



Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard

December 2016

Verbatim Comments

Online

Please note: Personally identifying information, as well as portions of comments not in compliance with The City's Respectful Workplace Policy have been removed from the participant-submitted comments that follow, the intent of the comment remains.

Approximately 750 unique participants contributed online.

Concept #1: Upstream Reservoir (Elbow River) and new reservoir upstream on the Bow River:

- No weaknesses, the city requires Springbank dam to proceed ASAP to protect our downtown core and communities
- We need this reservoir to protect our city core and communities NOW
- "Does do nothing for Bragg Creek and Redwood Meadows. MC creek option is the only good one that can work for all.
- Cheapest too!
- The proposed dam at Springbank will not protect everyone on upstream of the Springbank area. Everyone needs flood protection!
- Springbank is the right solution. McLean Creek is a poor option. Self interest is driving opposition to Springbank.
- The study has been done by experts in their field - get on with the Springbank option. It's the best option for the people of Calgary.
- For most downstream benefit & least damage to fish & landowners, dry dam measures should be further upstream than Springbank.
- Albertans great at working together to recover from disasters but not at working together to prevent them. www.preventingalbertafloods.ca.
- Looking at riverfront homes in '86 we opted to live on high ground. Flooding was a factor. Why can't people own up to their bad choices?
- The springbank reservoir is the solution with most benefits and the least cost and disruption. What is the hold up?
- Working with open ground and raw undeveloped earth, is much more economic than repairing developed lands , like downtown.
- Springbank Reservoir protects the city as a whole. Businesses and homeowners.
- I support upstream reservoirs.
- "Equal protection.
- Downtown more costly to recover so needs more protection. This is best way.
- Best for whole city, too."

- is this really a case where a government would rather sacrifice its citizens than take on the environmental lobby? God help us.
- The 2013 flood did so much damage. It would be criminal to let this event continue to ruin lives, homes, businesses, community. No to SR1.
- It is essential to have reservoir capacity in flooding situations. Both the Elbow and Bow require reservoirs in emergency situations.
- There is no need to turn community against community. Let's all support MC1. It's on land that the gov.ab (ie.we) already own. Why buy more?
- If berms are good enough for Bragg Creek and RW, they should be good enough for Calgary too
- I am sure Calgary will bully their way into having a dam in Springbank which is sad as I really do believe MC is a better choice for Alberta
- Don't we already have a reservoir? It's called the Glenmore. Dredge the dam thing!! Can't hurt!
- SR1=cesspool. Mosquito breeding ground. Not to mention dead animals, fish and sewage. Nice.
- The type of sediment left at SR 1 NOT fertile, would not grow pasture. Is mountain rock. Would be an ugly moonscape. What a crime!
- The taking of private land, businesses and homes when there are viable alternatives is POOR PUBLIC POLICY. Mclean creek please!
- We are in full support of the Springbank off stream reservoir. Please make this a priority and start building now.
- Protect all community in flood areas. Protect the all the city infrastructure. Get moving before disaster strikes again.
- We must have another reservoir west of Calgary on the Bow River to protect our economic core and communities along the river.
- Anti logging will kill MC1. Environmentalists will kill MC1. Lives are at risk. Temporary wet pasture best. SR1 a must for public safety.
- Time to take action. It is good for all of Calgary, you can't be a great city with a vulnerable core.
- Displacing some of Alberta's founding families when the Maclean Creek option exists that affects no one is a crime.
- Unless this plan protects all Alberta homes, it should not be completed at any expense. McLean Dam is the answer.
- Hands down, this is the most cost effective and best result concept to deal with flood risk in Calgary. For residences and businesses
- I believe that the Springbank reservoir is the best of the three concepts as it will be the quickest and least expensive to implement.
- Fully supportive of SR1. It's been analyzed, assessed and recommended by legions of experts and professionals. Get started now. Please.
- SR1 will benefit the city as a whole. It's been studied and analyzed enough. It's time to get on with it!
- After a week or so of jabbing back and forth the winner is - no one!!! Why can't we all get behind McLean? Everybody wins!



- SR1 has already been objectively proven to be the best solution to protect downtown Calgary & communities. I support it.
- Springbank opposition are exaggerating??? Meanwhile proponents claim it will save all of Calgary and world hunger too. Let's get real folks
- Engage best minds/skills to develop Tri-River Joint Reservoir ASAP. for future prosperity as our forefathers did
- A new cost benefit when gov.ab finally gets pushed into doing one will clearly show McLean is better. Enviro concerns can be mitigated.
- Objectivity on SR1 was lost in 2014, when the premier announced it was preferred. Since then - bureaucrats striving to please the boss.
- Project to protect most communities ASAP presented to NDP GOA. See www.preventingalbertafloods.ca. Need TRJR.
- Maximum benefit. Build it now.
- The science concludes SR1 is the highest cost/benefit and most feasible. Leave it to the experts instead of comments from NIMBY landowners.
- Why is SR1 not built yet? Much better to have controlled flood in the prairie than an uncontrolled flood of Calgary communities and downtown
- This seems the most logical solution from a cost and effectiveness viewpoint. Land recovers from water naturally; houses do not.
- Hmm...Government picking winners & losers instead of acknowledging that all can win, and making it happen...Can someone explain please? MC1
- Those of us upstream are getting a bit tired of being called "the opposition". Grow up! We're as worthy as Calgarians are. People are people.
- We are more than a "handful of people upstream". We are PEOPLE upstream who deserve the same degree of protection that Calgary demands.
- Springbank is the logical choice for a dry dam. The land can still be used for grazing, parks, nature reserve, etc. Protect against calamity
- Upstream mitigation IS a reasonable part of the solution, but flooding 7000 acres of farmland is not the right answer. Dam McLean.
- How is SR1 a "reservoir" when there's no plan to "line" the land with anything to keep water from simply soaking in? Waste of water & land.
- Be informed and make wise choices. With the wealth of information available - Springbank dam is a clear winner. Build it!
- Upstream reservoirs are the answer, few people impacted, good protection, very little environmental impact -during flood and for short time
- Note that above where it estimates 1.9B - that is to do a reservoir on each of the Elbow and Bow Rivers and is not the SR1 cost alone.
- The Springbank project has been objectively proven to be the best project to protect neighbourhoods and downtown Calgary. I support it.



- In 2012 SR1 = \$158M; now = \$1.9M & likely to increase yet no updated cost on MC1. Claims of MR1 costing more are unfounded! Look more at MR1!
- Upstream mitigation is the best solution set by far. It is the dominant solution globally for flood mitigation/hydroelectricity.
- The Springbank Reservoir has been well examined and studied. The expert conclusion is that it is a good solution; it ought to be undertaken.
- We really need to evaluate the two options properly and equally.
- The SR1 option will impact one of the last pieces of native prairie and unique habitat left around the city of Calgary.
- The McLean creek dam option was never explored to the fullest extent. So how come people say the SR1 is the best option?
- This is not a "them" or "us." Its about protecting the most Calgarians. Springbank dam doesn't do that. It does nothing for downtown.
- Springbok provides a viable flood mitigation option to protect downstream areas of the Elbow river and the downtown as a priority.
- YYC cannot afford another flood, economically, environmentally, or emotionally. Do SR1 and other mitigation asap.
- It has been over 3 years since the flood. It is time to move on this project!
- Praying and assuming that another flood will not happen is foolish. Start mitigation with SR1 asap and address other prevention as well.
- There have been several studies concluding that Springbank is the best option, cost wise and environmentally. Please get moving on this!
- Relocating downtown businesses, Saddledome, historic homes, etc. is not an option. Start with SR1 asap and address Bow flooding as well.
- SR1 liability to present & future Generations. Provide a great treasure Tri-Ri Ed Joint Reservoir of Alberta. All work together For TRJR
- The plan is to flood the SR1 site every 7 years to ensure everything is working properly. Not ONLY in big flood events like many think.
- McLean creek is the only good option and it would protect more than just the city of Calgary. The NDP government should be ashamed.
- The MC1 site is NOT too "wildlife sensitive". 40 years of ATV's, logging, a gas plant, etc...has ensured few animals live at the site.
- As a Bragg Creek resident, I want the dam IN MY BACK YARD! MC1 for the good of us ALL!
- The ship on floodplain development in YYC sailed 120 years ago. Subsequent civic govt's have ignored the threat. Concept 1 - NOW!
- Calgary core, business and communities will remain vulnerable 4 flood seasons later. Let's not make it 5 and counting...
- SR1 is feasible and gets the job done. Grazing land won't disappear - flood or no flood - It can be restored faster, cheaper than city land



- It seems like there are A LOT of people commenting here who support McLean, which the NDP campaigned upon. We won't let them forget that.
- YYC and AB cannot afford another flood in any sense of the word - expense, lost productivity, deminished property value=less property taxes.
- Sad that it appears that all supporting SR1 couldn't care less about Tsuu Ti'na, Springbank, Redwood or Bragg. Where's your compassion?
- Diversify the economy via tourism by building a lake-like, REAL reservoir at MC1. Win for all Calgarians who come & play in our back yard!
- I support the Springbank as a long term solution which affects all of Calgarians and Albertans.
- Concept #1 is core to every solution. Without it..#2 and #3 don't protect our city.
- According to the Treaty Act, neither SR1, nor MC1 can proceed without the majority of Treaty 7 bands on board. They're not.Indiginous rights
- We must take action to protect our city and reduce the uncertainty this churn is creating. Springbank needs to happen
- The Springbank solution has proven to be the best. It has minimal impacts and protects our city. Time to move forward.
- If the berms in Bragg & Redwood fail, the SR1 diversion gates will be so clogged by our debris, they'll likely fail and do no good at all.
- SR1 wouldn't conserve water for times of draught. MC1 would, and would also be a lake-like playground in close proximity to Calgary. Smart!
- Visit preventingalbertafloods.ca The TRJR. This project is the best solution. Not even considered so far by GoA. No to SR1 help everyone.
- The is virtually no environmental impact to building a dry dam and flooding a field every 20-50 years.
- The environmental impacts of upstream mitigation are vastly overstated, consider the impact of the contents of 10,000+ homes in the landfill
- I have some sympathy for those whose land is expropriated or flooded every 50 years, but upstream mitigation is needed for an entire city.
- All flood-prone areas should be protected, starting with the Elbow, then the Bow. Upstream reservoirs address all the issues +minimal impact
- The upstream reservoir would protect our drinking water by slowing the silting up of Glenmore reservoir.
- The long-term quality of water would be improved by the Springbank reservoir, by holding back mud and pollutants during and after a flood.
- Upstream mitigation protects all citizens, whether they live near a river or not, as we all have to pay when floods occur.
- Upstream mitigation is the best solution for the entire city, we're all taxpayers and ultimately have to foot the bill when disasters happen
- I support upstream mitigation as the best solution, we don't want to end up like Los Angeles and turn our rivers into concrete channels.



- Upstream mitigation is the best solution, it avoids ugly berms and walls and will preserve the natural beauty of our rivers.
- Upstream reservoirs are by far the most effective and least disruptive solutions. Let's push to get Springbank built, then one on the Bow.
- The Springbank Project makes a lot of sense- I'm surprised that it hasn't been better supported by the City. It seems to do the job well!
- Please mitigate the possibilities of having another flood like 2013. The downtown city core or surrounding residential home owners beg for
- If SR1 is built, tax Calgarians only for the 2 billion. Also for any future upstream floods costs. Build McLean creek and all pay for it
- The Springbank project is strongly supported by Calgarians. Environmental impact is negligible compared to the impact of a flood.
- Floods happen. Dams get built. Expropriation is older than the hills. Get Springbank built and fix the Bow River too.
- So tired of the inflammatory comments about sacrificing Springbank. Most of that grazing land will continue to be available for grazing.
- Please stop exaggerating. No one is sacrificing Springbank. 3600 acres of grazing land are needed for an important public work. Build SR1
- My family's farmland was expropriated west of Edmonton for a traffic exchange. We survived. The greater good needs the dam!
- Expropriating for public works is a concept older than Alberta. Let's get on with Springbank now!
- I think this is great although I don't understand why it isn't also combined with a dry dam in the meaclean creek, Allen Bill pond area.
- Get the facts straight. Both rivers need mitigation to protect the Core. Start with Springbank now!
- "Concept 1 protects the city downtown core. Calgary needs to have business and head offices protected.
- "
- I support Calgary solving it's own dam(n) flooding problems within their own city limits. Leave Springbank out of your selfish plotting.
- The land values in Springbank are attributable to the proximity to Calgary. Preserve the value of both. Concept 1 now.
- By the time NDP FORCIBLY takes the land for SR1 from the owners, MC1 could have been near completion, had the NDP kept their word. Sad.
- Why should we sacrifice long-standing landowners upstream while we continue to allow residential development in flood plains in Calgary?
- Expropriating prime farmland to create a 7000+ acre toxic dust plain is a ridiculous waste of Albertans' money. Smarten up! Dam McLean!
- Calgary needs to solve their own problems within their own city limits. The flood wasn't Springbank's fault. Period.



- Were Calgary a "world class city", it wouldn't insist that others pay for it's shortcomings & poor planning. Mitigate yourselves.
- A flood of a similar magnitude to 2013 in the next few years will erode the entire tax base of the city. Concept 1 ASAP.
- Calgary planners dropped the ball & now they're making it the problem of innocent people. City planners are to blame, not Springbankers.
- Easy to implement, cost effective and solves the problem. Protecting Calgary is of highest importance and should be a priority.
- Don't want unsightly, ineffective berms obstructing your posh river views? Neither does Bragg Creek. Dam McLean! We can all be happy!
- Springbank reservoir is needed now! This is the best solution for protecting our downtown, stampede grounds and residential communities.
- Sorry Springbank folks, but who are being the Nimby's? Why let facts get in the way of your lies?
- I support McLean Creek proposal. It costs less due to nil cost of land. Also protects villages of Redwood Meadows and Bragg Creek.
- This project needs to proceed asap. The risk and damage to personal and commercial property and the economy more generally is too great!
- Civic politicians have created this dam rush. Building on flood plains, is no excuse to make others bear the brunt. No to SR1, go elsewhere.
- How can YYC be considered "world class" when we cannot quickly implement flood mitigation? Start with SR1 asap before another flood occurs.
- Save the core! Fact: Bow River was primary cause(2/3) of CORE & city flooding. Focus on the BOW. Fact:SR1 will not save the Core.
- We need to Build SR1 NOW and MC1 ASAP. We need to protect Calgary from future Flood Devastation! Enough Studies and Surveys! We NEED Action!
- The Calgary residents opposing berms obstructing their river views are the NIMBY's, not the Springbank residents on the chopping block.
- The salesmen are heavily pitching the effectiveness of earthen berms for Bragg Creek & Redwood Meadows. No dams! Berms for everyone!
- This SR1 concept is more politically motivated than scientifically sound. There are other, more effective and viable options.
- Creating a likely toxic dust bowl, directly in the path of strong winds is seriously insane. No Springbank dry dam! All to the east suffer.
- It's too costly and has a great negative impact on both the community and enviro, while protecting a prestigious few properties downstream.
- We want Calgary protected without sacrificing & displacing others. MC1 is for the good of the many. SR1 is for the good of fewer.
- McLean Creek is off the table for good reasons. Springbank is now the only hope for the Elbow. Build it!
- This City cannot grind to a halt again. Let's get this fixed. Springbank now. The Bow ASAP.



- Very much in favour of Concept 1 - upstream protection on both rivers. Start with Springbank.
- Strongly support the Springbank Off-Stream Reservoir. It's a necessary public work.
- I support MC1 as it protects Calgary AND communities upstream, like Bragg Creek, that Calgarians like to frequent. MC1 is simply better.
- Informed people get that both rivers flood downtown and we need the Springbank reservoir ASAP as a start.
- Calgarians understand what's at risk. Our economic chugs away in the downtown core. Fix both rivers. Start with SR1
- The majority of these comments support building Springbank now! And fix the Bow too.
- If earthen berms are "good enough" for Bragg Creek, they're certainly "good enough" for Calgary too. Equal protection for all citizens.
- Please get informed. The Core floods from both rivers - and the Springbank project is the best first step. Build it!
- Act now! This City's fragile economy cannot weather another disaster. Fix the Elbow with SR1 and fix the Bow too.
- The greater good dictates we need to fix both rivers. Start with the Springbank dry dam for the Elbow and keep looking for the Bow.
- Heartwarming to see that the overwhelming majority are AGAINST SR1 & FOR MC1. There might be hope for humanity afterall:) Sacrifice nobody!
- Why should I pay to save flood plain people? Well - they pay for your LRT they never use. They pay for roads they never drive. Public works
- Why don't people move out of the flood plain? Because there are 10,000+ homes there. And the entire downtown. Too late. Build protection.
- this needs to be done immediatlt; stop delaying.
- I support Concept 1
- Science backs the Springbank reservoir. We need to protect the Core from both rivers. It's the best place to start!
- Why is it a dry dam? Because it has minimal environmental impact and we have enough drinking water. Build SR1
- Will Calgary flood again? Yes - most definitely. Rivers flood. People can protect themselves. Start with Springbank and fix the Bow too.
- How could people not get that the Elbow River contributes to flooding the Core? Because they are misinformed. Build SR1 and fix the Bow!
- Maclean Creek dry dam protects more people, costs less, with lower environmental impact than SR1. Respect those outside Calgary.
- Why is there such misleading information out there about the Springbank dam? Because a few people don't want it. Calgary needs it!
- Upstream reservoirs are the way to go for all the reasons listed
- Is the Springbank dry dam just about fancy houses on the river? Ah NO! It's about the economic engine of Canada. Start with SR1!



- Does the Elbow flood downtown? Yes. Does the Bow? Obviously. Fix both and start with Springbank dry dam.
- Yes the Elbow River contributes to flooding downtown. And City Hall. Informed people get this. Start with SR1 and fix the Bow too.
- Get informed. Understand what's at risk. Protect downtown from both rivers. Start with Springbank dry dam.
- Everyone in Calgary relies on the Core in some way. Protect it now. Stop flooding on both rivers. Yes to SR1.
- This protects only part of Calgary, ruins valuable agri-land and does not protect upstream Tsuu T'ina, Redwood Meadows or Bragg Creek.
- Informed people understand that the Core needs protection from BOTH RIVERS. Start with SR1 and fix the Bow too.
- Don't be swayed by falsities, exaggerations and biased "survey" data. This City needs the Springbank reservoir. Both rivers flood the Core.
- I support the spring bank project, we need this in place now to protect our economy & communities affected we cannot afford another flood!!!!
- Informed people understand that the Springbank dry dam is the only viable solution for the Elbow. Let's get it done!
- All studies point to Springbank as the best project for the Elbow. Build it and keep searching for a Bow solution. Protect this City!
- It's happening. The Environmental Impact Assessment is underway. Keep it going and fix the Bow too!
- Best case scenario is flood protection by 2020. We can't afford any more waiting. Get this done and fix the Bow too.
- Calgary is a huge city and warrants protection. Start with Springbank and fix the Bow too. It's time!
- Another foot of water and the downtown would have been shut down for months - because elevators and HVAC would have been ruined. Fix this!
- This is the quickest and cheapest solution to cut back on Elbow River flow and is urgent.
- This City has had 10+ major floods in the past century. It's going to keep happening - until we build protection. Start with Springbank!
- No more dithering. Build SR1 and find a solution for the Bow.
- Yes to Springbank dry dam - the City is vulnerable. It's an important public work. Build it!
- Build SR1 and find a solution for the Bow too. Calgary needs this!
- I do not support the Springbank Reservoir. The Maclean Creek dry dam protects more than just Calgary with less destruction of habitat.
- I'm 100% for this cost effective solution that provides minimal environmental damage using the existing flood prone areas.
- Enough talk! After 3+ years of "study" it is time to protect downtown Calgary. Build Springbank ASAP.



- This solution is clearly the most logical, effective, and will offer the most immediate and beneficial protection to Calgarians.
- It is for the greater good and most economically viable.
- The Elbow is the primary water source for the Tsuu Ti'na Nation. I don't believe they support SR1. They count as much as the Calgarians.
- Keep up the fight SR1 residents! There are MANY of us supporting you! Dam McLean! Protect more people. Sacrifice none. Stop the division!
- I am 100% for this project. The tangible and intangible costs of a future flood for the city, province and nation are not acceptable.
- Use the natural basin of McLean to build an actual reservoir to conserve water for times of draught. SR1 soaks into the land & wastes water.
- Yes to the Springbank Reservoir! Even Nenshi knows we need it to protect Downtown Calgary.
- Environmentalists have significant env. concerns including they will not allow trees cut at MC1. People lives are at risk. Build SR1 ASAP.
- Springbank off-street reservoir is the best option and needs to be implemented ASAP!
- Upstream resevoirs are a necessary measure. Since the city cant be relocated, the water needs to be diverted.
- Disagree with Springbank, protect more people/areas upstream - equally protect all - McLean Creek more fair and smarter choice.
- Two governments have given their word that upstream mitigation would happen. Live up to your word and make it happen!
- Springbank saving downtown is a myth. Still I would champion McLean Creek as a means to protect Elbow River communities and those upstream.
- Best concept for actually addressing the most potential harm.
- I think it will be beneficial not only for the affected flood areas but the city as a whole
- I support the upstream mitigation of a Springbank reservoir as the most cost effective and expedient and practical solution to mitigating
- Upstream reservoirs must be implemented to protect the core/communities. Other approaches: disruptive/discriminatory/of questionable effect
- No dam! Build berms and barriers. Use crown land at McLean Creek.
- #Albertastrong. Maclean Creek protects Bragg Creek, Redwood Meadows, Calgary and Springbank. Even the NDP knew this truth pre election.
- This dam will NOT achieve what you have been told. It will NOT protect the downtown core, only Elbow. McLean will protect far more.
- Calgary and Canada's GDP cannot afford to have the downtown core shut again. We need the upstream reservoir.
- NDP has already destroyed oil industry. Now going after farmers. This dam would not help the Bow River or downtown area. No dam
- Get on with this proposal. It was recommended by the experts, but has been sidelined by interest groups.



- A Springbank reservoir makes abundant sense. Compared to catastrophic flooding, it's a bargain. The city was built in valleys; get over it.
- SR1 was not chosen by experts. GoA cherry picked from the Deltares report, ignoring the emphasis on "Make room for the River" Use Crown land
- I am a two time flood victim. I am in support of the Springbank reservoir. This is the best option for the city of Calgary.
- I support concept 1. Floods occur frequently and 2013 proved that they threaten Calgary's entire downtown core, Stampede and Saddledome.
- Rivers are still stronger than any mitigation. Accept consequences of your decision. Crown land and options exist upstream. SR1 is wrong.
- Sad to see people pushing for the destruction of someone else's homes, businesses and property to secure their own agenda. How un-Albertan!
- Staying on a floodplain is a choice. Flood mitigation is going to happen. Pushing consequences onto other Albertans is wrong. No to SR1.
- Hello, I support the springbank reservoir. As a resident of elbow park, this proposal is the best option to protect the downtown core.
- Springbank will not be a beautiful lake with sailboats and cottages. Imagine a 7000 acre catch basin with rocks & silt & chain link fence.
- "An ounce of prevention is worth a pound of cure."
-
- This is easily the most effective, efficient flood mitigation solution."
- Build Springbank now! Calgary remains vulnerable. And find a solution for the Bow.
- This mitigation is paramount for the vitality of the city of Calgary. It's urgency is immediate to protect the citizens and infrastructure
- When Springbank is shown to be over \$600M and McLean is \$\$350M, then can we all get behind McLean Creek?
- In favour of upstream reservoirs. Would bring back the feeling of community. All buy out lots would be sold and new single family homes built
- We are a city built at the confluence of 2 rivers and must mitigate our flood risk to protect ourselves! I support the SR1 project.
- This has been studied to death and shown to be the best first step to protecting against a repeat of the 2013 flood.
- This plan offers the best protection to most citizens with the least adverse effect on river flows or water quality.
- I have attended many meetings on the flood mitigation for our city. The Springbank Reservoir proposal seems the most logical for the problem
- As Calgarians, we are embarrassed that Calgary's Elbow River residents would want to expropriate other peoples' land to protect themselves!
- I care and am concerned but don't feel capable of making a well-informed decision about solutions.

- The first berm in Bragg Creek HASN'T even begun to be built. Anyone saying Bragg Creek already has mitigation started is wrong.
- I just want this project to get under way to protect my home and my family. Every spring s tension occurs in my family that lasts for months
- The Springbank dam increases flood risk to Springbank homes. The cost is ridiculous. Consider McLean Creek.
- TRJR would provide flood protection quickest. We have built great projects so don't let leaders tell us the. BEST too difficult
- Bow River Reservoir- there are no plans and no money to actually build a Bow River reservoir in our lifetimes, so this concept is a failure.
- I like this concept as it achieves so much in terms of preserving the Elbow as a healthy river, but the dry dam is there when needed.
- Enviro and technical assessments are years away. Calgary wants assurance "ASAP". SR1 for 1.9B is an absolute terrible solution.
- SR1 embarrassment to our generation. City would still be vulnerable as gambles on size of flood. Leave great legacy Tri-River Joint Reservoir
- The Springbank Landowners' rights are being thrown out the window. DON'T build/rebuild on a flood plain! Poor city planners are at fault.
- Springbank is not VITAL to the survival of Calgary. This project is misleading and has been since the get go.
- The trade-off of land (fairly compensated for) for the protection of Calgary is a no-brainer. We cannot afford to wait any longer.
- If \$33 million in berms is GOOD ENOUGH for Bragg Creek, then \$330million in berms is GOOD ENOUGH for equal, not superior citizens in Calgary
- We should go ahead with both Upstream Reservoir Projects!!! We have studied this enough! It is time to take action before we suffer again!!
- Lost our home in the flood. Moved to Springbank. So I strongly oppose SR1. More effective, less intrusive mitigation is available.
- The cost shown above DOES NOT include the cost of purchasing the land from the Springbank residents! This is misleading.
- It is critical that the springbank reservoir and Glenmore Dam upgrades move forward ASAP. It is indisputably in the public interest.
- Many were affected. Many need protection. Work together & all can benefit. See www.preventingalbertafloods.ca Tri-River joint Reservoir AB
- Springbank is the best solution to protect Calgary . Do not waste another year.
- vital to the protection of the city of Calgary. Vital that it is built ASAP.
- We need to do this project to protect Calgary from future flooding and mitigate future damages! The risk of doing nothing is too high!!!
- Water is a treasure not our enemy. Respect & value it with much needed water bank in mountain valley. See www.preventingalbertafloods.ca.

- I want my tax\$ helping the masses. McLean or Tri-River Jt Reservoir would protect more Albertans than SR1. And use Crown land not private!
- Big problems require big minds to solve. Utilize great opportunity offered. See www.preventingalbertafloods.ca. Tri-River Joint Reservoir AB
- Protecting the economic core and the surrounding community are addressed by this concept so I support it wholeheartedly.
- Why would you support SR1 when it will not protect you from Bow River flooding. Downtown suffered from the Bow, not Elbow!
- "SR1 impacts the least amount of people"? Maclean Creek is on government owned land and a res there would protect Calgary + upstream towns.
- Enlist expertise of committed engineers, environmentalists hydrologists politicians. See www.preventingalbertafloods.ca. Tri-River Joint Res
- Alternatives to SR1 were not studied. More political science was involved selling SR1 as fast&cheap! Fed Govt see red flags, time will tell!
- I like concept 1 as the preferred option.
- As a Calgarian, I can't in good conscience support SR1. Don't make others pay for the city's decision to develop/live on a floodplain.
- Provide equal protection to all. See www.preventingalbertafloods.ca. Tri-River joint Reservoir of Alberta
- Let's get the Springbank Reservoir built before a flood wipes out downtown Calgary.
- Several expert studies agreed this is the best option to effectively protect Calgary from a 1/100 year flood. Expedite the construction!
- "Impacts the least amount of people
- Best cost benefit ratio
- Least environmental impacts
- 2 governments have determined its the best option"
- "Build berms in YYC. It's good enough for Bragg Creek?"
- No to SR1 and Yes to MC1
- Seems like a well organized blitz for the SR1 crowd tonite."
- All I'm seeing here from SR1 supporters is: save my skin, screw everyone else! Not the Alberta way when there is a solution for all. Go MC1!
- Springbank was selected by experts as the best solution to mitigate against the dire consequences of another flood like 2013. Let's do it!
- I do not support SR1. It protects to few at to high a cost. Build on gov. land so everyone wins.
- Save our families and our lives, complete the Springbank Res now!
- Why dam perfectly good farmland and homes when Maclean creek (on crown land!) could be damed and used for tourism and wildlife habitat?
- The time is now to complete the SBR. Until it is done 100,000+ Calgarians live in fear of another catastrophic event like 2013.



- Cncpt 1 has the best balance between protecting Calgary's downtown, and river communities, and the cost and effectiveness of other choices
- I support the Springbank option. I feel upstream flood mitigation is critical to the long term viability of the City as a whole.
- "We urgently need to build the Springbank off stream reservoir project . Do not waste another year.
- "
- I am a strong supporter of the spring bank reservoir. This has taken a very long time to move this project forward and protect the downtown
- I strongly support the Springbank Dry Dam project and act now
- Please build the Springbank Dam project ASAP
- Please do it. I understand the importance of community engagement but it's more important to act and implement programs to protect our city.
- Springbank res should be the #1 solution and needs to be completed asap.It is practical & cost effective and will save lives & billions of \$
- Yes to Springbank Dry Dam project. Please start right away.
- Immediate protection of people and property. Longer term solutions should still be looked at and Sprinbank off stream first.
- As a professional engineer, my opinion is that this is the no brainer option.
- Both SR1 and MC1 will sacrifice wildlife habitat, but MC1 is on crown land and will protect more communities. Talk about the greater good!
- It took multiple rewrites of the Deltares report to get to even a luke warm endorsement of SR. That's not science, that is politics.
- Please actually read the studies on SR1, it's not the magical solution it's being promoted to be! Build at MacLean instead...
- "Upstream mitigation on the Elbow River makes sense and needs to happen!
- Support Springbank Dry Reservoir and /or McLean Creek Reservoir."
- It is the most complete way to protect the city core and its residents and impacts the fewest citizens
- Upstream mitigation must be put in place ASAP. Insurance providers will not bail out the same people they helped in 2013.
- The Springbank Reservoir is the best option for protecting Calgary's downtown core.
- I support the upstream Springbank Damming, in order to mitigate the flow of runoff and other variables collecting on the Elbow River
- SB reservoir is the most objective solution.
- Deltares report was based on preliminary engineering design by AMEC in 2014. This decision was not based on thorough science. Gotta call BS
- 3 years after the flood, I can't believe we are debating whether flooding land or downtown homes and businesses is preferable.



- Being more concerned about fields covered in silt, rather than hundreds of families' homes filled with mud is selfish and misguided
- From a macro, long term view, SB reservoir is a must. We need to act now!
- The process to get to SR1 was neither thorough nor objective. Only stakeholders consulted were within Calgary city limits. McLean is better
- Upstream reservoir was my initial and pervasive solution to the downstream flooding effects.
- This is very important for our city.
- Three years into this process and we are still discussing this. Build the Springbank Dam and get on with it.
- Springbank must go ahead. Calgary is the economic engine of Alberta and almost was completely flooded if the Elbow continued to rise.
- I support the Springbank Reservoir project and urge that it be completed as quickly as possible to mitigate flooding and drought.
- Complaints of potential "mudflats" and "ruined" grasslands are complete exaggerations. The parkland flooded in 2013 has completely regrown.
- reduce environmental impact from any sizable flood compared to dry dam impact.
- All the alternatives have been studied thoroughly and this is the clear and most practical solution to protect our city
- decrease stress of over 100,000 people directly effected in 2013. protect downtown Calgary and surrounding areas from huge potential losses.
- This is by far the best option. By next spring, it will be 4 years, the communities and the city cannot afford to wait any longer.
- Please go ahead with SR1 ASAP! The City can not go through another 2013 flood and neither can my family! It makes sense cost wise!
- I support construction of dam in springbank (flood mitigation).
- I cannot support SR1 and am astounded at how many wish to secure their own well being at the expense of others. Please build MacLean creek!
- I am a Calgarian and will stand with my Elbow River neighbours to support McLean Creek. I will not support harm to my Springbank neighbours
- We came within a foot or so of losing downtown and impacting many more Calgarian residences and businesses. Mitigation makes sense.
- People who don't like a result complain about the process. Springbank reservoir just makes too much sense.
- The Springbank reservoir was selected after a thorough and objective evaluation of all viable alternatives.
- The Springbank reservoir is vital to protect the most people for the least impact.
- "Strengths - someone thought of it
- Weakness - doesn't consider McLean Cr
- Mclean Creek doesn't take private land, SR1 will be a mudflat"



- After attending a flood mitigation workshop and exploring the concepts in depth, full implementation of the Springbank reservoir is urgent!!
- "The strength of concept 1 lies in its dual purpose. It provides both flood protection measures and used to retain water during drought.
- "
- SR1 is far too expensive and does not protect enough people- if we can all agree on MC1 we can all benefit.
- This is NOT a popularity contest. The best solution should be based on science, monetary benefits and quick implementation.
- We must build springbank reservoir! Benefits far outweigh the cost. We must protect downtown & the hundreds of homes in river neighborhoods
- Inappropriate and overbuilt solution for homes built on flood plain. Reservoir further upstream to create mountain recreation opportunities.
- I support the position of The Calgary River Communities Action Group
- We are fully support
- Protection of Alberta's economic centre is vital. Fully support SR1. Build it asap!
- I support the Springbank Project. Do it now.
- "Mitigation needs to begin on this project (Concept 1) and be completed quickly to prevent another 2013 diaster so costly to all Albertans.
- "
- Calgary suffered severe flooding in 2005 and in 2013. These floods caused massive economic and personal losses. Prevent further flooding now
- Dams are required to protect the low lying areas in Calgary, let's get on with it!
- The Springbank project has been objectively proven to be the best project to protect neighbourhoods and downtown Calgary. I support it!
- Let's get this project underway before we run into another event similar to 2013!!! The whole downtown is at risk!!!
- SR1 is NOT the cheaper option. An honest cost assessment has not been done. Much more land needed than proposed, wildlife affected as well.
- Strength is a must in order to protect Calgary
- A FEW springbank landowners? How ignorant and selfish can you possibly be! Hilarious! MC1 to protect several communities! Do your research.
- Protecting Calgary's downtown, infrastructure, and Communities. Minimizing potential loss of life.
- We must do this. Sometimes the "needs of the many" outweigh the "needs of the few" - not just in the movies. Get it done!
- SR1 has been studied by environmental companies and two governments. Stop the time wasting and build it before another 2013 flood arrives!
- an upstream reservoir may unfortunately impact some individuals, but it is necessary to protect the city as a whole



- The springbank diversion plan is an absolute necessity
- Springbankers are NIMBYs? what does that make those who only want the Elbow in their backyard at certain flow rates?
- The cost benefit analysis has grossly underestimated the cost of SR1. You were warned if it goes through it's not the cheapest/best option.
- This is not just about Calgary! Maclean Creek won't destroy our heritage ranches & protects Bragg Creek!
- The most cost effective option to achieve flood mitigation goals. Maximum effect, minimum disruption. But treat those affected fairly!
- This seems the best option but I would leave the decision to the experts. The main issue is to do something to mitigate Calgary flooding.
- Upstream mitigation is absolutely necessary to prevent catastrophic flooding in the city. It is the most important piece of the solution
- Get it done already
- Springbank will be a good start. We need this for the city and as someone who was flooded out in 2013, will go a long way for piece of mind
- "Where will the folks from Springbank bring their kid's 4H animals if the Calgary Stampede Grounds are underwater?
-
- What about flames fans? "
- I fully support the concept of an upstream dam to protect the city. If Springbank is the best location for this, then so be it.
- Why should any of my tax \$ be spent for people who buy homes in low areas, then want the us to save them. You made your choice live with it
- I support the Springbank option which has been reviewed & confirmed as the best option to protect Calgary & further downstream communities.
- This seems like the only logical "solution" to me.
- As victims of 2013 flood, it is a misconception that we were offered buyouts and that insurance covered our losses. It cost us huge \$.
- We strongly support the Springbank Reservoir project to protect our communities and the downtown. We cannot afford another 2013 flood.
- what is the cost to clean out the debris after a flood event? I'm concerned about air quality from a dust bowl.
- This seems to be the he only long term solution to properly protect the economy of one of the most vibrant cities in the world.
- It is not cost effective. The concept design is only protecting a select few communities over smaller towns and communities outside Calgary.
- I want and support the Springbank off-stream Reservoir Project. This is the best option . What are we waiting for?????????



- " I strongly support the Springbank off-stream Reservoir Project-----we must protect our communities and downtown Calgary.
- "
- Our neighborhood and city urgently need mitigation. The Springbank dam is the best solution from a cost-benefit perspective.
- I strongly support Springbank off-stream Project-----we must protect our communities and downtown Calgary '
- Fact-Alberta Gov't Environment Dept has never studied SR1-Ask them yourself-They have never seen the file. Biggest myth this is well studied
- With the amount of damage done in 2013, the reservoir is the only answer. Stop talking about this and let's have some action.
- Is this not a provincially funded project? Why is only Calgary being protected and not other Albertan communities? No to SR1, Yes to MC1.
- I don't want my tax dollars going toward a project that only protects some while sacrificing others.
- An upstream Elbow River dam is a better solution protecting more communities like Bragg, Redwood, Springbank and Tnai lands along with Calga
- "I strongly support the ""Springbank offstream Reservoir Project,
-
- Mary"
- Maximize use of excess water to areas of the province that are drought prone. Irrigation!
- The Springbank Reservoir solution is the most effective and well thought out solution to avoid a repeat disaster and needs to proceed ASAP.
- Why doesn't this map show the full scale of the dry dam (almost the size of Airdrie!)? More misinformation meant to push SR1. Go Maclean.
- We have seen the destruction of a large portion of the City of Calgary. Not convinced that SR1 will destroy grassland. It doesn't equate.
- Has anyone even looked at the plans for SR1? They have water running uphill! No to Springbank! Dam Maclean, protect everyone!
- The SB reservoir has been studied and best serves the city .It has been approved; a few neg private interests should change the decision
- RockyView County is opposed to SR1. They state it will sterilize farmland, contaminate water and pollute the air. No upside for RVC. Yes MC1
- I fully support the Springbank option. It protects river communities BUT just as importantly, protects downtown businesses -small & large.
- The Springbank Option has been reviewed by a number of experts and comes out as the best alternative overall. It's time to committ to it.
- As a flooded resident I can tell you that the biggest myth is that we were offered a buyout, or indeed any public funds at all.We paid!
- Doesn't anyone realize 2013 was a freak occurrence that will never happen again in our lifetimes? Why ruin any communities over nothing?



- What ever happened to being good neighbours? A dam at MacLean Creek would offer the most protection without further destroying communities.
- Prague floods. Vienna does not. They figured it out and DID something!
- Instead of buying land, agree to cover crop or property losses if and when flood occurs. MB farmers still farm beside the dike.
- The Springbank option has been thoroughly vetted by two governing parties (Conservatives & NDP). Please end the delays and begin construction
- "If downtown Calgary is not protected head offices will leave Calgary particularly in light of the higher tax rate that now exists in AB.
- "
- AS albertans are paying for this, it must protect the most albertans possible. Not just YYC Elbow River communities.
- I feel Springbank dam is not right. Protect more people is a must. SR1 does not provide equal protection to all citizens, in YYC our out
- Springbank is the most viable option to protect homes, businesses and important city infrastructure. Calgary cannot afford another 2013.
- Springbank's wide input channel will safely ingest large debris (many large trees) whereas McLean's narrow flow channel is susceptible. Duh
- great idea. need to protect downtown and water from Elbow wants to go to Bow once it overflows banks. get Springbank done soon!
- With the Springbank project being closely positioned to the City, it provides snow/rain protection sourced on the greatest land area. Duh.
- By far my biggest concern to the time it is taking to begin the Spring bank Reservoir!!!! What is the hold-up?
- My biggest worry just now is that the decision to build the upstream reservoir on the Elbow river, which caused by far the greatest damage
- I am not an environmentalist nor do I have scientific credentials but it makes sense to protect our city from upstream activity.
- Yes, still PTSD symptoms! Action on Springbank is needed to protect YYC lives, businesses and homes and to help turn around our economy.
- I fully support this concept. I think it would protect the city with very little negative impact. Only some 20 landowners would be affected
- "SR-1 needs to go ahead as soon as possible to protect the citizens of Calgary and the downtown core.
- Do not wait!
- "
- "Equal protection from river flood to all citizens/communities
- Protect Calgary's economic core? I live in Rideau Rocksbough.DOIT"
- These upstream reservoirs are essential to protect people and property in Calgary. Building dykes/concrete walls is not enough; we need both



- Properly assess the McLean Creek option using recent data (NOT the outdated data of the previous and current governments)
- Flood Mitigation is critical to the long term safety and prosperity of Calgary. Springbank is the best option for Calgary, period.
- SR1 has been thoroughly studied, and has been rigorously compared to the alternatives. It is clearly the choice to be made. Action is needed
- Clearly this is required since the repeat of a 2013 flood or worse would have a terrible impact on the city, Alberta and nationally.
- Environmentalists will stall McLean Creek indefinitely. We need flood protection now, so I support Springbank and improving Glenmore Dam.
- Two provincial governments have agreed on Springbank. Let's proceed. We cannot afford another downtown flood, caused by the Elbow River.
- There is no comparison between the massive damage to an entire city from another flood, and the minimal disruption to a few landowners.
- It is ludicrous this decision is based on public opinion versus which will protect the city the best. Concept 1 is the best choice.
- The environmental impact of flooded appliances and building materials headed for the landfill is enormous compared to water in a field.
- Please get this project underway. It will protect everyone. Don't let a few vocal landers owners obstruct the right solution.
- Build the springbank reservoir asap. Enough time has been wasted.
- "SR1 would have prevented tens of thousands of families losing their homes and billions of dollars in damage.
- Build it now!"
- Need to protect Bragg Creek, Redwood Meadows as well as Calgary.
- Please just get this dry dam completed, we've all discussed this every which way possible....we are sick of discussing, just get it built!!!
- Baloney that a few dozen people can NIMBY and keep Calgary at risk. Expropriate, the rent pasture back to the original owner. SR1 NOW
- Floods caused many BILLIONS of damage. And will happen again. Do not forget 2013. SR1 NOW
- Maclean Creek is the best initiative and perhaps finding an insurance company that insures for floods in the interim.
- Naysayers complain that dust will blow out of SR1. Don't they think dust will blow out of flooded Calgary? SR1 NOW.
- SR1 land will still be grazing land 99% of the time. It is not lost, in spite of what a VERY FEW NIMBY types say.
- Springbank is the best choice. Being downstream of McLean Creek the Springbank option can catch water from the mountains AND the foothills
- It is now going on four years post flood. Our neighbourhood is still rebuilding. PLEASE build the spring bank dam and let us rest easy.

