## NORTH BEACH WATER DISTRICT PACIFIC COUNTY, WASHINGTON

RESOLUTION NO. 7-2019

A RESOLUTION OF THE NORTH BEACH WATER DISTRICT OF PACIFIC COUNTY, WASHINGTON, ADOPTING AN AMENDED AND UPDATED EMERGENCY RESPONSE PLAN

WHEREAS, WAC 246-290-415(2)(d) requires all public water systems include an emergency response plan as a component of the operations and maintenance element of their water system plan required by WAC 246-290-100; and

WHEREAS, on January 20, 2016 the North Beach Water District's Board of Commissioners (Board) adopted Resolution 07-2016 approving the 2015 Water System Plan including an emergency response plan found in chapter six; operations and maintenance; and

WHEREAS, the Board desires to amend and update the above referenced emergency response plan; now

**BE IT RESOLVED** by the Board of Commissioners of North Beach Water District, Pacific County, to adopt the revised Emergency Response Plan attached hereto and incorporated herein as Exhibit A.

**ADOPTED** by the Board of Commissioners on North Beach Water District, Pacific County, Washington at its special meeting held on the 17<sup>th</sup> day of June 2019.

Brian Sheldon, Commissioner

Position #1

Gwen Brake, Commissioner

Position #2

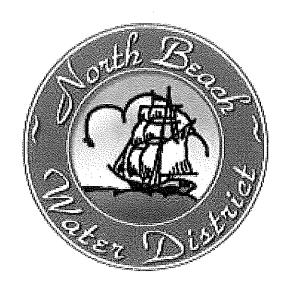
Glenn Ripley, Commissioner

Position #3

#### EXHIBIT "A"

# North Beach Water District

## **Emergency Response Plan**



A requirement of the Safe Drinking Water Act as amended by the Public Health Security and Bioterrorism Preparedness and Response Act of 2002

Revised June 2019

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#### Section One - Mission and Goals

#### Mission Statement for Emergency Response:

Provide clean, safe quantity and quality of water as directed by the Safe Drinking Water Act and be prepared to respond immediately to a variety of events that could lead to contamination of the water system.

Goal One: Quickly identify an emergency and initiate efficient and effective response action.

Goal Two: Quickly notify customers and local, state, and federal agencies of the emergency.

Goal Three: Quickly determine conditions that cause water to be unsafe to drink or use and, be able to notify and advise customers efficiently and effectively of the situation.

Goal Four: Quickly make corrections and/or repairs and return the system to normal operation.

#### **Section Two - System Information**

System DOH Identification Number: 63000C
System Name and Mailing Address: North Beach Water District
PO Box 618
Ocean Park, WA 98640
System Physical Address: North Beach Water District
2212 272 <sup>nd</sup> Street
Ocean Park, WA 98640
Directions to the System: Proceed north on Highway 103 to Bay Avenue;
Continue north on Vernon Avenue to 270 <sup>th</sup> Place;
Turn east on 270th Place and proceed to U Street;
Turn north on U Street and proceed to 272 <sup>nd</sup> Street;
Turn east on 272 <sup>nd</sup> Street and proceed to 2212 272 <sup>nd</sup> Street.
The District's Business Office and North Wellfield will be on the south side of 272 <sup>nd</sup> Street.
Full Time Population/Connections Served <sup>1</sup> :
Population4010
Service Connections3194

<sup>&</sup>lt;sup>1</sup> Per the District's Water Facilities Inventory (WFI) (WAC 246-290-480(2)(e)

#### **System Owner:**

NBWD is a Special Purpose district authorized under Chapter 57.08 RCW "Water Sewer Districts". NBWD is governed by an elected board of commissioners.

## Name, Title, and Contact Information of Person Responsible for Maintaining and Implementing This Emergency Response Plan:

William Neal,
General Manager NBWD,
PO Box 618 Ocean Park, WA 98640
360.665.4144 Office
360.244.0068 Cell
bneal@northbeachwater.com

#### **Basic Description and Location of Faculties:**

North Beach Water District's source of water is groundwater from two wellfields. The Wellfields are identified as the North Wellfield and the Wiegardt Wellfield. The North Wellfield is located at 2212 272nd Street Ocean Park, WA 98640. The Wiegardt Wellfield is located at 25600 Z Street Ocean Park, WA 98640. Each wellfield has a treatment plant designed to reduce iron, manganese, and arsenic to 50% of the maximum contaminant level (MCL). Treated water is conveyed to reservoirs at each wellfield. Each wellfield has a booster pump station. The distribution system has only one pressure zone.

