratory for total coliform. If any samples are positive for the presence of total coliform bacteria, the laboratory must analyze the samples for *E. coli*. Samples must also be analyzed for chlorine residual by an approved person.

Based on the sample results, affected water systems shall take the following applicable actions regarding notification to NJDEP:

- If **any** samples test positive for *E. coli* – system must call the NJDEP Hotline as soon as possible but no later than 6 hours.
- For all other instances where there are positive results for total coliform (negative for *E. coli*), systems should follow the steps set forth in AWWA C651-14 in accordance with

the New Jersey SDWA regulations at N.J.A.C. 7:10-11.6(d). Notification to NJDEP is not required in these instances.

If water service is restored to the affected customers before the results of water quality testing are available, the delivery of that water should be limited to those customers initially affected by the WMB through the use of valves and not delivered to unaffected portions of the distribution system.

SECTION V

Lifting a Boil Water Advisory

Notification to NJDEP is required when a BWA is lifted. It may be via email to wsemergency@dep.nj.gov, or as otherwise directed. At the time the water system lifts the BWA, they are required to provide notice to the mayor, municipal clerk, or an authorized designee of each of the affected municipalities. This notice should be provided by both telephone and electronic mail.

Unless under a NJDEP issued Order, an affected water system may lift a BWA ([*BWA Lift Notification*](#)) without NJDEP approval as long as the following conditions are met:

- i. Implementation and completion of remedial measures (e.g. repair, disinfection, and flushing of the water main);
- ii. Normal operating conditions have resumed, such as the discontinuation of the provision of alternate water supplies, discontinuation of the use of emergency interconnections, hydrant-to-hydrant connections, or bulk water delivery, etc.
- iii. Receipt of satisfactory water quality results (performed to ensure the effectiveness of the sanitary repair) as per AWWA C651-14. A copy of the water quality results is to be included with the submission of the Emergency Incident Report; and
- iv. Water quality samples show a minimum chlorine residual of 0.2 mg/L or normal operating residuals if less than 0.2 mg/L for systems that disinfect using chlorine, or no detectable residual for those systems that do not disinfect with chlorine.

APPENDIX A

Guidelines for a Water Main Break Action Plan

&

Water Main Break Log

<http://www.nj.gov/dep/watersupply/doc/wmb-log.docx>

GUIDELINES FOR A WATER MAIN BREAK ACTION PLAN

Recognizing that water main breaks are a common emergency encountered by water systems, the NJDEP recommends that each system develop an action plan for responding to water main breaks.

These Action Plans are to be maintained on-site and are subject to NJDEP review in accordance with N.J.A.C. 7:10A-1.12 et seq.

The Water Main Break Action Plan should address the following:

- a. Notification procedures to local, county, state agencies;
- b. Notification procedures to affected customers and critical facilities/sensitive populations (establish method(s) to be used and timeframes);
- c. Emergency utility call-out procedures;
- d. Leak Detection procedures;
- e. Traffic control procedures;
- f. Shutdown procedures for isolating the damaged main;
- g. Protocol for selecting the appropriate repair method;
- h. Procedures for disinfecting, flushing, and testing the water main(s);
- i. Procedures for restoring water service and informing affected customers; and
- j. Recording water main break incidents and documenting the remedial/follow-up actions taken and water quality data.

WATER MAIN BREAK LOG

CALENDER YEAR: _____

Water System: _____

PWSID #: _____

Date of Incident	Time of Discovery	Location of Main Break (street/cross street, municipality, county)	Type of Main Break: -Uncontrolled Outage -Controlled Outage -Repaired Under Pressure	BWA / WQ Results
				Boil Water Advisory Issued: Yes or No. Indicate if water quality results (WQ) Satisfactory or Unsatisfactory
<i>Example 5/1/2012</i>	<i>7:00 am</i>	<i>Intersection of K and M streets, Anytown, Middle County</i>	<i>Controlled Outage</i>	<i>No BWA Required WQ - Satisfactory</i>

APPENDIX B

County Health Agency Contacts

It is recommended that water systems contact their local County Health Agencies for emergency 24/7 contact information. Main office phone numbers and web page addresses are listed on the following page for convenience.

