

City of Prince George

Flood Risk Evaluation and Flood Control Solutions Project

Public and Stakeholder Involvement Process July 16, 2008 Meetings – Summary Report

Prepared by Fraser Basin Council

On July 16, 2008 representatives from the City of Prince George, Northwest Hydraulic Consultants Limited, Environmental Dynamics Incorporated, McElhanney Consulting Services Limited, and Fraser Basin Council hosted several meetings with government agencies, business representatives, residents that were impacted by recent flooding and the public. The project team provided an update on the status of the Prince George Flood Risk Evaluation and Flood Control Solutions project. The goals of these sessions were to inform stakeholders and the public about the project and to hear feedback from stakeholders and the public.

Participation by Project Team –

- Dave Dyer, City of Prince George;
- Bruce Walsh, Northwest Hydraulic Consultants Ltd.
- Bill Cheung, McElhanney Consulting Services Ltd.
- Rob Van Schubert, Environmental Dynamics
- Joan Chess, Fraser Basin Council
- Steve Litke, Fraser Basin Council

Key Action –

- Presentations and summary notes from July 16, 2008 meetings will be made available to meeting participants and the public.

Meeting with Affected Business Representatives
July 16, 2008 (3:00 pm – 5:00 pm)

Explanatory note: Italics are used to indicate a comment or response from the project team.

Summary Notes

Fifteen people attended, representing various businesses, along with five members of the project team including the City of Prince George, NHC, MCSL, and FBC.

Bruce Walsh, Northwest Hydraulic Consultants – Flood Risk Assessment

Bruce Walsh and Bill Cheung provided a presentation on the status of the project.

Comment: There was a request that the Powerpoint presentation be made available for distribution through Dave Jewesson.

Postscript: This was done several weeks after meeting.

There were several questions during the presentation.

Question: How do average flows and flood flows on the Nechako compare? Does flooding occur only on lower reach?

Answer: There is a backwater affect from Fraser River upstream into the Nechako during spring freshet flooding. The detailed analysis will compare previous decades to recent events, flood elevations and flows.

Question: Are the management options listed available?

Answer: These are the management options being considered in the analysis. There could be others.

Question: Has the City made any decisions on preferred options?

Answer: No.

Comment: Based on preliminary analysis, dredging and sand bar scalping would have no affect on freshet flood levels; however, there may be some effect during winter ice jam flooding.

Question: Is there the same backwater effect during winter, from Fraser up the Nechako?

Answer: Yes, when the Fraser freezes, it can back up the ice and therefore flood. Typically during winter flows, there is less of a backwater effect.

Question: How far upstream would dredging help alleviate flood levels?

Answer: If significant dredging is undertaken several kilometers upstream, then there is potential for river banks to collapse, leading to - or creating - other problems. The modeling and detailed analysis will look at various scenarios as part of the next step of the project.

Question: What is included in the ranking of social costs?

Answer: The estimate of social costs is very broad at this point; essentially what looks favourable or not.

Question: What is the “area ranking” column?

Answer: This is a ranking of all options for each specific area. The lower the number, the better the option (i.e. a ranking of one is best).

Question: Do land use changes and set back dykes look better (cost less) because there's less done?

Answer: Not necessarily; for example, flooding due to groundwater cannot be effectively managed by diking.

Question: How was “feasibility” incorporated? Was it only costs?

Answer: There was a simple ranking from 1 to 3 about how feasible the option could be implemented. For example, could it be constructed? For the consequence analysis, there are considerations of public and private assets, and utilities. The project team needs more responses to the survey about losses during the flood, to incorporate within the analysis and report.

Question: Do the cost figures for land use change and set back dykes include both ice jam and freshet flooding?

Question: How were the land values derived?

Answer: From assessment rolls and from the survey.

Comment: As business owners, their concern is long-term viability and remaining competitive. As well, there are other values as an enterprise. It would cost more to ‘pull up stakes’ and re-establish elsewhere. This is something to consider in the assessed value versus replacement costs. We will need more consultation as to how property and business values are determined.

