

**IN THE MATTER OF the Springbank Off-Stream Reservoir Project and Application  
No. 1701 made by Alberta Transportation to the Natural Resources Conservation  
Board**

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**Final Argument of the Interveners, the Bearspaw First Nation, Chiniki First Nation,  
Wesley First Nation and Woste Igic Nabi Ltd. (the “Stoney Nakoda”)**

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April 6, 2021

**Submitted by Rae and Company  
on behalf of the Bearspaw First  
Nation, Chiniki First Nation,  
Wesley First Nation and Woste  
Igic Nabi Ltd.**

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1. The Stoney Nakoda Nations (the “Stoney Nakoda”) are comprised of the Bearspaw First Nation, the Chiniki First Nation, and the Wesley First Nation. The Stoney Nakoda, as represented by the Bearspaw, Chiniki and Wesley First Nations, were signatories to Treaty No. 7 at Blackfoot Crossing in 1877. The Stoney Nakoda have six Indian Reserves. The proposed Project is located within the Stoney Nakoda’s Traditional Territory to which they have an ongoing claim for Aboriginal title and rights in the Court of Queen’s Bench of Alberta.<sup>1</sup> Woste Igic Nabi Ltd. is a wholly-owned company of the Stoney Nakoda and owns lands in close proximity to the SR1 Project.
  
2. The purpose or benefit of the proposed Project is to provide flood protection for the City of Calgary. However, the evidence shows there will be relatively few benefits to the City of Calgary from the Project unless similar flood protection is not also provided on the Bow River.<sup>2</sup> The scope of the EIA for the Project should therefore have been expanded to include the Proponent's projected flood protection measures on the Bow River, in addition to those on the Elbow River.
  
3. However, this did not happen and this Board’s mandate is restricted to the SR1 Project. Nevertheless, the Stoney Nakoda submit that the Board, in order to determine the public interest, must still review the costs and benefits of all the flood control projects proposed to protect the City of Calgary from another flood similar to the 2013 flood. But the public interest must also include flood protection for communities upstream of the City of Calgary and must recognize their riparian rights. The public interest cannot assume the priority of downstream urban populations over upstream rural populations. Most of all, the public interest must include the oldest rights holders of this land, the Indigenous peoples.

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<sup>1</sup> *Wesley First Nation (Stoney Nakoda First Nation) v Alberta and Canada*, Court of Queen's Bench of Alberta Action No. 0301-19586.

<sup>2</sup> See Appendix “A”.

4. Both Alberta Transportation and the City of Calgary have *de facto* agreed that SR1 is part of an overall plan for the Bow River basin, as is evidenced by the voluminous evidence they have put forth that relates to flood damage and flood control on the Bow River.
5. The City of Calgary's models that include both SR1 and upstream storage reservoirs on the Bow River, rank highest of all its flood mitigation options.<sup>3</sup> The City of Calgary expressly states that it is an "advocate"<sup>4</sup> for upstream water storage on both the Bow and Elbow rivers.<sup>5</sup>
6. The City of Calgary speaks of "total watershed management". Calgary's preferred flood control options are the SR1 project **combined with** a new reservoir on the Bow River.<sup>6</sup>

"So, absolutely, the City of Calgary's long-term plans anticipate that population growth and changes in demand would likely be met through incremental infrastructure investment and licence considerations along the Bow River."<sup>7</sup>

7. The evidence before the Board shows that the SR1 project is only one piece of a "combined" set of projects on the Bow and Elbow watersheds that would provide the necessary mitigation:

"...in the case of the Bow River Basin, both SR1 and any potential project on the Bow River combined would provide the mitigation necessary for Calgary and other communities that may benefit from those projects."<sup>8</sup>

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<sup>3</sup> Exhibit 231, PDF 25 at exhibit 4.4; see also Exhibit 231, PDFs 23-24 at exhibits 4.2 and 4.3. Options numbered 2 and 7 rank highest. Both these options include a Bow River reservoir. For further detail see Appendix "A".

<sup>4</sup> "The City will continue to advocate for a new provincially owned upstream reservoir on the Bow River as a major component in flood mitigation and drought management for the Calgary region", Exhibit 345 at PDF 18.

<sup>5</sup> "It is recommended that The City pursue implementation of Scenario 7 which entails water storage facilities along both the Bow and Elbow Rivers upstream of the city", Exhibit 231 at PDF 28.

<sup>6</sup> Exhibit 357 (Transcript March 23) at transcript pg. 390.

<sup>7</sup> Exhibit 373 (Transcript March 26) at transcript pg. 1278, lines 23-25 and transcript pg. 1279, lines 1-2.

<sup>8</sup> Exhibit 349 (Transcript March 22 morning session) at transcript pg. 118, lines 12-15.

