

## 2013 FLOOD RECOVERY TASK FORCE UPDATE: RESILIENCE REPORT

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### EXECUTIVE SUMMARY

As a result of the 2013 June flood event, the Flood Recovery Task Force (the Task Force) developed the 2013 Flood Recovery Framework and continues to complete its deliverables. Strong relationships are critical with other orders of government, within The City, and with community partners and citizens to fully understand the impacts of the flood and to align the ongoing efforts of recovery and leverage opportunities to build resilience.

At the 2014 November Business Plan and Budget Adjustments meeting of Council, Administration was directed to identify and cost a *first list* of flood resilience projects. Administration has taken a collaborative approach to understanding current efforts toward resilience and to develop recommendations that will support the development of overall City of Calgary resilience to future high water events. The information attached within this document illustrate a *first list* of projects organized into categories that illustrate community, infrastructure and operations. Administration continues to identify recovery, mitigation and resilience objectives that will be included within the 2015-2018 Action Plan. A final list is attached to this report that identifies projects that The City will submit for funding through the Provincial Mitigation and Resilience program.

Also at the Council meeting of 2013 November 25, Administration was directed to return to the Priorities and Finance Committee no later than Q1 2014, once there are more details available on the Calgary Zoo project. Administration has completed this work, and information and funding requests for the Zoo are contained in companion report *PFC2014-0279 Flood Mitigation Project for Calgary Zoo* (2014 April 01).

Building resiliency measures into projects and processes, and subsequently monitoring and reviewing their performance, will decrease The City's vulnerability to social, economic and environmental impacts of future disaster events. The City may be unable to purchase flood insurance in the future. It is important that The City demonstrate to its insurers that it intends to look for ways to reduce the likelihood of a flood loss or mitigate the amount of damage from a flood. Should The City take these steps to implement resiliency projects, the insurers may be encouraged to continue to offer flood coverage and the cost of the coverage should reduce over time.

There is opportunity to build back better, reduce risk and impact, leverage public and political interest in disaster resiliency, and strengthen the sense of community in Calgary.

### ADMINISTRATION RECOMMENDATION(S)

That the Priorities and Finance Committee recommend that Council:

- 1) As per the Community Resiliency Projects category (Attachment 1), of which \$26.6 million is potentially recoverable through submission to the Provincial Mitigation and Resiliency Program;
  - a) approve the identified projects, and approve the capital budget of \$30.2 million funded from the Fiscal Stability Reserve;
  - b) approve the one-time 2014 operating budget of \$530 thousand with costs to be incurred over two years funded from the Fiscal Stability Reserve; and
  - c) direct Administration to include any continuing operating costs not identified over

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two years in Attachment 1 as part of the 2015-2018 Action Plan.

- 2) As per the Infrastructure / Operations: Flood Resiliency Projects category (Attachment 2), of which \$1.9 million is potentially recoverable through submission to the Provincial Mitigation and Resiliency Program;
  - a) approve the identified projects, and approve the capital budget of up to \$15.7 million funded from the Fiscal Stability Reserve;
  - b) approve the associated one-time operating budget for 2014 of \$1.3 million funded from the Fiscal Stability Reserve; and
  - c) direct Administration to include any continuing operating costs not identified in Attachment 2 as part of the 2015-2018 Action Plan.
- 3) Relinquish \$3.640 million from Parks Flood Capital Program 932 which were approved during the 2014 Budget Adjustment Process (*C2013-0668 Proposed Adjustments to the 2014 Business Plans and Budgets*). These resilience requests are now included in Attachment 1 and Attachment 2.
- 4) Receive the projects identified in the Submission for Provincial Mitigation and Resiliency Program Funding (Attachment 3) for information, and direct Administration to report back by November 2014 on any funding approved through the Government of Alberta Mitigation and Resilience funding grant for consideration of projects to be identified within the 2015-2018 Action Plan.
- 5) Approve a staffing budget request for \$5.3 million, to be funded from Fiscal Stability Reserve, for the period 2014-2016 with reimbursement of these funds to be applied for under the Province's Municipal Staffing Grant Program.
- 6) Approve in principle the hiring of additional recovery staff as needed pending their costs are recoverable through the Municipal Staffing Grant Program.

