



Bowness Flood Barrier Project

Stakeholder Report Back: What we Heard – Phase I
January 2019

Project overview

The Bow River is an integral part of the Bowness community. Being so close to the river means there is a risk of flooding. Homes, buildings and other infrastructure in Bowness are impacted when river flows reach levels of 850 cubic metres per second (m³/s). Without upstream mitigation (naturalized flow), there is a 12 per cent chance of this occurring every year.

In 2016, The City hired external consultants to update the Provincial Flood Damage Assessment study for Calgary and to assess and recommend future resiliency and mitigation measures. The resulting document, the Flood Mitigation Measures Assessment (FMMA) report, was approved by Council in the spring of 2017. Recommendations include the following combination of mitigation solutions to create a flexible and adaptable flood risk management program.

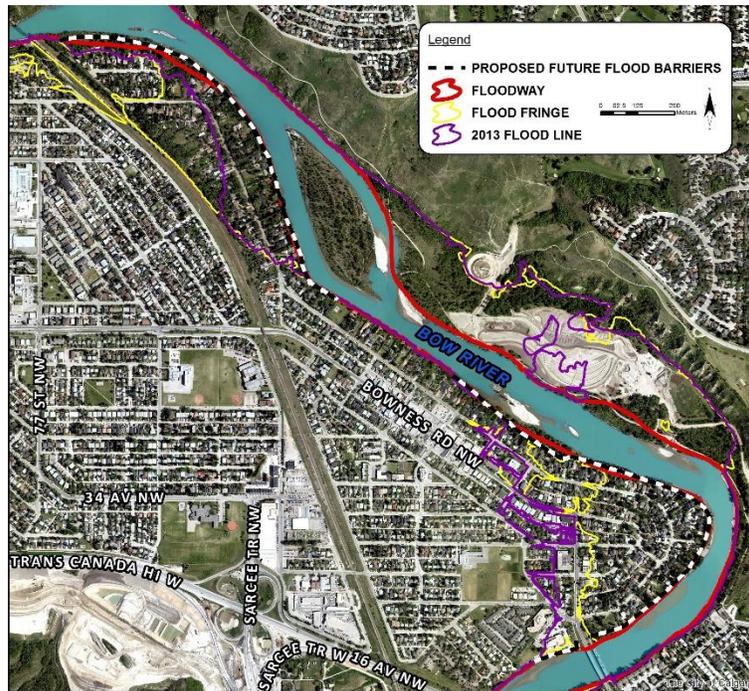
- Watershed-level mitigation (The Province):
 - Modified operations at Ghost Reservoir as part of the current five-year agreement with TransAlta.
 - A new an upstream reservoir on the Bow River.
- Community-level mitigation (The City)
 - Permanent flood barriers in communities where required.
- Property level and policy mitigation (Citizens and The City)
 - Policies, bylaws, land use regulations, building codes, possible incentive programs for flood proofing and public education.

There isn't one single project that will provide adequate flood protection on its own on the Bow River. Each piece of the strategy provides great benefits independently, but together, they ensure the most effective flood protection.

Bowness is one of the communities identified on the Bow River where permanent flood barriers are needed to work in tandem with upstream mitigation to protect the community from a 2013 level flood and beyond. As part of the conceptual design phase it was determined that flood barriers were a technically feasible option, located roughly between the CP Rail tracks to the Shouldice Bridge. The proposed barriers would need to be built on private property, requiring engagement with the Community and property owners. As part of the preliminary design phase (2018-2019), the findings from the conceptual work (2017) will be studied further and the concept refined.

As the decision unfolds a more comprehensive decision-making timeline will be available to the public along with upcoming opportunities for community members to voice their opinion.

The map below highlights the areas of flood risk and areas for which a barrier is being further studied in Bowness.

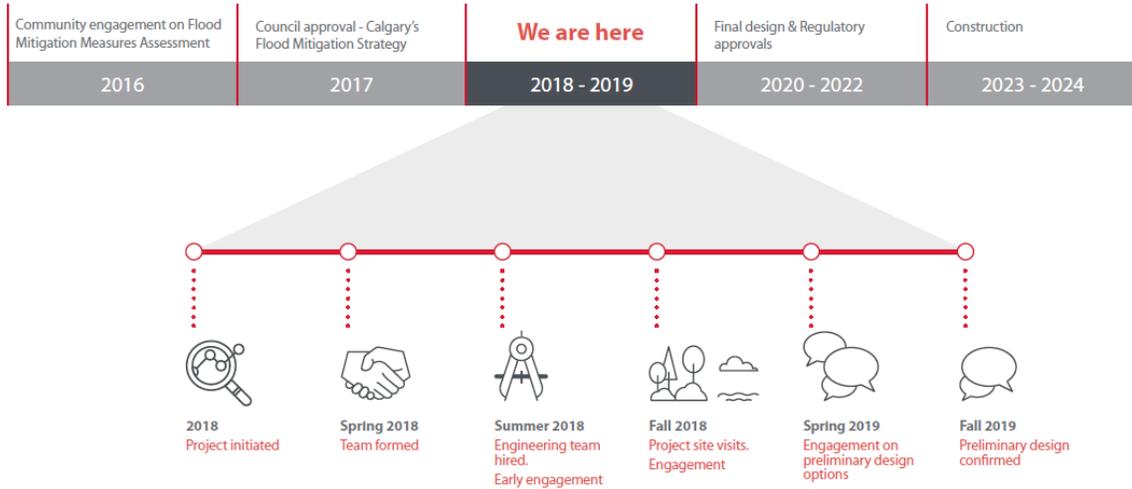


As part of the preliminary design process during which further study is conducted, a 3-phase community engagement program was developed. This report summarizes the communications and engagement activities within the first phase of the engagement program.

Engagement overview

As described in the figure below, the proposed Bowness Flood Barrier project is currently in the preliminary design phase. This phase extends from fall 2018 to fall 2019. It consists of gathering feedback from community members, conducting site surveys, and completing engineering studies and analyses.

Engagement with residents began in early 2018 and will be ongoing through to the completion of the project. The timeline for engagement activities is shown below.



Phase I

The Phase I engagement activities were implemented over approximately five months (August - December 2018) to reach riverfront residents, non-riverfront residents, Bowness Community Association representatives and Bowness Responsible Flood Mitigation (BRFM) society members.

Objectives

The purpose of Phase I was to collect local knowledge and get input on property-level and community values, areas of sensitivity and other factors that should be considered in the preliminary design. Objectives for this phase were divided into two categories:

Communication

To provide proactive, meaningful communications to stakeholders on:

- The need for flood barriers and the risks associated with not proceeding with the project in their community.
- Project timelines and current activities.

Engagement

- Obtain preliminary input about riverfront property owner concerns to inform the flood barrier design.
- Obtain input from the broader community on local features and sensitive areas that should be considered by the engineering consultant as they design the flood barrier.

Activities

Phase I consisted of integrated communications and engagement activities:

Communication activities

- The project included proactive communications to inform community members about the project process and engagement opportunities. Additional communications were introduced throughout



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Phase I, as questions arose from residents about the project through the various engagement opportunities.

- Project webpage: The City developed a project page on Calgary.ca. The page is the primary resource for up to date project information including FAQs, contact information and project timelines.
- Video series: The City developed visual explanations to help address and clarify some of the common areas of concern raised by community members. Phase I videos included: 'Stormwater 101', 'Groundwater 101', and 'How upstream reservoirs support downstream flood mitigation.'
- E-Newsletter: Starting in August, The City issued a monthly project-specific e-newsletter. The publication included updates on the project, key dates and educational articles on general flood topics. Residents were able to subscribe through the project webpage and at the in-person engagement opportunities.
- Engagement promotion: To promote the engagement opportunities the team used a variety of tactics to reach multiple and diverse audiences including *Bowest'ner* articles, bold signs, mail drops, correspondence with the Bowness Community Association and website information.