8. For all these reasons, any review of the SR1 project alone without a commensurate review of these other projects, does not serve the public interest.
9. Alberta Transportation has adopted these models prepared by the City of Calgary, however the models are based on only an analysis of the “financial” costs and benefits of flood control and mitigation measures. While such analyses are valuable, ultimately the Board must determine the public interest by taking into account a much broader range of criteria. Value judgements must be transparent and cannot be hidden within arbitrary attempts to monetize the value components that purport to constitute the make-up of the cost/benefits analyses.
10. Alberta Transportation should have come before this Board with a comprehensive solution for both the Elbow and the Bow Rivers, providing various alternatives for each of the rivers and letting the NRCB choose the best solution for each river from an overall perspective. Such a comprehensive solution should also have considered the cultural impacts on landscapes. This did not happen. To do so would have involved comparing the costs and benefits of the various projects for each of the rivers, taking into account not only the 2013 flood but also the future - climate change, drought, fire protection, recreation and perhaps most important of all, the greater Calgary area’s predicted future water needs for generations to come.
11. Included in any such review of the Elbow and Bow projects, the rights of upstream riparian residents and users must be taken into account and not simply sacrificed “for the greater good”. This Board must ask whether Alberta Transportation has taken into account the ecological and conservation values of rural landscapes. Or did financial and other benefits to urban communities simply supersede the costs and benefits to rural communities? Remember, there is no legislated policy that mandates the flooding of upstream landowners for the benefit of downstream riparian residents.

12. The waters flowing through the Traditional Territory of the Stoney Nakoda have been powering the City of Calgary for over 100 years. Any consideration of water control projects, on the Bow or Elbow Rivers, must consider the longstanding, historical and cultural connections that the Stoney Nakoda have to these waters. Over the past two weeks, the Board has heard evidence of Alberta's haphazard consultation process with the Stoney Nakoda amid the limitations created by Covid 19 on Stoney Nakoda communities.

13. The Aboriginal Consultation Office confirmed that it may rely on the NRCB process to fulfill the Crown's duty to consult.<sup>9</sup> Further, the Court of Appeal of Alberta confirmed in *Fort McKay First Nation v Prosper Petroleum Ltd.*<sup>10</sup> that tribunals must consider the honour of the Crown when making a determination about whether a project is in the public interest:

“A project authorization that breaches the constitutionally protected rights of Indigenous peoples cannot serve the public interest”.<sup>11</sup>

14. Consultation with Indigenous groups generally is not consultation with the Stoney Nakoda. Negotiations and agreements with the Tsuut'ina and other distant First Nations bear no relevance to the rights of the Stoney Nakoda. For Alberta Transportation to imply that consultation with unrelated Indigenous groups constitutes consultation with the Stoney Nakoda, is extremely disrespectful. While the Cree nations from central Alberta and the Blackfoot nations from southern Alberta have their own rights and interests, they do not speak for the Stoney Nakoda.

15. The duty to consult and accommodate involves both a procedural and a substantive component. Procedurally, if infringement of constitutional rights might occur, Indigenous peoples must have the opportunity to have their views heard

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<sup>9</sup> Exhibit 308 (Letter from ACO to NRCB, March 3, 2021).

<sup>10</sup> *Fort McKay First Nation v Prosper Petroleum Ltd*, 2020 ABCA 163.

<sup>11</sup> *Fort McKay First Nation v Prosper Petroleum Ltd*, 2020 ABCA 163, at para 45; see also paras 39, 41 and 43.

and considered. Substantively, where adverse effects to constitutional rights might occur, Indigenous peoples must have the impacts to their rights mitigated or accommodated. **Both** the procedural and the substantive components must be fulfilled.

16. The assessment of potential impacts from the SR1 Project on the rights and interests of the Stoney Nakoda has not been adequate and has not been complete. As a result, the extent of potential effects, including what mitigation or accommodation measures may be required to reduce, mitigate or avoid those impacts, has not yet been determined. Without this information, the Board cannot make a determination about whether the Project is in the public interest.

17. In its environmental assessment, Alberta Transportation only assessed potential Project effects on traditional land and resource use.<sup>12</sup> However, traditional land and resource use is only one component of Aboriginal and Treaty rights, as these rights also include Stoney Nakoda cultural, social, and governance components. For example, the right to hunt includes much more than just the activity of hunting; hunting is grounded in respect for the land and animals, and is a central part of the Stoney Nakoda culture.<sup>13</sup> For the Stoney Nakoda it is essential to be out on the land to access traditional sites for not just the exercise of the right to hunt, but also the passing down of knowledge to younger generations.<sup>14</sup> Since there has not yet been an assessment or consideration of Project impacts to these components of Aboriginal and Treaty rights, there has not yet been a complete assessment of potential effects to the rights and interests of the Stoney Nakoda.

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<sup>12</sup> Exhibit 365 (Transcript March 24), transcript pg. 707, lines 18-24.

