VILLAGE OF CHASE
BRITISH COLUMBIA

EMERGENCY RESPONSE PLAN

FOR CONTINUED SUPPLY OF

SAFE POTABLE DRINKING WATER

& WATER FOR FIRE FIGHTING PURPOSES

During a major emergency a command center will be set up at the Water Plant or Public Works Yard, whichever site is the safest. A plan of action and notifications will be determined and put in place to correctly deal with the emergency by the individual who is in charge. Communications must be submitted to all who are involved.

January 29, 2020

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INTRODUCTION

PROTECTING PUBLIC HEALTH

Safe and reliable drinking water is vital to every community. Emergency response planning is an essential part of managing a drinking water system. Most public water systems have had routine operating emergencies such as pipe breaks, pump malfunctions, bacteriological contamination, and power outages. These are manageable if the water system has an emergency response plan that can be put into action. More serious non-routine emergencies may result from intentional acts of vandalism, chemical spills, floods, earthquakes, windstorms, or droughts. These can drastically affect the system and the community that depends on it. Each emergency has unique effects on different parts of a water system. Floods can cause widespread bacterial contamination, earthquakes can damage water sources, distribution systems and treatment systems, and storms can disrupt power supplies. The common element is that each emergency may threaten the system's ability to deliver potable and palatable drinking water. Emergency response planning is a process by which water system managers and staff explore vulnerabilities, make improvements, and establish procedures to follow in an emergency situation. It is also a process that encourages people to form partnerships and get to know one another. Preparing a response plan and practicing it can save lives, prevent illness, enhance system security, minimize property damage, and lessen the overall burden of a catastrophic event and the cost associated to the disaster.

EMERGENCY RESPONSE PLAN MISSION AND GOALS

Mission statement for Emergency Response Plan	In an emergency, the mission of the Village of Chase is to protect the health of customers by being prepared to respond immediately to a variety of events that may result in contamination of the water or disruption of supplying water via floods, storms, earthquakes, and vandalism.
Goal 1	Be able to quickly identify an emergency and initiate a timely and effective response to the situation at hand.
Goal 2	Be able to quickly notify local and regional authorities to assist in the response if utilities cannot respond effectively.
Goal 3	Protect public health by being able to quickly determine if the water is not potable nor palatable to drink or use and being able to immediately notify customers effectively of the situation and advise them of an appropriate protective action plan.
Goal 4	To be able to quickly respond and repair damages to minimize system down time and the potential of illness associated to water quality in the event of a rare emergency.

WATER SOURCE

Thompson River Surface Water Source

Chase has historically relied on surface water derived from an intake in the South Thompson River. The surface water source infrastructure consists of the Raw Water Pump Station followed by direct membrane filtration, two stage disinfection and treated water pumping at the Water Treatment Plant.

Raw water is diverted from the South Thompson River to the Raw Water Pump Station wet well through a 300 mm diameter intake pipe. The Raw Water Pump Station on the right-hand side of the River and the approximate location of the submerged intake. The intake pipe has a cylindrical fish screen at a depth of approximately 4 meters below the water surface. Flow from the intake is controlled into the wet well using a slide gate mounted on the inside of the wet well. Two 50Hp vertical turbine pumps (1 duty/1 standby) convey raw water from the wet well to the Water Treatment Plant (WTP) through a dedicated 250/300mm raw water transmission main. Provision for pretreatment chemicals (coagulant and pre-chlorination) is included at the Raw Water Pump Station but not being used currently.

Production Well Groundwater Source

The well is located at the treatment plant site adjacent to Mill Park in Chase. The village's groundwater source was drilled in the fall of 2012 and commissioned in 2014 as part of the overall water system improvement project. The production well installation followed a previous phase of investigation that involved the drilling and testing of a 150 mm (6 inch) diameter test well at Mill Park, as documented in a report by Summit Environmental Consultants (Summit, 2006).

DISTRIBUTION SYSTEM

The Village of Chase water utility serves a population of approximately 2,600, and there are approximately 1,200 service connections. Current (based on 2010) maximum day demand is approximately 75 L/sec with projected future (2033) maximum day demand estimated at 115.7 L/sec. Major components of the water system from source to tap includes the following:

- One (1) surface source – South Thompson River intake;
- One (1) groundwater well (production well) and one backup well (test well);
- Water treatment plant;
- Raw water transmission main from intake pumps station to the water treatment plant;
- 2 storage reservoirs totaling approximately 2,100 m3 of storage; and
- 25 kilometers of distribution piping ranging in diameter from 100 mm to 400 mm.

