

## **MINUTES: Sunnyside Flood Task Force (Infrastructure Group),**

Monday, January 12, 2015 from 7:00 – 9:00 PM in the North Social Hall at HSCA.

**Attendees: Charlie Lund, Tim Shaefer, Dan Schaefer, Brad Stelfox, Krista Kaert, Reg Jans, Brad Larson, Pat Jans, Francois Bouchard, Tim Kitchen, Paul Galachiuk**

**Scribe: Kerri Treherne**

### **(1) Presentation on “Lift Station Resiliency” by Dan Schaefer of Water Resources.**

Handout provided of slides. Dan to provide a public version that can be posted on our website with the minutes.

#### **Sanitary :**

- electrical upgrade needed. Another story to be added to allow electrical etc to be above flood level.
- Goal is to operate as lift station at 1:100 level eventhough sanitary system may be non-functional.
- generator above flood level to maintain function .
- pump 30l per second x 2. Each is 5 horse power –current and to be maintained.
- Estimate 2-3 years and 3.2 million for design and construction. Start Feb 2015 pending budget approval. Interim measures to be investigated if budget approval fails.
- Francois: spending can not start until Feb due to budget issues. Design needs to follow DP process. Accelerated timeline will be pursued but not promised.

TASK FORCE: in agreement with proposal

#### **Storm 5a St ( Pump station #2 from the CDI study ):**

- Paul: the flow rates are quite different than original proposals- Brad- this depends on catchment and gates etc.
- need to increase power of pumps to 60 horse power, Gravity drainage to be changed to force main. Electrical system upgrades needed to 600 v.
- aiming for function in 1:100 yr flooding conditions. With 1:50 coverage with gates closed. This level of service may need to be revised depending on what happens with the drainage from B48 catchment.
- proposal ranges from 900 l/s (4 pumps) to 1800 l/s ( 10 pumps). Initial expectation from the community was 6000 l/s. 1800l/s is the biggest station that the City of Calgary currently has and it sits on a property double the size of the current site in Sunnyside at 5a St.
- Charlie: why can we not use bigger pumps? Dan- it is an issue of maintenance and power etc.
- pumping capacity could be augmented if the entire building was replaced as the basement could be deeper in a new building.
- 2-3 years for design and construction with a budget of 5 million for 9l/s and 8.8 million for 1800 l/s. Force main first as interim would be 1.2 million. Budget to be reviewed Feb 2015-aim for construction of force main in 2016—540 l/s would be provided In this case
- this is funded through 10y infrastructure funding – resiliency based improvements

TASK FORCE: 900 l/s is not an option. 1800 l/s is the bare minimum

### **(2) Discussion of the question: “What rainfall probability/return rate should be used to design facilities for a scenario where the gates are closed so as to have the same overall effective protection as with the gates open?” Brad Larson will present analysis done by his consultant.**

Brad provided a graph

A study was done of rainfall events dating back to 1947 and river level dating to late 1800’s. There is no connection to river levels and rainfall events. In the last 67 years there have been 3 rainfalls with a gates closed water level.

-Brad Stelfox: not sure the type of math answers the question posed. Further study could be warranted to determine a pattern. Could also consider frequent events which could be cumulative vs impact of single rainfall events.

-Brad Larson: there were no intense rainfall events when the river levels are high in the last 67 years

-Brad Stelfox: concern that climate change is incorporated into the calculations. Current calculations are 1947 to 2014.

Question to be answered by the City: at 1800 l/s what rainfall does that cover us for with high river and upper catchment disconnection.

FLOOD TASK FORCE coverage for 1:5 yr rainfall with gates closed should be adequate and affordable. This is assuming disconnection from the upper basin. Paul requests the capacity of the pumping first to provide opinion.

**(3) Plan for upcoming meetings, in addition to CDI discussion and update on all projects (both items at all meetings).**

January	Lift Station Resiliency
February	River Flood Protection Conceptual Design
March	Gate B46 repair / improvement & City plans for 2015 flood preparations
April	Updated Hydraulic Modeling & River Ice Study

Other items in (6) below not identified above will be discussed in May or later

**(4) Repeated graffiti interfering with operation and maintenance of "new" B47/48/48A gate actuation equipment. Brad Larson will discuss. Not addressed Jan 12/15**

**(5) Status of the Sunnyside Community Drainage Improvement (CDI) Project (by exception only - if there is news):**

*Not addressed Jan 12/15*

- a. Technical study progress
- b. Cost reduction options
- c. Funding options (provincial, federal, municipal)
- d. Next steps, timing and priority.

**(6) Status of various other projects (by exception only - if there is news):** *not addressed Jan 12/15*

- a. Updated Hydraulic Modeling  
(To confirm or revise (i) Hydrology: the river flow for a given return period and (ii) Hydraulic: river height for a given river flow. Both parts completion date TBA.)
- b. River Flood Protection Conceptual Design  
(To address the question of berm adequacy and possible berm height increases. First quarter 2015 aim for completion. Suggest meeting with John Slaney to review.)
- c. Lift Station Resiliency  
(To permit continued operation of the Sunnyside Sanitary Lift Station and the Sunnyside Storm Water Lift Station in the event of high water.)
- d. River Ice Study  
(Long term study to ensure Sunnyside has adequate protection in the event of high river levels caused by spring ice jams. Monitoring for first few years. Some monitoring equipment has been installed)
- e. Gate B46 repair / improvement  
(To address the leakage that was observed in 2013 and confirmed by testing in 2014)
- f. Prince's Island Park Causeway  
(To figure out how to compensate for the strengthening of the causeway. Plan is for berms to be adjusted higher to accommodate for lack of causeway failure)

- g. U of C Groundwater Study**  
**(multi-year study of the impact of groundwater. No monitoring in Sunnyside)**
- h. Transalta Dam Management**  
**(discussions leading to agreement with Transalta to ensure dam management with flood prevention in mind)**

**(7) Date for next meeting.** Tues Feb 10 at 7 pm.