

Emergency response plan

|  |  |
| --- | --- |
| Public Water System (PWS) ID# |  |
| Name/title of main contact: |  |
| Address: |  |
| City, State, Zip: |  |
| Phone number: |  |
| Email: |  |
| Fax number (if applicable): |  |
| Date of ERP: |  |
| Revision number: |  |
|  |  |

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 Contents

Most emergency response planners follow this common saying: “Plan for the worst possible event and then deescalate your strategies and procedures base on the impact of the threat.” If you think about the worst that can happen, you will be much better prepared for any events that may cause disruption to your system.

In the space below list basic system information.

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Introduction

An Emergency Response Plan (ERP) is a documented plan that describes the actions a Public Water System (PWS) would take in response to various major incidents that could impact the water system’s ability to provide safe drinking water to its customers.

All PWS owners/operators should be prepared before an incident occurs that poses a threat to the quality of drinking water. To be prepared, PWS owners should complete, or review and update, their operational plans and emergency response plans. Being prepared gives everyone the best possible chance of avoiding significant problems if an incident occurs.

Requirement under the 18 AAC 80.055

The purpose of the 18 AAC80.055 requirement is to enhance the preparedness of all **Community** water systems (CWS) to maintain service and operations during and after a natural or human-caused emergency that would directly or indirectly affect drinking water quality or quantity.

Under this requirement, all **CWS** serving a population of **1,000 or more** persons are required to complete a Vulnerability Assessment (VA) and an Emergency Response Plan (ERP).

This Template

The Drinking Water (DW) Program developed this template make it easier for PWS’s to develop a plan. Please note this template is simply a guide; you can modify it as you see fit. However, you must address the topics listed on the Table of Contents.

Since this document may contain sensitive information about your PWS, please DO NOT submit this plan to the Department of Environmental Conservation’s (DEC) DW Program. The only required document for submittal is the Vulnerability Assessment and Emergency Response Plan Certification Form. This form can be found on our DW Program’s security website at the following address: <http://dec.alaska.gov/eh/dw/security/regulations/>.

Drinking Water Source, Pumping and Treatment

During a major event, you need to have basic technical information readily available for your personnel, first responders, repair contractors/vendors, and others. In the table below, enter information about your PWS’s source type, and pump details:

|  |  |
| --- | --- |
| **WATER SOURCE name or identifier** (i.e., Well #1 or Blue Lake)**:** |  |
| DESCRIPTION: |  |
| LOCATION: |  |
| SERVICE COMPANY name: |  |
| SERVICE COMPANY cONTACT PHONE: |  |
| PUMP MANUFACTURER: |  |
| PUMP MODEL: |  |
| LOCATION: |  |
| SERVICE COMPANY name: |  |
| SERVICE COMPANY cONTACT PHONE: |  |

|  |  |
| --- | --- |
| **WATER SOURCE name or identifier** (i.e., Well #1 or Blue Lake)**:** |  |
| DESCRIPTION: |  |
| LOCATION: |  |
| PUMP MANUFACTURER: |  |
| PUMP MODEL: |  |
| LOCATION: |  |
| SERVICE COMPANY name: |  |
| SERVICE COMPANY cONTACT PHONE: |  |

In the two tables below, enter information about your transmission line(s) and treatment system component(s):

|  |  |
| --- | --- |
| **Transmission line pipe type:** |  |
| Pipe size/diameter: |  |

|  |  |
| --- | --- |
| **Treatment system component location:** |  |
| Description: |  |
| Manufacture/model number: |  |
| Service company name: |  |
| Service company contact phone: |  |
| Repair and/or vendor name: |  |
| Repair and/or vendor contact phone: |  |

Finished Water Storage, Distribution and Valves

In the space provided, describe your finished water storage tank(s), distribution system, any connected hydrant(s) and valve locations. If a topic does not apply to your system, please indicate so by writing N/A.

