

CITY OF IQALUIT
EMERGENCY CITY COUNCIL MEETING #22
August 27, 2018 at 5:19 p.m.
CITY COUNCIL CHAMBERS

PRESENT FROM COUNCIL

Mayor Madeleine Redfern
Deputy Mayor Romeyn Stevenson
Councillor Kuthula Matshazi – via teleconference
Councillor Jason Rochon
Councillor Joanasie Akumalik
Councillor Noah Papatsie
Councillor Kyle Sheppard

ABSENT

Councillor Simon Nattaq

PRESENT FROM ADMINISTRATION

Amy Elgersma, Acting CAO
Matthew Hamp, Director, Engineering and Public Works
Amanda Pollock, Recording Secretary

PRAYER

Councillor Akumalik opened the meeting with a prayer at 5:19 p.m.

ADOPTION OF AGENDA

Motion # 18-290

Moved by: Councillor Rochon
Seconded by: Councillor Sheppard

Adoption of the agenda as presented.

Unanimously Carried

1. DECLARATION OF INTEREST

None

2. EMERGENCY BUSINESS

a) Purchase of Ancillary Equipment – Reverse Osmosis Unit

Matthew Hamp, Engineering and Public Works Director, advised that the purpose of the meeting was for a Request for Decision on the purchase of ancillary equipment related to

the reverse osmosis unit that has been identified as the secondary plan for the supplementary pumping project.

Mr. Hamp advised the pumping project is proceeding well, but Council must still remain cautious. A generous amount of rainfall has been received in August that has made up for the lack of rainfall in June and July. The combined rainfall for June to August matches the historical average, but is not sufficient to re-supply the reservoir; supplementary pumping will have to continue and the backup plan pursued.

He explained that part of the backup plan is the reverse osmosis unit. Staff will be making a presentation tomorrow night requesting a decision on the reverse osmosis unit. However, there are some other items that need to be decided upon as soon as possible relating to setting up the reverse osmosis unit. Equipment that is needed is pumps, piping, shelter for the reverse osmosis unit and a number of ancillary tanks. The total cost is approximately \$350,000 between equipment purchase and transportation to Iqaluit. Some of the items can be re-purposed in the event that the reverse osmosis unit is not approved, but not all of the items.

Mr. Hamp advised that the request is to allow staff to purchase the ancillary equipment and have it shipped to Iqaluit as soon as possible.

Councillor Sheppard asked if the cost is on top of the expected \$250,000 for the retrofitting of the existing machinery. Mr. Hamp advised that was correct.

Ms. Elgersma advised that the latest information she has received from Colliers indicates \$350,000 for the retrofitting.

Mr. Hamp noted that the retrofitting cost is an estimate and is on the high side so that staff does not have to ask for approval for additional funds.

Deputy Mayor Stevenson wanted to clarify that the ancillary equipment is \$350,000 and retrofitting existing machinery is \$350,000, and that does not include installation, operation, and manpower to operate the unit. Deputy Mayor Stevenson asked if there is an estimate for any of these items.

Mr. Hamp advised at this point there is no cost for the operation of the unit, but there is an estimate of \$150,000 to assemble the reverse osmosis unit on site; commissioning \$100,000; and demobilization if it was not a permanent installation of \$100,000.

Deputy Mayor Stevenson noted that the cost for the reverse osmosis unit will be approximately \$1 million that may not necessarily be needed.

Mayor Redfern noted that the actual cost to the Government of Nunavut is \$4 million and the cost presented to Council is about 20 percent; Mr. Hamp agreed.

Councillor Sheppard did not feel that he had sufficient information on the reverse osmosis unit to spend \$1 million. He understands that it is not known at the time if the equipment is needed, but he wanted to know what the actual likelihood that the equipment will be needed.

Mayor Redfern noted that the request tonight is for \$350,000 for the ancillary equipment associated with the reverse osmosis unit. The reason it is being presented tonight is due to a timing issue to ensure that the equipment is on sealift. Mayor Redfern commented that Council will decide at the Council meeting tomorrow on the \$1 million cost for the reverse osmosis unit.

Deputy Mayor Stevenson noted that the request to spend \$350,000 is a large amount of money and every time a large portion of money is spent, it becomes difficult not to go forward with the reverse osmosis unit.

He noted, as a member of the task force, that both pumps are now pumping more than 20 hours a day, and Lake Geraldine is at 110.6 metres which is less than a meter of the maximum height of 111.3 metres. Providing pumping continues in the same manner, and the rain is consistent, Lake Geraldine will be filled to the maximum, but is not sure there will be sufficient water based on the water usage last year. He noted that next year has to be considered, and there may not be the option to pump water freely from the Apex River. There may not be as much rain and pumping will not be easy. He noted that because of all the rain in August, Apex is running freely.

