

Sunnyside Flood Task Force (Infrastructure)
Monday, May 26, 7:00 PM – 9:00 PM HSCA Tim Tyler Board Room

(II) City plans to address concerns for the 2014 flood season. UPDATE from April 28 meeting minutes

These items can be grouped into three themes:

- (1) Keep the Pumps running.**
- (2) Keep the water from coming over the berm.**
- (3) Close the gates.**
- (4) And four additional items.**

<i>Legend</i>
Brad Comments (April 28)
Francois Comments (May 26)

Subdivisions of the above follow.

(1) Keep the Pumps running.

1a. Position city owned pumps at the first sign of possible high water

April 28: Confirmed by Brad Larson. If the H2OC (emergency operating centre) is forecasted to be active (400 cm/s on the Bow), those decisions about pump deployment will be made. Worst-case scenario, once the water hits a certain height in the Banff area those decisions will be made with advanced notice. It takes 1 hour to put a pump in place. Wondering whether it is practical to keep the pumps well in advance before gates are closed.

May 26: Francois says city is erring on the side of caution. If there is a possibility of an event the plan is to act sooner rather than later. Looking to add more pumping capacity in area. City owned pumps to go to B47 (6”).

1b. Contract for additional standby rental pumps to provide 1/5 rainfall protection with the gates closed (understand that 1/5 is probably not doable at B48/B48A, but I think 1/2 is and should be the plan versus 1/1).

April 28: Brad says nothing in the plans for it. The already purchased pumps are all that’s going to happen this year. The task force suggests there needs to be a contingency and compromise when it comes to renting additional pumps. Alberta Dewatering, only 0.25 cm/s exists for rent. Not able to get the level of protection Sunnyside needs, so there needs to be compromise for this spring/summer. Need more pumps for B48 (3), B48a (3) and B47 (1) for the south side of Memorial Drive. Tie it in with the weather forecast. Paul and Brad to discuss numbers to come up with an appropriate pumping system. Brad to come back with an answer on whether or not we can get more pumps.

May 26: Francois says the city is in final negotiations to get 4 (12”) pumps a B48 and B48a. Anticipates those will be on standby until July 18. Deployed within 12 hours. Coordinating pumps with gate closure. In the zone of “reasonable risk,” aka 1:5 event. Group key input: there is a psychological effect (confidence/security) on residents when they see pumps.

1c. Implement a plan to provide sanitary lift back-up on 7th / 9th Ave

April 28: Brad confirmed, cul-de-sac on 3 Street.

May 26: If the sanitary pumping station goes down, this is an emergency pumping station. Pump is of limited capacity, only handle sewer not overland.

1d. Ensure personnel are on-site and fuel is available to keep all the pumps running.

Brad confirmed.

1e. Implement sand bags(?) and procedures to improve Sanitary Lift Station resiliency.

April 28: Brad confirmed.

May 26: Francois says they have sandbagging, but depending on what priorities are, it might not be at the top during an emergency. If there is a higher risk area, barriers will be built there. Protection from ground water is minimal.

1f. Implement sand bags(?) and procedures to improve Storm Water Lift Station resiliency.

April 28: Confirmed by Brad. Relatively safe because it was mostly dry during the June Flood.

May 26: Trying to find a stable operation with two pumps and lift station.

(2) Keep the water from coming over the berm.

2a. Commit to adequate sandbags and/or temporary berms to provide 1/100 +0.5m protection from 19th street all the way to Centre street.

April 28: Brad confirmed. Have purchased water tubes compared to last year. Frank mentioned that Sunnyside would get water tubes on the berm, with the exception of the pedestrian bridge because of handrails and different elevation. That will be an earth berm with earth and plastic.

May 26: Options - tubes, sandbag and earth berms. Choice based on access, limitations of those options (height and deployment). New priorities based on 13 different scenarios. Original temporary barrier designs were based on 2012 modeling. Looked at 2013 levels and made adjustments to the berm. Priorities: public safety, critical infrastructure. Not ready to share our priority level, but we are next to critical infrastructure.

2b. Pre-position materials at the first sign of possible high water, ensure adequate manpower is available to implement during warning period anticipated.

April 28: Brad confirmed.

May 26: People are now aware of this issue, automation of gates will free up manpower to make sure other stuff gets done. One of the challenges of last year was traffic slowed down ability to build berms and do critical work. Now that city is aware of issues, hopefully it runs smoother if event occurs. Do as required based on assessment of situation as it unfolds.