(*Why this information*: In a situation where contractors need to build emergency facilities/structures, the contactors will need to know where underground structures are located, such as drinking water lines, tanks and wastewater lines).

|  |  |
| --- | --- |
| **Finished water storage location:** |  |
| Description (i.e., tank ID, materials tank is composed of): |  |
| Manufacture/model number: |  |
| Tank capacity: |  |
| Service company name: |  |
| Service company contact phone: |  |

|  |  |
| --- | --- |
| **distribution system description:** |  |
| Type of pipe: |  |
| Size/diameter: |  |
| Length: |  |
| Pipe vendor name: |  |
| Pipe vendor contact phone: |  |

|  |  |
| --- | --- |
| **describe hydrant/appurtenance locations:** |  |
| Type of hydrant: |  |
| Number of hydrant type: |  |
| Size of hydrant: |  |
| Number of hydrant size: |  |
| Hydrant vendor name: |  |
| Hydrant vendor contact phone: |  |

|  |  |
| --- | --- |
| **describe valve locations:** |  |
| Valve type/manufacture: |  |
| Number of valve type/manufacture: |  |
| Valve size: |  |
| Number of valve size: |  |
| Valve vendor name: |  |
| Valve vendor contact phone: |  |

Current Equipment

In the space provided, please enter a description of the equipment currently in use at your facility including the model number and description of the equipment, the type of spare parts available, the primary manufacturer of the specified equipment (with contact information), as well as an alternate supplier (with contact information). If an equipment/process is currently not in use at your facility, please indicate so by entering N/A.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **current equipment or process** | **model number or description** | **type of spare parts on hand** | **primary manufacturer or supplier** | **contact Phone** | **Alternate supplier** | **contact phone** |
| Well Pump |  |  |  |  |  |  |
| Pump Repair Kit |  |  |  |  |  |  |
| Treatment Pump |  |  |  |  |  |  |
| Chlorinator |  |  |  |  |  |  |
| Chlorination Meter |  |  |  |  |  |  |
| Chlorine |  |  |  |  |  |  |
| Ozone |  |  |  |  |  |  |
| Ozonator |  |  |  |  |  |  |
| Ozonation Meter |  |  |  |  |  |  |
| Filtration String |  |  |  |  |  |  |
| Filters |  |  |  |  |  |  |
| Turbidity Meter |  |  |  |  |  |  |
| SCADA |  |  |  |  |  |  |
| Process Chemicals |  |  |  |  |  |  |
| Valves |  |  |  |  |  |  |
| Distribution Line |  |  |  |  |  |  |
| Repair Parts |  |  |  |  |  |  |

Infrastructure/ Property Protection

In case of a major emergency, it is necessary to know the location of your standard SOP’s (i.e., O&M manual) as well as the location of alternate supplies. In the space provided, please specify the location of such emergency manuals as well as the basic contact information for your facilities’ electrical and/or auxiliary power source (further information concerning alternate power will be specified under the Contingency Plan for Complete/Partial Power Loss section of this document):

|  |  |
| --- | --- |
| **What is the name and location of the building?** |  |
| Building maintenance contact: |  |
| What is the building use/description/type (e.g., treatment plant, well house, office, shop)? |  |
| Location of site plans and facility “as-built” engineering drawings: |  |
| Operating procedures and system descriptions, O&M manual (including back-up systems): |  |
| Location and type of maintenance supplies and/or parts: |  |
| main Electrical Power Source: |  |
| Contact name: |  |
| Contact phone: |  |
| back-up Power Source: |  |
| Location/description: |  |
| Manufacture/model number: |  |
| Service company name: |  |
| Service company contact phone: |  |

In the space provided, please describe your facilities’ property protection strategies and security measures:

|  |  |
| --- | --- |
| **Our procedure for “lock down” or access control:** |  |
| The person responsible for establishing a security perimeter during an event is (name): |  |
| Our procedure for evidence protection (if the event is a crime) is: |  |
| Other property protection procedures and measures in place are: |  |

