



September, 2023

A newsletter from the
Black Mountain Irrigation District
No. 58

www.bmid.ca

BMID WATER NEWS

BMID Drought Status: Please refer to the BMID web page for BMID's drought restrictions and water supply condition. BMID is on Stage 1 Water Use Restrictions. We are now later in the irrigation season with our upland reservoirs at reasonable year-end levels. BMID will be draining James Lake and Fish Hawk Reservoirs this fall to perform maintenance and renewal work on the outlet gates.

Watershed Activity during Drought: During extreme drought conditions, BMID discourages RV and recreational activity in the watershed. When the forest is tinder-dry like it was for July & August 2023, any spark or ignition from human activities could start a fire like we have just witnessed. Although there is no law stating persons cannot travel on Crown lands, there is common sense to be applied here. Even the forest companies shut down their activities under these extremely dry conditions because of the fire risk.

Mission Creek Salmon Release:

This spring, the Okanagan Nation Alliance was reported to have released 1,000,000 sockeye salmon fry into Mission Creek. It was a quarter of the total release in the Okanagan Basin. With fish passage now in-place at the Penticton Dam, the route to the ocean is now fish passable and it is hoped that 300,000 sockeye will return in 4 years. BMID is concerned with the flowrate and volume of water that will be needed to support those numbers of fish that may return in 2027. BMID will be looking to the Province for partnership in expanded upper reservoir storage for environmental flows.

2023 Water Usage to Date BMID's monthly usage year-to-date for 2023 and 20-year-average is listed below. Units are in mega-liters (ML). 1 ML = 1,000 m³.

Month	Actual	Avg.	%
Jan-March	745	568	131 %
April	307	463	66 %
May	1,491	1,386	108 %
June	2,156	1,830	118 %
July	2,690	2,843	95 %
August			TBD %
September			TBD %
Oct-Dec			TBD %
Total (end of July)	7,389	7,170	103 %

As shown by the water usage numbers, 2023 was very hot in May and June and average during July. Use for August is expected to be near average levels.

DROUGHT AND WILDFIRE

This summer, the BC Government directed significant resources to manage streamflows during the Southern Interior regional drought. On August 15th the drought had reached "Level 5 - Exceptionally Dry", meaning that it was expected to have adverse effects on socio-economics and ecosystems. All of the creeks flowing into Okanagan Lake that did not have the benefit of upland reservoir storage, saw fish kills and extremely low or no-flow conditions. Fortunately, BMID has very reliable watersheds and our upland reservoirs fill every spring. Through much of the summer, BMID water releases from reservoirs provided approximately 2/3 of the flow of water in Mission Creek. Although the provincial drought messaging was clear that the drought was a regional condition, there is confusion as to why several water utilities, including BMID, have only called for Level 1 Water-Use Restrictions. Drought levels for each water utility are determined based on storage water available at that time of year. BMID currently has more than 50% of our reservoir storage remaining. If you have questions or concerns as to the level of restriction or rules for irrigating, please go the BMID web page for the current watering regulations.

On Wednesday, August 16th the BC Wildfire Service Predictive Services branch issued a video stating that the next 48 hours would be an extremely dangerous time for BC forests. The Province knew there would be a 48-hour period of strong NW winds and cold front moving across the Province. One-day prior, on August 15th, the McDougall Creek wildfire was discovered approximately 10 km northwest of West Kelowna. By August 16th the fire had grown and by August 17th, it was fueled by the strong winds and out-of-control. Hot temperatures above 30°C, relative humidity less than 30%, and winds above 30 km/hr., all contributed to the extreme fire behavior. The extreme behavior saw embers causing new fire starts several kilometers in front of the fire. The result is something that could not be stopped by man. Even the width of Okanagan Lake did not provide a wide enough barrier with the fire crossing the lake into Kelowna and Lake Country.



Even with proven forest fuel management practices, there is resistance by some people living near the forest interface to allow the fuel mitigation measures. The majority of BMID customers are fortunate in that they have acres of orchards between them and the forest interface. With the new vineyard above McKenzie Road, orchards at Layer Cake Mountain & Pyman Road, and additional orchards planned on the benchlands to the northeast, agricultural land use will provide a level of protection for BMID customers that many other areas do not have.

There has been incorrect information circulated on social media regarding water safety and the impacts of the fires. We would reiterate that **"If you have questions about the fire impact on our water supply, please go to the BMID website to see if there are any issues or phone the office during normal working hours."**

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"We must protect the forests for our children, grandchildren and the children yet to be born. We must protect the forests for those who can't speak for themselves such as the birds, animals, fish and trees."

Qwatsinas (Hereditary Chief Edward Moody), Nuxalk Nation



BMID WATER NEWS

BMID-City Dialogue: In mid August, BMID Trustees and Administrator met with Kelowna Mayor Tom Dyas and the City Manager. BMID is encouraged by the willingness of the City to partner with BMID on regional strategic water initiatives for community benefit. This initiative will be work-in-progress adhering to the objective of long-term community benefit.

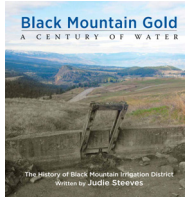
2023 Irrigation Tax Rate has been set in bylaw to be \$138.00/acre for Grade A lands and to \$110.40/acre for Grade C lands. This is a \$6.00 increase/acre for Grade A lands and \$4.80 increase for Grade C land. Tax assessments will be sent out in October and water taxes are due prior to year-end.

Fish Hawk Dam Upgrades: As part of our dam safety work, lining of the Fish Hawk Dam face with rip-rap rock is underway. This is to protect the dam from erosion due to wave action. The road to Fish Hawk Reservoir was improved in 2022 to allow for the dam upgrade work.