2c. Review condition of Prince's Island Park causeway and degrade to provide similar flood mitigation for Sunnyside and downtown as was experienced last year.

April 28: Brad sent email to Paul and Charlie describing why the water level was lower than the predicted water level. There are culverts going beneath PIP, but not enough. Not going to have the causeway degraded by June, it's a long-term project.

May 26: Francois says if Frank is saying there is now an issue whereas Brad said there wasn't, it means there is more up-to-date information coming out. Francois going to get an update for us.

2d. Work with TransAlta to ensure that all upstream dams and reservoirs, but especially the Ghost dam/reservoir are optimized for flood protection during periods of forecast concern.

April 28: Very little to do with TransAlta. It's the province that deals with them. Presuming Frank has the ability, but not sure if it's happening. Try to engage with TransAlta to run the Ghost River end properly by pressuring the province.

May 26: Internally, the city has a group working with province and TransAlta, but there hasn't been substantial conversation about last year and this year. On the operational side, city has daily talks with TransAlta in terms of operations for the next few days so they know what the flow is going to look like. Unless TransAlta decides to change operationally (provide some flood protection, storage, etc.), there isn't much for the city to do in that regard.

(3) Close the gates.

3a. Ensure motorized gates are operational and secure, and that operating procedures are developed and tested.

April 28: Find out on Saturday for the Jane's Walk demonstration. Brad to check if the electrical is high enough to survive a flood event.

May 26: Electrical panel doesn't meet new land-use bylaw (1:100 event).

3b. Ensure gate B46 does not pass water during future events (photos prove it was passing significant water in the 2013 event).

April 28: Brad confirms it works and it closes. Need a person to check that it is not leaking. Brad to check if that is being taken care of.

May 26: Francois says city did hydro tests on B46 and it doesn't seal 100%. Right now they have a couple of options in case of emergency to prevent surcharging. Haven't been given details on what that looks like. Gate will be replaced or repaired.

3c. Ensure that adequate manpower is available to close all gates during the anticipated warning window, then open them as soon as practical.

April 28: Wondering what the employee's job is at the station, i.e. how many are they looking after, what are their objectives, etc. Pushing a button to move the gates, employee to look after gates and pumps.

May 26: Doesn't have details of pump operation. Those smaller gates have crews deployed to them if they are manually operated. Which gates get closed first are in response plan. Not every gate needs to open and closed at same river flow. Personnel at Sunnyside, if gates are closed, isn't going gate to gate. He stays there to ensure we don't get a situation. That person pops manholes, make sure water isn't collecting, operates gates, etc.

3d. Prepare a log of gate closures / openings that can be used to assess how well the system functions after any future event.

April 28: No internal conversation on this matter. Same procedures of last year. Brad to talk to Randy about this issue.

May 26: In the heat of the moment, if the guy has to decide whether to deal with a situation or write something down, he will deal with the situation. Will estimate time for record.

(4) Additional items:

4a. Can we see the part of the Emergency Operations Manual relating to the above?

April 28: We will take that up with Druh.

May 26: Emergency response plans are confidential. Francois says they have a separate response plan for flooding than everything else because flooding can be such a huge event.

4b. Improved, more timely forecasting and communication. Specifically we would like to explore if communications can be earlier. Loss and impact to the community could have been significantly less if earlier warning was given - cars could have been moved, belongings could have been taken up at least one floor, confusion and stress could have been reduced. I recognize that forecasting is primarily a provincial responsibility but the City should be a major stakeholder.

April 28: Not going to be giving an evacuation order without being sure. But there will be no early announcement with a very quick event like June Flood. Need to work at the H2OC level to figure it out.

May 26: City has an internal communication process that they have to follow, there is an Water Operations Centre (H2OC), when event is large enough, the city has EOC with support of CEMA, and they are the ones that oversee communication process during an emergency. Personally can't speak to what deployment decisions are going to be made. The only thing Francois can share is that they are reviewing tools and process leading up to and during an event. Admits it's meaningless because of lack of substance, but this is something above Francois and Water Services.

4c. It is unclear to what extent Ground Water (versus ground saturation from sewer overflow, and/or surface water seepage) impacted Sunnyside. Will ground water monitoring be in place this year to provide data for future consideration?