Engagement activities

- In-person engagement events: The City hosted several opportunities for community members to learn about the project and provide input.
- Online engagement: The City also hosted an online engagement platform. This platform supplied project information and input opportunities that mirrored the in-person Open House for the wider community. This online tool provided a wider reach by allowing residents to comment and submit input over two weeks.
- Site meetings with riverfront property owners: The project team began engaging with riverfront property owners in the form of one-on-one meetings. These site meetings allowed the project team to meet individually with owners to discuss the project and collect information about each property to be used in developing a preliminary design for the proposed Bowness flood barrier. Riverfront residents were able to sign up by phone, email or in-person at the engagement events.

Engagement event dates and locations are listed below:

- August 15, 2018, Bowness Community Association meeting – Bowness Park
- August 17, 2018, Bowness Responsible Flood Mitigation Society meeting – private residence on Bow Cres.
- September 20, 2018, Riverfront Property Owners Meeting – Bowness Community Association Main Hall
- October 25, 2018, Bowness Responsible Flood Mitigation Society Meeting – The City of Calgary Water Centre
- October 30, 2018, Bowness Open House – Bowness Community Association Main Hall
- October 30 to November 16, 2018, Public Online Engagement – engage.calgary.ca/bowness-flood-barrier-project



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- December 11, 2018, Bowness Responsible Flood Mitigation Society Meeting – The City of Calgary Water Centre
- Fall 2018 site meetings with riverfront property owners (to continue until Spring 2019) – individual properties

What we asked

Methodology

To summarize the data in the ‘What we heard’ section, the project team reviewed all comments received from the online and in-person engagement. The team categorized the comments into overarching themes. Comments often fell into more than one theme. The results of the analysis represent those members of the public who elected to participate online or in person. They are not fully representative of the community of Bowness.

Areas of input

Areas of input	Questions	Audience engaged	Tools used
Project general feedback	- Any additional information you would like to share with The City? -	Bowness community members	- Open House evaluation form
Community features for consideration	- What local features and sensitive areas should the project team consider in the design of the barrier	Riverfront property owners & Bowness community members	- Online Engagement Map – through the Engage Portal - In-person input with area maps - Riverfront Property Owners Meeting and Bowness Open House
Description of property features for consideration	- How do you use your yard? - How do you use the riverbank area near your property? - Can you describe any views from your home or your yard that you enjoy? - What do you value about your outdoor space? - What do you value about living near the river? - What are your primary concerns about flood mitigation?	Riverfront property owners	- Bowness Project Site Visit Onsite Questionnaire Form (the full questionnaire can be reviewed here)



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What we heard

Who did we reach and hear from?

The following table shows the participation in the engagement activities, and the estimated number of people reached through some of the communications efforts.

<p>Riverfront property owners meeting</p> <ul style="list-style-type: none"> Over 200 residents attended the meeting. Questions were submitted either written, electronically or verbally. From the meeting the top themes that emerged were; <ul style="list-style-type: none"> Decision making process – concern over how the decisions on berm design and construction will be made and how community input will be used; Transparency – concern over questions not answered, why the project is happening and clarity needed on information presented; Barrier Design – concern on implementing the design of the barrier into current landscape effectively or other options instead of a barrier; and Financial Considerations – concern over compensation being provided for aspects of property and emotional stress along with decreases in property value.
<p>Public online engagement</p> <ul style="list-style-type: none"> 1,231 visitors came to the online Engage portal providing comments and input to the social map. From online engagement the top themes that emerged were; <ul style="list-style-type: none"> Environment – concern on the effects of the berm on environment, greenery and animals; Barrier Design – concern on implementing the design of the barrier into current landscape effectively or other options instead of a barrier; and Access to the berm – concern on the public using the berm as a pathway.
<p>Public in-person engagement – Open House</p> <ul style="list-style-type: none"> 113 individuals attended the Open House and completed feedback forms and comments on printed area maps at the Bowness Community Association Main Hall. From the Open House the top themes that emerged were: <ul style="list-style-type: none"> Barrier Design – concern on implementing the design of the berm into current landscape effectively or other options instead of a barrier; Environment – concern on the effects of the berm on environment, greenery and animals; and Decision-making – concern over how the decisions on berm design and construction will be made and how community input will be used.
<p>Site meetings with riverfront property owners</p> <ul style="list-style-type: none"> Property owners signed up for one on one site visits. The City commenced site visits in October and they are ongoing.
<p>Interest group meetings</p> <ul style="list-style-type: none"> Three meetings with Bowness Responsible Flood Mitigation Society Meeting (BRFM) One meeting with the Bowness Community Association
<p>Residents communications</p> <ul style="list-style-type: none"> Active communication through email, telephone and 3-1-1



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e-newsletter
<ul style="list-style-type: none"> • 152 residents signed up for the project e-newsletter distribution list through the Calgary.ca project website, and at in-person events • Six editions published for Phase I of the project
Project webpage
<ul style="list-style-type: none"> • Over 1,000 visits to project webpage

Themes from public engagement

The majority of stakeholders that provided feedback opposed the project and were interested in learning more about the decision-making process, and the criteria The City will use to determine whether to proceed with the project. The top three themes that emerged from the comments provided by stakeholders provided at both the in-person events and on the Project Engage Portal were:

- Environment;
- Barrier design; and
- Access

For a detailed summary of the input that was provided, please see the [Summary of the Input](#) section.

For a verbatim listing of all the input that was provided, please see the [Verbatim Responses](#) section.

Next steps

Further engagement is planned for the Bowness Flood Barrier Project. Following individual consultations with property owners and technical studies and analyses that will occur in 2019, the project team will draft options for the flood barrier. By fall 2019, the project team will be returning to the community to present the study findings and a draft of the preliminary design which is approximately 30% into the design process. After presenting our findings, we anticipate having a preliminary design finalized including updated cost estimates early 2020. It is at that point where the project team will review the findings and determine next steps.

Further engagement is planned for the Bowness Flood Barrier Project. Following individual consultations with property owners and technical studies and analyses, the project team will begin designing options for the flood barrier. During Phase II, these options will be shared with riverfront property owners for feedback in spring/summer 2019. This feedback will feed into the finalized preliminary design which will be presented to the community and residents in fall 2019 as part of Phase III of the engagement program.



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Summary of Input

Open House and Online engagement

This section provides a summary of the external engagement input received during Phase I of the Bowness Flood Barrier project.

Themes	Description of overarching themes
Environment	<ul style="list-style-type: none"> • Dredging the river as a mitigation option. • The effects of construction and barrier presence on wildlife and fish habitats • The extent of mature tree loss and natural landscape • Disruption and erosion of the river bank • Environment Impact Assessment requirements • Equipment spills and contaminated soils as a result
Barrier Design	<ul style="list-style-type: none"> • Clarifying the potential design of the barrier, including height, service level, aesthetics, footprint and location • Other flood mitigation solutions and options considered: examples from different cities, that better utilize/work with nature • Temporary flood protection measures/solutions options
Access	<ul style="list-style-type: none"> • Concerns regarding the potential for a cycling or walking path to be installed on the berm, and the effects this would have on private property and privacy • Disruption of privacy and movement of heavy equipment due to construction and maintenance access • Requests for a commitment from The City that public use on the berm will be prevented
Upstream	<ul style="list-style-type: none"> • Clarifying the TransAlta agreement • Upstream measures pursued as the primary or sole flood risk mitigation • Perceived management of upstream dam system during previous flood events • Allocation of funds for upstream measures
Decision-making	<ul style="list-style-type: none"> • Cost-benefit and social impact criteria taken into consideration. • How property owner feedback will influence the decision to construct a barrier and its design. • Whether the decision to proceed could be determined by a property owner vote. • Level of priority (response) for the Bowness community in case another flood situation occurs • Project review by the Province • Equity in flood protection measures



