



# Blackwater Gold Project

## Health and Medical Services Plan

April 2022

## COMMUNICATION AND CONTACT LISTS

Communications at the Blackwater Gold Project (the Project) are available by VHF Radio, voice over internet phones, and internet. Table 1 below provides internal and external contacts as well as other useful communications related references.

**Table 1: Medical Emergency Contacts**

Service	Party	Contact Number
Ambulance	BC Road and Air Ambulance	1-800-461-9911 Cellphone/SAT Phone/Outside BC: 250-374-5937
Emergency Events (environmental emergencies, mass casualties, etc.)	Health Emergency Management BC	1-855-554-3622
Communicable Diseases Reporting Line (business hours)		1-855-565-2990
Medical Health Officer	SIRIUSMEDx 24/7 Physician Assistance	1-514-905-1081
Helicopter Medivac		TBD
University Hospital of Northern BC (Prince George)		250 565 2000
St John Hospital (Vanderhoof)		250-567-6236

## ACKNOWLEDGEMENTS AND LIMITATIONS

The Health and Medical Services Plan has been compiled by BW Gold LTD. (BW Gold) from various public and private sources, including *the Health and Medical Services Plan Best Management Guide for Industrial Camps, Northern Health, March 2015*. Project Information and Camp infrastructure sections were written by Blackwater Gold staff using existing information, camp permits and plans. The onsite programs and services portion was written by Dr. Allan Holmes. This HMSP was reviewed, and input provided by Dr. Allan Holmes, Founder, Iridia Medical as well as Dr. Marc Gosselin Medical Director of SIRIUSMEDx. Both Medical Providers have extensive experience in the delivery and implementation of number of successful Health and Medical Services Plans in collaboration with Northern Health.

BW Gold has decided to engage SiriusMed for the implementation of the first part of the HMSP, that being approval of this document by Northern Health. The second stage will be supplying the resources to ensure this plan comes to fruition.

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## ACRONYMS AND ABBREVIATIONS

ACP	Advanced Care Paramedic
BC	British Columbia
BCAS	British Columbia Ambulance Service
BCCDC	BC Centre for Disease Control
BW Gold	BW Gold LTD.
BWG MSPT	Blackwater Gold Medical Services Provider Team
CDCL	Communicable Disease Control Lead
CDMT	Communicable Disease Management Team
CDP	Communicable Disease Plan
CEMMP	Community Effects Monitoring and Mitigation Plan
CLC	Community Liaison Committee
D&A	Drug and Alcohol
EAO	Environmental Assessment Office
EAP	Employee Assistance Program
ERT	Emergency rescue Team
FSR	Forest Service Road
H&S	Health and Safety
HSA	Health Services Administrator
HMSP	Health and Medical Services Plan
Indigenous Groups or Aboriginal People	Lhoosk'uz Dené Nation, Ulkatcho First Nation, Nadleh Whut'en First Nation, Saik'uz First Nation, Stelat'en First Nation, Nazko First Nation, Skin Tyee Nation, T̓silhqot'in Nation, Métis Nation British Columbia, and Nee-Tahi-Buhn Band (federal Decision Statement)
km	Kilometre
L	Litre
m	Metre
MAR	<i>Mines Act</i> Regulation
MHO	Medical Health Officer
MWR	Municipal Wastewater Regulation
NH	Northern Health
OFA	Occupational First Aid Attendant

PPE	Personal Protective Equipment
Project	Blackwater Gold Project
PTN	Patient Transfer Network
RFP	Request For Proposal
QP	Qualified Person: A person who has training, experience, and expertise in a discipline relevant to the field of practice set out in the condition (as defined in Environmental Assessment Certificate [EAC] #M19-01)
RBC	Rotating Biological Contactor
sq. ft.	Square feet
SSR	Sewerage System Regulation
STI	Sexually transmitted infection
UHNBC	The University Hospital of Northern BC
USgpm	US gallons per minute

## 1. PROJECT INFORMATION

### 1.1 Objectives

The objectives of the Health and Medical Services Plan (HMSP) are to outline the on-site medical services and programs to be delivered for the Blackwater Gold Project (the Project) workforce and describe the measures to coordinate health service delivery with Northern Health (NH). Given the remote location of the project, distance to public health care, and limited health care resources in the surrounding communities, BW Gold recognizes the need to move beyond the minimum legislative WorkSafe BC requirements and develop a comprehensive HMSP for the Project. The overall goal is to not only minimize the impact on local resources, but also provide a better work environment for those employed by the company and work in partnership with NH to find ways to improve the healthcare of the community at large. The HMSP is a requirement and forms part of the overall Blackwater Gold Mine Emergency Response Plan (MERP) and addresses Condition 40 of the Environmental Assessment Certificate #M19-01. The plan was developed in consultation with NH, Aboriginal Groups, the District of Vanderhoof, and the Village of Fraser Lake. The plan was then submitted to the EAO and to the aforementioned parties for review more than 60 days prior to the planned commencement of Construction.

### 1.2 Project Information

#### 1.2.1 *Blackwater Gold Project Location and Access to the Project*

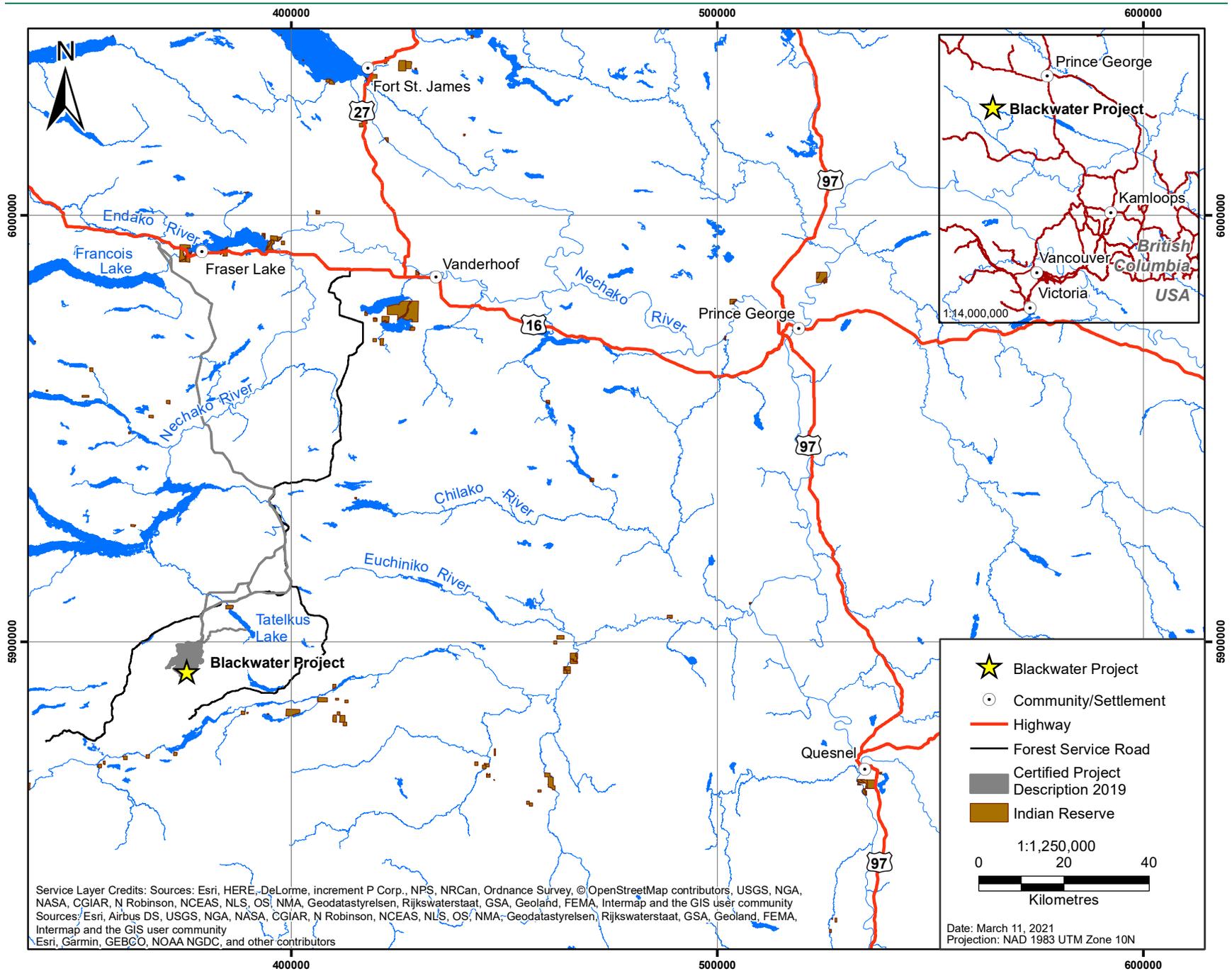
The Blackwater Gold Project mine site is centered at latitude 53° 11' 22.872" N and longitude 124° 52' 0.437" W and is located approximately 112 kilometres (km) southwest of Vanderhoof and 160 km southwest of Prince George, BC. Vehicle access to the mine site is via the Kluskus Forest Service Road (FSR), the Kluskus-Ootsa FSR and an exploration access road, which connects to the Kluskus-Ootsa FSR at km 142. The Kluskus FSR joins Highway 16 approximately 10 km west of Vanderhoof. The existing exploration access road to the mine site will be replaced by a new 13.8 km Mine Access Road (MAR). The new planned access road is at km 124.5. The mine site is located on provincial Crown land in the Cariboo Regional District (UTM coordinates: Easting 375400 and Northing 6326428, NAD83), and the traditional territories of Lhoosk'uz Dené Nation and Ulkatcho First Nation (Figure 1.2-1). Other Project components, including the existing Kluskus and Kluskus-Ootsa FSRs (Forest Service Road) and transmission line, cross the traditional territories of Nadleh Whut'en First Nation, Saik'uz First Nation, and Stelat'en First Nation (collectively, the Carrier Sekani First Nations), and Nazko First Nation.

An airstrip is planned just north of the camp. An airstrip access road (5.7 km) will be constructed off the MAR. The airstrip and access road are located on BW Gold mineral tenure. There is a helicopter landing pad at the exploration camp. Flight time to Prince George from the mine site is approximately 1 hour by helicopter and will be approximately 45 minutes by fixed wing aircraft.

#### Healthcare Provider

**Exploration and Early Works Camp** – Blackwater Gold employees currently provide in-house first aid care. Blackwater Gold contracted SIRIUSMEDx as a medical service provider who will be responsible for the development and implementation of this HMSP plan during early works of construction.

**Major Works Construction and Operations Camp** – Blackwater Gold will contract an experienced medical service provider that has experience in remote regions and who will be responsible for the application and implementation of this MHSP plan during major works of construction and operations. The plan will be to award this work prior to the start of major works construction.



**Figure 1-1: Blackwater Project Location**

## Camp Services Provider

- **Exploration and Early Works Camp** – The current camp services are contracted out to a third-party provider.
- **Major Works Construction and Operations Camp** – Blackwater Gold is developing an RFP for a camp services provider who will be responsible for food services, laundry, and cleaning services during major works construction and operations. The plan is to award this work prior to the start of major works construction.

## 1.3 General

**Company name:** BW Gold LTD a subsidiary company of Artemis Gold Inc.

**Project Name:** Blackwater Gold Project.

**Project Type:** Gold and silver open pit mine and associated/ancillary supporting facilities and infrastructure.

**Project Scope:** The Project will be carried out in multiple phases: Construction, Operations, Closure and Post-Closure. Construction phase will be completed in two stages: an Early Works stage and a Major Works construction stage. During the Operations phase, there will be incremental increases in production that result in corresponding changes to camp occupancy. A summary of the general scope of work and estimated camp occupancy is provided below for each phase of the operation.

**Table 1.3-1: Blackwater Gold Project Phases and Work Force Numbers**

Phase	Timing in Relation to Project Operations	Workforce Numbers
Early Works Construction	Months -29 to -24	80
Major Works Construction	Months -24 to 0	250-450
Operations – Phase 1	Years 1-5	266
Operations – Phase 2	Years 6-10	266
Operations – Phase 3	Years 11-23	532
Closure – Decommissioning Phase	Year 23-25	325
Closure – Care and Maintenance Phase	Years 25+	>50

### 1.3.1 Early Works and Major Works Construction Phase

Early Works will consist mainly of ground preparation (tree clearing, grubbing, and site leveling), and the construction of initial water management structures such as perimeter drainage channels and sediment control pond. During early works and construction, the camp occupancy is estimated at 80 workers.

Once major construction begins at the Mine Site, the camp occupancy is estimated to range from 250 to a maximum of 450 persons and will consist of the following main activities:

- Establish Construction Camp and support facilities;
- Open pit excavation (starter pit);
- Process plant construction to the pre-commissioning stage;
- Tailings storage facility – starter dam completion;
- Water management structures;

- Treatment plant construction;
- Establish ore, waste rock and overburden stockpiles; and
- Manage overburden stockpiles.

Off-site infrastructure completed during this period will consist of the transmission line.

### 1.3.2 Operations Phase Stage 1, Stage 2, and Stage 3

During this phase, from years 1-23, the camp occupancy is estimated to range from 266 to 532 persons. A breakdown of this period including general activities is provided below.

- **Stage 1 and Stage 2:** years 1-10 camp occupancy is estimated at 266. The main activities undertaken during this period consist of open pit operations, process plant operations and the completion of the initial tailings management facility dam. Initial ore processing rate will be 6 Mt/yr increasing to 12 Mt/Yr. in Stage 2. The increased ore processing rate will be accommodated by means of a process plant expansion in year 5 of Stage 1 operations.
- **Stage 3 – Mining:** during years 11-23 camp occupancy is estimated at 532 persons throughout this period with an ore processing rate of 20 Mt/yr. Mining operations in the open pit will be concluded in year 17 and the open pit will start to fill with water.
- **Stage 3 – Open Pit Mining Complete:** in year 23, camp occupancy during this period is estimated to be 325 persons. Ore will continue to be fed to the process plant from reclaimed/low grade ore stockpiles. Progressive reclamation will commence during this period and focus on infrastructure not required for processing and waste management.

### 1.3.3 Closure Phase

This phase will consist of an initial two-year decommissioning phase in years 23-25 where site infrastructure is removed/reclaimed, and the site restored to as stable, safe, and environmentally acceptable conditions. The maximum camp occupancy during this period is estimated to be 325 people, declining steadily when activities are focused on ongoing monitoring and maintenance of the site. Infrastructure that will continue to be required throughout this period include the transmission line, critical water management structures, and access roads.