<sup>13</sup> Exhibits 298, 299 and 300 (MNP, Stoney Nakoda Nations – Bearspaw First Nation, Chiniki First Nation and Wesley First Nation, Section 35 Rights Assessment Report for the 2021 NGTL System Expansion Project).

<sup>14</sup> Exhibits 298, 299 and 300 (MNP, Stoney Nakoda Nations – Bearspaw First Nation, Chiniki First Nation and Wesley First Nation, Section 35 Rights Assessment Report for the 2021 NGTL System Expansion Project).

18. The oral evidence of the Stoney Nakoda Elders and Knowledge Keepers in this hearing<sup>15</sup> detailed, among numerous other concerns, the trauma they have experienced as a result of inadequate consultation and engagement and the destruction of their lands, including cultural, spiritual and burial sites. Elder John Snow Jr. spoke of the trauma he still feels as a result of the flooding and desecration of Stoney Nakoda grave sites resulting from the Bighorn dam.<sup>16</sup> Such a situation is intolerable and must not be permitted to happen again.
19. Alberta Transportation asserts that the proposed Project, including the proposed Future Land Use Plan will provide for an “enhanced opportunity” for the exercise of Treaty rights and traditional uses.<sup>17</sup> However, this statement ignores the fact that the Project will disturb or destroy existing traditional use and cultural sites of the Stoney Nakoda in the Project area, and that the Future Land Use Plan includes a multitude of restrictions and competing uses to the exercise of Aboriginal and Treaty rights. This cannot be said to “enhance” the opportunities of the Stoney Nakoda.
20. Alberta Transportation acknowledges that mitigation measures should be directly proportional and responsive to identified impacts.<sup>18</sup> Yet, Alberta Transportation also concedes that the mitigation measures it has proposed for impacts to traditional land and resource use are simply mitigations of biophysical components.<sup>19</sup> Mitigations aimed at addressing biophysical components and by proxy some of the resources used by the Stoney Nakoda are not the same as accommodation of impacts to Aboriginal and Treaty rights. This has been confirmed by the Supreme Court of Canada.<sup>20</sup>

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<sup>15</sup> Exhibit 368 (Transcript March 25).

<sup>16</sup> Exhibit 368 (Transcript March 25) transcript pg. 903, lines 18-25, and transcript pg. 904, line 1.

<sup>17</sup> Exhibit 409 (Alberta Transportation Final Argument), at para 99.

<sup>18</sup> Exhibit 365 (Transcript March 24), transcript pg. 709, lines 10-13.

<sup>19</sup> Exhibit 365 (Transcript March 24), transcript pg. 709 lines 14-25, and transcript pg. 710, lines 9-12.

<sup>20</sup> *Clyde River (Hamlet) v. Petroleum Geo-Services Inc.*, 2017 SCC 40 at para 51.

21. For all the foregoing reasons, the Stoney Nakoda therefore submit that it is premature to approve the SR1 project and that the application should be denied.

22. However, in the event the Board approves the Project, the Stoney Nakoda submit that **the construction of SR1 not be permitted to commence** until and only if:

- I. The 2016 agreement between the Province of Alberta and TransAlta Utilities Ltd. governing water management in the Ghost Reservoir not be renewed unless the Stoney Nakoda Nations be made a party to the agreement;
- II. A full assessment of all the proposed flood and water control structures on the Bow River upstream of the City of Calgary has been completed, including an accounting for all payments to third parties. As part of this assessment the Board must mandate a fulsome response to both climate change and solutions to the threat of flooding facing the City of Calgary; and
- III. The Government of Alberta has obtained the full, free and informed consent of each of the Stoney Nakoda Nations to any and all flood mitigation or water storage structures on the Bow River upstream of the City of Calgary, regardless as to whether there is projected to be any actual flooding of Stoney Nakoda Indian reserves 142, 143 or 144.

23. We would emphasize that there is no reasonable reason why these conditions cannot be complied with **prior to** the commencement of construction of SR1. Further, these conditions are responsive to the principles under the United Nations Declaration on the Rights of Indigenous Peoples, which Alberta Transportation has confirmed its commitment to.<sup>21</sup>

24. In the event the Board approves the SR1 Project the Stoney Nakoda also ask that the following be made binding and enforceable conditions of any such approval. We note that evidence during the hearing indicated that Alberta Transportation can

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<sup>21</sup> Exhibit 365 (Transcript March 24), transcript pg. 746, lines 16-19.



only make commitments for itself, that is, it cannot make commitments on behalf of the eventual operator of SR1, Alberta Environment and Parks.<sup>22</sup> The Stoney Nakoda request that any commitments by Alberta Transportation therefore be made conditions of approval that are also binding on Alberta Environment and Parks. This includes the following:

**Condition 1**

*Completion of  
the Stoney  
Nakoda  
Traditional Land  
Use Assessment*

Prior to construction, Alberta Transportation shall enable the Stoney Nakoda to complete the Traditional Land Use Assessment. Alberta Transportation shall review the completed Traditional Land Use Assessment and meet with the Stoney Nakoda to discuss outstanding issues and appropriate mitigation or accommodation measures for identified impacts. Alberta Transportation shall provide up-front funding to the Stoney Nakoda for the completion of the Traditional Land Use Assessment, based on a budget to be provided by the Stoney Nakoda.