#### **Location of NBWD Water System Facilities:**

## North Wellfield, Treatment Plant, Booster Station, and Reservoirs are located at 2212 272<sup>nd</sup> Street Ocean Park, WA 98640.

- Step 1. From the intersection of Hwy 103 and Bay Avenue in Ocean Park, proceed east on Bay Avenue approximately 0.3 miles to the intersection of Bay Avenue and U Street;
- Step 2. Turn north on U street and proceed north approximately 0.5 miles to the intersection of U Street and 272<sup>nd</sup> Street;
- Step 3. Turn east on to 272<sup>nd</sup> Street and proceed east approximately 650 feet to 2212 272<sup>nd</sup> Street;
- Step 4. The facilities are located on the south side of 272<sup>nd</sup> Street.

## South Wellfield, Treatment Plant, Booster Station and Reservoir are located at 25600 Z Street Ocean Park, WA 98640.

- Step 1. From the intersection of Hwy 103 and Bay Avenue in Ocean Park, proceed east on Bay Avenue approximately 0.3 miles to the intersection of Bay Avenue and U Street;
- Step 2. Turn on south U street and proceed south approximately 0.6 miles to the intersection of U Street and 250<sup>th</sup> Street;
- Step 3. Turn east on to 250<sup>th</sup> Street and proceed east approximately 0.3 miles to the intersection of 250<sup>th</sup> Street and Ash Place;
- Step 4. Turn north onto Ash Place and proceed north approximately 500 feet to the intersection of Ash Place and 252<sup>nd</sup> Place;
- Step 5. Turn east on to 252<sup>nd</sup> Place and proceed east approximately 100 feet then turn north onto gravel driveway;
- Step 6. Turn north onto gravel driveway and proceed north approximately 700 feet to the facility.

### Wiegardt Wellfield is located at 25480 U Street Ocean Park, WA 98640.

- Step 1. From the South Wellfield proceed west on gravel driveway, located at the northwest corner of the facility, approximately 600 feet.
- Step 2. The Wiegardt Wellfield on the south side of the gravel driveway.

#### **Section Three - Chain of Command**

William Neal, General Manager

Office Phone: ---- 360.665,4144

Cell Phone: ----- 360.244.0068

Home Phone: ---- 360.665.3290

Responsible for overall management and decision making for the water system. The General Manager is the lead for managing the emergency, providing information to regulatory agencies, the public and news media. All communications to external parties are to be approved by the General Manager.

John Bell, Office Manager

Office Phone: ----- 360.665.4144 Cell Phone: ----- 360.690.4837

Home Phone: -----

Responsible party in absence of General Manager. The Office Manager will publish approved notifications communications to the public and news media.

Dennis Schweizer, Treatment Plant Operator

Office Phone: ----- 360.665.4144 Cell Phone: ----- 360.244.0047 Home Phone: ---- 360.214.2810

Responsible party in absence of General Manager and Office Manager. The Treatment Plant Operator facilitates repairs along with parts and equipment procurement and communicates with the General Manager with recommendations to address the emergency. The Treatment Plant Operator collects and submits water quality samples to accredited laboratories.

Jonathan Fleming, Crew Leader Office Phone: ----- 360.665.4144 Cell Phone: ----- 360.244.0083

Home Phone: -----

The Crew Leader directs crews performing inspections, maintenance and repairs on system facilities. The Crew Leader would help evaluate facilities during an emergency and communicate with the Treatment Plant Operator with recommendations to repair the emergency.

Board of Commissioners:

Brian Sheldon

Phone: ----- 360.665.2804

Gwen Brake

Phone: ---- 360.244.3961

Glenn Ripley

Phone: ----- 503.730.3404

In the absence of the General Manager, the Board of Commissioners will designate one of the Commissioners, an employee, or a consultant to make public announcements.