### 1.3.4 Post-Closure Phase

During this period (year 25 +), a minimum workforce will be required at the site. This extent of this phase is difficult to predict and concludes when there are no further activities required such as water management/treatment or equipment/infrastructure maintenance.

## 1.4 Human Resources – Roles and Responsibilities

BW Gold Management Team will allocate the appropriate human resources to the Health and Medical Services Plan for the Project. The roles and responsibilities for personnel are listed below and address the need for onsite personnel to communicate internally with the Management Team and externally with stakeholders at NH as well as with others including Aboriginal Groups, the District of Vanderhoof, and Village of Fraser Lake. The responsibilities will enable effective management of health and medical services, early warning and responses to health and wellness issues, compliance with NH regulatory and policy requirements and the evaluation and revision of health and medical services performance. The responsibilities are ultimately aimed at demonstrating diligence and transparency in BW Gold's health and medical services management.

### **1.4.1 BW Gold Management Team**

The management team will provide support for various programs to improve employee health, including an employer sponsored employee assistance program, health benefits and onsite health and wellness programming. All the above are designed to support employees and their families as they adopt and sustain behaviors that reduce health risk, improve quality of life, and enhance personal effectiveness.

### **1.4.2 Project Director**

The Project Director will ensure the resources required for developing, implementing, and evaluating an effective Health and Medical Service Management Plan are available. In this respect, the Director will maintain a reporting function relationship with the onsite medical services provider. The Project Director will instruct and approve the onsite system and resources, by delegation to appropriate line function personnel and with support and advice of Mine Management and supervision for planning, oversight, monitoring and reporting.

### **1.4.3 BW Gold Onsite Medical Services Team**

The onsite BW Gold medical services team will be responsible for the application, implementation, monitoring and evaluation of an effective health and medical services plan and communications with government and community, including First Nations Communities.

### **1.4.4 Employees and Contractors**

An induction/onsite orientation will be developed for BW Gold personnel and contractors involved in the Project and will include health and medical services and supports available to them while engaged with the Project. A key component of this orientation is information on what health, medical and wellness services are available, where they are located and how they are accessible.

## 2. BLACKWATER CAMP INFRASTRUCTURE

### 2.1 Exploration, Early Works, and Major Works Construction Camp

The Blackwater Project has a fully functional exploration camp that will be used for early works and major works construction periods. The camp is permitted by NH and the Ministry of Environment for operations of a camp kitchen, water, and sewage. The Blackwater Gold Exploration camp was a nominee for the 2013 NH Healthier You Awards for Best Camp Environment.

BW Gold currently contracts out in-house camp services utilizing a third-party provider. As the project moves into the construction and operations phase, a contracting service will be retained for these services.

During the Major Works Construction and Operations Phases, workers will be sourced from across northern BC, other areas of the province, and across Canada. There are commitments to maximize the workforce numbers from local and Indigenous communities.

The following sections were developed to address the information required in *the Health and Medical Services Plan Best Management Guide for Industrial Camps, Northern Health, March 2015*. Section headers mimic those found in the NH document table of contents as required information.

### 2.2 Accommodations and Medical Clinic

#### 2.2.1 Exploration, Early Works, and Major Works Construction Camp

The current Blackwater camp consists of six buildings (dormitory buildings A-F), a conjoined kitchen and dining area, administration building and a standalone office building and First Aid building. First Aid building photos can be found in Appendix A. All the six main buildings are linked via Arctic corridors for an enclosed indoor space. There are no outside shoes permitted in the enclosed buildings. Buildings are heated with a forced air furnace system. Each individual dormitory bedroom is also equipped with electric base board heat. A floor plan of the existing dorms can be found in Appendix A. Table 2.2-1 illustrates the number of beds, toilets, showers, sinks and laundry facilities for each building.

**Table 2.2-1: Exploration, Early Works, and Construction Camp Amenities**

	Dormitory A	Dormitory B	Dormitory C	Dormitory D	Dormitory F	Dining Hall Kitchen Area	Administration Building	Office Building (Building E)	First Aid Building
# of beds	42	42	42	42	42	n/a	n/a		2
<b>Men's Facilities</b>									
Sinks	3	3	3	3	3	1	2	2	n/a
Toilets	3	3	3	3	3	1	1	2	n/a
Urinals	3	3	3	3	3	1	2	2	n/a
Showers	3	3	3	3	3	n/a	n/a		n/a
<b>Women's Facilities</b>									
Sinks	4	4	4	4		1	1	2	n/a
Toilets	4	4	4	4		1	2	3	n/a
Showers	1	1	1	1		n/a	n/a	n/a	n/a

	Dormitory A	Dormitory B	Dormitory C	Dormitory D	Dormitory F	Dining Hall Kitchen Area	Administration Building	Office Building (Building E)	First Aid Building
<b>Common Areas</b>									
Hand wash sinks	n/a								1
Toilets	n/a	n/a	n/a	n/a	n/a	n/a	n/a		1
Shower	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1
Mop basins	1	1	1	1	1	1	n/a	n/a	n/a
Street clothes & linens	2	2	2	2	2	n/a	n/a	n/a	n/a
Work clothes	n/a	2	n/a	2	n/a	n/a	n/a	n/a	n/a

### 2.2.1.1 Dormitories

Site accommodations consist of 5 dormitory stick built insulated buildings with 2" x 6" outside walls with metal cladding. Each of the 42 single occupancy rooms are approximately 72 sq. ft. (8' wide x 9' long x 8' high). Each room has:

- Single beds on a box spring with a coil mattress;
- Sliding screened window 4" wide x 3' high;
- Pillow, sheets, and comforter, all provided by Blackwater;
- Binds or curtains on windows;
- Lockable wardrobe with hooks;
- TV;
- Reading lights;
- Overhead lighting;
- Desk and chair;
- Garbage can; and
- Electric based board heater thermostat (room heat is individually controlled).

A 5' wide central hallway, or Arctic corridor, separates the rooms on either side. Four hard wired, battery backup emergency lights illuminate the emergency exits. Separate men's and woman's washroom facilities, showers and clean clothes laundry facilities are located mid-point of the bunkhouse.

All the rooms and hallways are covered with commercial grade rubber flooring. Hallways are heated with a forced air furnace and bedrooms are heated with forced air furnace and electric baseboards.

Points of egress include exits at the mid and end of each dormitory as well as from the sliding windows in each dormitory unit.

### 2.2.1.2 *Drill Dry Rooms*

Dormitories B and D have an attached drill dry room that is approximately 720 sq. ft. (12' wide x 60' long x 9' high), for a total of two drill dry rooms. Each drill dry room has two washers and two dryers for work clothes, benches, shelves, and hooks for work gear.

## 2.2.2 *Operations Camp Accommodations*

During this phase, the camp occupancy is estimated to range from 266 to 532 persons.

The new operations camp facilities are yet to be finalized. Blackwater Gold recognizes the importance of building design in the health and well-being of workers and will adopt healthy design principles and best practices where possible and will include:

- Maximum access to natural daylight and views of the outdoors;
- Superior ventilation; and
- Control sources of indoor air contamination and excessive moisture accumulation.

Room schematics and design are in the process of being determined. Conceptual designs will be shared with stakeholder groups once finalized. Updates to the Health and Medical Services Plan will include Operations camp infrastructure information.

## 2.3 *Sanitary Facilities*

### 2.3.1 *Exploration, Early Works, and Major Works Construction Camp*

As per Table 2.2-1, there are toilets, wash basins and showers located in the central section of each Bunkhouse. The washrooms are cleaned daily and are constructed to minimize pests making their way into these areas. The furthest distance a room occupant would have to walk to the washroom facility is approximately 25 metres.

### 2.3.2 *Operations Camp*

During this phase, the camp occupancy is estimated to range from 266 to 532 persons.

The new construction and operations camp design is in progress. It is anticipated that the design will include such amenities as single rooms (100), each with a private wash basin, toilet, and shower and Jack and Jill rooms (350) with two employees sharing a washroom, sink, and shower. Communal areas such as the recreation areas and outside the dining facility will have wash basins and toilets for men and women. The men's and women's dries will have separate lockers for street clothes and separate baskets for work clothes. Each dry will also have shower facilities and laundry facilities for work clothes. Dries will be cleaned daily, and rooms and communal areas will be cleaned on weekly schedules.

Updates to the Health and Medical Services Plan will include Operations camp infrastructure information.

## 2.4 *Laundry Services*

### 2.4.1 *Exploration, Early Works, and Major Works Construction Camp*

Laundry facilities, including washers and dryers, are provided for each of the following functions:

- Bedding and other linens – Bedding is provided by BW Gold It is changed and cleaned by the housekeeping staff weekly. Fresh linens are available if personnel wish to have them changed more frequently.

- Work clothes – Dedicated washers and dryers are provided for personnel to wash their own dirty work clothes. Work clothes are not permitted to be washed in any other washing machines.
- Non-work clothes – Personnel have access to laundry facilities for washing their non-work, “street” clothes. Laundry soap is provided by BW Gold.

Heated “mine dries” are provided in dormitory buildings B and D building for personnel to store their work clothes, outerwear, and boots. This allows the clothing to dry and prevents dirt and grease from being tracked into the living areas. Dries are equipped with benches and either hooks or hanging baskets to store their gear. Personnel are encouraged to use slippers or other clean indoor footwear in the living areas. Boot covers are provided if personnel wish to cover their outdoor footwear.

## 2.4.2 Operations Camp

Operations Camp facilities design is still in progress. Blackwater Gold expects at minimum that the same number of laundry facilities and mine dry areas would be in place during Operations Camp Phases.

## 2.5 Supervision and Maintenance

Currently the camp is in “care and maintenance” status with camp population being less than 12 people. The camp manager is present all the time and is responsible for a good repair status of the camp equipment as well as that the structures, facilities, furnishing, and appliances are maintained in good repair and in a sanitary condition. When the population numbers return to normal levels the information on:

- Industrial Camps Regulation;
- BC Guidelines for Industrial Camps Regulation; and
- Contact information for the health authority (name, phone number and email address) will be re-posted in a prominent and accessible place.

## 2.6 Drinking Water System

### 2.6.1 Exploration, Early Works, and Major Works Construction Camp

Blackwater camp current source of potable water are four deep water wells. Wells 1 and 2 supply approximately 3 US gallons per minute (USgpm) and wells 3 and 4 yield of 5 USgpm. Wells are currently classified as “low risk” using the BC Ministry of Environment Toolkit for Groundwater. Notwithstanding the low risk of contamination of the source water, a packaged chlorine dosing system was installed in fall 2011 to provide secondary disinfection to limit potential of bacterial regrowth in the water distribution network. The chlorine dosing system is injecting a dose of bleach (sodium hypochlorite) into the potable water supply at a concentration of 0.5 mg/L.

Blackwater currently uses wells 1 and 2 at 5.4 USgpm to provide potable water to the camp. The well pumps from these two separate wells can be controlled individually. Another four pumps supply water to the camp from the tanks, these can be controlled individually as well. The camp has four external holding tanks with a total of 75,700 litre (L) capacity that can be hooked up in an emergency.

The on-going potable water quality testing is in place. A free chlorine test is conducted every second day with results recorded, if the levels are high or low, the bleach dosing system is adjusted to fix the values.

Drinking water sampling is completed per BC Ministry of Environment and Climate Change Strategy, Health Canada, Environment and Climate Change Canada standards for a suite of parameters including fecal coliform, E. Coli, metals, hardness, pH, and turbidity. Analysis is completed by a third-party

laboratory and results are posted on camp bulletin boards once received. A Monitoring schedule for drinking water testing can be found in Appendix B.

If the monitoring results indicate exceedances of current BC Drinking Quality Guidelines in one of the water wells, the following measures are set in place. The water can be brought from another well on site to replenish the tanks. The holding tanks for water storage with a total of 75,700 L capacity can be used individually, if needed. If an anomalous reading occurs, the camp has bottled water on site for drinking and would post advisory signs at all water outlets. Potable water can be hauled out to site until the camp remedies the situation.

### 2.6.2 Operations Camp

During this phase, the camp occupancy is estimated to range from 266 to 532 people.

The new operations camp drinking water sources are yet to be finalized. The potential sources of water will be screened for the presence of contaminants as requested in Guidance Document for Determining Ground Water at Risk of Containing Pathogens (GARP). The well construction will be in compliance with the Groundwater Protection Regulation and Health Hazards Regulation at a minimum distance of:

- 30 m (100 ft.) from a probable source of contamination.
- 120 m (400 ft.) from a cemetery or dumping ground (e.g., landfills and garbage dumps).

Conceptual plans for drinking water including the frequency of the monitoring and proposed mitigation measures in case of exceedances of current Drinking Water Quality Guidelines will be shared with stakeholder groups once finalized. Updates to the Health and Medical Services Plan will include Operations camp infrastructure information.

### 2.6.3 Mitigation Measures and Response Plan

In accordance with the law and the required quality standards for drinking water, we implement a series of measures to ensure that the water remains safe to drink and in a condition that can be used for camp food and hygiene needs in compliance with the *Drinking Water Protection Act*. It is essential to ensure that a minimum amount of water is always available to meet basic needs.

The proposed mitigation measures will be following the same principles as set in the Construction camp phase. The chlorine dosing system will be installed. The wells and the pumps will be controlled individually whenever possible. External holding tanks and bottled water will be available.

In addition to the above measures, tests will be conducted on a regular basis each year by the appropriate authorities and an approved laboratory as well as random tests during the year to ensure water quality. We also advise all employees and collaborators on the site to immediately alert the management team if any discoloration, odor or different taste occurs in connection with the water.

In order to be prepared we also plan to have a sufficient supply of bottled, safe drinking water for all camp occupants to sustain themselves for three days. This corresponds to 4 L of water per person per day (2 L for drinking and 2 L for hygiene). These bottles will not be kept for more water and will be stored away from bad/cold weather, sunlight and all forms of contamination. Potable water can be hauled out from Prince George.

