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ORGANIZATIONAL NEWS

BMID A large amount of steel pipe will soon be arriving at our Works Yard on Belgo Road. You may notice the site grading work that is underway in preparation for the pipe.

At the August 23 Board meeting, the purchase of a substantial volume of 42 inch diameter steel pipe was approved. It will be required for the Black Mountain Reservoir and East Bench trunk main projects. The pipe was obtained for a very good price. With steel prices rising and BMID having sufficient reserve funds to cover the purchase, it is a sound fiscal investment for BMID. The purchase will have no impact on present water rates.



The installation of irrigation meters is near completion and the conversion of the commercial and industrial meters to the remote-read-technology is fully underway.

Kelowna Joint Water Committee

Golder Associates has nearly completed Phase 2 of the Kelowna Groundwater Protection Plan for the KJWC. The KJWC has also been active in setting up standards for tracking of geothermal groundwater wells in the Kelowna area.

The recent activities at UBCO have caused concerns due to the substantial volume of the groundwater withdrawals proposed. Although the geothermal technology is considered environmentally friendly, the protection of our drinking water aquifers cannot be ignored.

A Provincial Environmental Assessment approval is required for large groundwater withdrawals. The KJWC will be a strong advocate that the proper reviews are carried out to ensure that the aquifer is protected. (continued on back page)

PUBLIC NOTIFICATIONS

Turbidity Notification Program: Over the past 18 months, the Interior Health Authority embarked on a program of increased public notification. The program is based on the BC Drinking Water Regulation that the public must be informed on deviations in water quality that pose a risk to public health. With the program, the IHA interpretation of risk changed and the program has been under scrutiny. While it is clear that the public must be informed on the safety of their drinking water, the messages must be issued at appropriate times and must be easy to understand.

This newsletter is to assist BMID customers in understanding drinking water risks and the terms currently being used for notifications. BMID provides unfiltered surface water that has been disinfected with chlorine. BMID, in accordance with the Ministry of Health, advises that for infants and all persons that are immunocompromised, extra precautions should be taken for drinking water to protect these groups. The safety of the drinking water cannot be guaranteed.

WATER SAFE No Notification	Water is Safe for General Public Consumption: This is the normal condition when there are no advisories issued. The water is considered safe for the general population. For unfiltered sources, extra precautions should be taken for the at-risk groups of the population .
RISK INCREASING ▼ Water Quality Advisory Issued	Water Quality Advisory: This advisory is called when the water is still considered safe for persons with an average immune system but there is an increased risk present. In addition to the at-risk groups such as infants and the immunocompromised (persons with HIV or with health issues), persons wishing to take extra precautions are advised to do so.
WATER UNSAFE Precautions must be taken, Boil the Water	Boil Water Notice: This notice is called when the water is not considered to be safe for consumption. The water can be made safe by heated it to a rolling boil for a period of at least one minute. Please note home treatment devices may not make the water safe in the event of a disinfection failure
WATER UNSAFE Use another source	Do Not Drink the Water: This is a special event that is the result of contamination, tampering, algae toxins, or some other extreme risk to the public drinking water. The water cannot be made safe through conventional or home treatment systems.

One of the difficulties with the current program is the area of gray. As in many other facets of a community, the ability to reach a goal of “zero risk” for drinking water is not achievable. Even with the best current technologies such as membrane filtration and ultraviolet light disinfection, risks will be present.

Increased notification may provide assurance for some persons who want to know of any variation in water quality. It also however, reduces the effectiveness of key messages when real and dangerous risks are present such as a chlorinator failure. The appropriate level of notification is not an easy issue to resolve. The goal of both the IHA and the water suppliers is to protect the public and both are committed to do so. During the last 18 months, an intense discussion on this topic has taken place between the IHA and the water suppliers. The IHA program is to be reviewed by a Provincially appointed expert panel this fall. Water industry parameters typically used as indicators of risk are provided on the back page.

ORGANIZATIONS (CONTINUED)

Water Supply Association of BC

In the last three months the WSABC has been active in working with the Interior Health Authority in developing a direction for water treatment for the valley. Many common objectives and approaches have been agreed upon.

Additional training for local operators is being set up to make sure that water utility staff have on-going local courses available.

