

**Natural Resources Conservation Board**  
**Springbank Off-Stream Reservoir Project**  
**NRCB Application No. 1701**

**Calgary River Communities Action Group and Flood Free Calgary**

**Oral Argument – April 6, 2021**

**I. INTRODUCTION**

1. Good morning Mr. Chair and Board members.
2. As you know, we are counsel to the Calgary River Communities Action Group or the Action Group - and Flood Free Calgary or FFC. Our clients wish to thank the Board for the opportunity to participate in this critical hearing as it relates to flood mitigation for the City of Calgary and to share the views and experiences of its members. We hope that these views and experiences will be of assistance to the Board in its public interest inquiry.
3. As note earlier this morning, we will provide the court reporter with a copy of this argument, which will contain the evidentiary references and headings for transcript purposes.
4. Mr. Chair, the Action Group and FFC are participating in this hearing on behalf of thousands of individuals and businesses in Calgary that support SR1.
5. Our clients have participated in this proceeding to be the voice of the affected and those who stand to be protected by SR1. As Ms. Leeds Binder stated in her opening statement, “we’re here to tell you what it is like to endure what was then Canada’s worst natural disaster so that you can appreciate the future devastation that can be avoided by SR1”.<sup>1</sup>
6. The Action Group and FFC fully support the application of Alberta Transportation and urge the Board to find that SR1 is in the public interest and to issue the appropriate approvals.

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<sup>1</sup> Transcript Volume 2, page 428, lines 17-21.

7. Our argument today will be directed, in the main, to Topic 1 issues and will address:
  - a. the need for and viability of SR1; and
  - b. the social, economic and environmental benefits of the project.
8. As we reviewed the evidence and considered the Board’s public interest mandate, we found the Board’s 2018 Decision approving the construction and operation of a debris flood retention structure on Cougar Creek in Canmore, Alberta, to be instructive.<sup>2</sup> The Board’s principal conclusions from that decision, to which we will refer, remain unaffected by the Board’s decision addendum issued in 2019 in relation to a proposed updated design.<sup>3</sup>
9. We want to briefly outline why the Board’s analysis in Cougar Creek is helpful, before we move into a more in-depth analysis of the relevant issues related to the Board’s public interest inquiry here.
10. In the Cougar Creek Decision, the Board first considered whether the project was justifiable in terms of need and viability.<sup>4</sup> The Board was convinced the project was justified because the proposed high debris retention structure, spillway and diversion tunnel was needed (and would work as intended) to mitigate future debris floods of similar or greater magnitude to the 2013 flood. The Board referred to the risk to human life, financial losses from damage to buildings and contents and economic losses from the disruption of major transportation routes as important considerations in assessing need.<sup>5</sup>
11. The circumstances under consideration in Cougar Creek are similar to those before the Board here in relation to SR1. In particular, there is without doubt a similar need in this case, specifically the need for flood mitigation on the Elbow River to avoid devastating social, economic and environmental impacts. These impacts are outlined in our clients’ evidence as well as the evidence of Alberta Transportation and the City of Calgary.

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<sup>2</sup> Board Decision NR 2018-01 (“**Cougar Creek Decision**”).

<sup>3</sup> Board Decision Addendum NR 2018-01, paras. 71 and 74-76.

<sup>4</sup> Cougar Creek Decision, para. 16.

<sup>5</sup> *Ibid*, paras. 22 and 23.

12. SR1 will be successful in providing such critical flood mitigation as it is designed for a “design flood” equivalent to the 2013 flood. In our respectful submission, the evidence on this record overwhelmingly supports a conclusion that SR1 is needed, viable and justifiable.
13. After establishing that the Cougar Creek project was justifiable, the Board also considered the project’s social, economic and environmental effects. The Board noted there is no fixed objective test to determining whether a project is in the public interest. Rather, it must balance the economic, environmental and social interests of the project.<sup>6</sup>
14. The Board found that the balance favoured approval of the Cougar Creek project because of its public benefit, namely the increase in public safety and protection of private property and public infrastructure, which the Board noted is of paramount importance to Albertans.<sup>7</sup>
15. At paragraph 339, the Board stated it this way:

The Board finds that the Town’s primary objective for developing the Project is to mitigate the effects of future flood events. The Project design is focused on reducing the risk of loss of life and protecting residences, businesses and infrastructure when flood events occur. The Board finds that the mitigation of potential economic losses is a key consideration that favours approval of the Project.

16. Clearly, those circumstances and considerations under review in Cougar Creek are analogous to the application before the Board here. SR1 will also have a significant public benefit to Albertans, protecting the City of Calgary and other downstream communities from flooding and avoiding significant social, economic and environmental impacts – impacts which were front and center for the Board in Cougar Creek. And it is important to note that compensation for or mitigation of any local area impacts has occurred or will occur, and any such impacts are limited and temporary in nature, such that the balance clearly favours SR1 being in the public interest.