- Protecting our city and rivers are mandatory. This is the strongest option to prevent and assist in another devastating flood.
- The ability to support a 2013 flood level is essential to protect not just residents along the Elbow river, but also Calgary's economic core
- Please get moving on SR1. The benefit to the entire inner city of Calgary outweighs the concerns of a few Springbank residents.
- does nothing to protect the communities of Bragg Creek or Redwood Meadows. It will destroy heritage farm lands and families in Springbank
- Springbank dry dam is the best solution.
- Since when did destruction of a community become an acceptable choice when there are alternatives? McLean Creek, the Tunnel or Tri River!
- Action SR-1. McLean Creek will never happen so stop putting it out as some viable option. You're all just distracting from viable options.
- It seems like a few dozen landowners against hundreds of thousands of Albertans that need the downtown core protected. Let's move on SR1
- Upstream mitigation is LONG overdue. Build SR 1 before another catastrophic flood affects ALL Calgarians.
- Action SR-1. Three years have passed since Calgary was shutdown. Stop the navel gazing. It's embarrassing. Springbank will be fine.
- Sediment management is easier in a dry reservoir as the reservoir is not continually subject to daily sedimentation - flood events only.
- Build! The Springbank Dry Dam is the best choice as a first defence to protect the citizens and the economic core of Calgary
- I am in favour of the Springbank reservoir
- Calgary cannot afford another flood. We must build the Springbank dry dam!!!
- The Springbank Project is in the public interest of the City of Calgary, and the operations of downtown Calgary.
- best overall option ... fully support this plan.
- Not an option. as it makes no sense!!!! Does not protect Red Wood Meadows, Bragg Creek and residences in between.
- "Protection of Calgary must be top priority given the number of people with property and livelihoods at risk.
- "
- We support the Springbank Dry Dam. Please act quickly to protect the homes of families in the path of Elbow River flooding.
- Please proceed with spring bank- this will benefit the most people and homes by far and we can't risk this extensive damage again!
- Pandering to rich fools who buy riverfront property and then cry when it floods. Work with Mother Nature and buy out flood plain properties



- I think this solution affects the least amount of people and is a fair balance to all parties. Please proceed ASAP.
- Protect our city. Build SR1. It will benefit the majority. We need mitigation now!
- We need to do this ASAP!!!
- Protect downtown calgary and build spring bank
- The Springbank Dry Dam is the essential choice as a first defence to protect the citizens and the economic core of Calgary and Alberta.
- Springbank Reservoir is the best solution: its quick, relatively inexpensive and least likely to run into environmental roadblocks.
- "I support the idea. It is low impact and low cost solution. It will protect in some flood events and provide needed time in all.
- "
- Maclean Creek is not necessary to protect those upstream of SR1 & will take 10 years to be put in place, if ever.
- Import to proceed with spring bank due to cost benefit to the downtown corr
- Build Springbank. It is the best option for the money and for the environment. The Elbow flooded downtown Calgary!
- Residents upstream of SR1 have already seen mitigation measures instituted to protect Red Wood Meadows & Bragg Creek
- We need to get moving on this as soon as possible. Time is of the essence. The further we are away from 2013, people start forgetting.
- There needs to be more than just operational changes on the Ghost Reservoir - need more storage capacity on the Bow to properly protect YYC!
- The destruction of pristine grasslands & agricultural land is disturbing. What is motivating the NDP to renege on their stance b4 election?
- Require Springbank reservoir to be built ASAP - the #of residents hurt by flooding greatly outweighs the few well off landowners impacted
- Just curious if the DDSB folks realize the folly of their arguments? 2 very different governments came to the same conclusion. YES TO SR1!!
- This approach causes environmental & ecological damage to the Springbank area, and leaving the effluent in situ introduces health concerns.
- This plan is not the most comprehensive solution available as it provides no protection to Bragg Creek & Redwood Meadows.
- Calgary residents expect empathy for flooding, yet show none for their upstream neighbours? Dam MacLean Creek and keep everyone safe!
- Nutrients from floods can be beneficial to grasslands. City waste in our rivers can't be good for downstream irrigation / municipalities.
- ruining springbank to protect Calgary still does nothing for those residents upstream of springbank, other solutions make more sense.



Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard

December 2016

- Maclean offers protection to the most number of people and costs are predictable. SR1 will cost the province too much for coverage of few.
- The health and economics of the whole city, along Bow and Elbow Rivers, hangs in the balance as we stall on mitigation upstream. Build it.
- Rockyview is moving ahead with local flood mitigation in Bragg Creek. We also need to protect a large population in Calgary.
- Maclean Creek is the best option. Protection to Bragg Creek, Redwood Meadows and Elbow residents. Even NDP knew this to be true pre election
- Springbank has been proven to be the best option, with less environmental impact. DO IT QUICKLY! Protect Calgary.
- the options have been analyzed and springbank is the best option to protect the elbow and downtown. Do not delay
- The govt's figures for land acquisition at Springbank are way too low. What is really going on here? And the proposed dam is ENORMOUS.
- Off Stream storage would be empty most often. Could off stream reservoir land continue to be used for grazing in non flood season? SR1 go!
- Buying 6800 acres of farmland makes no sense. It would cost us tax-payers billions and not be effective. Build berms and barriers.
- It is ridiculous that a handful of people upstream of Calgary continues to put the entire city at risk. Build Springbank soon!
- People seem to think that a dam at Springbank will protect ALL Calgary. It won't. It will only protect along the Elbow River,
- Temporary flooding of grasslands could work for livestock and grassland. Mclean Creek would require massive clear cutting of trees.
- Why is this a popularity contest? We need upstream mitigation measures now. Two successive government have chosen SR1. Get on with it!!!
- This option provides no protection for any community upstream of Springbank. Use McLean Creek.
- Options have been closely analyzed. SR1 has the best CB ratio and the least environmental impact. Time for action. SR1 Please!
- 80% of the excess runoff is generated in the mountains before it ever gets to Bragg Creek. SRI being downstream of Mclean does not help.
- SR1 is closer to Calgary and will catch more upstream runoff than McLean Creek ever could. SR1's proximity to Calgary makes more sense.
- Such a bad plan. Springbank resevoir makes no sense - cost or practical considerations. Protect upstream communities! Use MacLean Creek!
- One death from flooding is too many; it could easily have been much worse. Failure to protect a major City is unacceptable. SR1 ASAP.
- Off Stream storage has less impact on fisheries. Stream flow interruptions are minimum during normal operating stream flow. Yes Sr1!



- We need Upstream Reservoirs for both the Bow and Elbow Rivers. Please proceed with SR1 and plan for the Bow River ASAP.
- "This option makes the most sense considering all perspectives: environmental, community impact and financial.
- Proceed NOW!"
- SR1 avoids the need for walls 6m to 10m high along the Elbow, RUINING community. Confined by walls, flood water height will be greater!
- Off Stream Storage is more sustainable to manage in the long term. Build SR1 Now
- The Environmental Cost of doing nothing is too great. Flooded Calgary businesses pollute our rivers. Build Sr1 now.
- Safety DICTATES SR1. It is only 10m high and can avoid being used before it is safely finalized - unlike MacLean Creek (50m high).
- Enough fear mongering. No one in Calgary was harmed by any toxic dust - and we had all of Calgary's sewer in our basements. Yes to SR1
- Safety is ALL IMPORTANT with dams, particularly high dams (50m) like MacLean Creek. Poor rock and vulnerable during the lengthy construction
- The Environmental cost of not building SR1 is too Great. 90,000 tons of incremental waste in Calgary Landfills from 2013 alone. Build SR1!
- 8 grizzlies in Springbank? They'll be just fine. The grizzly corridor at McLean Creek however will pose a major problem. Build Springbank!
- Do you seriously think the professional environmentalists will let McLean Creek see the light of day? Not likely. Build SR1. Only option.
- The dry dam is being engineered as a reservoir that could be used for longer term containment, e.g., if a drought. It's the best option!
- Toxic flood mud? Really? Fear mongering is all that is. Your grassland will survive. All our lawns did just fine. Build the dry dam.
- The province will remediate any harm to the Springbank land. No one did that for Calgary and all the grass survived just fine. Build SR1!!
- Very tired of the fear mongering. Flood mud will not kill your pasture. City parks and lawns all recovered without any mitigation.
- Parks all over the city were covered in flood mud. Guess what? After some rain they all looked good as new. Nothing died. Build SR1!
- RE SR1, the current EIA is taking FAR too long. Cut time in half and let the NRCB decide if it is adequate. SR1 s/b flood ready Spring 2019.
- Ranchland is not usable after flooding. Lack of oxygen and light kills grassland. Disease laden dust bowl left. Google dry dam photos.
- SR1 will put river water on prairie grass a couple of times a century. Zero environmental impact compared to power plants, refineries, etc.
- Springbank is absolutely the best item. It is cheap and quick to build and safe during construction while MacLean Creek is dangerous (50m hi



- SR1 will kill the grassland, contaminate groundwater and blow diseases towards Calgary. Environmental concerns are real. Use McLean Creek.
- Upstream reservoirs are a good idea, but why not further upstream than Bragg Creek, why Springbank?
- Why are Springbank and communities upstream from Springbank considered acceptable sacrifices? Calgarians need to consider others too.
- The so called "independent" study done by Deltares was not much more than a book report. Lots of "according to the reports" in it. Dam MC.
- We need Upstream Reservoirs for both the Bow and Elbow Rivers. Time to proceed with SR1 and plan for the Bow River ASAP.
- SR1 has far less impact to the environment as MC is further upstream, affecting countless wildlife habitats. SR1 is the smart choice.
- SR1 has been researched and has been shown to be the best option. It has been over 3 yrs since the flood and time for SR1 to proceed.
- Springbank was approved by two separate government bodies, after extensive studies, scientific data was used to come to the right conclusion
- Please explain how can they acquire 6,800 acres of prime ranchland (and riverfront) at a cost of only \$40 million? Less than \$6K per acre?
- @Basement Water: Why are Urban lives and livelihoods more important than rural ones? The MacLean dam would protect everyone!
- We absolutely need protective measures for both the Bow River and the Elbow river. Massive property damage occurred along both systems.
- Drought will be a much bigger issue in the coming years than flooding. What good will a dry dam do? Build MC1!
- Why should some be sacrificed for the good of others when an option to protect everyone exists? Dam MacLean Creek!
- @ Martin: SR1 opponents care VERY MUCH about flood mitigation that works for all involved, that's why we are pushing for MacLean Creek.
- I support the Bow River reservoir. It's a necessity for flood mitigation in Calgary.
- Springbank is necessary and benefits ALL Calgarians. We must protect the core and Springbank is the BEST option.
- I support the Springbank project.
- DO NOT unnecessarily delay the Springbank mitigation project. The Springbank Project is in the best interests of Calgarians and Albertans.
- The Springbank dam will protect from the environmental damage of the massive clean up and rebuild. One years worth of landfill usage for ex
- The cost benefit analysis of losing the downtown core for an extended period (which almost happened last time) needs to be considered.
- As an individual who wants flood mitigation and has reviewed all options, I see MANY issues with SR1. MC1 protects more ppl. No to SR1.



- Note to the selfish lot of Springbank land owners; this is about protecting a city & lives NOT some farmland.
- An independent study, confirmed by the NDP, have identified Springbank as the best upstream solution for the Elbow River
- We need protection for the city of Calgary, downtown core, and the 100,000 residents that were last affected by the flood. SR1!!!
- Only those who live outside Springbank support this dam, not those who actually will be affected by the project. It's an unhealthy choice.
- Poor Springbank owners, your soooooo right. Let a city of 1M plus be vulnerable so your cattle can graze. Build it!
- MacLean Creek - YES!!!! No to SR! Where does Bragg Creek fit into this scenario?? Why would we want to be exclusive?
- There is simply no way that MacLean Creek, given environmental concerns, would ever be built - so build SR1. Now. Period.
- 97% of letters to CEAA were against SR1. These well researched, carefully drafted letters outlined many environmental concerns. No to SR1.
- I support SR1 - Don't Dam Springbank don't care about mitigation. Period.
- I fully support SR1!
- Why not manage dams better? Lower Ghost and Bearspaw every spring? Nice star on map please show actual size of Springbank Drydam. McLean #1.
- MacLean Creek is a better solution. Cheaper, faster, and helps all involved communities.
- The options have been well studied (i.e., SR1, MacLean Creek Dam and the Glenmore Tunnel) - the conclusion is that SR1 is best.
- The Springbank project has been objectively proven to be the best project to protect neighbourhoods and downtown Calgary. I support it.
- Premier Prentice picked the SR1 as the best option after a full review. Don't kid yourself - Mclean Creek will never be built.
- The Springbank reservoir is a NO-BRAINER! Sorry Springbank residents, the very few of you affected cannot deny a city of 1.1M protection.
- SR1 will contaminate Calgary water & ruin agricultural lands & wildlife habitat for YEARS! Dam McLean Creek & protect EVERYONE upstream!
- Residents of Springbank should not be flooded out to save those in the City of Calgary. Use Maclean Creek option to protect everyone.
- Maclean Creek protects everyone on the Elbow River including Bragg Creek and Redwood Meadows. Springbank protects only the City of Calgary
- I strongly support the Springbank project. The landowners will be treated fairly and receive far better compensation than any flood victims
- Stop flood water from entering the City - starting with the Springbank project. It's the only hope for protecting our future as a City.



Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard

December 2016

- We are a modern City and we need modern protection! Build the springbank off-stream reservoir and figure out how to fix the Bow.
- Duff's Ditch had opponents too - but is now viewed as a huge success! Get on with it Alberta - build the Springbank project!
- Yes to Springbank! We can't leave the downtown vulnerable. Both rivers flood the Core - start now!
- Springbank land is grazing land and can continue to be used for that the majority of the time. Build the dry dam and protect the City!
- 8 Grizzle bears settled and are living in the proposed Dam area, not to mention countless other animals. Don't destroy their habitats.
- Inconvenient Truth: Yes - SR1 protects the Core which is flooded by BOTH RIVERS! Build Springbank now and fix the Bow too!
- Calgary needs protection - just like every other major city in the world. Start with Springbank - build the dry dam ASAP!
- Good job province for acting swiftly post-flood to find solutions. Build SR1 now and find solutions on the Bow. Protect Calgary!
- These are heritage ranches that have had generations ranching and farming on them. But why would Albertans care about that?
- Build Springbank dry dam now! And find a solution on the Bow. The province is doing a great job-keep it up!
- The province acted swiftly post-2013 flood to find solutions for flooding. SR1 is the first project that needs building. Fix the Bow too!
- I strongly support protecting Calgary and the first project we need to get done is the Springbank dry dam.
- Yes, protect downtown. Springbank does NOT protect downtown. Other options need review. No to SR1, it is misguided.
- Yes to the Springbank Dry Dam! It's doable. It's needed. It must be done!
- Save Canada's economic engine and start with the Springbank Off-stream Reservoir!
- This Concept - flood infrastructure on both rivers - is absolutely the way to go. Build Springbank now and fix the Bow too!
- Tearing down homes and skyscrapers in Calgary is not a viable solution. Springbank project is. Build it ASAP and fix the Bow too!
- The Springbank Dam will be a health hazard to anyone who lives down wind or down stream, they have no plans to clean it up after flooding it
- The Elbow and Bow Rivers both flood downtown. Start with SR1 for the Elbow and find solutions for the Bow. It's urgent!
- The BOW River caused the majority of the City's grief. WHY is a fix on the Elbow being pushed? SR1 is bad public policy and irresponsible.
- Yes to Springbank Off-Stream Reservoir! It's about time. Look at Duff's Ditch? A 70 year dry spell has left us complacent. Wait no longer
- There are other options that don't destroy one community to save another, choose McLean Creek.



Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard

December 2016

- The majority may not be as loud as the minority - but make no mistake, this City wants the Springbank project built ASAP!
- SAVE THE CORE or whoever you are, stop spamming under different names. It only shows desperation.
- Calgary was built on the confluence of two rivers. Both need fixing. Start with Springbank dry dam and find a solution for the Bow!
- The Springbank reservoir is bad public policy, a health hazard after it being flooded and is a huge environmental impact to animals homes
- It's ludicrous that no action has yet been taken, almost 4 years after the flood. Build Springbank! It is objectively the best choice.
- Springbank is the best solution for Calgary. Do not delay. Prioritize this important public works project! Work with the province!
- Why is it okay to flood out one community to save another when they live on a flood plain. Why punish one community to save another.
- I strongly support the Springbank project. It protects thousands of homes and businesses and is needed to protect the Core.
- McLean Dam and Tri-River Joint Reservoir were not thoroughly reviewed as options. Springbank Dry Dam is irresponsible water management.
- Yes to Springbank Off-stream Reservoir. Protect the downtown by fixing both rivers ASAP!
- City water engineers have repeatedly said the Elbow contributes to flooding downtown - which cannot be protected without fixing both rivers.
- Both rivers flood the Core - the centre of our City and basis of our province's economy. Build Springbank and find a fix for the Bow!
- Like all mitigation measures, the Springbank dam will negatively affect some, but will benefit a much larger community and economic centre.
- Inconvenient Truth 4: SR1 will create ideal conditions for the breeding of Mosquitos. Zika mosquitos have made it to Canada. Calgary next?
- Calgary needs the Springbank dam and a fix on the Bow. Both are needed to protect the downtown Core, City Hall, the East Village, etc.
- Inconvenient Truth3: Agricultural lands can be used after flooding. 90 days without oxygen or light will kill all vegetation and crops.
- The Springbank project has already been objectively proven to be the best to protect downtown Calgary & communities. I support it.
- Build SR1. There is strong support in Calgary. Along with empathy for the Springbank landowners - but they will be treated fairly.
- The Core floods from both rivers. We can't save the core without upstream mitigation on both. Start with Springbank and find a fix for Bow!
- The City of Calgary knows that the Elbow contributes to flooding the downtown. Fix both rivers - starting with the Springbank project.



- Calgary wants SR1. Yes - the Elbow contributes to flooding downtown. Both rivers need fixing. Let's get on with fixing the Elbow ASAP.
- Inconvenient Truth 2: Stantec Project Report 5.3.5. Residue from SR1 may contain raw sewage susceptible to blow into Calgary on west winds.
- Springbank background suggests that governments are listening to private wealthy people Vs looking at wise spending of provincial tax dollar
- There is strong support in Calgary for the Springbank reservoir - especially amongst those well informed. It's our only option. Build it!
- Calgary needs the Springbank dry dam. Using private land for public works is an old concept. Happens all the time for the greater good.
- Springbank Reservoir is presented as a " quick Fix" Do we want quick fix or spend our tax dollars cost effectively. good for all
- SR1 opposers are not against prudent flood mitigation. City Land Use needs review. City needs a plan, not on the backs of others!
- Yes to the Springbank dry dam. It makes sense. Keep the flood water out of the City. The land will be useable for grazing when no flood.
- Springbank Reservoir .. most overall costly project . Combined costs for it, Bragg Creek, Redwood meadows, and First nations besides losses
- Build Springbank! The government is being pragmatic. McLean Creek would never get built. Too many contingencies. Expropriation is normal.
- Inconvenient Truth 1: Stantec Project Report 5.3.4. SR1 may contaminate groundwater and wells. Springbank relies on clean water wells.
- The Springbank Reservoir- is bad public policy. Does not protect Bragg Creek, Redwood or Tsuu Tina. It takes homes, heritage and businesses.
- Yes to Springbank! McLean Creek has too many contingencies and will never get built. Where does that leave Calgary? Protect YYC!
- The less vocal majority wants SR1. Anyone informed on flood mitigation understands why it's the best solution. Fix the river!
- I strongly support building the Springbank project and finding a solution for the Bow. Please do not delay! Their is strong support!
- Calgary is vulnerable to floods. Why?? It's embarrassing. Please build SR1 ASAP and find a solution on the Bow.
- Yes to Springbank Dry Dam. The City needs protection. And find a solution for the Bow too.
- Build SR1. Calgary needs it and everyone wants it! Strong support in the City for those informed on flood mitigation.
- We need the Springbank Off-Stream Reservoir and a fix for the Bow. Please make this a priority for the City!
- Springbank landowners will be fairly compensated and many will be able to retain the grazing use of their land. Please build SR1!



- Studies have shown SR1 to be the best contender. Please build it ASAP - this City cannot handle another devastating flood.
- Upstream Reservoirs are a good solution to protect Calgary's communities & economic core. Proceed with Springbank & a Bow River Reservoir.
- There is strong support for SR1 - in spite of a vocal minority. Expropriation is an oft-used tool for public works. Build SR1.
- Please build SR1 right away. 2020 is the best timeline. It's so far off! Every year the City is at risk.
- We need upstream protection on both rivers. Find a solution for the Bow and build SR1 ASAP. The vocal minority will be fairly compensated.
- As an Alberta taxpayer and YYC resident and business owner, SR1 is wrong. A dam at McLean is the responsible thing to do.
- Build SR1 for the Elbow and find a solution for the Bow ASAP. This City needs protection. ASAP!
- It's embarrassing this City has no flood protection - it's had more than dozen major floods in the past 120 years. Get SR1 done!
- It's unfortunate that expropriation may be required - but it's quite common for public works. Build Springbank ASAP!
- We Must protect the city, a few will be inconvenienced, but properly compensated. the land in question is not historically significant.
- Springbank is essential. The city remains vulnerable and this is the best identified option. Bragg Creek protection is already underway.
- Build Springbank as soon as possible. The city cannot afford another devastating flood. And find an upstream solution for the Bow River!
- Rehab what's left of Maclean Creek (now a giant gravel pit full of atvs) into a dam/rec area/ natural habitat. Protection on crown land.
- "I strongly support the Springbank Reservoir. Please move to protect our inner city communities and downtown. It's time.
- "
- No to SR1! It destroys yet another community and protects only a fraction of the people Maclean Creek would!
- Carving up valuable and historic agricultural land is insane as an alternative. Maclean Creek is already owned by the crown. Go there.
- The economics here are a lie! Land values are incorrect and no costs for expropriations. The Cost benefit makes no sense. A fail. A lie.
- I do not agree with the proposed plan, I believe that there are alternatives that are probably better and less intrusive to the parties
- Damming McLean Creek will protect more people and doesn't destroy another community. And is already government owned land
- Environmentalists and First Nations against this plan. Build berms and use McLean.
- This option does not protect downtown or anywhere along the Bow. It is a strange and unproductive idea. What is really in the gov't's mind?



- No Springbank Dam! Environmentally dangerous and unpopular with Calgarians. Use crown land at McLean Creek
- This is the best plan. It is so important we make this happen. The benefits are significant.
- NO to SR1. McLean Cr protects more people and doesn't destroy another community. Bow caused most damage to Calgary. SR1 is bad public policy.
- More research needs to be conducted for the McLean Creek dam. It's crown land, and will provide a recreational area in the future. NO to SR1
- This is the best plan. Let's go ahead and get the Springbank and Bow reservoirs done!
- What happened to #AlbertaStrong? Stop looking to destroy the ranching community in Springbank and consider the other options. Maclean Creek.
- I support the springbank reservoir project. This must be completed soon to protect the economically vital portions of the city.
- "Both Springbank and additional dams on the Bow River are needed to avoid another national catastrophe which will cost billions.
- "
- Downtown Calgary and all the communities along the Elbow and Bow rivers must be protected from future floods. Concept 1 is the best option.
- SR1 is not cost effective, and proposed costs have not been realistic up to this point.
- Why should one community should be protected at the cost of several others?? Dam McLean, Say NO to SR1.
- People against SR1 want Calgary protected. They just don't want Springbank destroyed as well. McLean Creek is the best option.
- Springbank wants flood mitigation to benefit all. Build MC1 and everyone wins.
- Springbank Dam will destroy 6,800 acres of ecologically significant private land. McLean Creek land is free and will protect far more people
- Flood mitigation should never involve flooding one community to protect another. SR1 is poor public policy.
- SR1 does not provide any benefit other than in the event of a flood- build McLean for drought and flood protection.
- If I had been a victim of the 2013 flood the last thing I'd want is to fling injurious affection onto anyone else for my future well being.
- ""YES"" to the McLean Creek Dam
- ""No"" to the Springbank Dam."
- Completely against Damning Springbank. A complete eye sore
- Myth 5 - SR will prevent \$billions of damage. \$750 million according to report on gov.ab. SR will cost more than that. Dam McLean Cr
- This is devastating to a longstanding rural community with founding forefathers still in this area. more common sense approach needed



- Given the risks to downtown Calgary and affected communities, and the ~ \$6 billion cost of previous flood damage, SR-1 is a must!
- SR1 studies only go so far. Who knows where the ranching sediment will end up? Likely in Calgary drinking water and filling up Glenmore dam.
- The Springbank project and the raising plates on the dam are a big and vital start to full flood mitigation. Downtown Calgary is at risk.
- I am a very strong proponent of upstream flood mitigation and I believe that the two projects that are in process are absolutely mandatory.
- Map needs to show the entire 6300 acres that flood will effect for SR1. Private land grab. MC1 would be on crown land saving all communities
- The City of Calgary needs to align with the Province's efforts in support of Springbank off stream reservoir
- How can diverting water kilometres off stream to stagnate possibly be more natural than holding it within the river valley? Dam McLean Cr.
- McLean proposal offers better protection for more folks & use of Crown lands would be fair for all at risk, urban and rural Albertans alike.
- I'm in favor of the Springbank Reservoir. This project is taking way too long. Let's get on with it. Save the inner city.
- Springbank off stream reservoir is the superior solution and should proceed first.
- No to Springbank, Yes to MacLean.
- More than 3 years post flood and all we have to show is fingers crossed that there is no new flood. Time to act!!!
- It is essential that we undertake the construction of the Springbank upstream reservoir to protect the city.
- Myth 3 (again) SR opponents are against flood mitigation. Fact - We have consistently advocated for McLean Cr to protect more Albertans
- SR1 SUPPORTER u r proving why you guys dig a deeper hole for ur selves with every statement.
- McLean protects more people and communities without destroying valuable farm and ranch land. SR1 is a mistake that should not be built.
- Poor SR1 SUPPORTER. Take people's homes and biz and community cause of ur wet drywall. Typical attitude from these FOLKS. Drywall B4 PEOPLE?
- Here's an idea. Let's have the Prov offer the buy-out to every impacted homeowner in the City at the 2012 tax assessment. Any guess on cost?
- One wonders if the SR1 opponents spent any time at all seeing first hand the devastation in Calgary. How much drywall did they pull down??
- SR1 SUPPORTER you fighting a losing battle. Get behind McLean and lets get mitigation.
- The facts and science support SR1. Look at the studies done. They all support SR1 over the other options. It can get built.
- Isn't this the "false equivalencies" like Trump/Clinton? And the mis-information in these anti-SR1 comments? Stunning.



- 22 ranch land owners and, what, 1 residence? vs 80000 evacuees, thousands of buildings, hundreds of families, and \$billions. Really?
- The cost of SR1 will continue to mushroom. I strongly support the McLean Creek option as was promised as part of the NDP election platform.
- To support Springbank is to support ignorance over reason. Protect more than a few, sacrifice no one. DONT DAM SPRINGBANK!
- ...and Bragg Creek and upstream areas are now building \$33m worth of 1/100 protection
- Make no mistake. The SR1 opposition in Springbank fundamentally don't care about ANY infrastructure on the Elbow.
- McLean Creek will never get built if SR1 dies. You wanna see opposition? Just wait for that.
- Let's get this flood mitigation in place ASAP. Springbank is the obvious choice
- Use the Springbank land folks, it's only needed should a flood event ever happen again. Remember the tax base is generated downstream.
- Control the Bow by another dam upstream--this is the most important/impactful/economic initiative to protect our city and my lot in Bowness
- Our mother's home in Elbow Park was hit hard. BUT. We strongly oppose SR 1 and support McLean. Use Crown land and protect more areas.
- Home owners below Glenmore Dam have already been given a buyout option. Anyone left now wants a Springbank floodplain. Buyout Elbow Park.
- Would those individuals pro SR1 be willing to give up their homes, businesses and heritage for minimal compensation? Not likely!
- We need flood mitigation. But let's ALL get behind McLean as it protects the most people. As a cohesive group we would get it done!!
- Springbank is a valuable cultural and agricultural site. It is productive farm and ranch land - It would be a mistake to destroy it.
- You already own the land at McLean, so use it to protect many. Don't wreck Springbank to protect a few.
- This would be quite wrong. McLean Creek is the right answer. Downtown needs the protection.
- The proposed figures for land purchase at Springbank are far too low for an area almost the size of Airdrie. This sounds like theft to me.
- McLean protects Calgary, Bragg Creek, Redwood and is on Crown land. Gov't experts say enviro concerns can be mitigated. Build McLean!
- Use McLean Creek! Already have land. Why buy more at vast expense? And why is it not better to protect downtown from the Bow?
- This is best option. Please protect thousands of residents and businesses. And a life was lost, let's not forget what it really protects.
- Instead of flood mitigation the focus needs to be on water management. Drought is an ominous concern also. SR1 doesn't cut it.
- GOA said no to MacLean because grizzlies are protected. Grizzlies are now in Springbank - eating our profit and the City's food. Now what?



- Springbank will not protect enough people to be a feasible option; it is being pushed through at the expense of one community over another.
- Berms work for all except wealthy communities along Elbow. They like mitigation that costs taxpayers 10 times and does harm to others.
- "No to Concept 1 Maclean Creek is the obvious solution for the majority.
- "
- All Ab will pay 4 a few. Purchasing the land is the biggest cost Ab already owns McClean creek it's a natural site reality is dead NDP - RIP
- highest unemployment to date thousands of foreclosures the city and province want to build a dam a cancer hospital a golf course and ringroad
- Destroying one community to protect a FEW is disgraceful. MacLean Creek protects more communities and is already crown land.
- Bonavista resident/Nov5 Is that really true bureaucrats refused to examine Tri-River Joint Reservoir?? Springbank DRY dam is a boondoggle!!
- The real problem is that Springbank slough will be a up wind site for new Aedes mosquitoes species/ Zika outbreak as a health hazard.
- What about the people of Bragg Creek? They are still not included with this? McLean Creek is the obvious choice.
- NO SR1! Silt and debris left behind would shower anyone downwind with particles containing dead animals and sewage. Not healthy!
- Time is of the essence. Calgary needs protection. No option is perfect, without environmental & social issues. Concept 1 has best balance.
- Upstream flood mitigation protects core areas of the city. I support dams for water storage and flood protection.
- Benefit to *all* those downstream Even if it costs more now, need to do the right thing for long term health of ALL communities (2/2)
- Downriver needs to be protected but so do the heritage, agricultural, Indigenous, and other areas upriver. SR1 destroys those w/o true (1/2)
- Why is the first question about the way the community looks/feels/moves? This should first and foremost be about protecting Albertans
- Flooding one community to *potentially* save another & not save all the communities that might be affected is a bad idea & bad public policy
- GOA only puts forward two options despite promising to examine all. Tri-River Joint Reservoir was turned down by bureaucrats, not experts.
- Only Tri-River Joint Reservoir would protect from spring floods plus conserve water. Best for Albertans. See www.preventingalbertafloods.ca.
- How will ranchers be compensated for deprivation of grazing and home loss during water storage at Springbank?
- Calgary needs more water storage for growth in the city and recreation. MacLean Creek provides both. Springbank can't.



- Anyone who supports Springbank Dam is either politically motivated - misinformed or has self interests to protect- Better options upstream
- I several open houses on Springbank dry reservoir. I have never received an credible explanation why MacLean Creek isn't a better option.
- Zika virus was found in Canada. Climate Change warms Canada. SR1 leaves behind countless pools of stagnant water. Zika mosquitos breed.
- The springbank reservoir is a great idea. I support it fully. We must protect the city and those who live and work along the Elbow river.
- No SR1! Silt and debris left behind will shower pathogens over people downwind of the site. Not healthy!
- GoA claim after SR1 flooding it's back to business as usual on the land. Fluvial clastic sediment and denudation will NOT support that!
- The 2013 flood was a 1 in 200/250 year event. Why has the gov.ab and city not disclosed this fact? Let's take the time to get this right.
- IBI reported 2/3 of damages to Calgary were from the Bow. Focus on the Bow and berm Elbow River. GoA are paying for berms in Bragg Creek!
- This is not Albertans pulling together. How is this okay to sacrifice one community to serve so few at enormous cost to Albertans? NO to SR1
- NO SR1! Silt and debris left behind will shower pathogens over anyone living downwind of the site. NOT HEALTHY!!
- The pro-SR1 arguments come across to me as futile and impatient. Now tell me, why not Maclean Creek?
- Myth 8 - Bragg Creek and Redwood will be protected by berms. Then why did the gov.ab tell Calgary River Group that berms inevitably fail?
- It amazes me that 20 families with political connections can hugely increase the risk borne by hundreds of thousands of downstream residents
- No to SR1. Terrible cost/benefit balance. GoA needs to come clean on this! Go McLean. An area to protect all with potential for recreation.
- McLean Creek would provide protection for Bragg Creek, Redwood Meadows and Native lands including Redwood Golf Course. More cost effective
- The proposed site for the Springbank dam is full of wildlife. This area, so close to Calgary, is a treasure which needs to be preserved.
- Myth 7- opposition to Springbank dam is only 20 landowners. This is insulting to the thousands of Albertans who support a dam at McLean Cr.
- We absolutely need the Springbank Off Stream reservoir. It's been through enough technical and political analysis. Get the EIA done ASAP.
- Build the Springbank dry dam. It's cost effective and can be completed quickly. It's been 3 years since the flood. let's get this done.
- McLean Creek is obviously the best choice. All parties are protected while being the most cost effective! McLean Creek protects more!



- McLean Creek option will protect more folks/areas, cost less & save heritage, food-producing lands. Springbank idea is the wrong one!
- I support building the Springbank Reservoir. This project is taking way too long. Time to get on with it. too many delays.
- Bad plan. Springbank dam won't protect Bragg Creek (of whom many work in Calgary) like the McLean creek solution will. Do NOT support this!
- I support SR1. The City of Calgary and my family were hit hard by the 2013 flood and I don't want to ever see that happen again.
- 2 flood in more than 200 years is this cost necessary. Do u want to pay 4it should Springbank pay, how bout the province McClean Creek
- The Springbank dry dam is obviously the best choice.
- Let's get moving forward with the Springbank dam!!
- Build the Springbank dry dam. Expropriation of the land may be required.
- Why the delay with the most cost effective solution. We need to protect Calgary, High River etc. Get this done !
- The city of Calgary, High River and other outlying areas can not afford another flood, build Springbank, the most cost effective solution.
- We need the Springbank dry dam.
- I support the building of the Springbank dam.
- Build the Springbank dry dam!!
- What happens to Redwood Meadows and Bragg Creek when the canal system entering the dam plugs with debris? logs rocks etc like Cougar Creek?
- This is taking the livelihood of some of the best agriculture land in Canada out of production for the few houses built on a flood plain
- Yes to McClean Creek. Protect Bragg Creek , Redwood Meadows and everything downstream Why should everyone payfor building in flood plain
- No to Springbank, No to the NDP who changed there original choice,,Yes to protecting heritage families and agricultural life.
- McLean Creek offers less protection, has higher environmental impact and will take longer & cost more to approve & complete than Springbank.
- Springbank is strongly supported by thousands of downstream residents vs. approx 20 individual landowners & others without a direct stake.
- NO to Springbank!! Our Government needs to protect as many ALBERTANS (not just Calgarians) as possible by using McLean Creek.
- Why should all Albertans pay for those who continue to build/live in flood plains? Take responsibility for your own life choices.
- A Springbank dam does nothing for Bragg Creek, Redwood Meadows or TsuuT'ina Nation. McLean Creek on gov't-owned land is a much better choice
- Wake up guys! McLean Creek is the only option best for all parties. Support an option that doesn't help one group while injuring others.

- "What about protecting Bragg Creek, Red Wood Meadows by the suggested Central reservoir at the vicinity of the Sheep River.
- Extent of type???"
- Ridiculous waste of tax-payer money. Little protection. It would make much more sense to protect downtown from the Bow.
- Berms and Barriers can eliminate the devastating effects of flooding along the Elbow River in most scenarios. Consider them.
- A berm at the same elevation as the bike path in Erlton to tow onto the Talisman Center hill would have prevented flooding our homes in 2005
- Springbank Reservoir. I appeal to the landowners of Springbank to do what they can to help mitigate the impact of flood disasters on Calgary
- The springbank Reservoir is the lowest cost / highest benefit project when it comes to protecting the city of Calgary's neighbourhoods
- "The Springbank Reservoir is needed infrastructure for the province.
- "
- Springbank is not the place! Far too expensive for very little gain. Farmers' live and livelihoods would be devastated.
- It is unfortunate that there is a negative impact by SR1 to 16 upstream landowners, but it seems to be the single best cost effective sol'n.
- McLean Creek better and doesn't penalize Springbank and other areas for the City allowing people to build on flood plain.
- Cost ludicrously high. Does nothing for downtown Calgary and businesses there. Devastates wonderful ranch land and ranchers' lives.
- I believe Springbank is the most feasible economically and in terms of early impact. We need to get it down, but fairly compensate.
- Build it at McLean creek. We should not penalize people in Springbank at the expense of Calgarians (and I'm a Calgarian saying this).
- It is time to make decisions and get flood mitigation and protection moving forward to protect our city from the Bow and Elbow Rivers.
- Do not sacrifice one area to protect another! There are better options that protects all. Homes do not have to be destroyed in the process.
- Please stop and think about what SR1 will do to your upstream neighbours. Do your own independent research. There are other options!
- Think back to 2013. Reflect on the effects of global climate change. The downsides of the Springbank proposal pale in comparison.
- I support upstream reservoirs. Downtown must be protected from future flooding.
- Providing flood prevention in YYC means you will flood some place else to compensate. One place sacrificed for another. McLean Creek <people
- It is sad to have communities fighting against each other. Equally sad is that we are talking about destroying one of these communities.



- The Springbank Reservoir is the best option to protect Calgary's economic core and vital urban communities against another flood.
- All Albertans will pay. Any project of this size and expense should be put to an ALBERTA-WIDE REFERENDUM.
- I strongly support the Springbank Offstream Reservoir idea as the best solution for flood future mitigation for Calgary.
- The Springbank Reservoir is the best option for protecting all property downstream of the Glenmore Dam (from overland flow & groundwater).
- All "concepts" have some downsides. Dithering is a greater downside. We cannot afford to lose downtown Calgary again, so let's get this done
- I am against this concept as the city/ province could use public land farther up stream for this mitigation project. Mclean Creek is better.
- DON'T DO THE SBR! I know many ppl that live in the proposed SB floodplain; 1family has a 100yr working ranch. This will destroy their lives.
- McLean Creek is the better choice. It perfects more communities, and would provide a nice recreational area.
- Start campaigning for McLean people!!! It will be built sooner with less resistance.
- McLean Creek is the obvious choice if you look at the facts, more people need to read the real facts, do your research people.
- There is a thousand residents in Redwood Meadows alone that all predominantly work in Calgary and support its economy. Protect us too
- Unanimous consensus will never happen. Implement the professional's recommendations, build SR1, and save our city. Enough already...
- McLean Creek!
- Springbank is one of the most picturesque beautiful areas. If you do this, you will trash one of Alberta's jewels. Shame on you!
- Do not steal from the original settlers to give to those without the forethought to build away from flood plains or move after repeat floods
- The McLean project has been objectively proven to be the best project to protect "the most" neighbourhoods and Calgary. I support it 100%.
- DamNing Springbank destroys our heritage, the original settlers who had the good sense to know where to build so as not to flood.
- We are completely in favour of the Springbank Off Stream Reservoir. Please stop studying... and start building.
- Poor choice! Too expensive. Sacrifices Bragg Creek, Redwood Meadows and the Tsuu Tina Nation. Destroys our heritage.
- Dam Mclean Creek I can.t bieleve that any calgarian would support dam spring bank when the other would save redwood meadows and bragg creek
- We need to prevent another flood of the city. To do nothing is not exceptable.



- Springbank Cost/Benefit does not justify building. Not to mention on going costs which also were not included.
- What will be done with all the silt that fills up the Springbank reservoir and creates a potential dust bowl
- Alberta's struggling: Schools and healthcare need help. Unemployment rising. Nenshi says 1 in 10 live in poverty in YYC . NO WAY to SR1
- If you oppose SR1, do you really think McLean Creek would go ahead without environmental protests? What else are you suggesting could work?
- We need the province on board. They need to support upstream measures for both Bow and Elbow. The province can't afford another flood.
- All options other than berms lie outside the City's jurisdiction. Berms would need negotiations with too many homeowners, wouldn't happen.
- Anyone who spend months cleaning and rebuilding a flooded home wants action soon. Doing nothing is not an option. SR1 is the best we have.
- Springbank Reservoir is the best option to protect the downtown and downstream residents. Construction should begin as soon as possible.
- SR1 isn't perfect, but it's the most feasible and most likely to actually happen. McLean Creek would have environmental protests for years.
- Calgary's economic core is on the Bow. The Bow has the largest volume and flow rate. Upstream measures are necessary, not optional!
- Transportation impact to school buses and tractor trailers bypassing city not evaluated in the Springbank Dam assessment.
- Too costly, unfair expropriation, not faster, McLean better site and protection alternative for all.
- Springbank Dam cost will balloon due to dewatering required and sediment/erosion control. No costs included in current estimate for these
- Contaminated dust blowing from the Springbank Dam to the east would impact agricultural and ranching operations and the City of Calgary
- Myth 6 -Springbank Dam has been well studied. As of a couple of months ago, they didn't even how they would drain the dam thing.
- Springbank Dam would result in a significant visual impact to tourists travelling on TransCanada Hwy
- The province has put forward no rational debris and solids management plan for the SR1 reservoir. Eastern slope floods are debris flows.
- Springbank dam would harm sensitive wildlife species that reside in the area and damage fish habitat.
- The SR1 reservoir will create a debris field, full of fluvial clastic sediments, that will be airborne particulate matter during Chinooks.
- Under sluice gates installed on existing facilities allow for safe passing of the front end of a flood, preserving storage for the back end.



- Under sluice gates installed on the existing facilities allow for natural sediment flushing and restoration of lost storage capacity.
- Under sluice gates installed on the existing facilities allow for maximizing the existing "Live" reservoir storage volume.
- Create an ability to manage extreme flows of water into Calgary is critical to our communities reasonable protection.
- Install undersluice gates in Glenmore, Bearspaw, and Ghost. Drain all of these empty during flood season. Safely pass the front of a flood.
- "The Springbank reservoir is an ill-conceived concept, promoted by self serving interests that have no conception of fluvial
- dynamic systems."
- Myth 5 - Springbank dam will save billions in damage. Gov.ab reports say \$750 million, a little bit less than Springbank will cost.
- The provincial and municipal govts need to remove emotion and rhetoric from the decision making and implement the Springbank reservoir proje
- Need to proceed with this well studied mitigation project. The cost of inaction far exceeds any downsides of the project
- It won't work! Clear cuts need to be stopped on the east slopes and the existing resevoirs should have been lowered and better managed.
- The dam in Springbank is not right. I don't want my taxes to pay to sacrifice one community to save another.
- Way too expensive to protect a few while destroying another community. Use the dams we have.
- Majority of flood mitigation professionals support Springbank. It's not perfect, but it's our best option by a landslide. Enough said.
- Flood mitigation must be done. Billions in losses cannot happen again. The government has been collecting high taxes on these properties
- Yes, Springbank will be expensive but so will another flood WHEN (not if) it occurs. Let's build Springbank.
- This is a great project to protect our city with least impact on people and environment.
- Destroying one community to save another is not the right choice when there are other upstream options!
- I think springbank dam will not protect enough of Calgary to make it worthwhile.
- @ckayser why should they? They didn't build on a flood plain...
- Upstream protection is required. Springbank is the right place as numerous studies have shown. Get on with it. Downtown needs protection.
- SR1 has relied almost entirely on misinformation to gain supporters. Don't Dam Springbank!
- Destroying one community to save another is not a responsible option. An upstream reservoir is a good idea, just go further upstream.
- We absolutely need upstream reservoirs in order to protect business closures from 5 days to months with huge financial losses.



