Emergency Response Procedure for Covid-19

Water & Sewer Department

Contact Information

In the event of an emergency, relevant contact information is included in the table below.

Name	**Position**	**Work Phone**	**Personal Phone**	**Email**
Graham Evans	Water/sewer operator **(primary)**	250 788 5365		gevans@gochetwynd.com
Lorraine Adams	Water/sewer operator **(primary)**	250 788 6887		ladams@gochetwynd.com
John Hauk	Water/sewer operator	250 401 3362		jhauck@gochetwynd.com
Kelsi Cupples	Engineering Technician	250 556 4622		kcupples@gochetwynd.com
Darcy Schmierer	Electrician/backup operator	250 401 3360		dschmierer@gochetwynd.com
Desiree LeBlanc	Manager of Engineering & Public Works	250 401 8793		dleblanc@gochetwynd.com
Ali Moore	Environmental Health Officer (Northern Health)	1 250 719 6500		Ali.moore@northernhealth.ca
ID Works	Isabelle (courier service for submission of treated wastewater samples)	1 250 719 0929		

Introduction

The following document is a response plan to be used in the event that both primary operators of the District of Chetwynd water treatment facility become unavailable to attend site due to positive Covid-19 diagnosis. This is a brief outline of the minimum level of duties required for the treatment facility to maintain normal operations. Due to the complexity of the facility and the level of training required to operate it, it is not advised that someone with no experience or training be placed in a position to operate the facility. We do have the ability to remotely monitor the system through SCADA, however there is still a level of fieldwork that needs to be completed on site. Both John Hauck and Kelsi Cupples are familiar with the daily operation and sampling procedures needed to get by in an emergency situation. With some training, Darcy Schmierer could also be utilised in an emergency situation, as he is very familiar with our current facility and it would take very little time to familiarise him with the samples and calibration procedures. This would require maintaining a good level of communication between myself and Lorraine through telephone conferencing, also keeping one of us on the Protalk

dialing system (oncall) so we can stay informed of the situations and delegate tasks to whoever is on site. This will also allow us to mitigate nuisance alarms that do not require a physical response. The individual chosen to cover our onsite duties will be required to be on standby 24 hours a day. Most average alarm situations and malfunctions can be talked through and managed accordingly. In the event that there is not a suitable person available, we have been advised by the EOCP that the best course of action would be to appoint a single person (primary operator) to travel between home and the treatment facility to undertake the require duties. This person would be required to follow strict sanitary procedures before, during and after facility contact and practice proper social distancing procedures.

Bi-Weekly Bacteriological Sampling

Bacteriological samples are collected as one of the requirements for the District's Permit to Operate as provided by Northern Health**.** Samples are tested for Total Coliform and E. Coli. Samples are collected on the first and third Tuesday of every month. Samples need to be dropped off to the Northern Health Office at the Chetwynd Hospital before 12:00 pm. Bottles are supplied by Northern Health; when bottles are dropped off, the same number of bottles should be collected for the next sample date.

Each sample station has its own Chain of Custody (COC), which is provided by Northern Health and a Bar Code label to attach to the COC, which is provided by Water Trax. The date and time are required on the COC, this is written on during sampling. Each bottle requires the station name i.e. "Public Works Shop", date the sample was taken and time the sample was taken.

The Sampling Stations are located as follows;

1. Water Treatment Plant- Lab sink
2. District Visitors Center- Back bathroom sink
3. Seniors Hall- Left most sink in kitchen
4. Public Works Shop- Office sink
5. Water Fill Station- Sample tap
6. Chetwynd Rec Centre- Pool washroom (main entrance first left)
7. PVEP- Washroom sink

Before following the sampling procedure provided by Northern Health (Appendix A), the chlorine residual in the water at each sample station must be tested using the pocket colorimeter. The chlorine residual must be higher than 0.2mg/L Cl_2 to proceed with the sampling. If the residual is lower, the tap must be run for an extended time period. The PVEP has history of low residuals and sometimes the nearest hydrant needs to be flushed.