As soon as we are made aware of a potentially unsafe water situation, we will automatically issue a do not drink notice and a procedure requiring the water to be boiled will be put in place. This order will be installed in all areas where water may be used (e.g., bedrooms, kitchens, drinking fountains, tanks). Every drinking water fountains available to the occupants will be turned off for the duration of the situation. Employees and occupants will be informed of the following guidelines:

- The water must not be used for drinking, cooking, making ice, washing fruits, vegetables or brushing teeth. Only boiled or treated or bottled water should be used.
- The water should be brought to a rapid rolling boil for one minute before use. According to NH, “auto shutoff kettles typically do not allow water to boil for a full minute and therefore should not be used to boil tap water unless their temperatures can be verified by a probe thermometer”.
- Discard all ice previously made to avoid contamination.
- Adults can take shower with untreated water, but the need to avoid putting water on their faces.
- Untreated water may be used for handwashing as long as hand sanitizer (60% ethyl alcohol or more) is used after washing hands.
- Untreated water may be used for regular dishwashing, but the dishware must be sanitized after washing (either using the “sanitize” cycle on your machine or soak the dishware for 2 minutes in a 100-200 ppm chlorine solution).
- Counter tops, chopping board or utensils must be washed with soap and sanitized. Sanitization can be with 1 tsp (5 ml) of bleach in 1 L of water.
- Nobody can brush their teeth with the untreated water, use boiled/bottled water instead.
- Coffee makers must heat the water to more than 74°C for at least 15 seconds. Verification must be made with a thermometer. If it is not possible, the coffee maker should not be used.

Following the application of the above measures and the information distributed/mentioned to all occupants, the management team will ensure that the source of the contamination is identified and that the water is disinfected and replaced. When laboratory tests confirm that the water is safe to drink again, the prevention and response measures previously implemented can be lifted. In the extreme case that it is difficult to get water to the camp, evacuation of the site will be required by the management team to ensure the health of the occupants while the situation is resolved.

If a person experiences symptoms (nausea, vomiting, stomach pain) within 48 hours of ingesting potentially unsafe water, that person will be referred immediately to medical help on or off site depending on the situation.

## 2.7 Food Services

### 2.7.1 *Early Works, and Major Works Construction*

#### Dining Hall and Kitchen

The current Blackwater Camp kitchen and dining room is a stick-built structure measuring approximately 4,800 sq. ft., connected to other buildings on site via the closed Arctic corridor. The dining hall is separate from the kitchen area by a wall with one entrance point. The dining hall seats up to 200 people and consists of non-porous dining tables and chairs.

This kitchen has approved Food Safety and Food Sanitation Plans and a current Health Operating Permit. 100% of kitchen staff is FOODSAFE-certified and food safety and sanitation procedures are carried out through well-established policies and schedules and checked regularly by supervisors. Temperature monitoring and logging procedures for food transport, storage, service, and cooling are established and well maintained. BW Gold intends to maintain and exceed all these practices as we transition to our new kitchen.

The kitchen area measuring 60' x 30' including the prep area, storage area and walk-ins, and the dining facility measures 60' x 50'. The building also includes:

- Hot food services line;
- Refrigerated cabinets for condiments;
- Refrigerated beverage coolers;
- Refrigerated coolers for sack lunches;
- Coffee and tea station;
- Drinking water dispenser; and
- Toaster and microwave.

### **Washrooms**

Indoor washrooms are located just outside the dining hall entrance.

### **Pests**

Pests are kept from kitchen area using screens on all windows and rodent-proof sweepers on all outer doors. All food is kept in secure pest-proof storage containers. Garbage is removed daily and disposed of in a dumpster with a pest-proof lid which is always closed. Regular sanitation of kitchen, dining room, waste receptacles and dumpster prevent attracting pests.

### **Kitchenware and Utensil Storage**

Kitchenware and utensils are stored on plastic coated wire rack shelving, or in stainless steel inserts on such shelves, all inserts and shelving to be cleaned and sanitized regularly. Other kitchenware and utensils will be hanging above work areas from purpose-built stainless-steel racks, and such racks will be cleaned and sanitized regularly as part of our sanitation plan. All stored utensils will be cleaned and sanitized regularly as part of our Sanitation Plan.

## **2.7.2 Operations**

During this phase, the camp occupancy is estimated to range from 266 to 532 persons.

The new operations camp food services are yet to be finalized. Conceptual plans for food services will be shared with stakeholder groups once finalized. Updates to the Health and Medical Services Plan will include Operations camp infrastructure information.

A Food Safety Plan and Food Sanitation Plan will be prepared and submitted for approval as part of our Health Operating Permit for the new kitchen.

## **2.8 Liquid Waste (Sewage) and Solid Waste (Garbage (Disposal)**

### **2.8.1 Liquid Waste Early Works and Major Works Construction**

The existing camp sewer system was registered with the Ministry of Environment and Climate Change Strategy under the Municipal Wastewater Regulation (MWR) in December 2012 (registration number 105882) as a to Class C (45 BOD / 45 TSS). The existing wastewater system was originally designed to support the 100-person camp. When the camp was upgraded to a capacity of 250 people, wastewater system capacity was added by improving the effluent quality through the installation of two new treatment plants, allowing the pre-existing disposal field to accept a greater amount of effluent. In the system's

current form, raw wastewater is collected from the camp facilities (dormitory trailers, kitchen, etc.) using buried gravity pipes, before being collected in five 9,080 L concrete septic tanks located in series. Effluent from the septic tanks flows by gravity to pump chamber #1, where duplex pumps convey and split effluent to two Rotating Biological Contactor (RBC) treatment units (RBC 321 and 322). Duplex effluent pumps at the end of the treatment process convey the treated wastewater from both plants to pump chamber #2. Pump chamber #2 conveys effluent to the dosing valve which controls flow distribution to the six-zone sewage in ground disposal field approximately 0.8 km away. Monitoring recommendations in the 250-person camp wastewater system Environmental Impact Study include the installation of two groundwater monitoring wells: one located up gradient, and one located down gradient of the septic field. The locations of the wells are roughly in accordance with the site plan appended to the MWR authorization in Appendix C, which also includes the frequency of testing for ground and surface water testing at Blackwater camp.

Currently the camp is in “care and maintenance” status with camp population being less than 12 people. As a result of the low camp population, the wastewater treatment system was shut down, to be restarted when camp populations increase. Despite the treatment system not running, the collection, conveyance, and disposal system remained in operation during the winter (with a by-pass around the treatment plants), to service the reduced camp population. The wastewater disposal system is designed, in its current form, to accommodate effluent from 100 people (or 22.7 m<sup>3</sup>/day) under Class D effluent quality conditions. With the treatment plants remaining shut down, effluent is considered as Class D. Prior to the MWR registration of the system in late December 2011, the system was registered with NH as a record of sewerage system (file number 41-00154) under the Sewerage System Regulation (SSR). The NH file has remained open over the life of the project/system, and as such, remains valid. With low camp numbers, the system would revert to permitting under the SSR until camp numbers rise to a level closer to the SSR/MWR threshold.

When active mine activities re-commence (drilling, construction, environmental monitoring, etc.), and camp population numbers return to normal levels (greater than 50), the treatment plants will be restarted.

When qualified professionals have determined that when the population reaches 50 people, one plant should be re-commissioned, with the second brought online when camp numbers reach 150. When the plants are brought back into service and re-commissioned, consultants, in coordination with Blackwater Gold staff, will continue to monitor the effluent parameter concentrations and optimize operation of the treatment system. Effluent will continue to be disposed of in the existing septic field, however at such small flow rates, permitting and authorization of the discharge technically reverts to the *Health Act*, and no flow or effluent quality monitoring is required. With the plants off-line, there is no mechanism for measuring flows, and effluent sampling is significantly less straightforward. Monitoring activities will only start when the plants are brought back on-line and flows increase.

### 2.8.1.1 *Ground and Surface Water Monitoring*

Processes for monitoring groundwater and surface water requirements near the effluent disposal field are in place. See Appendix C for a map of water monitoring sites for drinking water monitoring. The purpose of the groundwater monitoring wells is to determine if an overburden aquifer exists and determine the effect of the sewage disposal field on the aquifer. As groundwater wells have been continually found to be dry, no ground water sampling has been completed to date. Should ground water be observed, samples will be taken and analyzed for the parameters identified in the original EIS and MWR authorization.

Surface water samples are taken both upstream and downstream of the sewage disposal field. Additional site investigations and potentially the collection of additional samples above those of the permit requirements are being considered for start-up of the RBC units, concurrent with the proposed increase in camp activity.

## 2.8.2 *Liquid Waste Operations*

During this phase, the camp occupancy is estimated to range from 266 to 532 persons.

The new operations camp liquid waste treatment is yet to be finalized. Conceptual plans for liquid waste will be shared with stakeholder groups once finalized.

## 2.9 *Solid Waste (Garbage) Disposal*

### 2.9.1 *Solid Waste Exploration, Early Works, and Major Works Construction*

Solid waste is currently separated into recyclables, land fill waste, burnable, and regulated wastes.

- Recyclable material such as glass and aluminum cans are separated and shipped to the administrative office in Vanderhoof, BC where they are donated to a community group which then takes it to a recycling center.
- Cardboard boxes are broken down stored with other recyclable papers and along with paper and glass recycling are shipped offsite for recycling at a regional facility.
- General refuse is stored in large, covered dumpsters which are transported to Vanderhoof for disposal in the landfill.

Blackwater is permitted by the Ministry of Environment and Climate Change Strategy permit # 106530 to operate a diesel fuel fired putrescible refuse incinerator. The incinerator is authorized for burning putrescible camp waste, paper, cardboard, and lumber scraps that cannot be recycled. The maximum rate of discharge is 110 m<sup>3</sup>/minute with a maximum waste fed of 1.1 tonnes/ day with an authorized discharge period of 12 hours per day, 7 days per week.

Regulated wastes such as used oils, antifreeze and contaminated oil sorbents are separated and then shipped off site for disposal or recycling in approved facilities.

### 2.9.2 *Solid Waste Operations*

During this phase, the camp occupancy is estimated to range from 266 to 532 persons.

The new operations camp solid waste treatment is yet to be finalized but is expected to follow those established in the construction phase. All garbage (refuse) will be disposed of in accordance with the *Environmental Management Act* and associated regulations. Blackwater will:

- Provide leak-proof, pest-proof, durable containers with tight-fitting tops (or other suitable means) capable of excluding bears and other wildlife. There will be an adequate number and size of containers for buildings to store all garbage accumulated between collections and these will be located in a convenient location.
- Label clearly all containers.
- Maintain garbage containers so that they do not become foul-smelling, unsightly or a breeding place for pests. All containers must have sealable lids.

Conceptual plans for solid waste will be shared with stakeholder groups once finalized.

## 2.10 Other Facilities that Support Positive Health Outcomes

### 2.10.1 *Exploration, Early Works, and Major Works Construction*

The current camp has a gymnasium which includes several types of exercise equipment and weights. The recreation room includes a pool table, card table and dart board. The dining room is open 24/7 that also allows for social activities such as cribbage and board games.

### 2.10.2 *Operations*

Blackwater Gold recognizes the relationship between a healthy living space and positive health outcomes. We aspire to have a living facility that not only supports positive health outcomes, but also includes amenities recognize the cultural and social differences of our workers. Blackwater Gold will make best efforts to ensure future recommendations are being considered and incorporate whenever possible.

The new construction and operations camp plans are under development and will include the amenities that will promote positive health and mental health. Examples of amenities include:

- Gymnasium with a yoga/aerobics area, cardio machines, and weights;
- Recreation facility that includes pool tables, ping pong tables, social areas, TV lounge;
- Quiet area for reading/study;
- Private single rooms;
- Public phones so workers can call home at no cost;
- Wi-Fi internet access throughout the facility; and
- 24/7 access to the dining room.

### 3. ON-SITE PROGRAMS AND SERVICES

#### 3.1 Health Services

BW Gold will use an experienced medical service provider with experience in remote regions and who will continually improve the on-site health service delivery model that provides a high-quality occupational illness prevention and initial injury care, as well as addressing the general health and primary care needs of the site workforce whenever possible. BW Gold aims to be self-sufficient to a reasonable extent; but should a patient's condition warrant care beyond the scope of practice or expertise of the on-site team, BW Gold is a collaborative partner with NH and British Columbia Ambulance Service (BCAS) to ensure an efficient and effective transfer of care.

##### 3.1.1 Health Services at Blackwater Gold Mine

###### 3.1.1.1 Exploration and Early Works Construction

BW Gold currently has fewer than 20 workers at camp and employs a full time OFA level 3 on site to provide first aid services. This level of service is expected to remain in place during the early works phase which spans -29 months to -24 months from the start of Operations (see Table 1.3-1). The onsite medical team has access to the existing site medical clinic. See Appendix A for photos of the First Aid building. BW Gold will have the onsite OFA L3 supported remotely by a group of physicians with extensive experience managing illness and injuries in an industrial camp setting by mid-April 2022.

###### 3.1.1.2 Major Works Construction

Major Works Construction is expected to last 24 months and will commence -24 months to 0 months before the project's Operations phase.

As the camp population reaches 70 workers, the current plan will be for an Advanced Care Paramedic (ACP) to lead the on-site medical team (ACP & OFA L3). The ACP skill set was chosen to address the potential trauma risks associated with the construction phase of the project.

In addition to the ACP a number of OFA L3 trained personnel (ERT members) will be on site to provide additional support as required. The on-site medical team will be supported remotely by a group of physicians with extensive experience managing illness and injuries in an industrial camp setting.

The ACP and OFA L3 care team will work steady days and on call for night shift to ensure ready access to health services seven days a week. We anticipate continuing with this level of care but will look to add additional staff as needed to manage communicable disease outbreaks as well as meeting health and medical screening requirements (e.g., Audiology, spirometry, and lead testing).

The on-site medical team will be fully supported to allow them to act in a "physician extender" role so they can not only practice to their full scope but also have the ability to collaborate and implement physician-based treatment plans.

These collaborative care plans include the provision of higher levels of assessment and treatment options include both prescription and non-prescription medications.

Plans for a more permanent medical facility are still being developed. The current medical facility will meet WorkSafe regulations and depending upon the type of higher-level care team and their scope of practice could also include amenities seen in other well-equipped mining operations in the region such as a trauma area, observation area, private consult area and the ability to monitor a patient overnight should a medevac not be possible due to weather. Equipment will include cardiac monitors, 12 lead ECGs, peak flow measurement, glucometers, and tests for pregnancy, STI, COVID-19, influenza, and rapid strep and urine.