- Dams give illusion of protection at great public expense, degrade river ecology. Voluntary buyouts & floodproofing structures best use of \$
- Cost is too high and doesn't consider the negative effects to Bragg Creek and Springbank residents, as well as drinking water.
- "Too expensive as is.
- McLean Creek, if at all."
- For the greater good, do the right thing and build Springbank.
- "This is by far and away the most viable option. Lets get on with it!!!!
-
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- "
- Why is it okay to destroy someone's home to protect someone else's. Don't dam Springbank! McLean Creek is a way better option!
- Suggesting residents on the river are rich and deserve what they got forgets about all of Downtown and those who rent in Bowness, Sunnyside.
- Flow rate on the Bow is much greater than the Elbow yet other than Ghost Dam level lowering, NOTHING has been done. Downtown is on the Bow.
- It is not feasible to create berms from one end of Calgary to the other. Too many kilometers. Need an upstream option for the Bow.
- We need upstream solutions for the Bow! Soon! It is the largest river, affects all of downtown even more than the Elbow did.
- Taking the land of those who did not build in the floodplain to protect those who did seems completely unjust
- Is turning some of the most valuable land into a moonscape dry dam the best idea the government can come up with? Good grief.
- For Greg - People in Springbank do NOT object to flood mitigation, they say its better placed where more people will be protected
- "McLean Creek best option! Protects more & would make a great recreation area. Allen Bill Pond was wiped out in 2013.
- Drive out Hwy 66!!!!"
- The Mclean Creek Dry dam is best for the Elbow (diversion to Spgbk not feasible) and enhancement of Ghost and BearsPaw dams for the Bow.
- What happened to the tunnel from the reservoir to the Bow?
- "
-
- I believe that we are overdue already in not having a project such as this already underway.. The city was devastated by the last flood .



- "
- What about fixing the bridges over the Elbow? These are huge flow barriers,
- This is the only plan the city is entertaining which will protect the city when the next flood comes. And it will come. it must go ahead
- Maclean Creek is the way to go. Protection to Bragg Creek, Redwood Meadows and Elbow residents. Even NDP knew this to be true pre election.
- Trying to control the river is always a bad idea! Look for solutions that are environmentally sound and protect a larger portion of Calgary.
- Hey Calgary be a good neighbour! Let's find solutions that protect more people, cost less money and doesn't destroy a community !
- It's not cheaper, it's not faster and it doesn't protect enough people! It's not fair to spend that amount on two communities!
- The cost has been understated and the benefits are not as good as the Kananaskis project. Don't Dam Springbank
- It is very unfortunate that some made this into an US vs THEM debate. McLean Creek helps everyone harms no one and would be underway by now.
- All the people this protects are millionaires - Frankly i don't want to spend my families money to invest in their properties.
- This seems like a long term solution for something that will likely not happen. The cost is very high to protect a very limited number of
- SR1 does NOT meet the "needs of the many." It only promises to protect a couple of Calgary communities. The Bow is the threat to DT YYC.
- "Springbank dam does little to protect downtown. It is most vulnerable to a Bow River flood.
- "
- "Maclean creek is the only viable solution for flood mitigation
- "
- I live in Riverbend in Calgary. Damming springbank is a terrible idea. Why are the lives of Calgarians more important than rural people?
- Nothing is possible that will protect Calgary from all flood scenarios. Be self insured, or move to high ground. Not a new idea. Waste of \$\$
- no new reservoir construction, no loss of fish or wildlife habitat. Lower costs, faster construction. The only drawback is the rich NIMBY's
- Myth 4 - Springbank will be the cheapest option - wait until the new cost estimates come out, McLean Creek will look really cheap
- Myth 3 - Springbank opponents are against flood mitigation - we have consistently advocated for McLean Creek to protect the most Albertans
- Myth 2 - McLean Creek cannot ever be built - check the studies, it doesn't say that anywhere
- Myth 1 - Springbank Dam protects all of downtown. Check the studies - the Bow is the downtown threat.



- NO to SR1. All Albertans should know that this project is being forced on them WITHOUT transparency, and no good science to back it up.
- YES to SR1. Unless we are willing to relocate Downtown and Calgary's older neighborhoods, this is by far the best approach.
- I support the Springbank mitigation project to ensure protection for the communities and lives impacted by the 2013 flood.
- This shouldn't be a beauty contest about who can click the most. Science and economics show SR-1 is the best option, let's not be silly.
- NO to SR1. Other options were never fully investigated. All Albertans should be concerned about how their money is being spent.
- Option 1 needs to be McLean Creek...protects the most people and property, and stops everyone's [explicit]!
- Upstream dam in McLean Creek protects Calgary AND protect Bragg Creek, Redwood Meadows, Tsuu T'ina & Springbank. Protect the most people!
- This is a short sited proposal that only has City of Calgary interests in mind, what about residents in Bragg and Redwood?
- An integral part of a long-term solution for the City of Calgary as a whole. Important to protect downtown Core & sustainability of city.
- Building at McLean Creek is the only option worth pursuing. From minimal cost to protecting the most communities.
- The Bow has been proven to be the risk to downtown. Google it. Springbank is on the wrong river.
- Fantastic. This returns multiples of the hard costs and many more times the soft costs (individual's losses, pain and economic disruptions)
- The flood had a massive impact on many home owners and businesses. Concept 1 is the most immediate approach to help protect the city
- A good long term solution that will clearly benefit the City - it eliminates risk and will increase property values in the flood plain.
- Build at McLean Creek and protect Calgary-Springbank-Red Wood Meadows and Bragg Creek. All experienced devastating flooding and damage.
- The Springbank Reservoir is indisputably the best solution for the Elbow River, which contributed an estimated 70% of the 2013 flood damage.
- Most of the Springbank landowners are multimillionaires. The value of their land is in future development, not ranching. Greed is petty.
- The Springbank reservoir project will save money, and more importantly, lives. The potential of liability is too high to play games.
- Stop building dams. They don't stop floods. They upset the natural flow and ecology of the river.
- the city needs to look after its downtown core as well as the neighboring communities. with out the downtown we don't have a city.
- The Springbank project has been objectively proven to be the best project to protect neighbourhoods and downtown Calgary. I support it.



- It is imperative that we go ahead with the Springbank reservoir. We need to protect the city from the inevitable climate change damages.
- Still dealing with health issues & financial losses! There will be MORE DISASTROUS WEATHER EVENTS so why are we dithering? Get on with SR1!!
- Concept 1, after thorough study, has been shown to be the best alternative to protect Elbow properties and the Downtown Business Area.
- Please get this project as presented going. We do not want to go through this again.
- Springbok does not protect enough people. It is not the best idea nor will it be fast. There are better options for all.
- This concept seems to be the most expedient to keep our family and homes safe from another devastating flood . Let's move on this ASAP.
- I absolutely disagree with the spring bank reservoir. There are better options than this. Why can't the option of McLean creek be consider
- Spring Bank reservoir is the best idea by a long shot. It needs to be done ASAP. Every delay puts the entire city at risk.
- SR1 needs to get done as soon as possible. We are putting our city at risk every year until it is done.
- Hurry up and get it done already - it's been over 3 years since 2013 flood and NOTHING has happened to protect downstream communities & city
- Upstream mitigation is essential to protect the city and downstream communities. Potential env impacts pale in comparison to other impacts
- We need upstream mitigation, the costs of doing nothing are too high
- "The Springbank upstream reservoir must be completed as soon as possible. Failing to do so puts the whole city in jeopardy.
- "
- The Springbank upstream reservoir is a vital first step in protecting the city. Please get on with it.
- A multi-faceted approach is needed, including the construction of SR1. Let's also do some local protection (barriers) in the interim.
- Calgary needs this
- SR1 must proceed immediately. Thousands of homes will be protected from next flood while some farmland will be flooded temporarily.
- This is not a referendum on who wants what. The province has the responsibility & obligation to get this done to protect assets and lives!
- It's time to stop the decision paralysis and pursue projects for the greater good. Important decisions are seldom universally agreed upon.
- The human and financial costs of another flood are not acceptable, for people and businesses across the socioeconomic spectrum.
- Springbank upstream reservoir is a concept that must see reality as soon as possible. Cost effective, fast to implement and low env. impact
- We must support objective analysis. Here, the recommendation was Springbank. Doing nothing is not an option. The risks are apparent to all.



- Objections to this project from a few Springbank residents are solely based upon self interest with no regard for the greater good.
- It has been made clear from assessments that this upstream project is in the best interest of the Calgary as a whole - businesses & homes.
- Protecting downtown is common sense, as is protecting the homes of thousands who live near our rivers! When is something going to be done?
- The Province and City delays are playing Russian Roulette with the city of Calgary, its homeowners, and the prosperity of Calgary businesses
- If the Springbank residents want to veto this idea, let them put up their homes as collateral to compensate for future floods in Calgary
- How can the City or Province continue to show more concern for a few in Springbank, than the well-being of thousands of Calgarians???
- When compared to all other proposed solutions, this makes the most sense. Don't let 20 homeowners rule against the best solution
- The risk of flooding the downtown core again is unacceptable to all citizens. We must proceed with the Springbank off-stream reservoir.
- The question is not "whether" we will see another flood, but "when". Proceed with Springbank off-stream reservoir.
- I strongly support the building of the Springbank dry dam.
- gov.ab figures - \$750M damage caused by Elbow River for 1 in 100 year flood. Over half is residential. Downtown core is a Bow River issue.
- As a long time inner city resident - please proceed with the Springbank off-stream reservoir ASAP.
- Think long-term folks. Build the Springbank Reservoir to protect all future generations living in Calgary. What a legacy to leave.
- The Springbank Reservoir is an essential economic protection system for the City of Calgary. The cost/benefit for just this is worth it!!!
- Upstream reservoirs are critical to providing long term, cost effective and environmentally sound flood protection for the Calgary area.
- I think it is crucial for the city to build the Springbank reservoir to protect the economic core and improve moral of the city
- Please get on with flood mitigation ASAP. Doing nothing is not acceptable. 20 landowners should not override 100,000 affected citizens.
- Stop the political B.S. Build the dam
- I believe we need the springbank project is a must do option. We need some serious mitigation now not after the next flood.
- Springbank is the obvious choice for the Elbow mitigation.. It has the least footprint, and is the cheapest and fastest option. Get moving!
- People need to stop obsessing about 'rich' people's property and focus on protecting our city. We must get this project completed.
- The Springbank project is needed. It is a economically reasonable solution to a predictable problem.



- Sprinkbank has been deemed to be the most efficient and environmentally wise choice. Please move forward with this project quickly!!
- We can't allow a couple of wealthy land owners in Springbank to delay the building of the much needed Springbank dry dam.
- Enough talking, build Springbank dry dam.
- Flood mitigation is essential to maintain vibrant inner city communities of Calgary. Springbank is the best option, let's get on with it!
- The potential cost of doing nothing runs in the billions. I firmly believe that the Springbank reservoir is necessary for the greater good.
- SR1 provides the best chance to protect Calgary as the nearest upstream, feasible solution. More will be impacted by a lack of action.
- Upstream mitigation is critical for the city of calgary . The downtown core is at risk, city hall, stampede grounds, the zoo , and more.
- This is essential to the future well being of the City of Calgary. Please get on with it!
- "What if climate change makes the flooding even worse and we have to build both projects?"
- Let's get 'at least' Springbank done!"
- We can not listen to inferior source about the "best flood mitigation" the experts have been commissioned, studied & reported. Start SR1 now
- Flood mitigation is essential for Calgary and surrounding communities and will become more so in future years. Listen to the experts. Build.
- We've hired experts and exhaustively studied the flood mitigation. The experts suggest Springbank Dam. What are we waiting for?
- The province of Alberta has funding set aside for infrastructure building and the springbank dam is clearly the best solution. Lets get going
- Essential for the future of Calgary. Another flood would be devastating for downtown businesses and we would see companies leave Calgary
- "Benefit analysis - is \$2.6 billion EVERY TIME there is a flood.
- This inaction is insane, more than 3 years later and we're still debating?"
- We must protect our communities and our downtown economy and have to build the Springbank reservoir. We are exposed and must act faster.
- Urgent action required to protect Calgary. Please proceed with Springbank as soon as possible,
- It is the best option available and will offer protection to Calgary - and downstream communities - from another flood.
- Calgary must be protected from a flood shutting it down - flood is too costly (\$ & emotionally). We need protection (like other cities)!
- For example: original c/b analysis....2 million to raise highway 22. Now they say 19 million! UPDATE the Cost benefit analysis!
- The province needs to release an updated cost benefit analysis on SR 1. It is NOT cheap. Close to 1 billion \$\$!



- "Generating electricity on a reservoir used once in many years is ridiculous!
- Mitigating drought not feasible for the same reason.
- Build now!"
- SR-1 protects not just the Elbow valley, but the downtown of Calgary as well. It is the nearest shovel ready project. Do it now!
- Calgary cannot be a serious competitive world class city without basic infrastructure, including fundamental flood control. Alberta's loss
- "Springbank DAM is 18km. from Calgary, if it fails (a true possibility), Calgary would sink in water in minutes and there is no backup plan?"
- "SR1 can NOT generate electricity?"
- Not the best for the money.
- "
- "SR1 can NOT mitigate drought?"
- Not the best for the money."
- Deltares and IBI, hired consultants warned SR1 is not the best option and could cause full damages; unfortunately many don't know this fact.
- I support the mitigation measures for Bowness. You had to have lived in that community in 2013 to understand the trauma the flood caused.
- I strongly support SR1 ASAP. Both cost and c/b ratio are reasonable. SR1 land exposure is minimal, especially with new Glenmore Dam gates.
- Calgary has a long history of serious flooding. It seems with each flood, damage costs are higher and higher. Let's at least do Springbank
- We have wasted 3 valuable years of dithering about the need to protect Calgary from another devastating flood .The solutions are know.
- Building Springbank seems a logical thing with cost/benefit 1.4 to protect WHOLE downtown area
- Springbank is not the answer. Come on peeps, there are alternatives everyone can get behind. Work on a solution for all.
- This project not an us vs. them debate. Studies are clear. Springbank dry dam will protect ALL citizens of Calgary. Let's get started!
- With climate change we may be facing drought. A dry dam makes absolutely no sense at all. A dam at McLean addresses both flood and drought!
- Calgary River Group calls Springbank the opposition. Springbank calls for a dam at McLean Creek to protect Calgary. Hmmm?
- "Experts recommend bldg the reservoirs. I say let's get on with it. Not to do so would be irresponsible.
- "
- Flood/Drought, we need reservoirs. Build the dams and insure they are controlled by someone in charge with no conflicting priority.



- Premier declares SR the best. Bureaucracy and consultants reports support Premier. Deltares does book report on consultant report. Science?
- International experts in this field have already said this is the best option. Time to take action.
- The environmental and economic impacts of NOT proceeding with this project are clear. Build the reservoirs now!
- I have attended the information sessions. The Springbank project definitely seems to be a worthy project
- The needs of the many outweigh the concerns of the few. The Springbank Project should be started immediately
- The Springbank mitigation project provides significant benefits at a modest cost. It's long over due to be started.
- Build the dam without anymore delay. We need to protect our city!
- We are wasting valuable time. Build the Springbank Project!!!!
- So much has been spent on rebuilding and strengthening the river banks, stampede park tee. It will all be destroyed with another flood.
- We need to bring people back to the empty lots and build. No more ghost town streets! Can't happen when people are scared of flooding.
- This concept will protect our inner city neighbourhoods and most importantly downtown Calgary! It will bring buyers back to my neighbour
- please proceed with Springbank dry reservoir ASAP! Calgary can't handle another flood economically or mentally.
- SR1 does not pass the "designed for worst case scenario" test. Deltares warned it could be overcome in flood circumstances similar to 2013.
- GOA hired Amec & IBI to submit proposals on SR1 & MC1 & Deltares to choose between them. TRJR was result of researching all possible sites.
- Water needs to be managed in times of flood and drought. McLean Creek dam would do both.
- Gov.ab tells calgary River group berms likely to fail. Gov.ab tells Bragg Creek berms will keep you safe. McLean Creek keeps both safe.
- This is critical infrastructure for this City as a whole. It must be done without delay. The sooner the better.
- Time has come to stop the procrastination and start protecting the city. The downtown core can't handle another flood. Another year????
- The sooner the better. Build the Springbank dry dam.
- Our entire family supports the construction of the Springbank dam.
- I've been to all the open houses on flood mitigation and SR1 made by far the most sense. Stop wasting time and start flood proofing YYC
- Elbow River uncontrollable by time it reaches Bragg Creek. Consultant Deltares warned SR1 could be overcome in some flood circumstances.
- Opportunity with TRJR for flood management, water conservation, hydro power, recreation & income generation. Leave legacy future generations



- Water Experts advise Alberta needs a `Water Bank` & Tri-River Reservoir would provide this for flood prevention water conservation.
- Start ASAP an EIA & CEIA on Tri-River Joint Reservoir site. Protection for all communities could be provided quickest with this project.
- Manage rivers in the mountain valley before they become uncontrollable. See Tri-River Reservoir project www.preventingalbertafloods.ca
- Option #1 is to complete the Springbank Off-Stream Reservoir.
- Calgary is a dynamic city that was severely damaged in 2013. The downtown and affected surrounding neighbourhoods cannot afford a repeat.
- "This has been studied to death already. It is time to move forward with this project.
- Another major flood is just around the corner Calgary"
- Strength - instead of going on popular vote; do what is right for the city. Protect downtown and others. Weigh landfill impact after flood.
- Two very different provincial governments came to the same conclusion. It must make sense. Let's proceed with SR1 and move on from the flood
- Tri-River Joint Reservoir would provide flood prevention soonest once diversion channels built. See www.preventingalbertafloods.ca
- Concept 1 will help prevent or at least minimize the catastrophic effect of a 2013 flood - the faster Springbank can happen the better
- reservoirs have the best economics and most certainty of protection. Let's protect the City Of Calgary to the benefit of all Albertans
- "Springbank Reservoir. Yes! The best option by far. Why are we still debating this?"
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- "
- I support the Springbank Reservoir 100%. Enough already! Let's do this!
- Calgaryans demand immediate action on building the Springbank dry dam.
- Build the Springbank dry dam.
- Concept 1 will prevent the catastrophic environmental, property and economic damage of the flood of 2013. Why spend money on half measures?
- I think all of the above confirm that Springbank MUST be built.
- Environmental impact studies are not a drawback to any project. McLean Creek has extreme environmental impacts. SR1 less so.
- As a river community homeowner, I wholly support the Springbank Reservoir as viable and necessary for downstream flood mitigation
- The Springbank dam project should proceed. There is no viable alternative! Why this is taking so long to approve is beyond me.
- This is the most effective solution that will safeguard the most people, although it may not be large enough to cope with a larger flood



- I strongly support the building of the Springbank dry dam ASAP.
- I support the Springbank Reservoir project. Get on and build it!
- Our city cannot afford another flood like 2013. Springbank reservoir has been shown as the best alternative and should be built.
- This design will cause some concern amongst the people directly affected but thousands of peoples live were literally destroyed in the flood
- How much longer are we going to place the economic hub of Western Canada, the City of Calgary, at risk while we delay the inevitable?
- We need to get moving on the Springbank reservoir ASAP to protect our communities. Too much time has passed already. It's the best option!
- I support the Springbank Reservoir project. This project has been recommended at by experts from Holland.
- Calgary and Alberta cannot afford another flood. The Springbank reservoir should be built without delay.
- SR1 destroys fish & wildlife, water quality & land & as size of future floods unknown no guarantee safety. www.preventingalbertafloods.ca
- I believe this option provides for the best protection with the least environmental impact and the shortest time frame.
- I strongly support springbank project!
- "Upstream Springbank is the best option for our city and citizens devastated affected!
- "
- Build springbok reservoir ASAP. Both my OFFIC and my home were flooded last time!!! Two separate buildings
- The Bassano dam was severely threatened in 2013. What would happen if SR1 failed so close to Calgary? See www.preventingalbertafloods.ca
- I strongly support building the Springbank reservoir to protect the City of Calgary.
- This project is needed and makes sense to protect a large number of home and the downtown core. Let's get on with it.
- Springbank dam is 18km. from Calgary, if it fails (a true possibility), Calgary would be drown in minutes. There is no backup plan, bad idea
- See www.preventingalbertafloods.ca for info re The Tri-River Joint Reservoir of Alberta for quickest flood protection to most communities.
- I support the springbank reservoir project. There are tradeoffs 4 public good. Environmental impact of the "do nothing" option far worse.
- The Springbank Reservoir has been shown time and time again to be the the most effective tool for preventing another 2013 incident. Do it.
- Springbank dam is 18km. from Calgary, if it fails (a true possibility), Calgary would be drown in matter of minutes. There is no backup plan
- The entire downtown core was affected by the 2013 flood. We can't let this happen again! We need action immediately.



- Postponing the decision to proceed with the Springbank project places Calgary at continued risk, in a particularly tedious time for our city
- The negative environmental impact will be significant if we don't proceed with Springbank. The river areas still haven't recovered from 2013
- It is imperative, particularly given the current fragility of the Calgary economy, that our inner city communities & families are protected.
- Fully support the Springbank project. All families downstream should never have to endure the hardship of another flood like 2013.
- The proposed "TRJR" solution is a better solution than the Springbank dam "SR1" or McLean C, read more at: <http://preventingalbertafloods.ca>
- Numerous studies conclude Springbank reservoir is the most cost effective mitigation measure. Let's not waste any more time and build it now
- There is a better solution than SR1 or McLean C., it is called the "TRJR. read more at: <http://preventingalbertafloods.ca>
- Springbank option is the obviously preferable option that absolutely needs to be implemented immediately without any further delay.
- Calgary is a dynamic city that was severely damaged in 2013. The downtown and affected surrounding neighbourhoods cannot afford a repeat.
- I believe it is essential that an upstream reservoir at Springbank be created! A flood like 2013 cannot be allowed to happen again!
- fully support the dry dam- critical to protect 1000's of calgary homes, downtown core and environment from flood damage-pls get on with it!
- The water supply for Calgary is predominately the Glenmore Dam. It needs the protection of the Springbank Reservoir.
- "Calgary will be protected with the Spring Reservoir. Not "luxury" homeowners, but all river valley inhabitants!
- "
- The primary strength of this concept is the protection afforded to the City and the revitalization of the neighbourhoods in the flood zone.
- Upstream mitigation is mandatory for the safety of the people of Calgary and to protect peoples homes and the economic core of the city
- SR1 must happen. Calgary's entire downtown is at risk. The economy is already too fragile and we cannot survive another flood.
- I support this
- The choice: Siding w a few stubborn land owners vs. Protecting the economic engine of Alberta. Support Springbank, it just makes sense.
- Do not let bad NIMBY neighbors influence what is in the best interest of a hundred thousand Calgaryians and our infrastructure. Build SR1!
- SR1 is the closest project to Calgary, so will protect Calgary from Elbow flooding from the widest variety of storms

- SR1 affects the health of the rivers and floodplain the least as it is an off-stream project.
- I understand that tied in with SR1, are berms at Redwood Meadows and Bragg Creek. With these 3, all communities are equally protected
- Upstream infrastructure is how sophisticated, modern cities protect against disaster. Build Springbank and find solutions for the Bow. Now
- Springbank is an amazing opportunity for this City - let's get this done. A C+ rating for flood readiness for Calgary is embarrassing.
- Flood mitigation infrastructure is very common in Europe and Asia - because all major cities are built around waterways. Build SR1!
- SR 1 will end up costing a billion dollars or more. Update the cost benefit analysis. As a taxpayer I demand it!
- The Springbank project has been objectively proven to be the best project to protect neighbourhoods and downtown Calgary. I support it
- Flood defense construction is planned for Bragg Creek. Mclean Creek is unfeasible. SR1 best option to protect YYC. We must protect downtown!
- I support SR1-is less costly, will have less environmental impact, shorter timelines & capture more runoff. YYC needs protection. Lets do it
- Downtown Calgary & surrounding neighborhoods need flood protection. SR1 is proven to be the best project. I support it. Let's get it done!
- It has been shown that Springbank will cost more than we have been told - so why support SBD when McLean Creek will "save Calgary" & MORE
- "Save Calgary" building at Mclean Creek WILL save Calgary as well as many others without taking away land from people and agricultural land
- Wealthy landowners? Gosh that could include the houses along the Elbow in Calgary, couldn't it?
- All this talk about saving downtown Calgary - only Bow River changes can do that. SO DO IT.
- Building a solution on provincial land at mclean creek can restore the recreation in the area, protect Bragg creek, redwood and springbank
- Everyone wants protection for their businesses and homes. This concept destroys some for the sake of others. Unfair, UnAlbertan, unjust.
- I strongly support SR1. Calgary cannot withstand another flood like 2013, would be devastating for our fragile economy. Please proceed!!
- Downtown Calgary & surrounding neighborhoods need flood protection. SR1 is proven to be the best project. I support it.
- Put the reservoir upstream of Bragg Creek in Mclean Creek which protects ALL communities and it creates a recreation area. Use common sense
- Remember that 5 lives were lost in the 2013 flood. More than property damage is at stake. Calgary cannot afford another flood.
- An earthen dike is proposed to protect Bragg Creek. Springbank will have less environmental impact and is less costly than McLean Creek.



- Many opposed Duff's Ditch near Winnipeg. It has since prevented over \$100 billion in flood damages. No more delay over a vocal minority.
- Two governments and many studies have found Springbank to be the best alternative to protect Calgary. I support it. Let's get it done!
- Damming Spring bank will ruin pristine land, and destroy homes.
- Springbank is rich in wildlife. It would be turned into an ugly moonscape devoid of life. We should work WITH nature, not against it!
- I am a Calgarian and oppose the Springbank dam. Expropriation of private homes/land is wrong when McLean Creek option is on gov't land.
- No one posting here will live to see another major flood. '13 was one-in-a-million combo of events. Don't destroy Springbank because of it.
- "SCIENCE? LOL!!"
- A baseless, un-researched Prentice attempt to get Dirks elected in Calgary Elbow - only science in SR1 is political science!"
- Stand w science and oppose fear. Support Springbank!!
- Seems as though the provincial govt and Calgary city council want the most expensive solution.
- Wonder how well the City of Calgary will cope with the putrefaction of water after it has been festering in a shallow dam in Springbank.
- Springbank Reservoir would be a shameful misuse of a beautiful area of Alberta. Our children will question our sanity.
- A dry dam at Springbank will take away heritage farm land, be an eyesore and displace wildlife and people. McLean creek all the way!
- I don't see any strengths in this concept. The environmental impact and cost to taxpayers are ridiculously high and unnecessary.
- I don't see any strengths in this proposal. There is no mitigation relief for Bragg Creek, McLean Creek, or Redwood Meadows.
- Pushing a door from both sides will never open it. If we all get on one side and give it a good shove we could get on with a dam at McLean!
- As a citizen of the city of Calgary, I strongly oppose the building of this Dam. It will be more expensive and protect less people!
- "Lets think of everyone in making this huge decision.
- It's not just about Calgary !!!
- Mclean creek is the logical solution"
- Springbank makes sense. Don't let a handful of wealthy landowners tell you otherwise. Most studies support it's construction. Save Calgary!
- Win-win solution: Dredge and deepen Glenmore as it has gotten so full of debris and lost capacity. Don't Dam Springbank!
- Springbank Dam protecting downtown is classic misdirection. The downtown core is threatened by the Bow, not the Elbow.



- YYC downtown core needs protection with over 1 million people relying on it as an economic engine. This is not just a homeowner issue.
- Try managing the 3 dams we already have better. You can lower Ghost every spring and let it fill up..same with Bearspaw and Glenmore.
- Storing water on open field a few days every couple decades rather than have it clean out the heart of Calgary kinda makes common sense. SR1
- Many opponents to SR1 don't care if any mitigation is ever built if that project dies. They will be well compensated and have continued use
- For a cost less than the Airport Tunnel, this city can be protected. SR1 is achievable and is the only realistic option.
- Far and away Spring Bank is the right choice. If it dies, so does mitigation on the Elbow and Calgary can no longer be exposed to that risk
- It has been 40 months since the flood. We need to put a plan in place now and the SR1 is the best option.
- I strongly support the Springbank dam. We need to protect the downtown! A catastrophic flood in downtown would paralyze Calgary forever.
- Flood defense construction is planned for Bragg Creek. Mclean Creek is unfeasible. SR1 best option to protect YYC. We must protect downtown!
- NDP gov campaigned on stopping the Springbank dam because it does not protect communities such as Bragg Creek. McLean Creek would. Land grab
- Stealing land which has belonged to families for generations in order to protect a few rich people whose homes are on a flood plain- wrong!
- I support SR1-is less costly, will have less environmental impact, shorter timelines & capture more runoff. YYC needs protection. Lets do it
- Downtown Calgary & surrounding neighborhoods need flood protection. SR1 is proven to be the best project. I support it. Let's get it done!
- It is not just about Calgary! The Springbank Dam has negative effects on Bragg Creek, Redwood Meadows and Springbank!! Don't Dam Springbank!
- I support the idea of a dam, it just needs to be upstream of Bragg Creek for more bang for the BILLION dollars. No more secret on cost.
- There is considerable erosion from a flood on the Elbow. An upstream dam would help manage this major problem.
- The cost of a Springbank Reservoir alone is over \$1 Billion dollars. Let's spend this money wisely upstream of Bragg Creek.
- Bragg Creek & Redwood Meadows also need to be protected. Build a reservoir further upstream.
- The Springbank dry dam would not provide drought protection as the water will be released back into the Elbow on a graduated basis in 30days
- My family does NOT support the Springbank Dam. I stand with the overwhelming % of Alberta taxpayers who should not bear this burden.



- My family supports the Springbank dam. I stand with the overwhelming % of flood engineers and flood mitigation experts that also support it.
- "I strongly support the Springback diversion project, mainly for protection of the of the communities along the Elbow River and city core
- "
- Springbank would only accomodate a flood the size of 2013. Anything larger would breach the dam. I'm glad I don't live downstream!
- The taking of private land, homes and businesses when there is a viable alternative on public land is POOR PUBLIC POLICY
- People opposed to the Springbank Dam still want to protect Calgary - we also want to protect surrounding communities & not take away land
- "1. Protects Calgary's commercial center.
- 2. Avoids downstream environmental disaster of what a flood picks up in a city"
- The Springbank reservoir is basically a land grab by Calgary developers over the rural communities.
- Springbank is NOT the best option for flood mitigation, it destroys valuable farmland that will be needed in the future. Clear flood zones.
- what exactly does "objectively proven" mean?? Mclean Creek makes more sense as it would also protect Bragg Creek and Redwood Meadows
- Mclean creek is the logical solution
- Did it ever occur to some that perhaps the SBD project isn't about protection? Could be about future development around a lake in the area!
- Expropriating homes and land from families that have been there for generations is a crime! Some self serving people don't care.
- The area in question is a huge wildlife corridor! Too bad you don't care about them either. I do and I don't live in the area.
- It's a shame that you people that support the dam don't give a dam about the rest of the folks affected. Says a lot about your character.
- SBD will be a health hazard to all down stream. It's in the documents. Check it out! Your water and air will be polluted if a flood.
- McLean Creek can provide a future water source for Calgary and equally protect all communities. It won't steal land and homes from families.
- "The Springbank project has been objectively proven to be the best project to protect neighbourhoods and downtown Calgary. I support it.
- "
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Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard

December 2016

- "
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- The Springbank project has been objectively proven to be the best project to protect neighbourhoods and downtown Calgary. I support it.
- McLean dam seems to be a much better option - I do not believe it has been adequately explored by the province.
- I support the Springbank reservoir project. It has been shown to be a good solution to help prevent future flooding in Calgary.
- Dam McLean Creek and build on the recreational area it already is. A solution to flood mitigation and one that all could enjoy.
- The Springbank project has been objectively proven to be the best project to protect neighbourhoods and downtown Calgary. I support it.
- I support this project. This project has been proven to be the best solution.
- By the way, your "box" for comments is a joke - doesn't allow for well thought-out comments as you limit the amount of words.
- Contrary to what people believe, the Springbank reservoir will not be the healthiest or least expensive option.
- There are better options than the Springbank reservoir ... spend the time and do the studies to protect Springbank citizens and wildlife.
- Upstream flood mitigation is essential to protect Calgary's economy and the city as a whole. This project appears to have the best balance.
- Please go through with the mitigation....my family and I are counting on it!!!
- "A recent article in the Cochrane Eagle (October 13, 2016, by Lindsay Seewalt. The Tri-River Joint Reservoir Project.
- Please read this.
- "
- Springbank costs have been grossly understated. Groundwater studies have not been completed & dewatering costs not included.
- If we had all supported McLean Creek two years ago, construction would have started by now. Instead we have community vs community.kind a sad



- the fish after a flood will be devastated they will end up in dry reservoir and die it will eliminate them from the elbow river
- it will impact migrating of the elk with the inflow channel crossing through their route as well as other animals /fish will be most impact
- it may not work unproven in mountain and forest regions which could block inflow and do catastrophic damage to the fish as well
- There is another option (McLean Creek) so Calgary can have protection beyond this option...
- please dam McLean Creek and save Calgary and Bragg Creek and Redwood Meadows it will great water for times of drought and possibly hydro
- "It will put a local community at risk (Bragg Creek, Redwood Meadows, Tsuu Tina)...not very neighbourly
-
- Restricts westward development"
- Why should those who built ABOVE floodplain lose everything to those who decided to build/live on a KNOWN FLOODPLAIN?
- Springbank is the wrong choice. A better choice is in the Mountains protecting 3 River Valleys & Bragg Creek, Tsuu Tina Nation, Redwood Meadows.
- Dear folks of YYC's elite areas: insure, move, or accept wet carpet every 100 years. UnAlbertan to expect others to pay for your lifestyle.
- Strongly support the project. It would be foolish of Calgary to knowingly ignore the environmental, human and economic risks of not acting.
- "The Springbank project has been objectively proven to be the best project to protect neighbourhoods and downtown Calgary. I support it.
- "
- McLean dam provides recreation opportunities, protection for communities upstream of Calgary and potentially helps long term water supply for
- Springbank dry dam is not a cost effective or ecologically sound option. It does nothing to benefit any of the points asked.
- Springbank won't protect downtown. That has been proven and reported on. Claims of this are false.
- Too few communities protected. Very little if any protection of downtown Calgary. Bad idea for Springbank. Bad for Elbow River ecology.
- where there are families who may be displaced expropriated because of this plan, then the authorities must find another way, democracy first
- I fully support the Springbank project. It's the best option to protect 1000s of homes and DT Calgary (the economic engine of AB).
- Downtown Calgary affected vs. a small # of compensated landowners. Best proven protection is Springbank - it's crucial for our economy
- The Springbank project has been objectively proven to be the best project to protect neighbourhoods and downtown Calgary. I support it.



- McLean Dam would protect more people. It's on crown lands--would be far less expensive and displace fewer people. I support McLean Dam!
- After use, SDD will leave an unsightly mud flat. The next year it will become a dust bowl affecting all downwind including West Calgary
- The Springbank project has been objectively proven to be the best project to protect neighbourhoods and downtown Calgary. I support it.
- The Springbank project is the best project to protect neighbourhoods and downtown Calgary. 1000's will benefit vs a few who will get cashed.
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- It is not Calgary, but how about Bragg Creek and Redwood Meadows? In case the project is not funded solely by the city...
- Springbank Dam only serves a few posh areas along the Elbow - Readeau/Roxboro and Elbow Park. NO ONE ELSE! It's POLITICS before PEOPLE again
- Impact on ALL communities indicates that McLean Creek is clearly the best. Environmental impacts could be mitigated and its on crown land.
- SR1 removes 8000 acres of local food production in order to help houses approved by City decisions? Wrong!
- SR1 will have no impact on downtown. That was the swollen groundwater from the underground Bow River that underlies all of downtown.
- Grizzly bears have been sited all summer on the 8000 acres ranch land to be destroyed. They are a protected species.
- Calgary thinks it is correct to use my provincial tax dollars to solve the problems they created?
- Springbank not the right answer. Too expensive, protects too few while downtown left exposed. McLean Dam would at least protect more people.
- I am very strongly supportive of the Springbank reservoir! Please help protect Calgary now!
- To prevent devastating damage to downtown, it is worthwhile to construct SR1 to protect Calgary's economic viability
- Dry residue from SR1 will contain pathogens. Prevailing winds will blow dust into Calgary. Read Stantec SR1 Project Report 5.3.5.
- I wholly support SR1 - it is by far the cheaper and most effective solution!



- SR1 will contaminate groundwater and wells in surrounding communities. Google Stantec SR1 Project Description 5.3.4. Remember Walkerton.
- SR1 will leave may shallow pools of stagnant water behind. Mosquitos will breed. Zika is in Canada. Is Calgary next.?
- I am concerned about the water quality that would be released into the Elbow from the Springbank reservoir. Keep the river in the river bed.
- McLean Creek is the option that should be pursued. I don't understand why we would so willingly cause damage to our neighbours to the west.
- "Terrible destruction of good land when land around the city will become increasingly scarce. Use Maclean Creek which already partially "
- An upstream solution is necessary but must include west of Bragg creek. Rural not responsible for poor development practices of the past
- While it is important to consider the effect that new reservoirs may have on river health, surely these can be built with minimal impact
- As a homeowner in Bowness, who was forced to evacuate in June 2013, I support the construction of a new reservoir for the Bow River upstream
- Dam project simply transfers costs and damage to Springbank. Can't we do better than to destroy one community to (try to) save another?
- Springbank is not fast, cheap or easy as it was promoted. Alternative options available, such as McLean Creek & TriRiver need consideration
- The GOA was offered a solution that would protect our river communities. See www.preventingalbertafloods.ca and demand action of your reps.
- MacLean Creek. Cheaper, protects more communities and provides recreation for Calgary.
- Taxpayer funds should be used to protect all communities to the highest levels as is possible with an expert water management project TRJR.
- Springbank is too costly. Will be over \$1/2 a billion after land is purchased at market price even during the downturn. Use Crown land.
- Calgary's economic core MUST be protected to the highest of levels. Springbank is not designed for "worst case scenario" (Deltares Report)
- Water is our most precious resource and Springbank does nothing for long-term supply and quality of water for Albertans.
- Springbank does not ensure the health of the river & floodplain as diverting it then returning it to the river would add many pollutants
- 32 communities were devastated in the 2013 flood so a comprehensive solution such as Tri-River Joint Reservoir of Alberta is needed.
- Destroy a beautiful area which citizens and tourists enjoy when travelling to the mountains. Hinder traffic flow. Destroy wildlife habitat
- "no strength. Weakness. Nature will be destroyed. Pepole will loose properties. Toxic waste will be spread over the area with every flood"



- Dry dam, yuck! Makes no economic or environmental sense, has to be a better solution than the Springbank project.
- "I am very supportive of the Springbank project and I would like to see it go ahead as soon as possible. Calgary cannot another disaster."
- Springbank does little to protect the downtown core. The Bow is bigger threat. Use existing dams more wisely.
- Rural communities should not have to pay the price - this is only a viable option if crown land is used.
- Calgary's inner city and downtown core remain totally vulnerable. The Springbank reservoir MUST proceed ASAP. Lowest cost/highest impact.
- Global warming necessitates protective action as businesses & residences cannot be re-located from Calgary's river valleys without huge cost
- Lowest environmental impact of all alternatives; necessary to protect both residential communities and downtown core. Move fwd ASAP.
- Vastly too expensive. And totally unfair to Springbank. Build a reservoir at McLean Creek instead.
- YES! This is our #1 choice for upstream flood mitigation. We live in East Elbow Park + were devastated with the last flood. We support 100%
- Great concept! The Springbank reservoir should be the #1 priority. Low enviro impact & big YYC protection. Push the province to build.
- I am in favour of the upstream reservoirs as I feel it will have the least impact overall while maintaining Calgary as a world class city.
- If best technical, environmental and economic analyses result in the SR-1 proposal, then let's stop the open houses and start building!
- The Springbank reservoir is essential to flood mitigation along the Elbow River. This will protect downtown as well as neighborhoods.
- Please, Please, Please..... Build the Springbank Reservoir now!!!! Enough talk. Do something.
- I wholeheartedly support the Sprinkbank reservoir. If development, and indeed life, are a balance this option provides the lowest impact.
- Our riverbanks need aesthetic protection from erosion but are only bandaid solutions to flooding. Springbank Dam needs to be built NOW!
- Springbank has been studied/analyzed for over 3 years-only feasible solution! ALL levels of govt need to show some leadership!
- Also agree with Cheryl. A 140 character limit is frustrating, and limits our capacity to provide meaningful fact based input.
- Agree with Maureen. Any reservoir, if considered, should be multi-use? Changes benefit/cost. Why is Springbank dry?
- Preferred option. Provides provisions for drought as well, and communities downstream from Calgary as well. Greater cost/benefit
- Moving forward with Springbank is the only sensible course of action to protect downtown Calgary from the next flood. Please act quickly.



- My home and business were substantially affected by the 2013 flood. I completely support the Springbank project and urge quick action.
- ected as we have built the downtown core on a flood plain and requires upstream mitigation sooner rather than later.
- please ensure you total up the # of citizens in favour of Springbank option and give that info to the prov and CEAA - and to the Herald.
- The 2013 flood was devastating to Calgary's economy and to its citizens. The negative effects of the Springbank reservoir pale in comparison
- "-good beginning keeping the Elbow at 2005 flood level.
- The culvert from the Glenmore to the Bow - essential. The downtown MUST be protected"
- "I think that the amount of time and energy being expended to resolve this matter is ridiculous. Build Springbank."
- I strongly support the building of the Springbank dry dam and the increase capacity of the Glenmore dam.
- As I live in the Elbow River flood zone, I believe upstream protection is a task mandatory for my elected government to execute asap. Nike.
- We need affordable flood insurance!! Upstream reservoirs will help, but equal in-city berms/barriers would also protect neighbourhoods
- A 140 character limit is very frustrating!!! If you REALLY want feedback, make it easier to do so!!
- The City should Install permanent or seasonal berms along the Elbow to protect the inner city neighbourhoods. The dam is taking too long!!!
- Our family has huge support for the Springbank Reservoir, as we believe this will provide excellent protection for downstream residents.
- It is critical that this viable flood mitigation project move forward with due dispatch. As time goes on, people begin to forget.
- The clamshell type Springbank reservoir looks good. Another flood of Elbow Park and Roxborough will destroy these historic areas. Do it now!
- It is VERY important to protect residential districts AND downtown Calgary by building Springbank Reservoir
- I want to `Register' my whole-hearted support for building the Springbank reservoir.
- I am strongly in favor of the Springbank Dry Dam project. It needs to be approved and constructed ASAP in order to protect Calgary.
- It seems as though downtown Calgary needs to be protected and the Spring bank reservoir is the best way to accomplish that.
- As an affected citizen, both as a home owner and as a businessman in Calgary, I support the Springbank dam
- "I am strongly in favour of proceeding with the Springbank Dry Dam project as soon as possible.
- We can not wait for the next flood.
- Please!"