#### PREVIOUS COUNCIL DIRECTION / POLICY

On 2013 July 02, Priorities and Finance Committee received *PFC2013-0578 Flood Status Update* which was the first written report regarding the 2013 Flood Event.

On 2013 September 03, Priorities and Finance Committee received *PFC2013-0618 2013 Mid Year Report on Business Plans and Budgets* which identified known flood-related budget impacts.

On 2013 September 03, Priorities and Finance Committee received *PFC2013-0634 2013 Capital and Operating Budget Revisions* with a flood expenditure update and master list of flood recovery projects.

On 2013 September 03, Priorities and Finance Committee received *PFC2013-0646 2013 Flood Recovery Task Force Update Report* with attached 2013 Flood Recovery Framework.

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On 2013 November 25, Council received *C2013-0668 Proposed Adjustments to the 2014 Business Plans and Budgets* and directed Recommendation 2c. and all associated matters related thereto, be adopted, as follows:

That Council:

2. Approve the recommendations from the Interim and Permanent Financing and Funding Strategy (Attachment 1, pages 97-102), as follows:

c. Approve the Administration utilizing, as required, the Fiscal Stability Reserve to fund the residual tax supported flood-related capital projects funding shortfalls to a maximum of \$100 million (Attachment 1, page 100).

On 2013 November 25, Council received for information *C2013-0742 Flood Recovery Task Force: 2014 Business Plan and Budget Adjustments Companion Report* as a companion to *C2013-0668 Proposed Adjustments to the 2014 Business Plans and Budgets*. Council directed Administration to prepare a report containing a list and cost of the first grouping of resilience flood projects, to return to Council through the Priorities and Finance Committee no later than Q1 2014.

Further, at the same meeting on 2013 November 25, a Motion Arising was approved with respect to Report *C2013-0668 Proposed Adjustments to the 2014 Business Plans and Budgets* which was referred to Administration to return to the Priorities and Finance Committee no later than Q1 2014, once there are more details available on the Calgary Zoo project. Administration has completed this work and this information is contained in companion report *PFC2014-0279 Flood Mitigation Project for Calgary Zoo* (2014 April 01).

On 2013 December 16, *C2013-0836 City Manager's Office Report to Council Flood Recovery Task Force: Update Report* was received for information. It contained a six month update on the activities of the Flood Recovery Task Force. At this same meeting, Council received for information *C2013-0732 Expert Management Panel on River Flood Mitigation Quarterly Report*.

On 2014 March 31, *C2014-0100 Expert Management Panel on River Flood Mitigation Quarterly Report* was received by Council for information.

### **BACKGROUND**

In 2013 June, extensive flooding occurred in Calgary which damaged large amounts of infrastructure, disrupted services and left many citizens without power and, in some cases, without accommodation. A Flood Recovery Task Force (the Task Force) was established to provide leadership within The City of Calgary and the Calgary community to identify and resource immediate recovery activities and to support the delivery of recovery, mitigation and resilience recommendations for Action Plan 2015-2018. Work is ongoing in the framework key areas of: people, housing and property, services, infrastructure and funding. City of Calgary employees continue to support impacted citizens in their recovery from the flood event through services such as Property Tax Relief application support, Development and Building Approvals safety campaign for property owners impacted by flood, and ongoing community support provided by many Task Force members (through formal open houses, community association meetings, service requests and informal opportunities).

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The City has also established an Expert Management Panel on River Flood Mitigation (the Expert Panel) that is now reviewing Calgary's flood response measures and mitigation efforts and is investigating ways of reducing and managing river flood risks to Calgary in the future. The Expert Panel will develop a set of recommendations, to be received in 2014 June, that may also include mitigation and resiliency projects for future consideration. The work of this panel will be aligned with the Provincial Flood Mitigation Advisory Panel and The City of Calgary Flood Recovery Task Force.