**Condition 2**

*Cultural  
Awareness  
Training*

Prior to construction and any further field work, all employees and contractors for the Project must undergo Stoney Cultural Awareness training in the communities of Eden Valley, Morley and Bighorn. Alberta Transportation shall offer reasonable capacity to the Stoney Nakoda for the development of the training program.

**Condition 3**

*Information  
Sharing  
Agreement*

Prior to further field work and the completion of the Stoney Nakoda Traditional Land Use Assessment (Condition 1), Alberta Transportation must engage the Stoney Nakoda on the development of an Information Sharing Agreement for the SR1 Project, based on the First Nations principles of ownership, control, access and possession. The agreement shall include and apply to Alberta Transportation, Alberta Environment and Parks and Alberta Culture, Multiculturalism and Status of Women. Alberta Transportation shall offer reasonable capacity to the Stoney Nakoda for the development of the agreement.

**Condition 4**

*Independent  
Indigenous  
Monitor*

Alberta Transportation shall contract an independent Indigenous Monitor to monitor all field work activities undertaken as part of the completion of the Stoney Nakoda Traditional Land Use Assessment (Condition 1). The Indigenous Monitor shall be mutually agreed upon between Alberta Transportation and the Stoney Nakoda.

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<sup>22</sup> Exhibit 349 (Transcript March 22 morning session) at transcript pg. 57.

**Condition 5***Stoney Nakoda  
Traditional  
Knowledge  
Monitoring  
Committee*

Prior to construction and prior to the resumption of field work and completion of the Stoney Nakoda Traditional Land Use Assessment (Condition 1), Alberta Transportation shall offer reasonable capacity for the development of a Stoney Nakoda Traditional Knowledge Monitoring Committee. This Committee shall be in place for the life of the Project and its operation shall be funded by Alberta Transportation and/or Alberta Environment and Parks. This Committee shall be engaged on pre-construction, construction, operation and post-flood activities, including but not limited to:

- a) Field work, investigations and mitigation activities relating to cultural, spiritual, historical and archaeological features and sites in the Project area, including those captured by the *Historical Resources Act*;
- b) Cultural monitoring of the Project area at pre-defined intervals, including during and after ground disturbance and flood events;
- c) Monitoring and verification of environmental assessment and mitigation effectiveness, including for water, fish and fish habitat, wildlife and wildlife habitat, vegetation and wetlands;
- d) Cumulative effects monitoring including for water, fish and fish habitat, wildlife and wildlife habitat, vegetation and wetlands.

**Condition 6***Stoney Nakoda  
Archaeological  
and Heritage  
Management  
Plan*

Prior to further field work, Alberta Transportation shall offer reasonable capacity for the development of an archaeological and heritage management plan for any structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources within the project development area, including but not limited to sites and things subject to the *Historical Resources Act*. This plan shall include but not be limited to:

- a) Engagement of the Stoney Nakoda Traditional Knowledge Committee (Condition 5) on all future field work and investigations relating to sites and features, including those subject to the *Historical Resources Act*;
- b) Provision of reasonable capacity to the Stoney Nakoda to monitor investigations and mitigation activities of sites and features captured under the *Historical Resource Act* and conduct ceremonies at these sites as requested;
- c) A procedure for sites and features not captured under the *Historical Resources Act* which provides for documentation

and protection of the sites and features in accordance with Stoney Nakoda cultural protocols.

**Condition 7**

*Previously  
Recorded  
Archaeological  
and Historical  
Sites*

Alberta Transportation shall provide the Stoney Nakoda with **all** information and reports regarding previously recorded archaeological and historical sites in the Project area, including the findings of the Historical Resource Impact Assessment undertaken for the Project. Alberta Transportation shall offer reasonable capacity to the Stoney Nakoda to conduct site visits and undertake ceremonies at these archaeological and historical sites.

**Condition 8**

*Stoney Nakoda  
Sacred  
Ceremonial  
Objects  
Repatriation  
Regulation*

Alberta Transportation shall provide reasonable capacity to the Stoney Nakoda to engage the government of Alberta in the development of a Stoney Nakoda sacred ceremonial objects repatriation regulation under the *First Nations Sacred and Ceremonial Objects Repatriation Act*.

**Condition 9**

*Wildlife  
Overpasses*

Alberta Transportation shall install a wildlife overpass over Highway 22 to facilitate the movement of culturally significant animals.