#### **Section Four - Potential Emergency Events**

to highest probable risk. Terrorism Risk: ------Low Not in a high volatile area Wellhead Contamination Risk: ------ Low Protected sanitary control areas and two wellfields. Earthquake Risk:-----Low May cause catastrophic damage to facilities. Earthquakes occur nearly every day in Washington. Most are too small to cause damage. Large earthquakes are much less common but can cause significant damage to utilities. Tsunami Risk: ------ Low May cause catastrophic damage to facilities. The Cascadia Subduction Zone produces great earthquakes that can generate large tsunamis. The average reoccurrence interval for these great earthquakes is between 400 and 500 years. The last large tsunami that affected the North Beach Peninsula was 315 years ago. Backflow Incident Risk: ------ Low District has a proactive Cross Connection program. The District installed service meters that detect and record even small backflow incidents. The District installs a high-quality dual check valve<sup>2</sup> at each service. Droughts Risk: ------ Low Water sources are deep wells. The deep wells are recharged primarily through local precipitation. During extreme drought conditions, the deep wells are susceptible to saltwater intrusion. Flood Risk: ------ Low Heavy rain is common on the North Beach Peninsula. Storm water readily drains to the Pacific Ocean and Willapa Bay. Ground Slides/Liquefaction Risk:------ Low Ground movement may cause main breaks. Liquification due to a Cascadia Subduction Zone earthquake is low to moderate<sup>3</sup>.

The events listed below may cause water system emergencies. They are arranged from lowest

<sup>&</sup>lt;sup>2</sup> American Society of Safety Engineers (ASSE) standard 1024-2017.

<sup>3</sup>WASHINGTON DIVISION OF GEOLOGY AND EARTH RESOURCES REPORT OF INVESTIGATIONS 37

### **Section Five - Severity of Emergencies**

#### Level I Emergency

NBWD considers the following types of incidents to be Level I Emergencies:

- Meter failures (service meters, source meters, master meters)
- Mechanical failures at pumping stations
- Reservoir signal failures
- Minor vandalism or storm damage
- Service line leaks (laterals from main to meter)

NBWD has trained personnel either working or on call to handle these problem twenty-four hours a day, seven days a week. Personnel are notified from our continually manned dispatch center.

Level I - Normal (Routine) Emergency: The system experiences a normal emergency, such as a service line break or power outage. System personnel can handle the problem with minimal outside assistance. In these situations, it is not likely that public health will be immediately jeopardized. Normal events can likely be resolved within 24-48 hours.

#### Level II Emergency

NBWD considers the following types of incidents to be Level II Emergencies:

- Distribution main breaks
- Positive coliform sample
- Major vandalism or storm damage

Level II - Minor Emergency (Alert Status): The system experiences minor disruption in supply or has indications of possible contamination requiring coordination with the Office of Drinking Water and the possibility of issuing a health advisory to customers. In these types of emergencies, public health may be jeopardized, so it is important for system personnel to be on alert and initiate a quick response. Minor emergencies can usually be resolved within 72 hours.

#### Level III Emergency

NBWD considers the following types of incidents to be Level III Emergencies. All Level III emergencies require a health advisory and Office of Drinking Water must be notified:

- An acute confirmed, coliform maximum contamination level or E. coli/fecal positive sample.
- A confirmed sample of another primary contaminant.
- A system failure resulting in water shortage.
- Transmission main break
- Loss of source

Level III - Significant Emergency: The system experiences significant mechanical or contamination problems where disruption in supply is inevitable and issuance of a health advisory is required to protect public health. Major emergencies should be reported to DOH as soon as possible to determine the best available means to protect customers health. System personnel are directed to the situation, and outside entities are requested to aid in the response. Major emergencies may require more than 72 hours to resolve.

#### Level IV Emergency

NBWD considers the following types of incidents to be Level IV Emergencies. Level IV emergencies require a health advisory and the Office of Drinking Water must be notified:

- Natural disaster that results in catastrophic damage to system facilities
- Terrorism attack
- Loss of more than one source.