- The Springbank Project must proceed-the concept has been extensively studied and found to be the best option. Let's get on with it.
- The upstream solutions are the only viable solutions. Yes, it will impact a few landowners but will protect downtown and thus our economy
- SR1 has been proven to protect our downtown and neighbourhoods. Please find ways to speed this project up to protect our City.
- @livesonahill, thank you for prioritizing 3 fields and a couple cows over hundreds of homes and thousands of people's lives.
- Springbank residents, please remember the dam will rarely be filled, and when it is filled, you will be saving thousands of people's homes.
- upstream projects are hugely expensive, environmentally controversial and shift the mitigation impact to people who will not get the benefit
- In favour of these proposals - additional and substantial ongoing benefits for southern Alberta in years of low moisture
- This is the best option. Effort should be made to explore the potential electrical generation opportunities associated with the Bow dam.
- IBI estimates total damages for the Bow River at \$1.07B, how can you estimate C-B ratio when location & size of the reservoir is unknown?
- This is a disgrace. No info about reservoir location & size. An AMEC study has already been done, release it to the public.
- One measure of the adequacy of community flood mitigation is that flood insurance is available and affordable.
- Flood mitigation infrastructure must protect against reasonably foreseeable future floods so that affordable flood insurance would be avail.
- Implement management improvements at TransAlta's reservoirs while enabling rapid lowering of Ghost to balance flood, drought and recreation
- At least one new dam upstream of Calgary should be built, but with the recognition that completion is likely decades in the future.
- Protection for mixed-income Sunnyside must match the protection provided to the downtown condos of the wealthy.
- Build TBL justified berms now while waiting decades for upstream mitigation.
- Need barriers in combination with dams - not enuf protection
- "some blanket protection and management of flows & drought
- -could not take forever to get approved funded and built=no protection for 20 yrs"

Concept #2: Barriers along the Elbow River and barriers along the Bow River:

- This option does not provide the protection our community requires as well as being visually unappealing



- Will be very ugly in Bragg Creek. Likely to fail due to a bottle-neck just before the bridge. Water will just go higher, or around. Dam MC
- "Maclean Creek dry dam protects more people, costs less, with lower environmental impact than SR1. Respect those outside Calgary. ""
- The "barriers" proposed solution is very costly and interferes with the existing enjoyment of the rivers by millions of people, regularly.
- It has been years since we realized we need mitigation. Time to implement these solutions.
- Not as effective as SR1 (concept 1) - concept 2 results in overall worse outcomes. After concept 1 is in place, this may be a good addition
- Barriers alone will take too long to implement and are far more costly than an upstream reservoir.
- Maybe at some point, but right now the best and most efficient solution is Springbank Reservoir.
- Mitigation upstream (Springbank) will be more effective at reducing residential damage in future events.
- Since 2013, Stampede has been reinforced to prevent spilling (barriers). The next flood will have less places to spill which = higher water
- A barrier was used at Mission and 4th in 2013 and caused build up of the river base level, creating increased flooding in certain areas.
- I oppose barriers on the river. Upstream reservoirs (both the Bow and Elbow), resolves major flooding problems, mitigating most 2013 damage.
- SR1 has too many issues; fish & wildlife, pipelines, power lines, loss of local employment, land sterilization, roads & questionable success
- No adequate protection, looks unnatural, might still require evacuation, if not down to bedrock would still flood homes/downtown, disruptive
- Existing berms are a benefit as they provide recreational / pathway space right along the river. More would be a good idea.
- Barriers can be undermined by subsurface water flow. It is unsightly and does not provide reliable protection.
- This is best concept. Protection along the Bow is the top priority.
- not feasible as a stand alone measure. better to build the tunnel and divert the elbow to the bow below YYC,
- Concept #2 only works if Concept #1 is implemented first. I know it is a hard decision but it must be made.
- The time to act is now. We have lost more than a year with debate.
- I have confidence this can be done with natural materials to reduce the visual impact. Use this as an opp to improve access and functionali
- Barriers would be a huge waste of money, and cannot be fully effective, due to groundwater flow.
- Barriers would be ineffective due to strong groundwater flow during periods of high water, something already experienced in past floods.
- Flood barriers come at an enormous cost, and lengthy delays due to legal challenges by landowners, resulting in lack of protection or others



- Flood barriers would have a massive, devastating environmental impact and (I hope) would never make it through federal environment review.
- Flood barriers and concrete channelization are not only unsightly but also dangerous, let's avoid the mistake Los Angeles made.
- Flood barriers would have a negative effect on wildlife and recreational use along rivers, and should not even be considered.
- Flood barriers are a bad idea, they would be unsightly and disrupt communities.
- Concept 2 sparingly where it offers specific advantages or can be combined with improvements to recreation facilities along the rivers.
- Get going with these barriers. Calgary is important! Residential communities are important!
- 140 character limit is not good enough for valuable, inclusive feedback. Rethink this bad idea.
- Bad idea ... Upstream reservoirs are the ONLY solution which makes sense.
- This solution does not stop water table rising which is a big issue and will cause flooding. Ground water is what flooded my home in 2005.
- Numerous Upstream measures make way more sense. Look at the Hunter Valley in Australia.
- How many who claim that the MC1 site is "too sensitive", tear it up every chance they get off-roading & snowmobiling? Just curious...
- We need other, better and more creative options. These are all too expensive and protect too few.
- There are better options than barriers, such as habitat restoration and bank reinforcement along the rivers. Need more 'wholistic' options.
- To all who claim that barriers/berms are ineffective, why do you demand SR1 be built & Bragg Creek be ineffectively bermed? Very confusing.
- The Elbow is too small a river to have barriers, It would become a canal and destroy the beauty of the river valley and the homes built along
- Every year more and more gravel and debris is deposited from high flow waters causing even higher waters the next year. DREDGE.
- Every high water event carries more debris into the river creating more displacement = higher waters. DREDGE the river as well as berm.
- I live in Douglasdale where the river bank was eroded back by 20 feet in some areas. I would like to see the current banks protected by rock
- While there are some benefits to this concept, they do not compare to the Springbank solution. Do Springbank first, then consider this
- Upstream solution is the better option.
- This option will help communities most at risk for low volume floods. Needs to be done in conjunction with other measures, such as reservoirs
- The dry dam in Springbank is a bad idea on so many levels too many to explain here. You don't allow for enough words to explain. Frustrating
- Not acceptable: isolates communities/effects future development/impacts a host of environmentally sensitive areas.



- Yes to Concept 2. Does not destroy farms or homes. Mitigates more. Everyone needs protection not just Elbow.
- This is the way to go. Springbank dam helps a very small area. This helps the majority.
- Concept 2 is right. It will protect many. Crown land. More economical option. Use tax dollars wisely and protect a huge part of Calgary.
- "Barriers along the river are futile - hydrostatic pressure will cause flooding from the ground up.
- Too expensive. Not efficient capital use."
- "We flooded in 2005 albeit not majority overland but by ground water. These barrier/walls would not of helped in 2005 and obviously not 2013"
- "Both upstream mitigation projects are the only sensible action plan & will protect everyone incl. downtown that cost us 2 billion to fix!!"
- Upstream reservoirs is best solution as provides greater benefits for more Calgarian.
- In my opinion the drawbacks outweigh the potential benefits. Much less attractive alternative to dry dams.
- Make the Bow River berms up to 2 meters higher, but also make them 50' or 60' wide at the top so they look like flat land, not berms.
- This is the most direct way to affect the rivers. This does not affect any homeowners. This is definitely the best option
- Raise the berms along the Bow River by Sunnyside at least 1.5 meters to protect us from larger floods than the 2013 1:70 year flood
- "Not realistic to think this is possible
- Will destroy the feel of many communities along both rivers
- Weak cost benefit ratio"
- Barriers have proven to be good flood mitigation. Need to protect the core of the city as much as possible. We cannot afford another 2013!
- The idea as proposed makes no sense. Don't do it.
- This appears to be very expensive, time consuming and not particularly effective.
- Costly, destructive to communities, impractical where the river banks are vastly different heights (10ft) - see East of bridge at Elbow Dr
- Concerned about the environmental aspect of barriers. Build Springbank Reservoir first.
- too costly and hard on communities to accept as people on river very affected compared to others. springbank dry much better solution
- "Strengths - good for engineering company, berms needed
- Weakness - Calgary wouldn't like berms
- Mclean Creek better dam than SR1 mudflats"
- We can't control or predict the weather, but we can take reasonable precautions to protect our city.
- Increasing the capacity of the Glenmore reservoir is very cost effective and makes a lot of sense.
- The Berms would be better than the environmental impact a dry dam would have. Haven't we screwed around enough with the environment?



- The negatives of this proposal far outweigh the pros. Build Springbank.
- Not a real fix and less benefit
- The Springbank reservoir with the opportunity to provide drought management and energy generation in addition, should prioritize barriers
- Great engineering solution but impractical from a socioeconomic POV. Just build the upstream reservoirs.
- If berms are 1/4" too short the water will overflow unabated and berms may as well not be there. Waste of money.
- Water rose +30' to crest the 4th street bridge, these barriers would narrow the flow channel requiring an even higher wall. Rubbish idea.
- forget this. build Springbank
- Unsightly, expensive and inefficient...
- "For God sake get on with it, I can't go though that again.
- I live in Rideau Rocksborgh "
- Might cause disruption to homes during constr. Would be unsightly. Better than doing nothing. Faster solution than reservoir upstream??
- We need both barriers and upstream reservoirs to provide the necessary protection from a flood like 2013.
- No TO SR1M THERE ARE OTHER AND BETTER OPTIONS.
- An absurd, costly, ineffectual and unsightly idea. You cannot berm both banks of the Elbow River from the dam to Fort Calgary!
- this option does not do enough to protect the downstream communities so the Springbank option is the only viable option
- Build the dam. Do whatever else is necessary to protect our city and move on.
- Upstream mitigation eliminates the need downstream, but I see the city is reinforcing the banks of the bow ??
- Barriers might help downtown. Won't do much for the Elbow River.
- Berms along the Elbow river would destroy the original characteristics of Calgary.No to berms,far to expensive.
- No to berms on the Elbow river.
- Protect downtown communities and the city core. I am in favour of enhanced berms along the Bow River.
- Ridiculous!!! Riding ground water defeats berms. Mississippi levees(berms) not stable and always undermined by currents.
- Well done I think this concept could enhance it all!
- Why there is no barriers near Discovery Ridge Community? And on Elbow river in general?
- Bad economics and will destroy the look and feel around the rivers. Seems environmentally damaging to the river system.

- This is the weakest option for any sort of protection. A possible back up after Springbank is completed.
- Berms make sense. The Elbow breached 2 blocks upstream from us on low bank, a berm would have saved a 20-30 homes.
- Ok if coupled with buying out careless folk who built or bought on a floodplain.
- We need to get moving with mitigation measures. Time is of the essence. The further we get from 2013, the urgency just is not there.
- The barriers are great, but only if the water is not running over the top of them! Building SR1 upstream mitigation is most important.
- This page is about BERMS. I do not think BERMS ONLY is a practical solution. Some berms in some locations will make sense. Technical Answer?
- This protects the communities in Calgary but what about farther upstream (not springbank). This is best of 3 but needs expansion of thought
- Sacrificing a ranching community is not the Alberta way. Barriers are a good alternative and in this economy a good, financial choice.
- Something is not right about the Springbank proposal. The costs would be WAY higher than the government is telling us. Go with Mclean.
- McLean Creek protects many. Springbank protects very few and is not viable.
- Concept 2 is the only sensible option.
- MacLean Creek is simply OUT for safety reasons.
- Re wall foundations, we had a 4 ft chain-link fence flattened (2013) even though the posts were set in concrete. Have pics.
- The foundations for 6m to 10m walls must be HEAVY DUTY to resist pressure while the soil footing is "lubricated" by the flood.
- McLean Creek option will protect more home , lives and businesses than the Springbank option. Elbow Park Residents please be reasonable.
- I urge you to move quickly with the Springbank Dam project. Upstream mitigation is a must.
- Upstream protection at McLean Creek would provide a better solution for all communities, including Bragg Creek, Redwood Meadows and Tsuu T'i
- Why are we willing to sacrifice such a rich network of an ecosystem to ineffectually "protect" those who have poorly planned their builds?
- Springbank residents only use groundwater for water supply. You want to contaminate that? We want protection for YYC but want McLean Creek
- What is the hidden agenda when people want 1 ineffective solution over 1 that protects everyone. McLean Creek is best option for everyone,
- Yes, Calgary needs some berms & barriers. Dam McLean Creek as well to protect ALL!
- They use this very system in Prague. They have floods every few years and they have steel barriers they erect in the spring.
- Calgary will be a dust bowl if SR1` is built. Don't sacrifice one community for another. MC1 is a positive flood mitigation solution.



- The dam is a terrible idea! Destroying ranch land and homes is dispicable. McCreek protects more communities and is cheaper."
- Springbank Dam is an expensive, experimental solution to an extremely rare occurrence. Use Maclean Creek, making it recreational for all!"
- Mclean creek is cheapest when combining all costs for Bragg Creek, Redwood meadows, First nations and Calgary protection vs Springbank plus
- While some barriers would be useful, Upstream measures are required. It would be very difficult to effectively burm & barrier the rivers.
- "Think about Dredging the river! dredging or barriers is costly but would be effective
- Mclean creek is cost effective for all!"
- The gov't says we are moving to greener energy options so, kill 2 birds with hydro elec dam at McLean, protect all, create new rec area too.
- Yes to barriers, why a dry dam for a hundred year flood? Why ruin viable ranching land and displace families / wildlife? Upstream is best!
- If berms can keep Bragg Creek safe, then they can keep Calgary safe. No to SR1.
- Barriers should be built, not dams that will ruin land belonging to First Nations and ranchers and ruin their homes and lives.
- Yes. This is the only viable choice.
- Yes, barriers, barriers, barriers. No dam dam.
- How can people complain about barriers being an eye sore and hurting their property value yet support SR1? Hypocrisy.
- Why sacrifice one community for another when it's unnecessary to do so. Do not punish the people of Springbank further.
- Upstream (Springbank Reservoir) mitigation is the best option.
- Manage the Bow at Ghost Dam, Seebe, etc. and build MR1 then none of these flood barriers through the city would be necessary. Build McLean.
- The problem is best solved upstream with Springbank Reservoir. Barriers failed at New Orleans and Carlisle UK in the face of extreme flood
- Springbank Reservoir asap!!
- Berms through key areas, if done right with softscaping, look fantastic. Use them as part of the whole holistic picture.
- "As an owner of a lot on the Bow River bank I absolutely reject the idea of barriers/burms interfering with the view and value of property!"
- Homeowners below the Glenmore Dam have already been offered buyouts by Province. Use those properties to berm river to protect the others.
- Berms for the Bow! Use what you have. Please don't squander our money on unnecessary dams.
- Use this one. Don't take prime ranch land.
- This is the best option. Springbank would be hugely expensive and protect very few. Its the Bow that needs the mitigation.



- Sounds too invasive for a rare flood. A dry dam which could be used for agricultural purposes during the hopefully many years is better.
- If berms are enough to protect Bragg Creek etc they are enough to protect Calgary river communities.
- If u live in the flood plain this is a better way to control damage
- Only McLean Creek could provide protection for the new southwest leg of the ring road.
- An alternative to berms: McLean Creek with the bonus of developing its recreational value or Tri-River Joint Reservoir of Alberta (TRJR)
- GoA are endorsing and funding berms for Bragg Creek. If it's good enough for their homes, businesses and tourism, then berm Calgary too.
- Springbank Dam is the best option.
- The pro-SR1 arguments come across to me as futile and impatient. Now tell me, why not Maclean Creek?
- A half measure. Get on with the Springbank Dry Dam Project
- Springbank dry dam is the best option.
- McLean Creek is clearly the winner here. Public land that protects the most people. How is this not a simple decision!
- A crazy idea, too expensive as the Elbow is far from a straight river, what good will barriers do to anyone downstream. Solve this problem!
- Mother Nature has already widened ALL the river and creek beds in the area compared to prior to 2013. You can not beat Mother Nature
- This is the best option. How can you even consider stealing private land at Springbank and ruining people's lives? That would be wicked.
- MacLean Creek is the answer. Springbank Dam terrible waste of money to protect very few. Spend money on health and education instead.
- This is the best option. Most advantage to most people.
- New Reservoirs only address Elbow. Bow River has 3 dams and they were not able to control it & that flooding backed up the Elbow. Berms
- McLean Creek Reservoir -Recreational site-Potential power generation-Protects Bragg Creek-Redwood Meadows & Calgary- Crown Land- No brainer
- Calgary needs to take steps within its own jurisdiction. I support this option. Do not transfer the risk to your upstream neighbours.
- Springbank provides little protection, stop expending resources to protect those who choose to live in a floodplain. McLean Creek is better
- Downtown should be protected to a higher level
- This is not the first time cities have needed to look at solutions for potential flooding. Look to the Netherlands/Europe for other options.
- I think this is the best option. Why have you not also included making the river deeper to accommodate more volumes of water too?



- To put up barriers and berms will stop the rivers from flowing naturally. The natural force of the water will continuously erode barriers.
- Upstream management is the better option.
- McLean Option is the only solution. Flood control on public property that protects Bragg Creek is the correct option not taking private land
- The rivers need to be managed in the mountains before they reach the towns/ cities. Stop logging in Kananaskis. Dam Mclean Creek.
- Why are people worried about esthetics of a berm in Calgary but it's okay to berm a town that relies heavily on tourism like Bragg Creek.
- The rivers need to be managed in the mountains before they become raging & uncontrollable. Tri-River Reservoir solution shows intelligence.
- Water is a precious resource & civilizations have always used best minds to protect & conserve. See www.preventingalbertafloods.ca,
- "Albertans deserve better than mickey-mouse Band-Aid solutions to solve our flood and drought threats. See www.preventingalbertafloods.ca
- "
- Manage rivers in the last Eastern Slopes valley in a reservoir then control flows to natural course. See www.preventingalbertafloods.ca.
- See the videos of the Bassano Dam when it was almost breached in 2013? Diversions channels & barriers are useless when rivers in full flood
- Barriers could not protect against the volume of water experienced in 2013... not a realistic 100 yr flood solution...build SR1!!!
- I'm not in favour of expropriation. McLean is the best alternative.
- Difficult to do on a small scale. Least effective. Springbank offstream necessary
- This looks like a good idea. Damning spring bank is not.
- First "Springbank." Then, assuming endless gov't funding! some or all of concept 2. But First: "Springbank."
- There's a cost to building beside a river. Those who decided to build there need to be accountable for that decision. Berms are the solution
- Upstream protection is a must. Springbank is the correct location
- More than just Calgary was affected in the floods, and all those communities need to be considered in the mitigation. Think bigger!
- Berms are not as effective as upstream storage and have more of an impact to river ecology. Berms redirect water and simply flood other area
- This is a complete waste of capital and will negatively impact the surrounding natural areas!
- Far too expensive given the purchase of private land and trouncing of land rights. Public land near McClean creek would make far more sense.
- "Concept 2 does nothing to protect upstream properties in Bragg Creek or provincially owned infrastructure in the



Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard

December 2016

- upper watershed."
- Direct protection of the threatened communities seems like a better plan than the environmental cost of off stream storage
- Berms wouldn't be logistically feasible. Many properties do not have access to their backyards for large machinery.
- MacLean Creek will never happen. Province owns it but public loves the area and would protest any changes in wilderness area for years.
- Berms could trap water in a community as happened in High River. Berms can fail. Upstream makes more sense.
- Berms require miles of changes, many homeowners, much uncertainty. Springbank is a surer option, makes more sense to look upstream.
- It is a case of the greater good. Most Springbank residents will not be directly affected and a flood will never reach them.
- Springbank makes the most sense. Unfortunately, 12 properties will be directly affected and they need to be fairly compensated.
- Unless each homeowner agreed to berms, they cannot be built. Expropriation? Long and costly. How many homeowners would be affected?
- If Maclean Creek is too sensitive to build a dam on why are off readers allowed to tear it up? It could be under construction and done.
- Berms with public access on top would require compensating homeowners who previously had private backyards. What are the costs?
- A dam at Maclean Creek could have been under construction already. Scrap Springbank and get to work. Springbank will take years.
- The Springbank dam only protects two communities, that's too much money, and not enough protection. Buy insurance, put in dykes and berms.
- Berms require each homeowner to agree to have part of his yard taken up by wide and high berms. Will never get mass agreement.
- Calgary's downtown core should be protected. Barriers at different water levels are difficult to model accurately and may cause more harm.
- I believe this would be very negative for all of the above questions/issues. This would not be an optimal solution vs alternatives.
- McClean creek is the only solution. Don't waste tax payers money on buying Farmers land that don't want to sell.
- Waste of money, while destroying fish habitat and environment. It makes me sad that some feel these ideas have merit. Build on dry land pls!
- Barriers along the Elbow would destruct neighbourhoods and give false sense of security. Our City needs the Springbank option and ASAP!
- Barriers along the rivers would negatively affect the riparian zone and be an environmental disaster. Springbank is a better solution.
- Waste of money and time, the solution is McLean Creek, where the watershed funnels from!



- Upstream dam in McLean Creek protects Calgary ! AND ! protect Bragg Creek, Redwood Meadows, Tsuu T'ina & Springbank
- McLean Creek is the best option, protects the most people.
- Need to get rid of trees and bushes that hindered the flow of the rivers in 2013 and caused much of the overflow flooding.
- Barriers are just that - they block access and likely reduce the property values and hence the tax base - also not effective for major event
- Do not waste any time with this option. This springbank option makes the most sense from every perspective.
- Springbank Dam is the best option. Barriers will not hold back the amount of water we are discussing and could cause more damage.
- I can't believe how much time has passed since the flood, and we are still talking about "strengths & weaknesses" of concepts.
- Both upstream mitigation projects are the only sensible action plan & will protect everyone incl. downtown that cost us 2 billion to fix!!
- We flooded in 2005 albeit not majority overland but by ground water. These barrier/walls would not of helped in 2005 and obviously not 2013
- This is a foolish idea, only part of elbow river downstream of glenmore dam is protected. Cost likely much higher(double).
- Barriers work in specific areas, but do little in a major flood . Springbank dam will make most barriers superflous . Do Springbank first!
- Might help small pockets of land, however the Springbank solution would provide best overall protection.
- The Springbank dam is the best option. Barriers would be problematic to build and would scar the river valleys. Go upstream. Fast!
- a single berm in SR1 will be much easier to maintain and therefore much safer than dozens of berms throughout the city
- Visual impact of barriers is a deterrent to climate change resiliency, as no one will want the barriers to be higher than is necessary today
- Springbank Dam by far the best option, both esthetically, economically, and impacts few but could prevent great loss to many!
- Barriers will need impossible commitment from every landowner. If one section fails, the entire project is rendered moot.
- The height of barriers necessary will severely impinge river access due to the width that will be needed to lower costs.
- "Barriers alone is a poor substitute for upstream mitigation.
- It merely pushes the flood impact further downstream."
- Barriers don't need to be ugly. Barriers & upstream action are needed to protect all homes & downtown on both rivers, asap!



- The Elbow River needs barriers as we need to protect our downtown infrastructure, surrounding communities and economy to a higher level.
- Upstream flood control for major population centers is what has been used world-wide for decades, execute upstream mitigation
- This idea of putting flood barriers through communities would be terrible. Worse than doing nothing.
- I can't see any strengths compared to Springbank dry dam. Weak: greater cost, less protection
- Please explain to me why berms are good enough for Bragg Creek and Redwood Meadows but not good enough for neighbourhoods in Calgary??
- This could be combined with the Springbank reservoir to help protect areas along the Bow that would still need protection.
- The cost benefit ratio speaks for itself. This is not the best use of our money.
- After attending the information sessions, it would seem barriers along with the Springbank project are appropriate measures.
- Option #1 is to complete the Springbank Off-Stream Reservoir.
- Springbank reservoir ASAP. Far superior.
- If barriers are not high enough - in high flood water trapped on wrong side of barriers - Springbank far superior
- Springbank Reservoir asap!
- Let's build Springbank and not dally with less effective options.
- This proposal will impact more people more adversely and restrict enjoyment of the river. The Springbank Reservoir is the best solution.
- If the Springbank dam doesn't proceed this is an option: albeit more expensive and labour intensive.
- Just build SR1. The rest is merely secondary and ineffective. We'll still be messing about when the next flood takes out the City.
- Helpful in certain areas, but not practical or cost effective as a primary solution. This doesn't replace upstream reservoirs.
- Not to be the replacement for upstream mitigation and not effective enough. Mountain to city area control of flow the most effective.
- Raging river waters in the 2013 flood changed the course of the rivers, moved massive amount of rock... Berms might not be very effective!
- Flood walls & berms for emergency installation perhaps. Permanent structures no. The whole valley would have to be walled. \$\$\$\$\$\$
- Springbank dry dam is the most practical and effective plan.
- This would be very negative. I do not support this option
- Ugly, not cost-effective, and doesn't sound like it will work. What about McLean Creek?
- Yes, protect the downtown core. There will be very hard decisions to be made by private home owners and the city for berms along the rivers.
- City should protect its city and not dam Springbank and take away homes, ranches Does not protect Bragg or Tsuu Tina in that municipality.



- This supports the full Deltares report that has kept Holland above water for centuries.
- Current enjoyment of the river apparently includes being right in it, not just beside it! Or heaven-forbid having to walk somewhere to see
- I think this idea is not good. I don't support it. It will prevent enjoyment of the river.
- What a concept - the jurisdiction that allowed the development where it is in the way of the river has to pay to create their own solution.
- "I believe barriers would be a very good idea.
- We should also have forests along the rivers upstream to absorb flood waters."
- I like the idea that it protects along both rivers equally. There is no reason that one river community should get special treatment.
- Not sure I believe the Benefits estimate. Seems low compared to upstream alternatives. Are you trying to push us to a certain alternative?
- These are a piecemeal ugly approach. Maclean Creek will not be visible.
- Good that protection is equal to all communities aesthetic changes are a moot point as the dam would certainly change the countryside
- A good option - no effect on river health, cost-effective. This could be done in an aesthetically pleasing manner.
- A comprehensive solution is available. See www.preventingalbertafloods.ca and contact your government representative. GOA has ignored it.
- Springbank dam and barriers along the rivers are Band-Aid solutions. Use our experts & talented workforce for a solution worthy of Alberta.
- GOA want to set an example on the world stage but are ignoring the need to care for our water resource & produce hydro-electric power.
- Barriers cannot withstand raging rivers. 80% of floods come from sudden snowpack melt so to manage high flows in the mountains commonsense.
- Could these be faster and effective solution? Especially considering the Springbank dam has NO regulatory approval to proceed fully...
- Environmentalists warn against rip-rap barriers as they destroy fish habitat and do not work as no vegetation grows to bind in flood events
- Why does GOA allow logging in sensitive watersheds such as Ghost Valley and McLean Creek? Protecting water sources is priority most govts.
- Flood waters should be managed in reservoirs in the mountains before they become raging, uncontrollable torrents. We have perfect location.
- After the 2008 flood the barriers and pathway repairs were devastated again in 2013 in Fish Creek Park & Harvey Passage. What waste.
- "We saw in High River what happens when attempts are made to control a raging river. Then the water cannot return to the river from behind "
- Best idea. Much cheaper than Springbank. Protects those along the Bow and Elbow and doesn't destroy another community.
- love it, if you want to protect the city, manage it within the city!

- If Barriers are Ok for the Bow, then they should be Ok for the Elbow. The Bow is the biggest threat.
- Elbow - The city should consider barriers and berms as option #2, but option #1 is to complete the Springbank Off-Stream Reservoir.
- In addition to other measures may provide additional protection but will be costly and difficult to implement
- If you have no choice, other than the Springbank Dry Dam (our #1 pick for flood mitigation, upstream), then this would be our #2 choice alt.
- Barriers along the Elbow river would completely change life in the community in a very negative way. Use a dry dam.
- Upstream reservoirs most cost effective and studied with lowest impact, proven results. Enough consultation, build them!
- "Destroys visual aesthetics and restricts access, a bad idea compared to an upstream reservoir.
- Home owners would revolt and cause delays"
- Barriers along the Bow do nothing to protect communities downstream.
- Potential loss of personal enjoyment of river front vs protection of personal property and protection of community. Tough choices.
- Every major city in the world with a major river running through it has had to provide major flood mitigation protection.
- Protect the downtown core!!!
- I like the idea of concept #2. I'm particularly glad that it includes action that will protect Bowness as I own a house on the river.
- I strongly object to barriers that protect some at the expense of others (eg. The Safeway Berm). Please don't do that again!! Protect all.
- Berms protected Inglewood and could do the same for those along the Bow & Elbow...on a cost benefit analysis, it should be done right away!
- Reservoirs and dry dams are the way to go!
- I agree with proceeding on this front as quickly as possible, especially on the east end of Bowness. Our homes deserve protection too!
- We need higherberms in Sunnyside/Hillhurst. Land is already owned by the city and costs are reasonable.
- Inner city "barriers" are impractical, they merely move the damage-Should be implemented where improves/captures flow
- I strongly dislike the idea of ugly barriers along the rivers. Calgary is just starting to be more nice and walkable. Don't ruin it.
- Barriers in conjunction with dams provides best solution
- Barriers without upstream dams are the Darth Vader of solutions - cannot improve quality of life in city. Combination of solutions required

Concept #3: Springbank Reservoir (Elbow River) and barriers on the Bow River:

- Springbank Reservoir needs to proceed NOW as it provides the most protection. The barriers along the Bow are less appealing.
- "McLean Creek dry dam protects more people, costs less, with lower environmental impact. Protect Everyone upstream and downstream."
- A dry dam in Springbank will cause too much damage to farmland and someone else's community for the amount of protection it will provide.
- "We need to do the spring bank reservoir .
- It is common to at least two of the proposed solutions"
- Barriers are necessary in addition to reservoirs on both rivers. Areas such as Sunnyside and Bowness need barriers in addition to reservoir
- Your drawbacks list is substantially longer than the benefits. I question your cost benefit study.
- Springbank reservoir is by far best solution on a cost/benefit basis.
- This would be preferable to barriers alone. Springbank reservoir is the most cost effective first line of defence.
- Don't create barriers on private land. If this is necessary, buy out property owners at market rates. Barriers will destroy their lifestyle
- Yes to Springbank idea, barriers along Bow might offer more protection to downtown, cheaper than Bow storage option, impact during building
- Dam should be built upstream of Bearspaw Dam by province
- How is this concept a higher cost benefit than other concepts? Look at MR1 without barriers! SR1 will be a slough. MR1 a pristine lake.
- How can both concepts 2 and 3 provide the least flood protection, when the benefit of #3 is double that of #2? Descriptions are wrong.
- Barriers are ineffective as a flood mitigation measure.
- No to Springbank dam. It would protect such a small part of Calgary. The Bow is the biggest floodier and needs the most attention.
- Increasing the height of Glenmore Dam to increase its capacity is a good idea, in conjunction with the Springbank reservoir.
- Flood barriers cause environmental damage, are unsightly and dangerous, are unfriendly to wildlife, and limit recreational use of rivers.
- The best solution is to complete the Springbank project ASAP, and then construct a similar reservoir on the Bow.
- Let's not forget and minimize the devastation of 3 years ago! We know upstream mitigation (Springbank) is essential. Please move forward.
- Best. Protects all and all can share the the cost. Otherwise, tax only Calgarians for any other measures.
- Build the dam in McLean Creek. That way Calgary can have a water reservoir and private land is left in tact.
- This is my first choice. The upstream mitigation is essential.

- This seems to make sense - the upstream reservoir is critical. Protect Calgary!!!
- SR1 is good but rethink barriers on Bow. Work with 5 upstream dams to manage flow instead.
- Relying on SR1 which does not protect the downtown core. Barriers will only help in specific areas, not reliable during major flood event.
- You'll have to keep building bigger berms because the high waters keep depositing gravel & debris every year displacing and rising the river
- "Every high water event carries more debris into the river creating more displacement = higher waters. DREDGE the river as well as berm. "
- If the Springbank Dam is built what is built to protect the communities upstream?
- Barriers seem like a promising solution for Sunnyside. Wouldn't need to add much to the existing berms to protect the community.
- NDP campaigned promising to scrap SR1 & move on McLean. The old "bait & switch" is in play right before our eyes. Disgusted with this tactic
- I live in Calgary - protect all citizens rural/city, small/large centres equally -use crown land - belongs to everyone - Dam McClean Creek!
- Calgarians are not more worthy human beings than any other Albertans. Why isn't this about protecting the most people possible per project?
- Poor planning by Calgary city planners cannot be made to be the problem of the Springbank residents who don't live on a flood plain.
- These questions have been re-visited several times. Experts concur that the Springbank reservoir is most effective. Quit stalling.
- Protect the most possible. Springbank dam does not do that. Have to protect downtown. That means McLean Creek.
- Too much money to "protect" city residents better than upstream rural residents. Protect citizens equally. Dam McLean!
- No dam! Destroys lives and livelihoods. Only helps Elbow Drive, not downtown area. Too many tax dollars for too little gain.
- A Springbank dry dam? What do they plan to do once it has been filled once with silt, trees etc? Are they going to reclaim it or leave it?
- No Springbank dam. Expensive. Little protection. McLean protects downtown core.
- Can we not unify for a solution that helps THE MOST? GoA has the land,engineers have expertise. Go further upstream: McLean Dam or TRJR.
- Why does NDP really want 7000 acres of farmland? Could it be redevelopment? Dam would not protect downtown or the Bow. Only Elbow. NO!!
- Relative to upstream mitigation, barriers do not offer the same cost-benefit efficiency, and are still susceptible to multiple failure spots
- The best solution for the city in total.
- Flooding Springbank for the benefit of Calgarians is no benefit. We are better than that.
- The opinions of several flood experts that were engaged by the PC and NDP governments concluded the best solution is Springbank. Build it!



- "I'm for any option that includes building springbank
- Can't see owners/communities being for these barriers
- Build springbank and protect us!"
- I want my tax\$\$ to help the most, not subject injurious affection on even a few, that's not morally right when options exist. NO to SR1!
- Calgary was duped about SR1, everybody wants it fast! McLean or Tri-River Jt Reservoir would protect the masses, not just a few along Elbow
- As upstream expansion flood fields have been successfully implemented in Europe, GET GOING!!!
- GoA not transparent with cost/benefit for SR1. What if there is no flood damage compensation? Elbow homes got it twice!! Where's justice?
- Build Springbank. Barriers seem to have more negative impact than positive. There should be better ways to protect downtown.
- Looks like the Springbank Reservoir is the most effective. Lets build it before the next flood!
- GoA needs to get tough with civic officials about land use. One community should not bear the brunt for decades of floodplain development.
- Fed govt have identified environmental issues, etc and r now involved. What does that tell you? More "political" science than hard science?
- Calgary river communities can complain that berms are unsightly, but Springbank residents resist losing their community and they cry NIMBY?!
- There is absolutely no reason flood mitigation needs to happen on private land! Build on crown land at MacLean, protect all communities!
- Why Springbank? Because 10 years from now the province can make a mint developing "lakeside property"! MC1 Has everyone's good in mind!
- Wow, true colours of Calgarians shown! You think you were the only ones to lose everything to the flood?? MC1 Protects all of us!
- "SR1 bulldozes productive farmland. Mclean Creek can hold equal volume and be a better dam than a mudflat,
- All plans protect downtown"
- Crazy to spend so much \$ for benefit of small # of homes. Think... build a dam, generate hydro elec, create jobs & recreation opportunities!
- Why is this so dramatic? This is rural vs. urban! It's pathetic. Why dont we all look at the big picture? Protect everyone.
- Not a necessary dam, people shouldn't build beside the river - it's a flood plain! only every 100 yrs but a flood plain nevertheless.
- Do you know grizzly bears, cougars and elk live here, right in Springbank? They have for generations. Why make them pay for our problems?
- The government needs to ban building on a flood plain. This would not be an issue. Build upstream and protect everyone.
- This land is precious, not only to myself and my family, but to the wildlife that call Springbank home. Don't dam Springbank.



- It's appalling that urban people are pushing SR1. Protect everyone. Not just the people who live in expensive houses on the flood plain.
- All of the areas affected by both the 2013 Elbow and Bow flooding need to be protected
- Strong idea. Protects Calgary core 100% and deals with problem spots along Bow river
- Upstream mitigation is the only option that makes sense. Get on with SR1.
- This concept takes water mitigation that the Glenmore is supposed to do and making a big one elsewhere in the guise of flood protection.
- Build Springbank.
- If SR1 goes through don't be shocked when you find out the cost benefit analysis was bogus. Don't be fooled SR1 is not the cheapest/best option
- "Drought will be a much bigger issue in the coming years. Go with MC1. Provide protection, recreation, wildlife habitat for all!"
- Why are urban lives & livelihoods more important than rural ones? Dam MacLean Creek and protect everyone!
- Barriers dubious, will force up city taxes unless Feds are paying? Dithering will cause province to possibly blink on Springbank. Build it
- Hey, the flood happened in 2013...WHAT IS YOUR PROBLEM? WE HAVE BEEN THROUGH THIS IDEA THING SEVERAL TIMES ALREADY...ENOUGH ALREADY!
- We cannot afford further devastation as a city. Flooding has occurred for over 100 years and will worsen with climate change. ACT NOW !!!!!
- Think upstream reservoir protects downtown and homes along Elbow with little impact on community. Barriers along Bow disruptive and ugly
- Yes to Springbank, but Bow River needs more than just barriers. They would be too high and ruin riverbank. Bow needs both.
- Listen to the Tri River Joint Reservoir Project. Protect all communities. Forget SR1!!
- Barriers on the Bow and not the Elbow may lead to higher levels on the Bow backing up into the Elbow and flooding there. Mitigate upstream!
- Just do whatever is necessary to protect our city. Enough "discussions" just do it already!
- The city is already reinforcing the banks of the Bow why can't they do the same on the Elbow?
- Protect all communities. Build dam at McLean Creek!
- Berms are not the solution. Build Springbank dry dam ASAP.
- A dam in Springbank would not be a cost effective solution and still leave communities unprotected. Alberta taxpayers deserve better
- As a Sunnyside resident, I support the Hillhurst Sunnyside Community Association brief on flood mitigation measures.
- Does not offer comprehensive floor protection. Damage to environment, ecology, farm land & health is shortsighted & politically motivated
- I fully support the combination of SR1 and barriers along the Bow, plus further investigation about a Bow reservoir. The cost/benefit is clear.



- Bad idea to restrict farmland for a 100 year flood while still not protecting upstream. Dredge glenmore reservoir so it holds more water.
- McLean Creek area is a mess from the flood. Common sense=dam McLean. Resort recreation, store water, protect Bragg Creek, RW Meadows & YYC
- Don't destroy Springbank and our ranching heritage. #AlbertaStrong means we pull together and don't sacrifice one community for another.
- Take care of the Bow, its waters affect far more people than the Elbow. McLean Creek!
- The Bow needs flood mitigation first, not the Elbow. Downtown must be protected. McLean Creek is the answer.
- This is a terrible plan. It doesn't protect up-stream communities (Bragg Creek/Redwood Meadows) and will cost far more than estimated.
- Studying the environmental impact on MC would take years (probably never be built) leaving zero mitigation for the ones affected. SR1!
- Fully support SR1, as this has been studied over and over as the best option. Less damage to wildlife natural area where MC would be.
- YES to Upstream mitigation (SR1); Combined with strategically placed barriers ~ Let's get this done.
- The McLean Creek Option is better for Bragg Creek, Redwood Meadows and Tsuu T'ina as well as for downtown Calgary. Better for all.
- McLean Creek Is an inclusive solution! Don't destroy Springbank lands!
- Do you value clean drinking water? Go further upstream. See preventingalbertafloods.ca Risks with SR1 are too great. See Stantec report.
- The Federal Govt agree a Canadian Environmental Assessment must be done. There is just cause. SR1 is not best protection for the good of all.
- Maclean Creek is the option for everyone on the Elbow River including the City of Calgary. Don't destroy homes and families for a 1/2 fix
- Downtown is the economic engine of Calgary, so manage the problem. BOW RIVER mitigation, first! See IBI report, 2/3 of damages from the BOW
- McLean Creek: Reservoir capacity & recreational value on Crown land. That's the Alberta way, not to inflict injurious affection upon others.
- McLean Creek is the best solution. Both in \$\$ and Protect Bragg Creek as well. Only the Gov would be so inept. Lower dam levels in Spring.
- Do what you can within the city to mitigate flooding. Don't wreck Springbank lands. Dam McLean Creek instead!
- Springbank Dam is an expensive, experimental solution to an extremely rare occurrence. Use Mclean Creek, making it recreational for all!
- Build MC1 It is on Government land. Don't take lives, homes & businesses away from people that were here long before anyone else!!!
- Springbank vs barriers is just a "give in to the wealthy" Sacrifice agriculture and useable environment for the Wealthy..Mclean Creek!!!

- It is not feasible that barriers alone will protect communities and downtown Calgary. The Bow & Elbow need upstream reservoirs/mitigation.
- McLean Creek option best-already Gov't owned. Springbank dam won't protect downtown. Springbank dam way too costly and displaces families.
- This is a Calgary problem-don't make it problem for Springbank. There are other alternatives that apparently have not been identified
- Dam is a waste of billions of dollars and a complete enviro mess. Poorly thought out and a waste. Economics don't match!
- Downtown damages were from the Bow. The majority of people affected by the flood were in Bowness and downtown. SR1 does nothing for them!
- Most important to protect downtown. A dam at Springbank won't do that. Berms and barriers will.
- Springbank Off-Stream Reservoir a total waste of billions. McLean Creek more affordable and more effective.
- Why does the NDP government want to buy 7000 acres at Springbank when they already own McLean Creek? Get real!
- Shame on those opposed to this. A flood event MAY impact some farmland temporarily while it is SURE to devastate Calgary homes & businesses.
- We must have upstream mitigation projects completed as soon as possible. SR1 is the best idea.
- SR1 is a poor choice. It protects only a few homes and is extremely costly. The Province has grossly understated the true cost of SR1
- Upstream mitigation (SR-1 and Bow) make the most sense. Downtown Calgary must be protected.
- SR1 costs unknown, less effective than believed, protects only a few. MR1 makes more sense in ever way.
- 6 Billion dollars in damage. This is a common sense mitigation strategy the province needs the courage to mitigate or accept the blame.
- There could not be an infrastructure project more worthy of funding than the Springbank reservoir given potential damage of another flood
- Both are required. Downtown is the economic engine of the city. It needs to be protected
- SR1 is not the right option. Violating landowners rights and destroying fertile land while much better options have been ignored. NOT OK!
- The cost of SR1 will continue to mushroom. I strongly support the McLean Creek option as was promised as part of the NDP election platform.
- Homeowners below Glenmore Dam have already been offered buyouts by Province. Buyout the 20 or so holdouts and build berms along the river.
- Mclean Creek provides drought management, energy generation and recreation space that the government could profit from. SR1 is a mistake.
- SR1 floods over pipelines carrying toxic petrochemicals. Pipeline failure would contaminate city drinking water. McLean Creek is safer.
- Why the rush? This is not an urgent problem. Take time to figure out the best way. Its not daming Springbank.