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<sup>6</sup> *Ibid*, para. 345.

<sup>7</sup> *Ibid*, para. 342.

17. The Action Group and FFC therefore ask this Board to approve this project and that any conditions imposed not delay construction or operation, as any delay risks downstream communities being exposed to another flood.
18. We will now elaborate on the basis on which it should, in our respectful view, be found that SR1 is justifiable, the benefits of the project and respond to some of the positions taken by the Springbank Concerned Landowners Group or the SCLG.

## **II. SR1 IS JUSTIFIABLE**

19. We would first like to speak to why SR1 is justifiable. In the Cougar Creek Decision, the Board determined that a project is justifiable if it is needed and meets its intended outcomes, or in other words, is viable.<sup>8</sup>

### **A. SR1 is needed**

20. SR1 addresses the critical need for flood mitigation on the Elbow River. The 2013 flood is clear evidence of this need.
21. Another flood on the Elbow River is inevitable. Calgary is built on a floodplain at the confluence of the Bow and Elbow Rivers and has historically experienced flooding on several occasions, the 2013 flood being only its fourth largest.<sup>9</sup> Climate change has the potential to make matters worse, increasing the flood risk.<sup>10</sup>
22. This is evidence that Calgary will flood again. The only question is when, how badly and whether the City will be prepared.
23. Like many other major cities located near a water source, City planners in the early 1900s did not take flood risk into account and Calgary was allowed to grow around both of its rivers.<sup>11</sup> The result is that many of the river communities that flooded in 2013 were some of the earliest to be established. The Action Group and FFC represent many residents and

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<sup>8</sup> *Ibid*, para. 16.

<sup>9</sup> Exhibit 237, page 2, footnote 6.

<sup>10</sup> *Ibid*, page 4, footnote 8.

<sup>11</sup> *Ibid*, page 2.

businesses in these communities and our clients' evidence provides personal accounts of the devastating impacts of flooding to lives, livelihoods, property and businesses in the City.

24. In addition to affecting residential and commercial property, the 2013 flood had a significant impact on public safety and public infrastructure. We will speak to these impacts in more detail shortly. What is important – and this conclusion is in our respectful view, self-evident – is that these impacts, which would be avoided for a future flood if SR1 were in operation, establish that SR1 is critically needed.
25. It is important to note that the SCLG, who opposes SR1, agrees that flood mitigation is needed on the Elbow River. For example, Ms. Hunter and Ms. Feist both stated in their opening remarks for Topic #1 that “no one wants to see the City of Calgary flood”.<sup>12</sup> And Ms. Massey stated that “...we’re all in total agreement, folks. We all want flood control, we want flood mitigation...”<sup>13</sup> And in fairness, there are matters on which they join issue with Alberta Transportation and those matters are of course for the SCLG and Alberta Transportation to address.

**B. SR1 is viable.**

26. SR1 is not only needed but it is viable. SR1 is designed to afford the City of Calgary protection from future flooding events and in particular a “design flood” which is a flood equivalent to the 2013 flood – approximately equal to a 1:200-year flood.<sup>14</sup>
27. SR1 therefore has the capacity to satisfy the need for upstream flood mitigation for the City of Calgary and avoid the devastating impacts of another 2013 sized flood. Specifically, SR1 will remove 600 m<sup>3</sup>/s of peak flow from the Elbow River which, with the contribution of storage available at the Glenmore Reservoir, will protect communities downstream of the reservoir on the Elbow River from a 1:200-year flood (plus a safety factor of 25%).<sup>15</sup>

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<sup>12</sup> Transcript Volume 2, page 452, line 21 and page 531, lines 4-5.

<sup>13</sup> Transcript Volume 2, page 570, lines 8-10.

<sup>14</sup> Exhibit 325, para. 5.

<sup>15</sup> *Ibid*; Exhibit 327, pdf page 38.

28. SR1 also provides flood mitigation benefits to other downstream communities. Particularly, SR1 will:
- a. significantly reduce the flood risk for communities between SR1 and the Glenmore Reservoir by reducing the peak flow of a 2013 sized event in half from 1240 m<sup>3</sup>/s to 640 m<sup>3</sup>/s and a 1:100-year flood event to a flow rate as low as 165 m<sup>3</sup>/s;<sup>16</sup> and
  - b. lower inflows from the Elbow River into the Bow River during flood events, which will provide flood mitigation benefits for communities on the Bow River downstream of the confluence of the two rivers.<sup>17</sup>
29. In our respectful view, there can be no other conclusion than this project is needed and viable and therefore justifiable based on the evidence before the Board in this proceeding.

