

## 2016 ALBERTA COMMUNITY RESILIENCE PROGRAM PROPOSED PROJECT SUBMISSION

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### EXECUTIVE SUMMARY

The Alberta Community Resilience Program (ACRP) funds local flood mitigation investments to promote a more resilient Alberta. In 2015 October, the Province, recognizing the scale of Calgary's flood risk, committed \$15M per year for 10 years to The City through the ACRP. Each year The City submits a list of projects to the Province for program approval. The 2016 list, developed in consultation with the Province, identifies \$19.5M worth of projects, and represents a \$15.7M request to the Province. This is more than the \$15M annual allotment, as it anticipates potential funding from the Federal Government may be available to offset the amount above the \$15M ACRP allotment. It should be noted that this 2016 ACRP list does not represent all of Calgary's funding priorities for flood mitigation.

This report recommends a list of ACRP projects due for submission to the Province on 2016 September 30. The project list meets ACRP eligibility criteria while balancing strategic outcomes of optimizing return on investment, providing timely risk mitigation across a range of Calgary communities, and addressing uncertainty inherent in evolving Provincial and Federal regulatory standards for land use control in flood hazard areas. All projects consider The City's integrated watershed management approach, which seeks to protect our water supply, use our water wisely, keep our rivers clean, and build watershed resiliency.

The 2016 ACRP list also accounts for larger scale resilience work already in progress upstream that offers additional watershed management benefits such as drought and water quality protection. The list has been compiled to complement upstream options while maximizing benefit of timely local investments in Calgary.

### ADMINISTRATION RECOMMENDATIONS

That the Priorities and Finance Committee recommends that Council:

1. Approve the resiliency project list for the 2016 September 30 submission for the Alberta Community Resilience Program (Attachment 1); and
2. Receive this report as an item of Urgent Business for the 2016 September 26 Meeting of Council to provide Administration time to complete the submission by the program deadline of 2016 September 30.

### PREVIOUS COUNCIL DIRECTION / POLICY

On 2014 September 22, Council approved The City's priority projects for the 2014 ACRP submission and associated cost share obligations for tax supported 2014 projects, including any projects with multiple phases (PFC2014-0604).

On 2015 September 14, Council approved the resiliency project list for the 2015 September 30 submission for the ACRP (PFC2015-0692).

On 2016 April 27 the SPC on Utilities and Corporate Services received the Flood Resiliency and Mitigation 2015 Update (UCS2015-0168) for information including information on the Provinces' ACRP funding commitment to The City and existing ACRP commitments to date.

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### BACKGROUND

In 2015 October, the Province confirmed its intention to proceed with design and environmental assessment of the Springbank Offstream Reservoir along the Elbow River. It also committed to co-chairing the Bow River Advisory Committee with The City to assess floodwater storage and operations refinement options for flood and drought mitigation on the Bow River.

The Province and TransAlta also announced a five-year agreement for seasonal operations of TransAlta's reservoirs starting in 2016 May. Through the agreement, seasonal water levels in Ghost, Kananaskis, and Barrier reservoirs between May 16 and July 7 will be managed to buffer flood and drought. Though this will not provide all of the resilience Calgary's Bow River communities need, it is a positive, immediate step, and will reduce impact of the more frequent, moderate flood events without unduly compromising water supply security.

To support the development of local flood resiliency work in addition to upstream mitigation, the Province announced the creation of the ACRP in 2014 to help Alberta municipalities invest in projects to enhance flood resilience. ACRP project submissions were then considered on a province-wide basis. Recognizing the profile of flood risk Calgary faces, the Province announced in 2015 October a commitment of \$15M per year over ten years through ACRP specifically for Calgary. Attachment 2 shows the projects previously submitted by The City of Calgary to the ACRP over the last two years.