Any patients requiring tests beyond onsite capabilities will be evaluated to determine the most efficient timing and location for the testing with the goal of minimizing the utilization and impact on NH facilities.

The type of basic medicines and prescription medications that will be stored and issued onsite will be determined and may include select non-prescription medications to manage the common non-occupational illnesses such as flus, coughs, colds, local skin infections, skin rashes and antibiotic, gastrointestinal, cardiac, respiratory type medications as well as dermatologic medications available on-site that can be dispensed under a physician's orders. The implementation of a comprehensive, onsite immunization program is being considered and could include COVID-19, seasonal influenza, tetanus, and hepatitis (Twinrix).

There will be tracking of the numbers and types of visits to the clinic to adapt the medication supply should additional medical conditions commonly present which could be treated on-site.

Although the goal of the Blackwater Medical Services team will be to have workers assessed and treated so they can remain on site, there will be situations where a patient will require a referral to a NH facility or other service. Further detail on the referral and trauma transfer process is outlined in the sections below but the overall goal is to ensure effective communications with NH facilities and BCAS and make the transfer process as seamless as possible should a referral be required.

### **3.1.2 On-site Medical Clinic Areas of Practice**

The types of onsite medical services will be governed by the scope of practice that the onsite Blackwater Gold Medical Services Provider Team (BWG MSPT) will provide. Blackwater Gold is in the process of determining what level of onsite medical services will be provided during Major Works Construction. Depending upon the type of onsite care decided upon the list of the medical services onsite during early works construction and operations could include:

- All first aid treatment at the Blackwater Mine site.
- Selected treatments outlined in Schedule 2 of the Emergency Medical Assistants Regulations under the Advanced Care Paramedic license category.
- Select treatments outlined in the BC College of Registered Nurse Decision Support Tools.
- Initial and ongoing treatment with oral antibiotics for dental, skin, respiratory, urinary, and ear nose or throat infections.
- Oral and/or IV hydration for dehydration secondary to environment, gastro-intestinal illness, or other cause.
- Treatment for conditions requiring initial pain management such as lower back, musculoskeletal, overuse injuries and dental pain.
- Simple foreign body removal/lancing of abscesses/wound management.
- Short-term observation of various conditions such as minor head injuries, abdominal pain, or asthma exacerbation.
- Treatment on-site, whenever possible, for a wide array of non-urgent medical issues including prescribing/dispensing medications (starter packs).
- The following areas will be out of the scope for the on-site healthcare team:
  - Patients requiring laboratory or radiologic work-up.
  - Patients requiring assessment or treatment above the capabilities of the on-site team including those requiring prolonged observation or hospital admission.

- Embedded foreign body removal from the eye and complex laceration repair.
- Fracture management.

### 3.1.3 *Non-urgent Care Demands*

BW Gold recognizes that in addition to responding to and treating occupational injuries or illnesses, some employees have medical issues that require on-site monitoring and continuing care by the medical team. The BWG MSPT will make the best efforts to coordinate and provide care consistent with the patient's care plan. As needed, the best effort will be made to contact the person's home health care provider to best coordinate care when there are changes in the patient's condition.

BW Gold acknowledges that Vanderhoof/Prince George area does not have the local health care capacity to manage non-urgent care demands of workers at the Project. The on-site medical team will be staffed with experienced advanced care practitioners, supported by physician team to ensure, whenever possible, non-urgent care demands can be managed at the Project.

### 3.1.4 *Mental Health and Substance Use*

BW Gold strives to provide a safe and healthy working and living environment but recognizes that both employees and family members may require assistance in managing mental health and substance use issues that may arise.

The BWG MSPT will be well versed in mental health promotion and in specific mental health and substance use issues relevant to camp life. The goal will be to have the medical staff continue to maintain a high level of competency in this key area of health through ongoing medical education and programming, using materials and programs promoted by NH, the Mental Health Commission of Canada, and the Crisis Centre of BC.

The following resources will be reviewed and incorporated into the on-site mental health promotion programming:

- Mental Health First Aid <https://mentalhealthcommission.ca/training/mhfa/>
- Safe Talk – [SafeTalk Suicide Prevention Course | Living Works](#)
- Applied Suicide Skills Intervention Training (ASIST) – [ASIST - Centre for Suicide Prevention \(suicideinfo.ca\)](#)
- The Working Mind courses – <https://mentalhealthcommission.ca/training/twm/>
- A Path Forward: BC First Nations and Aboriginal People's Mental Wellness and Substance Use Ten Year Plan (2013) – [https://www.health.gov.bc.ca/library/publications/year/2013/First\\_Nations\\_Aboriginal\\_MWSU\\_plan\\_final.pdf](https://www.health.gov.bc.ca/library/publications/year/2013/First_Nations_Aboriginal_MWSU_plan_final.pdf)

The Project site is a "dry camp," and no alcohol or illicit drugs are allowed anywhere on the property; however, it is still important for the BWG MSPT to have a significant understanding of substance use issues. Camp will be equipped with multiple naloxone kits and on-site health providers will have training in overdose response and provide naloxone training on site.

BW Gold will also implement a program of pre-employment medicals, audiograms, and drug and alcohol testing for potential employees, and will require contractors to complete the same for their potential employees. The on-site medical staff will have the ability to test for drugs or alcohol where it is warranted.

Additional programs focused on substance use awareness will be made available should the need arise for staff employed at the mine site. The following resources will be reviewed and incorporated into the on-site awareness program:

- <https://www.northernhealth.ca/health-topics/overdose-prevention>
- <http://www2.gov.bc.ca/gov/content/overdose>
- <http://towardtheheart.com>
- <http://www.uvic.ca/research/centres/carbc/publications/infographics/index.php>
- <http://www.ccsa.ca/eng/Pages/default.aspx>
- <http://canada.preventionhub.org/en>

BW Gold will work collaboratively with NH and our Employee Assistance partners to distribute awareness and educational materials to support the areas of both mental health and addictions. To help reduce stigma, mental health and substance use awareness health awareness promotional materials will be posted at site in high traffic areas. Supervisors and Managers will receive training on the company's policies and procedures as they relate substance use, thereby promoting consistent and equitable treatment for all employees. Site drug and alcohol policy allows for financial support for rehabilitation programs, and upon medical clearance and successful completion of the program, a return to work.

BW Gold plans to engage with a reputable EAP provider, prior to the commencement of construction activities, as support for employees and their family members. On-site contractors will be strongly encouraged to have their own EAP programs for their employees. On-site contractors and their employees will have access to on-site facilities: telephone and internet to contact their service providers and best efforts will be made to provide a private location for this service. In a Crisis Management situation BW Gold will make best efforts to ensure all camp residents will have access to the necessary counselling resources.

All new employees will be provided with EAP information upon hiring. Posters and pamphlets promoting the EAP, with contact information, will be displayed in high traffic areas of camp.

Other programs that may be made available to staff include:

- Life balance services;
- New parent support;
- Childcare and parenting (including online childcare resource locator);
- Elder and family care (including online eldercare resource locator);
- Financial consultation;
- Legal advisory;
- Relationship solutions;
- Career smart services;
- Career counselling;
- Pre-retirement planning;
- Shift worker support;
- Health smart coaching;
- Nutritional counselling; and
- Smoking cessation program.

Each of these services has been developed to allow employees and family members to take a proactive approach to manage everyday challenges and life transitions, and to receive the information and support that suits each unique situation. All these services will be delivered by the EAP service provider, once appointed.

Whenever this program is used, it is in complete confidentiality.

### **3.1.5 Sexual Health**

BW Gold is very aware that the camp environment and lifestyle can lead to poor sexual health choices. To address this important issue BW Gold ensures that the BWG MSPT has the necessary training and qualifications to raise awareness on sexual health issues, that education and safe sex counseling may be required as well as coordination of testing and treatment in collaboration with NH public health services.

Our EAP provider will provide “safe sex” counseling when needed, and provide on-site awareness programs including posters, brochures, and pamphlets to reduce the risk of sexually transmitted infections (STIs) and unplanned pregnancies. Additionally, we will ensure that the on-site medical team, as well as camp workers, are aware of the following resources:

- Health Link BC:
  - <https://www.healthlinkbc.ca/health-topics/stdis>
  - <https://www.healthlinkbc.ca/healthlinkbc-files/preventing-sti>
  - <https://www.healthlinkbc.ca/services-and-resources/healthlinkbc-files/series#STD>
  - <https://www.healthlinkbc.ca/health-topics/stdis>
  - <https://www.healthlinkbc.ca/healthlinkbc-files/preventing-sti>
  - <https://www.healthlinkbc.ca/services-and-resources/healthlinkbc-files/series#STD>
- BC Centre for Disease Control (BCCDC):
  - <https://smartsexresource.com/about-stis/got-symptoms>

Should a patient have a potential STI or sexual health issue, the on-site BWG MSPT will look to initiate a treatment plan collaborate with the person’s home healthcare provider to develop and implement a patient specific follow-up treatment plan.

On-site interventions will include coordination of STI screening and treatment, birth control options, “safe sex” counselling, referral, and other supports for sexual health. Free sexual harm reduction supplies will be made available in discreet locations onsite near accommodation and offices.

### **3.1.6 Bridging with Providers in Home Communities and Northern Services**

BW Gold recognizes the fact that NH is not funded by the BC Government to fully support temporary resident populations such as those in industrial camps. For this reason, BW Gold will make reasonable efforts to ensure patients requiring care for non-urgent illnesses or injury are able return to their home communities for treatment once it is determined that their condition is stable, and they are fit to travel to their home community. Examples are patients requiring follow-up of injuries requiring a plastic or orthopedic surgeon assessment or conditions requiring internal medicine or medical specialist assessment. The BWG MSPT will track and initially follow all patients who are referred to any NH facility and ensure they are aware of the option to be transported home should they choose this option.

### **3.1.7 A Focus on Discretion, Privacy, and Confidentiality**

BW Gold recognizes workers' concern regarding discretion, privacy, and confidentiality can hinder whether they choose to use an on-site medical clinic. We continually strive to have all necessary measures in place to ensure patients can access care without any concern for repercussions related to their employment and continually seek to promote a high level of trust between employees and the on-site medical clinic staff.

BW Gold and the various site contractors can only access first aid records as permitted by WorkSafe BC for occupational related illness or injury. BW Gold understands the company is not legally permitted to access any patient's medical record unless they have the express written consent of the patient. BW Gold recognizes that any Electronic Medical Records are strictly confidential and will be securely stored requiring electronic passwords and supported by an IT (Information Technology) policy requiring staff to lock their computers when not at their computers. Any paper records will be kept in a secure storage area.

The discretion, privacy, and confidential process outlined above will be posted in the medical clinic as well as communicated on a regular basis to camp workers. This information will also be placed in the worker orientation package.

### **3.1.8 On-site Management of Company Policy Requirements**

BW Gold will make best efforts to implement company policies, when possible, which can be implemented by the on-site medical team. Thus, sick notes, insurance forms or other forms (such as return to work) which require completion on behalf of employees, contractors, or WorkSafe shall be completed using on-site resources whenever possible.

BW Gold recognizes that some occupational illnesses and injuries (e.g., those requiring x-rays for example) will be beyond the capabilities of the site medical staff and require referral to NH facilities. Reasonable efforts will be made to ensure any worker that is sent off site for further medical assessment will have full diagnosis and documentation in their referral paperwork to assist the attending physician or medical professional in their assessment of the patient and their ability to return to work, return with modified duties or be deemed not fit for work. BW Gold will make reasonable efforts to ensure the follow-up process will minimize the burden on local resources.

Modified duty programs are a requirement of WorkSafe BC as they have been proven to show that the quicker the person returns to work, the quicker the person will recuperate and become a productive employee again. Where reasonably practicable BW Gold will reassign the worker to modified work tasks until they are fully functional and healthy to return to work. BW Gold will rely on the on-site medical staff and with the support of our tele-physiotherapy provider determine when a worker may safely return to work, and to what degree of graduated return to work program they can undertake.

As noted previously BW Gold has a zero-tolerance policy to drugs and alcohol in the workplace and is a "dry camp". To meet this objective, BW Gold also has a comprehensive Drug and Alcohol (D&A) Policy, which will include pre-employment D&A screening and on-site "reasonable cause" testing if warranted. It should be noted that any drug and alcohol substance use problems that are brought forward by employees will be supported by the company with guidance from our EAP provider and community resources.

## **3.2 Disease and Infection Prevention and Outbreak Protocols**

The remote setting of the Project poses unique challenges, and the camp has the potential to be a high-risk area for the transmission of communicable diseases and infections, as the inhabitants are often near each other in a confined living and working environment.

BW Gold is committed to the proper management of communicable disease, infection, and outbreak occurrences and this will be achieved through prevention, rapid response and the collaboration of personnel and resources. The communicable diseases policy for industrial camps will always be followed by BW Gold.

A Communicable Disease Plan (CDP) is under development and will be in place for the start of early works construction. In Appendix D can be found a high-level overview of the draft elements of the CDP.

The intent of having a CDCP include the following:<sup>1</sup>

1. To avoid workers becoming unnecessarily infected and exposed to communicable diseases and at risk of adverse health outcomes as a result;
2. To create an internal system that public health systems can readily and efficiently support to quickly contain the spread of infection;
3. To mitigate potential lost productivity and unnecessary expenses incurred by prolonged infectious disease outbreaks; and
4. To minimize potential impacts to neighboring communities and the local health care system.

Specific to COVID-19, BW Gold will follow active BCCDC recommendations and updates. The COVID-19 Safety plan will transition to the Communicable disease plan starting April 8, 2022, following the most recent update for businesses and operations (March 11, 2022).

### 3.2.1.1 *Prevention*

The ideal approach to the prevention and containment of an infectious outbreak is to implement a series of controls as referenced in the BC Provincial Infection Control Network resources:

- [PHAC Routine Practices and Additional Precautions 2013.pdf \(picnet.ca\)](#)

### 3.2.1.2 *Engineering Controls*

The construction camp design will incorporate best practice engineering controls which will include designated areas for hand washing and hand hygiene dispensers, which will be throughout the complex. Handwashing areas, with posters promoting proper handwashing techniques will be available at the entrance to the dining hall and all eating areas. Hand hygiene dispensers will be installed near building entrances and other key areas including the medical clinic, recreational and social areas. Appropriate ventilation will be implemented across the camp including natural ventilation when possible. Should it be necessary, a protocol to isolate an infectious patient to a designated location will be in place to limit their exposure to the rest of the worker population.

