

**Full Authority**  
**15 March 2018**  
**Agenda Item: 10**

**General Manager's Report**

The General Manager's report provides a brief update for the Board Members prior to the Board meeting bringing forward additional information and/or progress on initiatives or current issues for the Board members consideration.

**1. Watershed Management**

*Current Watershed Conditions*

- Water levels and flows continue to improve from recent February thaw, although levels and flows are still higher than the norm for early March.
- Still deeper snow pack further north in watershed – 50 to 100mm of snow water equivalent on the ground – less in the lower 25% of the watershed.
- Ground is either still frozen or in a saturated state – either condition could result in additional runoff, especially during significant rainfall events.
- No threat of flooding as a result of this thaw – no ice jams reported along the Crowe River or its major tributaries.
- February thaw – resulting flows peaked at 62.1cms – currently at 57cms and dropping steadily.

*Patterns/Predictions*

- Any combination of rainfall, higher temperatures and snow pack could result in a significant runoff
- Short term weather conditions will not exacerbate the current situation – temperatures have been and will continue to dip below zero at night, slowing the runoff and predicted precipitation amounts will not have a significant impact.
- Long term weather patterns may produce a different story, which may emulate last year's freshet to a certain point. Spring weather predictions indicate moisture from the Gulf of Mexico and the southern Atlantic may produce higher than average amounts of rainfall through the first part of the spring season. Should this occur in combination with either frozen ground or saturated conditions, spring flooding could easily reach or surpass last year's totals.
- Due to this potential, the freshet pattern could follow last year. Essentially, there were three peaks spread out over a 3 month period, with each getting

progressively worse due to above average rainfall accumulation (6" in approximately a week) and persistent ground saturation. The last peak on 9th of May 2017 was the worst of the year and one of the latest freshet runoffs on record because of these conditions.

### *Hydro Plant Failure*

- Saturday March 3<sup>rd</sup>, 2018 electrical production ceased at the Shaman Hydro Power Plant located at the Marmora Dam (central sluiceway).
- No power was either being produced by the generators, nor was any electricity flowing back to the hydro plant from the grid to operate the by-pass gate.
- As per on call system, Wray was called to the site at 11:00pm – attempted to restart generator #1 and #2 – all attempts failed.
- Wray proceeded to call the maintenance contractor, who arrived on site to assess situation and attempt restart – unsuccessful.
- A commercial electrical contractor was then called to site.
- Wray contacted myself at 1:00am – to come to site to prepare for stop log removal since the generators were running at full capacity (30cms) and the by-pass gate was not functional.
- The commercial contractor determined a 150 amp fuse had been blown causing the generators to shut down. Further investigation from 2:00am to 3:00am showed that fuse replacement was not an option until the source of the power interruption was determined and repairs completed. Estimated time to complete repairs was difficult due to the nature of the failure, but would be at the very least “a few days”.
- Water levels continued to rise, risking potential flooding and damage from ice.
- Staff removed stop logs from the west sluiceway from 3:00am until 7:00am since the by-pass gate at the hydro plant was inoperable.
- Once the effect of the initial stop log removal was determined, additional logs were removed from 9:00am until 11:00am by Wray and Neil to adequately compensate for zero flow at the hydro plant.
- Early in the week of the 5<sup>th</sup> of March, a break in the electrical line from the hydro plant to the Ontario Hydro Marmora substation was discovered a few metres from the hydro plant.
- Repairs to the line are anticipated to be completed by the 9<sup>th</sup> of March.

### *Ramifications for the CVCA*

- In the event the generators are intentionally shut down or automatically shut down due to any number of faults, an on call system is used to alert staff to either restart the generators or open the by-pass gate to ensure the flow rate remains the same.
- If neither action is taken, as in the 3<sup>rd</sup> of March situation, then, the CVCA has no option but to remove stop logs. If nothing is done, then the CVCA risks flooding properties, homes, cottages and damaging other property such as docks.

- However, should this unplanned outage have occurred during a time when all of the stop logs were already removed, then the CVCA would not have had any additional capacity to increase flows and flooding would have occurred on the lake.
- Therefore, it is imperative that the by-pass gate be fully operational at all times to avoid this scenario and reduce or eliminate the need for staff to be conducting stop log adjustments in poor working conditions (in the dark and with no rest in a 24 hour period).
- CVCA staff have requested the maintenance contractor to investigate alternatives to ensure the by-pass gate is operational at all times and make the necessary change to the gate.
- If a solution is not found in the short term, the CVCA will contact the owners directly to ensure they understand the severity of the situation and insist action be taken to avoid a scenario which could cause loss of life or personal property damage.
- This is the first time in approximately 25 years of the hydro plant operation where this type of situation had occurred of this magnitude and it easily could have been worse if the spring freshet was higher. At the time of this situation, staff were coping with flows at 62cms, not flows like last May when they were at 162cms.

***As a flood forecasting and warning agency, the CVCA must be prepared as possible for any future scenario.***

## **2. Miscellaneous**

- Chair Redden and myself have recently attended the Stirling-Rawdon Finance Committee to review the budget and present the Board's direction to raise permit fees.
- A good discussion ensued with Stirling-Rawdon councillors and Mayor emphasizing they are fully supportive of increasing user fees.
- The Council also recognized the Authority's recent increases did not address the operational budget satisfactorily and that a plan to do so going forward is necessary for the CVCA and its member municipalities.
- Chair Redden and I met last week with Mike Bossio, MP for Hastings-Lennox and Addington
- The meeting was positive as Mr. Bossio announced there will be \$1.3 billion dollars available to environmental groups and agencies across Canada for scientific research over the next 5 to 10 years.

- We emphasized the natural rural characteristics of the CVCA watershed would be an exceptional baseline for conducting research as it relates to climate change and that the natural features of the watershed (90% forest, wetlands, lakes and rivers) would help to mitigate the effects of climate change.
- Mr. Bossio also believed the Crowe watershed could be a significant part of the natural corridor between the Algonquin area and the state of New York.
- There was also some discussion regarding carbon sequestering and the role conservation authorities could execute to achieve future cap and trade targets.