Personnel Safety

Describe the location of your facilities’ emergency response and safety plans, first-aid supplies and the location of personal protective equipment (PPE) in the tables below:

|  |
| --- |
| **Emergency Response and Saftey Plan** |
| The evacuation plan for this facility is located: |  |
| The evacuation leader (name) is: |  |
| The designated safety officer (name) is: |  |
| All personnel must evacuate to (location): |  |
| The written safety and health plan is located: |  |
| The MSDS book is located: |  |
| Other safety plan documents are located: |  |
| First Aid |
| The first-aid kit for this facility is located: |  |
| Our first-aid/CPR trained personnel are (names): |  |
| Personal Protective Equipment |
| Emergency response PPE for this facility includes: |  |
| PPE is located: |  |

Events that Cause Emergencies

List events below that may cause PWS emergencies (i.e., earthquake, wind storm, flooding, wildfire, vandalism, transportation accidents etc.). *NOTE*: This section is not required in the ERP; it is recommended.

|  |  |  |
| --- | --- | --- |
| **type of event** | **probability or risk**  (High-Med-Low) | **comments**(i.e., PWS components affected) |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Internal Chain of Command

Appropriate and timely communication is essential during an emergency. Using the table below, identify your PWS internal notification list. This information should contain all appropriate staff and personnel to be notified during a major incident including their names, titles, applicable land lines, cellular phone numbers, fax numbers and email addresses.

Keep in mind, that in a major incident, it may not be possible to use normal channels of communication. Provisions should be made for an efficient and fail-safe form of communication to be available during conditions when the use of normal means may not be possible.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **order** | **name** | **home phone** | **work phone** | **cell phone** | **e-mail** | **fax** |
| Emergency Lead |  |  |  |  |  |  |
| Alternate Emergency Lead |  |  |  |  |  |  |
| Owner |  |  |  |  |  |  |
| PWS Manager/ Director |  |  |  |  |  |  |
| Utility Director or Elected Official |  |  |  |  |  |  |
| Safety Officer |  |  |  |  |  |  |
| Media Spokesperson |  |  |  |  |  |  |
| Operator(s) |  |  |  |  |  |  |
| Partners |  |  |  |  |  |  |

External Communication

During an emergency, it is important to contact individuals and/or organizations outside your facility that might also be impacted. Your external non-PWS notification list should ensure that all appropriate first responders, the Drinking Water Program, affected customers, and critical users are notified. In the table below, enter the phone number and alternate contact beside the appropriate external entity:

|  |  |  |  |
| --- | --- | --- | --- |
| **Category** | **Title** | **Phone Number** | **alternate contact** |
| First Responders | EMS |  |  |
| Local Emergency Responder |  |  |
| Local Fire Department |  |  |
| Community Contacts | Mayor’s Office |  |  |
| Clinic or Hospital |  |  |
| Critical Customers |  |  |
| Regional Health Corporation |  |  |
| Radio Station |  |  |
| Newspaper |  |  |
| State Contacts | DEC Drinking Water Program  |  |  |
| Public Health Department |  |  |
| Remote Maintenance Worker |  |  |
| State Emergency Operations Center | 1-888-462-7100 |
| Alaska FBI Terrorism Contact | 276-4441 |
| State HAZMAT Team | 1-800-478-9300 |  |
| Other Contacts | Heavy Equipment Operator |  |  |
| Laboratory/ Water Testing |  |  |
| Other Service Provider (i.e., Well/Pump Service) |  |  |

|  |  |
| --- | --- |
| **Our basic fact sheets and sample health advisories are located:** |  |
| Our notification plan for delivering messages (such as public health advisories) includes the following distribution methods: |  |

Public and Media Communication Strategies

Any decision to issue a public notification should be made in consultation with the Drinking Water Program. You also should make arrangements with your local health department and/or other appropriate organizations prior to a major event in order to establish clear lines of communication.