### **III. SR1 WILL BE A PUBLIC BENEFIT**

30. The principal purpose of our clients' evidence is to speak to the social, economic and environmental impacts of the 2013 flood on the City of Calgary and other downstream communities. Alberta Transportation's and the City's evidence also speak to such impacts.<sup>18</sup> The evidence shows that these are the impacts that would be avoided if SR1 were operational.
31. The avoidance of these impacts is clearly a public benefit and in the public interest.
32. In the Cougar Creek Decision, the public benefits of mitigating flood events on Cougar Creek and the social and economic benefits of public safety and damage avoidance to the local area weighed heavily in favour of the project's approval.<sup>19</sup> In our submission, the same can be said of SR1. In fact, SR1 would have a greater public benefit as the damage avoidance to the City of Calgary and downstream communities is significantly larger in magnitude.

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<sup>16</sup> Exhibit 327, pdf page 38.

<sup>17</sup> Exhibit 229, page 9.

<sup>18</sup> For example, Exhibits 54, 56, 78, 100 and 229, pages 4-5.

<sup>19</sup> Cougar Creek Decision, para. 342.

33. Avoiding the impacts of a design flood has significant economic, social and environmental benefits. This is without doubt and is evident from the staggering quantifiable impacts of the 2013 flood that are outlined in Section C of our clients' evidence in Exhibit 237.
34. It is important to note that this evidence is uncontroverted and stands on this record without challenge.
35. We would like to share a few examples of these impacts. For example, 14,500 homes were damaged in Calgary and 136 homes required reconstruction on the Siksika Nation downstream of where SR1 would be located.<sup>20</sup> 4,000 businesses and 3,000 buildings were flooded.<sup>21</sup> 16 LRT stations were closed, 50 bus routes were cancelled or detoured and it took 13 days for LRT service to be fully restored.<sup>22</sup> 39,837 ENMAX customers were impacted and 34,000 locations were without power.<sup>23</sup> Evacuations occurred in 26 communities affecting 110,000 people and a state of emergency was declared for 14 days.<sup>24</sup>
36. These are just some of the quantifiable impacts of the 2013 flood. By reducing flows on the Elbow River, SR1 will prevent or mitigate these negative impacts in a future flood and will protect much of the historical, cultural and recreational heart of the City of Calgary.<sup>25</sup> It will also protect those areas of the downtown core that were impacted by Elbow River flooding in 2013 and benefit communities downstream of the confluence of the Elbow and Bow Rivers.<sup>26</sup>
37. The 2013 flood also had a significant impact on the environment. For example, we know that three years' worth of garbage entered the City's landfills in the weeks after the 2013 flood; the Province established the \$10 million FISHES program to mitigate the negative impacts of the flood on fish and fish habitat; and the City spent \$100 million repairing

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<sup>20</sup> Exhibit 237, page 5, footnotes 12 and 13.

<sup>21</sup> *Ibid*, page 5, footnotes 14 and 18.

<sup>22</sup> *Ibid*, page 6, footnotes 23 and 24.

<sup>23</sup> *Ibid*, page 6, footnotes 25 and 26.

<sup>24</sup> *Ibid*, page 6, footnotes 28 and 29.

<sup>25</sup> *Ibid*, page 4.

<sup>26</sup> Exhibit 229, page 9.

erosion damage from the flood.<sup>27</sup> SR1 would have the added public benefit of avoiding such environmental impacts.

38. In our submission, in light of the weight of this evidence, it is difficult to argue, let alone establish, that SR1 would not create a significant public benefit.
39. I will now speak to the social and economic benefits of SR1 generally and then turn to CRCAG's and FFC's evidence on the specific social and economic benefits of SR1 to the people and businesses it represents.

**A. Social Benefits of SR1**

40. SR1 would have considerable social benefits.
41. First and foremost, SR1 will improve public safety, a concern of paramount importance to Albertans<sup>28</sup> and, we suggest, to the Board. SR1 is expected to reduce the number of injuries and fatalities that would be directly attributable to a flood in Calgary.<sup>29</sup> This is critical given that five people lost their lives in the 2013 Alberta floods.<sup>30</sup> The Calgary Fire Department performed over 400 water rescues in the first 24 hours of the flood which likely prevented further deaths or injuries.<sup>31</sup>
42. SR1 would also have a positive effect on the City's ability to respond to emergencies. In the lead up to the 2013 flood, the City had only 15 hours to enact its emergency response plan and conduct evacuations.<sup>32</sup> SR1 will increase the City's response time and enhance the City's emergency response capacity, which will help ensure the safety of those downstream.
43. Alberta Transportation has identified that the period during and after flooding causes a multitude of public health and safety issues including water-borne communicable diseases,

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<sup>27</sup> Exhibit 237, pages 6-7, footnotes 30-32.

<sup>28</sup> Cougar Creek Decision, para. 342.