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Themes	Description of overarching themes
Groundwater	<ul style="list-style-type: none"> • Groundwater as main or only reason for the flooding in the area • Details regarding the effects of the proposed barrier on groundwater flooding, and how The City will manage it • Questions and details requested about the groundwater study (time, location, access)
Engagement	<ul style="list-style-type: none"> • Knowledge from community members in regards to the project area and important values to consider • City not listening to affected residents, no say or choice in project • General interest in engagement process with non-riverfront residents • Insufficient consultation and communication
Funding & Cost	<ul style="list-style-type: none"> • Clarity regarding the budget and cost of the project • Request to use the money in other projects/priorities in the city • Use of taxpayers' money
Misinformation & transparency	<ul style="list-style-type: none"> • Concerns regarding access to accurate information, level of detail (too general) • Need for more studies and data before building the barrier • Missing information about other options investigated, the budget/cost of the project, and the impacts of construction
Financial considerations	<ul style="list-style-type: none"> • Loss of property value • Details regarding compensation for property owners and how it would be evaluated • Expropriation
Studies & site visits	<ul style="list-style-type: none"> • Need for further project studies including wildlife, aquatic surveys, tree canopy, groundwater, hydrological, impact assessment, archeology
Ownership & liability	<ul style="list-style-type: none"> • Responsibility for damages resulting in construction and for maintenance of the barrier • Concern related to potential increased insurance costs and coverage for property owners.
Process	<ul style="list-style-type: none"> • The order of activities relating to the design and construction of the proposed barrier.
Other comments	<ul style="list-style-type: none"> • A range of questions, considerations, including visual impacts, opposition to the project and project support



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Verbatim Comments

Verbatim comments include all written input that was received through both the online and in-person engagement event (public open house). Verbatim comments from the Riverfront property owners meeting can be found on a separate document [here](#). Comments below do not include input collected as part of the resident's one-on-one site meetings.

The verbatim comments have not been edited for spelling, grammar or punctuation. Language deemed offensive or personally identifying information has been removed and replaced with either (offensive language removed) or (name removed).

- Get a listing available of insurance companies which might sell flood/sewer insurance. Too little concrete info and results. Little has been accomplished. Inglewood map mistake: mistakes are forgivable but should not be happening on a project or topic like this
- My property value will plummet, no backyard, river view destroyed. When our councillor tells me that he works for the city and not for area residents and also states that the berm is a done deal I wonder whether I'm wasting my time
- I feel we are not being heard. The city "thinks" they know best and we are from Bowness. I don't understand why you would contemplate cutting down trees and shrubs that hold the river bank. This is short sighted. Many of the residents along Bow Cres. have lived there for 30, 40 or more yers. We know and understand the river during all seasons. Therefore, I fail to understand how a city rep who may not be from this rea can judge what would be in our best interest. Also, are we sure a rowdy bunch, it takes 3 security officers to control us? I find it intimidating.
- Although there is a vocal, complaining contingent who oppose the project; there are many bow crescent residents who fully support the project. I heard many vocal, negative comments from participants today. However, my husband & I are in full support of any & all flood mitigation. We were flooded in 2013 & do not want it to happen again.
- Build a berm and not a highway!! We have a small berm in our back yard and it held up perfect.
- At this stage additional information is incremental. Many people, myself included are starting to get mentally and emotionally fatigued with this process and its impacts. Decision makers are not considering this. ALL of us know that an upstream dam is needed to make a real impact not just for Bowness but for all of Clagary. That project does not invade each and every river front property owner. It's much easier to swallow for the majority otherwise impacted. What price have you put on our sanity? How long are you prepared to let us have sleepless nights?
- We found extremely difficult to get specific information in this format. General information and general responses only.
- Could have been nice to have someone from the ecological science side of the project, to inform about impacts on the terrestrial and aquatic ecosystems. Please, advocate for the environment with this proposal.
- That all studies are fully accessible, thanks for the home visits

- Not a good idea - who's paying for it. "Look after the problem up river" who's paying for it
- I do not believe the city will ever listen to affected residents. Would appreciate a feedback poll for/against proposals
- I'm concerned that the preferred plan is for 1:20. This seems like no enough & leaves me anxious about future floods. I would prefer that we were designing for at least 1:100 year flood. I live on the street side of Bow Cres. where we have over 36" of water in our backyard in 2013.
- Just returned from trip to Vienna, Salzburg & Munich. All three cities have flood mitigation measures on rivers much larger than the Bow. None of them displayed a Berm like the City of Calgary is proposing.
- Concerns of improper built/designed berm. Nothing where a bike path could ever go. Need all 3 elements of proposed solution done. 1. Berm. 2 TransAlta agreement 3. Upstream mitigation. Not 1 or 2 in isolation. Need berm height elevations for my lot.
- Need hydrological studies on flows, through porous media, need interpreter comments on this
- Measure groundwater here [personal info removed] there is a history of water issues
- [personal information removed] - Property line is incorrect should be right to the river
- People living on the river will benefit - even though they don't want it - from not having their house washed away by kinetic energy.
- The main image on the website is incorrect and shows groundwater sloping in the wrong direction.
- I'm concerned there is a conflict of interest by having an engineering firm do this study - it could be done for less, in shorter time
- I'm concerned this will negatively affect how rain water runoff makes its way to the river
- I'm worried this has happened too quickly without doing a proper feasibility study. i.e. look at data of all extreme conditions
- My fear is that, once the City owns part of my property they can do what they want there forever
- I'm in flood fringe, but have no say in this. And I was flooded.
- Why can't we dredge the river to make it deeper? They do this in Ottawa and it's more cost effective
- This height is not sufficient for a 2013-level flood. If water comes in, then flows East to the plain, it will just pool behind this berm
- The removal of all these trees for a berm will cause more erosion and flood vulnerability
- I would like to see other solutions that better utilize/work with nature
- Why not expropriate all the homes and build a 30ft levy?
- For me, the risk is worth no having a - ugly - ineffective, expensive berm, which will end up having a bike path on it
- I'm concerned with a berm it will bring foot and bike traffic, which will bring vandalism and loss of privacy
- Removal of many trees seems counter intuitive to flood protection ; and is bad for aesthetics
- What about all the people who re-built with 1:200 flood prep without knowing this berm was planned. No transparency.
- Insurance was good in 2013 but can't insure against sewer/stormwater



- Flood waters entered the lot from the west side first, before coming over the bank on the river side of the house . Should look at the book – My Bowness History for photos of the area . There used to be a lagoon behind the houses at [personal information removed], but the landowners filled them in. At [personal information removed] there was a small berm constructed behind the house, very concerned about the 30m wide berm footprint
- Concerned that the berm will overtop and the water will get trapped behind the berm with no escape, making things worse . Willing to undertake temporary flood protection measures (i.e. sandbagging) and would like The City to look into this instead of a permanent berm
- Had water a bit further up their driveway, compared to the 2013 flood line shown on the aerial photo map . Didn't have overland flooding but had sanitary sewer back up
- Wanted info on regulations around riparian planting on property . Suggested that The City may want to do a planting project for the non-barrier riverfront properties to mitigate against erosion (and as a show of goodwill)
- [name removed] Suggested a temporary barrier solution with stoplogs (he is a supplier)
- what the flooding would look like and if we would need a barrier for a 1:100 year flood, if we had 2 upstream reservoirs
- Take all the money you are about to spend on this and put it into LRT security.
- Flood mitigation would be most efficiently and effectively handled upstream of Calgary. No berms for Bow Crescent!
- City flood mitigation is necessary to prevent a future reoccurrence. City of Calgary CANNOT set policy for the surrounding area ie mitigation upstream of the city. So CofC must work within its boundaries. Flood mitigation needs to be community needs sensitive usage wise and aesthetically
- Please do not waste more money on this. The city has so many more pressing issues. Fix the disaster that the Westbrook Ctrain station has become.
- This area is well above the 1:20year flood event risk, actually by the cities documentation in the 1:200 year level, and is not required for the effective deployment of the berm. This area should be removed from the berm plan. [personal information removed]
- Keep the trees
- Keep the trees
- Don't kill the plants and animal habitat
- Do not cut down my trees
- Is this your idea of consultation?
- I don't want to look at a berm
- Don't kill my garden and flowers
- Don't kill the trees