Question: Has the timeframe for the study changed?

Answer: Yes.

Comment / Question: The public consultation seems more like information sharing since decisions are already being made (i.e. City Council decision on River Road). Some people are upset about the process to date because they were not consulted about River Road. Is the City contemplating River Road being part of the flood protection measures? Will the berm stay?

Answer: Improvements to River Road have been on the City's capital projects list for three years. River Road will be rebuilt to the 200-year flood level; however, it will not be a dyke or part of flood protection works. It will be an elevated road to maintain access during high water like Pulp Mill Road. The project was delayed one year, mostly because of the previous year's freshet flooding.

Comment: There is concern about a lack of information from the City. People do not know what the City is doing, although today they have seen the various options being considered.

Reply Comment: There is confusion about the temporary berm on River Road, paving River Road, and the new 200-year level for River Road. The 2007 freshet and the 2008

ice jam led the City to reconsider its options. The road will be reconstructed to the 200-year level.

Question / Comment: What about businesses on other roads and access when River Road is raised? The immediate need is to discuss River Road on site re: ramps, drainage and impact on business operations.

Answer: These discussions have started. Some have agreed to on-site visits already.

Comment: Some owners do not want to sell. They intend to stay. Trust is lacking between the City and industry / business owners. The forest sector is already in difficult times. There is a need to deal with the flood and to find solutions by working together. Communication is key. Some feel that there has been no communication with the City. This needs to be established so people are notified more often as to what is happening. There is a need for more clarity. The ultimate fear is job loss and loss of business.

Comment: A business liaison person should be appointed.

Reply Comment: There will be more opportunities for discussion and consultation as the information becomes available from the detailed analysis, later this fall.

Question: Is anything being proposed for stabilizing the riverbank and protecting the trails? Is that part of the project? Between the Cameron Street Bridge and Cottonwood Island Park there are trees falling into the river. Long-term erosion could be a problem along the Nechako.

Answer: Yes, it's a concern to the City and other departments may be involved.

Question: How do you visualize dealing with groundwater?

Answer: It is part of the study. The City has 15 wells, which monitor groundwater levels. Groundwater flooding is an issue in some areas.

Comment: In over 30 years, one business has never had freshet flooding (i.e. over the top of the river bank).

Reply Comment: While that may be true, the probability still exists that over 100 to 200 years, that site could be flooded by water over the banks.

Comment: There was some concern expressed about the process when the consultants' report is complete. For example, who receives / reviews it? Are any changes made before public access?

Reply Comment: The process is that the consultants' reports on any topic must be presented to City Council first, at which time it becomes public.

Comment: It was suggested that further discussions be held before the Phase Two report is released. For example, participants could discuss the options and rank them generally by preference. We don't need to wait until November.

Meeting with the Public and Affected Residents
July 16, 2008 (7:00 pm – 9:00 pm)

Explanatory note: Italics are used to indicate a comment or response from the project team.

Summary Notes

Comments

Northwood Pulpmill Road should be Landooz Road.

The extent of flooding historically (e.g. 1948 and 1972 freshets) was greater than the 2008 ice jam, but the ice jam caused localized flooding that exceeded the 200-year flood.

In both 2008 and 1970s the ice jam formed near the confluence of the Nechako and Fraser, then backed up the Nechako, then the water found another pathway through a side channel.

Questions and Answers

Question – if you re-establish side channels how effective would it be in reducing the flood risk.

Answer – we do not yet know, but this can be assessed once the hydraulic model is developed.

Question - Have you looked at the Cottonwood Island side channel and if it has widened as a result of the flood.

Answer - Air photos have been taken and data will be analyzed soon.

Question – Would it be effective to dredge the Fraser as well as the Nechako.

Answer – Information suggests that there would be limited effect. Sediment will continue long into the future so this needs to be examined.