<sup>29</sup> Exhibit 237, page 9, footnote 49.

<sup>30</sup> *Ibid*, page 9, footnote 47.

<sup>31</sup> *Ibid*, page 9, footnote 48.

<sup>32</sup> Exhibit 229, page 7, footnote 14.



exposure to chemical contaminants as well as anxiety, depression and post-traumatic stress disorder.<sup>33</sup> Such impacts would be avoided or significantly reduced if SR1 is operational during the next flood.

## **B. Economic Benefits of SR1**

44. In addition to the significant social benefits of SR1, SR1 has a clear economic benefit. This is evident when considering the financial damage numbers from the 2013 flood, the estimates for which range between \$4.875 and \$6 billion.<sup>34</sup> In addition, it is estimated that 5.1 million working hours were lost in Southern Alberta during the 2013 flood.<sup>35</sup>
45. The 2017 IBI Study estimates that another flood of the same magnitude would cause \$4.7 billion in damages – \$4.7 billion.<sup>36</sup>
46. The operation of SR1 would significantly avoid future flood damages, which is undoubtedly in the public interest. Alberta Transportation estimates a design flood on the Elbow River would cause \$935.2 million in direct costs for commercial and residential properties and \$318.6 million for infrastructure, totaling \$1.254 billion.<sup>37</sup> In addition, the City of Calgary and IBI Group both estimate that SR1 would reduce the average annual flood damage by approximately \$27 million.<sup>38</sup>
47. In the Cougar Creek Decision, this Board recognized that the \$700,000 average annualized damage avoidance to buildings was an important factor for determining the project was in the public interest. The Board also noted that avoiding damages to public infrastructure, including transportation corridors, further benefits the public at large and all Albertans and Canadians.<sup>39</sup> On this basis the Board concluded that the economic benefits of the project

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<sup>33</sup> Exhibit 237, page 9, footnote 50.

<sup>34</sup> *Ibid*, page 7, footnotes 35-37.

<sup>35</sup> *Ibid*, page 7, footnote 33.

<sup>36</sup> *Ibid*, page 7, footnote 38.

<sup>37</sup> *Ibid*, page 31, footnote 56.

<sup>38</sup> *Ibid*, page 8, footnotes 42-44.

<sup>39</sup> Cougar Creek Decision, para. 355.

were significant and a material consideration weighing in favour of the project being in the public interest.<sup>40</sup>

48. Those considerations are equally applicable here. The average annualized damage cost for SR1 at \$27 million is significantly higher than the \$700,000 for Cougar Creek.
49. And the loss of transportation corridors was also experienced during the 2013 flood in Calgary. We have already spoken to the impact of the 2013 flood on LRT and bus routes. In addition, 1,000 kilometers of roads were washed away, as were rail lines, pedestrian bridges and culverts in Calgary. A rail bridge on the Bow River downstream of the Elbow River confluence also failed causing a train carrying highly explosive liquids to derail.<sup>41</sup>
50. The \$27 million annual avoidance of damages, including potential damages to transportation corridors, indicate that the economic benefits of SR1 are significant and demonstrate that SR1 is in the public interest.
51. These numbers also indicate that SR1 is a sound investment. Multiple studies conclude the benefits of SR1 far outweigh its costs, with the City of Calgary finding that the benefit/cost ratio is 5:1.<sup>42</sup>
52. With SR1 currently budgeted to cost \$432 million,<sup>43</sup> Alberta Transportation predicts that SR1 would more than pay for itself after a single design flood.<sup>44</sup> In fact, a single design flood would pay for SR1 three times over based on Alberta Transportation's \$1.254 billion property and infrastructure damages estimate for the next design flood.
53. In our respectful view, SR1 is clearly an economic benefit.

### **C. Social and Economic benefits to those CRCAG and FFC represent**

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<sup>40</sup> *Ibid*, para. 355.

<sup>41</sup> Exhibit 237, page 5, footnotes 20 and 21.

<sup>42</sup> *Ibid*, page 8, footnote 41.

<sup>43</sup> Exhibit 325, para. 27.

<sup>44</sup> *Ibid*, para. 27.

54. Most important to our clients' membership and supporters are the significant social and economic benefits to the lives, livelihoods and properties of those that were impacted by the 2013 flood and those that stand to be protected by SR1.

55. Our clients' evidence gives a voice to the people behind the statistics of the flood. As Ms. Leeds Binder stated in her opening statement:

...Our members are the homeowners, residents and businesses whose financial, mental and physical health suffered, and in many cases, continues to suffer as a result of the 2013 flood.

