

**MINUTES  
CITY OF IQALUIT  
ENGINEERING AND PUBLIC WORKS  
COMMITTEE OF THE WHOLE MEETING #01  
SEPTEMBER 1, 2020 at 6:05 p.m.  
CITY COUNCIL CHAMBERS**

**PRESENT FROM COUNCIL**

Councillor Romeyn Stevenson, Chair  
Mayor Kenny Bell  
Deputy Mayor Janet Brewster  
Councillor Joanasie Akumalik  
Councillor Sheila Flaherty  
Councillor Simon Nattaq  
Councillor Kyle Sheppard  
Councillor Malaiya Lucassie  
Councillor Solomon Awa

**PRESENT FROM ADMINISTRATION**

Amy Elgersma, Chief Administrative Officer  
Tammy Ernst-Doiron, City Clerk  
Shane Turner, Superintendent of Water and Sewer Services  
Jason Harasimo, City Project Officer

**ADOPTION OF AGENDA**

**Motion EPW #20-01**

Moved by: Councillor Akumalik  
Seconded by: Councillor Sheppard

Adoption of agenda as presented.

**Unanimously Carried**

**1. MINUTES**

None

**2. DECLARATION OF INTEREST**

None

**3. DELEGATIONS**

None

4. **DEFERRED BUSINESS AND TABLED ITEMS**

None

5. **NEW BUSINESS**

a) **Dam Safety Plan Presentation**

Representatives from Meco and Colliers Project Leaders were present via teleconference.

Perry Mitchelmore, P.Eng., Meco, made a presentation on the Dam Safety Plan. The following are highlights of the presentation:

- The rock fill dam and concrete spillway are suitable for the environment.
- There are some challenges when constructing a dam on a hill with a changing environment.
  - Climate change factors.
  - A longer open season that creates waves and wind.
  - Loss of frost in the foundation has an effect on the north and south berms and the spillway.
- Dam Safety Management Plan
  - Nunavut Water Board is responsible for water regulations of dams and issuance of permits.
  - Dam safety inspections and reviews are set out by the Canadian Dam Association.
  - The following items have not been included in the Dam Safety Management Plan and are required:
    - A Public Safety Plan which addresses fencing and signage.
    - An Action Deficiency List which is an on-going list to identify deficiencies.
    - Improve upon staff training to ensure staff are more aware of dam safety issues.
  - Inspections required monthly and annually.
  - Dam Safety Review required every five years.
    - Next review required in 2021 or 2022.
- Technical Risk Analysis
  - Flood and climate
    - Spillway is adequate.
  - Open water
    - Wind and waves created erosion in the past and could happen in the future.
  - Geotechnical investigation
    - Warming of the permafrost could create a potential for ground seepage in the future.
  - Structural investigation of the spillway
    - Ongoing seepage was determined.
    - Watch for unusual cracks.

- Emergency response plan
  - The current documents are satisfactory.
  - Proposed an operating plan for staff to follow for decisions when water flow from normal operation, to flood operations and emergency operation.
    - This operational plan should be tested.
- Operating Model
  - Operations and maintenance
    - Use staff to carry out work.
    - Test the performance of the structure and keep records, which could cost \$3,000 - \$5,000 per month.
      - Option to train a staff member to do this work.
  - Annual inspections
    - \$30,000 to \$50,000
  - Dam Safety Review Inspections
    - Required every five years at a cost of \$70,000 - \$100,000.
- Risk reduction recommendations
  - Repairs and upgrades
    - Raise crest one metre.
    - Raise top of concrete core wall.
      - Cost \$800,000 to \$1.2 million
    - Bubbler system to manage ice on spillway.
      - Cost \$100,000 to \$200,000
    - Seepage monitoring.
      - Cost \$100,000
  - Monitor north and central berm for seepage.
  - Monitor seepage below spillway.

## **b) Long-Term Water Supply Presentation**

Representatives from EXP Services and Colliers Project Leaders were present via teleconference to provide support during the presentation.