Level IV - Catastrophic Disaster/Major Emergency: The system experiences major damage or contamination from a natural disaster, an accident, or an act of terrorism. These incidents usually require immediate notification of local law enforcement and local emergency management services. Immediate issuance of health advisories and declaration of water supply emergencies are critical to protect public health. These events often take several days or weeks to resolve before the system returns to normal operation.

#### Section Six - Emergency Notification and Contacts

#### Health/Ecology Departments

### Department of Health Southwest Regional Office of Drinking Water

Office:	360.236.3030
Fax:	360.236.3029
24 Hr. Emergency:	877.481.4901
Andy Anderson, P.E.:	360.236.3025 – Regional Manager
Kay Rottell:	360.236.3037 – Assistant Regional Manager
Teresa Walker P.E.:	360.236.3032 – Regional Engineer (Pacific County)
Charese Gainor:	360.236.3045 – Coliform Monitoring Program
Sophia Petro:	360.236.3046 – Chemical Monitoring Program
Denise Miles:	360.236.3028 - Sanitary Survey Program
Gael Kantz:	360.236.3027 - Technical Assistance Coordinator

#### **Department of Ecology**

Southwest Regional Office:	360.407.6300
24 Hr. Emergency:	800.645.7911
Scott Malone.:	360.407.6648 – Well Construction Coordinator Statewide
John Pearch:	360.407.0297 – Well Construction Coordinator SW Region
Eva Richards.:	360.407.6643 – Metered Water Use
Tammy Hall:	360.236.3045 – Water Rights Examiner – SW Region

#### Pacific County - Department of Environmental Health

#### Police/Fire/Emergency Medical Services

#### **Washington State Patrol**

#### Federal Bureau of Investigation

#### Pacific County - Emergency Management Agency

Scott McDougall: .....360.642.93387 - PCEMA Director

#### Pacific County - Sheriff's Office

#### Pacific County - Fire District #1 - EMS Services

#### Local Media

#### **Neighboring Water Systems**

Chinook Water District	360.777.8131 385 Connections
Anderson RV Park	360.642.2231 64 Connections
Ocean Bay Mobile & RV Par	k360.665.6933 40 Connections (unapproved)
Pegg's Trailer Park	360.642.2451 34 Connections (unapproved)
Ocean Park Retreat Center	360.721.9369 33 Connections (unapproved)
Cranberry RV & Trailer Park	360.957.3548 38 Connections (unapproved)
Dunes Bible Camp	360.665.5380 26 Connections (unapproved)
Dunes Loomis Lake	360.665.5380 13 Connections (unapproved)
Shady Dell Condominiums	360.642.1315 5 Connections
Ocean Spray Cranberries, Inc	360.642.2563 1 Connection (commercial)
Water Testing Laboratories	
BSK Analytical	360.750.0055 – Emergency 360.619.8248 – Elizabeth
Bunge	
	360.577.7222 – Emergency 360.975.4165 – 360.430.7119
Pacific County	360.875.9356 – Emergency 360.589.3598
Utilities	
Charter Communication:	800.314.7195
Century Link	855.891.4080
PUD	
Utility Locates	811 - 800.424.5555
Fuel Venders	
Wilcox & Flegel Oil:	503.397.0130 – Diesel Delivery
Active Enterprises	360.642.2102 – Propane Delivery
Port of the Peninsula	360.665.4547 – Gasoline Pick-up
Mutual Aid Agreements	
Surfside HOA	360.665.4147 – Emergency
Electricians	
Ford Electric:	360.642.2137 – Emergency
Wadsworth Electric	503.325.5501 – Emergency
Plumbers	
Taft Plumbing	360.665.4775 – Emergency
	360.783.2951 – Emergency

#### **Excavating Contractors**

#### **Equipment Rental**

#### Pump Repair

#### Well Repair

#### **Dosing Pumps**

#### **Scada Programing**

The Automation Group ......541.359.3755 – Emergency 503.488.9443 – Dustin Perket

#### Local Call List

#### Customers at High Risk (immunocompromised, home dialysis)

 [Enter Name]
 360.

 [Enter Name]
 360.