**Condition 10**

*Crown Land  
Offset Measures  
Plan*

Alberta Transportation shall calculate the permanent loss of unoccupied Crown land and private land to which Indigenous groups have a right of access, and based on this calculation shall develop and provide a Crown Land Offset Measures Plan to the Board and the Stoney Nakoda. The Plan must include, at minimum:

- a) A description of site-specific details and maps showing the locations where unoccupied Crown land or private land to which Indigenous groups have a right of access is no longer available for traditional use as a result of Project activities;
- b) A list of the offset or compensation measures that will be implemented to address the permanent loss of unoccupied crown lands and private lands to which Indigenous groups have a right of access identified in (a) above.

**Condition 11**

*Water  
Monitoring for  
Woste Igic Nabi  
Ltd. Lands*

Alberta Transportation and/or Alberta Environment and Parks shall monitor the water quality and quantity of the Woste Igic Nabi Ltd. lands prior to, during and after ground disturbance activities for the Project, and on an annual basis thereafter for the life of the Project. Should the water quality or quantity be impacted, Alberta Transportation and/or Alberta Environment

and Parks shall provide potable water to the Woste Igic Nabi Ltd. lands for agricultural and other purposes.

**Condition 12**

*Chair of the  
Indigenous  
Advisory  
Committee*

A Stoney Nakoda member shall be appointed Chair of the proposed Indigenous Advisory Committee.

**Condition 13**

*Stoney Nakoda  
Communication  
Plan*

Alberta Transportation shall offer reasonable capacity for the development of a communication plan specific to the Stoney Nakoda communities, regarding, at minimum:

- a) all impacts to land use resulting from the Project;
- b) post-flood activities and restrictions;
- c) accidents and malfunctions occurring in relation to the Project, including those within the project development area which may affect area(s) outside of the project development area.

**Condition 14**

*Funding for  
Participation in  
Conditions or  
Programs*

Where participation of Indigenous groups is an option as it relates to a Project condition or follow-up program, Alberta Transportation and/or Alberta Environment and Parks shall offer the Stoney Nakoda a reasonable amount of capacity funding to support their involvement.

**Condition 15**

*Funding for  
Consultation on  
Conditions*

Alberta Transportation and/or Alberta Environment and Parks must offer the Stoney Nakoda a reasonable amount of capacity funding to support consultation activities where such activities are a requirement of a Project condition.

**Condition 16**

*Regional  
Assessments*

No further flood control infrastructure will be considered for approval by the NRCB until a Regional Assessment on flood control needs and impacts has been completed, either pursuant to the *Impact Assessment Act of Canada* or an equivalent standard. This Assessment shall consider the 'region' to be assessed to include the entire Bow River system, including the Elbow River as a sub-basin. This Assessment shall include but not be limited to:

- a) Describing a baseline against which to assess the incremental impact of a discrete project;
- b) Identifying thresholds to inform future project decisions and limit unacceptable cumulative effects;

- c) Clarifying expected standard mitigation measures for future projects;
- d) Addressing potential impacts on the rights and interests of the Stoney Nakoda;
- e) Providing guidance for land-use planning that may be undertaken by various jurisdictions.

**ALL OF WHICH IS RESPECTFULLY SUBMITTED** at the City of Calgary, in the Province of Alberta this 6<sup>th</sup> day of April, 2021.

By Rae and Company on behalf of the Bearspaw First Nation, Chiniki First Nation, Wesley First Nation and Woste Igic Nabi Ltd.

## Appendix “A”

Pursuant to a direction from the Chair, Mr. Kennedy, Board counsel, in an email dated March 30, 2021, posed a series of questions to Alberta Transportation and to the City of Calgary in regard to the 2016 agreement between the Province of Alberta and TransAlta Utilities Ltd. pertaining to the operation of the Ghost Reservoir (the “2016 TAU Agreement” or the “Transalta/GoA operating agreement”). Two of those questions posed by the Chair were:

1. Is the Panel correct in its understanding that Alberta Transportation indicates it has no knowledge and has not considered the Transalta/GoA operating agreement in preparation of the EIA including cost-benefit analysis?
2. Regardless of operating parameters for the Ghost Reservoir, is it Alberta Transportation’s position that costs and benefits of SR1 as calculated are completely independent of those operating parameters?

Alberta Transportation’s reply is located starting at Exhibit 385 (Transcript March 30) at transcript page 1740, line 2:

“Alberta Transportation can confirm that the benefits, which are the damages averted, were completely attributable to the operation of SR1.”

And then again to question “A” Alberta Transportation at line 17 stated:

“I think Mr. Hebert did mention briefly yesterday that there's some general awareness of the existence of the agreement, but that the costs and benefits were calculated completely independent of any operating parameters that might be considered for the TransAlta/government of Alberta operations.”

In regard to question “B”, Alberta Transportation at Exhibit 385 (Transcript March 30) at transcript page 1741, line 6 stated:

“... the costs and benefits are completely independent of those operating parameters.”