Question – How will groundwater be examined? Will there be measurements on the PG Pulpmill Road?

Answer – Groundwater analysis that is being undertaken by the City is a separate project that started 3 years ago and has focused on land south of the Nechako River. The City may consider ways to look at the relationship between river level and groundwater levels.

Comment – Landowners on the north shore of the Nechako would likely approve the use of their drinking water wells to help better understand the groundwater dynamics north of the Nechako.

Question - Will the project examine erosion protection?

Answer – The project is looking primarily at flood protection measures, but erosion issues could be considered, particularly in relation to potential flood relief options such as diking.

Question – There are problems of groundwater flooding on the north side of Pulpmill Road. Do we know the volume of groundwater?

Answer – The project will look at floodproofing and drainage improvements to address groundwater.

Question – Do we understand the effect of the Mountain Pine Beetle (MPB) outbreak on river hydrology and flood risks?

Answer – The hydrological study is looking at both MPB and climate change in terms of river flows.

Question – After dike had been put in on River Road, now it appears that a new channel is cutting along the north bank of the Nechako (near the sturgeon hatchery on PG Pulpmill Road?). Is the dike forcing water elsewhere? Water appears to be rushing faster on the north shore and filling in on the south shore.

Answer – Rivers do change over time so it is important to track changes that are being observed. It is possible to model the effect of a dike on water levels.

Question - Will the City of Prince George be putting gabion diking in again?

Answer – The appropriateness of gabion diking will depend on the results of the technical project.

Comment – NHC will not be modeling an ice jam event, but will be developing a model to estimate the water level associated with an ice jam event.

Question - What experience does the consultant (Northwest Hydraulic Consultants) have with ice jam river flooding?

Answer - Dave Andres (NHC team) has been working on ice jams for 20-30 years including experience with the Nechako, Mackenzie, Athabasca and Peace rivers.

Question – Do we have information about whether the trend is upward or downward in terms of flood impacts in Prince George?

Answer – We have not yet completed this analysis; however, the winter flows along the Nechako seem to been lower in recent decades.

Question – Has the consulting team looked at 1996, 2008 and other flood events over the past 30 years in relation to water releases at the Skins Lake spillway?

Answer – The team may have the data already or will acquire the data from Rio Tinto Alcan.

Comments

River is too shallow to get large volumes of ice through. So need flow and depth. Suggested that Alcan should spill more water through their diversion. Both recent floods are related to Alcan releasing too much water at the wrong time.

Ultimately nature solved the problem. But diking along River Road would have prevented some of the ice and floodwaters from impacting businesses.

Dredging would have to be an ongoing thing because sedimentation will be an ongoing process.

Riverside dikes are more costly than setback dikes because of higher maintenance and operations costs and also fisheries compensation costs.

Opening up the Cottonwood Island channel would be of value for helping to manage flood flows.

The water flow monitoring device at Vanderhoof is not working properly. An unknown source has suggested that there was 50 cubic metres per second of missing flow. Alcan was releasing a lot and then cut back on flow releases. Was this due to a time lag (i.e. the water lingered in the Nechako)?

In the 1950s, there was a lot of flooding at Island Cache. Since Alcan put the dam in, this seemed to reduce the flow. But recently they have increased winter flows, which may be causing problems.

In 1979, Alcan reduced flows going into the Nechako, which influences the historical data. Then in 1989, there were increased flows due to government requirements.

The project should consider the time that it takes for water flow to travel from the Skins Lake Spillway to the Nechako River confluence with the Fraser. The last two flood events have both occurred in correlation.

The railway bridge island has receded. CN bulldozed the island to reduce liability. Did this get pushed toward the Nechako confluence? The Nechako water used to enter the confluence on the far side of the Fraser and now the near side. Gravel accumulation at the confluence should be dredged to help return to historical conditions.

Local and provincial governments need the support of science to help make the situation better. The cost benefit analysis will help.