- The government's valuation of the land at Springbank is far too low. This proposal will cost far more than they say and will do little
- What does the government really want all this land at Springbank for? I don't think its for a dam.
- Springbank Road - while not driveable - cuts the school bus route off and divides Springbank trade routes off! Is that a cost/benefit?
- GOA cost/benefit does NOT include current land cost, cost of raising Hwy 22, cost of moving Springbank Road to a new location!
- The McLean Creek project needs to be considered as seriously and critically as all other options. SR1 is not the best option.
- SR1 is not flood mitigation. It only transfers flood and damage from one community onto another. McLean creek helps all upstream.
- The Zika mosquito was found in Canada. Countless pools of stagnant water left behind from SR1 will breed mosquitos. Health Risk!
- See 1890s Elbow River reviews by Gord Pearce Studies as reviewed by Water Smart in Dec 2014.
- Calgary is not only city on a flood plain. It is the only city that hasn't actively worked to mirigate flood damage. Look to other cities
- YYC is one of very few cities worldwide that doesn't have in-city flood protection along the river. E.g. Seoul - has never flooded.
- Droughts statistically are more frequent than floods. Springbank DRY dam is poor public policy, short-sighted and questionable cost/benefit.
- Droughts statistically are more frequent than floods. Springbank DRY dam is very short-sighted, bad public policy and a waste of money.
- Calgary's greatest damage was from the Bow. SR1 is misguided and bad public policy. The Bow river needs attention and berm the Elbow River.
- The Concept misleadingly refers to the SR1 size as "a field" and a tiny red star on the map. It's closer to 6500 acres up to 1# highway.
- "
- Linda, "Springbank reservoir is the best idea. It makes sense." - Can you please elaborate on that?"
- The 2013 flood was a 1 in 200/250 year event. Why has this not been made public and why are we fixated on moving so quickly?
- Springbank reservoir is the best idea. It makes sense.
- we're getting a bit " touchy-feely " here . I feel that " equality of protection " could interfere with the timely completion of Springbank
- So far, this SR1 concept has been less than quick, outrageously expensive, and and publicly divisive. Now tell me, why not Maclean Creek?
- McLean Creek area needs restoration. Build McLean Creek Dam.
- No to SR1. Terrible cost/benefit balance. GoA needs to come clean on this! Go McLean. An area to protect all with potential for recreation.
- Springbank dry dam is the best option, barriers do not slow the water.



- No. McLean Creek is better option. Keep ranchers on own & heritage land. Use prov-owned land at McLean Creek & protect more communities
- Damming springbank is a terrible idea! McLean Creek protects the most people without sacrificing springbank and private land.
- "How about putting a dam where Allen Bill Pond is so all communities like Bragg creek and Red Wood Meadows would benefit.
- Save buying land"
- Damming Springbank is a horrible idea. It will ruin lives, and destroy ecology. Why is it even an option? I am a resident of Riverbend YYC.
- Why sacrifice Springbank and the ground water which the residents drink and still not solve flooding in Bragg Creek and Redwood Meadows
- A reservoir at Springbank will not stop the Bow flooding, it will only perhaps help a few residents of Elbow Drive who chose to live there.
- In addition to Concept 3, berming at current bike path elevation between 25th av and Talisman hill will prevent flooding to 1 in 20 yr event
- Concept 3 provides the lowest cost highest benefit mitigation solution. It must be pursued.
- Why waste billions wrecking Springbank? It won't help downtown Calgary. Use MacLean Creek.
- Why should residents of Springbank pay the price of poor planning decisions by the City of Calgary? We need more and better options.
- Springbank reservoir would help very few, and be a criminal waste of tax-payers' money. It is the Bow that needs to have barriers.
- The area earmarked for SR1 is NOT a natural floodplain. The most logical decision would be to allow "room for the river" on floodplains.
- Springbank option unfairly penalizes more people than the upstream management. Use crown land at McLean creek and mitigate flooding for all.
- McClean creek is clearly a better option. Protect the many, not the few.
- SR1 will not protect upstream Elbow communities nor will it protect downtown Calgary. Don't buy into the GoA's rhetoric.
- Springbank option protects inky a chosen few. Go with McLean creek, thus is an Alberta issue, not just downtown Calgary
- All Albertans will pay. Any project of this size and expense should be put to an ALBERTA-WIDE REFERENDUM.
- Upstream management is the better option. Combine barriers with public access/paths.
- Build McLean option, protect BCreek and Redwood instead of just protecting rich properties in Calgary
- Makes more sense to build a dam at McLean Creek on crown land instead of letting land owners from Springbank, Bragg and Redwood suffer.
- Yes 2 Mclean! I know many that live in the proposed SB area; 1family has a 100yr working ranch. This will destroy their lives, protect them!

- It does not provide equal protection from future floods for all those impacted. The Springbank Reservoir only protects those downstream.
- Alberta's struggling: Schools and healthcare need help. Unemployment rising. Nenshi says 1 in 10 live in poverty in YYC . SAY NO WAY to SR1!
- Makes more sense to build a dam at McLean Creek on crown land rather than taking productive land and homes from the community of Springbank.
- McLean Creek Dam would protect both City and rural communities. It is the best option.
- McLean Creek option will be the least expensive option and will impact the way fewer people & communities
- Springbank Dam will end up the costliest option once dewatering, sediment erosion & land acquisition costs are included
- Too costly, unfair expropriation, not faster, McLean better site and protection alternative for all.
- Offstream storage allows the land to be used productively in non-flood years. Springbank still has access to the land. Build Springbank.
- Calgary River group calls Springbank the "opposition". Springbank group advocates for McLean to protect more Albertans. Build McLean Creek.
- The total costs of EIA's, ecological loss and private buy outs makes it a very expensive operation. Which won't work fix the causes upstream
- McLean Creek protects Calgary Elbow communities and upstream neighbours. Flaws with McLean are overstated or fabricated. Manage dams on Bow.
- Springbank is not right. We don't want our taxes to sacrifice one community to save another.
- Terrible idea. There are a number of upstream reservoir already. They weren't emptied despite being recommended to. They destroy ecosystems.
- Dam McLean. Cheaper, creates recreation, protects Calgary, Bragg Creek, Tsuu Tina and Redwood and doesn't destroy another community.
- IF we can get Springbank dry dam built (cheapest, most 'beneficial'), other barrier or diversion proposals may be OK. First: SPRINGBANK
- Barriers seem far too complicated and destructive. Upstream mitigation-Springbank makes most sense
- We need to protect all communities, not just Calgary. Redwood, Tsuu T'ina and Bragg Creek need to be considered, too. Don't Dam Springbank.
- It is not fair that people who have chosen to live right beside a river, pass the consequences of flooding onto farmers in Springbank.
- Upstream Springbank option is the best option and will benefit the majority of people. Please start building it NOW. No more delays.
- Total waste of capital. Those that live on the river should insure themselves.
- This is a provincially funded issue. Calgary property is but ONE part of it. Protect upstream too or build your pond within city limits.
- Too expensive with purchase of private land required and denial of land rights. Public land near McLean Creek would be less expensive



- Does nothing to protect upstream properties in Bragg Creek or upper watershed infrastructure owned by the province. Too expensive.
- Why build it springbank when you could build on public land mclean and create another spot for recreation?
- The berms are fine for small floods. An upstream dry dam is critical in the long term and Springbank is obvious choice of options. Build it!
- I'm not in favour of off stream storage. The cost is too high
- Springbank Dam is a bad idea for all the reasons I put in my option 1 comments. Any plan with a Springbank Dam is a bad idea.
- No solution with Springbank reservoir is good. The inflow design to the reservoir is not sufficient to mitigate a flood surge.
- Trying to predict just what the rivers will do in another flood is a fools game. Build some berms, move some houses and give the river room.
- Dykes and berms are good enough to protect High River and other towns, build some in Calgary!
- If you live in a flood plan, up flood insurance? Why should the rest of us pay for where you choose to live?
- People have mentioned a spot where the Highwood River, the Sheep and the Elbow could be controlled. Look at that option! Protect more people
- Wait for the university studies on flood before proceeding with daming Springbank, they might have better ideas, that protect more people.
- Why ruin heritage farms in Springbank when you can build it on Crown land in McClean creek and save many more Alberta tax payers homes
- "Maclean creek flood mitigation makes more sense \$ wise and in efficiency
- Saves more communities than using spring bank flood plain
- Wake up
- We have so much useful dry land. Do we need to destroy the environment due to our poor decisions to build on the flood plain? Waste of \$\$
- NO to SR1! Killing one community to save another is wrong. Other options need to be investigated.
- MacLean Creek is destructive to the environment. Springbank affects few (yes, compensate them) but protects thousands. Build it! Now!
- Ridiculous that McLean Creek isn't the #1 option, protecting the most people and property!
- Upstream dam in McLean Creek protects Calgary ! AND ! protect Bragg Creek, Redwood Meadows, Tsuu T'ina & Springbank
- McLean Creek is the only option, protects the most people.
- An OK middle ground between Concepts 1 & 2 - let's fix the whole problem not part of it with effective reservoirs.
- It is vitally important to get moving on the Spring bank Reservoir ASAP! Every year wasted puts the entire city at risk.

- "The government needs to focus on getting the Springbank Dam built asap. These other measures are not significant enough to stop a flood."
- No dam at Springbank. McLean creek is on crown land, protects more people and won't ruin one community to save another.
- I understand the desire to consult the public, but please just get on with protecting the City! The engineers have already spoken.
- Upstream reservoir first please
- Must be done, this is the first step to protect the city
- Permanent fortification of Prince's Island Causeway after 2013 damage creates need for higher berms and groundH2O barriers along MemDr ASAP.
- Best option. SR can be farmed when not a reservoir. Out of commission 1 year out of 100? Reservoir needed for greater good of Alberta.
- "This concept substitutes barriers for Bow River upstream mitigation.
- Cheaper and be in the City of Calgary's control?
- Build Springbank NOW!"
- building both may mean compromises on both, as the impression from both sides will be that the other project will keep us safe.
- I support these concepts 100% and would like to see them proceed asap - they've been studied to death and they make sense, now is the time!
- Upstream reservoirs are best practice for major cities built on river systems. Alberta fortunate to still have that option, so why not act?
- The barrier is a terrible idea. Build the two reservoirs.
- Better than Elbow barriers, but not as good as Springbank. And likely more expensive too. I'm not in favour.
- Two reservoirs are preferable but build barriers along the Bow if the Bow reservoir will be delayed. Build Springbank reservoir now.
- Memorial Drive is lifeline for emergency vehicles, fire, EMS, etc. Protect Memorial Drive with higher berm. Build SpringbankRes ASAP.
- Spring bank reservoir ASAP. Far superior.
- Build infrastructure to 1:350 now; don't wait for 1:200 to be obsolete.
- Sunnyside berm withstood 2013 flood; just needs to be higher with groundwater barrier. SpringbankRes & barriers ASAP. BowReservoir later.
- Make TransAlta agreement permanent to manage GhostReservoir for flood & drought. Community safety & protection 1st priority over recreation.
- Natural river-rock covered walls & berms with groundwater barriers to protect river communities; use gravel from bars deposited in 2013 flood
- CommunitiesNeedAffordable flood insurance, only available once communities are protected to appropriate level; Berms, barriers&SpringbankRes



- Tax-paying communities should be protected to as high a level as Zoo & Downtown core. Berms, groundwater barriers, SpringbankReservoir ASAP.
- "ElbowRiver communities need SpringbankReservoir ASAP.
- Higher berms & groundwater barrier needed along MemorialDr ASAP.
- BowR Reservoir later."
- Flood protection has been practiced for thousands of years and helped deliver the high standard of living we have today. Emminent domain!
- The "posh" not the only ones affected by the flood. Many business closed,many Calgarians affected. Option 3 good. Select barrier locations
- The Springbank dry reservoir is still 1st choice. Strategic berms/barriers within the city on both rivers might help directing high waters
- Berms or walls without ground water barriers are less useful. What happens to water that comes up behind them and the rivers?
- We lost almost everything in the last flood, prevention is the only solution. FYI our garden is amazing since the flood. Stop fear mongering
- This project will protect thousands of people and MAY cause a small disruption to a very few people in the Springbank area.
- Doesn't make sense to flood thousands of acres of family owned ranch lands and render it unusable.
- The ranchland will be sterile and unusable after flooding by SR1. Dead, covered in inorganic silt. A very poor choice for long term planning
- We all want protection for our homes and businesses. Not debate about sacrificing one community for the sake of another. MaClean Creek, yes
- Obvious choice for the greater good is Concept 3.
- Springbank terrible idea--would ruin Albertan's homes and businesses. Dam Mclean!! Save Bragg Creek and Redwood Meadows while you're at it
- Ugly and not cost-effective. McLean Creek?
- SDD ignores aftermath. Vast mudflat followed by vast dust bowl. West wind will carry powder to Calgary. Visit Exshaw to experience rock dust
- Springbank Dam only serves a few posh areas along the Elbow - Readeau/Roxboro and Elbow Park. NO ONE ELSE! It's POLITICS before PEOPLE again
- There is a tri-river option the GOA has NOT released results on. Is it the best one and that is why?
- Springbank is named after all the springs over the lands. What will a dam do to all those drinking water sources? Safe? Or not?
- New GOA promised full-science first. Got political decision just like previous GOA. Not good enough. Do science.
- Springbank has a huge natural runoff through it. Springbank dam has no control on this flow. SR1 could become overwhelmed.
- Earthen dams have a high risk factor. Google Teton Dam Disaster. Failure would result in a Calgary Tsunami.



- Gov floods SR1 for 90 days. Light and O2 cut off from native grassland. Grassland dies. Environmental disaster is left behind.
- Original cost for Bragg Creek \$8M. Budget as today \$32.8M + \$5.5M Fed. SR1 will cost 4 to 5X what we were told \$1B+. Use McLean Creek.
- Dam at McLean Creek. Manage the Glenmore Reservoir and Bow River dams better and some strategically placed barriers and we are good.
- Unsightly and very expensive when you settle the expropriation court fights.
- Let's try barriers and existing damcontrol first -please no dry dam to benefit elbow community only
- When there is a vital, urgent need for protection, 3 levels of govt. should focus on problem, find solution and implement ASAP. Prioritize.
- Springbank dam and barriers along the Bow River will not protect Calgary or the other 32 river communities devastated in the 2013 flood.
- Springbank is not fast, cheap or easy as it was promoted. Alternative options available, such as McLean Creek & TriRiver need consideration
- Barriers - yes. Springbank - no. Springbank Diversion is way too expensive, it destroys one community to protect another. Support MC1.
- Destroying land against the wishes of a "entire community" is detrimental to all communities involved.
- Barriers on some sites will have negative impacts on property values & natural beauty of the Bow. \$s cannot compensate for the loss.
- Many people who live along the Bow know the risks and live here regardless because of the positives.
- Both are required!
- Individuals cannot protect against flood, but bear the devastating effects. The City must provide berms/barriers to protect neighbourhoods
- barriers do restrict natural river movement but this is inevitable within a densely populated area like calgary
- in general i would be supportive of barriers for 'high value' areas only, flood resistant zoning should still apply to 'protected areas'
- I think the risk of flooding has been understated by the City and we should be taking immediate action to reduce flood risk downtown.
- Reservoirs may take a long time to build and approve. In the meantime we need something protecting our economic core.
- I think strategic barriers protecting only the most important assets could mitigate risk starting in the short term.
- barriers are only a short term solution at best - upstream solutions provide the required protection and low moisture water mgmt benefits
- How will work crews & large equipment access the river along Bow crescent? There is little space between houses for large equipment to pass.



- Barriers along the river banks in Bowness may alter the natural beauty of the river and disrupt habit for river dwelling species.
- "Sheet pile barriers along Sunnyside bank of Bow, similar to zoo protection; could be embedded in rock-covered earth to mimic current look."
- Add groundwater barriers in locations with positive TBL economics
- One measure of the adequacy of community flood mitigation is that flood insurance is available and affordable.
- Flood mitigation infrastructure must protect against reasonably foreseeable future floods so that affordable flood insurance would be avail.
- Implement management improvements at TransAlta's reservoirs while enabling rapid lowering of Ghost reservoir to balance flood, drought etc
- Protection for mixed-income Sunnyside must match the protection provided to the downtown condos of the wealthy.
- Economically sensible in-city barriers can be built now to provide protection while waiting for a dam.
- At least one new dam upstream of Calgary should be built, but with the recognition that completion is likely decades in the future.
- The flood protection standard for Calgary should be 1:350. Some climate change has happened and it is important for our infrastructure to b
- Two dams and smaller barriers!!!!!!
- No barriers without dams!!!!!!!!!!!!!!

Non-Structural Measures:

- Important to minimize the consequence of flooding but unrealistic, main focus needs to be to build the Springbank to prevent flooding
- Clearing only some but not all structures in floodway will not reduce flood risk. Removing all structures is not feasible. Best is SR1
- Major infrastructure project such as SR1 is what is needed.
- Oppose all the non structural proposals. Not necessary if the reservoirs are built, except removing existing bldgs. from flood-way.
- Tough applying to existing residential areas where such measures materially affect community and resale. Affected areas folks become trapped
- Thousands of homes in flood fringe already. Build Springbank Storage reservoir, Maclean Creek won't solve 2005 flood! Won't save downtown
- Agree -restrict vulnerable uses in the floodplain. Otherwise, option is unrealistic for riverside communities. Upstream mgmt better choice.
- These measures would unfairly impact some landowners. Creating winners and losers by changing regulations is not helpful.
- we must protect the vibrancy of all Calgary communities, notably downtown and inner city. Other cities have successfully done in floodplain



- oh great - more regulations! Seriously, stop procrastinating and get SR! and measures for the Bow built.
- Restrictions in flood-prone areas penalize property and business owners. Large scale upstream mitigation avoids this unfair treatment.
- More rules and regulations are not needed, and can be avoided by supporting upstream mitigation.
- "This is a bad idea. Can't move what's already built. Inner cities are important to the city as a whole.
- Get going with the Springbank dam."
- This impacts the residents by the river who have been through enough for one lifetime. Do the hard work of upstream mitigation Once & for al
- Bylaws cause inconsistency in community. Already can see where higher first floor elevations are being mandated. Looks awful.
- Total waste of time. You did this in the past. You allowed new development in a no development area then bought them out.
- I am concerned about decisions being made by people with far less knowledge of the history of the flood plane than those living in it!
- Developers should not be allowed to build on historical flood plains - there should be stricter regulations and controls overall.
- Overland flood is forceful and unpredictable. It needs a forceful, predictable response - upstream reservoirs. Bylaw change is a mugs game.
- We need to ensure the communities along the river are restored to their original form and keeping the communities viable.
- These measures are important for new development but don't help existing communities such as Bowness and Elbow Park.
- This city was born and built on a floodplain. Removing buildings will be impractical and costly. This option should not be on the table.
- Competing development pressures over time will will influence decisions that negatively impact the effectiveness of berms. Yes to a dry dam
- Completely unrealistic given existing footprint. Buyout program to date inadequate given size and scope. Upstream mitigation required. Now
- Daylight Nose Hill Creek and restore the natural occurring wetlands at the Highland Park proposed development.
- Not a logical solution.
- Will we remove the entire downtown? How about inner cities communities? This option is unrealistic.
- "Will destroy communities and land values
- Doesn't fix the problem
- Build the dam!!!"
- Unrealistic and destructive for existing communities. Where would downtown go? If you've been flooded, you'll protect house as best you can



- Nice idea for new builds - what about existing homes??
- Most of the inner city of Calgary and much of downtown is in the flood plain so ineffectual - upstream mitigation needed
- Common sense should prevail
- would not protect the existing City infrastructure, buildings and communities.
- No guarantee like other concepts
- "Highland Park Development:" "They Paved Paradise and set up a Parking Lot"
- what folly, let nature take its course (Confederation Creek)!"
- Non structural restrictions in flood and fringe zones are a necessity
- FACT - almost no homes along the river were offered buyouts. Moving entire communities is not the answer. Build SR1!
- Requiring expensive retrofits now places an undue burden on the owners already suffering from loss of property value
- I support non-structural options. However the time for doing this would have been immediately after the flood while we were doing our renos
- If its good enough for the rural areas its good enough for Calgary, Edmonton did it and moved everything out of their river valley.
- YYC has to do its part to mitigate flood damage. Upstream options are provincial. YYC can't just hope the province will fix. Do what WE can
- "Homeowners. Turn the land into parks and rec areas that can be closed in event of flood.
- No new buildings in flood plain. (2/2)"
- Buildings should not be on a flood plain. Every other city in the world knows this. It'll cost more now, but will protect those future (1/2)
- "Go build further west so up stream residents can be protected as well.
- Build it on Crown land and create public parks. Protect Bragg Creek."
- New construction in flood plains should be elevated 1m above 100 year flood level.
- Dream on! Build Springbank. Who's paying to expropriate everyone in floodway?!!
- As for removing structures from the flood-way, like all of downtown Calgary? The other ideas seem sound.
- Homes are already in the flood plain -with City approval! Wouldn't protect downtown. Impacts thousands negatively. Still huge dollar damage
- Stop letting certain people do what they want. Stop approving non sustainable development. Concentrate on mitigation.
- Yes, useful measures, but the essential, long term solutions are upstream reservoirs and barriers on both the Elbow and Bow Rivers.
- Perfect timing for shovel ready infrastructure projects. Build Springbank now and protect the city
- This is silly. The new land use bylaws listed above would mean gutting the entire inner city of Calgary. Upstream mitigation asap.
- Do whatever is necessary to protect our city.



- It is a little late to move the city core and neighborhoods that have been here 100 years. Build Springbank.
- I support the Hillhurst Sunnyside Community Association response on land use and other measures to mitigate the impact of future flood event
- The city should encourage and help homeowners to take flood mitigation measures, not stand in their way with over regulation. It's a problem
- Unrealistic for existing communities. Primary focus needs to be on upstream flood mitigation. Build SR1.
- New construction, commercial and private, should have new regulations for flood protection. Large and serious rain events are now inevitable
- This is reasoned and logical. No matter how money we spend on flood mitigation, no one on this planet is going to win against Mother Nature.
- Non structural measures for NEW developments. Springbank is essential to protect inner city communities and Calgary's business core.
- Why can politicians and our planning departments not use a global approach
- think of a plan that protects as many as possible with as little cost as possible. Better Dam control and upstream dams .McLean Creek !
- Upstream measures are essential to existing communities, buildings and Calgary's core. A few bylaw changes will not help most of the City.
- Build the Springbank Reservoir!
- We need a balance of common sense changes (new construction basement flood rules, etc), plus practical upstream mitigation (SR-1).
- SR1 destroys ranching in an already tough economy. MR1 adds recreation, a water reservoir, and protects more in every way. Support McLean.
- Existing Calgary inner city communities need to be nourished and not rendered uneconomic by excessive, complex or impractical regulation
- Can't move the downtown location. Upstream mitigation is needed and should have been done yesterday!
- The Province already offered buyouts for homeowners below Glenmore Dam. Expropriate the remaining 20 or so holdouts and build berms. Cheaper
- " This whole project is a waste of time ,a local MLA and Calgary residents vs ranchers who have 130 years of good range of management !
- "
- No matter what flood abatement measures are taken, we cannot continue to build as in the past in flood prone areas. Start these measures now
- This is a horrible idea. Something concrete must be done like the Springbank reservoir project to avoid another disaster.
- Some of these suggestions are positive, some are bureaucrats' make work projects. Lets focus on getting the Springbank project done!



- The best option is the Springbank dry dam. Too costly to remove buildings that were impacted by 2013 flood.
- New bylaws in old communities has been done with care but will not stop flood damage. Upstream mitigation essential!
- Land use regulations and bylaws to protect new building in flood prone areas is only logical.
- This city core is where it is--can't change that. Manage upstream. Don't reverse the density trend for core.
- Build Springbank offstream AND action non-structural measures. Governments need to do both, now.
- Map the flood zones, change bylaws to adjust to reality of flooding for new builds. Ban all further land in flood plains from development.
- I agree with some of these policy `shifts.` But they're not getting the SPRINGBANK Dry Dam BUILT!
- Build upstream mitigation first - Springbank is the clear choice.
- The Springbank dam only protects communities on the Elbow. All communities need to be considered, and these measures help prevent damage.
- Downtown and residences along the river have been built up for decades. Can't move a city away from a river but can build upstream reservoir
- These flood proofing measures are wise use of public \$ for long term safety and river ecology. Benefits include great parks in floodplains
- Bad idea. Any serious rain event like 2013 would completely override any man-made attempt to use nature alone to control a catastrophic flood
- Good idea. Get these homes and buildings out of the floodplain
- The city of Calgary needs to make it clear that The Springbank dam doesn't protect downtown!
- Springbank only protects two communities, it's not enough to protect downtown. Tax dollars a better spent on projects that protect more land
- You can't protect all of downtown with a dam at Springbank! Make room for the river through natural projects.
- These measures are ALL we need. People who live/build on a floodplain need to be self insured. There is no way to protect against flooding.
- The worst concept - increases construction costs in flood plain forever, compresses property values & tax base, drives people & cash away.
- Good in coordination with other options but not a primary focus of change. Need Springbank to be implemented
- While it was promised to put something on title for houses in the floodplain, this isn't being done.
- Please start moving as quickly as possible on the Spring bank Reservoir project. The important issues described in Concept #4 can be de
- "Non-structural measures can be considered in the future after the Springbank Dam is built and the imminent threat has been
- dealt with."



- I understand the desire to consult the public, but please just get on with protecting the City! Upstream mitigation should be the focus.
- May work for minor flood conditions , but ineffective for a flood like 2005 & 2013. Get the Springbank infrastructures in place ASAP.
- It will be near-impossible to implement floodplain regulations that account for climate change, because they will be seen as too restrictive
- Too much pressure to develop in the river valley for this to be effective; "out" clauses will allow building in floodplains regardless.
- Would be a great idea if starting a city from scratch; a bit too late for Calgary. Are we supposed to move our downtown?
- Non-Structural measures are required in concert with the Springbank Dam and Bow River flow control. Upstream mitigation is the priority.
- "Wasn't most of the 2013 damage done to downtown businesses?"
- Removing homeowners doesn't fix anything.
- Build Springbank NOW!"
- A twitter debate to help you make the tough decisions you were elected to study and act on for the greater good?! Get going on this already!
- Our local economy and livelihood is at risk if we don't protect the Elbow River from flooding in all ways possible.
- Upstream mitigation designed for worst case attacks the reality of a major city built along a river system, this is done worldwide.
- I'm in favour of more stringent regulations; I believe Calgary has given in to `developers' too much. But build Springbank too!
- Drumheller lies largely in a floodway. They used berms and other measures. If approved originally, homeowners shouldn't bear the brunt now
- Who decides? In Fort McMurray, many homes are in the floodway but the owners want to rebuild. Is it fair to not rebuild now? Who pays?
- Cities have always been built around rivers. We can't pretend our inner city communities do not exist. Not fair to existing homeowners.
- Emptying out the inner city neighborhoods will destroy the heart of the city. Keep the core vital by encouraging people to live there.
- Would love new builds not be allowed to put in basements making incentive not to tear down old buildings and less mess to clean up next time
- It is unfair to penalize the oldest neighborhoods in Calgary from re-development - this will drive down property values.
- Bad idea. Stripping people of their rights to use their own property is not the solution.
- Forcing home owners to comply with expensive new building codes is unfair.If someone wants to renovate it is their right to do so as they wa
- Removing homes, businesses or communities would be very costly - I totally disagree with this.
- I don't agree with the city interfering with individual home owners rights.



- This option is a joke. Springbank reservoir ASAP. Shame on the Govt for their inaction and wasting taxpayers money on repeat studies.
- Option #1 is to complete the Springbank Off-Stream Reservoir.
- Let's proceed with more concrete and effective measures first. Build the Springbank Reservoir!
- Let's complete the Springbank Reservoir and many of these other measures may not be needed.
- All non-structural measures should only be considered after mitigation is built. Non-structural measure should not impact current structures
- Clear cutting upstream has to stop. We continually do things where the left hand doesn't know what the right is doing and homeowners suffer
- Any new bylaws should not negatively impact home owners in the floodplain or flood fringe. Government flood insurance should be offered.
- This is not practical unless the province wants to buy all of us out! Every major city in the world is built beside waterways, build a dam!
- Useless until after concrete measures in place.
- Flood mitigation building codes need to be robust & enforced. Removing homes, businesses or communities would be \$\$\$\$ and loss of tax base.
- A good idea for new developments. Existing homes and structures need to be exempt - we can't roll back the clock on previous decisions.
- Should be applied only to new development
- Policy and land-use regulations can be effective for greenfield developments, but are completely impractical for existing development.
- No question this is part of the answer. But it must be done fairly - proper compensation so people can buy replacement property.
- Sadly, this is what should have been done. While I understand why people don't like it and it is costly, ultimately this should be done
- Do a feasibility study on McLean Creek. The land in question with this option should NEVER have been developed, but we cannot move backward
- Destroying existing communities on purpose is impractical and counter-intuitive.
- This is as ill advised as the original floodway buyout policy - look where that got us! Millions wasted!
- I don't like this idea. The development has always been there and will continue to be there, just like every city around the world.
- The idea of forcing people out of their river-backing homes should not be on the table.
- Hate the idea of my neighbours in Bowness - many of whom are elderly - having to shoulder the burden of flood-proofing
- Complete the Springbank Off-Stream reservoir and then address new policies. Policy changes probably won't be required.
- Removal of buildings is impractical and prohibitively expensive, to say nothing of the destruction of the oldest neighbourhoods in Calgary



- Should stormwater measures fail in Highland how much will the taxpayers of Calgary pay to fix or buyout? Alta govt bailed out Elbow wealthy.
- LID practices...green roofs, permeable pvmt, wind, solar, internal drainage areas based on topological constraints the least costly option
- Science and "best practices" worldwide should be our blueprint going forward with any watershed development. If something works...free now?
- Cost to the City to manage stormwater through Highland will be 20 mill plus...trees, topography, wet ponds cost nothing to do the job now
- A man drowned on 4th St. trying to move his vehicle during a rainstorm. 40th avenue cannot handle any additional storm water. Taxpayer money
- Confederation Creek flooded 4 times this summer because of densification on the hills surrounding it. Infills increase water runoff to creek
- Developing in a natural watershed that is purifying water and air (for free)for the City of Calgary and Nose Creek seems counter-intuitive
- Planting more trees in the river area most especially in the riverside. Scarcity of trees made us more prone to flooding.
- Preserve theHighland Park watershed . Development in the area should be restricted to four stories otherwise traffic is excessive.
- A serious look needs to be taken at the old Highland Park Golf course site in the NW. Ideal location for flood mitigation before development
- It seems most major cities 'grow up' around water and rivers. Need to look to innovation, good development practices....
- Please include the Highland Park wetlands and watershed from being developed as this is a critical infrastructure for flood mitigation.
- West Nose Creek, Nose Creek and Confederation Creek (Highland Park Golf Course need to be included in the long term plan.
- Daylight Confederation Creek through Highland Park, move condos and station east of Centre by church and bottle depot
- not reasonable for taxpayers to eliminate risk of living on a floodplain-but maybe to bring insurance within reason say 5k/yr on a 1M home
- as communities densify over time multi story with flood resistant main floors/bsmts make great sense
- this will change the look and feel of communities over time but i don't think thats all bad if the alternative is a community under water
- moving people is the only way to reduce risk to 0, all other options leave residual risk.
- LUBs ensure sustainable development. Perhaps it could be more restrictive for developers/new builds and less for renovations to existing.
- Although I think people buying or renovating houses in mapped flood areas should be doing so at their own risk I approve of LUB...



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- What if we encouraged/mandated green roofs for all downtown towers? How much stormwater would this divert?
- What if all of the streets and parking lots downtown were transitioned to permeable paving? Using the stormwater capacity of the soil?
- Calgary has one of the largest footprints of any City. LUBs should address the removal of vegetation and riparian areas in new communities.
- Development bans are wrong. Reasonable building codes should be implemented consistent with the infrastructure protections effected.
- I feel that people should be allowed to live in floodways, but only at their own risk, including purchasing flood insurance.
- Must respect the character of existing communities and be effective for all existing structures.
- Ineffective because they will take up to a century before they apply to all.
- Reliable and resilient infrastructure make bylaw changes useless.
- Design guidelines on new developments in high-risk areas.
- The heavy hand of govt to place financial hardship on its citizens..... NOT THE SOLUTION
- Does not provide protection only inequity between neighbors be it flood damage or prop value
- Does NOT provide flood protection. It only cretes
- Better to build smart than try to stop mother nature. Change building codes to allow for homes on stilts, or built over car ports.
- In the early-mid 1900s, people used to come down to the bow river to watch properties flood in the spring. You can't stop mother nature.
- Really? 140 characters to comment on this important matter? That's a joke.



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Workshop #2: Riverbend CA (October 20, 2016)

Approximately XX participants attended this workshop.

Concept #1: Upstream Reservoir (Elbow River) and new reservoir upstream on the Bow River:

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Concept #2: Barriers along the Elbow River and barriers along the Bow River:

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Concept #3: Springbank Reservoir (Elbow River) and barriers on the Bow River:

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Non-Structural Measures:

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Workshop #3: Bowness High School (October 22, 2016)

Approximately XX participants attended this workshop.

Concept #1: Upstream Reservoir (Elbow River) and new reservoir upstream on the Bow River:

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Concept #2: Barriers along the Elbow River and barriers along the Bow River:

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Concept #3: Springbank Reservoir (Elbow River) and barriers on the Bow River:

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Non-Structural Measures:

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Stakeholder Report Back: What we Heard

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Workshop #4: Cliff Bungalow / Mission CA (October 24, 2016)

Approximately XX participants attended this workshop.

Concept #1: Upstream Reservoir (Elbow River) and new reservoir upstream on the Bow River:

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Concept #2: Barriers along the Elbow River and barriers along the Bow River:

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Concept #3: Springbank Reservoir (Elbow River) and barriers on the Bow River:

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Non-Structural Measures:

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Workshop #5: Southern Alberta Pioneers Building (October 27, 2016)

Approximately XX participants attended this workshop.

Concept #1: Upstream Reservoir (Elbow River) and new reservoir upstream on the Bow River:

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Concept #2: Barriers along the Elbow River and barriers along the Bow River:

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Concept #3: Springbank Reservoir (Elbow River) and barriers on the Bow River:

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Non-Structural Measures:

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Workshop #6: Alexandra Centre Society (November 1, 2016)

Approximately XX participants attended this workshop.

Concept #1: Upstream Reservoir (Elbow River) and new reservoir upstream on the Bow River:

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Concept #2: Barriers along the Elbow River and barriers along the Bow River:

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Concept #3: Springbank Reservoir (Elbow River) and barriers on the Bow River:

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Non-Structural Measures:

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Stakeholder Report Back: What we Heard

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Verbatim Comments

Open Houses

Open House # 1 Riverbend CA (November 3, 2016)

Approximately 24 participants attended this workshop.

Concept #1: Upstream Reservoir (Elbow River) and new reservoir upstream on the Bow River:

- Opportunities to generate electricity
- Concept 1 , although would be more expensive in the end would be the most beneficial in that it would give protection to all Bow River communities and has other economic benefits i.e. power generation and recreation
- Wet reservoirs provide opportunities for drought management. Storing up water.
- Draught control
- Potential for reservoirs to fail and damage will be more severe.
- Some communities are only concerned about mitigation for them and do not consider mitigation needs to be looked at as a whole and how everyone will best be served.
- Build reservoir in Kananaskis. Would be an investment for drought and connect Bow and Elbow through diversion tunnel outside of the city
- All reservoirs should be designed for multi-use. Does analysis include non-flood benefits? i.e. is true benefit to cost ratio for this concept much higher?
- I think it's best to control the excess water before it gets to Calgary
- Fully support moving with concept 1 to mitigate flood concerns. That should get progressed ASAP!
- Concept 1 looks be the lowest overall impact ensuring the best long term risk reduction
- Strongly agree with upstream Bow River reservoir especially if it will mitigate not just flooding but also drought
- Reservoirs can help with ground water management
- Important we start on this now for long term benefits. Berms can be built to but in the end we would need this long term.

Concept #2: Barriers along the Elbow River and barriers along the Bow River:

- Barriers, berms, riprap should be planned/engineered to develop surfable waves along the river, bringing in massive economic and cultural benefits.
- Barriers are unsightly
- Barriers will make the city look ugly and not natural
- Barriers will make city more fun!

Concept #3: Springbank Reservoir (Elbow River) and barriers on the Bow River:



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- Barriers, berms, riprap should be planned/engineered to develop surfable waves along the river, bringing in massive economic and cultural benefits. (same comment as the other section)
- Most cost effective
- Protect people and property; minimize loss
- I represent 7 properties on Bow Cres NW. They are mostly in the 6700 block across from the island. We are not interested in flood walls. We have considerable investment along our Riverfronts. We have not been flooded.
- Barriers make sense for downtown core. Combine with some gravel removal.

Non-Structural Measures:

- Risk tolerance is a personal choice and The City shouldn't be making decisions on behalf of private property owners. Land use restrictions do more damages than good



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Comment Form Summary

Do you have any additional feedback you would like to share?

- The posters/info boards were very helpful and were supported very well by the staff. I see value in concept 1 and concept 3. Concept 1 – reservoirs have appeal as they don't change our current excellent access to the rivers, especially the Bow. However, "saving Calgary" at the sole expense of others is not fair. Also, the benefit of coverage may not be enough to justify the cost. Concept 2 – The combination of 1 reservoir plus barriers gives a much better benefit of coverage and shares the impact between rural and urban citizens, as well as government. It has also been helpful to understand how primary changes e.g. riverbanks can then positively impact (prevent erosion) of secondary bluffs. E.g. west end of Riverbend is on a high bluff and would be protected by improvements to the riverbank south of Glenmore Trail on the east side of the river.
- Concept #1 is the least disruptive plan within the city and most appealing. Barriers are ugly but better than flooding. Preventingalbertaflood.ca
- City should go with options that include riverbank work and can be planned/engineered to create great recreational opportunities and create massive economic and cultural benefits. I don't believe the whole 'it's ugly' concept because whenever we surf at 10 street crowds of happy surfers and bystanders/pedestrians gather to watch surfers in the water. Surf waves are great and are a major reason as to why I moved back to Calgary permanently.
- Protecting the city core is crucial: need to keep downtown and stampede grounds dry. Need to move or remove some gravel bars. Like the work so far!
- It worked: I was able to talk to different city engineers, staff. Could read comments of all.
- Strongly support the idea of more than one measure being put in place (i.e. upstream reservoirs and barriers). Must get the message out that Calgary is making progress on mitigation especially to ensure investors are still willing to invest in our city! Equal effort must be put into protecting Bow River communities. It appears as though only Elbow River communities are benefitting so far. At times it has felt like Riverbend is a forgotten community with respect to flood mitigation. However, we are exposed as well, so it is hoped Riverbend is being considered. Calgary is subject to extremes. While flooding is one of those extremes, so is drought. It would make sense to factor in drought risk as mitigation measure are put in place, especially upstream reservoirs.
- I am learning to support a combo reservoir/berm concept. I support both Springbank and other bow river reservoirs. In addition, to alleviate a 20 year flood scenario in my neighbourhood – Bow Crescent, Bowness, a smaller berm could be added to properties along Bow River in combination with the reservoir addition. I do not support a wall concept in any combination or alone, an earth berm is in keeping with the natural aesthetics of the area. I do not support the berm or wall concept alone without addition of reservoirs. I do not support the construction of a pedestrian bike path on or beside a berm scenario – this would severely impact the security of our property.
- I was unhappy to see the level of self-serving individuals who attended the workshop at Inglewood on November 1. Some attendees came with the purpose of railroading their solution rather than a city solution. I understand you are aware this was happening!!
- I represent 7 riverfront properties in the 6700 block of Bow Crescent NW. We are opposed to flood retention walls. We all have made considerable investment on our river fronts. We have never been flooded as we



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are above the 100 years flood levels. Contact [name, email and phone number have been removed]. We would be interest in what a 200 year flood mitigation would entail.

- Informative. Concise. 3 very different options. No perfect solution. Pros and cons to each. Well done.

How satisfied are you with today's session?

	Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Dissatisfied	Not Applicable
Clarity of information provided	x7	x0	x0	x0	x0
Project team's response to my questions	x6	x1	x0	x0	x0
Opportunity to provide my input	x6	x1	x0	x0	x0
Opportunity to hear others' input	x5	x1	x0	x0	x1
Session location	x7	x0	x0	x0	x0
Session time	x6	x1	x0	x0	x0

What worked for you about the session format and activities today? Is there anything we could do differently to make it better?

- More road signs to advertise the session. A sign on the overpass at 18 St and Glenmore Trail.
- Liked location and presentation in terms of different concepts, including cost/benefit and residual risk.
- Well informed and educate city staff and consultants. Good overview of problem, solutions and progress to date

Which community do you live in?

Riverbend-x4
 Falcon Ridge -x1
 Douglasdale -x2
 Bowness -x1

How did you hear about this session (check all that apply)?

x1 e-mail notice	x5 Community road signs	x1 Flood Info Newsletter
x1 Community Association	x0 Social media – Facebook/Twitter	x2 Word-of-mouth
x1 Community newsletter	x0 Online advertising	x1 Ward Councillor
x1 Newspaper	x1 calgary.ca	x0 Other, please specify:
x1 Radio/TV News	x0 311	



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Open House #2: Queen Elizabeth Elementary School (November 5, 2016)

Approximately 23 participants attended this workshop.

Concept #1: Upstream Reservoir (Elbow River) and new reservoir upstream on the Bow River:

- Single point solution makes regulation and maintenance much easier than distributing berms
- Reservoir on the Bow is important for water retention to mitigate climate change from future damage and drought conditions
- Environmental impact and cultural impact on aboriginal territories and historical sites and lands must be considered
- One dam upstream on the Bow is not enough and two will never be built. In city permanent (e.g. Sunnyside) and temporary barriers must be used to bring up the protection level
- Organizations such as CP, zoo, stampede have money to protect themselves so they no longer have stake in upstream measures. Homeowners do! The DRP did not pay out enough to them so they shouldered the costs.
- Zoo received the money right away to seal themselves off
- Stampede given \$\$ right away but homeowners did not
- Modify Ghost reservoir to permit rapid lowering to balance drought, recreation and flood protection
- Prefer Bow Reservoir to berms
- Springbank reservoir is an important project to complete. Get it done! Need for fair compensation to Springbank landowners who are impacted.
- Use combination of 1-SR1, 2-one dam upstream on the Bow, 3-in city barriers including ground water protection where easy and economic e.g. Sunnyside, 4- temporary barriers in other locations maybe Bowness, 5-objective is to have enough physical mitigation to bridge to affordable insurance.
- We need both Springbank and an upstream Bow project. Upstream is the only way that protects the entire city and provides security to homeowners and businesses
- Upstream reservoir concept. Springbank Reservoir is the lowest cost option to protect against significant damage to Calgary neighborhoods and infrastructure.
- Reservoir over berms for sure
- Upstream let's you regulate the water much better than berms
- Has to be something upstream - needs to be priority.
- We need upstream. Springbank landowners unfortunately have to give up something and should be fairly compensated. They are only 12 landowners who are directly affected. There were 10s of thousands affected. Dam Springbank!
- Prefer concept 3 and add the additional reservoir on the bow

Concept #2: Barriers along the Elbow River and barriers along the Bow River:

- Bow Crescent berm would never work. Negotiating with hundreds
- Homeowners cannot touch property adjacent to river.