### 3.2.1.3 *Administrative Controls*

The administrative controls will be introduced to provide an infrastructure of policies, procedures and patient care practices intended to prevent exposure to and/or transmission of infectious disease within the camp. The on-site medical staff will be experienced in the identification, diagnosis, and treatment of common camp illnesses such as upper respiratory tract infections, influenza, noroviruses, and COVID-19. On site medical staff will maintain vigilance for all reportable illnesses listed on the BC Centre for Disease Control website.

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<sup>1</sup> ref: Northern Health Best Management Guide V2.2. July 2017

Appropriate occupational health and safety policies including work restrictions, sharps safety, prevention of exposure to blood-borne pathogens and immunization programs will be communicated to the workers through safety meetings and awareness campaigns. Ongoing awareness campaigns for the need for hand hygiene and cough etiquette will be in place with special focus during the typical months for seasonal influenza activity.

Routine environmental cleaning policies will be created for the housekeeping staff as well as the safe use and disposal of sharps, incorporation of safe practices for handling blood, body fluids and secretions as well as excretions by both housekeeping and medical staff.

To reduce the risk of food handling related to norovirus infection and consequent outbreaks, there will be an ongoing focus on the need to maintain food hygiene standards. Policies will be in place to include attention to hand hygiene, prevention of cross contamination during food preparation, provision of adequate handwashing facilities for food handlers and ensuring that food handlers do not work while they have symptoms of illness.

#### *3.2.1.4 Personal Protective Equipment (PPE)*

PPE will be available for the protection of our on-site medical staff and housekeeping, or other team members involved in an outbreak to minimize the risk of contact with an infectious disease. These barriers include gloves, gowns, masks, facial protection, eye protection (including face shields, or masks with visor attachments) and respirators as required. Simple face masks will be made available to patients with a cough and symptoms of a respiratory infection to help reduce their chances of disease spread.

### **3.2.2 Outbreak Management**

BW Gold will ensure that on-site medical staff are qualified in all aspects of outbreak management and follow the CDP.

The CDP will include the following steps:

- The onsite Communicable Disease Control Lead (CDCL) will oversee outbreak prevention and management practices and be the single point of contact with NH.
- The CDCL will be supported by the on-call physician team.
- A Communicable Disease Management Team (CDMT) will be in place to provide the necessary support and help oversee the communicable disease control. It will include:
  - Medical Director / Lead for the project;
  - Infection control prevention nurse (Off Site);
  - The CDCL;
  - Health & Safety Manager;
  - Support service manager; and
  - Camp Manager / Superintendent.

The CDMT will meet on a bi-monthly basis to monitor information, ensure plans are implemented, review outcomes as well as review and update the CDP.

- An education and awareness program will be in place to inform camp residents of the risk of communicable diseases as well as actions during an outbreak.

- NH contact numbers will be prominently displayed for communicable disease cases/outbreak and contacted within 24 hours of a suspected outbreak.
- The Alert/Outbreak Definition Criteria for common communicable disease will be available along with illness tracking for surveillance and monitoring.
- The Alert Phase Response Procedures will be in place along with the necessary testing kits.
- The Outbreak Phase Response Procedures will be in place including communication, additional enhanced hygiene, and outbreak reporting protocols.
- There will be sufficient medical equipment and supplies on hand to manage an outbreak.
- Additional strategies will be available such as isolating those suspected of illness in their rooms and having meals and medical care provided so they do not have to leave their rooms.
- The on-site medical staff will maintain vigilance for all reportable illnesses listed on the *Health Act* Communicable Disease Regulation 7/2015, O.C. 14/2015 under the *Public Health Act*.

The goal will be to have a process in place to mobilize an Outbreak Prevention and Management Team, as necessary. This team will link directly with external partners such as NH for their input, expertise, and guidance. Necessary protocols will be developed outlining the following key areas to manage influenza, respiratory, and gastro-intestinal outbreaks:

### 3.3 Health Promotion, Disease Prevention, and On-site Wellness Programs

BW Gold supports a population-based approach to health promotion, disease prevention, and on-site wellness. In Condition 40 of the Environmental Assessment Certificate, reference is made to a Health and Wellness Management Plan. This Health and Wellness Management is provided in the sections below as part of the HMSP. The Health and Medical Services Plan also supports Condition 37 b, the requirement of the Community Effects Monitoring and Mitigation Plan to address the following:

- Implement a monitoring program for the following potential adverse effects from the Project on the communities identified in paragraphs b) i) and b) ii) related to:
  - i) impacts on community services;
  - ii) impacts on population and demographics;
  - iv) impacts on community and family well-being;
  - v) provision of housing for all Employees at camps at the Project Site during Construction and Operations while on shift;
  - viii) measures to support Employees maintaining regular contact with their social networks while residing at the camps; and
  - ix) measures to support Employees in managing personal finances and mental and physical health; BW Gold recognizes that promoting a healthy lifestyle will not only reduce the potential for injury or illness for workers in camp, but it also is proven to reduce fatigue and enhance camp morale. Addressing risk factors that can lead to injury, illness, and chronic disease is a key goal at the Blackwater Project.

Blackwater Gold circulated draft copies of the Health & Medical Services Plan to Aboriginal Groups, NH, The Village of Fraser Lake, and the District of Vanderhoof for their review and comment prior to official submission. All the listed stakeholders are members of the Community Liaison Committee. Blackwater Gold plans to provide a review of the HMSP to the CLC prior to the start of construction.

NH has developed some excellent web-based and printed resource materials in workplace wellness, and BW Gold will make best efforts to assist in making these resources available to the camp workers. BW Gold looks forward to ongoing collaboration with NH to support and implement future programs at the site as they are developed.

The overall goal of the on-site wellness program will be to address a spectrum of topics in wellness and be consistent with the position papers developed by Northern Health to address the areas of health communities and prevent injury. These topics include:

- Sedentary Behaviour and Physical Inactivity;
- Healthy Eating;
- Tobacco Reduction/smoking cessation;
- Prevention of Problematic Substance Use;
- Environment as a Context for Health; and
- Health, Weight and Obesity.

Specific disease prevention and on-site wellness initiatives continue to be implemented for the site and be based on the following resources:

- <https://www.healthlinkbc.ca/services-and-resources/healthlinkbc-files;>
- [http://www.bchealthyliving.ca/what-we-do/working-on-wellness/wellness-topics/;](http://www.bchealthyliving.ca/what-we-do/working-on-wellness/wellness-topics/)
- [http://www.powerplayatwork.com/;](http://www.powerplayatwork.com/)
- [https://www.cdc.gov/workplacehealthpromotion/index.html;](https://www.cdc.gov/workplacehealthpromotion/index.html)
- Canadian Centre for Occupational Health and Safety – Workplace Health and Wellness;
- Collaborating and supporting current NH wellness initiatives;
- Embedding wellness programs into camp policies;
- Incorporating wellness as a standing item on the joint health and safety committee;
- Introducing a “health tip” of the week at any regular health and safety meetings;
- Providing a healthy selection of food choices in the dining area;
- Offering a recreation facility that includes pool tables, dart boards, card tables, social areas, TV lounge;
- Forming a recreation committee to encourage social activity and comradery; and
- Other facilities that support positive health outcomes

The Blackwater Project will have a gym/fitness and a recreation area that support positive health outcomes. The specific details of these facilities are currently being developed and designed at the time of writing this document.

The facilities could include areas that will support the following proposed activities:

- Yoga/aerobics, cardio machines, and weights;
- Recreation facility that includes pool tables, ping pong tables, social areas, TV lounges;
- Quiet area for reading/study;
- Outdoor volleyball, marked walking/hiking trails;
- Private single rooms;

- IP connected phones so workers can call home at no cost;
- Wi-Fi internet access throughout the facility; and
- 24/7 access to the dining room.

The monitoring of the employee's satisfaction with the wellness program and programs which support positive health outcome is being considered to ensure the continual improvement. The draft of the employee's questionnaire is attached in Appendix F.

### 3.4 Company Polices

BW Gold recognizes that company policies can play a significant role in determining the health of the camp. As mentioned previously, BW Gold has a zero-tolerance policy to drugs and alcohol in the workplace and is a "dry camp". BW Gold has a comprehensive D&A Policy, which includes pre-employment D&A screening and on-site "reasonable cause" testing if warranted. The worksite is smoke-free and has designated smoking areas. BW Gold has a WorkSafe BC compliant policy on smoking and protecting workers from second-hand smoke.

BW Gold will develop a Health and Safety Policy, prior to the start of early works construction to support the creation of a safe and healthy work environment as we move to improve all aspects of human health and safety performance and strive for the goal of zero injuries.

### 3.5 Collaboration, Communication, and Problem Solving

BW Gold recognizes that clear and effective communication forms the basis for developing an effective partnership with NH and is essential for the management of patient flow and trauma care, responding to emergencies and problem solving. To this end, BW Gold will establish a clear process for coordination of medical and health program delivery with NH.

#### 3.5.1 Identification of Communication Pathways

In collaboration with BW Gold medical staff, BW Gold will establish clear lines of communication with key NH stakeholders including the St John Hospital in Vanderhoof, University Hospital of Northern BC, the local Health Services Administrator, BCAS, local physicians, NH Resource office, NH Medical Health Officers (MHO), and all other identified stakeholders. The following will be key elements of the communication plan:

1. The onsite medical clinic is the single point of contact for all healthcare issues related to the Blackwater Project and we have provided contact information to the various NH key contacts.
2. A regular meeting schedule will be proposed to include representatives of BW Gold, NH MHO, HSAs, and the Office of Resource Development to review current medical service delivery and review any recent challenges.
3. If practical, arrange an on-site tour for key members of NH. The goal of the visit will be to provide an orientation and background to the site and seek any additional input from the NH team.
4. Connect regularly with NH's Office of Health and Resource Development to ensure that the BW Gold is linking with the necessary NH Stakeholders and is up to date on best practice recommendations for industrial camps.

### 3.5.2 *Patient Information Flow, Trauma Care and Emergency Response*

BW Gold representatives along with the onsite team will meet with key representatives from NH, Patient Transfer Network (PTN), and BCAS to finalize the patient information flow, communication protocols, patient transfer protocol and ensure there is a venue for sharing information.

#### 3.5.2.1 *Patient Information Flow*

A patient transfer checklist will be implemented by the on-site team to address all facets of the transport including mode of transport, notification of receiving hospital, BCAS notification (if necessary), patient effects (including wallet and ID), patient care records, first aid records, and plan for accommodation and return travel if they are discharged.

#### 3.5.2.2 *Trauma Care and Emergency Response*

In the cases where the patient requires a higher level of care, each patient will be triaged by the medical team including the physician on call as necessary to ensure proper procedures are followed so NH resources are accessed in the most efficient manner.

The University Hospital of Northern BC has been identified as the most appropriate receiving hospital for all patients requiring high acuity care beyond the capability of St John Hospital in Vanderhoof. BW Gold will maintain an on-call contract with a helicopter provider to facilitate the rapid transport of employees to a higher level of care when necessary. BW Gold is committed to working with BC Ambulance to reduce the impact of patient transfers on the local community resources.

The current patient transfer approach (subject to full review by NH and BCAS) is proposed to include the following:

- Whenever possible, patients requiring care beyond the scope of St. John Hospital will be transported by air (helicopter) to Prince George Airport accompanied by our onsite care service provider as the preferred approach. BCAS will be contacted to arrange transport from Prince George Airport to the University Hospital of Northern BC.
- For stable patients not requiring stretcher transfer they will be transported by private vehicle or Mobile Treatment Center accompanied by a BW Gold first aid attendant from the site to the most appropriate health care facility. This could include the University Hospital of Northern BC, St. John Hospital or family practice clinic as required.
- When transport by air is not available patients will be transported by road via BW Gold approved motor vehicle transport accompanied by the onsite medical support person. In consultation with St John Hospital and University Hospital of Northern BC, the optimal patient destination will be University Hospital of Northern BC in Prince George.
- As further information becomes available the transport process will be modified and shared with key stakeholders. Blackwater Gold will consult with NH to determine their role in the Blackwater Mine Emergency Response Plan (ERP).

St John Hospital and University Hospital of Northern BC have been identified as the most appropriate medical facilities for any mass casualty incident events at the Project. Health Emergency Management BC will be notified immediately should an event or potential event occur and will confirm that NH facilities will be notified. We recognize this notice is essential to activate NH's own disaster plan.

BW Gold is committed to working with NH and BCAS on ways that the company may contribute to the community ERP and possibly aid, including the provision of emergency response in the vicinity of the Blackwater Mine.

It is understood that the Medical Health Officer's mandate is to protect public health under the *Public Health Act*, and Part 5 of the *Public Health Act* provides the ability to act in emergency situations to reduce an immediate and significant public health risk.

### 3.6 Quality Improvement

BW Gold medical staff is engaged in a quality improvement framework to continually seek ways to improve the health care delivery for camp workers, minimize the impact on local resources, and respond to unforeseen issues and changing conditions.

The following are components of the quality improvement framework:

- BW Gold will commit to regularly reviewing the effectiveness of site health services, at minimum annually, and update the plan, as necessary.
- Regular review of the HMSP with NH to ensure our commitments are being met and adaptive to changes to the NH medical service delivery capacities.
- Regular meetings with NH to maintain an open line of communication.
- Regular reporting of the onsite clinic and NH utilization stats divided by occupational and non-occupational cases and measures taken to mitigate when areas of high impact are noted.
- An ongoing review of each patient transferred to ensure it was appropriate and minimized local impact. An immediate review will be undertaken should NH identify a patient transfer concern.

The plan, and any amendments thereto, must be implemented throughout Construction and Operations to the satisfaction of a Qualified Person and to the satisfaction of the EAO.

### 3.7 Health Service Utilization Information and Reporting

BW Gold will track, on an ongoing basis, specific utilization information from several areas including on the number of times on shift employees or contractors utilize the services of NH. This information will be reviewed as a component of regular meetings (initially monthly) with NH. Reporting can take place in a variety of formats including but not limited to report summaries, newsletter articles, annual community meetings or inclusion in annual reports. Specific data collected will include:

- Monthly clinic visits;
- Nature of the visit (work related vs. non-work related);
- Types of illnesses and injuries;
- Number of vaccinations; and
- Number of transports to NH facilities by private vehicle, road, and air.