PRESSURE ZONES

The distribution system is segregated into one pressure zone with 2 storage reservoirs totaling approximately 2,100 m3 of storage.

EVENTS THAT CAUSE EMERGENCIES

The main purpose of this plan is to address a situation where the raw water for the Village of Chase has been contaminated due to an accident on the railway or highway. CPR tracks and the Trans-Canada Highway run parallel with Shuswap Lake, creating risk management concerns. Other possible emergencies considered include:

- Natural disasters
- Accidents
- Deliberate acts of vandalism or terrorism
- System neglect or deferred maintenance

An emergency may affect the entire water system or only isolated sections. Each type of event can cause different types of damage to system components or contamination resulting in a disruption in service. Evaluations should be considered in how to respond to these actions.

NATURAL DISASTERS

EARTHQUAKES

Damage resulting from the earth shifting along geologic faults resulting in shaking and settling of the ground can cause severe structural damage to virtually all water system facilities, including sources, transmission and distribution lines, storage reservoirs, and pump-houses.

FLOODS

Floods can cause widespread contamination as turbid waters carry bacteria that can overflow sources, transmission lines, treatment facilities, and pumping facilities. Floods can also ruin electrical components and telemetry systems. Fortunately, from experience, the drinking water system has not been vulnerable to high flooding.

HIGH WINDS

Every so often high winds occur in the region and they can pose a threat mainly to the power supply.

DROUGHT

Severe droughts have the potential to compromise the water supply network, specifically the Mill Park Wells, which could endure periods of significant reduction in volume late in the summer.

WATERBORNE DISEASES

Organisms such as *Giardia*, *Cryptosporidium, E. coli and viruses* can contaminate water supplies and cause waterborne diseases. It is very important to monitor the treatment processes, maintain positive pressure and maintain an adequate disinfection residual throughout the water distribution network to ensure the delivery of safe, potable water.

HUMAN-CAUSED EVENTS:

HUMAN-CAUSED EVENTS THAT CAN RESULT IN A WATER SYSTEM EMERGENCY INCLUDE CHEMICAL SPILLS, VANDALISM, TERRORISM, CYBER-ATTACK, FIRES, CONSTRUCTION ACCIDENTS, AND BASIC NEGLECT OF MAINTAINING THE SYSTEM.

VANDALISM

Vandalism is generally a spur-of-the-moment act using materials at hand rather than pre-planned or pre-meditated activities. Vandals often break into systems, damage facilities, and paint graffiti. These acts are relatively easy to prevent by enhancing security, increasing lighting, installing locks on doors and hatches, and installing and maintaining security fencing.

TERRORISM

Acts of terrorism are conducted by someone whose intent is to instill fear or induce harm to people and facilities. Acts of terrorism are a very real threat. Even though it may seem unlikely, it would only take one well-staged event to undermine confidence in drinking water safety. Being prepared and knowing what to look for are crucial elements of preventing an attack on the system.

CHEMICAL SPILLS

Many chemicals that are routinely transported can harm humans directly or by contaminating air or water. No drinking water system is safe from a hazardous chemical spill and the resulting contamination. Spills can come from motor vehicles, trains, airplanes, boats, or fixed containers. They can occur at any time without warning.

EMERGENCY SEVERITY

Emergencies usually have a wide range of severity. Defining categories of severity can significantly aid in determining appropriate response actions and notifying correct agencies to assist with the emergency. Knowing the severity of the emergency and being able to communicate it to others will help system personnel keep their response balanced and effective.

Deciding on severity should be collaborative among system personnel with who could be potentially involved with the emergency. The individual in charge may also choose to coordinate with external parties, especially if partnerships have been formed and are part of the ERP contacts. The information for making the decision will progressively increase over time and may result in the level of severity being changed and other actions required.

After an assessment of the severity, the assessment must be communicated immediately to all those dealing with the emergency. Make sure personnel have cell phones and/or radios when they are in the field assisting. Remember to have an alternative method of communicating if cell phones don't work or in a worst-case scenario event. The buddy system should be utilized if personnel power is available.

TYPE I – ROUTINE EMERGENCY

The system experiences a normal emergency, such as a line break or power outage. System personnel can handle the problem with minimal assistance. The situation is not likely to negatively impact public health. Although it is important to begin responding, personnel should have no difficulty remaining calm and work thoroughly through the situation. Normal events can usually be resolved within 24 hours.