### Hospitals/Schools/Clinics

Golden Sands:	360.665.4815
Family Health Center	360,665.3000
Ocean Park Pharmacy	360.665.5181
Free by the Sea	360.665.4494
Ocean Park Elementary.	360.665.4815
Rainbow Child Care	360.665.0122
Learning Center	360,665.4367
Restaurants	
Thriftway:	360.665.5222
Jacks Country Store	
Bailey's Bakery:	
Doc's Tavern	
Anita's Coastal Cafe	360.642.3500
Rusty Spur	360.777.3877
Kiss of Mist	
Adelaide's Coffee Shopp	pe360.665.6050
Crown Ally Pub	
Tu Tu's Lunch Wagon	360.244.2712
Berry Patch	360.665.5551
StreetSide Taco	360.777.3300
Wholesale Food	
Jolly Roger Oyster:	360.665.4111
Coast Seafood	
Willapa Bay Shellfish	360.665.2804
Local Governments	
Port of the Peninsula:	360.665.4547
Fire District #1	360.665.4451
Pacific County Health	360.642.9356
Office of Drinking Water	r360.236.3030 – Emergency 877.481.4901
NBWD	
William Neal:	360.665.3290 – Home 360.244.0068 - Cell

John Bell ......509.690.4837 - Home

360.214.2810 – Home 360.244.0047 Cell
360.244.0083 – Cell
360.244.3337 – Home 360.244.0046 Cell
360.875.1649 - Cell
360.244.9719 - Cell
360.214.0476 - Home
808.283.4707 – Home
360.665.2804 - Commissioner
360.244.3961 - Commissioner
503.730.3404 – Commissioner

#### **Notification Methods**

#### **Responsible for Notifying Water System Customers:**

John Bell – Office Manager (see page 13 for contact information)

#### Method:

Reverse 911

Web Site

Local Media

**Door Hangers** 

Signs

Reader Boards

## Responsible for Alerting Law Enforcement, Office of Drinking Water, Local Health Department:

William Neal – General Manager (see page 13 for contact information)

#### Method:

Use phone list and deliver the proper message.

#### Responsible for Contracting Service and Repair Contractors

Dennis Schweizer - Treatment Plant Operator and

Jonathon Fleming – Crew Leader (see page 13 for contact information)

#### Method:

Notify General Manager of the need for additional help. Contact necessary contractors from Small Works Roster.

#### Responsible for Contracting Neighboring Water Systems, If Necessary

William Neal – General Manager (see page 13 for contact information)

#### Method:

In the case of reginal contamination or coordination of efforts, use phone list to deliver message.

#### Responsible for Issuing a Health Advisory

William Neal – General Manager (see page 13 for contact information)

#### Method:

- Step 1. Mobilize field crew to investigate the problem(s) and make repairs as necessary.
- Step 2. Confer with key staff to verify problem(s)
- Step 3. Consult with ODW staff regarding notification requirements and assistance in resolution of problem(s)
- Step 4. Organize staff to develop message to be delivered to customers.
- Step 5. Mobilize staff to deliver message via door hangers, road signs, reverse 911, and radio message.
- Step 6. Mobilize staff to notify all local heath agencies, restaurants, schools, clinics, pharmacies, emergency medical providers, wholesale food processors, customers on the medical alert/life support list.
- Step 7. When the ODW agrees the District has returned to normal operations, notify all customers the emergency is resolved.

#### Section Seven - Effective Communication

#### **Designated Spokesperson:**

The General Manager is the designated public spokesperson for North Beach Water District. All communication with the media, the public, or federal, state, or local agencies will be directed to the General Manager. In the absence of the General Manager, the Board of Commissioners will designate one of the Commissioners as spokesperson for the District.

#### **Key Messages:**

Key messages for water customers are

- Boil water letters;
- Media notification; and

Letter to rescind boiling water.

NBWD has on file EPA Public Notification Handbook EPA-816-R-09-013, 2010. This book shows all information required for issuing public notices and should be referenced before notices are made to the media and/or customers.