In your press release or notice you should explain to the media what information you are trying to communicate and why. The most important information, including a description of the situation, populations at risk, instructions to consumers, and potential health effects, should be near the beginning of any press release or notice. Be sure to include a contact name and telephone number so that the media can call you for more information. Remember to avoid technical or confusing language in your press releases and notices.

General Tips on Working with the Media

* Be truthful and up-front.
* Answer questions as well as you can, but don’t be afraid to say that you need to check on something. If there is a question you can’t answer (once you find the information, quickly report back on what you’ve found).
* Be sensitive to the fact that reporters may be working on tight deadlines.
* Provide a list of elements that should be addressed.
* Don’t be upset if a newspaper article or news report isn’t exactly as you would want it, but politely. Tell a reporter if a significant piece of information is wrong or missing.
* Don’t be defensive when answering questions.

You should consider the amount of water needed to address short-term (hours to days) and long-term (weeks to months) outages. A short-term disruption in service might be due to communication or electrical power outages. However, if your PWS will need extensive restoration or if portions of the system have been destroyed, you will need a long-term alternate water supply. Fill out the table below with the appropriate information about your alternate water supply:

Short-Term Alternate Water Supply

|  |  |
| --- | --- |
| **what is the name/description for your short-term water source?**(e.g., lake, well, water hauler) |  |
| Where is the source located?(Describe the physical location, you may want to use GPS coordinates, if applicable) |  |
| Is the water supply treated?(If the emergency water supply is NOT treated, how do you plan to make the water safe for human consumption?) |  |
| describe any sampling or field tests that will be done prior to using the short-term alternative source(s). |  |

Long-Term Alternate Water Supply

|  |  |
| --- | --- |
| **what is the name/description for your long-term water source?**(e.g., lake, well, water hauler) |  |
| where is the source located?(Describe the physical location, you may want to use GPS coordinates, if applicable) |  |
| Is the water supply treated?(If the emergency water supply is NOT treated, how do you plan to make the water safe for human consumption?) |  |
| describe any sampling or field tests that will be done prior to using the long-term alternative source(s). |  |

|  |  |
| --- | --- |
| **Describe how and where your alternative water supply will be stored.** |  |
| How much water can be stored (in gallons)? |  |
| Describe how the alternative water supply will be distributed to customers. |  |
| Describe how you will communicate with your customers about where they can get access to potable drinking water during an emergency if normal delivery methods are compromised. |  |
| If your PWS provides water for other purposes like fire suppression, describe how water will be distributed to those customers. |  |

A commonly reported impact from many natural disasters is the loss of electrical power from the normal utility supplier. You can be prepared for a loss of power through redundant electrical service supplies. In the space below, document the electrical service system operation and power needs for your utility:

|  |  |
| --- | --- |
| **describe your primary power source.** |  |
| Please list the critical parts of your electrical system. |  |
| Describe where the critical parts of the electrical system are located (if you have back-up power, please include the manufacturer, model/serial number and vendor contact information). |  |

Can your system produce water without electricity? [ ] Yes [ ] No If so, for how long? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| **Describe how your system can operate with less power.** |  |

Do you have backup power? [ ] Yes [ ] No If *Yes*, provide the following information in the table below:

|  |  |
| --- | --- |
| **auxiliary power model number or description:** |  |
| type of spare parts on hand: |  |
| Auxiliary power primary manufacturer or supplier: |  |
| Contact phone: |  |
| Alternate supplier: |  |
| Contact phone: |  |

Do you have a generator? [ ] Yes [ ] No If *Yes*, provide the following information in the table below:

|  |  |
| --- | --- |
| **MAKE/MODEL:** |  |
| Contact for replacement parts: |  |
| Phone number: |  |
| Fuel type: |  |

By specifying water sampling and monitoring methods, you can determine whether the drinking water you supply is safe for public consumption. In this section, you will include standard, routine water tests that are conducted for your facility. Also, consider where you might take samples and monitor your water during an emergency. Try to identify and address special water sampling and monitoring issues that may arise during and after a major event.