As part of The City of Calgary's long-term flood resilience work, Administration has updated the Provincial Flood Damage Assessment Study for Calgary. This update serves as the basis for The City's Flood Mitigation Measures Assessment (the Assessment), which examines all potential mitigation measures, including upstream and local infrastructure, operational strategies, land use and building policy solutions for both the Bow and Elbow rivers. Once input is gathered from the Community Advisory Group and broader citizen engagement, the Assessment will inform Administration's long-term flood mitigation investment plans for both the Bow and Elbow Rivers, which will be presented to Council in 2017 Q1. These recommendations will also be used to inform the strategic direction of subsequent ACRP project submissions.

Additional, "no regrets" projects that are not part of the current 2016 ACRP list are outlined on Attachment 3; however, once the Assessment is complete, Provincial decisions around upstream mitigation are finalized and eligibility criteria for Federal funding are announced this project list may change. Though the Federal Government committed funds for water and wastewater infrastructure as part of its 2016 budget, details on amounts, eligibility criteria, distribution, and potential cost sharing with other funding programs such as ACRP have not been announced. City Administration continues to assess and strategically apply for federal funding programs.

### INVESTIGATION: ALTERNATIVES AND ANALYSIS

Attachment 1 shows the proposed prioritized list of ACRP projects for the 2016 application. The list identifies \$19.5M worth of projects, and represents a \$15.7M request to the Province. The proposed projects address risks along the Elbow and Bow Rivers, and involve strategic flood barrier enhancements, stormwater and sanitary (wastewater) infrastructure improvements, and

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river bank stabilization to protect critical infrastructure. These investments should be considered as complementary to pending upstream mitigation works along the Bow and the Elbow, which will provide significant levels of protection to the watershed but at a considerably higher cost.

The Province's funding commitment specific to Calgary has eliminated the uncertainty of prioritization outcomes that existed in previous years, allowing a more secure approach to project applications. However, significant strategic factors and uncertainties were considered when identifying candidate projects. These include:

- Ensuring “no regrets” investments that will provide benefit despite uncertain nature and timing of upstream mitigation,
- Ensuring that residual flood risk is clearly understood so that the ACRP investments do not de-emphasize the drivers for major upstream solutions;
- Optimizing return on investment based on triple bottom line (TBL) benefit-to-cost ratios;
- Ensuring flood risk reduction is distributed across communities and reasonable levels of service;
- Meeting ACRP eligibility criteria;
- Alignment with the recommendations in the Expert Management Panel Report on Flood Mitigation
- Investments promote The City's integrated watershed management approach
- Uncertainty regarding the sustainability of Provincial and Federal funds given the current economic climate; and
- Changing Provincial and Federal regulatory approaches, including updated flood hazard mapping, policy changes and related financial tools like insurance that could affect project outcomes.

Eligible projects were identified through cross-departmental meetings throughout the Corporation. Though benefit to cost ratios and business case information were considered, project inclusion on the 2016 list accounted for the strategic considerations noted above.

### **Stakeholder Engagement, Research and Communication**

Including the voices of our community throughout the process and maintaining coordinated communications with the Province and other watershed stakeholders is critical. Direct communication with citizen groups, such as the Calgary River Communities Action Group, the Hillhurst Sunnyside Community Association's Flood Task Force, and the community engagement work underway for the Flood Mitigation Measures Assessment project has indicated that citizens are aware of the importance of implementing long-term resilience. Citizens also recognize the uncertainties associated with Provincial and Federal mitigation efforts, but continue to voice their concern that timely upstream solutions are needed.

The City provides ongoing information to the public via Calgary.ca and 311 enquiries, and reminds citizens of their potential flood risk throughout the year. More targeted communications through annual open houses in flood-affected communities and weekly subscriber newsletters between May and July are used to highlight current conditions, as well as ongoing mitigation and resilience work undertaken by The City and the Province. As part of this, The City also

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emphasizes its integrated watershed management approach and communicates any changes to its water supply or storage demands, should drought become a concern.