The Calgary Emergency Management Agency (CEMA) has also conducted a post-flood response debrief, is awaiting the results of a third party review of response approaches, and will be bringing these results to the Emergency Management Committee of Council in 2014 April and June. The Recovery Operations Centre (ROC) team and CEMA have worked collaboratively to generate resilience recommendations within this report and to ensure alignment with the Comprehensive Emergency Management framework and lessons learned from the 2013 flood.

A consultant was secured to review the recovery progress and to ensure all external funding streams were explored. According to the study conducted by *Jacobs Consulting* and reported in *City of Calgary – Disaster Recovery Funding Analysis* (2014 February 14), "Calgary has surpassed its peers in similarly complex disaster in terms of overall recovery performance. The City's recovery effort is tracking three to six months ahead of sister municipalities that have experienced similarly impactful flood conditions."

### **INVESTIGATION: ALTERNATIVES AND ANALYSIS**

Planning for and building resiliency is the overarching theme of this report. While The City is viewed as having responded well to the flood event of June 2013 and substantial progress has been made in recovery efforts, it is important to look toward the future and ensure appropriate measures are taken to be prepared for future incidents. Losses due to weather events such as winter storms, severe high winds, floods and wildfires have increased over the past decades. According to the Insurance Bureau of Canada, the majority of weather losses in 2012 in all of Canada were in Alberta. Taking appropriate steps to be prepared for weather related disasters are what most influence community resiliency.

Resiliency is defined in many ways, and most often centres on a community or organization's ability to prevent or protect against significant multi-hazard threats and incidents and to recover and resume critical services with minimum impact to public safety, health, the environment and the economy. This is a very broad definition so it is beneficial to refine the definition and also align to definitions being adopted by others.

The following definitions are taken from the recently published Government of Alberta Mitigation Framework and help to clarify what the various terms mean.

Recovery – The return to a normal, pre-disaster state.

Mitigation – Implementing various measures and sustainable actions in order to reduce or lessen the long-term risk to people and property from future natural disasters.

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Resilience – The capacity of a system to cope with, adapt to or recover from a recurrent disturbance such as a flood. Resiliency includes planning for the future to reduce the need for mitigation.

The above definitions make a clear distinction between resiliency and mitigation. The projects that accompany this report include mitigation and resilience, and some may overlap. This is because there is still work underway to develop an overall resiliency framework and because there is a relationship between mitigation and resiliency that needs to be considered.

Resiliency planning is a tool for strategic planning that considers a community in its entirety. It is an iterative process consisting of planning, implementation, monitoring and review. It usually encompasses the following four steps:

1. Defining the context.
2. Assessing the risks.
3. Formulation of actions.
4. Implementation.

Planning for a city that is more resilient towards future hazardous events and less exposed relies on investment decisions that prioritize activities which perform well in different scenarios. A balance needs to be established between managing today's risks and planning for the future. It is important to manage urban growth in a smart way, taking a far sighted approach and integrating resilience into any type of future development. This can be achieved, for example, by providing safe and affordable infrastructure and community services, or by developing innovative approaches to urban landscaping and building design which are adaptable to identified risks.

To meet Council Direction ROC, and CEMA undertook a joint effort to engage with business units across The City to obtain a broad range of information and perspectives related to the flood response, recovery, mitigation and resiliency. This engagement resulted in each contacted business unit providing a summary of work completed, underway or proposed (defining the context) that was either a result of lessons learned (assessing the risks) from the flood response or an opportunity to become more resilient (formulation of actions) in future flood emergency events.