Describe your standard treatment and monitoring plans in the space provided below:

|  |  |
| --- | --- |
| **Our monitoring plan location is:** |  |
| The person responsible for routine monitoring is: |  |
| Our emergency sample collection kit is located: |  |

Describe your specific testing and analysis techniques below:

|  |  |
| --- | --- |
| **standard monitoring analysis:** |  |
| Frequency: |  |
| Laboratory (or in-house lab): |  |
| Contact person for laboratory analysis: |  |
| Contact phone: |  |

Specify your designated contact information for laboratory sample testing below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **analysis** | **laboratory** | **physical address** | **Contact person** | **contact Phone** |
| Pathogens |  |  |  |  |
| Chemical  |  |  |  |  |
| Radiological |  |  |  |  |
| Chemical Warfare or WMD Agents | National Response Center | Seattle Office | 24- hour duty officer | 1-800-424-88021-206-553-1263 |

Staff Training Evaluation History

Training can include briefing sessions, classroom sessions, or mock exercises. You should also remember to do “refresher” training on a regular basis. Training should include testing of the plan. Drills and exercises that challenge the information in the ERP should be conducted at least annually. In the table below, record any future exercises and/or training events:

|  |  |  |
| --- | --- | --- |
| **date** | **description of exercise or training event** | **participants** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

1. Drinking Water Warnings

***(Note: The health advisories below must be customized and completed prior to use)***

**DRINKING WATER WARNING**

**#System#** water is contaminated with **#fecal coliform#** or **#E. coli#**

BOIL YOUR WATER BEFORE USING

**#Fecal coliform#** or **#E. coli#** bacteria were found in the water supply on **#date#.** These bacteria can make you sick, and are a particular concern for people with weakened immune systems.

**What should I do?**

* **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a boil, let it boil for one minute, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation **until further notice**. Boiling kills bacteria and other organisms in the water.
* *Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.*
* If you experience any of these symptoms and they persist, you may want to seek medical advice. People at increased risk should seek advice about drinking water from their health care providers.

**What happened? What is being done?**

Bacterial contamination can occur when increased run-off enters the drinking water source (for example, following heavy rains). It can also happen due to a break in the distribution system (pipes) or a failure in the water treatment process.

**#Describe corrective action.#** We will inform you when tests show no bacteria and you no longer need to boil your water. We anticipate resolving the problem within **#estimated time frame#**.

For more information, please contact **#name of contact#** at **#phone number#** or **#mailing address#.** General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1(800) 426-4791.

*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*

This notice is being sent to you by **#system#.** State Water System ID Number: \_\_\_\_\_\_\_\_\_\_\_. Date distributed: \_\_\_\_\_\_\_\_\_\_\_.

**DRINKING WATER WARNING**

BOIL YOUR WATER BEFORE USING

Disease-causing organisms have entered **#systems#** water supply.

These organisms are causing illness in people served by **#system#** . We learned of a waterborne disease outbreak from **#agency#** on **#date#** .

**What should I do?**

* **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a boil, let it boil for one minute, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, food preparation and bathing until further notice. Boiling kills bacteria and other organisms in the water.
* **#Describe symptoms of the waterborne disease.#** If you experience one or more of these symptoms and they persist, contact your doctor. People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers.

**What happened? What is being done?**

**#Describe the outbreak, corrective action, and when the outbreak might end.#**

We will inform you when you no longer need to boil your water.

For more information, please contact **#name of contact#** at **#phone number#** or **#mailing address#** . General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1(800) 426-4791.

*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*

This notice is being sent to you by **#system#**. State Water System ID Number: \_\_\_\_\_\_\_\_\_\_\_. Date distributed: \_\_\_\_\_\_\_\_\_\_\_.