- Look at how trees are here that you are going to kill. Go spend the money upstream
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- Lot elevation is already higher than the 2013 flood (one in 70 year flood). Do you really need to wipe out 8-12 50+yr trees to put in another berm that would be higher than a one in several hundred year flood? (Adding in 1/2M of freeboard height to a one in 20 year flood will make it this high.)
- What is being done to address the significant erosion of the riverbank at this location during potential flood periods? This should be addressed before any unnecessary berms are added.
- If the barrier does not prevent groundwater flooding it will provide essentially no benefit as 80% of flood damage in Bowness is related to Groundwater.
- The rich folks on the Elbow get upstream mitigation to keep their basements dry. Bowness is the poor cousin gets a berm that will not address groundwater. to protect from groundwater damage, you need upstream mitigation. This is a waste of money.
- The urban forest behind Bow Village Crescent properties is a unique natural space in Calgary. Home to wildlife, birds, native flora, etc. Construction of the flood barrier would be devastating to this unique ecosystem and the berm would not benefit residents on the Crescent.
- This property and others close by are above the 1:100 flood level and will not benefit from the 1:20 barrier that is proposed. Lots of downsides: disrupted enjoyment of properties with construction, loss of privacy, lost trees. A complete waste of taxpayer dollars.
- What will heavy construction vehicles moving up and down the street during construction do to this already poorly maintained road?
- how will the wildlife that live (e.g. deer, fox, bobcat) on the island be affected by the construction? Will they move away never to return? What a shame that will be.
- How will the barrier protect against groundwater flooding? Why bother with the barrier and the destruction of trees and river ecosystem if you can't protect our basements from groundwater flooding?
- another waste of taxpayers money. The damage done was due to groundwater.....we are sitting on 10+metres of gravel no way economically can you mitigate that
- We experienced groundwater flooding on bowness road in 2013. This berm will do nothing to deal with the real cause of property damage that the community experienced. We are sitting on multiple metres of gravel. No way you can groundwater mitigate that....

- My biggest concern is the removal of mature trees and the natural landscape.
- Trees cannot be planted on or near a new berm because it will weaken the integrity of the berm. How can you build a berm and still keep the natural beauty and health of our riverside habitat?
- The flood left behind massive gravel beds that weren't there before. This will bring up the water level even higher. Wouldn't it make more sense to dig those out of the river instead of building a berm?
- this property has a wetland habitat that is not only important for wildlife but also important during high water events in its capacity to slow down flow and absorb.
- The trees that grow along the property lines that run perpendicular to the proposed barrier, if removed also eliminate privacy in our backyards and nesting habitat for the birds in the area. This is unacceptable.
- It is my understanding that during the 2013 flood the Telus building needed to be protected. This resulted in water being diverted and negatively impacting other properties. Please ensure the barrier design mitigates risks to ALL critical infrastructure like the Telus building.
- Consider what may occur to erosion of the bank in a high water event with the barrier in place. Won't there be greater velocity along the bank. What will that do for fish habitat. I understand that the trout spawn under the river banks.
- Prevent channel jumping. If the barrier is located near the rear wall of homes positioned closer to the river, I would like that the house foundation is at risk.
- There was overland water in my alley and up my street a block inland from Bow Cres. I do want mitigation to reduce this risk. Hopefully this can be done with 'greater community needs' in mind.
- Is there any thing The City can do to reduce ground water during high river flow periods? Pumping stations?
- don't kill the trees or the area that our geese come to grow their families each year. We have followed city guidelines for property mitigation from; property elevation to mechanical room location and sump pump. We don't need a barrier we already spent the money don't charge tax payers more, no need
- Your barrier design slows down ground water penetration, but is beneficial only if the river level recedes quickly. Otherwise, we will have more severe flooding and slower drainage back to the river. And some of us will flood for the first time ever!
- In 2013, the flood water stopped at the top of the old bank at the midpoint of our yard, so we already have an effective barrier. 2 ft of water in bsmt from groundwater seepage thru foundation. A unnecessary berm halfway thru my yard would destroy my property value, and ruin the beauty of this area
- Our home did not flood in 2005 or 2013 and we are not scheduled for a barrier. However, it is not clear to us that the engineering study and design are rigorous enough to ensure that the berm will not induce a potential groundwater increase and an quick and efficient egress should a flood occur agai
- In both the 2005 flood and the 2013 flood there was gross mismanagment of the resevoir levels of the upstream dam system. In the USA, Transalta would have been sued. Now that the Province is



controlling the dams during flood season, I don't foresee another flood for 100 years. Berm is unnecessary.

- I am in the later stages of my life and I am not interested in dealing with the noise, dust, debris, traffic and natural devastation of this project. I see no net positive benefit but for a few hundred homes who may never see a flood again in their lifetime, many of whom are opposed anyway.
- The river in Bowness is a haven for wildlife. On the bank we regularly witness deer, coyotes, red fox, beaver, bald eagle, a vast array of other wildlife. The project will drive them away, possibly for good and that would be a true loss for our neighborhood and our environment -
- I would like to know how on earth the City can get the okay to massively disrupt the riverbank when my neighbor had to fight for two years to build an erosion prevention rock wall, was never allowed to and was reprimanded for even touching a tree on his PRIVATE property along the bank. Laughable!
- "No Flood protection is required in this area"!
- All of this disruption, destruction, devaluation of private property for access....
- This area is well above the 1:20 year flood event risk, actually by the city's documentation in the 1:200 year level, and is not required for the effective deployment
- I have serious concern about the effect of a berm/barrier on my property value.
- I worry about drainage, and the enveloping of water between a barrier and my house during heavy rains.
- Should a barrier be built, there needs to be an option for construction of a wall rather than an earthen berm, and an option as to where such a wall would locate.
- How would I be compensated for severance of my property?
- How could there be compensation for loss of wonderful old trees, and the nesting that they house.
- We have had to listen to the movement of heavy equipment during the construction across the river in Bowmont Park (settlement ponds and Dale Hodges park). Next we get four or more years of this noise with the construction of a flood barrier. So much for enjoying our retirement.
- Proposed road allowance in our yard is over 30 ft wide and 5 ft high. Mismanaged 2013 flood water peaked at 3 ft? Somethings wrong here. We stand to lose trees, wildlife, view, privacy, backyard, property value, to say nothing about 10 years of emotional upheaval with the process & construction.
- Standard engineering would be for a 1 in 100 year flood. Why is the city engineering for 1 in 200 on the Bow and 1 in 100 on the elbow?
- With the berm, can we rest assured the city will have enough lead time to set up portable pumps and generators to clear the blocked storm drains. Does the city also have the capacity to pump out water trapped behind this berm if it is compromised by groundwater or overland flooding?
- Given a berm and another flood situation, where would Bowness sit on the priority list. It took weeks to get High River residents back which caused irreversible damage. (Temporary barriers are easier to take down)
- As we all tend to get older I wonder how I will get over a 5 foot wall to access our patio in the future. Getting our canoe or lawn mower over will definitely be more challenging.
- Mature trees, wildlife.
- Put a wall on bow crescent and save the trees



Bowness Flood Barrier Project

Stakeholder Report Back: What we Heard – Phase I
January 2019

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- Put a wall on bow crescent and save the trees
- Put a wall on bow crescent and save the trees
- Put a wall on bow crescent and save the trees and money
- Put the barrier on the road
- Put the barrier here (Bow Crescent)
- put the barrier here (Bow Crescent)
- dont build a berm but if you do build it on the road
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- dont build a berm but if you do build it on the road
- go spend the money upstream and save the natural beauty in Bowness
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- go spend the money upstream and save the natural beauty in Bowness
- don't build berm, spend the money upstream