Amy Elgersma, Chief Administrative Officer, provided an overview of the Long-term Water Supply and Water Storage Project presentation. The following are the highlights:

- Lake Geraldine is reaching limits to store water for over-winter demands.
- A study was carried out on the viability of the Sylvia Grinnell River and the Unnamed Lake to supply water.
- Alternatives were considered:
  - Excavate additional storage within Lake Geraldine.
    - Cost - \$195 million
  - Excavate additional storage in close proximity of Lake Geraldine.
    - Cost - \$132 million
  - Combination of excavated and berm reservoir in close proximity to Lake Geraldine.
    - Cost – \$64 million

- Long-term water supply from the Unnamed Lake
  - Evaluating the feasibility of a sustained water supply source.
  - Water balance model.
  - Fish and fish habitat assessment.
- Finalizing a Pre-feasibility Study for long-term water storage.
- Compare the study results from the Sylvia Grinnell River and Unnamed Lake to determine the best solution.
- Once a decision is made, a timeline has been established to have a long-term water supply and water storage in place by 2026.
- Associated costs for feasibility, design and construction for:
  - Long-term water storage - \$100 million.
  - Long-term water supply - \$19 million.

The following questions were posed and answered by a representative from EXP Services.

- What is the size of the proposed additional lake and will it have the capacity to store water based on projected storage requirements for 2050?
  - The proposed size will provide storage for the projected water requirements for 2050.
  - It is possible to have a phased approach of constructing the long-term water storage.

### **c) Solid Waste Facility Presentation**

Representatives from Dillon Consulting and Colliers Project Leaders were present via teleconference to provide support during the presentation.

Amy Elgersma, Chief Administrative Officer, provided an overview of the Landfill and Waste Transfer Station project. The following are the highlights:

- Reviewed the location of the landfill and waste transfer station.
- Reviewed the various buildings on the site and what they are used for.
- Waste will be baled daily and transferred six kilometres to the landfill site.
- The landfill site has capacity for 12 cells, which is estimated to have 75-year capacity.
- The project package was 90 percent complete in January 2020 and submitted to the City and various other required agencies.
- Targeting October 2020 for the submission of the waste transfer station and landfill documents to be tender ready.
- EXP Services is overseeing the initial construction of the Northwest Aggregate Deposit and Landfill Access Road.
  - This project is out for tender.
- Review of the timeline:
  - October/November 2020 - Issue Tender
  - December 2020/January 2021 – award tender
  - Spring/Summer 2021 – begin construction
  - 2023 – commissioning and operations begin

- External funding available and received over \$30 million for the project.
- City must look at how the waste transfer station and landfill site will be managed and operated.

The following questions were posed and answered by Dillon Consulting and Colliers Project Leaders:

- Is the project 100 percent funded, and if not, should additional cells be constructed now to maximize available funding?
  - Building cells in advance is not practical as they will remain dormant and open and require storm water management.
  - Council approved the five-year Capital Plan last year and identified \$36.5 million for the project.
    - 75 percent funding from the Investing in Canada Infrastructure Program (ICIP) Fund
    - 25 percent funding from the Government of Nunavut Block Fund
- What is the baling material made of?
  - Bale will be made up of the solid waste that is collected. It will be compacted into a bale that is five feet long, four feet wide and three feet high. The bale will be wrapped with metal straps to hold it together and wrapped in plastic.
- How soon after being delivered to the landfill will the bale be buried?
  - The bale will be delivered to the landfill site the same day it is made and placed in the cell. Shredded tires and construction and demolition waste will be placed on the sides to fill in the voids.
- Concern was expressed regarding the ravens taking garbage from the site which will be blown around.
  - Daily cover can be placed over the bales with granular type material.
  - The bales are quite compressed and will be difficult for the ravens to take material.
- What material will be recycled?
  - Metals, tires, household hazardous waste, wood and cardboard.
- Recycling plastic is not included in the recyclable products, but the equipment can be used to bale plastic if Council wishes to implement a plan in the future.
  - Currently, there is not sufficient plastic to recycle.
- The tender that will be called in the fall is for the construction of the site and buildings and does not include the operation of the site.

## 6. IN CAMERA SESSION

( ) As per Section 22 (2) (a) CTV Act and Bylaw 526 Section 67

7. **ADJOURNMENT**


**Motion EPW #20-02**

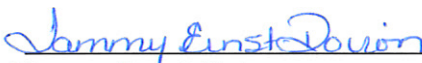
Moved by: Deputy Mayor Brewster  
Seconded by: Councillor Akumalik

Committee adjourns at 7:34 p.m.

**Unanimously Carried**



  
\_\_\_\_\_  
Romeyn Stevenson  
Chair

  
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Tammy Ernst-Doiron  
City Clerk

Approved by City Council on the 8<sup>th</sup> day of September 2020.