Okanagan Basin Water Board and Okanagan Water Stewardship Council:

The Okanagan Basin Board is working with the Province and consulting industry to complete the Okanagan Water Supply and Demand Study. The work is to be the most definitive resource on the state of water supply and water use for the entire Okanagan Valley basin.

OBSERVE, RECORD & REPORT
questionable watershed activities to
BMID at 765-5169

"No one can see their reflection in running water. It is only in still water that we can see"
Taoist Proverb

"Water is a good servant, but it is a cruel master"

John Bullein, 1562



JULY 4TH, 2007 WATER QUALITY DEVIATION EVENT

On Wednesday, July 4, 2007 a water quality deviation event occurred on the main BMID water supply system. This event was the result of the loss of signal to our primary chlorinator on our Mission Creek water source. The event resulted in a two hour period of time where the primary chlorination system was shut down. The system alarms went off and chlorination was restored to normal levels within 2 hours and 5 minutes.

An advisory was not immediately directed to the public as BMID also has a back-up chlorinator located downstream. It is programmed to boost chlorine in the supply system to a level of 1.0 milligram per litre if low levels are detected. This chlorinator started and boosted chlorine levels, however it was later found that at a third sampling site within the distribution system the desired chlorine levels were not fully achieved. Actual levels attained were only in the range of 0.2 mg/L whereas 0.7 to 1.0 mg/L would have been desired. Although this level was sufficient to inactivate 99.99% of viruses and 99.9% of bacteria (industry standard), residual levels were lower than desired and likely resulted in no chlorine in the water distribution system extremities for a brief period of time. BMID operates a water treatment plant and large settling ponds which had reduced the waste contamination in the raw water to extremely low levels. Sampling and monitoring since the event has shown no evidence of coliforms in the distribution system.

Although the risk posed was small, the event was not communicated in a timely manner to the IHA who were made aware of the event on the next day. BMID erred in not reporting the event promptly to our regulator. The IHA subsequently directed BMID to notify the public after the event and the notice is on our web page and provided in this newsletter. BMID apologizes for not reporting this water quality deviation promptly to the public.

PUBLIC NOTIFICATIONS (CONT.)

A table of drinking water indicators provides some insight into what is monitored to determine drinking water risk. In order for the public to protect themselves during a notification, there are several steps that should be taken.

INDICATOR	DESIRED LEVEL	COMMENT
TOTAL COLIFORMS <i>E. COLI</i>	< 100 / 100 mL in raw water < 20 / 100 mL in raw water	Primary indicator of safety. If numbers are high, waste is present and risk increases. E.Coli indicates that warm blooded animals and risk of protozoa is present. Information is on BMID website
TREATMENT EFFECTIVENESS	To meet regulator requirements	Disinfection effectiveness and low coliform numbers are key to safe water. Treatment effectiveness is lowest when water use is highest and facilities are stressed. BMID disinfection systems inactivate all bacteria, viruses and protozoa with the exception of <i>Cryptosporidium</i> . Plans for UV disinfection equipment to inactivate <i>Cryptosporidium</i> are proposed to address this risk.
TURBIDITY	< 1.0 NTU (turbidity units)	Turbidity compromises disinfection effectiveness. If high turbidity is combined with high coliform counts, potential for waterborne disease increases.
RESIDUAL DISINFECTION	>0.3 mg/L throughout the water system	Disinfection residual levels are important in ensuring bacteria regrowth is not occurring in the distribution system. High water temperature and low usage increase the potential for this to occur.

1. Know where your water comes from. There are 5 large water utilities within the City and many sources of water. A person may obtain water from several different utilities and/or sources in a single day. Check kjwc.org and use the feature "Who is my water supplier" or call BMID.
2. Sign up for electronic notification via e-mail. Visit www.kjwc.org to subscribe. Notifications for all service areas within the City of Kelowna can be provided by this e-mail service.
3. Understand whether extra precautions are necessary for you or your family due to health issues. Do you have a normal immune system or are extra precautions necessary for protection of your health due to illness or other conditions?
4. Be aware of what is going on in your community. Listen closely to the notification message to determine what is being issued and where. This means listening to local radio stations or reading local newspapers for current news.
5. Listen closely to the seriousness of notification and what has caused the notification. Check the water suppliers website to find more details. For a District-wide notification, it is not possible to notify every resident with door hangers.
6. Take appropriate actions as advised by the regulator and the water utility.