These are the people whose lives, livelihoods, and properties stand in the cross-hairs of the next inevitable flood event.<sup>45</sup>

56. It is devastating still to hear those words let alone speak them. The experience of the Action Group's and FFC's members and other community members are outlined in the letters and emails received in support of SR1.<sup>46</sup> These accounts describe what it is like to suffer through what was then Canada's worst natural disaster – all of which were shared – so the Board can appreciate the future devastation that can be avoided by SR1.<sup>47</sup>

57. Our clients received 193 letters or emails from individual residents of flood-affected communities in Calgary. One theme is the devastation and loss in the immediate aftermath of the flood, including the loss of homes and valued possessions including family heirlooms, precious mementoes and other irreplaceable items collected over generations.<sup>48</sup> The pungent odors and sounds associated with the flood and its aftermath continue to be constant companions for many, their memories jolted into regular reminders of the devastation, loss and heartache suffered.<sup>49</sup>

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<sup>45</sup> Transcript Volume 2, page 431, lines 1-9.

<sup>46</sup> Exhibit 239.

<sup>47</sup> Transcript Volume 2, page 428, lines 17-21 and page 430, lines 14-17.

<sup>48</sup> Exhibit 237, pages 16-24.

<sup>49</sup> For example, Exhibit 239, B-32.

58. The video played during our clients' opening statement demonstrated the harrowing experience of one family that lost their home as a result of the flood. This wasn't a unique experience. Several homeowners along the Elbow River in Calgary similarly lost their homes as they were damaged beyond repair and demolished, including 10% of the homes in the community of Roxboro alone.<sup>50</sup> Similar harrowing experiences from the flood are illustrated in the many photos included in the submissions received.<sup>51</sup>
59. The letters and emails speak to the immeasurable and continuing impact of flooding on physical and mental health and the stress, anxiety and sense of insecurity that remains following the flood.<sup>52</sup> Many accounts speak to the fear of another flood and the anxiety felt during flood season. The added security that SR1 would provide to landowners, residents and businesses affected by the 2013 flood or to those who now reside or work in the flood impacted area cannot be understated. This is an important social benefit of flood mitigation that the Board recognized in the Cougar Creek Decision.<sup>53</sup> How could it be argued otherwise in the face of the evidence on this record – indeed, in our respectful view, it cannot!
60. Perhaps most devastating is that almost every letter or email that has been included in our clients' evidence speaks to the mental health impact of the flood and the lingering effects for so many.<sup>54</sup> For this reason many found it too hard to write a letter and this is why an online survey was created, where 393 responses in support of SR1 were received.<sup>55</sup>
61. Finally, the accounts our clients received from individual residents speak to the significant costs they have incurred on personal flood mitigation, for example, installing sump pumps, generators, break resilient glass, relocating mechanical/electrical equipment and raising water tanks, furnaces and other utilities. This was done with the expectation that the City

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<sup>50</sup> Exhibit 239, B-2.

<sup>51</sup> Exhibit 237, page 33; Video: <http://protectcalgary.com/after-the-flood>; Photos: Exhibit 239.

<sup>52</sup> Exhibit 237, pages 24-29.

<sup>53</sup> Cougar Creek Decision, para. 342.

<sup>54</sup> Transcript Volume 2, page 432, lines 9-11.

<sup>55</sup> Transcript Volume 2, page 433, lines 23-24.

and Province would do their part to protect their citizens.<sup>56</sup> For the most part, individual efforts can only reduce property loss; only upstream mitigation can actually keep the floodwater out of Calgary – and only the province can build such mitigation infrastructure.

62. In our clients' evidence, you will also find letters from ten inner city community associations which together represent well over 43,000 residents.<sup>57</sup> These letters describe the physical and mental impacts of the flood on their communities and the ongoing stress felt each spring by residents looking anxiously at weather forecasts and river levels.<sup>58</sup>
63. While the impact on residential communities was profound, SR1 is about more than protecting these communities. SR1 is critical infrastructure to protect the economy of Alberta, and most certainly Calgary. As Mr. Battistella noted in his opening statement, the centre city area of Calgary that was impacted by the 2013 flood is not only the economic engine for Calgary, but also for the Province.<sup>59</sup>
64. Not to be forgotten are the impacts the 2013 flood had on the businesses in Calgary. 4,000 businesses were flooded<sup>60</sup> and 7,000 were impacted in total, a third of which never reopened after the flood.<sup>61</sup> In addition to losses due to direct flooding for some businesses, many more businesses were impacted by loss of business due to evacuations, power outages, street closures and the temporary suspension of the LRT.<sup>62</sup> One example is First on Colour, the locally owned and operated copier store that Mr. Battistella referenced in his opening statement that was forced to close for 17 days.<sup>63</sup>
65. Fifteen businesses and business-related organizations such as the Calgary Chamber of Commerce, Calgary Economic Development, Calgary Downtown Association and local Business Improvement Areas and Revitalization zones representing over 6,000 businesses

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<sup>56</sup> Exhibit 237, page 30.