This is something that should not be missed. However, we have been in contact with Northern Health and were advised that we can do a modified sampling process if necessary. This would allow us to reduce our workload and continue to practice social distancing. Most of the sampling sites are District buildings, with the exception of the PVEP and the Seniors centre, which might be excluded in the modified process. If we feel the need to do a modified sampling process or if there is nobody to collect

these samples, Northern Health has requested that we contact Ali Moore (Environmental Health Officer Dawson creek B.C.). Ali Moore will give the modified sampling process if and when needed. Ali Moore can be contacted at; Tel: 250-719-6500 Email: ali.moore@northernhealth.ca

Monthly Sewer Samples

Samples are collected on the second Tuesday of the month. This is less critical than the bi-weekly bacteriological samples collected for the water system and may be skipped if human resources capacity is limited. However, if the person filling in is competent in sampling of this nature, I would advise we continue to collect and submit our monthly sewer samples.

ALS is the laboratory that analyzes the District's treated wastewater samples to ensure we are in compliance with our Ministry of Environment permit to discharge to the Pine River. We typically collect wastewater from the manhole immediately downstream of the polishing cell (Cell 8) in the northwest area of the lagoon site, place it in appropriate bottles, fill out a chain of custody, and submit samples to ALS in Fort St. John where they are then flown to Vancouver. On the day that samples will be collected, a staff member must call ID Works, the courier company that transports samples from Chetwynd to Fort St. John, to let them know we will be submitting samples so they can inform their driver. Ideally, this should be done before 10:00AM. The phone number is: 1-250-719-0929.

The wastewater is poured from the sampling apparatus (measuring cup on a stick) into bottles supplied by ALS that are suitable for the following analyses:

- Carbonaceous 5-day Biochemical Oxygen Demand
- Total Suspended Solids
- Nitrate
- Nitrite
- Ammonia Nitrogen
- Total Phosphorous
- Ortho-P
- Fecal Coliform Organism

In addition to the laboratory analyses, the following parameters are measured in the field and recorded:

- Temperature
- Dissolved Oxygen
- pH

Daily Checks and Samples Required for Normal Operation: (does not include unknown alarms or system failures)

- Monitor level of raw water storage ponds and start/stop lowlift pumping station as necessary, i.e. when the total freeboard of the 4-million-gallon pond is approximately 2 feet or less, the low lift pump may be shut down.
- Check and calibrate chlorine analyzer in water treatment plant
- Check and calibrate chlorine analyzer in high lift station
- Check and maintain level of salt brine for hypochlorite generator by adding salt to keep black brine container between ½ and ¾ full. If there are any alarms on the hypochlorite generator screen, they can be reset.
- Acknowledge and reset Sewer plant generator run alarm (Tuesday at 8:45 AM)*
- Acknowledge and reset Blower building generator alarm (Thursday 12:45 PM) *

*There is a reset button on the panel at the Sewer plant, and the Blower building can be reset on the SCADA screen under blower overview and then blower alarms, then press acknowledge and reset. **High wetwell alarms must not be ignored**.

Daily Samples and Data Record Keeping (not including uploading to WaterTrax)

Record the following parameter on the printed spreadsheet:

- Collection date and time
- Raw water total (M3) -> Collected from information in “Water Treatment Plant Data” from the day before
- Raw water flow rate (M3) -> Collected from information in “Water Treatment Plant Data”
- Raw water Temperature -> Collected using pH meter in water sample collected from Raw Water Tap
- Raw water turbidity (NTU) -> Collected from information in “Water Treatment Plant Data”
- Raw water PH-> Collected using pH meter in water sample collected from Raw Water Tap
- Tap sample CL2 residual-> Collected using table top CL2 residual analyzer
- Tap sample temperature-> Collected using pH meter in water sample collected from Lab Tap
- Tap sample turbidity (NTU) -> Collected using Table Top Turbidimeter in water sample collected from Lab Tap
- Tap sample PH-> Collected using pH meter in water sample collected from Lab Tap
- Skid A flow rate (L/S) -> Collected from information in ``Water Treatment Plant Data``
- Skid A integrity test (Y/N) -> Collected the from information in ``IT Data `` from the day before
- Skid A integrity test (KPA) -> Collected the from information in ``IT Data `` from the day before
- Skid A turbidity (NTU) -> Collected from information in ``Water Treatment Plant Data``
- Skid B flow rate (L/S) -> Collected from information in ``Water Treatment Plant Data``
- Skid B integrity test (Y/N) -> Collected the from information in ``IT Data `` from the day before