- There are large stands of mature native river birch behind Bow village Cres that cannot be replaced once removed. Very upsetting!
- I expect the City to conduct a complete Environment Impact Assessment that should be reviewed by the Province!
- The city should plan on completing the important studies like the hydrology study and geotechnical studies before any other project work is undertaken!!!
- The City's Biosphere Impact Assessment is not enough. At a minimum, the City must complete an Environmental Impact Assessment to be reviewed by the Province.
- Protect the deer that live here.
- Protect the fox that wander through our backyards.
- Protect the old snags that are home to woodpeckers and other birds.
- Would some dredging here help reduce the proposed berm height?
- With a berm, storm drain gates will be closed during high water. City will need to bring in pumps and generators before water backs up onto the streets. Will the city have the lead time and resources. Where would the Bowness berm response fall on the priority list given other high water issues?
- What do you have planned for the natural wetland that is on the street? It's one of the places you can still hear frogs.. kind of like what was removed across the river?
- I heard there is a phase 2 to the project? When will we get informed about this?
- The city is asking if we have sump pumps. Is there some uncertainty about groundwater?
- If the Berm does not prevent Groundwater migration under the barrier, which it will not given the thick permeable gravels in the Bowness area, the benefit to Bowness residents, both river side and non river side properties will be close to zero
- Without massive stormwater pumping capacity, if the stormwater outfalls are closed, our sump pumps and groundwater ingress into the stormwater system, as well as normal rainfall load from the higher areas of Bowness and COP will cause overland flooding in the low lying areas of Bowness
- I have heard city representatives indicate that Bowness residents can safely live in their home with groundwater flooding in the basement. If through SR-1 and Glenmore, residents along the Elbow will have Groundwater Protection as will residents of Sunnyside through the berm, Bowness needs equity.
- This berm is disregarded for private property rights. The berm could be built on City land on Bow Crescent and deliver the same benefit (zero) to River Front property owners).
- The city is not honest with respect to flood probability. My home on Bow Crescent existed for over 50 years and has been flooded once (in 2013) and the result would have been the same if the barrier as designed had been in place for this entire period.
- Once groundwater enters the basement of our homes, it will drain down the floor drains into the sanitary sewer and overwhelm the lift station. This will cause the sanitary sewer to be diverted to the storm sewer system that will be closed. The result will be sanitary sewage overflow on Bow Cres
- Home owners have mitigated and rebuilt according to the city flood mitigation standard. We were not told that a berm might be built. It is not fair to not share this important information while we are rebuilding. This whole process has been very unfair.



- Alberta has very smart people who can provide innovative solutions. We need to go back to identify cost effective upstream mitigation solutions that limit the peak flow to 800 cms where ground water is not an issue. This can have added benefit of irrigation water. This adds value to Alberta
- The way the city has managed this project has cost me a significant price in terms of lost sleep and anxiety as we fear how the city will force this project on us without consultation as to how we or our neighbors will benefit from the project. This has never been communicated to bowness residents
- Bowness Businesses on Bowness Road suffered flooded basements in 2013. The issue is not overland flooding, it is Groundwater Flooding and upstream dam control is the only practical way to address this.
- The city's management of this project through miss information has drastically reduced our property market value and liquidity. Unfortunately we have been hurt by the people we have paid taxes to and continue to pay taxes to. If you want to help us, build an upstream dam
- This area is a natural wildlife corridor, supporting the greatest wildlife diversity inside Calgary city limits. The plan must fully retain this ecosystem and corridor.
- Erosion is the main problem in South Bowness. Before you build a berm, address the problem of Erosion, which was being pursued in 2014 and then dropped by Government, not the landowners.
- Given everyone has weeping tile tied into the storm sewer and or sump pumps, the groundwater will quickly reach surface and equalize with the river level. We will still have overland flooding.
- [personal information removed] is above the 1:100 flood level. We have not need for a berm protecting to the 1:20 level. The quality of our back yard will be permanently damaged by the Cities proposed "access' route. In 2013 our immediate neighbours were affected by ground water not overland flooding
- In 2013 this portion of Bow Cres was affected by ground water, not overland flooding. Why are you building a barrier that has no benefit to this part of the crescent?
- The BRFM volunteers have surveyed the proposed berm route and have identified over a 1000 mature trees that would be destroyed. This is an unacceptable effect on the local ecosystem
- The AE report suggests that this portion of Bow Cres during a 1:20 event is at greater risk of ground water flooding, not overland flooding. You are proposing a structure that will not be cost effective to the majority of homes in the vicinity of Bow Cres, as flood protection
- The City states that social impact needs to be taken into account in considering projects such as this. This does not appear to have been addressed at all, with this project. The City seems bound and determined to proceed with this barrier despite the negative impact on property owners.
- The City states that this barrier will protect Bowness. And yet I suspect that a very small number of homes are at risk in a 1:20 flood. Why is the City so determined to proceed with a project that doesn't seem to make sense?
- The City's proposed budget accounts for financial compensation of the land required for construction of the barrier. It doesn't take into account the fact that the majority of property owners will see a marked decrease in their land values as a result of this berm.

- The budget for this project does not take into account that the majority of the river side land owners are likely to take the City to expropriation and ask for compensation of loss of land value and coverage of our legal costs in doing this.
- Look at the reports you have provided to the public. The older report suggest there are 10+metres of gravel before you hit bedrock. The cost to effectively deal with ground water in this case would be enormous. Will the citizens be provided with an actual cost benefit analysis on this option?
- What consideration is being given to the urban forest that exists along the riverbank and all the animals that call it home? Do you understand that potentially hundreds of trees will be in jeopardy with the berm construction?
- Why are you putting a berm where none is required? No flooding was experienced by the 6700 block in 2013. You are potentially ruining multiple yards for no gain as it relates to flood mitigation. Please be respectful and if you don't need the land it will result in an enormous loss to those resident
- think about the wildlife as well as the residents who will be disrupted by a berm that will not protect against the real damage....groundwater
- The equity in my riverfront property is a big part of my retirement fund. How is the City going to compensate me for the lower market value and liquidity that this ill-conceived project has caused?
- My property was unaffected by the 2005 flood and experienced only ground water flooding in 2013. A berm would not help us and comes with a massive social and environmental cost. Stop the madness!
- The City mentions protecting 350 Bowness properties with this project. How many of those property owners actually want a berm? I suspect not many, which makes this an outrageous expenditure on something that people don't want.
- Do not build a barrier
- Build an upstream dam first to make the biggest impact. _+
- Don't take private property for 'band-aid' solution
- Have not been properly notified, engaged yet
- Heard about it from councillor on CBC that it's a done deal
- Explore if residents are willing to absorb the risk if a berm is not built.
- Dredging of the river. Increase flow and remove excess to increase flow.
- What happens with water trapped by berms?
- Lost 30' of propertyâ€¦will the berm system take away more?
- Will berms be more accessible to public? How do you prevent public use?
- Private vs. public rights/goodâ€¦who decides what prevails?
- Theft/security risk increases if property access increased (i.e. by berms)
- Compensationâ€¦Fences, trees, firepits, wells, etc. How are these compensated for and evaluated? How are disputes settled?
- Boat access to bermsâ€¦party central?
- What happens if the insurance companies say they will not cover properties with insurance? Will the city become the insurance provider?