On-site clinic utilization information will be forwarded to NH on a quarterly basis at a minimum.

## 4. EVALUATION, ADAPTIVE MANAGEMENT, AND PLAN REVISIONS

### 4.1 Evaluation, Indicators and Adaptive Management

BW Gold recognizes the importance of the HMSP effectiveness evaluation to meet the project goals and objectives. Therefore, the monitoring framework is set in place and the monitoring indicators were identified for each of the project objectives. The indicators do meet the S.M.A.R.T. (specific, measurable, achievable, relevant, timely) criteria of the best practice evaluation.

The following table shows the monitoring framework related to the BW Gold project objectives.

**Table 4.1: HMSP Effectiveness Monitoring Framework**

Project Objective	Activities	Indicators for the HMSP Effectiveness Monitoring	Verification
Minimize the impact on local resources	<ul style="list-style-type: none"> <li>■ Groundwater and surface water monitoring (Section 2.7.1.1)</li> <li>■ Solid waste system (Section 2.8)</li> </ul>	<ul style="list-style-type: none"> <li>■ No. of groundwater and surface water samples above the permit requirements.</li> <li>■ No. of days when the refuse incinerator is out of order</li> </ul>	<ul style="list-style-type: none"> <li>■ Water monitoring (every 2 days and monthly)</li> <li>■ Camp Log Books</li> </ul>
Better work environment for the employees of the BW Gold Project	<ul style="list-style-type: none"> <li>■ On-site health services (Section 3.6) evaluation</li> <li>■ Trends or pattern of illness or injury</li> <li>■ Wellness programs (Section 3.3) and programs which support positive health outcomes (Sections 2.9 and 3.3) monitoring through the employee questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>■ Monthly clinic visits</li> <li>■ Mitigation measure in response to identified trends or pattern of illness or injury (annually).</li> <li>■ Ratio of employees who are satisfied with the programs supporting better work environment.</li> </ul>	<ul style="list-style-type: none"> <li>■ HMSP revision (as needed, min. annually)</li> <li>■ Health service utilization Information and Reporting (Section 3.7)</li> <li>■ Questionnaire summary (as needed, min. annually)</li> </ul>
Improve the healthcare of the community at large in partnership with NH	<ul style="list-style-type: none"> <li>■ Regular communication with NH</li> </ul>	<ul style="list-style-type: none"> <li>■ Applied measures/ recommendation from NH</li> </ul>	<ul style="list-style-type: none"> <li>■ Health and Wellness Management Plan or CEMMP revisions (as needed, min. annually)</li> </ul>

#### 4.1.1 On-site Health Services Monitoring

The utilization of the on-site health services will be continually evaluated by the on-site team and the supporting physician group. This information forms a key component of the adaptive management plan. On an annual basis the HMSP will be formally reviewed by the onsite medical team and the physician team to identify any trends or pattern of illness or injury. Based on this information targeted health action plans will be developed to mitigate any identified illnesses or injury through employee awareness, enhanced safety practices or modified treatment protocols.

#### 4.1.2 Wellness Program and Programs for Supporting Positive Health Outcomes Monitoring

The monitoring of the wellness program and programs for supporting positive health outcomes will be put in place to achieve one of the project goals which is “Better environment for the employees”. The monitoring

results will serve to BW Gold Management Team for the updates of the human resources policies and the Camp programs for the employees. The evaluation will be done through the questionnaire for the employees/workforce of the BW Gold Project. The drafted questionnaire can be found in Appendix F.

## **4.2 Community Effects Monitoring and Management Plan Relationship**

This HMSP is developed in parallel with the BW Gold Project Community Effects Monitoring and Management Plan. It is well known that there is a direct link between health and the social environment. By providing access to a high-quality on-site health service in both medical treatment and health promotion, BW Gold will seek to maintain a healthy workforce which will positively impact the social environment in the surrounding communities. The goal is to embed positive health choices and practices within the workforce and have them shared back in the home communities. BW Gold will continue to assess opportunities to share information and opportunities to positively impact thought in the regional area and beyond.

## **4.3 Health and Medical Services Plan Revision**

The Health and Medical Services Plan is a living document and will require updates and revisions to meet the intended purpose at the mine site. It provides the framework for health and medical services administration for all site employees. As advances in technology and understanding or because of investigations or audits, this plan will require updates and changes. The plan will be reviewed annually.

## **4.4 Consultation and Notification Required upon Plan revision**

Changes to the Health and Medical Services Management Plan will be developed in consultation with NH, Aboriginal Groups, the District of Vanderhoof, and the Village of Fraser Lake. Resources, internal or external, needed to evaluate and develop changes will be made available. Changes will occur under the direction of the onsite medical team and site management.

## 5. QUALIFIED PROFESSIONALS

The Project Information and Infrastructure components of the Blackwater HMSP were developed by Blackwater employee Claudette Gouger, Indigenous and Community Relations Coordinator, and reviewed by Dr. Marc Gosselin. The On-site Programs and Services component of the plan including the Health Services, Health Promotion, Disease Prevention and On-site Wellness Programs and the Collaboration, Communication and Problem-Solving components were initially authored by Dr. Allan Holmes. Dr. Gosselin and his medical team have reviewed, refined and updated the components of the entire HMSP plan outlined above.

Dr. Holmes role was to author the initial version of the plan during the interim period prior to the selection of a designated Medical Service Provider for the project. Dr. Holmes is a specialty trained Emergency Physicians with over 25 years of experience in the areas of Emergency Medicine, Emergency Preparedness and Health Planning. He has over 15 years of experience in planning, developing, and delivering health services in camp environments with a focus on the BC mining sector. He has worked collaboratively with the Northern Health Office of Resource Development since 2015 and provided key industry input for the NH HMSP Best Management Guide for Industrial Camps.



Dr. Marc Gosselin is Blackwater's qualified professional. He is SIRIUSMEDx president and medical director. His role was to review, refine, update and approve the initial version of the plan during the interim period prior to the selection of a designated Medical Service Provider for the project. Dr. Gosselin is certified in Family Medicine and holds a certification of added competency (CAC) from the Canadian College of Family Physicians both in Emergency Medicine (EM) and Exercise and Sports Medicine (SEM). He has extensive background, experience and training / certifications in remote and environmental medicine. From 2000 to 2008, Dr. Gosselin was director of the Emergency Medicine Dept. at Saint-Jérôme hospital in QC. In addition to being medical director for SIRIUSMEDx since 2012, Dr. Gosselin is also the medical director for the Centre de Médecine sportive des Laurentides (CMSL) and is the medical director for Ironman Mont-Tremblant since 2012, as well as other sports events. He has more than 10 years of experience in delivering and supervising care in remote regions especially in the mining industry.

Over the past years, SIRIUSMEDx has contributed to the development and modification of several camp HMSPs and medical emergency response plans including those of Galore Creek Mining, Anglo American Exploration, and Teck Resources in BC. SIRIUSMEDx has also contributed to preserve the health of workers operating in remote areas with its field expertise and experienced personnel. More recently, SIRIUSMEDx has worked closely with multiple companies during the COVID-19 pandemic. Dr. Gosselin and his team have developed several COVID-19 Safety plans and more recently Communicable Diseases Prevention Plans for different industry such as mining, construction and production.

BW Gold has consulted with Aboriginal Groups, NH, the District of Vanderhoof, and the Village of Fraser Lake on the initial copy of the HMSP. BW Gold plans to continue to consult with required stakeholders' groups and the Community Liaison Committee on the HMSP prior to the start of construction and throughout all stages of project development.

Prepared by:

A handwritten signature in black ink, appearing to be 'Dr. Marc Gosselin', written over a horizontal line.

Dr. Marc Gosselin

Reviewed by:

A handwritten signature in blue ink, appearing to be 'Claudette Gouger', written over a horizontal line.

Claudette Gouger

Reviewed by:

A handwritten signature in black ink, appearing to be 'Don Ethelston', written over a horizontal line.

Don Ethelston

## 6. REFERENCES

Northern Health. 2015. *Health and Medical Services Plan Best Management Guide for Industrial Camps*. Prepared by the Office of Health and Resource Development for Northern Health.

Northern Health Communicable Disease Control Plan Best Management Guide for industrial Camps. V2.2. July 2017. [communicable-disease-control-BMG.pdf \(northernhealth.ca\)](https://www.northernhealth.ca/communicable-disease-control-BMG.pdf)

Guide to Prevention and Control of Infectious Diseases in the Workplace :

[https://www2.gov.bc.ca/assets/gov/careers/managers-supervisors/managing-occupational-health-safety/infectious\\_disease\\_guide.pdf](https://www2.gov.bc.ca/assets/gov/careers/managers-supervisors/managing-occupational-health-safety/infectious_disease_guide.pdf)

Ministry of Health, Health Protection Branch. Version 2 November 2015. *Guidance Document for Determining Ground Water at Risk of Containing Pathogens (GARP)*.

[https://a100.gov.bc.ca/pub/acat/documents/r20531/garp\\_v2\\_dec2015\\_final\\_1449696195712\\_9696014840.pdf](https://a100.gov.bc.ca/pub/acat/documents/r20531/garp_v2_dec2015_final_1449696195712_9696014840.pdf)

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[https://www2.gov.bc.ca/assets/gov/health/keeping-bc-healthy-safe/industrial-camps/bc\\_guidelines\\_for\\_industrial\\_camps\\_regulation.pdf](https://www2.gov.bc.ca/assets/gov/health/keeping-bc-healthy-safe/industrial-camps/bc_guidelines_for_industrial_camps_regulation.pdf)

*Drinking Water Protection Act:*

[http://www.bclaws.ca/EPLibraries/bclaws\\_new/document/ID/freeside/00\\_01009\\_01](http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_01009_01)

Drinking Water Protection Regulation:

[http://www.bclaws.ca/EPLibraries/bclaws\\_new/document/ID/freeside/200\\_2003](http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/200_2003)

Groundwater Protection Regulation:

[https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/39\\_2016](https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/39_2016)

Health Hazards Regulation:

[http://www.bclaws.ca/EPLibraries/bclaws\\_new/document/ID/freeside/216\\_2011](http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/216_2011)

Food Premises Regulation:

[http://www.bclaws.ca/EPLibraries/bclaws\\_new/document/ID/freeside/11\\_210\\_99](http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/11_210_99)

**APPENDIX A      BLACKWATER EXPLORATION, EARLY WORKS, AND  
MAJOR WORKS CONSTRUCTION CAMP AMENITIES PHOTOS**

## Appendix A: Blackwater Exploration, Early Works, and Major Works Construction Camp Amenities Photos

### A.1 Blackwater Exploration, Early Works, and Major Works Construction First Aid Clinic



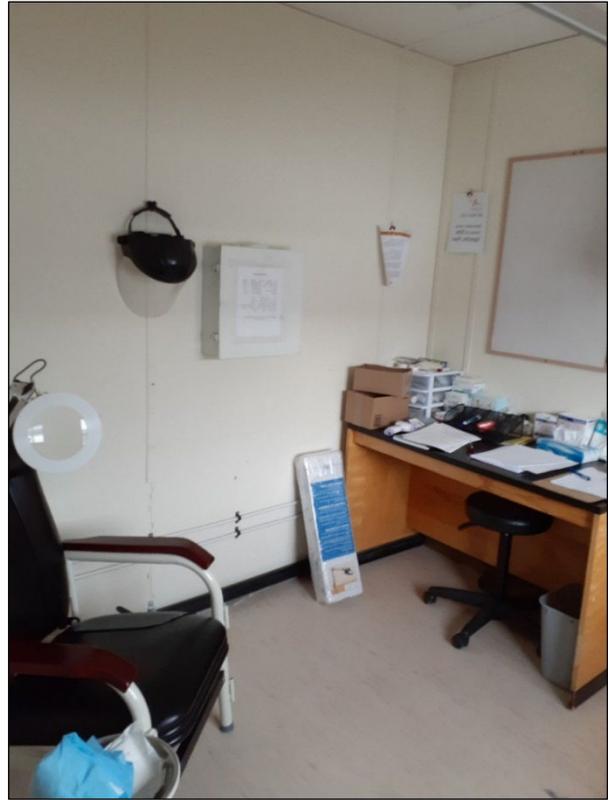
**Photo A.1-1: Cupboards with supplies.**



**Photo A.1-2: Patient resting room.**



a)

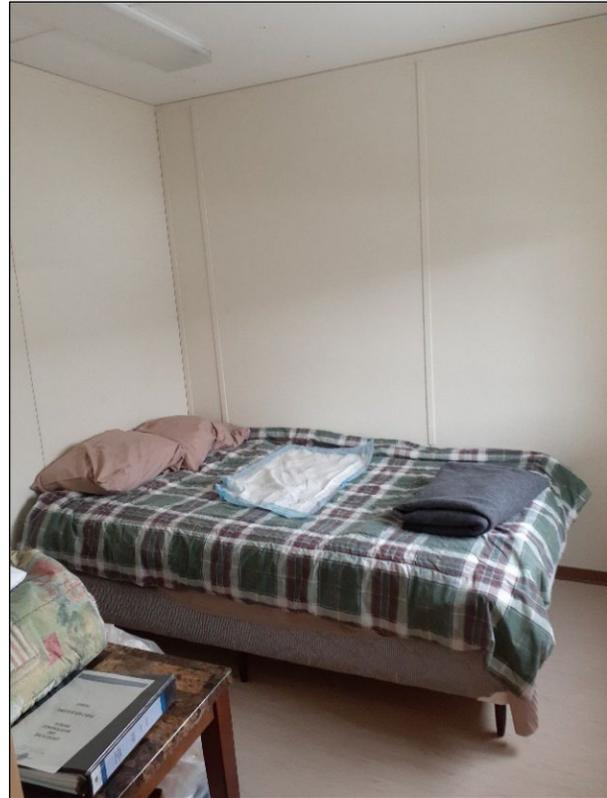


b)

**Photo A.1-3: Medical treatment room.**



**Photo A.1-4: Washroom with sink, toilet, and shower.**



**Photo A.1-5: Spare room that will be used for consultation purposes and Medical Team bedroom if needed to monitor patient.**



a)



b)