Description: The Village of Chase Water System Type 1 Emergencies

- Distribution line breaks
- Short power outages
- Minor mechanical problems in pump-houses
- Other minor situations where it is not likely that public health be affected (Fire hydrant strike)

The system has specific response activities identified for these types of emergencies, including proper sampling, disinfection, and pressure testing activities. System personnel

are advised and are directed to work on the problem and are usually capable of resolving the problem within 24 hours from the first notification. If it is determined the event will last longer than 24 hours and storage is likely to be drawn down below a safe operating level, the situation may be elevated to a Type 2.

TYPE II – MINOR EMERGENCY

The system experiences minor disruption in supply or has indications of possible contamination where it may need to coordinate with Interior Health Authority (IHA) and consider issuing an advisory to customers. In these types of emergencies, health may be jeopardized, so it is important for system personnel to be on alert and initiate a quick response. These emergencies can usually be resolved within 48 - 72 hours.

Description: The Village of Chase Water System Type II Emergencies:

- Disruption in supply such as a transmission main line break, pump failure with a potential for backflow and loss of pressure
- Storage is not adequate to handle disruption in supply
- An initial positive bacteriological sample (E. coli)
- An initial primary chemical contaminant sample
- A minor act of vandalism
- Drought conditions

TYPE III – SIGNIFICANT EMERGENCY

The system experiences significant mechanical or contamination problems where disruption in supply is inevitable and assistance from Interior Health Authority (IHA) is needed. Major emergencies should be reported to Interior Health Authority and Ministry of Environment as soon as possible to determine the best available means of protection. System personnel are directed to the situation and outside agencies are notified to aid in the response. Major emergencies may extend beyond 72 hours before resolution.

Description: The Village of Chase Water System Type III Emergencies:

- A confirmed coliform MCL or E. coli/fecal positive sample, requiring immediate consideration of a boil water advisory notice to customers
- A confirmed sample of another primary contaminant requiring immediate consideration of a boil water advisory notice to customers (ie. Cryptosporidium, Giardia Lamblia, Turbidity)
- A loss or complete malfunction of the Water Treatment Facilities for surface water treatment, including disinfection
- A major line break or other system failure resulting in a water shortage or requiring system shutdown
- An act of vandalism or terrorist threat such as damage to Water System Facilities
- Disinfection system failure

TYPE IV – CATASTROPHIC DISASTER/MAJOR EMERGENCY:

The water system experiences major damage or contamination from a natural disaster, an accident, an act of terrorism, and/or vandalism. These incidents require immediate notification of local law enforcement and local emergency governing services (IHA, MOE, PEP). Immediate notification of Interior Health Authorities is critical to protect public health. These types of emergencies are usually not resolved quickly, depending on circumstances.

Description: The Village of Chase Water System Type IV Emergencies:

- Chemical spill that comes into area of the system's source(s)
- High flood or landslide that infiltrates/contaminates system
- Act of terrorism possibly contaminating the water system with biological or chemical agents
- Storm that significantly damages power grid and system operations

EMERGENCY NOTIFICATION

During most emergencies it will be necessary to notify a variety of government agencies. Type III and Type IV emergencies will require this to be done immediately.

Procedure:	• Operator in charge will assess the situation and take immediate action. • Notification to Local Authorities (Interior Health) • Operator notifies Village of Chase Management • The water notification will be distributed by: 1. Personnel placing "**water notices**" on doors and along travel routes 2. Personnel will do whatever it takes to notify the community 3. The City Administrator will notify local radio station, television and news paper 4. Administrative support person will provide pre-scripted message to telephone callers or media and log message that was delivered in a timely basis • Public Works personnel will continuously update The Village of Chase and surrounding community and regulatory agencies on water advisory • Once resolved, notify customers of rescinding notices

Notification call-out list:
Use the following lists to notify appropriate personnel and agencies during an emergency

MANAGEMENT PERSONNEL				
Title	**Name**	**Home**	**Office**	**Cell**
Public Works Leadhand	Guy Spencer		250-679-3238	250-280-1190
Utilities Operator 2	John Fandrey	250-604-8310	250-679-3238	250-318-9482
Director of Corporate operations	Sean O'Flaherty		250-679-3238	
Administrative Support & Client Services	Joni Heinrich		250-679-3238	250-320-8419
Chief Financial Officer	Vacant		250-679-3238	
Utility Operator 1	Tyler Magnusson		250-572-1611	250-318-2467
Fire Chief – Fire & Rescue Services	Brian Lauzon		250-220-3032	