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- Would also be politically difficult to oversize berms for climate change impacts, limiting their effective lifespan; dams could still provide some benefit in this scenario
- Barriers can trap water behind them in case of a flood if water breaches them. Barriers still allow for seepage. Barriers need to be 3-4 metres high but even wider at the base.
- The cost ratio benefit is very low for the barrier concept and does not protect against ground water.
- Resent that the Elbow River communities are so protected and catered too. Sense of entitlement
- Protect public infrastructure first
- Parkdale - unknown and needed is the whole modeling of what will happen next time
- Use combination of 1-SR1, 2-one dam upstream on the Bow, 3-in city barriers including ground water protection where easy and economic e.g. Sunnyside, 4- temporary barriers in other locations maybe Bowness, 5-objective is to have enough physical mitigation to bridge to affordable insurance
- Berm concepts with people/wall no public access to previously private houses
- Homeowners along the river would lose at least 10m (30') of their backyards to a berm. With a berm, they would not have use of 2 significant part of their land. They could not use it for gardens, sheds, storage or anything else.
- River pathway system is one of Calgary's greatest community assets, and barriers would either hide the river from pathway users or make pathway access difficult.
- Too many stakeholders would be very difficult to maintain through U R/W's or access agreements. How would individual owners deal with AEP if riparian habitat is impacted?
- Talk about the number of houses impacted not just the cost of the damage
- Bowness bank stabilization planning is a real disconnect
- Open lot is 'frozen' in Bow Crescent. No decision making need to go ahead.
- Those who benefit the most should bear the greater share of the costs.
- Bowness took down berms for aesthetic reasons, gained land to the river extending properties
- I don't want to pay to protect private property. Risk needs to fall on property owners or tax them more to help pay for structural mitigation.
- If private land owners want protection let them build their own barriers or pay for insurance.
- Protects local existing neighbourhoods
- Flood walls when necessary could be barriers or wide enough to become part of pathway systems
- Length of time to expropriate land makes it not feasible

Concept #3: Springbank Reservoir (Elbow River) and barriers on the Bow River:

- Should have made room for the river as it turns at Bow Cres and Montgomery Hill
- Flood walls may collapse/crack over decades. Barriers and berms are preferred
- Put barriers on the road side of available land, no on the river side. Evacuate bike paths in case of a flood emergency
- If downtown will be protected to a higher level then that some level of protection must apply across the river.
- Downtown is the economic engine of our City and province. We need to protect high density residential and employment lands over low density (and wealthy) residential areas.
- Need reservoir on the Bow at Glenbow. Good for future water shortages from climate change.



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- Flood walls that can be raised and lowered
- Barriers are a good solution for Bowness - but how can you fit them?
- Why didn't The City put easements post 2013 in Bowness to build barriers? It's too late now that rebuilding has happened.
- More engagement in places like Bowness where barriers may be needed but not wanted. Let those landowners decide what they want.
- Melting glaciers and climate change will cause drought/limit water use in the decades to come. Reservoirs may be more important
- Barriers should protect public goods over private goods. Homeowners need to assume the risk of living next to the river.
- Upstream mitigation combined with select barriers (that protects public infrastructure) is the best option. Best cost benefit ratio.
- Makes sense to do both, but concerned that each side will be compromised if they assume the other side will provide protection
- Best long-term and wide spread benefit. Most long-term cost savings.
- Preferred option includes SR1 which must be completed
- Appears to have the greatest benefit vs cost
- Use combination of 1-SR1, 2-one dam upstream on the Bow, 3-in city barriers including ground water protection where easy and economic e.g. Sunnyside, 4- temporary barriers in other locations maybe Bowness, 5-objective is to have enough physical mitigation

Non-Structural Measures:

- Zoning bylaws and ARP's need to be developed for the flood fringe and hazard areas to protect property owners (no insurance for home owners) from major losses
- Too late! City is already build in flood prone areas. You can't now say no more building will be allowed. Fort Mac/Drumheller are floodways. We haven't stopped building there. We need upstream measures.
- I don't think this will be able to stick. Too much pressure from developers means that partial solutions like raising building footings or relaxations for non-priority land uses means development will occur in floodplain anyway
- Make it easier for landowners to repairing banks. How come the City and CP do it so easily? Inform citizens of the process and approval requirements! Make it easier!
- Protection and education for renters in secondary suites is needed
- Protect the city core
- More emphasis should be placed on emergency response
- Mission bridge redesign. Cantilever.
- Designate headwaters Bow Elbow is potential areas (i.e. no more logging)
- Loss of rental properties for basement developments can be supplemented by mandatory rentals (subsidized) for new buildings and development
- Incentivize new development to be designed for flooding. Tax breaks or subsidies?
- No draining of wetlands



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- Stop trapping the beavers.
- City should work with insurance companies to ensure that mitigation results in reduction in premiums and increase in availability of insurance
- This would also require regulations to consider climate change impacts which would be very difficult to specify due to the imprecise nature of these estimates. How do you rationalize the balance between the public and developers?
- Dredging center street as last resort
- No basements in flood fringe and hazard areas
- Rules are different for homeowners and commercial/businesses. Homeowners can't build a structure on their riverbank to protect it but the zoo/stampede/CP all stabilized and protected their banks
- Absolutely required for all scenarios. City, Province and each home owner /property manager must be prepared. Must be diligent.



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Comment Form Summary

Do you have any additional feedback you would like to share?

- 1- Springbank Reservoir – This must be completed. We must do all we can to mitigate the impacts of future flooding. I appeal to those land owners who would be impacted by the reservoir. You have the ability to help mitigate the impacts of many future natural disasters for so many families in Calgary along with all of the infrastructure within the City. Get a fair deal that considers how they may impact you but please make it happen.
- 2- Berms and barriers – The community in Erlton along with the Erlton LRT station and other infrastructure in the area can be protected with Berms and Barriers. Please consider berms along the Elbow from 25 Ave bridge around to the Erlton Station and the barriers within the Stampede Park. This will protect Erlton Place, Erlton Street, Erlton Road residential from the disaster of the 2013 floods.
- I am support of reservoir on Bow and Springbank proposal, as these will have major benefit to reduce flood risk to property owners (residential and business). Downtown as a major employment centre must be protected. As a landowner/property owner living on Bow Cres and adjacent to the Bow I have grave concerns over building of barriers along the Bow. I would be directly affected by this concept. I am concerned about the effect on property values, my lost enjoyment of my backyard, disruption during construction, loss of mature trees, and damage to fish habitat and other species habitat.
- We're just moved to Bow Crescent NW to be on the river. We spent a very 2 weeks reviewing the 2013 event and projections from The City and Province. We felt based on local work by The City to prevent [non-legible] back up, work the sellers had done, and the TransAlta/Provincial agreement on the management of the Ghost Reservoir, that our particular property would be safe in a 1:100 year event i.e. hopeful we did our due diligence. We moved to be on the river. We're outdoor people. A large amount of our warmer days are spent as close to the river as possible. We're avid birders, we're probably going to take up some sort of paddling and we want to learn to fly fish. A large berm/wall would take this away completely. We are therefore very opposed to the local barrier concept. It appears to be similar in cost to an upstream dam and doesn't have the positive associated with a new dam (recreation, drought management, power generation). Thanks.
- If you are building barriers consider ones that raise and lower. Lego blocks for emergencies to maintain homeowner access, to sandbags gel bags. Consider at cost. Flood evacuation plan for residents, emergency posted e.g. light stands. Educated.
- Put all my ideas on post-it notes.
- I liked being able to talk to my neighbours, staff, and consultants. I can't think of anything to change.
- Concept 4 – Non-Structural Measures. Reference – city flood resiliency. Because overflow of the rivers as well as an excess of ground water due to heavy rain caused the 2013 flood, perhaps we should be considering how to handle rainwater in ways other than providing larger and larger storm sewers. My understanding is that presently 45% of residential lots can be developed (homes, garages, decks over 2 feet above grade and other structures). In the past, I believe that this percentage for 40%. Perhaps we should return to the 40% rule. This would increase the amount of open space available for ground water drainage. Also we should be adopting a more environmentally responsible approach to handling excess rainwater by encouraging the use of pavers, pea gravel etc. (those materials that allow rain to soak into the ground rather than run-off) and discourage the use of concrete and asphalt paving. Paved laneways should be a thing of the past.



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- [Contact information removed]. I support an upstream dam absolutely, however would never want a flood barrier along the shoreline impacting access and view of the river.
- I think the upstream reservoirs make the most sense. Barriers along the river are very difficult to implement. Home owners as a group would require years of negotiations to sign off and enforcement would be impossible. Most would not accept the loss of property involved in a public pathway as shown in diagrams. Also barriers would simply move the problems downstream. Springbank is a better location for a dry damn than McLean Creek area. Far less environmental impact. However, home owners should be compensated fairly for the future value of the land (not just the current value). As Calgary grows, they are giving up very valuable future development land.
- Please move ahead with option 3 + some non-structural. This is the \$1 billion option to do the Springbank project and start work on Barriers in the easiest locations along the Bow River. I'd also like to see insurance companies kick in money for this project in the form of upfront capital or lowered premiums, given that they will benefit from this. One way to do this is to advertise which insurance companies supported it so that residents can switch insurance companies if they choose. I also believe that the owners of houses should also kick in to the project. This could mean increased property taxes for houses that appreciate in value on this announcement. Please have a bias toward action on this and spend less time on planning. Calgary spends too much time trying to satisfy everyone and needs to just move on more economical solutions.
- [Contact information removed]. No barriers because of Wildlife i.e. (2 foxes) also aesthetics. Support upstream dam.
- I think it's clear that all of these concepts would require a compromise between landowners directly affected (i.e. those in Springbank in the dam scenario or those that would have berms on their properties in the barrier scenario) and the larger portion of the public affected by flooding. However, in the balance I think there are a few factors that are in favour of the Springbank dam. First, climate change should be considered in any solution. Most estimates agree that river flows will increase significantly, but it is difficult to establish with certainty exactly what that increase will be. This makes option 2 and 4 difficult, because they are "all-or-nothing" and therefore would need to be oversized (higher berm in option 2 or larger setback in option 4). This oversize would greatly increase the impact on immediately affected parties, and may turn out to be unwarranted if the climate change increase is less severe than estimates. The advantage of the dam is that it would provide amelioration in any climate change scenario, and therefore doesn't force an undesirable choice. The second is the impact berms would have on community infrastructure. Calgary's great river pathway system would necessarily be impacted if full-height (3-4 m) berms were implemented. In places, existing houses to be removed would quickly outnumber affect Springbank landowners. Finally, storm outfall gates would require a huge (if distributed) infrastructure investment and recurring maintenance costs to ensure they don't cause their own problems.

How satisfied are you with today's session?

	Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Dissatisfied	Not Applicable
Clarity of information provided	x7	x0	x0	x0	x0
Project team's response to my questions	x6	x1	x0	x0	x0
Opportunity to provide my input	x6	x1	x0	x0	x0
Opportunity to hear others' input	x6	x1	x0	x0	x1



Flood Mitigation Measures Assessment

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Session location	x7	x0	x0	x0	x0
Session time	x6	x1	x0	x0	x0

What worked for you about the session format and activities today? Is there anything could we do differently to make it better?

- Great displays and layout. Informative.
- Frank from The City was very responsive. I also attended the Sunnyside/Hillhurst community workshop in October. I benefited from multiple sessions/opportunities to participate. Multiple opportunities provide time for new information to sink in an allows time for thoughtful consideration. More sessions would have been helpful. One on one opportunities to ask questions was invaluable.
- We really enjoyed Frank’s ability to flesh out some of the details in regards to online and community based information we already had.
- Access to key staff engineers Frank Frigo and Deighen Blakely (viewing computer models) was extremely valuable and informative.
- Reasonable, much more appropriate than the web/facebook type of input.
- Laptop with 100 year and 200 year flood maps.
- Access to key people.
- Love the open concept for input, however would like to see more survey type input to make it more clear where others stand. Calgary staff were very well informed, this was great. Would like to see a bit more detailed design stage i.e. specific problem areas, solutions around major river crossings, etc.

Which community do you live in

Erlton -x1
 Bowness –x5
 Sunnyside –x3
 Brentwood –x2
 Hillhurst –x1

How did you hear about this session (check all that apply)?

x5 e-mail notice	x2 Community road signs	x1 Flood Info Newsletter
x4 Community Association	x1 Social media – Facebook/Twitter	X3 Word-of-mouth
x2 Community newsletter	x0 Online advertising	x1 Ward Councillor
x1 Newspaper	x2 calgary.ca	x1 Calgary River Community Assoc.
x0 Radio/TV News	x0 311	x2 Real Estate Agent





Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard
December 2016

Verbatim Comments

Facebook



City of Calgary – Your Local Government
October 12 at 2:22pm · 🌐

As part of ongoing efforts in building **flood** resilience, The City is hosting a series of public workshops and open houses October 18 - November 5. Citizens from all communities are invited to attend to learn more and provide input on **flood** mitigation recommendations that will be presented to Council. Registration is required for some events. Visit our website to learn more & register.



Flood mitigation - Public engagement sessions

Drop by to learn more about the **Flood** Mitigation Measures Assessment and provide your input.

ENGAGE.CALGARY.CA/FLOOD [Learn More](#)



Flood Mitigation Measures Assessment

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When will we see shovels in the ground constructing a flood mitigation project ? I think we have talked enough about mitigation projects. (#8 Likes)

- They've been ongoing since the flood all over the city. Go drive by Blackfoot and Deerfoot right now to see one. (#3 Likes)
- **City of Calgary – Your Local Government** Hi Terry – Over 200 flood mitigation and resiliency projects have been undertaken since the 2013 flood, with 75% of those now complete. If you are interested our 2016 update (<http://www.calgary.ca/.../Flood.../Flood-Recovery-Report.PDF>) gives a good overview of the work done, and how The City is working to build resiliency to flooding. Our Flood Information portal has even more. (www.calgary.ca/floodinfo)

Floods affect all Calgarians whether they live or work near the river, use the pathways and rivers for recreation, or send waste to the sewage treatment plants. Many mitigation measures will change the way Calgary communities and rivers look, feel and move. This is why it is so important to have citizens share their opinions at these upcoming events, or online if they are unable to be there in person. Building flood resiliency takes the whole community working together. (#7 Likes)

- Those big excavators next to the rivers dumping rock for 3 years now would be that..... (#1 Like)
- Yes would be nice to have shovels in the ground for the Springbank project. Let's hope it keeps moving along and that we eventually get there so our beautiful and amazing city can be protected. (#1 Like)
- At the expense of Springbank---how about dredging the Glenmore Reservoir, which is probably half full of silt, and quit clear cutting the water sheds west of Calgary.
- if you check out the government site you will see all the reasons why they chose Springbank over McLean creek. The decision has been made - they are moving forward on it.
- Attend one of the flood sessions and the engineers will provide all the reasons why that would be ineffective. Getting informed is worth the time!
- <http://www.rockyview.ca/.../BraggCreekFloodMitigation.aspx> work on protecting Bragg Creek is already happening.
- <http://aep.alberta.ca/.../flood.../springbank-road.aspx> Lots of great info here including rationale for Springbank over McLean creek.

I went to the Bowness session today, and it was very positive, thanks for putting this event on in my community. (#2 Likes)

- **City of Calgary – Your Local Government** Hi - Thanks so much for attending and providing your input. We're glad you found it useful and a positive experience.

What's disappointing is that the "online" comment/idea section is limited to less characters than a twitter post. Obviously you don't "really" want public input for those that can't make the meetings.

Have you looked at the LA spillways? Do something like that...line it with concrete that doesn't wash away like the silly "rocks" that the city have put in place in areas of a so called "repair" LOL It's quite comical really that the city still thinks that these rocks won't get washed away again. What doesn't get washed way is a



Flood Mitigation Measures Assessment

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foot or two thick lined concrete layer.

I really don't think the city have talked to a lot of experienced people, no matter what they say. There's a HUGE difference between recovery and mitigation. One big problem is that we've dammed off the natural flow of the river to create these luxury reservoirs where people can build resort style communities and such (ie: Ghost Lake). Remove the dams....let nature be nature. The river has already changed after 2013.

But with a concrete layer like they have in LA, that won't happen...it can be controlled.

I would have put this on the website, but oh yeah....you have limited characters. Silly programmers..... (#1 Like)

- of Calgary – Your Local Government We understand that there are some limitations to the Engage portal, and have shared your feedback with that team. We really do want to hear from you, so please feel free to enter more than one comment. (There are no limits to the number of comments you can leave.) We also have two open houses coming up – one in the north and one in the south – should that format work better for you. Details are on engage.calgary.ca/flood

Take a look at the City's website. They have been very transparent about what was considered for mitigation and how it was evaluated in terms of go no go. The Water Resources team has these engagement sessions (which have been on going) built into their Watershed Resiliency mandate. The mandate is also available online. (#3 Likes)

What about flood mitigation and LRT tunnel for "Green line"?

In 2013 City of Calgary building was flooded, and nothing done yet to eliminate building flood in the future. Now you want to build tunnel.

Is this smart choice for public transit? (#1 Like)

- Have you heard about New York City subway system
 - have you heard about how many times that system has been flooded???
- https://www.youtube.com/watch?v=anLR0_C1XvE
- Seriously, living in Calgary I don't care about other cities even it's New York or Dark side of the Moon
But I do care about safety and protection of people and equipment in Calgary, and about my Taxpayer money as well.
I don't like to pay for somebodies stupidity.
If Councilors are ready to take full financial responsibilities for future disaster I, probably, would agree with this solution.
I don't like situations like current situatio with West Village land when nobody responsible for clean it up. Do you know why? Because City Aldermens voted vor annexation of this land in " as is" conditions, and people like you supported them



Flood Mitigation Measures Assessment

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What about dredging the Glenmore reservoir, which is probably half full of silt , and quit clear cutting the water sheds west of Calgary. Instead of the ridiculous Springbank dam idea. (#1 Like)

The best flood mitigation is to stop building in flood plains. It doesn't matter how much we try, mother nature will take her river back. (#1 Like)

Sure hope they take another look at the development going to happen at the old Highland Golfcourse. It sits on a natural springs & they are going to build condos. (#4 Likes)

- Omitted
-

I think the city is short-sighted if they are not looking at the Ghost river watershed, which is being cut by those "non-sustainable" logging interests..Spray Lake Sawmills. (#1 Like)

When the flood first happened I sent city hall and the mayor an email and said build a canal from the ghost dam into a dry dam, like a huge empty lake so they can divert the water immediately into the canal when flash flooding occurs.

They went with this solution as their answer to save calgary from ever flooding again. But they said their "think tank" thought of this. I guess I was their think tank lol. Flood a few farms and save a city.

City is doing what it is supposed to do, and our city is doing a great job. Go Calgary. (#5 Likes)

- Do you own a lot of property in Calgary do you? (#3 Likes)
 - Ignorance is bliss. (#1 Like)
-

I was under the impression dry ponds were constructed to handle the over flow .. to prevent flooding.. Bronconier days..

How's about taking some of the stones,trees,new islands back out of the river. (#1 Like)



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It was a 1 in 200 year flood. Lets just spend Billions on it in case it happens again.

- They're 'century floods' and we had 2 within a decade. (#2 Likes)
 - And if it did cost billions... how much damage do you think 1 flood costs? And 'fabricator' is misspelled on your profile. (#2 Likes)
 - In the early 1900's 3 floods of greater magnitude occurred than the 2013 flood occurred in a ten year period. In current times with climate change and global warming the weather patterns are even more unpredictable. In 2013 the city of downtown narrowly escaped complete flooding which would have cost billions to rebuild and economic loss. This is a real problem that needs to be fixed. It's worth the investment to protect our city and all those whose livelihoods are dependent on it. (#1 Like)
 - Anyone who lived through the 2013 flood or volunteered in flood areas would know that the damage and cost was enormous in addition to the emotional impact and loss of life. All could have been prevented. Flood mitigation is necessary.
 - a few people have told me that. I blame spell check
 - on is misspelled on your comment
 - 'on'? And I did my replies from a Smartphone... not bad, eh? lol. Where is the spelling error (I'm not above making such errors, believe me).
-

How come the city only responds to the top three posts?, don't the rest matter?

- That's just how Facebook works. When the poster responds to a comment you see it first. I assume the City would like everyone to go to an event or respond online so they can answer questions.
-

DREDGE the bottom of the rivers. Make them 100' deep. that would hold more water when it floods.

Problem fixed. Next! (#1 Likes)

- Then people like you could fall into them and drown!
 - so what's your solution. Where would you put all the extra water during the flooding? And dredging the rivers wouldn't make them deeper unless there's a flooding it would just make them lower. (#2 Likes)
 - The Springbank project will divert water during flooding. Attend one of the sessions and learn all about how it can best protect the Downtown City of Calgary, Stampede grounds, the zoo, Saddledome and surrounding residential communities from the next massive flood. (#1 Like)
 - The Bow is fish habitat, not a drainage ditch.
 - And? The repeated (2 'century floods' within 10 years of each other) causing billions of real estate damage... dredging would be a temporary inconvenience to the fish, they move from areas being worked on. So what else you got, besides stating the obvious... water is wet?
 - Digging the rivers deeper so they could have a larger capacity for water during floods hold more water like a bathtub I don't see how that would affect fish they would still be lower down they would still be in the same River
 - Just great when trolls post not offering any solutions just posting the obvious very helpful
-

what about not building in flood plain ?? (#2 Likes)



Flood Mitigation Measures Assessment

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- The downtown, Calgary zoo, stampede , many schools, and neighborhoods , are already built. (#3 Likes)
 - What should we do with all that was built over the last 100 years when the City of Calgary was established. Do you suggest we move downtown Calgary, Stampede grounds, Saddledome, the Zoo and all surrounding communities? Seems a little late to consider "not building in a flood plain" when that's where our city currently thrives and resides. (#3 Likes)
-

The recent decision to move an unprecedented amount of water through the Nose Creek water shed (Harvest Hills) could create some real problems. The decision by our City Council to develop our valuable green spaces could prove detrimental.

I also believe (through my own recent experience) the words engagement and transparency most often stand for deceit and appeasement. (#2 Likes)

Build only parks in flood plains and there is little to mitigate. Spending 100's of millions to protect a few houses is a foolish waste of time and money. (#2 Likes)

- 100,000 people were evacuated during the last big flood, including City Hall and most of the downtown core. It would cost billions and billions of dollars to make the park areas you are talking about. (#4 Likes)
 - How much it cost to insurance companies: evacuation, repair, rebuild, temp housing etc? Just few houses in the Rideau park and Mission area and Calgary Stampede (Saddledome) cost billion at least with all fancy stuff in basements and so
 - Do you suggest we move downtown Calgary, Stampede grounds, Saddledome, the Zoo and all surrounding communities and build parks instead? Seems a little late to consider that option. (#2 Likes)
-

Seems like common sense doesn't it. 😊 (#1 Like)

The mist beautiful City in the world

Hmmm I'm sure this will cost us some cash!!

- The downtown City of Calgary is at risk for massive flooding. I'd hate to think of the cost and loss of jobs if this were to happen.
 - It's already happened twice.
-



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Flood mitigation ? Here is a tipwhen the Government orders Trans Alta to lower Dam levels , and Trans Alta responds by saying no, and proceeds to overflow their dams , revoke their right to do business in this province and get competent dam operators to replace them .

Great pic

My beautiful city

How about a no fluoride poisoning of our water workshop

Betiful city i like it



Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard
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Verbatim Comments

Twitter



City of Calgary
@cityofcalgary



Following

Help build Calgary's resiliency to flooding.
Attend a workshop or open house Oct 18-Nov
5. [#yycflood engage.calgary.ca/flood](https://engage.calgary.ca/flood)



RETWEETS
44

LIKES
54



9:22 AM - 12 Oct 2016

3

44

54





Flood Mitigation Measures Assessment

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Buck Buchanan @dblebuck · Oct 15

@cityofcalgary 10% unemployment this is really important.



Merlin @MerlinYYC · Oct 14

@cityofcalgary millions wasted on river pathways should have been raised several feet before completion total lack of planning





City of Calgary
@cityofcalgary



Following

Have your say and help build flood resiliency in Calgary. Register for a Citizen Workshop.
[#yycflood engage.calgary.ca/flood](https://engage.calgary.ca/flood)



RETWEETS 16
LIKES 4



8:09 AM - 13 Oct 2016



16

4





Flood Mitigation Measures Assessment

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City of Calgary
@cityofcalgary



Following

Share your opinion on flood mitigation in person or online. [#yycflood](#) [#yycengage.calgary.ca/flood](#)



RETWEETS

5

LIKES

2



2:23 PM - 14 Oct 2016



5

2





City of Calgary

@cityofcalgary



Following

Share your opinion on new flood mitigation plans at a Citizen Workshop. Oct 18-Nov 1. [#yycflood engage.calgary.ca/flood](https://engage.calgary.ca/flood)



RETWEETS

7

LIKES

2



8:23 AM - 17 Oct 2016



7



2

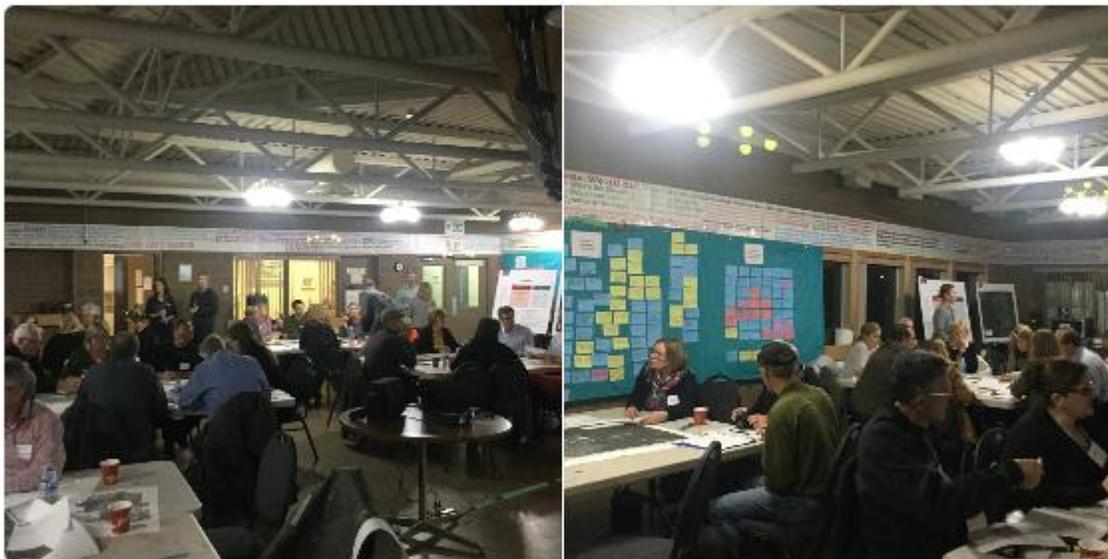


Flood Mitigation Measures Assessment

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 **City of Calgary**   [Following](#)
@cityofcalgary

We had a fantastic session on #yycflood mitigation in @HillhurstSunny last night. Thanks to those who attended and participated!



RETWEETS 3 LIKES 6



1:51 PM - 19 Oct 2016





Flood Mitigation Measures Assessment

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City of Calgary
@cityofcalgary



Following

Be part of building Calgary's resiliency to flooding by attending a workshop or open house. Oct 18-Nov 5. #yycflood
engage.calgary.ca/flood



RETWEETS
11

LIKES
8



10:25 AM - 20 Oct 2016

11 8



Flood Mitigation Measures Assessment

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December 2016



City of Calgary
@cityofcalgary



Thanks to those from [@RiverbendYYC](#), Douglasdale/Glen & other SE communities who participated in yesterday's [#yycflood](#) mitigation workshop!



RETWEETS 4 LIKES 2



10:50 AM - 21 Oct 2016



Christine Arthurs @carthursyyc · Oct 21

[@cityofcalgary](#) [@RiverbendYYC](#) Shout out to my fantastic colleagues...truly caring for our citizens, communities and our city! [#resilientyyc](#)





Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard
December 2016



City of Calgary
@cityofcalgary



Following

Thanks to everyone in [@mybowness](#) for coming out to our [#yycflood](#) mitigation workshop on Saturday. For more info: engage.calgary.ca/flood



RETWEETS
3

LIKES
2



7:21 AM - 24 Oct 2016



3

2





City of Calgary
@cityofcalgary



Following

Learn more about flood mitigation and share your opinions at a Citizen Workshop. [#yycflood](#)
engage.calgary.ca/flood



RETWEETS

3

LIKES

2



1:22 PM - 26 Oct 2016



3

2





City of Calgary

@cityofcalgary



Following

Learn what The City is doing to mitigate flooding by attending a Public Information Session on Nov 3 & 5. [#yycflood](#)
engage.calgary.ca/flood



RETWEETS

8

LIKES

8



9:24 AM - 31 Oct 2016



8

8





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December 2016



City of Calgary
@cityofcalgary



Following

Miss the [#yycflood](#) workshops? Attend a public info session Nov 3 & 5 to provide input on flood mitigation. [#yycflood](#) engage.calgary.ca/flood



RETWEETS
22

LIKES
25



9:10 AM - 1 Nov 2016



22



25



Hoarse Whistler @AdrianLuhowy · Nov 4
[@cityofcalgary](#) "is your property low? Then it will flood...eventually."





Flood Mitigation Measures Assessment

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Verbatim Comments

Emails

- Just a belated note to thank you and your team for running the excellent workshop at Bowness HS on Saturday morning. The turnout was perhaps disappointingly small, but the "flip side" of that is that we all had ample opportunity to engage in the lively discussion. It was encouraging to hear that the consensus was that upstream mitigation was the only realistic way to reduce the flood risk. I can't resist making one observation regarding some of my more vocal fellow participants - how is it that seemingly intelligent people will buy into a riverside property without checking the readily available information on the flood risk? I recall reading the Montreal Engineering Co. Report and other material that was available when my wife and I bought into Bow Crescent in 1975, when we decided that the peace, quiet, and abundant wildlife of a natural environment within the city were worth what seemed to be a fairly low risk.
Again, many thanks!
- Unfortunately I can't make it tomorrow night. What I would like to see is the 2013 peak Hydrograph with the SpringBank reservoir storage routed thro. I am curious as to how much of the peak flow you fell has been cut. That will provide an idea of the benefits. Also will there be backwater impacts upstream as the SpringBank reservoir is operated



Flood Mitigation Measures Assessment

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Verbatim Comments

Workshops

Workshop #1: Hillhurst / Sunnyside CA (October 18, 2016)

Approximately 45 participants attended this workshop.

Concept #1: Upstream Reservoir (Elbow River) and new reservoir upstream on the Bow River:

- Control of operations City verses Province
- Could increase drinking water
- Bow River Reservoir lacks specific site and capacity
- Not the best cost ratio
- Weakness - Impacts people who weren't impacted in 2013 - people may object
- Concern that only one reservoir is considered on the Bow. What about temporary barriers/additional barriers?
- Weakness- cost is so high - high variability in estimate
- Currently the focus (re SR1) seems weighted towards Elbow adjacent communities vs Bow River communities.
- SR1 will protect downtown - this is important. Bow is an attempt to balance community protection.
- Bow River reservoirs does not provide equal protection
- If it was a wet dam it could create recreation options
- Strength- use for energy generation
- Strength- opportunity for recreation in dry area
- Capacity of reservoir needs to be more
- Benefit it can be expanded
- Impacts to drinking water, opportunities for different sources.
- Will the cost be the same? This was an estimate.
- How many landowners residents might be displaced in Springbank Reservoir scenario?
- Are there projections on the degree of drought?
- Bow River mitigation - mitigate 2013 flood, what level is needed.
- What is difference/advantage of dry reservoir vs wetland option?
- Flood event calculation methodology - back castings or looking forwards climate change (future orientated)?
- 1 is the cost of acquiring land for reservoirs factored into 24 m/yr. average damage cost?
- Lack of detail
- What is the backup plan if the dam fails?
- If your building barriers on the south side of the river, it should be happening on the north



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- Will the Bow Reservoir protect the inner city (Sunnyside) communities?
- Why isn't there an option to build barriers and the Bow Reservoir?
- What happens to dry areas when in interim/between floods?
- Is 24 million cost/year average spread equally between all stakeholders/tax payers or weighted towards river communities?
- What other purposes will the reservoirs be used for, aside from recreation?
- Need to know what the difference is (businesses vs. homes)
- Is it business protection or home protection. Would be different design in all scenarios? Is there a different compact? Should there be a difference?
- Reservoir was other benefits - green energy, drought protection... but only 40% on Bow? Is it worth it?
- Is a reservoir realistic on the bow - would it be effective?
- What level does it protect us? Depend on insurance industry to get reasonable coverage - coordinate the mitigation
- Less pushback is can make it more environmentally friendly
- Strength is reduced community impact with reservoir
- No to barriers - don't like aesthetics. Prefer reservoirs.
- Bow River reservoir is most important
- Benefit is that it protects both businesses and homes.
- Purpose of reservoir are food flood mitigation, drought control and drinking water. Not just re use.
- Believe reservoir should be done. Skeptical that it will be done.
- Bow River also accommodates for drought
- Not concerned about look and feel of my community if we get flooded.
- Provides protection from drought and flood
- Short term mitigation such as barriers should be implemented
- Strength- controls water best
- This is one of the pieces of flood mitigation
- How long will it take to construct a reservoir on the Bow?
- We want to see the reservoir in the long-term but with other measures in the short and medium-term.
- It's too far away
- Need more risk mitigation in the short- to medium term. This is too long to go without any major mitigation work.
- There are too many unknowns with this concept
- The timing for reservoirs to be build is a concern
- Weakness- dams take too long to be constructed and used.
- Concern- need a staged approach to provide some protection
- Reservoirs could be 20 years out; non-structural could be 100 years out.
- Too far into the future, two-to-three decades out
- This concept puts us at risk for too long



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- weakness because it will take so long to make a reality it will weaken community certainty and stability. People will not make it a home.
- We are at risk for too long

Concept #2: Barriers along the Elbow River and barriers along the Bow River:

- Border communities not getting the level of service we pay for
- The barriers would also help to prevent sound
- Barriers are band-aid solution for mitigation
- Weakness - walls may not address root cause of problem
- How do you trade off economics and quality of life (sight lines, use of the river) want Sunnyside to get easy, economic decisions don't hold up because of Bowness
- Weakness - property required. May be costly and take time.
- Weakness - barriers create a pressures from rising water. Higher = higher cost.
- Barriers didn't work in Weyburn, Saskatchewan
- Important to consider other options aside from flood walls. Not as nice to look at. Decisions shouldn't just be based on money.
- Flood berms are somewhat preferable to barrier walls visually. A combination of the two may be a better option
- Need combo of earthen berm and wall
- Lower areas benefit more from the barriers
- Psychologically better because visually we can see it. Its reassurance.
- Consider looking at barriers on a triage basis, not 200-year flood.
- Preference for sheet pile like at the zoo (takes up less land)
- Walls can be beautiful public - the barriers are an opportunity for public art
- Property impacts with barriers
- Aesthetics is a challenge with walls blocking view of river
- Reduces access to river
- Weakness - change the river system/flow of river
- Barriers would create a more natural environment for the river because it would be less disturbed.
- If raise embankment would it be a wall? Would it prevent a flood really?
- Are barriers an enduring solution given the river changes?
- There doesn't seem like enough room in areas like Memorial Dr. for the width of berms required.
- What are the widths of barrier berms?
- How will barriers be implemented? At once, or in steps? Different barriers will impact different communities depending on floods.
- How effective would these barriers really be?
- Do barriers have provision for releasing water?



Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard

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- Bowness: is it more prohibitive to implement barriers there due to lack of easements/proximity of homes to river? How do we deal with these inequalities?
- Barriers - how do they impact the tourism industry?
- Bowness has been tearing down barriers.
- Strength - cost effective for Sunnyside
- Strength - can be built quickly to provide almost immediate protection
- Barriers can be aesthetically pleasing - it is important to note that. They can be usable in many ways.
- Access and amenity should be second to public safety
- We already are used to memorial drive as a barrier, the barriers walls are completely acceptable and welcomed.
- We don't object to sound walls - why do people object to flood walls - we need them!
- Provide safety should be the priority
- Earthen berms are great, we need them to be higher to the 1:350 year mark +.5m
- View impacts less important than protecting homes
- Weakness - barriers seem to be a short term plan - need for a longer term strategy

Concept #3: Springbank Reservoir (Elbow River) and barriers on the Bow River:

- Seems like a good hybrid option but without a Bow River reservoir option too many barriers still remain
- Weakness - only addresses 1/2 of the problem
- Doesn't protect downtown core exposed to Bow
- Don't see barriers only protecting us enough
- Barriers do not protect us against ground water
- Weakness - if no reservoir decision by province no decision can be made on barriers
- Weakness- doesn't address bow. We need a solution for both the Bow and the Elbow
- Would like to see groundwater barriers in Sunnyside - cheap and easy to do now. Don't wait for other parts of the City
- Are barriers worth the cost if it doesn't protect against ground water?
- Concept three has the best cost: benefit ratio
- Does not provide equal protection on the bow
- Residents of EV should be protected. Not for discussion tonight.
- Barriers do not look great along the river
- Benefit to river health because of the protection from barrier
- Ground water barriers will change the river upstream and downstream
- What if barriers don't work and flood over Crowchild and up to 5 Ave? Shouldn't we plan for 1:200 and larger events
- Reservoir would help and barriers would help for ground water issues...
- Rather see farmland south of the City flood rather than my basement
- Barriers on south side of the river near Sunnyside means north side is protected



Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard

December 2016

- Protects our economic core
- I'd rather have a wall than a wall of water
- Barriers are needed to mitigate out risk. Then do the reservoirs
- Concept three is the best option for the City
- I feel safer when I can see the barriers
- Safety is priority
- Want to see phased approach - short- medium- and long-term
- Start barriers ASAP
- Richard will give us his wheelbarrow to start now!
- Can we provide berms 1:100/+ as a short term plan? Protect for now and increase over time.
- Area indicated for Bow River reservoir makes sense due to river path there

Non-Structural Measures:

- Existing communities need to be protected
- Existing uses and development should be protected by The City
- If the use already exists The City should protect it
- Planning department is running a muck! Proposing silly solutions that are make work projects.
- The City would have to help make these happen
- Allow basement suites - acknowledge the risk but city needs to do own mitigation
- Don't want the city to leave us on our own once they put new regulations in place
- Enforcement and inspection should be required
- We should meet the standards over the next 100 years but still protect what was there in the first place
- The City needs to provide the same level of protection
- The City allowed the development in the first place - it should be protected
- Compliance with existing by-laws would be difficult
- Some of the redevelopment ideas aren't realistic/not workable
- Can't mitigate against everything. There is always a risk of more damage. No need to change everything
- Not there are height restrictions of building heights. Stilts would create a problem
- Don't do just non-structural concepts. Must include structural concepts also.
- The image show of the house doesn't suit our climate or urban planning
- Would limit housing options in attractive areas to live in.
- Need a selective approach won't work everywhere
- Not all buildings can be raised.
- Less important than structural mitigation measures. Shouldn't even be on the table.
- The cost to move/reinstall electrical/furnaces is high and doesn't make sense if mitigations will be made years from now.
- Could look at other types of secondary suite housing (laneway and carriage houses)
- Need for electrical, heating, how eater, laundry all to be raised above the flood line



Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard

December 2016

- Flood resistant/water resistant materials for basement development
- Cost to homeowners to "lift" -> move everything from basement up
- My basement in Sunnyside was built to get wet and dry out. Newer houses aren't built the same. Don't need a system that creates bigger basements.
- Rules and regulations change too often
- Consistency across what needs to be done in flood fringe/floodway/flood hazard area
- Clear difference for existing and new properties
- Needs to be consistent for everyone in the flood fringe.
- Flooding doesn't affect all Calgarians (if they don't live in the flood fringe)
- Need to have relaxation to LUB depending on lot sizes (feasibility)
- City could do cost sharing or tax relief to encourage people to build differently
- Consider financial incentives to facilitate change - steel studs etc.
- There is an issues with the fact that new homes can be built and sold in flood hazard areas with full disclosure of potential risks.
- Potential to allow for increased height (don't have to go as deep)
- High density structures should be on hold until mitigation measures in place address the risks
- Recommend having landowners build retaining walls around homes (about 2 ft.) give tax incentives to do so. Saved from 2013 level floods in Sunnyside.
- Constraints associated with square footage if limiting what could be in the basement
- Loss of use of space when not able to use certain parts of home
- People can feel punished by these standards. They are not sensitive to the historical context of communities.
- Too expensive and unfair for home homeowners to have to bare the cost
- Non-structural changes should not negatively impact home owners/tenants without appropriate compensation
- These tactics may be too heavy handed - will have a huge impact on community both social and environmental
- Non-structural items devalue community. People will not want to move there. Will be considered a lower tier community
- Existing areas have suites and basements - too much of a change.
- Reduces existing property values in future!
- Property owners should have the choice to rent secondary suites in flood fringe
- Would mean houses in Sunnyside would be worth less if these go ahead. (Develop could build bigger basements and we could get more money)
- I had to pay for the back water valve to be installed in my house - that cost fell on me.
- It's not reasonable to restrict basements because The City allowed development in the first place.
- Non-structural measures feel like an insult to injury
- Potential for 2 tier community when you stage these measures



Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard

December 2016

- Need to respect community character when considering non-structural
- Remove buildings in floodway creates a sense of loss/disjointed community
- Changes look and feel up high
- Would need to make vacant areas attractive community spaces
- Potentially communities will have dilapidated houses that can't be redeveloped because it's cost prohibitive
- Don't want to raise our houses because of the impact to the look, feel and cost
- To change building codes in existing neighbourhood will change the look of the neighbourhood. Nobody wants that.
- Only has social and economic impacts. Not environmental impacts
- DP need to look at how flood mitigation measures would impact neighbours
- Changes to buildings will change the community look and feel
- Avoid non-structural by building berms then the reservoir in the longer term
- Would affect character. The look and feel of our community matters to us.
- Some methods would destroy look, feel and moves. This is a walkable community and stilts change how we interact with our neighbours.
- Making changes to homes, changes insurance and cost of living and it becomes and unattainable community. We value diversity in Sunnyside.
- Social cost is that the tone/vibrancy/spirit will be changed by elevated houses.
- None of the non-structural measures provide for affordable overland flood insurance
- You can tell you have adequate mitigations when insurance and community is affordable
- Other urban area precedents - what is being looked at (re: Dutch examples) Dykes would these applicable for diversion mitigation technologies?
- All electrical will get shut off in a flood event because it is safe, so why more electrical? It will get shut off any way
- Who would pay to raise the buildings?
- How far would the regulations go? Would we have to put our homes on stilts?
- Is the City thinking of financial assistance?
- What criteria going to be for levels of mitigations? 1:100, 1:500 etc.
- Why wasn't economics accounted for on the info? It doesn't make sense to move... I see cost but no benefit.
- How do we account for unpredictability i.e. water from other communities' groundwater etc.?
- Decisions to condemn homes takes time and we aren't paid for years. Does the city consider bankruptcy in its studies?
- Climate is changing. We don't know what is going to happen
- Reduce risk to vulnerable people
- If you're going to renovate/rebuild, you may as well move critical "infrastructure" higher
- It's up to the individual but there is a need for education and informing people of their duty



Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard

December 2016

- Great community (Sunnyside) we don't want to move. Any protection they can give us (structural and non-structural) is positive. What you build is your own risk.
- Do more frequent updating of flood mapping. Every 5 years would be better.
- Floodway restrictions protect everyone
- Buildings would be taller which impacts streetscape and our sense of community. Being built to maximum height to mitigate for flood.
- Protecting economic core is critical because it is the economic engine of city.
- Overall, could help to reduce environmental impacts from waste of materials
- Prohibit land uses like hospitals and assisted living facilities in the flood fringe
- Measures in place to encourage growth, protect image of The City/brand (flooding negative)
- Restrict risky uses (hospitals, daycares etc.) going forward
- Awesome - get rid of buildings in floodway
- New housing should not have basements
- Waste of money on redevelopment. It will flood anyway.
- Is reasonable for basement restrictions in flood areas.
- I am okay with new development in my community not allowed to have basements (Sunnyside)
- There is an understanding that certain uses (basement suite) may be pre-existing and would not be allowed today in flood hazard areas.
- Basement development in flood fringe could be adapted to be "flood friendly" using building materials that are water-proof/friendly and raise electrical, water heater, furnace
- New builds should have minimal footprint to encourage water flow
- Land use restrictions and/or relaxations (height) to mitigate flood damage risk are acceptable.
- Reduce impact to people living in high risk areas
- The City could lead the way by making 1:200 the standard
- The more the City does to mitigate - the easier it is for us to get flood insurance (would be too expensive without mitigation)
- Moratorium on nursing homes until adequate structural facilities are built-up
- Senior facility was flooded in 2013 and it was a nightmare to deal with and they were moved back in (Mission). Consider moving these facilities in the short-term.
- Can see value making these recommendations for new development
- No secondary suites
- Timeline is critical. For all of the measures, they need to work together.
- Non-structural mitigation takes too long to be effective and are therefore a bad idea
- Flood fringe is determined by elevation and doesn't take into account any structural flood mitigation



Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard

December 2016

Comment Form Summary

Do you have any additional feedback you would like to share?