**Photo A.1-6: 4-wheel drive truck with new emergency transfer cap.**

## **APPENDIX B      BLACKWATER CAMP MONITORING SCHEDULE FOR DRINKING WATER**

## Appendix B: Blackwater Camp Monitoring Schedule for Drinking Water

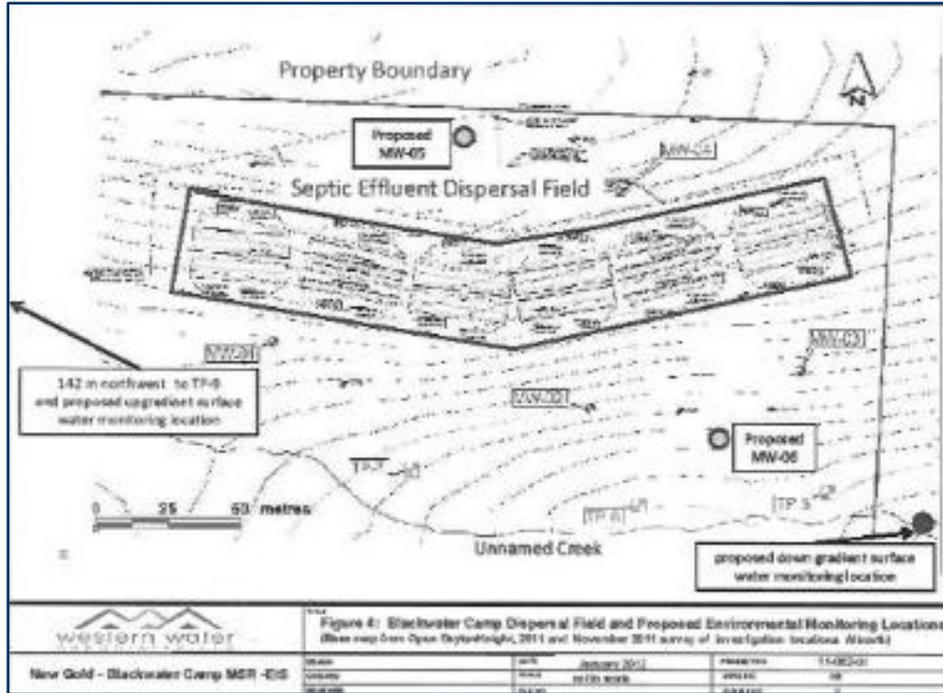
### Monitoring Schedule for Authorization Number 105882

Sample Parameter	Location	Monitoring Frequency	Data Submission
Discharge Flow	Treated effluent before discharge to ground	Twice per week record the 24-hr flow	Twice per year
BOD		Sample once per month	
TSS		Sample once per month	
<b>Groundwater</b> Monitor for presence of groundwater and if groundwater is encountered, sample as follows: <ul style="list-style-type: none"> <li>■ groundwater elevation</li> <li>■ field parameters (pH, temp, ORP, conductivity)</li> <li>■ BOD5</li> <li>■ TSS</li> <li>■ total nitrate, nitrite and ammonia</li> <li>■ total and dissolved phosphorous</li> <li>■ ortho phosphorous</li> <li>■ chloride</li> <li>■ dissolved metals</li> <li>■ total coliform, fecal coliform and <i>E. coli</i></li> </ul>	4 Piezometers: <ul style="list-style-type: none"> <li>■ MW-01</li> <li>■ MW-02</li> <li>■ MW-03</li> <li>■ MW-04</li> </ul> 2 drilled monitoring wells: <ul style="list-style-type: none"> <li>■ MW-05</li> <li>■ MW-06</li> </ul> 4 test pits: <ul style="list-style-type: none"> <li>■ TP-5</li> <li>■ TP-6</li> <li>■ TP-7</li> <li>■ TP-9</li> </ul> Locations of above monitoring sites is shown on attached site map (Figure 4)	Sample three times per year as follows: <ul style="list-style-type: none"> <li>■ freshet (May-June)</li> <li>■ water level recession (Sept or Oct)</li> <li>■ baseflow (Nov)</li> </ul>	Annually
<b>Surface Water</b> <ul style="list-style-type: none"> <li>■ field parameters (pH, temp, ORP, conductivity)</li> <li>■ BOD5</li> <li>■ TSS</li> <li>■ total nitrate, nitrite and ammonia</li> <li>■ total and dissolved phosphorous</li> <li>■ ortho phosphorous</li> <li>■ chloride</li> <li>■ dissolved metals</li> <li>■ total coliform, fecal coliform and <i>E. coli</i></li> </ul>	Unnamed creek at one location upgradient of septicfield and one location down gradient, as shown on attached site map (Figure 4)	Once per year: <ul style="list-style-type: none"> <li>■ water level recession (Sept or Oct)</li> </ul>	Annually

## **APPENDIX C      BLACKWATER CAMP TESTING WELL LOCATION AND SCHEDULE**

## Appendix C: Blackwater Camp Testing Well Location and Schedule

### C-1 Blackwater Camp Testing Well Location in Relation to Septic Field



## C-2 Blackwater Camp Frequency for Testing Ground and Surface Water

### MWR Authorizations – Groundwater and Surface Water Testing Requirements

Type	Location	Parameters	Frequency	Data Submission
Groundwater	Drilled monitoring wells MW-05 and MW-06	<ul style="list-style-type: none"> <li>■ groundwater elevation</li> <li>■ field parameters (pH, temp, ORP, conductivity)</li> <li>■ BOD5</li> <li>■ TSS</li> <li>■ total nitrate, nitrite and ammonia</li> <li>■ total and dissolved phosphorous</li> <li>■ ortho phosphorous</li> <li>■ chloride</li> <li>■ dissolved metals</li> <li>■ total coliform, fecal coliform and <i>E.coli</i></li> </ul>	3x annually (freshet, water level, recession, baseflow)	Annually
Surface Water	Upstream and downstream of disposal field	<ul style="list-style-type: none"> <li>■ groundwater elevation</li> <li>■ field parameters (pH, temp, ORP, conductivity)</li> <li>■ BOD5</li> <li>■ TSS</li> <li>■ total nitrate, nitrite and ammonia</li> <li>■ total and dissolved phosphorous</li> <li>■ ortho phosphorous</li> <li>■ chloride</li> <li>■ dissolved metals</li> <li>■ total coliform, fecal coliform and <i>E.coli</i></li> </ul>	1x annually (water level recession)	Annually

## **APPENDIX D      COMMUNICABLE DISEASE PLAN**

## Appendix D: Communicable Disease Plan

### Organizational Structure and Contact information

#### 1. Roles and Responsibilities

- a. Each **worker** will be responsible for:
  - i. Following all the recommended hygiene rules (hand washing, mask wearing, social distancing, sanitizing surfaces and tools when needed).
  - ii. Declaring any communicable disease symptoms as they appear (if already at the work site) to the CDCL.
  - iii. Avoiding coming to work (and start self-isolation when required), if symptoms start at home and advise the CDCL as well as their supervisor.
- b. The **CDCL** (Communicable Disease Control Lead: EMT/Nurse in charge) will be responsible for:
  - i. Promoting activities minimizing the risk of communicable diseases.
  - ii. Surveillance of daily symptoms screening being done by the workers.
  - iii. Surveillance and care of the symptomatic isolated worker, communicating the evaluation with the medical director and organizing the evacuation if needed.
  - iv. Monitor and review communicable disease related information issued by the regional medical health officer. This includes orders, guidance, notices and recommendations.
  - v. Communicating with the BC Communicable disease office to declare a case (or outbreak) as soon as possible and daily thereafter.
  - vi. Implementing disease communication protocol in case of outbreak.
- c. **Blackwater Gold** will be responsible for:
  - i. Requiring the workers to follow sanitary rules: proper mask wearing, hand hygiene, social distancing.
  - ii. Promoting and supporting vaccination of the workers.
  - iii. Providing a safe, clean and well-ventilated work/living environment (including cleaning products, handwashing stations, separation devices, masks...).
  - iv. Providing Personnel Protection Equipment PPE in sufficient quantities for daily use and in case of outbreak.
  - v. Providing and a proper isolation room (Private room and bathroom, away from the other workers' room) as well as transportation a sick worker when evacuation is needed.
  - vi. Providing a copy of the Prevention, Surveillance, Monitoring Procedure Plan on their website.
  - vii. Reviewing the "Disease and infection prevention outbreak protocol" once a year.

## 2. Contact List

- a. Communicable Disease Reporting line:
  - i. During business hours 1-855-565-2990
  - ii. Outside of business hours 1-250-565-2000
- b. BC Ambulance services:
  - i. Phone/Within BC 1-800-461-9911
  - ii. Phone/Outside BC: 250-374-5937
  - iii. Back-up BC Ambulance: 1-800-561-8011
- c. Contact information of the mine staff:
  - i. Matthew Nicolls, Medic: 250-960-8106
  - ii. Clarissa Clement, Medic: 250-960-8106
  - iii. Don Ethelson, H&S Manager: 250-204-0004
  - iv. Bob Nichols, Site Manager: 250-991-9694
  - v. Keith Baker, Site Manager: 778-686-4995
- d. Communicable Disease Management Team:
  - i. SIRIUSMEDx On call Physician: 514-905-1081
  - ii. SIRIUSMEDX On call Infection Prevention Nurse: 514-905-1082

## Infectious Agent Risk Identification and Assessment

The main infectious agents identified as a risk for this CDP are: COVID-19, influenza-like illness (ILI), and gastrointestinal illness (see below examples of Risk Identification Worksheets).

Other communicable diseases like vector borne disease have a very low prevalence in BC (<0.5 /100 000 population) and are not considered a significant risk in this work environment.

Bloodborne diseases like hepatitis B are mostly of concern to workers providing medical care or first aid. Any exposure will follow the accidental exposure control plan.

Sexually transmitted diseases (STIs) are a common occurrence in the workforce as well as in the general population. General measures and recommendations for the prevention of STIs in the worker population is identified in **Section 3.1.5 of the HMSP**.

### RISK IDENTIFICATION WORKSHEET

Respiratory illness (COVID-19, ILI)			
Pathogens: Influenza, COVID-19			
All employees potentially affected			
Job Task	Route Contact	Risk ID	Risk Score
Health Care Worker	AIR	OHS	MOD
All workers on Site	AIR	OHS	LOW

<b>EXPOSURE CONTROL PLAN</b>			
<b>1. Purpose</b>			
Purpose of this plan is to eliminate or minimize the risk of transmission of contagious respiratory illnesses in the worker population.			
<b>2. Responsibilities</b>			
Identified in section 1 of the CDP			
<b>3. Control Procedures (Detailed in HSMP)</b>			
<b>Substitution/Elimination</b>			
Vaccination (COVID-19 or seasonal for influenza)			
Possible pre deployment or onsite screening if high populational prevalence of disease			
Exclude/isolate symptomatic individuals			
<b>Engineering Controls</b>			
Section 3.2.1.2 of HSMP			
<b>Administrative Controls</b>			
Section 3.2.1.3 of HSMP			
<b>PPE</b>			
Section 3.2.1.4 of HSMP			
<b>4. Hygiene Facilities and Decontamination Procedures</b>			
Handwashing stations			
Social distancing			
Mask wearing			
Disinfection of food preparation surfaces, shared bathrooms, common areas, etc.			
<b>5. Education and Training</b>			
Information sheet for transmissible respiratory illnesses			
Education respiratory etiquette			
<b>6. Health Protection/Monitoring</b>			
Monitor signs of aggravation for onsite isolated workers			
Monitor for signs of severe infection (difficulty breathing, low saturation, etc.)			
<b>7. Records</b>			
Documentation of individual cases in EMR			
Documentation of outbreak cases on case sheet (spreadsheet)			
Onset and duration of symptoms			
Possible contact / Source			
Total number of cases and evolution of outbreak			

<b>RISK IDENTIFICATION WORKSHEET</b>			
Gastrointestinal Illness			
Pathogens: Norovirus, Food born (Salmonella, E Coli, Shigella, Campylobacter)			
All employees potentially affected			
Job Task	Route Contact	Risk ID	Risk Score
Cook / Food handling	Oral-Fecal	OHS	LOW
All workers on Site	Oral-Fecal	OHS	LOW
<b>EXPOSURE CONTROL PLAN</b>			
1. Purpose			
Purpose of this plan is to eliminate or minimize the risk of transmission of contagious gastrointestinal illnesses in the worker population			
2. Responsibilities			
Identified in section 1 of the CDP			
3. Control Procedures (Detailed in HSMP)			
<b>Substitution/Elimination</b>			
Exclude/isolate symptomatic individuals			
<b>Engineering Controls</b>			
Section 3.2.1.2 of HSMP			
<b>Administrative Controls</b>			
Section 3.2.1.3 of HSMP			
<b>PPE</b>			
Section 3.2.1.4 of HSMP			
4. Hygiene Facilities and Decontamination Procedures			
Handwashing stations			
Handwashing when handling food			
Disinfection of food preparation surfaces, shared bathrooms, common areas, etc.			
5. Education and Training			
Information sheet for transmissible gastrointestinal illnesses			
6. Health Protection/monitoring			
Monitor signs of dehydration if on site worker			
Monitor for signs of severe infectious gastrointestinal disease (fever, blood in stool, etc.)			
7. Records			
Documentation of individual cases in EMR			
Documentation Of outbreak cases on case Sheet (spreadsheet)			
Onset and duration of symptoms			
Possible contact / source			
Total number of cases and evolution of outbreak			

## Symptoms Identification

### ■ COVID-19:

- a. Symptoms: <http://www.bccdc.ca/health-info/diseases-conditions/covid-19/about-covid-19/symptoms>:
  - i. Fever or Chills;
  - ii. Cough, Sneezing, Sore throat, Runny nose;
  - iii. Loss of sense of smell or taste, Loss of appetite;
  - iv. Fatigue;
  - v. Headache, Body/muscle ache; and
  - vi. Nausea, Vomiting or Diarrhea.
- b. Daily questionnaire: See appendix E.

### ■ Influenza-like Illness (ILI):

- a. Symptoms: <https://www.cdc.gov/flu/symptoms/symptoms.htm>:
  - i. Fever or Chills;
  - ii. Cough, Sneezing, Sore throat, Runny nose;
  - iii. Fatigue;
  - iv. Headache, Body/muscle ache; and
  - v. Nausea, Vomiting or Diarrhea.
- b. Daily questionnaire: See Appendix E.