Once contacted, Management personnel will assess the situation and if the incident is of a nature that requires a Village of Chase response team, Management will contact waterworks personnel on the following call out list:

WATER WORKS PERSONNEL – TREATMENT/DISTRIBUTION SYSTEM			
Name	**Home**	**Office**	**Cell**
Richard Bastiaansen-(Cloudburst Waterworks) WTP Cheif Operator			250-253-2534
John Fandery-WTP/Utility Operator	250-604-8310	250-679-3238	250-318-9482
Tyler Magnusson-WTP/Utility Operator		250-679-3238	250-572-2411

WATER WORKS PERSONNEL - UTILITY SERVICES			
Name	**Home**	**Cell**	
John Fandery	250-604-8310	250-318-2467	

The responding personnel will make the assessment of the situation and notify proper authority and take the necessary steps to correct the situation.

If contamination of water is suspected, in addition to calling management personnel, the following list includes contacts for further potential necessary notification which should be identified by management:

INTERIOR HEALTH AUTHORITY			
Name	**Title**	**Office**	**Cell**
Diana Tesic-Nagalingam	Specialist EHO	250.851.7340	250.320.0501
Emergency After Hours		1.866.457.5648	

PROVINCIAL GOVERNMENT			
Provincial Emergency Program (PEP)			250.832.2424
Ministry of Wildfire and Management Branch			1.800.663.5555
Ministry of Environment			1.800.663.3456
Ministry of Agriculture and Lands			250.387.5121
BC Hydro			1.877.520.1182

HOSPITALS			
Chase and District Health Centre			250.679.3312
Kamloops Royal Inland Hospital			250.372.5111

CHASE FIRE DEPARTMENT			
Name	**Title**	**Home**	**Office**
Brain Lauzon	Fire Chief		250-220-3032

If no fire department member can be contacted call 911 if call already has not been made

Interior Health Emergency Contact Numbers

The following is meant to assist water suppliers to reach their Interior Health representative in the event of a water quality problem as part of their Emergency Response Plan protocol. Please include this information in your Water System Emergency Response Plan.

During Office Hours [8:00 am – 4:30 pm weekdays]

Direct contact:

Diana Tesic- Nagalingam, Specialist Environmental Health Officer

1-250-851-7340 Direct office line or 1-250-320-0501 Cell

If your direct contact is not available our administrative staff will direct your call to the Specialist Environmental Officer covering the area

Please call **1-250-851-7340 [Kamloops office]** & do the following:

- State your name
- Water system
- Contact numbers you can be reached at
- And the fact that this is an emergency call
-

After Hours [after 4:30 pm weekdays/weekends & Statutory Holidays]

- Call the Medical Health Officer on call at 1-866-457-5648

EMERGENCY SERVICES			
			Telephone
Regional Fire Departments			911
BC Ambulance Service			250.828.5888 or 911
Chase RCMP		Daytime	250.679.3238
		After hours	911
Columbia Shuswap Regional District		Daytime	250.832.8194
Shuswap Emergency Program	Co-Ordinator Cliff Doherty		250.832.8194 Cell: 250.833.6556
Canadian Pacific Railway Emergency			1.800.795.7851
Canadian Pacific Railway Police			1.800.716.9132
FortisBC (Natural Gas)			1.800.663.9911
Copper Island Diving Ltd	Paul Downey		250-832-5737
AIM Roads Inc.		1.866.222.4204	778.215.6054

LOCAL MEDIA		
Type	**Name**	**Telephone**
Radio	CHNL	250.372.2292
Radio		
Television	CFJC	250.372.3322
Newspaper	Chase Sunflower	250.320.3050

TRADESMEN			
Company	**Name**	**Telephone**	**Cell**
Plumbing			
Spooner Plumbing			250.679.3373
Electrical			
Centrix Instrumentation	Gordon Jensen		250.550.4737
Spooner Electric			250.679.3373
Excavators			
Shykat Contracting			2503191358