In response to the same series of questions, the City of Calgary simply responded indirectly at Exhibit 385 (Transcript March 30) at transcript page 1741, line 19:

“In response to the ... question as to whether the City of Calgary can confirm that benefits measured through damage avoidance for SR1 are completely attributable [sic] to SR1, the City can confirm that. The presented benefit of SR1 in the City of Calgary cost benefit analysis is completely attributable to SR1.”

The City of Calgary did not directly respond to question “A”. However, previously the evidence of Mr. Frigo on behalf of the City of Calgary commencing at Exhibit 357

(Transcript March 23) at transcript page 336, line 22 through to page 338, line 19 and from page 339, line 17 through to page 340, line 7, was as follows:

Q. "The Government of Alberta's agreement with TransAlta has further decreased flood risk on the Bow River in Calgary." Do you see that sentence?

A. I do, sir.

Q. What is that sentence referring to? What is the agreement it refers to?

A. In 2016, the Government of Alberta and TransAlta struck a deal to be able to enter an agreement to be able to have modified operations of the Ghost Reservoir, as well as the reservoirs on the Kananaskis system, so Upper and Lower Kananaskis Reservoirs. This allowed the Alberta government to, in advance of flood season, and prior to an event, provide direction to TransAlta in terms of setting water level at the Ghost Reservoir, allowing for additional flood mitigation capacity. This was also considered in the -- in terms of water supply from the standpoint that the upper and lower Kananaskis reservoirs, which sit very high in their relative catchments and are not particularly useful for flood mitigation, but are useful for reservoir storage, can then refill the Ghost Reservoir. So, in that 2016 agreement, which had a term of five years and is set to be renewed this year, was about a modified water operations that would secure both greater water -- water supply security, as well as flood resilience for communities downstream on the Bow. That would include city of Calgary, Cochrane, et cetera.

Q. Is the Ghost Reservoir, in part, located on the Stoney Indian Reserve?

A. I understand it is, yes, sir.

Q. Now, this agreement of which you speak, did it provide for payments from the province of Alberta to TransAlta Utilities?

A. My understanding is that it does, yes, sir.

Q. And have the amount of those payments been exhibited as part of this hearing?

A. I'm not certain if they have been exhibited. I do know that they have been communicated publicly in various forums.

Q. And does this agreement provide for payments from the province of Alberta to the City of Calgary?

A. No, not that I'm aware of.

Q. Does the agreement provide for payments from the province of Alberta to the Stoney Indian Band or the Stoney Nakoda Nations, whom I represent?

A. No. Not that I'm aware of, sir.

...

Q. Mr. Frigo, would you be able to advise the amount of the payments from TransAlta Utilities -- or to TransAlta Utilities under this agreement?

A. My understanding is that, the public communication has been that this is in order of \$5.5 million per year.

Q. And have those numbers and those amounts been considered by the Calgary -- by the City of Calgary in its cost benefit analyses of the various options, flood control options?

A. The impacts of the flood mitigation have been considered, yes.

Q. No, I'm referring to the payments to TransAlta Utilities.

A. I believe they have. I would need to verify that, but I do believe they have, yes.

Notwithstanding all this oral evidence, the table located at PDF page 22 of the City of Calgary's evidence at Exhibit 231 ("Flood Mitigation Options Assessment"), a copy attached hereto, appears to indicate in the first two lines that:

- Calgary's baseline studies do not assume the operation of the 2016 TAU Agreement; and
- ALL the projected flood mitigation scenarios -- including those involving the construction of the SR1 project -- all scenarios assume the operation of the 2016 TAU agreement.

Exhibit 231 appears to indicate that no scenarios were modeled that excluded the operation of the 2016 TAU agreement.

The only conclusion is that the projected benefits of the SR1 Project are premised on the continued operation of the 2016 TAU Agreement and that no scenarios were modeled that excluded the operation of the 2016 TAU Agreement. No models segregated out the benefits from the 2016 TAU Agreement from those attributed to the SR1 Project.

It is therefore difficult to reconcile the City of Calgary's responses to the Chair's questions with the evidence in Exhibit 231 and as a result, Alberta Transportation's responses to the Chair's questions may be challengeable as well.



