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A newsletter from the
Black Mountain Irrigation District
No. 38

VALLEY WATER NEWS

2010 Drought: Heavy rains in May and June of 2010 averted the possibility of a regional drought. Although the year started off with lower than average regional snowpack, and levels in Okanagan Lake 40 centimeters below seasonal averages, the rains were strong enough and steady enough to fill Okanagan Lake to full pool and the majority of storage reservoirs in the surrounding hills. Based on the early snowpack readings, BMID would have had adequate water to fill our reservoirs. With the added moisture, we were able to run off of the surplus natural flow in Mission Creek and not have to access our storage reservoirs until July 26, three weeks later than average. BMID storage reservoir levels should be relatively high at year-end and in good shape for next year.

Kelowna Joint Water Committee

As stated in recent media articles, the City of Kelowna and the four local Improvement Districts delivering water have all agreed to work together to develop a plan for the best and most cost effective means in which to improve all drinking water to the Provincial regulations and Federal standard.

In late 2009, the Minister of Community and Rural Development, the Honourable Bill Bennett, issued a letter to the Mayor of Kelowna and Improvement District Chairpersons requesting that they work together to develop solutions for the City of Kelowna water supply that meets the following objectives:

1. Best, lowest cost solution from a City-wide perspective;
2. Flexibility to consider governance options that achieves a coordinated approach similar to one local government, through a facilitated, open and transparent approach that build trust among purveyors, stakeholders and residents;
3. Achievement of public health outcomes;
4. Maintenance of agricultural interests.

Subsequently the four water Improvement Districts have met with the City on several occasions on this issue and have agreed to work together to first develop a memorandum of understanding (MOU) and then (Continued on next page)

TOOLS OF THE TRADE

The way that BMID provides water service continues to change. The regulations for worker protection and safety are now higher than ever, as is the awareness of the potential for workplace injury. Compromised worker safety, on-the-job risks, and costly damages can occur during excavations. Road corridors are jammed with utilities including sanitary sewer, storm sewer, water mains, high voltage electrical lines, high and low pressure gas mains, fibre-optic phone and cable-TV and street lighting. Some services are extremely dangerous and some are very expensive to repair. This has resulted in BMID investing in the proper equipment for underground utility operations.

In the last five years, BMID obtained two high capacity pieces of equipment, our Service Truck, purchased in 2005, and our Vacuum Truck which arrived in early 2009. The new Vac-truck has become an integral part of how the Operators do their work on a daily basis.



The Vac-truck improves worker safety by reducing the potential for damages to other underground services. Costs resulting from damages are also reduced. During a water main break, water can effectively be drawn out of the muddy hole, allowing the repair to be made more quickly. The truck has flushing attachments to go up a broken water main pipe in either direction to scour the pipe and flush out contaminated water. The truck is a critical part of managing the operational risks.



As illustrated in the photo, the ability of a vacuum truck to excavate material out from around many existing utilities is invaluable, particularly in the time of an emergency such as a water main break.

The BMID Service Truck is another valuable piece of equipment. The truck is equipped with a wet saw (to cut asbestos concrete pipe), a full range of air and hydraulic tools, a high capacity hydraulic pump, small crane, in-truck air compressor, and a working layout designed specifically to deal with water system repairs and new installations. To compliment these tools is an inventory of parts on the shelf at the BMID yard. Our trained Operators who specialize in water system operations and maintenance keep everything running smoothly.

"Humidity is the experience of looking for air and finding water. We keep track of the humidity in the air so we won't drown when we breathe" - *Science Quotes from Kids*

BMID WATER NEWS

KJWC (continued from front page)

develop a realistic City-wide long term water supply and treatment plan. The MOU is completed and awaiting signatures. The scope of work for the City-wide plan is expected to be completed within eight months.

BMID Waterworks Projects

Highway 33 Widening: The Provincial contract for the four-laning of Highway 33 from Muir Road to Gallagher's Road is nearing completion. The major 42 inch diameter pipe crossings for BMID are expected to be installed in mid September.

Houghton Road Corridor The City of Kelowna recently awarded Hayter Construction a \$2,400,000 contract to improve the paved and walkway portions of the Houghton Road corridor. BMID crews found the water mains to be in good shape in this area with several decades of life-span left, but we replaced and renewed all galvanized service lines with high-density polyethylene service pipe.

Black Mountain Reservoir Project Preparation: The sandblasting and coating operation for the 42 inch steel pipe and 56 manufactured bends is completed. The 60 inch pipe is all that remains for sandblasting and painting works.

BMID is planning to install steel pipe from Highway 33 to the Ultraviolet-chlorination disinfection site ASAP. This design work, including a connection to our primary 48 diameter supply main for the district is underway. A major concrete chamber is required to house the bends, tees, valves, pipe, tie-in pieces, and major equipment. Materials are being pre-assembled at the BMID Works Yard. Our objective is to have all fittings and materials in place so that the connection will be made without major incident.

BMID Standard Operations: The BMID works staff have been busy throughout 2010. In addition to the preparation work and roadway renewal work, a complete flushing of the distribution system took place from May to July. In July and August, all air release valves were serviced. The air release valves are an important component that reduces the chance of pressure swings and/or water hammer in the water distribution system. Larger air valves are serviced every year with the smaller valves serviced every 2 years.

"Water is composed of two gins, Oxygen and Hydrogin. Oxygen is pure gin. Hydrogin is gin and water"
- Science Quotes from Kids -

BMID WATERMAIN FLUSHING

Although we continually remind the customers to be efficient and effective with their water use, we also have to keep the water distribution system clean. This means flushing the areas of the water distribution system where there is not a lot of water usage.

Typically the agricultural areas have high water usage during the summer months with a flow that is sufficient to scour the water distribution pipes in those areas. The residential areas, and in particular, the end of cul-de-sacs and dead-end lines are the most susceptible to experiencing older and stagnant water.

The higher the flow and velocity of water within a pipe, the higher the scouring ability of the water to cleanse the pipe. Old or stagnant water can result in the formation of a biofilm on the inside of the pipe walls. This biofilm occurs in many water systems and flushing helps to reduce the potential for its formation.



BMID typically provides a crew of three Operators who spend weeks flushing the mains. The job is done during the hotter times of the year when flows are already high within the distribution system. The job is one of the less desirable ones for our staff as it is repetitive, labour intensive, and occurs during the hottest times of the year. The water is uni-directionally flushed in a downstream direction so that cleaner water is always fed into the areas being flushed and displaces the older water.

Even with very clean source water and/or with full filtration Water Treatment Plants, there are biological and chemical processes that can result in deteriorating water quality. The regrowth of bacteria in the water distribution system can result in the formation of a biofilm or deposition on the pipe wall as illustrated. These coatings can shield the residual chlorine in the water from killing bacteria that can hide behind the coating. If you see our crews flushing mains, they are not wasting water but rather carrying out one of the tasks necessary to protect the health of the community.



ODD-EVEN SPRINKLING REGULATIONS IN EFFECT (REMINDER)

The *Odd-Even* sprinkling policy works with Odd number addressed properties watering on the odd numbered days of the month and Even number addressed properties water their lawns on the even numbered days. The regulation allows for extended watering times from a six hour to eight hour period. This is to allow for lower flow rates over a slightly longer period of time. Watering with underground sprinklers is now permitted from 10:00 pm to 6:00 am. The watering day starts at 10:00 pm and carries on 6 hours into the next day. The *Odd-Even* regulation excludes metered agricultural customers who have a fixed annual allotment of water and flow rate based on their land area and soil type.

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

"H2O is hot water and CO2 is cold water"
- Science Quotes from Kids -