The City continues to work closely with the Province, particularly the Resiliency and Mitigation branch of Alberta Environment and Parks. The Province is conducting stakeholder consultation through the Bow River Advisory Committee co-chaired by The City and the Bow River Working Group, to develop mitigation recommendations along the Bow in 2016. This process is occurring in parallel to The City's community engagement on the Flood Mitigation Measures Assessment project. Input from stakeholders will help refine decision making for future mitigation measures.

### Strategic Alignment

Moving forward on flood mitigation and resiliency strongly supports and contributes to a number of Strategic Action areas in Council's Priorities for 2015-2018:

- A city of inspiring neighbourhoods (N2 - Build resiliency to flooding, N3 - Enhance The City's capacity and resiliency to prepare for and respond to pandemics, natural disasters and emergency situations).
- A healthy and green city (H3 - Manage the interrelationships between flood protection, water quality and quantity, and land use, H4 - Work with our regional partners and the Government of Alberta on an integrated approach to the watershed).

### Social, Environmental, Economic (External)

Recent Flood Damage Assessment Study work suggests annualized flood damage costs in Calgary will average over \$170M per year, unless mitigation investments are made. TBL analyses for the individual projects on the 2016 list all yield favorable returns. By offsetting secondary economic losses, particularly in areas like downtown, as well as content and building damages, transportation delays and safety risks, the listed ACRP projects will partially mitigate local flood risks without affecting any drivers for upstream mitigation.

### Financial Capacity

#### Current and Future Operating Budget:

Delivering the ACRP funded projects list will require approximately \$780,000 of City resources over three years to administer the proposed projects. Staff resources are already assigned for projects currently in The City's related capital budgets and have dedicated project managers. No additional hires would be required for projects not yet in existing capital projects, though staff wages to complete these projects would be required.

#### Current and Future Capital Budget:

Leveraging ACRP funding to deliver municipal projects creates an opportunity to redirect budget and funding previously allocated by a business unit to other priority projects. Once projects are approved for ACRP funding, Administration will seek the appropriate capital budget approvals from Council, if required.

### Risk Assessment

An immediate risk associated with failure to capitalize on Provincial and Federal funding opportunities is reduced ability to invest in resilience and mitigation projects, prolonging

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exposure to future weather related issues like flood, drought, and severe winter and summer storms.

In addition to this immediate risk, long-term risks associated with funding do exist, including:

- Uncertainty around upstream mitigation. This risk is mitigated through selection of “no regrets” options that do not reduce the motivation to invest in upstream mitigation potential and minimize future possible redundancy. The City will also continue to utilize annual allocations provided through the ACRP to continue reducing Calgary’s overall flood risk.
- Uncertainty regarding sustainability of Provincial and Federal funding, existing economic conditions, and potential changes to regulatory standards by the Province or the Federal Government. These risks are being mitigated through ongoing communication and collaboration with the Province and Federal government on funding opportunities, program criteria, and possible regulatory changes.

Future capital projects identified in the Flood Mitigation Measures Assessment will be presented to Council in 2017 Q1, and will be regularly evaluated to ensure projects meet changing regulatory requirements and do not remove motivation for upstream mitigation. Administration will continue to pursue further funding or cost sharing opportunities through the Province and Federal Government.

The City continues to communicate with citizens and work closely with community groups to ensure clear lines of communication and progress on flood resiliency and mitigation to minimize potential reputational risks, and maintains various communication tools throughout the year such as weekly newsletters to keep Calgarians informed of flood risks and conditions.

### **REASON FOR RECOMMENDATION:**

Administration has prepared a list of resilience projects for ACRP’s 2016 September 30 submission date. It accounts for resilience measures already in progress locally and upstream, providing benefits to a number of communities. The proposed list is made in anticipation of a more comprehensive list of long-term mitigation measures that will go to Council in 2017 Q1.

### **ATTACHMENTS**

1. 2016 ACRP Project Submission for The City of Calgary for 2017 Funding Cycle
2. Previously Submitted ACRP Projects
3. Potential Future ACRP Eligible Projects