**WARNING**

**DO NOT DRINK THE WATER**

**#Contaminant#** found in the **#PWS Name#** water supply on **#Date#**

Bottled water can be obtained at **#Location and Time 24 hours per day#** .

**What should I do?**

* Do NOT drink the water.
* Symptoms associated with **#insert symptoms of contaminant here#** .
* If you or someone you know exhibits any of these symptoms, immediately contact your health care provider. In addition, please notify the public health department at **#insert phone number here#** .

**What happened? What is being done?**

**SAMPLE NARRATIVE**: On October 10th, the water distribution system was contaminated with cyanide. We are working with law enforcement and the public health department to investigate/resolve this issue. We have tested the water in various parts of the distribution system to verify the extent of the cyanide contamination. Based on these tests, we have isolated the portion of the system located north of Aspen Street and east of River Road. Everyone in this portion of the system should not drink the water. We have implemented additional security procedures to protect the system against further contamination. Additional information will be provided 24 hours/day on Channel 57- the local government television channel.

For more information, please contact **#contact name#** at **#phone number#** . More information is also available from **#insert Local ADEC and Public Health numbers here#** .

*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.*

This notice is being sent to you by **#Name of PWS#** . State Water System IDNum **#PWS ID Num#** . Date distributed: **#date#**

1. Sample Collection Guidelines

**Safety guidelines**

1. Do not enter the site to perform sampling until cleared. Hazardous materials response units may perform safety screening before allowing other responders to enter the site. Note that field safety screening does not generally include testing for pathogens.
2. Do not eat, drink, or smoke at the site.
3. Do not taster or smell the water samples.
4. Do use general personal protective equipment (PPE) such as splash-proof goggles, disposable gloves, proper footwear (i.e., no open toe or open heel shoes), a chemical resistant, disposable lab coat and long pants. (NOTE: this level of PPE is only intended to minimize incidental contact with the water or chemical reagents used during sample collection or field testing.)
5. Avoid all skin contact with the water, and if incidental contact does occur, immediately flush the affected area with clean water brought to the site for that purpose.
6. Fill sampling containers slowly to avoid volatilization or aerosolization of contaminants.
7. Minimize the time that personnel are on the site and collecting samples.

**Sampling procedures**

1. Pre-label sample containers with a waterproof marker. Information should include: analyte class (pathogen, chemical, or radionuclide), specific analyte (if sample is being collected for a specific target), sample identification number, utility name, location of sample collection, sample collection date and time and sampler’s initials.
2. Check for the presence of any in-line filters (e.g., home treatment devices) that might interfere with sampling. Remove such devices if present.
3. If the sample tap is the suspected point of contaminant introduction, collect swab samples from tap before flushing the tap and collecting water samples.
4. Flush sample taps for a time sufficient to displace the water in connecting lines in order to obtain a sample that is representative of the water of interest. Keep the flow rate from the sample tap sufficiently low in order to avoid splashing and aerosolizing water droplets. Divert water to a drain if possible.
5. Carefully collect samples in the specified containers (see Section 3.3 of the “EPA Response Guidelines available on the Resources page). If a reagent needs to be added to the sample, allow enough headspace in the container to add the proper amount of preservative. Cap then gently mix the contents to ensure that the reagent is properly mixed with the sample. Test the sample with a strip of pH paper to ensure preservation to the proper pH. Do not insert the pH paper into the sample container. Pour a small portion of the mixed sample into the container cap then pour from the cap onto the pH paper to verify.
6. For chlorinated samples, VOCs should be collected into a secondary 8-oz. glass container (prepared with ascorbic acid- see footnote 1, Table 3.3. of the “EPA Response Guidelines” available on the Resources page). Gently mix the sample and transfer to 3, 40-ml VOA containers (triplicate). Fill the 40-ml container above the top to form a meniscus. Close the container with the Teflon side of the septa facing the water sample, gently invert the sample container several times, and verify that there are no air bubbled in the container. Once each container is tagged, the tree 40-ml containers should be inserted into a plastic whirl pack bag (provided) and sealed prior to sample storage.
7. Wipe the outside of the sealed containers with paper towel.
8. Attach custody seal to the sample container.
9. Place the sealed container into a rigid cooler and pack with frozen ice packs (preferred) or sealable freezer bags filled with ice.
10. Tag each sample and record all necessary information on “Sample Documentation” and “Chain of Custody” forms.
11. After all samples have been collected, preservative blanks and temperature blanks should be prepared and tagged. A preservative blank should be prepared for each preservative used during the sampling event. The preservative blank can be prepared by adding the appropriate amount of preservative to the preservative blank should be analyzed for metals). Additionally, a temperature blank container should be placed in each cooler containing samples.