<sup>57</sup> Transcript Volume 2, page 431, lines 13-15.

<sup>58</sup> Exhibit 237, pages 11-14.

<sup>59</sup> Transcript Volume 2, page 425 lines 16-17.

<sup>60</sup> Exhibit 237, page 5, footnote 14.

<sup>61</sup> Exhibit 239, B-11.

<sup>62</sup> Transcript Volume 2, page 436, lines 1-3; Exhibit 237, pages 5-6.

<sup>63</sup> Transcript Volume 2, page 437, lines 19-25. Exhibit 239, B-22.

wrote letters in support for SR1 and expressing their concerns about a repeat of the 2013 flood.<sup>64</sup>

66. As Mr. Battistella outlined in his opening statement, SR1 is a benefit to businesses for several reasons, including the protection of current and future assets; protection of business revenues, which in turn protects owners and employees; reduction of business operating costs such as insurance rates; and the reduction of the risk profile for locating and operating business in and attracting business to the downtown of Calgary.<sup>65</sup>

67. The social and economic benefits of SR1 that are outlined in the evidence of CRCAG and FFC and the evidence of Alberta Transportation and the City of Calgary demand careful consideration, for such benefits are clear and significant and overwhelmingly favour approval of SR1.

#### **IV. SCLG Position**

68. We will now respond to some of the positions taken by SCLG in its opposition to SR1.

##### **A. Unequal outcomes and MC1**

69. The SCLG is of the view that SR1 creates unequal outcomes for downstream communities on the Elbow River.<sup>66</sup> Such an argument is premised on the assumption that there is a project that could create equal outcomes for all downstream communities. We agree with Alberta Transportation that no such project could exist.<sup>67</sup>

70. We do not dispute that flood protection for all communities on the Elbow and Bow Rivers is in the public interest and a laudable goal. Of all participants before this Board, our clients know all too well the devastating impacts of another flood and would not wish their experiences on any community. However, SR1 is the only project before this Board and this project is not intended to be everything for everyone (nor could it be). It is not intended

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<sup>64</sup> Exhibit 239, B-11 to B-26.

<sup>65</sup> Transcript Volume 2, page 436 line 17 to page 438 line 15.

<sup>66</sup> Exhibit 254, pdf page 4.

<sup>67</sup> Exhibit 325, para. 71.

to be flood, fire and drought protection for Calgary, Bragg Creek and Redwood Meadows. Rather, it has been designed to protect the City of Calgary from a design flood on the Elbow River equivalent to the 2013 flood.<sup>68</sup> And here it is worth noting that our reference to the City is a reference to not only the lives and property of downstream residents, but to businesses, livelihoods and the economy of the province writ large as we outlined earlier. SR1 is clearly needed and must be built.

71. Having said that, it is worth mentioning that SR1 does have ancillary benefits in terms of water security because it reduces the quantity of water that must be drawn down on the Glenmore Reservoir during the flood season thereby increasing water supply to the City.<sup>69</sup>
72. It also bears noting that SR1 and other flood mitigation projects are not mutually exclusive. Indeed, many other such projects have been undertaken or concluded to date. And no doubt, other such projects will be pursued as the Province, cities and counties act to protect their property, citizens and businesses from future floods.
73. In particular, as Alberta Transportation notes in its evidence, SR1 is just one component of a larger flood mitigation plan for the Bow River basin. Other components include a potential new flood control structure on the Bow River, upgrades to the Glenmore Reservoir and berms within the City of Calgary, Bragg Creek and Redwood Meadows.<sup>70</sup> The building of SR1 does not preclude these other components or other flood, fire or drought mitigation. Nor are these other components or projects being considered here or relevant to the Board's determination of whether SR1 is in the public interest.
74. The SCLG also takes the position that MC1 is the project that would cause equal flood mitigation outcomes for downstream communities.<sup>71</sup> First and foremost, such an argument is not relevant because MC1 is not the reviewable project before the Board as recognized

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<sup>68</sup> *Ibid*, para. 271.

<sup>69</sup> Transcript Volume 1, page 101, line 18 to page 102 line 14; Exhibit 325, para. 115.

<sup>70</sup> Exhibit 325, para. 9.

<sup>71</sup> Exhibit 254, pdf page 4.

by the Board in its pre-hearing conference decision report. This is an issue we will revisit in a moment.