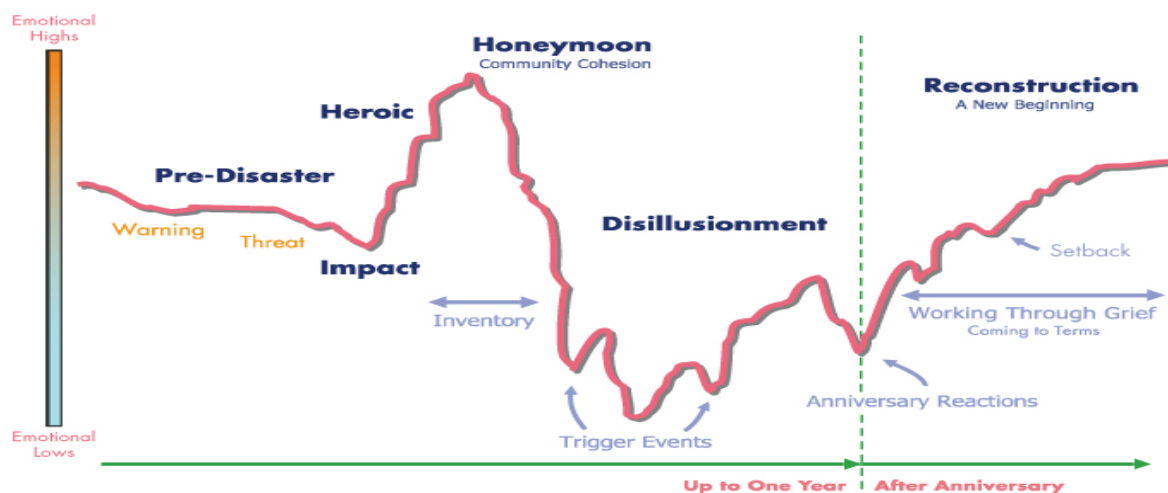
Three categories were used to classify the resiliency/mitigation projects identified. They are community, infrastructure and organization, and Province Mitigation and Resilience submissions to Province. The community category is for projects that are meant to improve existing programs or public spaces, or implement new programs to help citizens or community organizations achieve a higher degree of resiliency. These may take a few years to put into place. The infrastructure and organization category refers to projects that are for improvements to existing or new infrastructure to mitigate against damage and/or improve organizational resiliency. These projects are expected to begin this year and be completed no later than 2015. The final category are those projects that meet the criteria of the Provincial Mitigation and Resilience funding program. The City will submit these projects to the Province on 2014 March 31. Details of each category and current needs assessments within each are identified in the following sections.

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### Community Resiliency

There are different facets to community resiliency. Local governments have an important role in reducing impact stemming from weather related disasters to improve the preparedness of their citizens. A municipality has to ensure continued operation of needed infrastructure regardless of the event in order to keep its citizens safe. A municipal government therefore needs to identify infrastructure vulnerability and dependency, have the measures in place to mitigate against the effects of a disaster, and also identify services that communities are depending upon. There are psychological and emotional phases post disaster that correspond with very real experiences due to an emergency event and the recovery process. This is illustrated by the attached graph.

### Phases of Disaster – Mental Health\*



\*Source: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. (2000). Training manual for mental health and human services workers in major disasters, second edition. Washington, DC. Retrieved from <http://www.dmh.ca.gov/disaster/CCPToolkit/PhasesOfDisaster.asp>

Administration has worked collaboratively with the Government of Alberta and our corporate partners to understand, monitor and support our citizens well being. Participation in community open houses, correspondence with Council members, continued monitoring through direct work with communities, information offered through partners such as the Canadian Red Cross Society and correspondence with Government of Alberta partners have identified that our citizens impacted by the flood are in the emotional phase of Disillusionment and entering Reconstruction.

The intent to support public resiliency became a focussed priority. In recent months it has been identified that some of those flood victims who were self-sufficient prior to the flood have become financially vulnerable. For homeowners in particular, the loss of financial capacity has jeopardized their ability to rebuild or repair their property to pre-flood integrity. Having identified this trend the Task Force has committed to work collaboratively with community partners to identify those who are financially vulnerable and are experiencing inertia as a result, and to

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develop strategies and processes to remove financial barriers to build individual and community capacity. One strategy is targeted financial assistance to overcome barriers to recovery. The Canadian Red Cross Society has been engaged in cost-sharing projects with other flood affected communities across Alberta, leveraging resources with municipalities to administer programs that promote resiliency. The Task Force is exploring such community resiliency approaches in Calgary with the Canadian Red Cross Society.