# Definition of Flood Mitigation Scenarios to be Modelled

| Flood Mitigation Measures  |  |  | Scenario Number |                           |     |                                |                         |                                |                                 |                    |                                 |                        |                                 |                  |   |      |
|--|--|--|-----------------|---------------------------|-----|--------------------------------|-------------------------|--------------------------------|---------------------------------|--------------------|---------------------------------|------------------------|---------------------------------|------------------|---|------|
| Category   | Type   | Brief Description  | 0               | 0a                        | 1   | 1a                             | 2                       | 3                              | 3a                              | 4                  | 4a                              | 5                      | 5a                              | 6                | 7   |      |
|  |  |  | Baseline        | Baseline + Non-structural | SR1 | #1 with high downtown barriers | SR1 + new Bow reservoir | Bow reservoir + Elbow barriers | #3 with ground water mitigation | SR1 + Bow barriers | #4 with ground water mitigation | Bow and Elbow barriers | #5 with ground water mitigation | Floodway buyouts | SR1 + Bow reservoir + select Bow barriers |      |
| Structural   | Flood Storage/Regulation Reservoir   | TransAlta's hydro facilities and reservoirs in the Bow River basin - historical operating rules  | ✓               | ✓                         |     |                                |                         |                                |                                 |                    |                                 |                        |                                 |                  |   |      |
|  |  | TransAlta's hydro facilities and reservoirs in the Bow River basin - current TA and GoA agreement  |                 |                           | ✓   | ✓                              | ✓                       | ✓                              | ✓                               | ✓                  | ✓                               | ✓                      | ✓                               | ✓                | ✓   |      |
|  |  | One new flood storage facility on the Bow River (likely between Cochrane and Calgary)  |                 |                           |     |                                |                         |                                | ✓                               | ✓                  |                                 |                        |                                 |                  |   | ✓    |
|  |  | Glenmore reservoir on the Elbow River, including gate improvements   | ✓               | ✓                         | ✓   | ✓                              | ✓                       | ✓                              | ✓                               | ✓                  | ✓                               | ✓                      | ✓                               | ✓                | ✓   | ✓    |
|  |  | Springbank off-stream reservoir (SR1) in the Elbow River basin   |                 |                           | ✓   | ✓                              | ✓                       | ✓                              |                                 |                    | ✓                               | ✓                      | ✓                               | ✓                | ✓   | ✓    |
|  | Permanent Barriers   | Existing barriers (existing conditions without raising dykes)  | ✓               | ✓                         | ✓   | ✓                              | ✓                       | ✓                              | ✓                               | ✓                  | ✓                               | ✓                      | ✓                               | ✓                | ✓   | ✓    |
|  |  | Discovery Ridge barrier (not in the hydraulic model domain)  | ✓               | ✓                         | ✓   | ✓                              | ✓                       | ✓                              | ✓                               | ✓                  | ✓                               | ✓                      | ✓                               | ✓                | ✓   | ✓    |
|  |  | Stampede barrier (designed based on 494 m <sup>3</sup> /s in Elbow River)  | 50              | 50                        | 200 | 200                            | 200                     | 200                            | 50                              | 50                 | 200                             | 200                    | 50                              | 50               | 200                                       | 200  |
|  |  | Zoo barrier (designed based on 2820 m <sup>3</sup> /s in Bow River)  | 100             | 100                       | 200 | 200                            | 350                     | 200                            | 200                             | 200                | 200                             | 200                    | 100                             | 100              | 200                                       | 350  |
|  |  | Eau Claire West barrier (designed based on 2390 m <sup>3</sup> /s in Bow River)  | 200             | 200                       | 200 | 200                            | 1000                    | 1000                           | 1000                            | 200                | 200                             | 200                    | 200                             | 200              | 200                                       | 1000 |
|  |  | Heritage Dr./Glendeer Circle barrier (designed based on 2820 m <sup>3</sup> /s in Bow River)   | 100             | 100                       | 200 | 200                            | 350                     | 200                            | 200                             | 200                | 200                             | 200                    | 100                             | 100              | 200                                       | 350  |
|  |  | Centre Street bridge lower deck – gates (designed based on 1660 m <sup>3</sup> /s in Bow River)  | 50              | 50                        | 75  | 75                             | 350                     | 350                            | 350                             | 75                 | 75                              | 75                     | 75                              | 75               | 75  | 350  |
|  |  | Bonnybrook improvements (designed based on 2820 m <sup>3</sup> /s in Bow River)  | 100             | 100                       | 200 | 200                            | 350                     | 200                            | 200                             | 200                | 200                             | 200                    | 100                             | 100              | 200                                       | 350  |
|  |  | Deane House barrier (designed based on 803 m <sup>3</sup> /s in Elbow River)   | 100             | 100                       | 200 | 200                            | 200                     | 100                            | 100                             | 200                | 200                             | 200                    | 100                             | 100              | 200                                       | 200  |
|  |  | Downtown barriers including those along Elbow & Bow Rivers (designed based on 2627m <sup>3</sup> /s in Bow River and 879 m <sup>3</sup> /s in Elbow River) |                 |                           |     | 350                            |                         |                                |                                 |                    |                                 |                        |                                 |                  |   |      |
|  |  | Bow River barriers (designed based on 2280m <sup>3</sup> /s upstream of Elbow confluence and 3506 m <sup>3</sup> /s downstream of Elbow confluence)        |                 |                           |     |                                |                         |                                |                                 |                    | 200                             | 200                    |                                 |                  |   |      |