Mayor Redfern noted that the prediction for this winter is a much higher snowfall.

Mayor Redfern pointed out that the shelter, or possibly some of the other ancillary items, could have other uses.

Mr. Hamp advised that the shelter could be used at the public works yard to protect the winter sand and gravel, which would alleviate having to chip it up during the winter months. Some of the piping and pumps can be used to keep as stock, but unfortunately, there is no other use for the two tanks.

Mr. Hamp advised that there is some more information on rainfall and projections. The following are his comments:

- Some modelling has been carried out to follow-up on the earlier projections, based on the rainfall received since the first projection was completed.
- If the maximum rainfall is received, based on the last 10 years of data, there would still be a deficit leading into the winter. The results show that pumping must continue.
- If pumping continues under the same scenario, and in September and October the maximum rainfall is received, there will be an additional 17 days of pumping required.
- Over the last 10 years of data, if the average median rainfall is received in September and October, it would require 42 additional days of pumping.

- If the minimum rainfall is received, it would require 56 additional days of pumping.
- Must rely on rainfall and pumping.
- The reverse osmosis unit provides some risk mitigation.
- If there is a major break this winter, a sudden spike in demand, or any fluctuation, the City will have an alternative plan to use to make sure that water will not have to be rationed.

Mayor Redfern noted that currently pumping is being done to fill Lake Geraldine and depending on the rainfall amount in the next five weeks, Lake Geraldine is being supplemented with pumped water. Mayor Redfern felt the question is if there is a major break similar to the one a few years ago, the reverse osmosis unit might be needed. However, the issue that was identified by the task force is that there is a frozen bay, so the issue becomes how and where salt water can be pumped in the winter months.

Councillor Sheppard understands the insurance value of having the reverse osmosis unit here, but it is expensive. He clarified that Council has the authority to spend, but the Committee of the Whole does not have the authority to spend. Councillor Sheppard asked if it is possible to make a motion tonight to approve spending, pending a recommendation to proceed by the Committee of the Whole tomorrow.

Mayor Redfern advised that there is a Committee of the Whole tonight following the Emergency Council Meeting, and there is a Council meeting tomorrow.

Mayor Redfern pointed out that the reason for the meeting tonight is due to the timing to ensure the equipment is on the sealift.

Deputy Mayor Stevenson noted that the reverse osmosis unit is no longer new and it was going to be scrapped by the Government of Nunavut. Deputy Mayor Stevenson asked if anyone has seen the unit other than the people working on the unit and the Government of Nunavut staff.

Mr. Hamp is not aware if someone has physically seen the unit, but the original designer of the unit is on the team through Stantec. Stantec is fairly confident that the unit can be rehabilitated.

Mayor Redfern commented that people go to the Sylvia Grinnell in the winter and make a hole in the ice and draw water, as it actually does not freeze right to the bottom in some places. Mayor Redfern noted that a meeting with the QIA Community Lands and Resources Committee (CLARC) is needed to find out more information about winter fresh water sources and which lakes and rivers freeze and which ones do not.

Councillor Papatsie noted that damages were discussed a few weeks ago and have those been determined. He noted that consideration must be given to using the water from the lakes around Lake Geraldine. He always referenced the snow in the winter and asked if the snow could be dumped on Lake Geraldine, and is it possible to keep the dam or Lake

Geraldine warm so the snow could melt and flow into Lake Geraldine. He noted that there are some lakes that do not freeze up in the winter and suggested using the water from these lakes for fires instead of using the treated water from Lake Geraldine. There is also the possibility of making a makeshift reservoir similar to the one by the hospital.

Mr. Hamp advised that Councillor Papatsie's suggestions are important to pursue and some things will take time to carry out. He felt all the efforts to conserve water usage over the winter will help with the situation.

Councillor Akumalik asked why this is an emergency and Mr. Hamp advised it has to do with ordering timelines to ensure the equipment is on the sealift.

Councillor Akumalik asked if the administration spending authority is exceeded and requires Council to approve the expenditure.

Mr. Hamp advised that is beyond the administration and directors' approval. He noted that the supplemental water project was required to receive Council's approval.

Councillor Akumalik asked if the pipes can handle the minus 50 to minus 80 degree winter temperatures.

Mr. Hamp advised that the pipes being proposed to purchase are the standard pipes that are used in Iqaluit. Some lengths of pipe are insulated while others are not, which are standard products used in the north.