**Sample holding**

1. When samples are not in the possession of designated personnel, they should be secured (e.g., locked in a secure area) and only accessible by designated personnel. In the field, samples may need to be locked in a vehicle.
2. Samples should be chilled, but protected from freezing.
3. Samples should be held at the drinking water utility lab until shipped to a lab for analysis or until it is determined that they are not needed.
4. Samples that are held longer than the approved holding times for contaminant analysis may no longer be useful.

**Sample trnasport**

1. Sample integrity and chain of custody must be maintained. All factors that might compromise sample integrity (e.g., storage containers, excessive transit time, temperature, pressure, physical disturbance, etc.) should be considered and appropriate measures taken to avoid compromising samples.
2. Sample packaging must be in compliance with shipping regulations.
3. Samples may be screened by law enforcement and/or ICs prior to sample transport to the laboratory.
4. Samples will be transported to the appropriate laboratory in coordination with law enforcement using appropriate air and ground assets.
5. Recommended Emergency Water Sample Collection Kit

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| --- | --- | --- | --- |
| **Item** | **quantity** | **notes** | **quantity** |
| Field Resources and Documentation |
| Field guide | 2 | Resource for field personnel |  |
| Health and safety plan | 2 | If required for the site |  |
| Chain of custody forms | 24 | For documenting sample custody |  |
| Lab marker | 2 | Waterproof, 1 red, 1 black |  |
| General Sampling Supplies |
| Sample containers | Various | For collecting samples |  |
| Device for grab sampling | 1 | For sampling large water bodies |  |
| 10 liter HDPE container | 4 | For collection of large volume water samples |  |
| Collapsible cooler | 1 | For sample storage |  |
| Rigid shipping container | 1 | For shipping by overnight service if needed |  |
| 1 qt. zippered freezer bags | 1 pack of 100 | For double bagging ice and sample containers |  |
| Paper towels | 2 rolls | Wiping wet containers and containing spills |  |
| Safety Supplies |
| Splash resistant goggles | 2 | One per individual (minimum) |  |
| Disposable gloves | 6 pairs | Nitrile or polyethylene, powder-free |  |
| Disposable shoe covers | 2 pairs | One pair per individual (minimum) |  |
| Disposable laboratory coats | 2 | One pair individual (minimum) |  |
| Clear, heavy duty plastic trash bags | 4 | For disposal of lab coat, gloves, etc. |  |
| Rinse water | 20 liters | For general use and first aid |  |
| Antiseptic wipes | 1 pkg | For cleaning hands, sample containers, etc. |  |
| Bleach solution (at least 5%) | 1 gallon | For decontamination if necessary |  |
| Squirt bottle | 2 | For use with rinse water or lab grade water |  |
| First aid kit | 1 | For general first aid |  |
| Flashlight/headlamp | 3 | For working at night or in dark locations |  |
| Respirator | 2 | As required, if respiratory program in place |  |
| Respirator cartridges | Assorted | Organic Vapor, HEPA, Chlorine, as required |  |
|  |  |  |  |