- How will the city deal with the loss of gardens and trees?
- Has the city done a study of the wildlife that will be affected by the berm?
- Has the city undergone a proper study of the fish population in the area? It looks like some of the properties where the berm is being proposed will result in being close to the river's edge.
- How will the city deal with water that will be trapped if the berm is compromised or ground water gets trapped? Is this the homeowner's responsibility to get the water out or the city's. And what time frame would they be dealing with that?
- How will the city access properties?
- How will the city access properties?
- Will the city remove all work equipment at the end of the work day?
- Will the city's work day be 8 am to 4 pm? With no exception and no equipment being on property before 8 am and removed no later than 4 pm.
- For properties where the city does not include in the map of having a berm will the city engage them in the whole process. It seems they will be affected whether there is equipment in their neighbours yards or noise or debris mess going on.
- Will the city actually tell us what the other options were?
- Will the city actually tell us what the other options were and why they were not investigated.
- Will the city provide a proper budget for the berm?
- Will the city use equipment that will not potentially cause any damage if there is any type of spill from the equipment? I have a vegetable garden that if there is any type of spill it will contaminate the soil thus preventing me from being able to grow my own food.
- You are killing hundreds and hundreds of trees. Tell me that that has no impact on all the animals depending on them. Spend the money on something else. this is not acceptable.
- With the location of the proposed berm it will take out a vegetable garden and a raspberry patch. Will the city take into consideration the loss of the ability to grow our own food?
- With the location of the proposed berm on our property there is a culvert located in the middle of the yard. With this it appears our insurance company will not cover us if there is a flood. Will the city cover us or will be subject to no coverage?
- All the animals effected on this insane idea. Beavers, all the birds, fish, hawks , ducks, geese, eagles, bats, insects, garden snakes , coyote, fox and many more. Just to protect a few homes?
- With the location of the Telus building, it caused damage for homes on the non river side and for the homes across Bowness Road. They had 5 massive fire hoses pumping water out of their basement. This caused massive water to flow down the alley and across Bowness Road. Will the city mitigate this?
- Will the city deal with ground water?
- How will the city deal with ground water?
- How will the city deal with ground water that will be potentially increased by the berm on river side houses?
- Will the city be talking with the province for an upstream dam?
- Why is the city pushing for the berm? What is the end game that they are going for?



- How will the city ensure that there is no public access on private property? The city on their website has said that they will put gates in which would give the impression that it is no longer private property but access for the public.
- Has the city studied the tree canopy in this area? To determine how it will be affected by the berm?
- Who will be responsible for the upkeep of the berm?
- Can property owners plant on the berm?
- Will the city be reimbursing for the loss of all the plants, trees, shrubs, yard structures (fences, patio stones, fire pits)?
- Why did the city not approach property owners when they began the whole study of the berm? Why did they not include them as major stake holders?
- It has been said that this project is just 10% complete yet the councillor for this area says this is a done deal? Can you tell us which it is? Has the city already decided? Is the city just doing a due diligence and then will go ahead anyway?
- How will the city compensate river owners for loss of enjoyment of property?
- How will the city be compensating river front owners for loss of property value?
- How will the city compensate river property owners for loss of use/enjoyment of property during the construction phase of the proposed berm?
- What are the options for what the potential berm will be made of? Or are there options?
- How is the city intending to compensate for the loss of trees, shrubs and gardens? Is there a formula or how will it be determined?
- If there is a dramatic loss of value of properties along the river front will the city compensate owners?
- How long will it be before the city makes a determination on whether the proposed berm is cost prohibitive?
- For those that are attempting to sell their properties the proposed berm is proving to be a deterrent to buyers. Will the city help to compensate for this?
- Due to the proposed berm and at this point the decrease in property values, will the city cut property taxes for those directly affected?
- If a property owner does not want the berm and does not want to grant access to private property, what will be the process?
- Does the city have a lawyer that will be dealing with residents on an individual basis?
- Should property owners have legal representation? Does the city have lawyers that are looking at the property rights and will they share what their lawyers say the city's legal rights are or are not?
- During the construction of proposed berm how will homeowners be able to deal with children and pets in their backyards? Do they lose access for the duration? How does the city ensure it is safe?
- When will the city begin ground water studies?
- Will the city do ground water studies for longer than one year? It seems that one year may not provide a true assessment of what is happening.
- Has the city determined where the ground water study sites will be yet?

- Will the ground water study sites be on private property?
- If the ground water study sites are on private property will the city be compensating owner for access to the property?
- If a property owner allows access for the ground water study will the city have access to their property at any time or will they have to make arrangements to enter the property?
- Will the city be taking away owners rights to the water? Real property reports that the city approved show to the river yet the city shows something different? Can you explain that?
- For the trees that will be lost in the proposed berms construction phase, will the city compensate appropriately for how mature most of the trees are? And who will determine that?
- How is that property owners now have the ability to insurance their homes and the city's proposed berm may take that away? Will the city cover our insurance? Will they pay back property owners the insurance they effectively paid for that will have been for nothing?
- Here the city is allowing a 66 unit apartment building with underground parking to go in. This is an area where the city indicates will be under water in a major event. So why would such a development be allowed to go?
- As this 66 unit apartment with underground parking is awaiting approval one wonders if the planning department is talking to the planners of flood mitigation in the city. There is no way that that many should be put in harms way if what the city is telling us is correct.
- Our house did not have any overland flooding, only groundwater and sewer backup. The proposed barrier will not help us in any way other than destroying the natural river habitat by our home. We do not need a barrier/road running through the back our property when it is ineffective and not required
- Our house in the 2013 flood only received ground water flooding, your solution to put a berm at the back of my upper will absolutely do nothing to stop the ground water problem we had in 2013.
- This is as high as the water got in the flood, only minimal debris came up on my lawn, again a berm here will do nothing to stop ground water flooding in my basement. I have been in this house since 1981 and river only came up to this level (couple feet below this) in all the years we have lived th
- we have 10 dams between the mountains and Calgary , manage them properly and we will not get flooded. It only flooded because the dams were not opened when the rain came from the mountains,
- So we knew Canmore and Kananaskis got flooded and here nobody opened the dams a bit more ahead of time.
- the city just wants to spend money and create jobs because they got it from the province and federal government . They need to spent it, create some jobs for the city and look good.
- Manage the dams properly and there will be no floods. But its incompetent people on those jobs , with no normal sense
- Ghost dam , the water there is not managed properly, Private company should step in and get it managed the way it should. Now its just all about making money on electricity. How do you expect them to think otherwise, somebody does not care thats why we had a flood
- yea right, add as many as we want, and you guys don't care a bit about it, as long as you get paid to go ahead with the project. to prove it call me [personal information removed]



- So we knew that there was a flood in Canmore and Kananaskis, and still the flow in the City that day was the same, nobody opened up the dam and let more water out. the next day all the water came and we got flooded. How is that possible, somebody was sleeping on the job. That needs to change
- Barriers are a means of trying to control the river. the only sustainable solution is to "Make Room for the River". What is happening in Calgary is every action is causing the flood level to increase upstream. Bowness is the Victim. We need upstream mitigation to stop this insanity.
- Unless you control groundwater, which is near impossible in Bowness, overland flooding will still occur through backflow in manholes as groundwater will enter the stormwater system through joints. This will likely occur within hours of the river level reaching the street level elevation.
- Most properties in North Bowness are already mitigated following the last flood. Those that are not mitigated will still experience the same flood damage with or without the barrier as groundwater will come into basements. No basement is designed to withstand full hydrostatic column of water
- [personal information removed] These trees and shrubs stabilize the river bank, we lost less river bank than some other areas, and had more gravel deposited in this area because of the growth. This is also a habitat for wildlife. It needs to be protected.
- [personal information removed] We have a old tree-house platform that a pair of nesting Canadian geese use. Since the year before the flood, they nest and around Mother's day every year, the eggs hatch. The goslings drop off the platform and parents quick get them to the river for safety. Needs to be protected.
- [personal information removed] the beauty of the yard is made manifest by the mature trees of all variety. there are apple and cherry trees, poplars, larch, Douglas fir, birch, poplar (variety) spruce, dog wood, cottonwoods, Saskatoons, mountain ash. The loss would be devastating personally and environmentally
- [personal information removed] before the flood and evacuation the water table was so high that walking on the grass in the back yard would cause water to squirt out where you were stepping.
- [personal information removed] After the flood, there was a huge 'lake' in our back yard, water (and fish) trapped in the yard by the existing berm. Took 2 days to drain it. I can't imagine how deep the water would be if the berm was even higher.
- This lift station was out of commission for a long time. many houses along here could not get their basements pumped out because it was filling back up as the sewer out of commission. Once the lift station got working, we could dry out our basements.
- You can see that the bank that had rip rock, gravel put down to stabilize this hill has slumped into the river with normal high water in the spring.If a big flood comes again, what will happen to this area? will more rip rock fill up the channel and cause the river to settle at a higher level?
- this is wearing everyone out. likely a loss of 200k+ on our property values due to the berm (uncertainty of future city plans and loss of view). Change of zoning to lose another 200k because i'll be looking at a fourplex. Its a full on assault.
- we got groundwater flooding on Bowness road. A berm will not address this. Do it right or save the tax dollars for something that can add some value.