Mayor Redfern noted that when staff asked her to sign off on the purchase, she advised that she would not and it had to be referred to Council for approval. Mayor Redfern advised that the timelines to have the material booked on the sealift would not be sufficient if approval was received at the next Council meeting.

Councillor Sheppard noted with the conservation measures and repairs that have been done, the consumption level has decreased. He commented that it is only one day until Council, but he feels councillors would have more information following the task force update and be in a better position to decide. Councillor Sheppard reiterated that he does not have enough information to support spending \$350,000 today, when he feels he might have enough information tomorrow. He understands that time is of the essence, but how big an impact will 24 hours have.

Mayor Redfern asked if 15 minutes was sufficient time for staff to provide a task force update.

Mr. Hamp advised that he is not prepared to give an update at this meeting.

Councillor Rochon commented that last winter, the bottom of Joamie Hill was always blocked off because the pipes were being worked on and is it known how much water

would have been wasted. He is asking because if this reoccurs this year, how much water would be lost.

Mr. Hamp advised that if it was a major water loss, it is possible to determine the amount. He pointed out if there is a slow leak, it would not be possible to determine the water loss.

Councillor Rochon asked if it is normal to have pipes breaking in the winter with a long period of time to fix the break.

Mr. Hamp advised that typically there is a spike in water production in January which relates two things; intentional bleeds, which are required to ensure the pipes do not freeze up and the ground freezes solid, which causes jolts to the system causing leaks. That is why staff is digging next to access vaults where the pipe connects to the access vault. Mr. Hamp advised that it is anticipated that the same spike and usage will happen in January and February as every other year.

Mayor Redfern noted that having sensors will enable staff to have better data on how much water is flowing through the various pipes, the temperature of the water, as well as the movement of certain access vaults that shift due to the change in perma-frost, especially where the pipes are breaking on a continuous basis. The installation of flexible pipes will help reduce the number of breaks. There is a type of flexible coupler available now that was not available a couple of years ago that can be used.

Deputy Mayor Stevenson asked how much money is being spent to have EXP to look at the system and to repair the 96 identified leaks.

Mr. Hamp noted the cost to repair the pipes, including the EXP review of the pipes, is approximately \$300,000.

Deputy Mayor Stevenson pointed out the repairs being made to the system will make it more efficient now and in the long-term; Mr. Hamp agreed.

Deputy Mayor Stevenson asked how close to the bottom of the reservoir was the water last year in April, as that is time when there is the least amount of water before the snow starts to melt and after using the water all winter. He asked if there is a way to determine the amount of water in the reservoir once the ice is on top. He noted that it was explained in the task force that pumping had to stop in October because of freeze-up, but could water not be pumped in April and May to refill the reservoir.

Mayor Redfern noted that some local knowledge would be valuable for the task force regarding these matters.

Mr. Hamp provided the following answers:

- How close in April and May to running out of water? The exact timing is not known. Data is available and shows that 150,000 cubic metres of water is used a month.
- Monitoring – there is visual monitoring and staff also measure from the top with a tape measure. He explained that there is a digital monitoring station at the reservoir that provides data to the Water Survey of Canada. He noted that staff can actually see daily elevations, which is what staff relies on.
- Stopping pumping because of freeze-up – this is mostly to do with operations because with lines that long, the lines start to freeze up even with low water flow in the pipes.

Councillor Sheppard asked if there is any estimate on the cost of work done to date that was previously approved on the reverse osmosis system.

Mr. Hamp advised that approximately \$200,000 has been authorized, but has not been spent.

Mayor Redfern understood that assessments have been carried out, but not much work has been completed; Deputy Mayor Stevenson agreed.

Councillor Matshazi asked how the Request for Decision for \$350,000 is linked to the water project to make sure there is enough water.

Mayor Redfern advised that there will be a task force update tomorrow night and noted that Councillor Sheppard stated that it difficult to decide on the request and would prefer to have the update to be able to decide on the expenditure. She advised that staff have indicated they are not ready to provide the update, but they will be ready at tomorrow's meeting and asked what Council wished to do.

Motion # 18-291

Moved by: Councillor Rochon

Seconded by: Deputy Mayor Stevenson

That the matter of ancillary equipment for the reverse osmosis system be deferred to the August 28, 2018 Council meeting.

Unanimously Carried

3. ADJOURNMENT

Motion # 18-292

Moved by: Councillor Rochon

Seconded by: Deputy Mayor Stevenson

Council adjourns at 5:58 p.m.

Unanimously Carried

Madeleine Redfern
Mayor

Amy Elgersma
Acting Chief Administrative Officer

Approved by City Council on the 25 day of September, 2018.