- Please have an ending, or a starting, executive summary at future meetings that tell everyone just what is at risk in a 1:200 or 1:400 year flood: 170 million a year in damages is actually 17 billion. Canada perhaps could not even afford to repair 17 billion in damages, so it is urgent to prevent flooding right now with berms and pumping stations. Build immediate infrastructure! Berms and pumping stations don't rely on hypothetical upstream mitigation like dams that will probably never be built for the Bow River.
- As a Sunnyside resident, I knew I was moving to a floodplain. I chose the community because of the river and accepted the risks. Protection whether structural or non-structural should realize the existence of the historical communities. Risks are inherent to any natural disasters whether floods, fires, volcanos, tsunamis, hurricanes, earthquakes etc. For insurance exits why not better flood insurance. Buildings downtown can be 12 stories deep why should we not have basements. If downtown is protected to 1:200 with the West Eau Claire barrier, then Sunnyside needs to be protected at the same time to the same level. There is already great risk due to the West Causeway on Prince's Island. Short, mid and long-term mitigation measures need to be balances. Thanks for your continued efforts.
- Shorter break, would like to continue talking. Decaf and tea option.
- The session was well organized and facilitated. Hope this doesn't become a hallow exercise in seeking opinions and feedback which will be largely ignored.
- I was concerned by the second half of the agenda. I'm afraid that The City might implement non-structural measures and then think they don't need to do any flood mitigation.
- Group: Parkdale- Sunnyside concern that storm water and sewer updates need to be done to bypass our communities to mangle upstream community contribution to flows. This will prevent on mitigate damages and level of service.
- Need to fund and build CDI projects for Hillhurst Sunnyside.
- I noticed that none of the three concepts mentioned upgrading the storm piping (e.g. to a larger pipe size/lift stations etc.) – I thought that in 2014, most of the flooding in our basements in Sunnyside was caused by the inadequate capacity of the storm piping.
- Concept 3 is the best option in the short/mid term, however we need the Bow River Reservoir(s) in the long term for this area (Sunnyside/Hillhurst) we also desperately need the storm sewer problem to be fixed ASAP. No matter what measures are taken re mitigation, we need the drainage fixed. Also, flood insurance is now available, but the cost of this is often dependent on the amount of structural mitigation provided on a municipal/provincial/federal level. We need the structural mitigation for the existing homes and businesses; the non-structural merely addresses forward build premises.
- The reality is that houses are located in flood fringe and floodway. It can be perceived that fighting mother nature (flooding) is futile. I would like to implement many of the non-structural measures from concept 4 to recognize this reality.



Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard

December 2016

- Waiting for the reservoirs may take 20 years. We need remedial work done now! Dredging and replacing debris (rocks, sand, silt etc.) back to the riverbanks. No flooding since 1912, just 2013, maybe dredging as before, is most sensible and least expensive. Remove the sand bars, and a small island made by the water flow. The fish and frogs will come back, Mother Nature is resilient. Natural Resources and Government can't control Mother Nature. Home owners do not want to move. Bringing in rocks and rebuilding banks the present way having done is a real eyesore!!!
- The utilities company that are managing the off/on switch should have back up systems available – should that be up to the home owner to have a generator to operate the sump pump? A lot of us would not have flooded if our power wasn't turned off without notice.
- How to mitigate the risk associated with a dam failure that is only 18 km from The City of Calgary Springbank dry dam?
- If barriers are considered for the Elbow and the Bow Rivers, there should be unified design concept that carries through each riverside in terms of image.
- Potential flood water management which is upstream of Calgary needs to be properly understood and managed. Private industry (TransAlta) has other drivers not related to floods. Natural flooding processes are destroyed by upstream dams. A potential fix is "man made flooding" to move river sediments without flooding communities. This possibly combined with dredging will improve river capacity within current constraints of river barriers. Constraining river or working with river? Sewer systems, once an area is flooded, can likely never prevent back flow into homes. Thus, The City needs to ensure and inspect yearly on effectiveness of back flow valves. Just as a furnace is the homeowners responsibility, free inspections are provided by this gas supplier. The water supplier (Calgary) and sewer supplier (Calgary) needs to ensure homeowner safety. \$170 million/year potential next 30% reduction since 2013 down to \$115 million/year federal/provincial/municipal governments.
- The main issue in Sunnyside is drainage. Our groundwater issues need to be prioritized – this would be the most effective way to mitigate damage. I think The City placing restrictions on basement development and basement suites in the flood fringe is perfectly acceptable. Three new houses were built on my block (5th Street NW) all with basements and I think this is a mistake. No new building on the flood plain is a good idea. No barriers without pumps! Barriers increase water retention.
- We should address Drainage (storm sewer) system in old Sunnyside.



Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard

December 2016

How satisfied are you with today's session?

	Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Dissatisfied	Not Applicable
Clarity of information provided	x10	x3	x2	x0	x0
Project team's response to my questions	X14	x0	x0	x0	x1
Opportunity to provide my input	x10	x4	x1	x0	x0
Opportunity to hear others' input	x11	x4	x0	x0	x0
Session location	x15	x0	x0	x0	x0
Session time	x12	x2	x0	x0	x0

What worked for you about the session format and activities today? Is there anything could we do differently to make it better?

- Did not provide an executive summary laying out the huge damages a large flood will cause. Have 15 minutes at the end for Q&A!!
- Basically all the feedback was very similar. The issues and problems re flooding are well known. How many times do we need to restate them?
- It would have been good to hear more comments from the other tables.
- Great format.
- Resident had opportunity to discuss their experiences and views on options.
- Information was good.
- Small groups was a good approach. Sandra gave a very articulate presentation, facilitators very good. As storm water drainage issues are arguably more critical to this neighbourhood, should have been addressed.
- Liked the format of presenting the information and then small round table discussion. Would like to get summation from all the comments made tonight. I would have appreciated having decaf coffee or herbal tea – something without caffeine this time of night. In general well done – hopefully this information will be used going forward.

Which community do you live in?

Sunnyside - x11

Hillhurst – x3

How did you hear about this session (check all that apply)?

x10 e-mail notice

x7 Community Association

x5 Community newsletter

x0 Newspaper

x3 Community road signs

x0 Social media –
Facebook/Twitter

x0 Online advertising

x0 calgary.ca

x3 Flood Info Newsletter

x6 Word-of-mouth

x1 Ward Councillor

x1 Other – Community Flood
Leader



Flood Mitigation Measures Assessment

Stakeholder Report Back: What we Heard

December 2016

x1 Radio/TV News

x0 311



Workshop #2: Riverbend CA (October 20, 2016)

Approximately 15 participants attended this workshop.

Concept #1: Upstream Reservoir (Elbow River) and new reservoir upstream on the Bow River:

- Springbank wastes water, wastes land, wastes taxpayer dollars, doesn't have the overall benefit, creates a false sense of security.
- Dry reservoir is concerning. Don't drain it like Pine Coulee Reservoir
- Building a reservoir near a city (opposed to in the mountains) is a risk.
- The reservoirs don't work on their own
- This is an all or nothing solution. No certainty or protection until it's build
- 2 dams alone will not provide enough protection
- Costs should take into account all the river
- SRI protects only a small populations base with high property values
- Reservoir could provide drinking water
- Look at down flooding wells as a part of the concept combinations into water formation. Can do a pilot test with one general
- Need to manage 3 rivers (Highwood, Sheep, Elbow) by placing reservoir in east slopes.
- Need to regulate erosion and sediment control. No matter which concept.
- "injuries" the environment
- Not saving access water in right of way
- Is upstream damn adequate/capable of providing enough protection?
- Holds the water at the source but not sure how downstream affected on release (e.g. Hidden Valley, First Nations)
- If you bought on the flood plain you have to live with the reality you may get flooded
- Concept needs to have 2 dams plus barriers
- Reservoir doesn't effect farming country
- With 2 reservoirs wouldn't need as many barriers downtown (fewer impacts)
- Length of time to construct dams is very long term
- Once it's built it would protect the downtown but it's too far into the future
- Puts at risk of the 170 million / year until the reservoir is build
- No change to look of community but it's so long-term that it doesn't protect us until that time
- Too far away to not provide solutions in the interim

Concept #2: Barriers along the Elbow River and barriers along the Bow River:

- Barriers could cause problems downstream
- It's a temporary solution
- Some neighbourhoods will be more feasible to build in

- Barriers are a band-aid solution. It's better to fix the source.
- Some areas it's more difficult to implement with a lower return on investment
- Certain areas its reasonably easy to implement but not consistent. A good return on investment.
- Should be based on feasibility and cost effectiveness
- What about the federal money for water infrastructure? We should use that for the reservoirs
- Let's use the federal money that was promised to us.
- Barriers cost a lot of money and I'd rather see if spent on the reservoirs
- Equal level of service once it's completed. Difficult to build all of it.
- Removing fear is priceless
- Use barriers as transportation corridors
- Could there be potential to build a dyke (canal) around the City. Could be a natural solution
- Concrete barriers considered on land (close to community) vs closer to river (allows for view of river)
- For some neighbourhoods it will be expensive, disruptive and take a long time (buy outs etc.)
- When you choose to live in an area you accept the risks but also the understanding there were protections in place
- Property impacts with barriers
- Huge impacts to aesthetics
- It would change the look and feel of my neighbourhood
- Adding barriers to Sunnyside wouldn't change the look or feel
- No access to pathways with concept 2
- What areas are prioritized?
- Phasing or gradually increasing the height? Not feasible
- How to implement barriers where residents own property right up to river? How to mitigate property impacts?
- Climate change - let's plan for the future
- I support the barriers because they prioritize infrastructure in the city
- Immediate stakeholders have all experienced flooding. Would immediately serve those stakeholders
- Shorter build time mitigates a lot of risk
- If the protections are available, we should put them in place
- Barriers are very important
- Barriers are a better solution. Todays experts showed have better solutions
- Barriers are good in their place
- Can't be all done at the same time. Takes so long to build.
- Look at barriers implemented prior to reservoirs being built

Concept #3: Springbank Reservoir (Elbow River) and barriers on the Bow River:

- Barriers are a Band-Aid solution
- Barriers can be overtopped and cause more damage



- Spend money on a solution that doesn't require barriers.
- The development of the city needs to come away from the banks
- Upstream reservoir should consider other rivers not just one
- Communities still many need evacuations with only the barriers
- Barriers could change the flow of the river
- If water can be diverted to other rivers
- How do we get public agreement on the size of barriers? (e.g. what about the balance between height and aesthetics)
- Right way right place. This is a good option
- Multi-tiered approach is necessary
- Don't put all your eggs in one basket. A combination approach is necessary.
- SR1 with the Bow Barriers is the best concept we've looked at.
- The barriers should be supported long term to address climate change

Non-Structural Measures:

- Community flood protection priority
- Regulating land use probably won't have a major impact
- Buying out is very costly
- Properties located in the floodway are a higher burden to the tax base
- New regulations should require developers to create buildings that are flood proofed/temporary replaceable structures (e.g. sprung structures)
- Look at other alternatives for secondary suites (carriage/laneway homes)
- Education is more powerful than mandating.
- Education is coordination with rules. Explanation why and awareness are very important.
- Lowering water more quickly at Ghost Dam is important. If you can lower it quickly, more safely more benefits for drought management and recreation.
- Prohibiting value of property by limiting basement suites
- If the protection isn't there its very difficult to get insurance. It downloads the responsibility onto the landowner.
- Mandating transfers the risk but doesn't educate or really address the issues. Pushed the responsibility onto the residents.
- If buyouts are needed than we need fair market value for property.
- Affects property values
- Buildings too costly to raise.
- Buyout create incomplete communities (e.g. vacant lots) + reduce property values
- Would affect the look and feel of the existing neighbourhood
- All above ground would create a two-tiered neighbourhood. It wouldn't feel organic.
- Impact to community feel

- Mandating non-structural measures creates stigma and erodes character
- Raising houses changes the character of the neighbourhood
- Above the 100/200 flood level creates a different character
- Can the city protect all current and future development? What is the cost?
- What have other places done in this area? What are lessons learned and best practices from other urban centers that deal with flooding.
- A comprehensive plan (access federal money) we could avoid putting in non-structural and barriers
- Trade-off by implementing structural and non-structural. Community protection first.
- Essential services and high density residential should not be in flood fringe because of the difficulty evacuating
- No new residential development on the flood way/flood fringe.
- In the floodway, removal would be okay if it was consensual. A plan would be needed.
- No new construction in high risk areas
- Remove buildings, increase regulations, no basement suites, no basement development, no compensation for companies that don't comply
- Restricting land uses are a good idea
- Complete plan would eliminate need for many non-structural measures
- Don't need non-structural changes if there are structural measures



Comment Form Summary

Do you have any additional feedback you would like to share?

- Educating people is the key to getting them on board with decisions that are made.
- Would like to see the 3 governments – Federal, Provincial and Municipal investigate the comprehensive water management system described in www.preventingalbertafloods.ca. In the 2014 Federal Budget \$3.2 billion was allocated to funds for water infrastructure as a result of the 2013 floods.
- Very informative and helpful workshops. Thank you for the opportunity to share ideas and concerns.
- Related to erosion and sediment control in specific areas along the river mostly those are river side hill.

How satisfied are you with today's session?

	Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Dissatisfied	Not Applicable
Clarity of information provided	x8	x0	x0	x0	x0
Project team's response to my questions	x7	x1	x0	x0	x0
Opportunity to provide my input	x7	x1	x0	x0	x0
Opportunity to hear others' input	x5	x3	x0	x0	x0
Session location	x8	x0	x0	x0	x0
Session time	x8	x0	x0	x0	x0

What worked for you about the session format and activities today? Is there anything could we do differently to make it better?

- Presenters were very knowledgeable and very easy to listen to. Well done!
- It would be good to know how The city representatives present the and the meeting and engineers felt about the options available so after we reinvent the mitigation objectives they could reveal to us what we are up against.
- Please note this project is very well researched and the forward planning should be effective to control water. Well done, thank you!
- Good concept. Helpful ideas.
- Good.
- Yes, take the individuals input and give engineering input. Take more initiatives in preserving excess water rather than stopping and wasting it.



Which community do you live in?

- Chinook – x1
- Riverbend – x1
- Douglasdale –x1
- Milligan Estates – x1
- Lake Bonavista – x2
- Quarry Park – x1

How did you hear about this session (check all that apply)?

- x3 e-mail notice
- x0 Community Association

- x0 Community newsletter
- x0 Newspaper
- x0 Radio/TV News

- x3 Community road signs
- x0 Social media –
Facebook/Twitter
- x1 Online advertising
- x0 calgary.ca
- x0 311

- x3 Flood Info Newsletter
 - x1 Word-of-mouth

 - x0 Ward Councillor
 - x0 Other, please specify:
-



Workshop #3: Bowness High School (October 22, 2016)

Approximately 18 participants attended this workshop.

Concept #1: Upstream Reservoir (Elbow River) and new reservoir upstream on the Bow River:

- As a community, we need to continue to hold Alberta and the Canadian governments to continue to move forward with upstream measures
- Weakness - potential for the reservoirs to overflow
- When you hire a civil engineering firm they are going to suggest civil engineering solutions. Make-work projects.
- Dam failure - ten minutes hit Glenmore. Need mitigation.
- Low quality science - the studies used to present these concepts are questionable. The Golder Study is not based on sound science.
- If the dam fails, the damage could be catastrophic
- No recreational benefit. No water storage with a dry dam. No benefits to nearby affected communities.
- Loss of the carbon storage with reservoirs
- Weakness - cost/timeline/working/multiples levels of government
- Cost of SR1 is grossly under-estimated
- Bow is bigger but receives less attention
- Equitable distribution - zero tax dollars have helped me where they have helped other people
- Need for lobbying the Bow River reservoir to be as close to the City as possible
- Opportunity to improve science around flood modeling
- Need to look at the root causes. Forestry practices, land use planning, weather modifications
- Need to get the Bow River reservoir as close as possible
- The impact is much greater at the high end.
- Current design downstream from many communities (Bragg Creek etc.)
- SR1 and reservoirs in general affect nearby communities
- Weakness - ability of reservoir to actually mitigate and protect communities
- Encroachment on aboriginal land
- Benefit - avoid aesthetic impact to communities with The City
- Water contamination for YYC - flow rates a concern on SR1
- Concerns about insurance premiums for nearby communities with SR1
- What about funding for the Bow River reservoir? Time to acquire etc.
- Not enough study to know the effectiveness of SR1
- Scary to see this concept. We don't have the ground water studies. Major
- Even with SR1 the threat will continue to evolve and the volume of water will increase
- City doesn't have decision making power for implementing Bow River reservoir
- We need provincial support for the reservoirs to go forward
- Upstream helps everyone downstream (on The Bow)
- Initial surge causes most of the damage. Upstream reservoirs have more benefit to prevent that.

- Reservoirs in the mountains further upstream could create more opportunity than just flood mitigation (drought protection, clean energy)
- Priority to move Bow River reservoir forward is just as important as Elbow River reservoir
- Huge opportunity, you get the biggest bang for your buck, especially on the Bow.
- Very supportive of upstream measures on the Elbow; however, concerns regarding mis-information in media on SRI
- One of the few mitigations we'd benefit from (in Bowness)
- Upstream benefits everyone along the river
- Reservoirs upstream will do more to hold the water back during a flood event
- Using infrastructure that is already in place is a good short-term solution
- May need to look at concepts that can be implemented in short-term while waiting for long-term solutions
- This concept is too far into the future to leave us without mitigation measures in the mean time.
- The timeline is about 20 years - political commitments can change a lot in that time
- This is the best option and it's a weak option. We are left vulnerable for the next 20 years.

Concept #2: Barriers along the Elbow River and barriers along the Bow River:

- The City and the government should assist mitigation solutions for private landowners to build resilience (e.g. plantings, pumps and flood proofing)
- Concern over The City's political will to push the province towards moving forward with reservoirs and enhancement of Ghost reservoir
- Recent evidence in Bowness - Land owners and government don't work well together. The City needs to work with us to find a solution.
- We had agreement amongst ourselves (the land owners) and The City didn't help us
- There was already an opportunity to buy-out land owners but The City didn't do it.
- Money within The City isn't beneficial = berms and barriers
- Weakness, social problems with putting in publically accessible berms
- Expropriation to build walls ultimately does not address the entire problem. Not the answer.
- Ineffective/partially effective. Cost benefits are insignificant
- Significant challenge to mitigating ground water with walls - even doubling depth will not stop flood waters/ground water
- Weakness - walls would prevent drainage within community from flash flooding (rain)
- Concern with the cost of the berm that will be built deep enough to withstand flooding and not et wiped out by a 2013 flood event
- Save the money and the efforts of build barriers and direct them towards upstream reservoir on Bow and creating strong voice to the provincial government
- Where will the funding come from? It's not available now.
- Educating landowners. Working together and building understanding is important
- Using natural materials could increase aesthetic appeal
- Opportunity for public art on natural berms
- Property values are decreased
- Impacts to private property to build walls. Property values decreased. Desirability of property decline.

- Weakness - need to expropriate all homes affected because of groundwater. Barrier engineering unsound. Need to go up river. Pushes water elsewhere affecting neighbours.
- We don't want to move from our community.
- Huge impacts to property owners who have already made huge investments
- The families here have been through hell. 30% haven't finished repairing the damage from the 2013 flood
- There's no protection until it's full built
- 4 streets go to water (privately owned)
- Some serious time and practicality issues with the barrier walls.
- Barrier walls impact the use of pathways
- Weakness - safety can be a concern. Would hide people and questionable activities could occur behind the barriers.
- The visual impacts of barrier walls are huge
- Concerns regarding implementing berms/barriers creating holes in communities, affecting property values.
- berms/barriers can be costly and will create an ugly city. They reduce the visual attractiveness of the City. Decrease property values.
- Would help to know where (for the proposed barrier walls) its private property vs what is publically owned
- Pocket of individualist, a lot of individuals have their own solutions besides a wall
- More supportive of berms with pathways. People run/walk along pathways and they are well utilized. I don't want to block access to the river.
- Concrete wall more effective at keeping water back but not an attractive aesthetic
- The barriers are a good technical plan but a horrible social and economic plan
- Would rather incur the costs in the short-term to improve for the future
- Benefit - quicker to implement the barrier walls.

Concept #3: Springbank Reservoir (Elbow River) and barriers on the Bow River:

- Would like to see barriers but the cumulative risk is too high
- No revenue generated from the reservoir with electricity generation
- Measures upstream of the current reservoir location is needed
- The problem is generated upstream on The Bow and is the province's responsibility
- The over all solution is upstream mitigations, further than the reservoirs with forestry practices plus the reservoir plus the barriers. There are many pieces to the solution.
- Benefit - building barriers can help in the short-term with the reservoir in the long-term
- If we're going to invest money in reservoir now is the time to do it

Non-Structural Measures:

- City should be providing info on flood risk for real estate transactions.
- Unsure of reconstruction policies. Needs to determine in advance buy-outs/re-development to move forward. The system didn't help
- Concerns that as land-owner/individual/risk and responsibility increases, government (provincial and federal) risk/responsibility decreases

- Property re-development is already happening, it's too late to implement policy changes post 2013.
- Site specific design more appropriate but challenging to monitor
- Ground water will add considerably to cost to protect basements.
- Weakness- Basements had regulations for no basements, tried before (only in 5 cities). Abandoned previously over too many reasons.
- Weakness- opportunity for input is limited (practical). Feedback is key to implemented proper regulation
- Identify the point where risk is taken on. Cost/benefit for flood proofing.
- Need to ensure people see benefits from what they put in
- Opportunity to educate residents. Be interactive, proactive, don't just force it on people
- Education: banks/financing; misinformation about communities that have flooded in the past. This makes it hard to get money for home purchases.
- Education: in simplified central website or registry. Multiple partners are needed to disseminate information and target those most affected
- Education for renters. Communication and community awareness.
- Education component is key for understanding the non-structural measures.
- Need to encourage people to flood proof their properties
- Incentivize flood proofing regulations similar to energy efficient homes. Provides new builders/renos with some guidance. This is more equitable.
- Concerned about using flood assistance because you can't ever use it again.
- Laneway housing as a solution
- Lethbridge is a good example moved people off of the flood plain
- The costs of non-structural measures fall onto the owners
- Costs incurred by homeowners to protect home are high
- Shadowing and height of raised buildings change the look and feel of the neighbourhood
- New Orleans rebuilt on stilts and it had a major affect on their culture/social customs.
- Concerns about insurance restrictions
- As regulation and constraints increases property value decreases, frustration increases. How are landowners compensated?
- What would be the best/fastest solution?
- Allows for innovation
- Lead by example and implement these measures
- We have an opportunity to set the example. Now!
- More regulations for developing in the flood fringe/way are needed
- We have a connection to the river - if we want to build next to it we need to build to a standard where the risk is assumed by the owner.
- People still need to accountable and accept the risk with building or buying the flood hazard area
- Smarter option - Erlton (as an example) is well done
- Currently not a lot of information on how to flood proof homes. Need for design guidelines. It's difficult to fully waterproof concrete
- Non-structural measures help to embrace a future approach.
- Secondary suites in the flood area put people at huge risk



- No emergency services in floodway
- The choices should be limited for secondary suites.
- Makes sense to limit land uses like daycares, long-term care facilities
- Taking a pro-active approach in the floodway is important
- Shouldn't be voluntary. Needs to be implemented consistently
- Agree with secondary suites idea
- I don't mind raised housing but designed with porches and decks to maintain the street interface.
- Why are we even discussing this three years later?
- Reservoirs offer most benefit so non-structural would not be necessary
- Help to streamline to disaster recovery bureaucracy and assistive processes and policies. It was 'hell' to live through as bad or worse than the flood itself.



Comment Form Feedback

Do you have any additional feedback you would like to share?

- The way I understand it, The City has engaged a civil engineering firm, AMEC, to design some flood mitigation solutions. It is no surprise that most of the engineered solutions are civil engineering projects. My concern is that we confine our thinking to the mindset of civil engineering. We, as taxpayers, might end up misallocating resources towards large projects that do not yield a net benefit. The fatal assumption in this discussion is that we must accept future floods as the new normal, and that there is nothing we can do to reduce the severity or frequency of floods. I disagree. As long as we allow clear cutting upstream, any mitigations we implement will be eclipsed by the flood threat due to poor forestry management. Nature already provides flow mitigations in the form of forests and “duff” or the forest floor. I’m not calling for extreme measures, simply more science-based forestry management.
- City came to sessions with pre-determined outcome in mind. City has primary responsibility to protect its citizens. An engagement session to seek public input to a pre-determined and manipulated outcome only serves those with “agendas.” In this case, The City’s agenda is to take the results to bolster need for dams upstream. Scaring citizens with 8’ barriers, so they prefer dam only allows The City to push the can “down the road” to let the province deal with the problem. The City must take the lead in recommending the solution and must take responsibility for their portion of the solution including the financial responsibility of funding said solutions.
- Bottom line is prevention
- Gravel bars – more detail. Bow reservoir? No commitment. Let’s get on it!
- I think just having a provincial government representative in attendance would have been very beneficial.
- The upstream solutions (i.e. Bow Reservoir) need to receive more attention. Priority should be made towards ways to expedite implementation of this solution if it is deemed appropriate.
- Keep the lines of communication open. This is great! Please consider working collaboratively with communities upstream on the Elbow in order to find a solution that works for all stake holders. Please continue to be open to alternative to your mitigation concepts (specifically SR1) as new information/statistics come to light. There simply is not enough data available from the province yet to conclusively provide a cost/benefit analysis or to conclusively say that SR1 is the best option. Please consider the Tri-River project as an option.
- Look at alternative solutions upstream such as Tri-River project and McLean Creek. The cost of Springbank reservoir hasn’t been communicated or estimated correctly making the presentation cost benefit estimate null. Consideration of risks and factors for Springbank reservoir that have not been considered: extended timelines, landowner opposition, regulation process and approvals, health risks to The City, no added recreation value, no value for water storage, destroys another community, does not provide upstream protection, limited effectiveness in debris management and flow rates.



How satisfied are you with today's session?

	Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Dissatisfied	Not Applicable
Clarity of information provided	x9	x2	x0	x0	x0
Project team's response to my questions	x8	x3	x0	x0	x0
Opportunity to provide my input	x9	x2	x0	x0	x0
Opportunity to hear others' input	x8	x3	x0	x0	x0
Session location	x10	x1	x0	x0	x0
Session time	x10	x1	x0	x0	x0

What worked for you about the session format and activities today? Is there anything could we do differently to make it better?

- Some type of ranking system whereby we can get a feel for where the overall group preference “tends towards”
- Excellent presentation material. Difficult to absorb so much complex material.
- Well set up!
- Provide provincial representation.
- The format generated interesting discussion. Facilitators did a good job and City representation and participation was excellent. More opportunity for discussion between groups would have been appreciated.

Which community do you live in?

Bowness - x6
 Sunnyside –x1
 Varsity –x1
 Springbank -x2

How did you hear about this session (check all that apply)?

x3 e-mail notice	x0 Community road signs	x0 Flood Info Newsletter
x2 Community Association	x2 Social media – Facebook/Twitter	x2 Word-of-mouth
x0 Community newsletter	x2 Online advertising	x0 Ward Councillor
x1 Newspaper	x0 calgary.ca	x1 Online news
x1 Radio/TV News	x0 311	



Workshop #4: Cliff Bungalow / Mission CA (October 24, 2016)

Approximately 38 participants attended this workshop.

Concept #1: Upstream Reservoir (Elbow River) and new reservoir upstream on the Bow River:

- Expensive for the protection it offers
- SR1 is the 'best bang for the buck'
- Springbank reservoir provides the best bang for buck
- An equitable solution. Does affect some but protects more. Fairly compensate those who are affected.
- Concerns about impacts to the core and Calgary's opportunity to grow.
- Potential for failure and how catastrophic the loss would be
- Winnipeg mitigated to 1:800
- City is growing/could expand out to Springbank. What would be the value?
- Compensation option rather than complete buy-out of lands within design area of SR1 - could this reduce impact to landowners.
- Environment concerns with reservoir
- Weakness - reservoirs (dry) sediment will settle in area
- What structural effect will adding gates onto Glenmore dam have to structure
- To that standard do we mitigate to? 1:200? 1:350?
- Weakness - Glenmore reservoir won't last forever, what will happen at the end of Glenmore reservoir's lifetime?
- Springbank dry reservoir becomes "sterilized" after 1st event (silt) would it be remediated for grazing and ecosystem purposes?
- Will change development around Springbank
- Will Glenmore dam be able to with stand the volume of H2O? It was build in 1930
- Location and number of reservoirs being considered on Bow River? How many to mitigate 2013 flood?
- Drought mitigation options are important also for utilization for drought resiliency and drinking water
- Concern about level of influence City has with the implementation of SR1
- Reservoir concepts had decisions that are outside of the City's control
- Positive - Springbank. Glenmore gates better than dredging especially because dredging is not permanent
- Springbank - well designed. Have seen one in Denver. Seemed okay. Doesn't protect Bragg Creek.
- This is the least worst option
- Can only hold so much but we have a good idea what that would mean for other mitigation needs
- Sooner the better
- Its best to keep the water out of the city
- Positive effect for many, negative for few.
- Benefit - enjoy use pathways and reservoirs. Doesn't impact aesthetics.
- Reservoirs will be the best option; EIA processes may hold them up or stop them.
- Community has already expressed support of the reservoirs; this is repetitive.
- Springbank Reservoir needs to go ahead and Glenmore dam improvement as well.
- A combination of reservoir and barriers are needed together

- Protect the downtown core, its our economic engine.
- Springbank Reservoir is part of good flood mitigation - it needs to be built.
- Reservoirs are out of sight, out of mind.
- Reservoirs mean we aren't just relying on the Glenmore Dam
- SR1 is being reviewed by two governments and agree it should move forward.
- With reservoirs a few people are negatively impacted but the whole city is protected.
- Glenmore is almost 100 years old. It behooves us to make mitigation long-term
- Calgary is an important Canadian city, we have to protect it.
- Generally in favour of Concept 1
- Reservoirs will help downstream communities by reducing flow
- Strength - easier to clean, wouldn't need to dredge
- Strength - reservoirs work for emergency only, no impact when not needed vs barriers are there all the time
- Push for Sr1 because upon implementation of Springbank Reservoir, there will be less pressure on the Bow River also
- Projected completion for Sr1 (2020) is quick which is great.
- Important to move ahead with Bow River Reservoir
- Reservoirs will maintain the aesthetics of the river as they flow through the city - maintains charm
- Concern that there is no timeline/decision regarding the Bow River reservoir
- Unanimous (at our table) support for moving forward with the Springbank reservoir
- Reservoirs provide protection for communities beyond Calgary and that is a benefit compared to barriers.
- Reservoirs provide minimal physical impacts to landowners within Calgary vs barriers and are more effective.
- SR1 - what's the timeline? 2020?? The Bow River Reservoir timeline is unknown
- Weaknesses - SR1 needs to be ready to operate ASAP. Move the Fed EA faster, does not need to take 12+ months.
- Concerns about the timeline of Sr1 and other reservoirs.

Concept #2: Barriers along the Elbow River and barriers along the Bow River:

- Barriers can create a false sense of security, redirects river, barriers are flawed and can cause issues in other areas. Cost is an issues.
- Barriers along Elbow will have too large of financial, social, visual impacts that may not be supported by those along it.
- Barriers don't prevent ground water flooding so additional reservoir is required
- Once you start building barriers, you need to finish them
- Need to chop off a significant amount of property for barriers
- Need to consider access with barriers. Would have to provide additional facilities at new points
- Barriers keep water in - more challenging to get water back into river on the other side of the wall.
- Elbow River parkway along the river will be drastically impacted by barrier approach
- Building barriers provide false sense of security. Land use decisions are also important to consider.
- Water table can come up and make barriers less effective

- Barriers do not necessarily help groundwater
- Never get the compliance of citizenry with barriers. Checker board approach will not work
- Barriers would limit access to river during emergencies
- Barriers can keep flood water in
- Barriers don't slow down flow
- The Elbow barriers would have catastrophic results. Not even worth considering.
- Affects transportation and mobility around the City
- Cost benefit of barriers is just not there. It reduces the value of property along the rivers - decrease tax base by tens of millions of dollars.
- Forced to buyout of hundreds of millions of real estate
- Earth berms likely won't fit physically or within the budget
- Concerns about the cost of buying out properties for barriers
- Barriers don't have that much higher benefits for cost.
- Access on 10t is nice now. Don't want to change.
- Open channel through Erlton to create a short-cut for the river.
- Other mitigation efforts along river: cut back trees in front of bridges
- Cause-way between Eau Claire and Prince's Island should be rebuilt to be wasted away in a flood event to keep river flowing instead of backing up into communities.
- Is the City planning on using temporary berms etc.? Such as the one at 5th and Elbow drive which was critical??
- We should explore more opportunities for temporary barriers vs permanent walls, berms etc.
- Study each of the bridges to see how much it could be opened up?
- I would be more apt to support temporary barriers along the Elbow vs permanent
- Interested in seeing how some barriers could protect some assets instead of whole concept. Protect what's important.
- Use mechanical barriers that can be raised and lowered as needed
- Just build berm around the economic core
- Pay more to Springbank land owners to get it down faster.
- Houses on river property value largely based on river would lose 1-2 million in value
- Proportion of Calgary affected is huge!
- Doesn't look practical. Lots of houses and communities impacted. Not enough value in return.
- Concerns about the look of barriers throughout the City and impacts to recreation.
- Berm where you can walk along a park is preferable to wall but only because it is lesser of two evils.
- Too many barriers changes character and feel of the city and its communities
- Limited benefits: barriers only provide protection, but take away too much from the nature of our rivers (recreationally, visually, safety downstream)
- 1st impression is that's a lot of barriers!
- Impacts of barriers along Elbow are high
- Loss of park space and aesthetics when river is blocked in by barriers and walls - think Rome
- I find cities with barriers along the river (egg in Europe) as unattractive
- Totally change character and feel. Paved river feeling

- Prefer earthen berms to walls - maybe downtown the walls may not impact visual aspects
- Berms (earthen) separate river from the community.
- Aesthetics of barriers are really bad. Rivers make Calgary a livable city.
- Barriers would affect character of our community.
- Barriers would ruin whole communities
- Flood barriers make our community feel claustrophobic
- The barriers would be very devastating to communities in the core of the city.
- Buying properties wouldn't be enough. What about the neighbours? A wall would be horrible to look at.
- It would be awful
- Significant change to look and feel of downtown.
- Environmental and river impacts of installing berms and barriers.
- Blocks rivers natural ability to flow. How would they affect river channel?
- Walls vs barriers. Walls are worse because they will impact wildlife movement
- Design will need to be simulated prior to implementing barriers, consider cost and location along river for installation
- Do they compensate property owners? Fairly?
- Can temporary barriers be used in spots to mitigate flooding in key spots?
- What are the breaks in the barrier along Elbow River?
- Flow rate - 700m²/second 244m²/s? How did we get to that number?
- Where is the City thinking of doing berms vs walls? Online graphic?
- How would pathway networks be impacted by building walls and berms? Impacts to pathways.
- Question about holding capacity of areas of the river
- Tunnel option compared to barriers? In terms of \$/mitigation
- Question: barrier walls going to increase flow downstream? Yes, barriers closer to the river - river will go deeper.
- Too many barriers will create a high volume water channel. What happens when this wits older bridges and other infrastructure?
- Floodway mapping is not accurate. It was used for buyout offers even when properties were clearly not in the floodway.
- Floodway mapping being redone - not sure it can be trusted. Wasn't done properly in the 1980's
- If the City owns the land, and the space is adequate, careful implementation of berms would be beneficial. Important to do due diligence to start upstream and move down to install
- Barriers used selectively - wall acts as a dam, barriers need to be consider
- Berm at Elbow and 5 was critical to reduce flow and impacts of flooding
- If space is available a berm is far nicer, with a pathway along the top. Better riparian effect on the river.
- If it protects communities and downtown, the aesthetics don't matter
- Barriers/berms could save part of the community by preventing water from flowing down some streets (Elbow Dr.)
- Reservoir universal benefits downstream
- Can walk on berms - create opportunities for pathways
- I can see barriers on the Bow because there is more room for them but not along the Elbow

Concept #3: Springbank Reservoir (Elbow River) and barriers on the Bow River:

- Generally, concept 3 isn't favourable. The cost doesn't line up.
- If you eliminated the Bow Reservoir and go with concept 3, the benefits (costs) are much better.
- How much redundancy are we building in by building barriers on top of the reservoir option? Wasteful.
- Cost of barriers in short-term are so expensive in the mean time. Speed up SR1!
- Way more positive impact for \$\$
- Resilient designs and sustainable systems that are safe to implement and operate
- Preference for earthen berms vs concrete walls
- Opportunities to design infrastructure that can flood.
- The core is more important - more people live and work there.
- Does not offer enough protection to the entire City. Protect to 1:500 to protect core.
- We would not support removal of historic bridges (or replacement)
- Interested in learning more about offsetting cost of Bow Reservoir with drought mitigation hydroelectric etc.
- Winnipeg berms are not that unattractive. Something like those could be appropriate.
- Modify concept 3: consider combinations with improving reservoirs at Ghost and Glenmore, combine with barriers to create 'best' options
- Being mindful of where berms are placed and how they impact other properties (e.g. Safeway)
- How would barriers impact both river system pathways?
- Aesthetically, concept 3 is still concerning.
- Is one dam on the Bow enough?
- Was stormwater a significant factor in the 2013 flood?
- Did the Bow cause the Elbow to back flow in 2013?
- What's the return in the short-term?
- Can SR1 grow? Like for instance putting gates or walls like on the Glenmore Reservoir?
- Is there value to expanding the Bears Paw dam/reservoir?
- What happens when you have gaps in a berm?
- Would the Bow Reservoir be between Cochrane and Calgary or in other locations? Could there be more than 1 Bow reservoir?
- The cost benefit on concept 3 is the best of the concepts
- More control for The City. Allows the City to implement flood protection
- Concept 3 much more palatable in terms of property impacts
- Springbank impacts would be relatively low compared to what we gain - it's a good compromise
- Upstream reservoirs are preferred with barriers only as needed
- Don't have to acquire as much expensive land. More about direct mitigation
- Concept 3 makes sense because it protects downtown
- Not necessarily as large of an impact as the on the Elbow River
- SB1 needs to go ahead.
- Bow barriers are far less impactful (more property and space) than the Elbow barriers would be
- Precaution of barriers and berms downtown to act as a backup

- Fewer residents on Bow River to deal with barrier walls
- Focus on an optimal combination between upstream reservoirs and barriers

Non-Structural Measures:

- City hasn't been interested in protecting private property, only public. There seems to be a shift though to protecting both private and public property.
- I think engineering needs to be in place to protect existing homes instead of changing the homes.
- The vision should be to protect the community. People have lived here 100 years and want to continue to. Protect what's here.
- How to have high density? It's challenging to evacuate and bring back in
- High density buildings cause huge displacement
- Feasibility of raising homes raises questions - old homes are difficult to change that much
- If City is protected from flooding, then non-structural item become moot
- Size of lot would dictate what could have been done - would need relaxation for development
- Older homes lots of it can't be done
- Loss of houses in a community is a huge negative
- Limits housing opportunities (affordability) by limiting secondary suites
- Economics may determine if anyone can rebuild or not and bylaws
- buildings are already being raised. Once they all raised they'd all feel the same. Not ideal but it makes us more resilient
- Older homes seem to fare floods better than newer homes. Higher building codes for areas in flood hazard. New houses should be better build, higher quality materials designed to flood.
- Need to build flood proof in the flood hazard zone.
- With new building standards (100-year flood level) creates visual and drainage impacts of newer houses. Drainage is supposed to be fixed (not on neighbour) but isn't
- Consider more opportunities for LID - permeable pavement/grass/absorption vs paving
- In 2013 we weren't given enough time in the warning
- The warning system is so important.
- People were asleep at the wheel in 2013
- Concerns about warning - we need to be warned more in advance
- Upstream watershed management is lacking for all of Calgary catchment area
- Booklet set to zone to describe risk and mitigation measures
- Alternatives: permeable streets and green roofs
- Guidelines could be attached to the property deed
- Give one person full operating authority in a flood event - consistent and reliable decision making
- Tax deductions for people doing the mitigations to their homes
- Early warning systems; want more information on this implementation. Also smart grids (?) so that if one electric grid section does down others are isolated.
- Challenging to implement without impacting communities feel. Needs to be specific to community.
- Different solutions for different communities

- Different solutions for different communities. Each community in Calgary is distinct and has its own set of aesthetics
- Dangerous to implement a one-solution approach across the city. Each area has unique set of requirements.
- Basement suites - devastating impacts for renters and \$ impact for landlord
- We live in the floodway - generous compensation would be needed. It's not practical. Huge expense incurred by us.
- Owner has to make/pay for changes.
- Province buying up and removal of existing structures - seems like a knee-jerk reaction
- Individual implementation can impact neighbours
- Removing buildings impact community - isolating.
- Sterilizes street level with high buildings
- Larger lot sizes/height impacts neighbours
- Ruins a community to remove buildings/homes randomly ("sterilization of community")
- We want complete neighbourhoods - rebuilding homes that were taken down
- Depends on where new floodway map share (thinking of removing buildings)
- Sell vacant lots with flood proofing build requirements. Rebuild communities.
- Flood way vs fringe. Some houses bought out resulted in the lost sense of community. Poorly thought out solution.
- Renovations impact neighbouring properties. Excavation and rebuild impacts other properties.
- We don't want vacant lots (e.g. the properties that were bought out). We'd like to see them developed in the future.
- Removing building impacts visual continuity of communities. Bridge are causing some of the flooding to buildings.
- Raised homes are an eyesore in our community. Aesthetics make an impact on neighbouring property values.
- Hard to change community character. Impacted either way if floods keep happenings
- Dramatic impact if removed buildings from floodway
- Every time river floods it changes and it will be different in the future
- If existing land use is high-risk how long would someone have to move it? Would the city subsidize the move? What's there is there.
- Who bears the cost? Risk should fall onto the land owner.
- Sewer back-up due to silt after 2005 flood. What is the City doing?
- New building put up on 25th right by river after 2005 flood was a wide path for flood - now blocked for 2013
- Graphic or communication piece that describes flow rates and potential for impacts
- Communications was not good re: essential services in 2013 - not has this been improved - have protocols been put in place to address this and what is the plan?
- How is The City accommodating for tweaking their mitigation plans for all the holes created by the loss of homes, those that have been removed, what effects has this had on modelling - these need to be looked at



- When new utilities and infrastructure goes in has policy been adapted to avoid problems encountered in 2013?
- How to inform people of zone they are in? E.g. renters moving into basement suite
- Province purchased properties post 2013 flood. What's happening with that?
- Regulations should be robust regarding flood proofing
- Building code should respond to flooding
- Stronger land use changes - lower impact development
- Have the assisted living out of immediate impact area of community. Or police, fire-department, hospitals etc.
- Don't restrict people from developing basement - yes to secondary suite restrictions.
- Agree that not building critical infrastructure in floodways is important
- Building in resiliency is a good thing but raising homes can have a negative impact
- Allow for innovative housing designs outside of code (e.g. build higher) being considerate of neighbours
- There should be assisted living communities - its gives diversity to the community.
- Shouldn't have assisted living in flood areas
- Increasing heights of window wells for basement and sump pumps and walls to make it viable.
- Special considerations for emergency/vulnerable population in the flood area. More challenging for evacuation/displacement
- A mechanism that regulates construction to higher standard in flood prone areas (e.g. membranes) People would be willing to do this to live in riverside areas.
- Land use restrictions on certain uses in flood hazard areas are appropriate (e.g. assisted living, essential services)
- Risk should fall on home/land owners
- If basements are at risk that should fall onto the homeowner
- Why does the City care if I build a basement - I pay for its damage.
- If a person wants to develop their basement they should not be eligible for disaster recover. If covered by insurance it costs everyone.
- If a person is willing to assume the risk and cost of a basement they should be able to build it. Take into consideration storage of items that could pollute river/environment in a flood.
- People looked to the province and the City for restitution
- What is city doing without updated mapping... province needs to move
- 3 years later we are still mapping... it's really concerning its taken so long
- How can you have vulnerable populations in the flood hazard area (e.g. drop-in center where people have no where else to go)
- Placement of assisted living can vary within community, but out of flood area
- Sensible/sensitive implementation is key
- Would have to revise LUB and make adjustments for height relaxations to accommodate for shifting buildings higher
- Design guidelines to be resilient - mandated
- Proximity - don't put high risk land uses in the floodway



- Restricted development makes sense for those not able to self evacuate. Mindful of folks who aren't able to get out on their own.
- Restrict further development in the floodway
- So could build decorative walls more than moving electrical and mechanical up
- Support for changes on new developments rather than existing
- Support for no basements in new development
- Limiting basement suites is an appropriate measure in the flood hazard areas but it does need to be accommodated or made up for in other areas to meet demand for rentals in Calgary
- Agree fringe footprints should be restricted for existing. Agree on restrictions on new developments in fringe (more stringent flood control construction) But not restrictions on basements personal risk.
- Anything in the floodway should be built for flooding
- No secondary suites but with a sunset clause once mitigation has gone in and risk has been reduced.
- Investment in flood mitigation is past due. Should have been thought of many years ago.
- Questions about timing of policies - what comes first? New infrastructure or changes to policy? Policy should reflect infrastructure
- Approach needs to be grandfathered in over long term



Comment Form Feedback

Do you have any additional feedback you would like to share?