- 1/2M of additional freeboard height? That's 20" extra that will take the berm height from 1 in 20 year height to 1 in 100+ years! So, then all real mitigation as needed upstream will never happen? Residents just get a wall in their backyard to look at instead? I think upstream & real mitigation first
- with the proposed plan I will no longer see the river from the pool area - this will lower my property value
- The only solution to this problem is upstream mitigation! Not a Barrier of any kind. Ive spoken at length with [name removed], the engineer representing the residents. 1 upstream reservoir and controlling the ghost level, fixes the problem! The residents on the River do not want a Berm. Start Listening!!!
- since our house is so close to the river the proposed berm will take away the only flat areas in our yard the we use for recreation
- I have flower beds and trees that allow me full privacy from my neighbors - lack of privacy will very much lower our enjoyment of our entire backyard
- since our house is so close to the river and the proposed berm will take up about 1/2 of our backyard - is the city prepared to move my house closer to the road like they moved the garage in Inglewood?
- since the proposed berm will obstruct the view of the river from our house - is the city prepared to raise my house 16 inches like they did for a home owner in Inglewood?
- A berm will incur massive financial costs, while having a massive detrimental effect on the community. It will be imposed on property owners who are universally opposed to this project.
- if we get more sewer backup because of the snow melt and heavy rain on the house side of the berm and my insurance company will not cover me - does the city insure me?
- what will happen to my underground sprinkler system in my backyard? Will you be reinstalling it all after installing the berm?
- Creating a berm would inexorably change the nature and quality of bowness back yards. There would be an instant loss of privacy, disruption of the natural features, and destruction of natural habitat
- If a berm is necessary, yet unwanted by property owners, constructing this on the road appears to be a logical step
- Bow Crescent is poorly maintained and in need of repaving. Placing the berm here would reduce property acquisition costs, reduce alienation and dispossession of land owners, preserve valued landowner privacy, and provide easy access for maintenance
- The city has failed to engage those affected by a proposed berm, instead paying lip service to engagement obtaining feedback exclusively from people largely unaffected by the intervention during design. Dismissing a berm on Bow Crescent has been done in paternalistic fashion.
- we have a constant coyote presence along the river - far enough away from the house to not be a problem for my dog being endangered. How is the city proposing to keep this berm/road from being a coyote alley right up next to my back deck?
- Dismissing a berm on Bow Crescent has been done in a controlling and paternalistic fashion, assuming the values of riverfront property owners without actually considering these.



- Don't kill my forest
- let alone coyotes - how is the city proposing to keep transients and other people from using the berm/road as a waking path - right up to 20 feet from my house with no barrier (fence) between the berm/road and me. This is much more than a privacy issue - it is very much a security issue
- I don't want or need a berm. I am aware of the risk of flooding and have been for the entire time that I have owned this property. I am prepared for a flood, even if this is unlikely, and object to the city stealing my land to protect me from something that I accept
- since my privacy is currently created by trees/shrubs that are apparently not allowed on the berm/road - is the city buying and installed esthetically pleasing view barriers between properties?
- As climate models make it clear that drought events will be more likely over time, the necessity for an upstream solution allowing management of both flooding and drought conditions becomes pressing. Don't waste money on a temporary measure with limited benefit that harms individual property owners
- An early sign of despotism is disregard of property rights. The city's apparent zeal for expropriation rather than making an effort to engage landowners is a clear hallmark of such a disregard
- We personally built up our property (bt 200-250 truckloads of dirt) and now have a property height of 1066.4 at the house +for aprox 25 feet toward the river from the house. My question is since the height you want for the berm 20 year elevation+ 0.5 m freeboard is 1066.4 Why am I effected at all?
- I do not want a berm on my property. But if I have no choice, and the city will steal my land to build one, I would prefer that the berm be built on the street side of the property, not the river side.
- These large riverfront lots which gradually flow down to the river and host a robust urban canopy are unique to Calgary, and beautiful to look at for those floating the river. Replacing this vegetation and variety with a uniform earthen berm would be like looking at a scar several kilometers long.
- I enjoy floating down the river, but will not once the views of trees and unique character properties are replaced by a machined berm
- why did Inglewood get flood wall options instead of the much more intrusive berm/road proposed for Bowness? Are we second class citizens?
- use Crownland upstream for dry dams.
- It seems like you've already decided. Groundwater flooding is what has occurred in the past and could
- barriers actually cause more damage?
- Why no berm for Elbow instead of SR-1
- Loss of privacy



- What are other impacts/consequences of NOT a berm? and why don't you ask me if I am okay with that?
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- Fish impacts? What happens to fish habitat along the river?
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- Expect engagement before it is decided on. There has been none. Implication that engagement occurred is an insult. Add more insult by asking me how to construct this berm instead of asking if I want it. Instead of asking "what City should consider when planning" ask if you should be planning it
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- Is there merit for CoC to hire consultant who can review with residents in unbiased way the City's work?
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- Where is City Councillor? Zero consultation. Multiple attempts to contact the office have gone responded.
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- Berm created lake in 2013
- Where does water from sump pumps go? Into yard and back into property? Can't go into river or sewer.
- Sump pumps burned out when running 24/7 - lost electricity - too short term of a solution
- Concern with new berm before new dam
- Concern with new berm before new dam
- New dam needs to happen before deciding on details of berm
- New dam needs to happen before deciding on details of berm
- Need more mitigation upstream. Minnewanka, barrier, Ghost



- Prefer small wall over large berm
- Giving up most valuable part of the landowners property (rivers edge)
- Need to prevent people from accessing berm
- Need to prevent people from accessing berm
- Need to prevent people from accessing berm
- No intentions of public access but how do you prevent public access
- No intentions of public access but how do you prevent public access
- No intentions of public access but how do you prevent public access
- Berm needs groundwater protection/barrier
- Prove that this isn't a 'check the box' exercise
- Prove that this isn't a 'check the box' exercise
- Privacy, no walking on river, no public access no walking on berm_+7
- Privacy, no walking on river, no public access no walking on berm_
- Privacy, no walking on river, no public access no walking on berm_+7
- Continued views of the river
- Do not want height of the berm, the value of property to decrease
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- Keep personal access to the river (not public)_+4
- Keep personal access to the river (not public)_+4
- Keep personal access to the river (not public)_+4
- Want continued view from kitchen_+3
- Concerned that berm will invite and draw more parties on the other side of the berm.
- No Berm_+9
- No Berm



- Increasing berm height; option to increase house height
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- Upstream dam to be done - order of operation should be done
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- What about storm water drainage? In Bowness? There is no mention of it.
- Will we flood anyways? If there is groundwater.
- Questions on timing of flood mitigation projects - why flood barriers before dam?
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- Impacted local/riverfront residents should have a major role in decision making
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- I discussed my concerns with site visitors [City staff name removed] on October 24. In brief, I doubt that the berm will provide significant protection beyond that of the natural upper bench. It may suppress the rapid drainage of rain, and would require removal of trees that protect the riverbank.
- We are concerned about losing the trees along the river that provide habitat for Osprey, Bald Eagles, Owls, Hawks, Woodpeckers, Waxwings and many other bird species. The flooding of basements in this area was from ground water flooding, not overland flooding. Loss of habitat is not justified.
- We did NOT get overland flooding in the 2013 flood. The proposed barrier system will provide NO benefit to our property. The benefits of the proposed barriers are overstated.
- Removing trees here to install the barrier system will reduce the erosion resistance of the shoreline. The trees are an important part of the ecosystem here, supporting Bobcat, Raccoon, Fox, Osprey and several protected raptor species.
- We were adversely affected by the ad hoc installation of flood barriers around the Telus building. Upstream mitigation is much more important than local berms!