75. Despite MC1 being out of scope, we do want to comment briefly on some of the evidence advanced by SCLG. MC1 is upstream of SR1 and therefore has a smaller rainfall catchment area to manage water entering the Elbow River.<sup>72</sup> If significant rainfall were to occur downstream of MC1 (as occurred in the 2005 flood)<sup>73</sup> this would mean the project would afford less protection to communities downstream of that rainfall area. In and of itself, this could create unequal outcomes for different communities.
76. The SCLG's unequal outcomes position is similar to its position that alternatives like MC1 provide greater benefits than SR1.<sup>74</sup> This conclusion cannot be justified on the evidence before this Board. MC1 was considered by Alberta Transportation and ultimately not chosen as an option because of its "significant number of adverse effects" compared to SR1.<sup>75</sup>
77. Mr. Hebert from Alberta Transportation provided further detail on this point in his opening statement for Topic #1. He stated that compared to MC1, SR1, as an off-stream dam, is less sensitive to impacts from sediment and debris, is closer to operational response teams and access roads, has less environmental impact, has less of an impact on the Elbow River, is less vulnerable to damage during extreme weather (including catastrophic failure during construction) and has less impact on social, recreational, tourism and commercial values.<sup>76</sup> Mr. Hebert also noted that SR1 has a positive economic impact and "perhaps most importantly, is years closer to being built than any alternative project".<sup>77</sup>
78. It is therefore clear that Alberta Transportation made the right decision in choosing SR1. However, all of this is not relevant to the Board's public interest inquiry because it is not

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<sup>72</sup> Exhibit 20, page 2.9.

<sup>73</sup> Transcript Volume 1, page 138, lines 14-18.

<sup>74</sup> Exhibit 247, para 19.

<sup>75</sup> Exhibit 325, paras. 10-11.

<sup>76</sup> Transcript Volume 1, page 45 line 21 to page 46 line 9.

<sup>77</sup> Transcript Volume 1, page 46, lines 9-11.



choosing between SR1 and MC1. Rather, SR1 is the only reviewable project before this Board.

79. SR1 has been selected by three provincial governments and in preference to other options (including MC1).<sup>78</sup> The federal government has backed the project with a significant funding commitment.<sup>79</sup> SR1 has also successfully navigated two environmental assessment processes, one at the provincial level and one at the federal level.
80. In the Pre-Hearing Conference Decision Report, the Board recognized that SR1 is the only reviewable project before it, specifically stating that the focus of this proceeding is on the social, economic and environmental effects associated with SR1.<sup>80</sup> This Board further stated there is no merit in the expenditure of significant time and resources assessing projects that are not reviewable projects under the *Natural Resources Conservation Board Act*.<sup>81</sup>
81. The Board showed exceptional tolerance at hearing evidence from the SCLG on this point during the hearing. However, at the risk of sounding like a broken record, the fact remains that MC1 is not the reviewable project. Nor does the Board have the jurisdiction to consider a project that has not been applied for. In fact, it appears that SCLG's real concern is with the Government of Alberta's decision to choose SR1 as the preferred option over other alternatives, including MC1. However, that decision is not subject to review in this proceeding.
82. Let us not forget that it has taken nearly 8 years to get to this point. There is no evidence that the government of Alberta would pursue MC1 (or another option) if SR1 were not approved or that funding from the provincial and federal government for such a project would be available. Nor is there any evidence that it would take any less time to get another project to this stage. We cannot predict with certainty the groups or individuals that might oppose MC1. Nor can we predict, assuming an application were ever made, that the project

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<sup>78</sup> Transcript Volume 1, page 43, lines 4-7.

<sup>79</sup> <http://protectcalgary.com/federal-govt-announces-168-5-million-funding-springbank-off-stream-reservoir-sr1/>

<sup>80</sup> Exhibit 156, page 5.

<sup>81</sup> *Ibid.*

would successfully navigate the environmental assessment process, the NRCB process, and ultimately receive approval. All of this would be conjecture and conjecture about MC1 is not an issue before this Board, in this application.

83. Therefore, SR1 is the only project before this Board and, most importantly – most critically – the only prospect of implementing effective and needed mitigation for the City of Calgary and other downstream communities.
84. For all these reasons, in our respectful view, no weight can or should be given to SCLG’s position about alternatives with greater benefits and the relative implications of such alternatives.

**B. Local area impacts**

85. Let us now turn to local area impacts of SR1. This project, like many projects this Board and other facility regulators consider, will not be free of impacts to the local area.
86. In determining whether SR1 is in the public interest, this Board must balance the social, economic and environmental impacts of the project.<sup>82</sup> In this case, we submit that such a balance heavily favours approval of SR1.
87. The City of Calgary’s evidence indicates that over 15,000 dwellings, over 3000 buildings and over 34,000 suites stand to be protected by SR1.<sup>83</sup> In comparison, only five residences exist within the footprint needed for the project.<sup>84</sup>
88. The impacts to the local area from the operation of SR1 will be limited and temporary in nature. In most years SR1 will not be operational and when it is operational it will only contain water for a short period of time (days not months).<sup>85</sup> Furthermore, the Impact Assessment Agency of Canada, in its draft environmental assessment report, has concluded that SR1 is not likely to cause significant adverse environmental effects, when taking into

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<sup>82</sup> Cougar Creek Decision, para. 345.