County health agency contacts are also available at the following links:

<http://www.nj.gov/dep/enforcement/county.html>

<http://www.nj.gov/health/lh/documents/lhdirectory.pdf>

County Health Agency Contacts

County Health Agency	Phone Numbers	Web Page
Atlantic County Division of Public Health	(609) 645-5935	https://www.atlantic-county.org/public-health/
Bergen County Department of Health Services	(201) 634-2780	https://www.co.bergen.nj.us/environmental-health/about-environmental-health
Burlington County Health Department	(609) 265-5548	www.co.burlington.nj.us
Camden County Department of Health and Human Services	(856) 374-6000	https://www.camdencounty.com/service/health-human-services/
Cape May County Department of Health	(609) 465-1209	https://capemaycountynj.gov/228/Environmental-Division
Cumberland County Department of Health	(856) 327-7602	http://www.co.cumberland.nj.us/ccdoh
Essex County Health Department	(973) 497-9401	https://essexcountynj.org/department-of-health-and-rehabilitation/
Essex Regional Health Commission	(973) 251-2059	http://www.essexregional.org
Gloucester County Department of Health	(856) 218-4101	https://www.gloucestercountynj.gov/1135/Department-of-Health
Hudson Regional Health Commission	(201) 223-1133	http://www.hudsonregional.org/
Hunterdon County Dept. of Public Safety Division of Public Health Services	(908) 788-1351	https://www.co.hunterdon.nj.us/health/environmental.html
Mercer Division of Public Health	(609) 278-7165	http://www.mercercounty.org/departments/human-services/division-of-public-health
Middlesex County Office of Health Services	(732) 745-3100	http://www.middlesexcountynj.gov/Government/Departments/PSH/Pages/Office-of-Health-Services.aspx
Monmouth County Board of Health	(732) 431-7456	https://www.co.monmouth.nj.us/page.aspx?ID=1932
Morris County Office of Health Mgmt	(973) 631-5484	https://health.morriscountynj.gov/public/healthdepartments/
Ocean County Health Department	(732) 341-9700	http://www.ochd.org
Passaic County Health Department	(973) 881-4396	https://www.passaiccountynj.org/government/departments/health/index.php
Salem County Health Department	(856) 935-7510	http://health.salemcountynj.gov/
Somerset County Department of Health	(908) 231-7155	https://www.co.somerset.nj.us/government/public-health-safety/health-department
Sussex County Department of Environmental and Public Health Services	(973) 579-0370	https://www.sussex.nj.us/cn/webpage.cfm?tpid=6998
Union County Office of Health Management	(908) 518-5620	http://ucnj.org/public-safety/office-of-health-management/
Warren County Health Department	(908) 475-7960	http://www.co.warren.nj.us/healthdept

Quick Reference Resource Uncontrolled Outage

Loss of positive water pressure in the entire drinking water distribution system, or portions of the service area, at street level before implementation of corrective action, and/or the loss of positive pressure which results in intermittent water service, regardless of the size of the water main and number of service connections affected.

Required Action:	Time Frame	Completed (Date/Time)
Notify NJDEP <ul style="list-style-type: none"> • <i>During business hours</i> contact: <ul style="list-style-type: none"> ○ NJDEP Hotline at 1-877-927-6337 (WARN DEP); <u>and</u> ○ Bureau of Safe Drinking Water at (609) 292-5550 • <i>Outside normal business hours</i> call NJDEP Hotline & email wsemergency@dep.nj.gov 	Within 6 hours of occurrence	
Notify Affected Municipal Mayor and Clerk Delivery by <u>both</u> telephone and electronic mail	Within an hour	
Notify Local/County Health Department As per their requirements: Contact Information:	As per their requirements	
Notification to local Stakeholders (OEM, FIRE, PD)	Within an hour	
Reports and Updates to NJDEP <ul style="list-style-type: none"> • Provide updates as directed • <u>Water Supply Emergency Incident Report</u> <ul style="list-style-type: none"> ○ Submit via email to wsemergency@dep.nj.gov 	As requested and directed	
Issue <u>Boil Water Advisory</u> to impacted population: Delivery methods used (check all that apply): Telephone notification[] Reverse 911[] TV/Radio broadcasts[] Hand delivery (door-to-door)[] Sound truck[] Other (specify)[]	Sensitive populations: within an hour. General population: As soon as possible but in no case later than 24 hours	
Disinfect: <u>Chlorination and de-chlorination</u> procedures <u>must</u> be followed in accordance with AWWA Standard C651-14.	After repairs are completed	