EQUIPMENT SUPPLIERS

Company	Name	Telephone
Centrix- BG Controls	Dom Sacco	604.942.0288
EMPS	Bob Grantham	250.470.8963
Trojan Technologies	Anders Nielson	1.800.291.0213
Smith Cameron Pump Solutions		1.800.663.5841
Hayward Gordon Ltd		604.986.8464
Mearl's Machine	Greg Anderson	250.763.0109
Wolsely Canada		250.765.5186
Iconix Water Works-Kamloops		250.374.7909

TESTING AGENCIES – ENVIRONMENTAL MONITORING

Company	Name	Telephone
ALS Environmental Kamloops		250.372.3588

WATER QUALITY SAMPLING

Many types of emergencies can jeopardize the quality of water and adversely affect those using the water. The primary objective for any water system is to protect human health, the system must know how to act quickly and make decisions on whether to issue a health advisory. Sampling and obtaining results from a lab takes time.

If there is reason to believe that the water has been contaminated, the Director of Public Works and/or Chief Operator should consult Interior Health Authorities and consider issuing a health advisory as soon as possible – often before conducting water quality sampling.

Contamination of drinking water, whether intentional or unintentional, comes in many forms, which are classified in four general categories:

- Inorganics such as metals or cyanide
- Organics such as pesticides or volatile compounds
- Radionuclides
- Pathogenic microorganisms or microbial organisms

If the water system is experiencing an emergency caused by a natural event or intentional act and contamination is suspected, system personnel may be faced with making a decision about what contaminants to test for and how to get the tests performed quickly.

If contamination is suspected, Interior Health Authorities should be contacted to assist with the direction as to what testing should be completed. If it is suspected that someone intentionally sabotaged the system or contaminated the water, this may be a crime scene and Interior Health shall be notified immediately as well as the local RCMP Detachment.

Coliform Bacteria: In the event of an emergency, testing for coliform is a standard first test, and if detected it is a signal that the system may be contaminated. Coliform bacteria are organisms that are present in the environment and in the feces of all warm-blooded animals, including humans. Coliform bacteria generally do not cause illness, but their presence indicates that other disease-causing organisms (pathogens) may be present in the water system. Most pathogens that contaminate water supplies come from the feces of humans or animals. Testing drinking water for all possible pathogens is complex, time-consuming, and expensive. Coliform

testing is, however, relatively quick, easy, and inexpensive. Public water systems must test for coliform bacteria regularly as per the GCDWQ.

Heterotrophic Plate Count (HPC): This test provides information regarding the numbers of bacteria that may have been introduced into the water. HPC counts with significant growth require immediate action. Very high levels (1000 – 10,000 and greater) would suggest a problem that needs immediate evaluation.

Chlorine Residual: In chlorinated systems, this test indicates if materials introduced into the water have created a demand for the chlorine, leaving lower-than-normal or no residual and signaling the need for further evaluations. Samples need to be taken at the distal end of the distribution system (the point farthest from the start of the distribution system).

Chlorine Demand: This test reveals unusual demands on the oxidizing capability of the added chlorine, indicating the presence of a contaminant that warrants further investigation.

Total Organic Carbon (TOC): Relatively simple to perform, normal expected levels range from 0.2 to 4.0 mg/L for surface water and 0.01 to 2.0 mg/L for groundwater. Higher levels may indicate the presence of organic materials that could pose a health concern.

Trihalomethanes & Haloacetic Acid (THM & HAA): Disinfection by-products such as Trihalomethanes and Haloacetic acids. High levels suggest that contamination has occurred or that organic materials have been added to enable formation of disinfection by-products.

Cyanide: This test is not easily performed, but should be done immediately if cyanide contamination is suspected. Presence may indicate a source of water pollution that must be traced and eliminated. It may be noted that toxicity is related to pH with a deleterious effect at pH = 6 and can become innocuous at pH > 8 (may be decomposed to carbon dioxide and nitrogen gas). Deterioration of cyanide happens in open streams and further reduction because of bacterial action. Time is the key for the reduction of cyanide. Cyanide is very poisonous. The lungs, gastrointestinal tract and skin absorb cyanide.

Sampling SOP is attached in appendix. Testing agency is listed in contact list.

EFFECTIVE COMMUNICATION

Effective communications are a key element of emergency response.

Developing partnerships with others in your local emergency response network, establishing relationships with our customers and the media, and creating communication tools such as fact sheets and media releases ahead of time will help us communicate efficiently and successfully during a crisis.

All questions and concerns should be directed to the designated spokesperson.