### ■ Gastrointestinal illness – Symptoms identification:

- a. Symptoms: <https://www.cedars-sinai.org/health-library/diseases-and-conditions/b/bacterial-gastroenteritis.html>:
  - i. Nausea, Vomiting, Diarrhea (possibly bloody);
  - ii. Fever;
  - iii. Abdominal pains and cramping; and
  - iv. Dehydration.
- b. Self-surveillance.

## Prevention, Surveillance and Monitoring Procedure (COVID-19, ILI, gastrointestinal illness...)

### ■ Screening:

- a. Pre-deployment:
  - i. All workers are to complete a self-declaration form prior to travel and commencing work, this includes questions on possible exposure and travel history during the past two-week period.

- ii. All workers who show flu-like symptoms (cough, body ache, etc.), or have been in contact with someone diagnosed or investigated for COVID-19, or test positive on a home antigen self-test are required to self-isolate according to the most recent BCCDC recommendations and communicate with their supervisor and advise them of their health condition.
  - iii. Questionnaire (To be added)
  - iv. Document vaccination Status (COVID-19, influenza, Hepatitis A and B for specific workers)
    - 1. Fully, partly, or unvaccinated
      - a. Fully vaccinated is: 1 dose of Janssen COVID-19 or 2 doses of approved vaccine.  
[http://www.bccdc.ca/Health-Info-Site/Documents/COVID-19\\_vaccine/WHO-EUA-qualified-covid-vaccines.pdf](http://www.bccdc.ca/Health-Info-Site/Documents/COVID-19_vaccine/WHO-EUA-qualified-covid-vaccines.pdf)
    - v. Pre-deployment testing when available (e.g., COVID-19 Antigen Testing)
  - b. During deployment:
    - i. Daily screening for symptoms (Questionnaire or application to be added)
    - ii. In case of an employee having symptoms, the self-isolation protocol will be started
- **Facilities:**
- a. Common areas (offices, cafeteria, recreational rooms...):
    - i. Handwashing stations:
      - 1. Soap and water stations (when possible) or Hand sanitizer 70% alcohol will be available at the entrance of each area.
        - a. Handwashing will be talked about on a regular basis (ex: at morning security meetings) to remind workers to do it regularly.
      - 2. Hand and Respiratory hygiene posters will be displayed:  
<https://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/office-of-the-provincial-health-officer/reports-publications/covid-19-handwashing-poster.pdf>  
<https://sharedhealthmb.ca/covid19/providers/cough-etiquette-posters/>
    - ii. Social distancing (during and after work):
      - 1. Plexiglas separators will be placed between seating areas where the 2 metres distancing or mask wearing are not possible (ex: at the dining areas).
      - 2. Employees will wear the mask/face covering when separators and the 2 metres is not possible.
    - iii. Cleaning of Surfaces:
      - 1. The employees will be responsible for the cleaning of their desk, dining table, tools etc. after each use. The cleaning products will be provided by the employer (see #4 "Cleaning procedure" section).
      - 2. The common areas will be cleaned once a day by the cleaning crew (floors, tables, chairs, common bathrooms...).

- iv. Ventilation:
  - 1. Ventilation will be as per Provincial Health and Safety recommendations:  
[http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Health-Environment/COVID-19\\_and\\_Indoor%20Air\\_RiskMitigatingMeasuresAndFuture-proofing.pdf](http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Health-Environment/COVID-19_and_Indoor%20Air_RiskMitigatingMeasuresAndFuture-proofing.pdf)
- b. Living quarters:
  - i. Single rooms and bathrooms to avoid cross contact between the workers.
  - ii. Each room will be sanitized by the cleaning crew once a week and at every worker change. This will include surfaces, floors, toilet/shower, bed sheets.
  - iii. An isolation room (rooms) will be available in case of outbreak. It will have a private entrance/toilet/shower. See outbreak section for details.
  - iv. Ventilation will be available in the dorms areas and will be of the same quality as the common areas.
- c. Transportation to and from the work areas:
  - i. All vehicle passengers and driver will wear masks (or face covering).
  - ii. If possible, the transportation of employees will be done in work pods, hence decreasing the exposure.
  - iii. The high touch areas of the vehicles will be cleaned with the available products between each transportation. The driver will be responsible for the sanitizing.
- **Daily scheduling:**
  - a. The dining and break schedules will be planned in work pods as much as possible to decrease exposure.
  - b. Meetings will be done:
    - i. In large enough rooms to make 2 meters distancing possible.
    - ii. On Zoom (or Teams) if possible, to avoid physical contacts.
    - iii. Or outside when weather permits.
- **Cleaning procedures for the common and living areas:**
  - a. Schedule:
    - i. Common areas will be done daily (all high touch areas: door handles, light switches, tables, chairs, desks, bathroom...).
    - ii. Living quarters will be cleaned once a week and at each worker's change (High touch areas, toilet/shower, furniture, bed sheets...).
  - b. Housekeeping staff to follow thorough cleaning and disinfecting procedures. They will need to wear facemask, nitrile gloves and safety glasses. Long sleeves are recommended. Gloves should be changed frequently.
  - c. Approved cleaners and disinfectants will be provided.
    - Mix 10ml household bleach (5.25%) with 990 ml water;

- Accelerated hydrogen peroxide (0.5%);
- Quaternary Ammonium Compounds (QUATs); and
- Any disinfectants from the list of EPA approved disinfectant.

Basic principles for choosing a disinfectant:

- Ensure product has a DIN;
- Check manufacturers information to ensure that product is effective against organism in question;
- Unless otherwise stated on the product, use a detergent to clean surface of all visible debris prior to application of disinfectant; and
- Alcohol 70% may be used on small equipment but not as a general surface disinfectant.

■ **PPE:**

a. Site medical personnel:

- Surgical mask, N95 masks when providing care to possible COVID-19 patient, as well as suspected TB exposures;
- Goggles or face shield;
- Nitrile gloves (chemical resistant gloves); and
- Disposable coveralls or long sleeve gowns when providing care to possible COVID-19 patient or testing/sampling for COVID-19.

b. Package/baggage handling:

- Gloves;
- Goggles; and
- Facemask (surgical, N95 or KN95).

c. Housekeeping:

- Gloves;
- Goggles; and
- Facemask (surgical, N95 or KN95).

■ **Vaccination:**

BWG will support employees in receiving vaccination for COVID-19 and other vaccine preventable conditions. Vaccination clinics for seasonal flu will be offered to employees. Vaccination for hepatitis B will be offered to First Aid attendants / Health workers or any worker possibly in contact with body fluids.

## Outbreak Response Procedure

### 1. COVID-19:

a. Alert phase:

- i. One (1) confirmed onsite case (confirmed by Ag(Rapid) or PCR testing).

- ii. Isolate immediately from other workers for 5-10 days, depending on vaccination status and absence of symptoms. <http://www.bccdc.ca/health-info/diseases-conditions/covid-19/self-isolation>.
  - iii. Alert the Communicable Disease office as soon as possible.
  - iv. Test contacts to the confirmed case as per BC Ministry of Health's recommendations [http://www.bccdc.ca/Health-Professionals-Site/Documents/BCCDC\\_PHL\\_Updated\\_nCoV\\_Lab\\_Guidance.pdf](http://www.bccdc.ca/Health-Professionals-Site/Documents/BCCDC_PHL_Updated_nCoV_Lab_Guidance.pdf)
- b. Outbreak phase:
- i. Situation dependent and will be decided by the Northern Health Medical Director.

## 2. Influenza Like Illness (ILI):

- a. Alert phase:
- i. More than 2 cases in 7 days:  
**A case being:** Fever 38C or more **AND** a cough **AND** one or more of the following: Sore throat, joint/muscle pain or fatigue Ref #1.
  - ii. Isolate all workers with ILI symptoms until symptoms have subsided for at least 48hrs.
  - iii. Alert the Communicable Disease office. The Outbreak Template for ILI in the Ref#1 p.18 can be used.
- b. Outbreak phase:
- i. Situation dependent and will be decided by the Northern Health Medical Director Ref #1.

## 3. Gastrointestinal illness:

- a. Alert phase:
- i. More than 3 cases within 4 days:  
**A case being:** 2 or more episode of Diarrhea or Vomiting in a 24hrs period **OR** 1 episode of each vomiting and diarrhea in a 24hrs period **OR** 1 episode of bloody diarrhea Ref #1.
  - ii. Alert the Communicable Disease office as soon as possible. The Outbreak Template for Gastro in the Ref #! P.19 can be used.
- b. Outbreak phase:
- i. Situation dependent and will be decided by the Northern Health Medical Director Ref #1  
Ref #1: [https://www.northernhealth.ca/sites/northern\\_health/files/services/office-health-resource-development/documents/communicable-disease-control-BMG.pdf](https://www.northernhealth.ca/sites/northern_health/files/services/office-health-resource-development/documents/communicable-disease-control-BMG.pdf)

## Post Outbreak Phase (for any communicable disease)

Black Water Gold, together with the health team, will review the Disease and Infection Prevention and Outbreak protocol to make sure it will be improved when need be.

## **APPENDIX E      DAILY QUESTIONNAIRE FOR THE EMPLOYEES**

## Appendix E: Daily Questionnaire for the Employees



### Daily Questionnaire (COVID-19, ILI)

In the past few days, did you develop any of the following symptoms:

Symptom	Yes	No
■ Fever (38 °C or more) or chills		
■ Cough (new or worsening of a chronic cough)		
■ Difficulty breathing or Chest pain		
■ Loss of sense of smell or taste		
■ Severe fatigue		
■ Headache		
■ Congestion or runny nose		
■ Sore throat, Difficulty swallowing or Horses voice		
■ Nausea, Vomiting or Diarrhea		

If you answered yes to any of those question, you must report back to the nurse/EMT for further evaluation.

*Health team BW Gold*

**APPENDIX F      DRAFT QUESTIONNAIRE EVALUATING THE EMPLOYEE'S  
SATISFACTION WITH WELLNESS PROGRAMS AND  
PROGRAMS WHICH SUPPORT POSITIVE HEALTH OUTCOMES**

## Appendix F: Draft Questionnaire Evaluating the Employee's Satisfaction with Wellness Programs and Programs Which Support Positive Health Outcomes



The questionnaire will be anonymous at all phases. The goal of the questionnaire is to improve the wellness program for employees. It should take the employee around 10 minutes to complete the questionnaire.

- Personally, is employee wellness important to you? (scale 1-5)
- Do you follow any exercise or training routine?
- List any fitness activities you enjoy.
- Personally, is the healthy eating important to you? (scale 1-5)
- Do you feel that the camp is providing healthy food options? (scale 1-5)
- Do you have any medical conditions?
- Do you feel stress from work is affecting your personal life?
- What kind of fitness or hobby activities would you like to see in the camp?
- Is there anything else that you want to add to help us improve employee wellness in our organization?

*Please select one of the choices for the following statement:*

I strongly agree     I agree     It's ok     I don't agree     I strongly disagree)

- I'm satisfied with wellness program and programs which support positive health outcome in the camp.

## APPENDIX G      HMSP CONCORDANCE WITH NORTHERN HEALTH GUIDELINES

## HMSP Concordance with Northern Health Guidelines

The table of concordance below shows how the requirements of the *Health and Medical Services Plan Best Management Guide for Industrial Camps*, Northern Health, March 2015 were addressed.

HMSP Best Management Guide for Industrial Camps section	Blackwater Gold Project HMSP	Note/ Explanation
<b>Project Information</b>	Location, and access as well as the contractors are given in section 1.2 Project Information. Complete project information is given in section 1.3 General (Company name, Project name, type, scope, project phases, workforce related to project timing).	Workforce turnover patterns and work shifts will be decided in the later stage of the project.
<b>Infrastructure</b>		
1. Accommodation	Section 2.2 lists all the details for the early and major work construction Camp. Operation Camp accommodation are yet to be finalized.	Ad 1) and 2) Operation Camp accommodation and sanitary facilities are yet to be finalized. However they will follow the BC guidelines for Industrial Camp Regulation and NH guidance.
2. Sanitary Facilities	Section 2.3 provides the overview, table 2.2-1 provides the details of the sanitary facilities.	
3. Laundry Services	Section 2.4 gives the details; dry rooms are described in sections 2.2 and 2.4.	
4. Drinking Water System	Section 2.6 provides the details of the drinking water system including the mitigation measures and the response plan. Appendix B shows the Monitoring Schedule for Drinking Water.	Ad 4) Drinking Water Sources for Operation camp are yet to be determined.
5. Food Services	Section 2.7. The current kitchen has approved Food Safety and Food Sanitation Plans and a current Health Operating Permit.	Ad 5) The new Operation camp food services are yet to be finalized.
6. Liquid Waste and Solid Waste Disposal System	Sections 2.8 and 2.9	
7. Other Facilities	Sections 2.10 and 3.4	
<b>On-site Programs and Services</b>		
1. Health Services <ul style="list-style-type: none"> <li>a. Non-urgent care demands</li> <li>b. Mental Health and Addiction</li> <li>c. Sexual Health</li> <li>d. Diagnostics</li> <li>e. Bridging with Providers</li> <li>f. Focus on Discretion, Privacy and Confidentiality</li> </ul>	Section 3.1 <ul style="list-style-type: none"> <li>a. Section 3.1.3</li> <li>b. Section 3.1.4</li> <li>c. Section 3.1.5</li> <li>d. Details are given in Section 3.1.1.2</li> <li>e. Section 3.1.6</li> <li>f. Section 3.1.7</li> </ul>	

g. On-site Management of Company Policy Requirements	g. Section 3.1.8	
2. Disease and Infection Prevention and Outbreak Protocols	Section 3.2, Appendix D provides a high-level overview of the draft elements of the CDP	
3. Health Promotion, Disease Prevention, and On-site Wellness Programs	Section 3.4 of the HMSP gives the overview and details based on Population Health Approach, Opportunities prevention and Collective Messaging Company Policies – section 3.5 outlines the Company policies	
<b>Collaboration, communication and Problem Solving</b>		
1. Identification of Communication Pathways	Section 3.6.1	
2. Patient Flow Information, Trauma Care and Emergency Response	Section 3.6.2	
3. Hiring considerations	See the explanation column	BW Gold has a legally binding EAC commitment (37(b)(vii)) that requires the company to implement measures to facilitate hiring of employees and service providers from the Regional Study Area. That being said, the Company will be mindful of Northern Health's significant efforts to recruit and retain health care professionals in the North, and will be cognizant of how our hiring practices may impact local service
4. Quality Improvement	Section 3.7	