<p>Water Quality Testing: Number of samples required depends on the extent of the water outage and is based on the population affected. See Section IV of guidance for details.</p>	<p>After repairs are completed</p>	
<p><u>Boil Water Advisory Lift Notice:</u> Notify affected customers of appropriate measures to take prior to resuming normal water usage.</p>	<p>Upon receipt of satisfactory results</p>	

Quick Reference Resource Controlled Outage

Partial loss of pressure (positive pressure is maintained) that requires a section of water main to be isolated and wholly or partially dewatered to facilitate the repair.

The outage in this scenario is due to implementation of corrective actions ONLY.

Required Action:	Time Frame	Completed (Date/Time)
<u>Notify Local/County Health Department</u> Contact Information:	As per their requirements	
<u>Disinfect:</u> Chlorination and de-chlorination procedures must be followed in accordance with AWWA Standard C651-14.	After repairs are completed	
<u>Water Quality Testing:</u> Number of samples required depends on the extent of the water outage and is based on the population affected. See Section IV of the guidance for details.	After repairs are completed	
<u>Notify Customers:</u> Provide guidance regarding appropriate measures to take upon restoration of water service	After repairs are completed	

A Boil Water Advisory is required if:

- Temporary service is provided by overland lines that were not properly disinfected and flushed prior to use. Note: A Do Not Drink Advisory is required if the overland lines are not dedicated for potable-use only and/or are not ANSI/NSF 61 compliant; or
- There are water quality concerns due to temporary provision of water from an unapproved water source(s) or water tankers.
- System may also elect to issue a precautionary BWA if there are sanitary concerns or other issues.

<u>Additional Actions if a BWA is issued:</u>		
<u>Notify NJDEP</u> <ul style="list-style-type: none"> • During business hours <ul style="list-style-type: none"> ○ NJDEP Hotline at 1-877-927-6337 (WARN DEP) ○ and the Bureau of Water System Engineering (BWSE) at (609) 292-2957. • Outside normal business hours call NJDEP Hotline 	Within 6 hours of occurrence	
<u>Issue BWA to the impacted population</u> <ul style="list-style-type: none"> • Delivery methods used (check all that apply): Telephone notification[] Reverse 911[] TV/Radio broadcasts[] Hand delivery (door-to-door)[] Sound truck[] Other [] 	As soon as possible but no later than 24 hours	
<u>Boil Water Advisory Lift Notice:</u> Notify affected customers of appropriate measures to take prior to resuming normal water usage.	Upon receipt of satisfactory results	
<u>Reports and Updates to NJDEP</u> <ul style="list-style-type: none"> • Provide updates as directed • Water Supply Emergency Incident Report <ul style="list-style-type: none"> ○ Submit via email to wsemergency@dep.nj.gov 	As requested and directed	

If significant impacts, as described below, are anticipated: provide courtesy notification to NJDEP at wsemergency@dep.nj.gov (DO NOT contact NJDEP Hotline).

- Traffic due to the closure of one or more lanes of a major roadway (U.S. Route, Interstate Highway, State Highway, Major Toll Road, or 500 Series County Roadway)
- Impacts to a large commercial facility, hospital, college, recreational facility, or State Correctional Facility, lasting ≥2 hours

Quick Reference Resource

Low Pressure Event

An event during which positive pressure is maintained in the water main during repair through the use of full circle clamps, sleeves, etc.

For Low Pressure Events there are no notification requirements (NJDEP nor customers), and no BWA or water quality testing is required.

However, if significant impacts, as described below, are anticipated: provide courtesy notification to NJDEP at wsemergency@dep.nj.gov (DO NOT contact NJDEP Hotline).

- Traffic due to the closure of one or more lanes of a major roadway (U.S. Route, Interstate Highway, State Highway, Major Toll Road, or 500 Series County Roadway)
- Impacts to a large commercial facility, hospital, college, recreational facility, or State Correctional Facility, lasting ≥2 hours