The projects identified within the Community Resiliency category (Attachment 1) by Business Units intend to support community needs as identified through our dialogue and interface with our impacted community members. These needs include capacity to continue to manage the financial impacts of the flood; address fears and concerns for future events through information provision; and interest in personal preparedness and safety. Some of the projects on the list also support community gathering places and attractions to be more resilient to future high water events, which in turn may help our citizens quickly return to their normal day to day activities.

### Infrastructure and Operations : Flood Resiliency

The City of Calgary has successfully invested in resilience measures in the past, including building public awareness and education around personal preparedness, emergency response investment and specific infrastructure mitigation. These investments resulted in the delivery of capital projects such as:

- the new Emergency Operations Centre
- development of the emergency management system
- infrastructure investments on water ways (Bow and Elbow rivers) including the addition of storm water outfall gates and barriers and modification of stormwater systems
- Upgrades to water treatment plants
- Corporate Security investments
- relocation of the Data Centre to ensure Information Technology sustainability and efficiency

Resilience is also supported through operating investments such as:

- the development of the Water Services operation centre
- the development and staffing of the Calgary Emergency Management Agency
- public education (such as Disaster Alley, 72 hour kit circulation, Household Emergency Action Plan)
- staff preparedness for business continuity (staff handbooks entitled *myERP*, and the *Self-Care Handbook* distributed during the H1N1 infectious disease outbreak in 2009)

The coordinated response, low interruption to critical services, community preparedness and participation, and quick recovery following the 2013 flood event can be attributed to many of these investments.

Investments in Infrastructure / Operations: Flood Resiliency projects (Attachment 2) facilitate normal day-to-day operations while reducing impact of future high water events through mitigation and resilience work. Through the experience of the 2013 flood, and lessons learned

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through CEMA debrief and business unit analysis, Administration has identified actions that could be taken immediately to support preparedness and reduce impact of future water related events.

The Government of Alberta requested municipalities to identify a list of Flood Readiness Supplies for response partners to be prepared for future high water events. The City of Calgary, through CEMA, submitted a list of items to the Alberta Emergency Management Agency, and a total of \$3 million of supplies were approved by the Minister of Municipal Affairs, with potential for an additional grant to be considered in future.

Corporate Properties & Building assessment reports post flood revealed that five downtown buildings sustained considerable flood water damage to electrical and mechanical systems rendering them non-operational: Historic City Hall, Municipal Building, Administration Building, Alberta Trade Centre and EMS #3 Station. These five buildings collectively provided workspace for 2811 employees, including the Mayor, Council and their staff, and 13 of The City's business units that deliver over 80 services to citizens, businesses, and City of Calgary staff.

With the activation of the Municipal Emergency Plan (MEP) due to the flood, Corporate Properties & Buildings responded by initiating preventative measures to mitigate damage to the Municipal Complex including shutting basement drains, testing and running sump pumps, installing auxiliary sump pumps, sand-bagging, and initiating an orderly shutdown of electrical power to the Complex. The unprecedented scale of flooding however overwhelmed these basic preventative measures.

The cost of recovering and restoring services for the five impacted buildings is estimated to be in the order of \$29 million. In addition, Corporate Properties & Buildings financial analysis of lost productivity for City employees in the impacted downtown core buildings is an estimated minimum of \$1.6 million per day – amounting to between \$15 million and \$19 million until buildings were restored to operation. The combined losses from a corporate accommodation perspective total between \$44 and \$48 million (i.e. the loss of buildings and the services delivered to citizens from those buildings).

#### Submission to Government of Alberta Flood Mitigation and Resiliency Grant

C2014-100 Expert Management Panel on River Flood Mitigation Update (2014 March 31) identified information concluded by independent consultants, including that dredging the reservoir was not a recommended flood mitigation measure and that the Elbow River Mission Barrier was recommended as a continued element of a City of Calgary emergency response plan. The feasibility study of the Glenmore Bypass Tunnel is underway. Further results from The Expert Panel's work will be provided to Council, with recommendations, in 2014 June.