May 26: City has project initiated with UofC, looking at ground water and how that effects flooding in Sunnyside. There have been maps created that identify where wells have been drilled for environmental assessment, but don't think there is one in Sunnyside. Frank is the best person to talk about this with.

4d. Installation of backflow valves in the area of 3rd Ave and 8th Street

April 28: Ordering the valves for the area. Mike's suggestion: Brad says that would not do anything really measurable.

May 26: Hoping for an update from Brad.

(III) City and Infrastructure Group contributions to Jane's Walk May 3.

Who in Water Services / Water Resources will participate and what will we see?

April 28: Informational talk for people (entry level). Commemorate crisis café site, walk through that around lift station, storm station, etc.

(IV) City and Infrastructure Group contributions to the June 3 community meeting.

I suggest that Water Services / Water Resources involvement will be much less than on March 12, and what there is will focus on short term (2014) issues. No role for the Infrastructure Group?

April 28: If Water Services wants a booth, they can have one but they don't need to attend.

May 26: No booth needed.

(V) Status of funding for longer term projects.

What did the city ask the province for that would directly benefit Sunnyside (I see \$115M in infrastructure, but I think there is more?).

Refer to item P-49 on page 20 of 25 in the file "04 2013 FLOOD RECOVERY TASK FORCE UPDATE RESILIENCE - Att 3.PDF" which can be found in "Dropbox\HSCA Flood Task Force\Reports\2013 FLOOD RECOVERY TASK FORCE UPDATE RESILIENCE REPORT, PFC2014-0282"

Has there been feedback from the province? If not, when is it expected?

Is the City planning to spend any city money on Sunnyside projects in the interim?

April 28: (Brad) \$115 million includes everything, whether listed there or not. Included estimated recommendations from the new report that's coming out.

(VI) Approximate timing for when the Sunnyside Flood Task Force will be able to review the draft of the update to the NW Inner City Drainage Study (aka "Sunnyside Community Drainage Improvement Study").

May 26:

Sunnyside drainage improvement study – the work is progressing well, it's waiting for review from Brad for solutions that have been identified, upper plateau being the main item. What infrastructure is required for Sunnyside like capacities of pump stations, etc. Drainage channel on community side of the berms and connected to larger CDI pumping solution. Captured groundwater will be captured in underground chamber and pumped out. We don't necessarily think groundwater is an issue. Francois to confirm with Brad and Charlie when to get together with this study. This is the highest priority study for Sunnyside and is moving along well.

Flood protection study – haven't had a chance to talk to manager (John Slaney?) to see if this can be Sunnyside specific for community use. Second priority and moving along as well.

Flood hydraulics update study – done in phases. Information to improve emergency response planning for this year, elements of that study have to be delayed/less effort until flood season is over (Fall most likely). Purpose: remapping inundation areas based on new data collected. Most concerned with tracking what's going on.

(VII) Land Use Bylaw (LUB) Revision – is this an item for this group to address?

The proposed revision to the LUB will require major design changes versus typical new developments in Sunnyside. A significant concern with these revisions seems to be that the City "flood elevations" assume complete failure of the berm along the river, and/or all the flood gates

wide open. This is unrealistically conservative. We depend on various types of infrastructure working – for example, think of electrical power on a cold winter day. Flood protection infrastructure should be no different. Perhaps we should insist on community flood protection at the 1/100yr level or better and then depend on it working. With functioning community flood protection the draconian revisions to the LUB will not be required. For more background see my note circulated to the Infrastructure Group on Thu 17/04/2014 at 10:17 AM with the subject “Land Use Bylaw and Surface Elevation Contours”.

May 26: Peggi working on that now in form of a letter, but what should we do as a group? Potentially writing a letter together, however it’s difficult to collaborate on one document with so many members. We need a volunteer from this group to write one on behalf of the group with final approval from us a run by the HSCA planning committee (endorsed by the city). Charlie to create a skeleton of a letter/provide comments and Peggi (volunteer writer) to actually write it/combine it with her current letter. Council meeting on this is June 9, so the letter should be distributed to each individual Council member before then.

Key message: Sunnyside is infrastructure like any other city infrastructure so it should be protected (community protection)

(IX) Other business

(X) Date of Next Meeting and Adjournment: June 23, 7pm – 9pm at HSCA