- A reasonable session. Important to quantify the number of residents who support the concepts – particularly the Springbank Dam! Think about additional water catchment projects throughout the city and beyond to delay water runoff during heavy rainfall events. Many non-structural measures will only work in some communities. Do not assume “one size fits all.” The idea of a dam on the Bow River is really interesting. Keep working on it! – It will take a lot of effort to turn into a reality. Springbank Dry Dam is a no-brainer! Keep the pressure on the Province and on the Feds.
- I strongly urge that in addition to these structural and policy mitigation measures, The City also pushed for greater upstream watershed and environmental protection. For example, advocacy around land use decisions like clear-cut forestry in the ghost watershed. Trees are flood mitigation. Thank you for listening to the people.
- More comprehensive costing of alternatives. For example, were hydro-generation benefits considered for the Bow River dam?
- My question is given the high risk of flooding shouldered by all Calgarians, are developers doing their share in taking responsibility to ensure new communities are developed to reduce the natural assets such as streams and vegetation with permeable streets or green roofs to reduce further natural storm water capture and reduction.
- Economic impact of waiting for new flood maps from Province – affects any new changes to property development/building permit bylaws in flood hazard areas. These delays (2 years to get building bylaws passed??) will and is now affecting sales of property potential plan for sale/development, uncertainty of property values in near future. Retirement income plans? This is a huge social cost of delays in building regulation. Please proceed with haste –
- Very informative, many interesting possibilities. Concern about housing vulnerable populations (assisted living and hospitals) in flood affected areas, especially in high-density developments. Concern about sterile streetscapes if ground-level floors are non-residential garages etc. Encourage storm water management ponds in new developments.
- Incorporate hydraulic jumps into the river relief channels through gravel bar areas. Also this would create surging waves which would benefit the city business wise and recreation/tourism wise.
- Table discussions and maps worked well.
- Non-structural measures and restrictions must have a “sunset clause” or an end date or condition. These restrictions will not be required once structural mitigation elements are installed. Would like more information on the Bow River reservoir? This is the first I’ve heard of this! Lots of informed project team members – very useful. Might be useful to have a pre-session information booklet to read beforehand (available online?)
- I will look at the online options for adding more input. Thank you.
- It seems as though all of the policy decisions (buyout, raising homes etc.) should be made after understanding the structural protections that have/will be built. It is great that The City is taking the initiative to solicit feedback from citizens of Calgary.
- The bridges on the Elbow really need to be looked at.

- I believe we need to work on a preparation plan, an early alert. The fire chief told me The City was aware earlier and did not advise the public. We could have prepared and had a lot less personal impact. Monetary and emotionally. I believe streets could have been cleared of dangerous construction bins etc. that plugged our bridges causing more damage. Lastly – the USA has federal flood insurance, has our federal government looked at this?
- Presentation by Sandy Davis were well informed, complete, paced at a comfortable speed and her spoken delivery was clear/understandable. Timing for exercises following the presentation was sufficient to cover the materials/questions. I cannot emphasise enough the necessity of timing and deadline for a Bow River reservoir.

How satisfied are you with today's session?

	Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Dissatisfied	Not Applicable
Clarity of information provided	x18	x2	x0	x0	x0
Project team's response to my questions	x20	x0	x0	x0	x0
Opportunity to provide my input	x19	x0	x0	x0	x1
Opportunity to hear others' input	x18	x1	x0	x0	x1
Session location	x18	x1	x0	x0	x0
Session time	x18	x1	x0	x0	x0

What worked for you about the session format and activities today? Is there anything could we do differently to make it better?

- Advertise in the neighbourhood magazine for more feedback. Posters making residents aware of migration. Most people I talk to were not sure of the term migration in relationship to flooding.
- Appreciated the change for dialogue and feedback from city representatives. Good table facilitations.
- More comprehensive costing of alternative. For example, were hydro-generation benefits considered for the Bow River dam?
- More time would be nice.
- I liked the table discussion format. Very civilized.
- Great format but very noisy. Hard to hear everyone at the table sometimes. Larger space so tables could be spread out more.
- Great to have lots of informed city and even provincial government representatives.
- I was able to express ideas and provide input.
- Thought it all went very well – good division in time for the structural vs non-structural measures.
- Very interactive. Appreciate respectful discussion format. Seems to be a fair amount of similar options as to processes followed. Great detail and well organized.
- Positive – I thought the session was very informative. The facilitators did a good job engaging with everyone. Improvements – better mapping, better drawings for barriers and locations.
- It was well run.
- Well done session.



- Very informative. My questions were answered. More clarity in the directions and timeline.
- Could have used another venue.

Which community do you live in?

Erlton-x1
Killarney-x1
Cliff-Bungalow -x2
Bankview-x1
Mission -x3
Beltline -x1
Mount Royal -x1
Elbow Park -x1
Sunnyside -x1

How did you hear about this session (check all that apply)?

x11 e-mail notice	x2 Community road signs	x3 Flood Info Newsletter
x5 Community Association	x3 Social media – Facebook/Twitter	x2 Word-of-mouth
x2 Community newsletter	x0 Online advertising	x0 Ward Councillor
x0 Newspaper	x4 calgary.ca	x1 BRBC e-mail
x0 Radio/TV News	x0 311	x1 MLA



Workshop #5: Southern Alberta Pioneers Building (October 27, 2016)

Approximately 30 participants attended this workshop.

Concept #1: Upstream Reservoir (Elbow River) and new reservoir upstream on the Bow River:

- What is The City going to do for downtown? Our economic core was shut down for 10 days in the last flood.
- Wet reservoirs have the benefits of hydroelectric generation, recreation and drought mitigation
- Maintains recreation options
- Dry reservoir doesn't restrict flow
- There is a cost to purchasing lands outside of the City.
- Upstream reservoir on Elbow will withhold large scale floods. Bow River needs more.
- We all get hammered if downtown goes down - it's important to protect downtown.
- Benefits flood affected areas
- It's not just wealthy people impacted. Media is misinforming.
- Negotiation of the reservoirs is a risk. Governments change every 4 years. Contributes to risk. Need political will to get it done.
- Remember how close we were to Core being flooded even more - don't overlook risk.
- Concerns that modern LIDAR on Glenmore reservoir is not accurate nor does it take into account the data taken in the 1930's
- Concerns that original environmental studies did not include a review of the entire watershed
- Concerns that both Sr1 and Glenmore reservoir will not protect against a 2013 level flood.
- Affected area in Springbank could be used for other purposes in the downtime (i.e. grazing or growing)
- Help to maintain character, aesthetic and connection to the rivers in Calgary.
- Concept 1 preserves look and feel of communities. Community integration with the river.
- Question? Why isn't SR1 being designed as a wet reservoir?
- On surface, sounds good because there is no impact to downtown but hard to say because don't know where the Bow Reservoir will do.
- Good idea about 2 reservoirs. Like the Bow Reservoir is wet. Problem about uncertainty, difficult to get in place. Is it really a feasible solution?
- Will mitigation to Elbow help or will it be useless because of the Bow? Back up. Be clearer.
- What can be accomplished with Ghost? If it would do 1:100 - maybe nothing else required.
- What is the current volume of Glenmore reservoir?
- How much sediment will drop-out from SR1 after a flood?
- If doing 1:200 no more building in flood plain
- Strength - prevent water going into City. Electricity generation. Recreation.
- We want the reservoirs.
- Concentrated facilities = easier to monitor and maintain.
- Lesser impact on overall population
- Lower environmental impacts
- Upstream benefits, the water addressed before it hits the City.

- Important to mitigate the water outside of The City
- Solution on Bow = mitigate as much capacity as possible plus some barriers.
- Reservoirs have to happen.
- Bow Reservoir sites might create discussion. Upstream (further) is better.
- Springbank is practical for Calgary. Dry dam is good.
- Springbank reservoir - thumbs up. Makes sense. Dry dam is liked.
- Shouldn't be a big issue for land values. Only flooded rarely.
- Flooding of reservoir would impact fewest people
- A number of people affected by flood - only 2-3 home owners impacted by reservoir. Public good should outweigh.
- In favour of SR1
- Apply expropriation legislation to make it happen
- Like Sr1 project if you live along Elbow it will be a good resource even when not in use. Dry space.
- Sr1 has a larger benefit for inner-city then for the few in Springbank area.
- Reservoirs on both rivers are requires.
- Like concept 1 because of the potential economic and recreational drivers. Check check.
- SR1 is an alternative to barriers, we like that.
- Prevent as much water coming into core as possible
- Value of the land will only go up, which would present a missed opportunity. Concept one is ideal.
- Strength - Will mitigate in a timely matter. Levels of 2013. Faster construction.
- What happens in the meantime before Sr1 is completed? How are you protecting homeowners?

Concept #2: Barriers along the Elbow River and barriers along the Bow River:

- The barriers would have limited recreation opportunities along the rivers.
- The river turns more sharply on the Elbow compared to the Bow. Because of this its more difficult to put walls, interferes with the natural formation.
- The Elbow is not an ideal location for the barrier walls.
- The Bow is straighter - barriers are more viable along The Bow.
- Cost include closing gaps but not groundwater
- Groundwater impacts are challenging
- Looks like you are constraining the river and the water can burst through. Barriers can be breached.
- Ongoing maintenance and complexities to build strategy
- Barriers do not protect against ground water
- Concerns about groundwater seepage under barriers
- Barriers prevent water from draining back into the river.
- Groundwater can still be a significant issue
- Weakness - doesn't do enough. A reactive approach
- Not a stand alone solution. The Cost is high with very little gained.
- Cost benefit seems 'thin'

- 600 million and not impacting community fabric. 1.2 billion and huge detriment to community. Doesn't make sense!
- Cost for barriers along Bow verses Elbow?
- Hugely invasive to the city
- Risk of barriers is that in order to have adequate ground water protection, the cost can almost double for implementation
- Weakness - cost of barriers is huge with very little added benefit.
- For berms to be effective they need to be on both sides.
- Favour raised walkways on top of earthen barriers
- Need larger walls on the lower topography
- Concern - berms preferable to concrete wall. Create useable space, bike paths etc.
- Need to save the downtown core (large cost-benefit). Need principles which is more important - communities or downtown? Neighbourhoods need to know what the principles are.
- Can't really predict how high the wall needs to be. Can still get a super storm
- Concerns that the intermittent barriers will not work
- How do you figure out costs? Property assessment and damage forecasts
- At 5 St where the Safeway is the berm caused more flooding
- Would be open to art concepts on barriers downtown that are considered necessary
- Favour a concept 4 that includes both reservoirs and the barriers
- If something is build that only exposes small area that people like = subsidize insurance.
- What is going to happen with the empty lots? Still with the province. This could tie in with barriers (opportunity to help mitigate)
- Barriering up on Elbow River is ridiculous. Who is it being presented?
- Aesthetic would be impacted. There's places it would be okay but not a lot a lot!
- Barrier walls are ugly.
- I don't want to see barrier walls in my community.
- Impact of not being able to see river not quantifiable
- Think barrier concept is naïve because it is not feasible.
- Barriers will impact recreational use and will effect sense of community.
- Barriers are an eye sore.
- Magnets for graffiti. Temporary public art.
- Different experience for community if berms are 1 meter (wall versus ledge)
- Barriers would affect visual appeal, purchasing property values, and the way the community interacts with the river
- Concern with bridge heights with barriers
- That's a lot of walls!
- Weakness - esthetically unpleasant. Pathways and access would be taken away. Takes away community feel. Makes it feel commercial. Disconnected greenspaces and parks.
- Why not just insure against it? If \$ are in bank because it won't happen often is I worth doing mitigation. Yes it's cheaper.
- Would like to see cost breakdown of damage between both rivers.

- Is tunnel off table for good? Yes if SR1 happens, it's not needed.
- Is there a middle ground where you put barriers only around critical infrastructure?
- How to handle roadway infrastructure? You would need barriers that can be raised up - an engineering challenge.
- Concerned about the age of Glenmore dam
- What is the life cycle of the barriers? Maintenance and upkeep would be expensive.
- What are the emerging technologies for the barriers?
- Unintended consequences of barriers - divert water?
- Difference in size of the berms/barriers impacts opinion. Whether they completely impact view of the river.
- Would Stanley Park be protected? Would need to take out playground equipment etc.
- Concerns about hydrostatic pressure caused by barriers
- Why are there gaps between the barriers?
- Could the neighbourhoods choose?
- Cost and impact of diversion tunnel is less. Should come back on table. Maybe won't need SR1
- Tunnel (diversion) cheaper and less impact on communities so why is it off the table?
- We need to divert Elbow
- City mitigation in progress are all focuses on City infrastructure. What about home owners - our risk profile has not changed.
- I don't want to have to pay for barriers that protect private property, especially for wealthy people. When you move beside a major river you should accept the risk of living there.
- Reasonable option to do small barriers where needed on top of SR1
- Barriers because of the Bow? Yes, but also residual could do some smaller strategic barriers.
- Some barriers are okay, but don't want all of them
- City is in control - positive but benefit ratio is low. Like the certainty.
- Positive - City has control over it
- Might need to build barriers on Bow as insurance even with the Bow River reservoir because it won't provide enough mitigation on its own.
- Political risk can put plans in jeopardy
- Timing is extended due to varying sizes and locations
- Possibilities are used for damage assessment 100-year window

Concept #3: Springbank Reservoir (Elbow River) and barriers on the Bow River:

- A reservoir would be more effective than the barriers along the Bow - better cost benefit as well
- Cost is an important factor when considering which concept moves forward
- Sr1 - sustainable price. Choose places for barriers but where does that money come from?
- Should proceed with protecting downtown and critical areas
- After downtown barriers what communities would be next? Tough decision to make.
- Bow has more separation of communities, fewer barriers needed. Elbow has more private land.
- Important to look at saving the river crossings for both concept 2 and 3
- Berms are better than barrier walls.

- By the zoo - confluence weir area - is a dam maybe needs removal?
- When Bow is at height does it spill into the Elbow?
- For downtown - was there ground water flooding?
- Communities would work together with City to build some protective barriers - complex but do able
- The reservoirs are core of solution and maybe some lower barriers and removal of debris
- Strength key to have something upstream
- Easier to barricade bridge on Bow.
- In support of berms and flood walls to protect downtown where possible. Want to protect inner city in any way possible. Really support upstream reservoirs.
- Cost benefit is high. Cost is lowest of the 3 concepts. Most cost effective concept.
- SR1 pushed the cost up the food chain to all Albertans. Cost off setting benefits.
- Barriers are need to protect major functions but I don't want to pay to protect private property.
- Cost benefit ratio is good - maybe feasible to do underground barriers for downtown
- Dams are great and work for everyone.
- City should explore temporary barriers before reservoirs are done
- Need to consider a temporary solution to protect along the Elbow (in short-notice)
- Good idea, but won't be done right away

Non-Structural Measures:

- Can we mandate homeowners assuming their own risk?
- Emergency plans are disjointed and inadequate. Business are units disconnected and siloed.
- If you have enough notice (3 days) impacts whether secondary suites should be allowed enough time for evacuation
- Most impacted were only basements, if an event occurred that had more damage, province wasn't prepped to reveal new bylaws right away
- Does rezoning become redundant when structural measures are implemented?
- Concern with secondary suites and impacts on elderly people to eliminate
- Don't want to remove services from communities like hospitals. The benefits of having it there outweigh removing it
- City plans to increase density - remove from flood area = wasteland. Takes out fabric of The City
- Properly defined flood fringe vs flood way. Unsure what areas/building are affected. Outdated maps with low number of homes in flood way.
- Opportunity was missed after flood - houses already re-built
- No requirements to build to 1:200 level built if it happened they should know what the regulations would be if it happens.
- Reservoir and berms to 1:100 then bylaws should address the remaining risk e.g. groundwater
- If you are building infrastructure to protect homes/community, why ask each home owner to conform to regulation?
- What about people who want to sell and retire?
- If you rebuild in floodway, its your issues. No expectation of bailout.
- We need to learn from what we know. No building more properties in floodway.

- Not allowing secondary suites in basements in floodway is a good idea
- How the flood way is developed more important to those who live there?
- Funding to help people to stay in their homes and meet standards
- Resale issue what happens to those left with properties
- Basements are a huge issue. Phase out existing secondary suites in the flood hazard area.
- Limit rental of secondary suites in the floodway
- MDP and CTP integrated land use needs to consider transit
- Existing building can be difficult to bring up to standards
- The land use bylaw is disjointed, cobbled together and doesn't serve us. It's inadequate.
- For future development - we need developers at the tables and to include them in the conversation.
- Redeveloping homes is individual decision meeting city requirements
- No to buying up property mitigate future redevelopment
- Fells derelict with removed properties
- Grandfather existing uses - limiting future uses
- Raised houses are not accessible for those with disabilities or for seniors (elevators are expensive).
- Emergency response plans: importance of communication and informing citizens of available resources.
- Flood proofing regulations like changing bylaws (ex mechanical above flood fringe, raising new foundations = no consideration for height of house). Need to consider overall impacts unintended consequences were missed about 2013 flood.
- Limiting land uses for vulnerable populations is smart
- If homes are removed it impacts the character of our neighbourhoods
- It's not practical to remove homes and buildings - it hollows out our neighbourhood.
- Removing buildings should not be an option
- Changes the look of the community in a negative way
- Gap tooth effect - what happens in that case? Tougher to deal with.
- Support no new development in greenfield areas.
- Support that no new critical facilities should be built in the flood hazard areas
- Mandatory requirements for public service buildings and key infrastructure
- Buildings that impede the river - should discuss whether to move them
- Awkward for the city to tell people what risk they should take
- It's too late in some of these neighbourhoods. Not a lot of homes are being rebuilt. Not sure who is doing the (developers?)
- How much/many government facilities does this affect? Can we have different regulations for public vs. private? I don't really care about private property.
- Not being able to have a basement will impact property values
- Publically funded structures should abide by these and no new infrastructure in the flood hazard area
- Allow designs that don't impede water is a good idea (building houses up). Higher development is a smart land use.
- Difficult to flood proof now - time to get DP, neighbours complain
- Some regulations should apply to underground infrastructure to prevent sewer back ups

- Why aren't building codes more rigorous? It discourages people from making the right decisions/taking the right steps.
- Missing the option to let people do what they want but relieve the province and the city of responsibility. Get the home owners to sign -off that they accept the risk)/.
- Basements: saying 'no' would affect a lot of homes
- Do you still need a crawl space if you don't build a basement?
- Instead of no basements let them adjust the height.
- This is all common sense
- Might need to say that you need back-up power source. When the power went out, we couldn't pump.
- Is the city going to re-sell the properties they bought? I would say they shouldn't/
- Sanitary sewers in the flood fringe were the cause of a lot of damage. City should fix this.
- Integrate bylaws with insurance. Insurance is more expensive if you do develop your basement.
- Likes a policy to disclose renting/building to say flooding can occur.
- Policies that don't mitigate city/province costs aren't appropriate, its my problem. Unnecessarily impinges on private property. Land use development restrictions.
- Land use development restrictions - grandfathered.
- Why do we need this if mitigation is in place?
- Removing homes reduces public benefit of proximity to rivers. Don't like removing homes. City funder itself on property taxes, especially along river/downtown. Would discourage development.
- Developers need to be consulted on these measures too
- Non-structural measures will help us build a more resilient city
- Why would we mandate if it doesn't cost the city/province anything and the risk falls on the property owners?
- Neighbourhoods will feel destroyed if we limit the developments
- Regulations feel like big brother
- Cost to the tax payer when our city doesn't work well together
- Flood insurance is unattainable and didn't help enough. We need more options in regards to this.
- Safety could be improved
- Support the idea of enforcing or strengthening bylaws to protect against flooding.
- Why are current developments not incorporating flood mitigation? Some new builds have basement windows.
- It's your investment in your home. You should be able to have a basement if you want. Don't want regulations to be too tight.
- Concern that the floodway maps are outdated and actual overland flooding is more significant
- Before there is a conversation about non-structural the current bylaws are based on old maps, so current discussions seem futile
- Concerns that the way the city is planning is based on old flood way/ flood fringe data
- Thoughts of moving properties off the flood plain doesn't makes sense. It shouldn't even be an option.
- Concerns about purchasing more property when they have already done some of this and have vacant lots with no plans for them
- Current bylaws are reasonable if you're making renovations to include flood mitigation



- Would raised homes still be considered if upstream mitigation is happening?
- Prohibiting basement suites in a flood plain seems reasonable.



Comment Form Feedback

Do you have any additional feedback you would like to share?

- We needed clearer information on the potential looks and feel of possible flood walls – metal, concrete, ivy? It matters to how we would experience it. The cross-section illustrations were not sufficient. Also, we'd like to know exactly what wall/berm height is intended where. Decision on what is cost effective should be tied to the level of government that is providing some amount in insurance
- 1- Liked the community engagement. 2- Input is essential. 3- Learned about the projects in place. 4- Strategy for rebuilding affected communities essential. 5- Flood insurance needs a revision.
- 1- Revisit the tunnel. 2- Springbank SR1 best alternative: cost benefit! And social impact.
- The workshop was well organized and kept under control. There was lots of opportunity to express opinions and lots of information and answers to questions. I like the fact that The City is consulting so thoroughly with Calgarians.
- Public engagement is critical in planning for the future. Floods affect the whole city. The Springbank Reservoir is essential to the mitigation process. It will assist the downtown core as well as hard-hit residential areas. It is not a luxury and must be started as soon as possible. Barriers and berms may help along The Bow but they will not be appropriate solutions along the Elbow where groundwater is a major concern, as well as overland flooding. Thank you.
- Push for Springbank to get done. Question why removal of river obstructions was worth not explored further. There are many areas in the river where the floor is obstructed – i.e. river channel of Elbow upstream of Mission Bridge.
- Excellent workshop. It was informative and constructive. Very well organized.

How satisfied are you with today's session?

	Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Dissatisfied	Not Applicable
Clarity of information provided	x11	x2	x0	x0	x0
Project team's response to my questions	x12	x1	x0	x0	x0
Opportunity to provide my input	x12	x1	x0	x0	x0
Opportunity to hear others' input	x12	x1	x0	x0	x0
Session location	x12	x1	x0	x0	x0
Session time	x12	x1	x0	x0	x0

What worked for you about the session format and activities today? Is there anything could we do differently to make it better?

- Better illustrations/example photos of flood walls.
- Nothing. Well organized, provided background, Katie kept us on target well. Felt our opinions are valued, positive, open communication.
- Getting more info – hear all idea's.



- Good format – with presentation and follow- up. Question why barriers were raised for Elbow – would be better and have more chance to ask questions of City representatives.
- Good informative presentation. Good discussion and learn new ideas from participants. City staff gave explanation on technical questions. Very helpful.
- Very happy with the format as I felt it allowed sufficient input and feedback.
- Like the split between the physical solutions and policy.
- Liked the opportunity to interact with neighbours, The City, and well managed by facilitators.
- Liked having material ahead of time. Read it all and then repeated through presentation. Useful may not be totally necessary if all did their homework. Excellent Materials. Format good.
- Dividing the discussion options into dry reservoirs, barriers, and a mix was a bit simplistic but eventually directed most of the discussion aspects. Bylaw discussion is a now event. Participants not interested now.

Which community do you live in?

Elbow Park –x3
Kensington –x2
China Town-x1
Sunnyside-x1
Rideau Park –x2
Parkhill-x2
Roxboro-x1
Lower Elbow-x1

How did you hear about this session (check all that apply)?

x6 e-mail notice
x3 Community Association

x0 Community newsletter
x0 Newspaper
x0 Radio/TV News

x1 Community road signs
x1 Social media –
Facebook/Twitter
x1 Online advertising
x0 calgary.ca
x0 311

x1 Flood Info Newsletter
x1 Word-of-mouth

x1 Ward Councillor
x1 CRCAG email
x1 Bow River Basin Council



Workshop #6: Alexandra Centre Society (November 1, 2016)

Approximately 20 participants attended this workshop.

Concept #1: Upstream Reservoir (Elbow River) and new reservoir upstream on the Bow River:

- The community associations have stepped in to explore options where the City should be stepping in
- We feel that The City has done very little to protect us in the short term
- Power generation creates jobs. Recreation.
- Investment in reservoir for flood capacity will always be in use and useful
- Advantages of potential power and recreation in long-term
- Could provide opportunities for recreation
- One reservoir doesn't give adequate protection
- Dry reservoirs will be wet - reducing availability for flood protection. Becomes recreational site at odds with flood protection
- Reservoir would be a catchment area for upstream debris
- Cost sharing SR1 with the whole province. YYC is economic engine of the province.
- Quick, achievable, cheap - Sr1 will cost less than the airport tunnel
- Upstream mitigation is an equitable option for Calgary
- Bow River reservoir does not give some protection that SR1 does. BR does not mitigate to 2013. Inadequate.
- In other places dams are being removed to minimize damage
- Uncertain option (will the reservoirs happen) makes it less desirable from community perspective
- In the mean time we are left vulnerable
- Would consider swapping park space for reservoir
- Renewable energy potential on upstream Bow River reservoir
- Recoup the water, save for later drought management
- Has the City looked a quick deploy mitigation options that could be used during events and taken down?
- Consider 1:350 year events rather than 1:200 year floods
- Short-term risk could be mitigated using temporary barriers etc.
- Reservoirs much preferable to barriers in community for a long-term solution
- Could enhance environment along river. Provides opportunities for mineral build-up regeneration
- Will affect wildlife areas upstream.
- Land is required for the Bow but because we don't know where, its hard to discuss impacts on land.
- How to know what gets protects or repaired and fixed first? Infrastructure?
- Will it (can it) be ready in time for the next incident
- Reservoirs provide higher capacity. Better investment over time.
- Reduces groundwater level
- Construction of reservoir impacts fewer people
- The economics of the SR1 make sense
- Support for SR1 - it makes the most sense for the Elbow Valley
- To give the most protection for The City, a Bow Reservoir is ideal for the long term

- SR1 is the shortest term option
- Need short-term mitigation
- The timeline for the Bow River reservoir is a concern - we don't have any idea how long that could take
- Good protection potential. Could be decades away makes me wonder if it will happen. Has the feasibility of the new dams been considered - i.e. benefit potential is it fully feasibly within the community i.e. ghost reservoir issues
- It would take a long time to build reservoirs on Bow. Barriers would be beneficial in this instance.
- Barriers would take longer
- Too long-term to benefit us in the current state (Bow River reservoir)
- Could support this open if there were interim measures combined
- Could be 20 + years until completed - what happens in the interim?

Concept #2: Barriers along the Elbow River and barriers along the Bow River:

- Barriers create risk further downstream. Impacts downstream where there are no barriers
- No barriers to protect upstream of Glenmore
- Berms will destroy the natural habitat
- Barriers only protect to a certain level
- Threat: barriers increase water flow for downstream communities like Cranston and High River
- No space on the Elbow to build barriers
- Barriers can fail.
- Doesn't prevent groundwater seepage
- Barriers don't provide for drought management
- Barriers speed up water (speed up the force of water)
- Could apply for Federal and Province funding
- Shouldn't build something just in case - extreme level (1:1000)
- Province doesn't contribute financially to barriers in the city
- Ground water barrier protection would double the cost - the cost ratio wouldn't be beneficial then
- Short-term solution if barriers only look at 1:200 - what if risk level changes
- Concern about what level a barrier might fail
- Would like to see 1:200 across the board
- Major impacts to look and feel of neighbourhoods along the Elbow river
- River adds to quality of life - taking away that will diminish that quality
- As the sole strategy - it is the least pleasing unless it's done well (cost) - berms are more appealing
- Barriers would ruin my neighbourhood
- Not in favour of long, continuous berms.
- No positive for Elbow River with barriers
- Losing access to river with barriers. People will ask for concessions for access
- In some areas, berms are not going to be welcome, due to visual appeal and obtrusive nature
- Concern with aesthetics with berms
- Barriers make sense on the Bow not the Elbow

- Impacts wildlife
- Cost-benefit analysis needed to determine which need to be constructed first
- Need to work together with province
- Berms are probably more reliable and more aesthetically pleasing than barrier walls
- Would support combination of berms and barriers
- Much faster to implement
- Underground barriers in areas that require extra protection (i.e. Sunnyside) regardless of cost
- Benefit: City owns properties along the river at Memorial Drive. Memorial needs to be protected due to emergency response)
- Safety and protection overrule aesthetics
- For the Bow River neighbourhood, this wouldn't change the look and feel (Sunnysider)
- Weakness - no reservoir on the Bow would prefer to see a reservoir on the Elbow
- Sunnyside needs higher berms and ground barriers. Impact = high costs
- Would like to see the risk brought down, regardless of a loss in aesthetic appeal. Trust The City would make it visually appealing
- Area specific barriers are good idea. Some areas are better than others. Bowness will be a difficult one and may need to work with land owners there
- Advocate for 1:200 level. Berms for at risk communities as well as downstream. Combination of upstream and local mitigation measures preferred
- Barriers should protect public infrastructure and vital services first and foremost
- Time consuming and costly to have to expropriate properties

Concept #3: Springbank Reservoir (Elbow River) and barriers on the Bow River:

- Regulatory issues should stop us from addressing easy things - like removing debris
- It's really hard to protect Bowness
- SR1 won't last 200 years needs maintenance
- Bowness is a challenge. Barriers are difficult to place. Maybe put down the street and leave it up to the home owners along the river to decide what they want to do
- Downtown if there is a south side river barrier there needs equal sized berms on north side
- Any measures shoot high - minimum 1:200 year
- Issues with the barrier examples. You can put cycling paths on the inside, close to the river
- Look at the 1:350 levels. Impacts = heights but want protection to be at level for future events.
- Temporary barriers could work if we build permanent barriers in the appropriate areas
- Confident The City will put up visually appealing barriers - opportunities for public art.
- 3 more Ghost reservoirs are needed. The timeline leaves us vulnerable based on that timeline - thus are the barriers needed?
- Barriers are so inferior to upstream mitigation. Need community negotiation. Land owner negotiations. Cost etc.
- Sunnyside wouldn't be affected (look and feel) by the barriers
- Aesthetics and environment damage of barriers as negative
- Once mitigation is good enough insurance will be affordable

- Questions about the protection used along Prince's Island park
- Barrier examples problematic - place pathways on inside of barrier
- How are we three years later and still have debris in the river
- Are temporary barriers an option over permanent barriers?
- Does the city have a plan for dealing community by community?
- Options for low cost mitigation? - ex remove trailer under 25 Ave. Remove barriers in the rivers pathway like gravel bars.
- Berms can be used as pathways
- By far the best cost benefit ratio
- Prefer option 3 because of the cost benefit. (If all concepts provide the same protection)
- Would still like to see reservoir on Bow in long-term but concept 3 is the best for now
- We need the combination of upstream mitigation and barriers
- Barriers on Bow and one upstream reservoir is the solution
- Sunnyside wants higher barriers with ground water protection
- Upstream mitigation for Elbow is the best choice
- A barrier is not a barrier to every community - the impacts change based on location
- Not worried about impact on trees or cost of trees to implement barriers

Non-Structural Measures:

- Development of established communities needs to be protected (Sunnyside, Inglewood)
- The city needs to protect existing communities/development
- Improve communications to Calgarians about risk (evacuation time)
- Ensure the City is protecting developed communities
- City should focus on protection of those policies being encouraged in our communities i.e. vulnerable uses, basement suites
- Policy issued already that guts value, and over reaches what it needs to (ex not allowing basements)
- Policy can overshoot and gut value
- Removing buildings creates a checkered community with vacant lots
- Like the idea of raised home, regardless of visual impact on the community
- City should add low impact development now
- Stop adding concrete to everything! We need more green space - add trees
- More guidelines for people to protect home during flood to reduce risk
- Target education to communities in floodway and flood fringe
- Think current policies are working fine. The biggest problem is enforcing it.
- Increase education on insurance. What it covers and doesn't cover. Difference between coverage types.
- Educate people for flood preparation. Increased awareness
- Zoo walls - we feel we are being sacrificed. The city is picking and choosing.
- Bad policy can be more destructive than water
- There is a need for increased storage and solutions for upstream
- We were not protected in 2013

- Better management in time of flood - ghost dam etc. need to collaborate to minimize damage
- Improve forecasting to inform us faster. Need to improve how public knows about emergencies
- Emergency response time (max response time?). Public safety - what planning do people do/need to do when there is a flood?
- Needs to consider enhanced weather predicting/forecasting models
- Invest in super computer forecasting
- Put back the beavers
- Not allowing basement redevelopment will impact property values
- The neighbourhoods that would be impacted by policy measures are high value, desirable areas to live and play
- Reduce surprises to homeowners.
- Sunnyside - basement suites are now encouraged by the city and we are going to have to figure out how to protect them
- Government should not interfere with private decision-making related to property. Penalized property owners in certain communities
- Policy should compliment the mitigation not undervalue property values
- Removing buildings creates a bad feeling to community with vacant lots
- Mandatory insurance regulations across floodway or fringe for some areas. Mandatory for companies to provide.
- Insurance needed as the back up
- Insurance falls on home owner
- Major causes for deaths in floods. How to address what the causes are
- Design guidelines reflect the fluid nature of our climate
- Develop a long term plan (exit strategy) to no repair infrastructure after a flood
- Secondary suites, no new ones for safety and damage protection reasons
- Pathways, parks etc. should be developed in flood fringe not new development of homes and structures
- Great idea to remove basements/basement development in the floodplain
- Inglewood basements - changes design to be resilient to flood
- Policy should only be used as the compliment to structure mitigation
- Agree with further restriction re-development in the floodway
- Removing buildings in flood way depends on how many. Do it until it becomes cost-prohibitive
- Land use plans should reconsider adding so many people to a flood area
- Willing to take risk as homeowner to regulate basements on own
- Huge cost on to the home owners to mitigate flood water on their own property
- Basements are fine because it is at your own risk
- Design for resilience - mitigating your own assets
- City is guilty of taking away permeability in the way they are building road - sidewalk - pathway. Reduce concrete
- People who want to live in a flood area should accept full risk.
- People have adapted to live in flood area - no expectation to be bought out or reimbursed
- New maps coming in - 2017 will impact opinion on removing homes and buildings from the floodway



- Flood mapping needs to be updated, then proper risks can be identified. Implement structural changes and address policy changes. Sequential order with policy as the last course of action.
- Raise electrical panels and furnaces in new homes
- Policy should address gaps and risks
- Removing buildings reduce property. There is no fairness to the process
- No structures (public) should be built in flood hazard area in 250-500 year zones
- Agree with flood proofing measures. Ex back-flow prevention
- Restricting risky uses is acceptable (i.e. long term care facilities, day cares, ems etc.)
- Vulnerable uses should be considered in areas other than flood hazard areas due to instability to protect themselves in flood events
- Floods are from areas above - minimizing development in flood areas and fix infrastructure
- Moving electrical upstairs is safer but power will still be shut off because not everyone will have done it
- Good idea to remove structures where possible - including pavement to allow for permeability



Comment Form Feedback

Do you have any additional feedback you would like to share?

- Frank and Sandy are very knowledgeable and helpful.
- I strongly support Springbank Reservoir. I am not in favour of barriers along the Elbow River. In terms of non-structural measures: do not interfere with individual right to make decisions re their property. Do not mandate that homes be removed from the floodway. Do not restrict basement development. Do not regulate how buildings are re-developed in flood hazard area. Create an app that homeowners can use to be warned about evacuation or potential flooding.
- I feel like the barriers were presented as completely ugly, unrealistic structures. Some sights are already 1:100 protected, going 1:200 would not create that much difference. I felt like there was a bias towards upstream mitigation. Thanks for hosting this workshop!
- More trees and permeable surfaces. More gutters for rain water. Remove constrictions (e.g. still a trailer under 25 Ave Bridge SE). Stop river recreation that's damaging river banks. How about temporary barriers? Or lifting ones?
- We have some of the most capable humans on the planet in terms of their ability to respond to these types of risk, this is reflected in the rapid and repeated ability for houses to be rebuild. Based on this, further degradation to a public resource (the rivers and their floodplains) through increasing infrastructure and mitigation projects is societally unacceptable (in my opinion). Using creative approaches, these home owners could be leaders in implementing strategies for avoiding flood damage while remaining where they live... a win/win for everyone! Thanks for giving me the opportunity to have some input!

How satisfied are you with today's session?

	Satisfied	Somewhat Satisfied	Somewhat Dissatisfied	Dissatisfied	Not Applicable
Clarity of information provided	x7	x1	x0	x0	x0
Project team's response to my questions	x6	x2	x0	x0	x0
Opportunity to provide my input	x7	x1	x0	x0	x0
Opportunity to hear others' input	x7	x1	x0	x0	x0
Session location	x7	x0	x1	x0	x0
Session time	x5	x2	x0	x1	x0

What worked for you about the session format and activities today? Is there anything could we do differently to make it better?

- Better projector would help.
- Good flow and pace. Imagery re: barriers.
- Important to discuss the issues and hear concerns and opinions of others. Thank you providing these sessions for community input.
- More time but who has more time?
- It was good to have representatives from other flood affected communities.



- It was nice to discuss issues with people from several communities. May need a better way to mix up tables. People seemed reluctant to move tables. Presentation was very informative.
- More of an effort to stop the very opinionated people over taking the conversation and not listening to others. Bit biased show of barriers. Made it out to be like biking along the river with a concrete wall by the side. Not correct??
- Need more time! Make it longer!

Which community do you live in?



Erlton –x1
Cranston-x1
Douglasdale –x2
Ramsay –x1
Sunnyside-x2
Inglwood-x1
Crescent Heights –x1

How did you hear about this session (check all that apply)?

x4 e-mail notice
x2 Community Association

x1 Community newsletter
x0 Newspaper
x0 Radio/TV News

x3 Community road signs
x3 Social media –
Facebook/Twitter
x0 Online advertising
x1 calgary.ca
x0 311

x2 Flood Info Newsletter
x3 Word-of-mouth

x2 Ward Councillor
x1 Eventbrite