Grant Applications: BMID is not usually eligible to receive senior government grants, however there were two recent grant applications made: one to the *Federal Disaster Mitigation & Adaptation Fund*; and the second to the *Investment Agriculture Foundation of BC*. BMID applied for the maximum amounts available from both agencies, both for the McDougall Tunnel Extension project.

Boundary Amendment Application: The 1,885 acre BMID boundary amendment started in 2022 is nearing final approval. The boundary change would take in lands from the City of Kelowna boundary out to, but not including Eight-Mile Ranch. The final decision lies with Provincial Cabinet who will be meeting in September. There are also numerous enquiries from land owners outside BMID Boundaries to be included once the current amendment is completed.

BMID History Book - The BMID 100-year history book, written by Judie Steeves, is a remarkable record of the settlers that valued agriculture and created the orchard setting that surrounds us. It is available at the BMID Office front desk. Price is \$25.00 cash or debit.



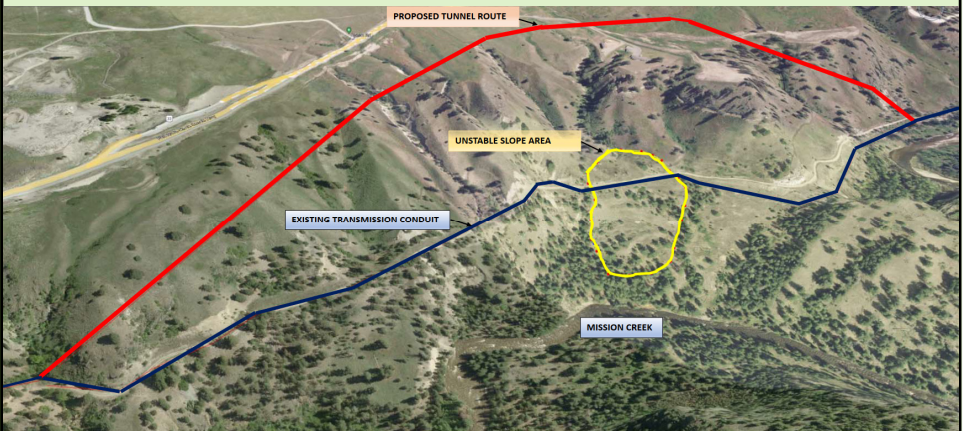
OBSERVE, RECORD & REPORT
questionable watershed activities to
BMID at (250) 765-5169

McDOUGALL TUNNEL EXTENSION PROJECT

The McDougall Tunnel Extension project is coming closer to reality. BMID was fortunate to have Dougald McDougall working for the District as legal surveyor, engineer and as manager from the mid-1920s until 1948. He had proposed the plan to dig the low elevation ditch and tunnel in the mid-1920s to access the more reliable, larger volume of water supply from Mission Creek. It took until the mid-1940s for the 1,000 metre long rock tunnel to be completed.

The existing tunnel lies below the south shoulder of Black Knight Mountain and conveys water from Mission Creek to the BMID water distribution system. The McDougall tunnel is BMID's single most reliable and cost effective piece of infrastructure. The bare rock, unlined tunnel requires minimal maintenance, and has no components that would wear out. The natural metamorphic rock material is solid with minimal fissures or cracks, stable, and does not leach any harmful chemicals into the water.

When the north slope of Gallagher Canyon saw increased groundwater levels in 2018, the slope where the BMID primary supply conduit crosses (yellow outline below) was creeping downwards towards Mission Creek. The total movement in some locations was greater than 250mm. BMID's water conveyance route between Mission Creek and the east end of McDougall tunnel has been compromised 5 times since 1973. The 2018 brought it to the attention of the Board that renewal of the conduit in the same location is not a viable option as the silt slopes could fail right after the new pipe is installed. In 2018, it was estimated that, if BMID were to lose the water supply in mid-summer, the economic losses in agriculture alone could be greater than \$400,000,000.



BMID is at the stage where the detailed design work is completed. BMID is in the position of being able to start construction of the first part of the work as early as this fall. The project is expected to cost \$24,000,000 in three phases of work.

The three phases include: the renewal of 1500 mm diameter steel conduit to convey water from Hadden Reservoir to the east Tunnel Portal; the work to excavate 1650 metres of rock tunnel and seal the portals (tunnel ends) and; to utilize the 25,000 cubic metres of tunnel rock to line and protect the integrity of BMID facilities along Mission Creek from higher creek flows and slope failures.

With the unknown status of the grant applications, the exact amount that BMID will have to fund is not yet determined. The project is one of renewal where the Renewal Reserve Funds can be partially utilized. It is also one that increases the conveyance capacity so that the Capital Expenditure Fund collected from new development could fund a portion of the project. For the portion of work covered by BMID, it is intended that this project be financed over time. BMID will be approaching the public to inform them of the project details and costs as they come available. For any borrowing, the District must obtain ratepayer assent and this can be done by referendum or the Province's Alternate Approval Process where a sufficient number of customers, >10%, could vote to block the project.

BMID will be holding open houses in the near future for the public to view the project, its costs and rate-impact. These open houses will have staff and Trustees available to answer questions. A similar process was used to fund the UV Facility. Please stay tuned for the open houses as they will be advertised and on the BMID web page. They will be held at the BMID UV Facility which is worth seeing if you are a BMID customer.

"The best time to plant a tree was 20 years ago.
The second best time to plant a tree is now".
Ancient Chinese Proverb