#### Requirements for Issuing Public Notice (WAC 246-290-71001)

#### Tier 1 Violations and Other Situations Requiring Notice within 24 Hours:

- Violation of the MCL for total coliform, when **fecal coliform or E. coli** are present in the water distribution system, or failure to test for fecal coliform or E. coli when any **repeat** sample tests positive for coliform.
- Violation of the MCL for **nitrate or nitrite**, or when a confirmation sample is not taken within 24 hours of the system's receipt of the first sample showing exceedance of the nitrate or nitrite MCL.
- Occurrence of a waterborne disease outbreak, as defined in 40 CFR 141.2, or another waterborne emergency.
- Detection of E. coli, enterococci, or coliphage in a ground water source sample.
- Other violations or situations with significant potential for serious adverse effects on human health as a result of short-term exposure, as determined by the primacy agency either in its regulations or on a case-by-case basis.

Note: If NBWD has any of these violations or situations, in addition to issuing public notice, we must initiate consultation with the Southwest Reginal Office of Drinking Water as soon as practical but within 24 hours after you learn of the violation or serious situation.

#### Tier 2 Violations and Other Situations Requiring Notice Within 30 Days

- All violations of the MCL, MRDL, and treatment technique (TT) requirements except where Tier 1 notice is required.
- Violations of monitoring requirements where the primacy agency determines that a Tier 2 public notice is required, considering potential health impacts and persistence of the violation.
- Failure to comply with the terms and conditions of any variance or exemption in place.
- Failure to take corrective action within the required timeframe or follow a state approved corrective action plan and schedule for a fecal indicator-positive ground water source sample under the Ground Water Rule.

 Failure to take corrective action within the required timeframe or follow a state approved corrective action plan and schedule for a significant deficiency under the Ground Water Rule.

#### Tier 3 Violations and Other Situations Requiring Notice Within 1 Year

- Monitoring violations, except where Tier 1 or Tier 2 notice is required, or the primacy agency determines that the violation requires a Tier 2 notice.
- Failure to comply with an established testing procedure, except where Tier 1 notice is required, or the primacy agency determines that the violation requires a Tier 2 notice.

#### Section Eight - Vulnerability Assessment

The District's Vulnerability Assessment is a product of our own personal evaluation of our system. The Vulnerability Assessment was completed January 15, 2019. The assessment was used in our security upgrade recommendations in this Emergency Response Plan.

#### North Wellfield Facilities:

#### Office and Faculties Building

Office, Public Meeting Room, Vehicle Storage, Parts and Supplies Storage, Tool Storage

Vulnerability--------Low

Improvements or Mitigating Actions --------Monitored security system installed

Recommended Improvements:

1. Video surveillance

#### Shop

- 1. Improve exterior lighting,
- 2. Install monitored security system,
- Install video surveillance,
- 4. Install security doors<sup>4</sup> on the north side of the building.

<sup>&</sup>lt;sup>4</sup> LPS 1175 Level SR2

Booster Building Booster Pumps, Generator, Water Meters  Vulnerability
Water Treatment Building  Filtration Equipment  Vulnerability
NWF Well #1  Located inside Booster Building  Vulnerability
NWF Well #4, #5, #6, #7, and #8  Located in the open east of the treatment plant  Vulnerability
NWF Reservoirs #1, #2, and #3  Located south of the treatment plant  Vulnerability
NWF Caterpillar Generator  Located south of the shop  Vulnerability

Electric Power Connection	
Located southeast of the booster building	
Vulnerability	
Improvements or Mitigating Actions	
Recommended Improvements	None
Computer Telemetry System	
Located in the water treatment building and the Booster Building	
Vulnerability	Low
Improvements or Mitigating Actions	-Fenced on all sides
Recommended Improvements	
Wiegert Wellfield Facilities	
Wells #1, #2, and #3	
Vulnerability	Low
Improvements or Mitigating Actions Each Well and components are	e fenced on all sides
Recommended Improvements:	
1. Install lighting and video surveillance.	
Generator and Propane Tank	
Vulnerability	Low
Improvements or Mitigating Actions	-Fenced on all sides
Recommended Improvements:	
1. Install lighting and video surveillance.	
Electric Power Connection	
Located in the Well #1 fenced enclosure	
Vulnerability	Low
Improvements or Mitigating Actions	Fenced on all sides
Recommended Improvements	
Computer Telemetry System	
Located in the Well #1 fenced area	
Vulnerability	Low
Improvements or Mitigating Actions	Fenced on all sides
Recommended Improvements	