|  |  | Bow River barriers (designed based on 2280m <sup>3</sup> /s upstream of Elbow confluence and 3520 m <sup>3</sup> /s downstream of Elbow confluence)        |                 |                           |     |                                |                         |                                |                                 |                    |                                 |                        | 200                             | 200              |   |      |
|  |  | Elbow River Barriers (designed based on 1130m <sup>3</sup> /s in Elbow River)  |                 |                           |     |                                |                         |                                | 200                             | 200                |                                 |                        | 200                             | 200              |   |      |
|  |  | Bow River barriers (Bowness North and South, Sunnyside) (designed based on 1300m <sup>3</sup> /s in Bow River)   |                 |                           |     |                                |                         |                                |                                 |                    |                                 |                        |                                 |                  |   | 200  |
|  |  | Bow River barriers (Fish Hatchery) (designed based on 1729m <sup>3</sup> /s in Bow River)  |                 |                           |     |                                |                         |                                |                                 |                    |                                 |                        |                                 |                  |   | 200  |
|  | Bow River barriers (Bowness North and South, Sunnyside) (designed based on 2020m <sup>3</sup> /s in Bow River) |  |                 |                           |     |                                |                         |                                |                                 |                    |                                 |                        |                                 |                  |   |      |
|  | Bow River barriers (Inglewood, Fish Hatchery) (designed based on 2820m <sup>3</sup> /s in Bow River)           |  |                 |                           |     |                                |                         |                                |                                 |                    |                                 |                        |                                 |                  |   |      |
|  | Bow River barrier for downtown (designed based on 2390m <sup>3</sup> /s in Bow River)                          |  |                 |                           |     |                                |                         |                                |                                 |                    |                                 |                        |                                 |                  |   |      |
|  | Stormwater and Drainage Improvements   | Existing stormwater outfall gates (e.g. downtown, Mission, Eau Claire, Bowness)  | ✓               | ✓                         | ✓   | ✓                              | ✓                       | ✓                              | ✓                               | ✓                  | ✓                               | ✓                      | ✓                               | ✓                | ✓   | ✓    |
|  |  | Gates and pump stations at planned permanent barriers  | ✓               | ✓                         | ✓   | ✓                              | ✓                       | ✓                              | ✓                               | ✓                  | ✓                               | ✓                      | ✓                               | ✓                | ✓   | ✓    |
| Sunnyside pump station / Sunnyside stormwater (Community Drainage Improvement CDI additional #2 pumps) |  |  |                 | ✓                         | ✓   | ✓                              | ✓                       | ✓                              | ✓                               | ✓                  | ✓                               | ✓                      | ✓                               | ✓                | ✓   |      |
| Quarry Park pump station   |  |  |                 | ✓                         | ✓   | ✓                              | ✓                       | ✓                              | ✓                               | ✓                  | ✓                               | ✓                      | ✓                               | ✓                | ✓   |      |
| Groundwater Flood Control  | Groundwater control as supplemental feature of planned permanent barriers                                      |  |                 |                           |     |                                |                         |                                | ✓                               |                    | ✓                               |                        | ✓                               |                  |   |      |
|  | Temporary Barriers   | ✓  | ✓               | ✓                         | ✓   | ✓                              | ✓                       | ✓                              | ✓                               | ✓                  | ✓                               | ✓                      | ✓                               | ✓                |   |      |
| Non-structural   | Contingency Measures   | Flood warning protocols  |                 | ✓                         |     |                                |                         |                                |                                 |                    |                                 |                        |                                 |                  |   |      |
|  |  | Education & awareness  |                 | ✓                         |     |                                |                         |                                |                                 |                    |                                 |                        |                                 |                  |   |      |
|  |  | Emergency measures - protection of highest risk or best B/C areas  |                 | ✓                         |     |                                |                         |                                |                                 |                    |                                 |                        |                                 |                  |   |      |
|  | Flood Plain Regulations  | Land use bylaws (no below-grade suites)  |                 | ✓                         |     |                                |                         |                                |                                 |                    |                                 |                        |                                 |                  |   |      |
|  |  | Development policies (basement floodproofing)  |                 | ✓                         |     |                                |                         |                                |                                 |                    |                                 |                        |                                 |                  |   |      |
| Buyouts  | Homeowner grant program - sump pumps/backflow preventers   |  | ✓               |                           |     |                                |                         |                                |                                 |                    |                                 |                        |                                 |                  |   |      |
|  | Buyouts (200 year floodway)  |  |                 |                           |     |                                |                         |                                |                                 |                    |                                 |                        |                                 | ✓                |   |      |

Color scheme:   
 Going ahead/done   
 Planned/will go ahead when funding obtained   
 No immediate plans to implement, may consider in scenarios

Note: The values for the permanent barriers under the various scenarios refer to the minimum return periods of floods (in unit of year) which the barriers are designed to protect against (or the minimum flood protection level).