COMMUNICATION TIPS

Do:

- Be prepared
- Designate a spokesperson
- Provide complete, accurate, and timely information
- Tell the truth
- Express empathy
- Acknowledge uncertainty and offer to get back with more information later
- Document your communications

Do not:

- Speculate on the cause or outcome of an incident
- Blame or debate
- Minimize or brush off concerns of customers

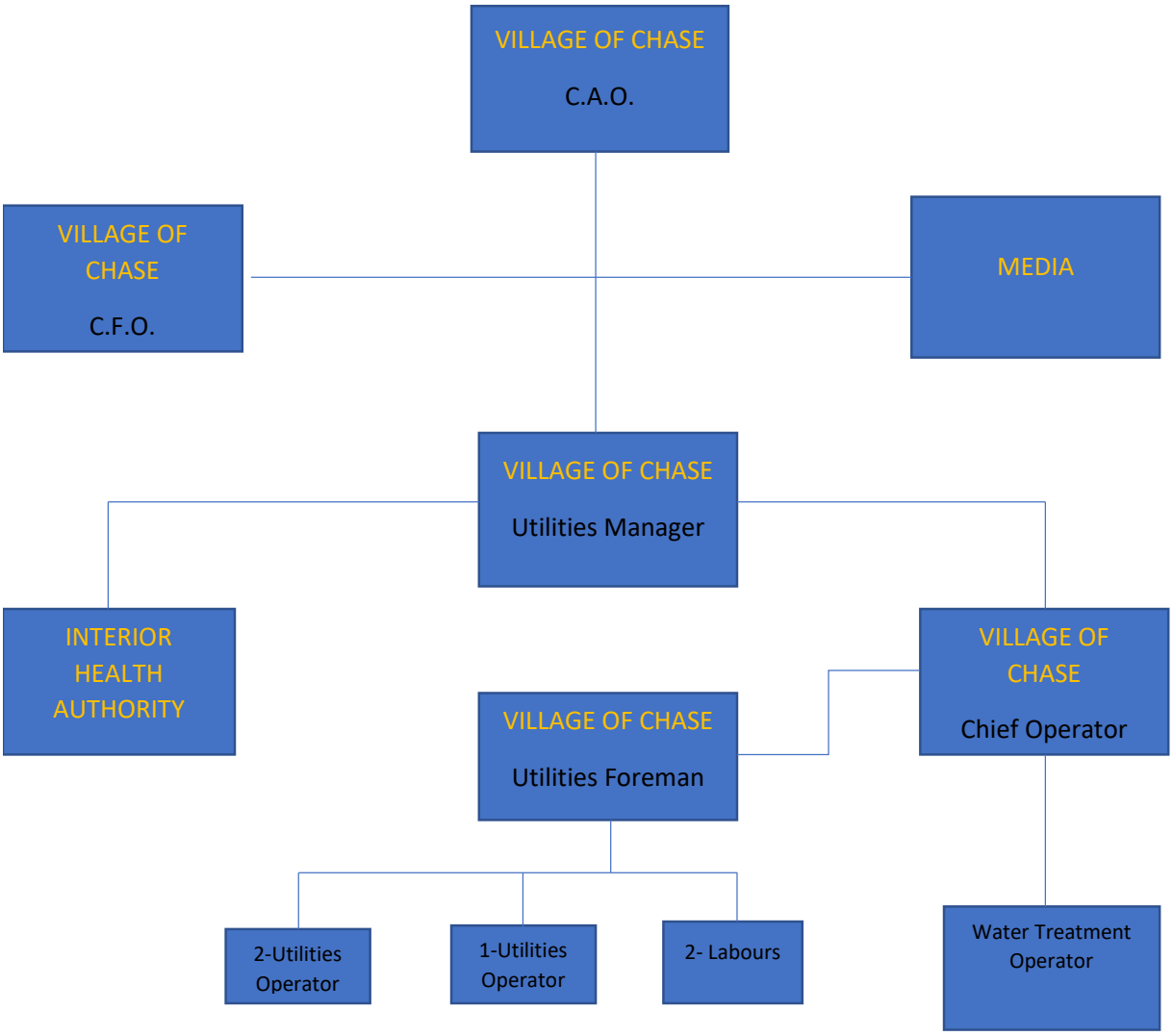
Media Spokesperson	Alternate 1	Alternate 2
City Administrator	Director of Public Works	Public Works Foreman

KEY MESSAGES

Develop possible messages in advance, and update them as the emergency develops:

- We are taking this incident seriously and doing everything we can to resolve it
- Our primary concern is protecting our customers' health
- Another important concern is keeping the system operational and preventing damage
- What we know right now is_?????????????
- The information we have is incomplete at this time; we will keep you informed as soon as we know more
- We have contacted regional and local authorities to help us respond effectively and to correct the current situation as soon as possible
- If you think you may be ill or need medical advice, contact your local physician or go to the emergency room of the hospital
- We are sampling the water and doing tests to determine whether there is a potential cause of contamination

CHAIN OF CUSTODY



RESPONSIVE ACTIONS

GENERAL

EXTENDED POWER FAILURE – TYPE IV

1. Call Power Company at **1.877.520.1182** to check status and duration of power outage.
2. Contact IHA and Director of Public Works for approval to utilize emergency sources.
3. Flush creek sources and confirm adequate disinfectant residual.
4. Increase flow from creek sources to satellite reservoirs.
5. Adjust PRV operation to allow flow from satellite to primary reservoir.
6. Notify contacts list of the possibility of water shortages if power outage is prolonged.

DISTRIBUTION/WTP COMMUNICATION LOSS FOR EXTENDED PERIOD – TYPE IV

1. Determine if problem is radio or SCADA issue;
2. Call Village of Chase IT Department and Centrix Instrumentation for assistance if problem cannot be rectified by operations;
3. If communication problem persists, call out operations personnel to operate and monitor distribution or Water Treatment Plant manually.

CHEMICAL SPILLS – TYPE IV

AT CITY FACILITY OR WATER PLANT

1. Obtain SDS if possible and report spill (required by law);
2. Contain and prevent spill from entering storm or sanitary sewer by using rubber or clay mats and sandbags;
3. Use proper PPE including appropriate respiratory protection for specific chemical;
4. If possible, neutralize chemicals which are alkaline or acid using spill kit neutralizers.

TRANSPORT CHEMICAL TRUCK SPILL

1. Contain and prevent spill from entering storm or sanitary sewer by using rubber mats or sandbags;
2. By law all chemical spills are to be reported;
3. Use proper PPE and necessary breathing protection for specific chemical;
4. If possible, neutralize chemical which are alkaline or acid using spill kit neutralizers.
5.

TRAIN DERAILMENT AND CONTAMINATION

1. Assess damage. If there is a liquid chemical spill, shut down the water intake to the plant and the Seton fan wells. Use contact notification list and get emergency help;
2. If there is a gas leak, evacuate Facilities and use laptop at a safe location to operate facilities.
3.

FIRE AT WTP OR DISTRIBUTION BUILDINGS – TYPE IV

1. If fire cannot be contained using a fire extinguisher, evacuate building leaving doors closed and call 911;
2. Once outside take roll call of all contractors, chemical delivery personnel and employees;
3. Open all gate accesses to the plant or facility for fire department.

FOREST FIRE ENCROACHING CITY – TYPE IV

1. Increase all reservoir fill set points and maintain maximum water storage capacity for firefighting;
2. Have emergency sources ready for increased flow capacity including disinfection quantities on hand and enough to last for the duration;
3. Increase manpower to monitor and assist with operation and to work with the fire department's need for volume and increased pressure.

RIVER FLOOD LEVEL – TYPE IV

1. In the event the river level rises above normal conditions at the WTP, there is risk of untreated water entering the clear well;
2. Organize a task force to sandbag and, using polyethylene plastic, seal off WTP;
3. Use a backhoe/loader to move sand around well heads to build a safety dike.

INTRUSION ALARMS – TYPE IV

1. Dispatch will call standby personnel with location of site intrusion alarm;
2. Do a drive-by of location and have dispatch call the RCMP if location is not secure or suspicious activity is observed;
3. Record license plate numbers and description of vehicle and/or individuals if safe to do so. Do not confront individuals. Wait for the RCMP;
4. Thoroughly check area for any possible type of sabotage or vandalism.