#### South Wellfield Facilities

Treatment Plant Building  Booster Station, Generator, Filtration Equipment, Records Storage  Vulnerability
Storage Building  Vulnerability
Water Reservoir  Vulnerability
Electric Power Connection  Located on the treatment plant building  Vulnerability
Computer Telemetry System  Located in the treatment plant area  Vulnerability

## **Section Nine - Responsive Actions for Specific Events**

Regardless of the event that results in an emergency the following actions will be taken by the District with limited variations dependent on the situation:

- 1. Confirm and determine the type and severity of the emergency.
- 2. Take immediate actions to protect lives, reduce injuries, protect property, and ensure safety.
- 3. Collaborate with State and local health officials and others when making Public Health Notifications. Follow all state and local rules and regulations and prioritize notification of vulnerable customers.
- 4. Make repairs based on priority demand.
- 5. Return the system to normal operation.

#### Type of Incidents

#### A. Loss of System Pressure (below 20 psi)

a. Emergency Concern:

Cross connection contamination due to back flow from back siphonage or back pressure or direct contamination from open pipe.

b. Potential Causes:

Booster Pump(s) failed, Power/Standby Generator failed, Water main break.

- c. Immediate Actions:
  - Contact Office of Drinking Water (ODW) for direction, issue boil water notice.
- d. Follow-Up Actions:

Determine the cause of the loss of pressure and make needed repairs. Take investigative coliform bacteria samples from within the system appropriate to the incident.

#### B. Positive Coliform Bacteria Sample

a. Emergency Concern:

Coliforms are a wide-ranging class of bacteria found in our environment, including the feces of man and other warm-blooded animals. The presence of coliform bacteria in drinking water may indicate a possible presence of harmful, disease-causing organisms.

b. Potential Causes:

Failed seals on water reservoir penetrations, improper sample collection procedure, contaminated sample collection bottle, insufficient disinfection of components when working on infrastructure.

c. Potential Response:

Collect repeat samples and collect triggered source samples per the District's Coliform Monitoring Plan. Thoroughly inspect the water system to identify potential sources of contamination. Take corrective action if any potential

sources of contamination are identified. If two or more positive coliform bacteria samples in one month (treatment technique trigger), perform a level one assessment within 30 days.

#### C. E.coli Maximum Contaminant Level (MCL) violation

#### a. Emergency Concern:

E. coli (Escherichia coli) is the name of a bacterium, that lives in the digestive tracts of humans and animals. There are many types of E. coli, and most of them are harmless. But some can cause bloody diarrhea. Some strains of E. coli bacteria may also cause severe anemia or kidney failure, which can lead to death. Other strains of E. coli can cause urinary tract infections or other infections.

#### b. Potential Causes:

Failed seals on water reservoir penetrations, improper sample collection procedure, contaminated sample collection bottle, insufficient disinfection of components when working on infrastructure.

#### c. Potential Response:

Contact the Office of Drinking Water (ODW) immediately. In consultation with the ODW, issue a boil water notice. Perform a level 2 assessment. Identify all sanitary defects in the water system and correct them promptly. Disinfect appropriate facilities and take follow-up water samples.

#### D. Water Main Break

#### a. Emergency Concern:

Cross connection contamination due to back flow from back siphonage or back pressure or direct contamination from open pipe.

#### b. Potential Causes:

Excessive stress from ground movement, damage during construction, near or past useful life expectancy.

#### c. Immediate Actions:

Contact the Office of Drinking Water (ODW) immediately. Determine the type of main break (see ODW publication 331-583 1/1/2017). Take immediate actions to isolate the break and protect life and property.

#### d. Notifications

Notify all affected customers. In consultation with ODW, issue boil water notice. Notify local Fire Department of limited fire protection status.

#### e. Follow -up Actions

Flush and disinfect the isolated portion of the distribution system and collect and investigative coliform bacteria samples appropriate for the incident.