- Skid B integrity test (KPA) -> Collected the from information in ``IT Data `` from the day before
- Skid B turbidity (NTU) -> Collected from information in ``Water Treatment Plant Data``
- Hypochlorite pump flowrate (ML/MIN)- > Collected from information in ``Water Treatment Plant Data``
- Coagulant Flowrate (ML/MIN) - > Collected from information in ``Water Treatment Plant Data``
- Plant filtrate volume (M3) - > Collected from information in " Data button on Pall Screen, under plant data" from the day before
- Plant filtrate waste volume (M3) - > Collected from information in ``Data button on Pall Screen, under plant data" from the day before
- Flush waste volume (M3) - > Collected from information in `` Data button on Pall Screen, under plant data" from the day before
- Low lift pumping status (UP/DOWN) - > pumps running or pumps not running.

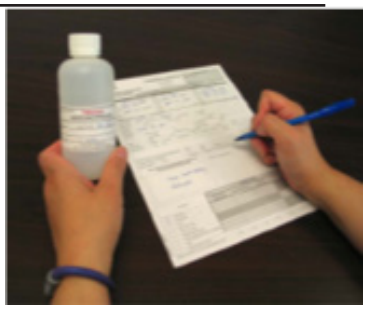
APPENDIX A

SUBMISSION OF WATER SAMPLES FOR BACTERIOLOGICAL EXAMINATION

THE WATER SAMPLING KIT

- Water samples for bacteriological examination will ONLY be accepted if they are submitted in sterile specimen bottles provided by the Health Unit.
- Water sample bottles are available at the local health unit.
- Requisition forms are provided by the Health Unit (forms mailed each month)

COMPLETE THE REQUISITIONS FORMS AND LABEL THE SAMPLE BOTTLE



- **The bottle label must be filled out with the water system name, the sampling site name and the date and time the sample was collected. Make sure the date and time of collection is also entered on the requisition form.**

SAMPLE COLLECTION

- Water samples must be collected immediately before delivery to the Health Unit
- For community water systems, water samples should be collected by water purveyors or other suitably trained personnel.
- Each bottle contains sodium thiosulphate as a powder or pill which must not be discarded or rinsed out of the bottle during collection of the sample.
- Do not take water samples from any tap which may have additional water treatment devices on it (e.g home water softener, etc)
- Collect water sample only from the cold water tap

HOW TO COLLECT SAMPLES

1. If water is collected from a pump or a tap, remove any aerators or screens.
2. Ensure the faucet is free of contamination before the sample is taken. The faucet may be sterilized by flaming with a lighter or wiping with an alcohol wipe or mild chlorine solution
3. Run water for about 2- 3 minutes to flush the water lines
4. Reduce water flow to permit filling bottle without splashing.

5. Remove cap from the bottle taking care not to touch the inside of the cap or mouth of the bottle.
6. Fill the bottle (without rinsing) to at least the fill line marked on the bottle. Do not adjust the fluid level in any manner following collection.
7. Screw cap on tightly.
8. Place completed requisition form inside ziploc plastic bag and wrap it around the sample bottle with rubber band



SAMPLE TRANSPORT

- Ship samples in cooler with sufficient ice packs to maintain temperature at <10□C (Do not add ice to the sample.)
- Water samples should be delivered to the Health Unit immediately following collection.
- Samples received at the lab more than 24 hours after collection are generally unsuitable for bacteriological examination as the results may be of little value or may even be misleading.

RESULT REPORTING

- Sample results are normally emailed to the Health Unit within 2-3 working days of receipt of sample
- If water sample shows presence of total coliforms or e.coli the water supplier will be contacted by the laboratory and/or Environmental Health Officer. No contact will be made if the sample shows absence.
- Contact your Environmental Health Officer for any questions.

Place the requisition form in the plastic bag, and wrap the plastic bag around the bottle with the elastic band

Make sure the sample site, date and time are on the bottle.

Make sure the date and time are also on the requisition form