WATER TREATMENT PLANT

EXTENDED POWER FAILURE – LOCAL – TYPE IV

1. Call Power Company at **1.877.520.1182** to check status and duration of power outage.
2. Drive to the WTP and verify the backup generator has started and check fuel level.
3. Then proceed to ensure the process of running the groundwater well pump and dedicated UV reactor backup system is operative.
4. Notify contact list of the possibility of water shortages if power outage is prolonged.
5. If power outage is estimated to have a Significant Impact on our Water Supply, then contact IHA to verify the backup emergency plant groundwater production well system and dedicated UV reactor has been initiated.
6. Contact Fuel delivery supplier for the plant generator and schedule accordingly. (Full tank capacity gives approximately 6 days of operation)
7. Ensure key communication between all parties are being regularly updated during the event.
8. Verify post chlorination free chlorine target is being met and adjust as necessary.
9. Document and log raw well totalizer volume, date and time of when the event took place.
10. Make note of any problems that arise and the solution to those problems as well as any procedures or operation that could be improved upon for future incidents.
11. When incident has been resolved and the power is back on, contact all parties to inform them of the update and ensure the Water Treatment Plant system is set to its original settings.

FIRE AT WTP – TYPE IV

1. Call 911. If fire cannot be contained using a fire extinguisher, evacuate building leaving doors closed and;
2. Once outside take roll call of all contractors, chemical delivery personnel and employees;
3. Open all gate accesses to the plant for fire department.

INTRUSION ALARM – LOCAL – TYPE IV

1. Dispatch will call standby personnel with location of intrusion alarm;
2. Do a drive-by of water plant and have dispatch call the RCMP if it is not secure or suspicious activity is observed;
3. Record license plate numbers and description of vehicle and/or individuals if safe to do so. Do not confront individuals. Wait for the RCMP;
4. Thoroughly check plant for any possible type of sabotage or vandalism.

CHEMICAL SPILL – TYPE IV

1. Obtain SDS if possible and report spill (required by law);
2. Contain and prevent spill from entering storm or sanitary sewer by using rubber or clay mats and sandbags; contact personnel to bring out Vacuum Truck;
3. Use proper PPE including appropriate respiratory protection for specific chemical;
4. If possible, neutralize chemicals which are alkaline or acid using spill kit neutralizers.

WATER PLANT LOSS OF SODIUM HYPOCHLORITE GENERATOR- TYPE II

1. There should be sufficient storage in the sodium hypochlorite tanks in SHC tanks to run for several hours. The Emergency eductor post chlorination system can be connected to a pail of 12% sodium hypochlorite which is kept on site for this purpose.
2. Set feed rate by dividing the mg/l by 12. Example: plant was dosing at .90 mg/l divided by 12 =.075 mg/l.
3. The above procedure is only a short-term temporary backup until more 12% sodium hypochlorite can be provided.
4. If problem is deemed to be for an extended period, order an emergency load of 12% sodium hypochlorite carboys from distributor.

Village of Chase

BOIL WATER NOTICE

[Contaminated Water]

Contaminated water has entered the distribution system and we've received reports of people with symptoms typical of waterborne illness. Disease-causing organisms [bacteria, viruses or parasites] may have entered the distribution system. These organisms can cause symptoms such as diarrhea, abdominal cramps, headaches, nausea, vomiting or other symptoms. Boiling the water kill these organisms. People with weakened or undeveloped immune systems are most at risk [this includes; elderly people, pregnant women and their unborn, very young children [under 2], people with AIDS, cancer, diabetes or kidney disease and people being treated with immuno-suppressing medications].

Water users are advised to bring all water to a rolling boil for at least one minute and let it cool before using it or, use bottled water. Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth and food preparation until further notice. We will inform you when you no longer need to boil your water.

THIS BOIL WATER NOTICE IS EFFECTIVE _____ UNTIL FURTHER NOTICE.

ENQUIRIES?

Please call Sean O'Flaherty, Corporate Officer, Village of Chase at

250-679-3238. Interior Health – Drinking Water Officer 250-320-0501

Kamloops Toll Free 1-866-457-5648

PLEASE SPREAD THE WORD TO YOUR NEIGHBOURS

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, rental units, nursing homes, schools, preschools, churches and businesses]. You can do this by posting this notice in a public place or distributing copies by hand or mail.

Signature: _____

Village of Chase

NOTICE

DRINKING WATER ISSUE CORRECTED

The *Do Not Use Water Notice* is Removed

Water samples collected from our water system indicate that **it is no longer necessary to use bottled water or other alternate sources of drinking water**. We may find it necessary to increase chlorine levels for a short period of time and you may detect a stronger chlorine taste and odor. Chlorine levels will be reduced to normal operating range as soon as possible.

EFFECTIVE _____

THANK YOU FOR YOUR PATIENCE AND CO-OPERATION

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