<sup>83</sup> Exhibit 229, pdf page 51 of 51.

<sup>84</sup> Exhibit 237, page 31, footnote 57.

<sup>85</sup> Exhibit 325, paras. 24-26.

account the implementation of key mitigation and follow-up program measures by Alberta Transportation.<sup>86</sup>

89. Any local impacts of SR1 are heavily outweighed by the significant benefits to the City of Calgary and other downstream communities from the reduced risk of flooding and the avoidance of the devastating social, economic and environmental impacts of a flood.
90. SR1 is designed for a 1:200-year flood plus a safety factor of 25%.<sup>87</sup> This stands in stark contrast to the City of Calgary and other the downstream communities that are not designed to endure flooding to any degree. Furthermore, SR1 local area impacts can be mitigated whereas the impacts of a future 2013 sized flood on Calgary cannot be fully mitigated without upstream mitigation.
91. In terms of the mitigation of impacts of SR1, Alberta Transportation has consulted with impacted parties, and has worked and is working to address and where possible mitigate those impacts.<sup>88</sup> Alberta Transportation has proposed numerous mitigation measures and has promised to continue to listen to the concerns of residents and accommodate where possible to achieve further mitigation of any impacts.<sup>89</sup>
92. In some circumstances where impacts could not be addressed through mitigation, such as for landowners whose lands are needed for the project, Alberta Transportation has offered compensation. To date, Alberta Transportation has acquired approximately 25% of the lands in the project area through voluntary purchases and is in the process of negotiating agreements with three additional landowners which would increase this number to 43%.<sup>90</sup>
93. In the City of Calgary, the City has taken significant steps in terms of local mitigation measures to reduce the potential exposure of flooding but local mitigation is not sufficient

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<sup>86</sup> Transcript Volume 1, page 44, lines 19-25.

<sup>87</sup> Exhibit 325, para. 5.

<sup>88</sup> Transcript Volume 1, page 47, lines 12-16.

<sup>89</sup> Transcript Volume 1, page 48 line 23 to page 49 line 4.

<sup>90</sup> Transcript Volume 1, page 47 line 21 to page 48 line 9.

to protect the City from a 2013 sized flood.<sup>91</sup> Only the Province of Alberta can protect the City and Southern Alberta from such a flood.

94. The social, economic and environmental benefits of SR1 heavily outweigh any such impacts to the local area of the project. As this Board stated in the Cougar Creek Decision, public safety, protecting private property and public infrastructure are of “paramount importance to Albertans”.<sup>92</sup> Like the Cougar Creek project, these goals will be achieved by SR1 and should weigh heavily in favour of the project’s approval.

## **V. CONCLUSION AND RELIEF**

95. In conclusion, it is important to emphasize the public benefit of this project, a project that is fully supported by all three levels of government. SR1 will increase public safety, protect private property and infrastructure, and protect the well-being of people and businesses in the City of Calgary and other downstream communities. A project of such public benefit is in the best interests of all Albertans.
96. It is inevitable that the catastrophic impacts of the 2013 flood will be repeated if SR1 is not approved. We therefore urge the Board to find SR1 is in the public interest and approve this project to avoid such impacts in the future. A decision otherwise would be, in effect, a decision to leave the City vulnerable to flooding indefinitely, which cements the intolerable status quo. At this point in time, it’s SR1 – a viable project with a significant cost/benefit – or nothing. That’s the reality.
97. Time is of the essence to ensure that SR1 is fully operational before the next major flood. On this point, the Mayor of Calgary, Naheed Nenshi, stated the following in a letter supporting SR1:

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<sup>91</sup> Exhibit 229, page 11; Exhibit 237, page 4, footnote 10.

<sup>92</sup> Cougar Creek Decision, para. 342.

...If SR1 is not approved or the Province is forced to reconsider other alternatives that have already been dismissed as less effective, the flood mitigation infrastructure Calgary requires could be delayed by decades.<sup>93</sup>

98. We simply cannot afford to have the City of Calgary and other downstream communities remain unprotected. As Mr. Morris stated in his opening statement: “The city will flood again, the only question is will it be ready”<sup>94</sup>
99. With the approval, construction and operation of SR1, the City and the Province will be ready.
100. Those are our submissions Mr. Chair and Board members. We wish to echo Mr. Fitch’s comments regarding the efforts of the Board and Board counsel and staff and the court reporters, the efficiencies with which the hearing was conducted and the participation of all of the parties. Thank you very much for your time and attention.

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<sup>93</sup> Exhibit 239, B-27.

<sup>94</sup> Transcript Volume 2, page 442, lines 8-9.