- The proposed berm is an expensive and ineffective response to the risk of groundwater flooding, the main Bowness concern. Environmentally it will destabilize the riverbank and disturb the riverine forest, triggering further problems in Bowness and downstream. Best solution is 2 upstream reservoirs.
- Why isn't an Environmental Impact assessment part of your studies?
- No BERM!
- "Concern about no long term or commitment that this will not become a recreational asset. Design of
- berm seems to match existing bike path link (this happened in the past, 39 years ago,"
- "Cost benefit analysis has been skewed by not taking into account the groundwater infiltration in the
- current design. Groundwater was a bigger issue. Needs to."
- Berm would need to go down 15-20' in order to be effective.
- Do property owners not flooded have the option of not having a barrier on their property?
- After 2005 Flood, new homes on Bow Crescent built on berms, could we join/use these?
- No community access to berm, but will look like public spaces
- Berms will require taking out trees, removes stability from ground.
- Capacity of river could be increased by removing more gravel bars.
- Worried about future change in access (public) to berm.
- Worried about crime related to berm
- Will City replace trees taking down?
- Bought house for access to, view of the river. Will impact.
- Will homeowners have access to top and otherside of berm? Will City build stairs?
- What environmental protections will be in place during construction? I.e. trees, fish, water quality.
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- "View if it's too high and will it produce tea kettle affect to property - potential changes to property
- landscaping"
- What happened with underground tunneling for mitigation?
- How deep do you go with berm and what will you do about overtopping?
- Had I known there would be a berm I would never have bought my property
- How will you address access/construction - 5 years of disturbing owners
- How will you address access/construction - 5 years of disturbing owners
- Concern that berm could create opportunity for people to enter yards
- Don't live on Bow Cres - we got storm flooding, not overland
- We should have been informed/approached earlier because it's our private land



- Barrier trapping water on the other side
- Visual impacts/loss of views
- How to restrict public access to berms?
- Archeology study for First Nations - will it be done? (FN contact), will it be used?
- Why berms not concrete walls considered? - Sheet piling, base stabilization, base grouting?
- "Have you, the City, already made decisions and this is just lip service to residents? (like asking for input on roads in Bowness but did it anyway?)"
- Wall instead of berm - do I have input on my property
- Issue is to protect downtown - Bowness doesn't need this. Lets put this money towards the homeless.
- What other options were considered?
- How will the City ensure the berm does not become a public recreation area?
- "The City should be understanding the province mitigation measures in front/before they choose their mitigation methods."
- What will the City do for landowners that have groundwater flow under their houses?
- What measures will the City take to actively police access/prevent on the berm?
- Berm encourages public access.
- Have environmental impacts been addressed? Re: impacts of installing a berm.
- Has the City considered ways to remove standing inside the berm - from rainfall & snowfall?
- Object to the 1/2 m safety factor
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- The stretch of river from Bowness Park to the Shouldice bridge is the most undisturbed ecosystem you could find anywhere in a city in Canada. It deserves a full EIA prior to any commitment to change the river through the barrier project.
- Upstream mitigation should happen first. If a berm is built, there will be less urgency for any upstream measures as well as less funding available: the berm will be expensive and governments will have less to spend on a larger project such as a dam. Build a dam first, then think about a berm.
- Expecting all the river residents to "give up" the back 30 feet (or more) of their properties for a berm wide enough for trucks to drive on is unrealistic. Who would agree to this anywhere in the City? Nobody. You are ruining all the river properties. What kind of compensation would be provided?
- A berm is cheap but destroys 1000s of trees and plantings in backyards, plus destroys the value of those properties. Who would buy a house along a river where you can't see the river and have a 30 foot area that you can't plant, have to leave open for trucks or maintenance, and you can't even fence
- When we bought our lot we were told the barrier would have no public access, like a bike path on it, is it true it will not be a bike path in my back yard?

- "observing the river minute by minute on the day of the flood, mismanagement of upstream river flow control in consultation with the City of Calgary is mostly responsible for the 2013 flood.
- One could exactly tell when the flood gates opened, much to late !
- Only an upstream river control will do !!"
- "Beaver area with lots of trees, 4 beavers on river downstream of here.
- They regularly patrol the river at dusk, cutting down trees for their lodge on the 6000 block.
- Foxes and skunks live here too."
- Our house did not get overland flooding in 2013, (6056), nor did the houses on either side of us. A 1 in 20 flood plus freeboard flood would stop approximately 20m from my house, so I see no reason for a berm to be built on my property (or the adjacent ones).
- I think the City should announce what flood the 1 in 20 plus freeboard height will protect us from (is it a 1 in 60 year flood?; 1 in 80?). The 0.5m of freeboard makes the barrier longer than if a 1 in 20 one was built. I say build to 1 in 20 and no higher, or preferably not at all, spend on upstream
- If the AE report map states berm not necessary along this section of river, but it's in the City plan anyway, I suggest the City only builds a barrier where it is absolutely necessary, not a like to have. These are my taxpayers dollars at work. Don't overbuild the berm.
- This is the area where the river tried to cut a channel in the 2013 flood. If the berm is overtopped the river will flow straight down this street. As will groundwater if the berm holds back the water but not the underground aquifer.
- low spot around here somewhere, groundwater comes to surface at 20 year flood level.
- Please talk to Bowness road businesses (Bow Cycle, the Library) about groundwater flooding in 2013. Flooded basements a long way from where the overland flooding reached.
- Suggest you get some wildlife and fish experts to show you what you are disturbing/destroying. Suggest residents and the City jointly consult with experts (U of C?)
- You will ruin the view of the wildlife and beautiful setting when I raft down the river.
- Will the berm design look like the one on this side, only 2m higher?
- This nose on the berm is designed to shift the flow away from the cutbank edge. Will the City be considering erosion control along the other side to protect land erosion?
- How about dredging this area to keep more water on this side of the river.
- Geese nest all along the Bow Crescent side of the river in Spring. Will work halt during nesting and also fish spawning times. There are 200 geese here in spring.
- It would have been beneficial for the city to meet 1:1 with individual property owners at the onset of the project, not as the detailed design work gets underway. A lot of useful information could have been gathered and concerns addressed in a more productive way.
- It seems ludicrous that the berm project is even at a preliminary design stage with a lack of a refined cost-benefit analysis, incomplete groundwater studies and an outdated budget. I suspect completion/re-evaluation of these will render the berm project unfeasible.
- Riverfront residents are fully aware of flood risk and are willing to take on flood mitigation measures individually.



- More information should be provided re: impact of construction and completed berm on wildlife, riverbank erosion (along the berm as well as up/down stream) and effects of drought.
- Endangered brown bats live in our trees in the summer. Taking away the trees is taking away their habitat.
- How will land value be compensated when remove the trees and having a structure behind our home will significantly negatively affect property value?
- We did not have overland flooding in our house and only experience some sewer back-up, do we still need a berm?
- Please leave large mature trees and do not remove them. Any tree removal will affect our privacy, home value, and will much of the reason we moved to Bowness
- You must consider the massive loss of trees, views, property values (riverfront and surrounding streets will lose major value), families' net worths. Flood insurance is available without destroying this street and its assets. I am a Bow Cres riverfront property owner 100% against your flood barrier.
- The entire river frontage area is sensitive and unique The proposed berm will destroy the quality and property values of the 100 nicest properties. This will in turn devalue the homes across the broader community. Flood insurance is available for less than \$2000 annually! much less than the berm cost
- 80% damage 2013 - groundwater flooding. 99% damage 2005 - groundwater flooding. Creating a 1:20 year overland flood barrier is useless and a major waste of tax payers money. STOP all the excessive spending, STOP raising taxes.
- I'm concerned that trees on private land won't be valued/compensated the same as a standard "City Tree" i.e.