Proposed projects for hazard mitigation and resiliencies related to the watershed were due to the Government of Alberta by 2014 March 31. Administration is diligently seeking all recoverable and additional funding opportunities, including submission to the Provincial Mitigation and Resiliency Funding program. The submissions are identified in Attachment 3 and include the \$25 million flood resiliency request identified by *PFC2014-0279 Flood Mitigation Project for Calgary Zoo* to support 1:100 year flood level. The Province has identified up to a \$2



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billion budget for disaster resilience efforts across the province (*Jacobs Consulting*). Awards of funding through this program are expected in the third quarter of this year.

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

CEMA and ROC have combined efforts in order to collect information required for respective needs. Staff met directly with business unit Directors and support staff to discuss lessons learned from the flood response, review information resulting from the CEMA debrief, and discuss resilience and mitigation. Through this process, individual business units were provided with the opportunity to bring forward initiatives that would support mitigation efforts and contribute towards resiliency of infrastructure, the organization and the community/citizens.

Information gathered at these sessions and in subsequent communications has been organized by theme and category, and is being used jointly by CEMA and ROC to inform future reports and actions. The Recovery Operations Centre Steering Committee was consulted to confirm direction. From a broader perspective, there has been ongoing engagement with the Expert Management Panel, departmental business planners, Finance & Supply, Office of Sustainability and expert consultants.

Community engagement is ongoing and often revolves around the themes of recovery, mitigation, preparedness and resilience. Specific and focussed opportunities for citizen, partner and community engagement include three public open houses (February/March) co-hosted with the Government of Alberta; The City launched a flood specific Service Request in March, which offers a direct port of entry by the public to the ROC office (to date eight service request enquires and numerous Councillor/Mayor requests have been completed); ongoing dialogue and weekly sharing of information at ROC task force and biweekly at ROC steering committee; monitoring input/activities from partners, e.g., Canadian Red Cross Society has provided direct assistance to 2000 households in Calgary and is currently assessing 10-15 new clients each week; door knocking strategies and data collection underway by Task Force partners such as Community & Neighbourhood Services.

While much has been learned and a great deal of effort has gone into understanding current efforts in resiliency and developing this first list of recommendations, there is still much work to do. Resiliency must be thought of as an ongoing program to ensure The City is doing what it can and what is appropriate to move toward a more resilient organization, community and infrastructure. Further resilience projects may be identified in the 2015-18 Action Plan.

While mitigation/resiliency funding has become available through the provincial Flood Recovery Erosion Control (FREC) program and the Mitigation and Resiliency Grant (see Flood Recovery Financials, Attachment 4), this is limited to river bank stabilization and repair. Funding for other resiliency/mitigation initiatives is not available through the DRP or insurance recoveries, hence the need for Council support.

### **Strategic Alignment**

This report aligns with the Municipal Development Plan (MDP), the Calgary Transportation Plan (CTP), the MEP, the 2020 Sustainability Direction and CEMA's Comprehensive Emergency

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Management model. Investing in resiliency may assist in reducing insurance premiums and may help ensure coverage may be obtained in future.

### **Social, Environmental, Economic (External)**

The Triple Bottom Line (TBL) is repeatedly referenced in literature regarding disaster recovery and resilience. The Task Force has centered its key result areas within the 2013 Flood Recovery Framework around the TBL sustainable development principles.

The social impacts of the flood event continue to be monitored and supported through ongoing liaison with directly impacted communities, Council Members' offices, calls to 311 and 211, and the strong network of relationships between The City of Calgary and service agencies within Calgary.

Environmental impacts continue to be identified and assessed. The City of Calgary continues to work with other orders of government to understand the impacts and to identify next steps and responsibilities in repair and mitigation.

### **Financial Capacity**

The final tally of flood related expenditures cannot be identified at this point in time. It is expected that the majority of the flood related recovery expenditures may be recoverable from either insurance or the Province's Disaster Recovery Program (DRP); however specific recoveries will vary on a project by project basis and are difficult to predict with full accuracy. In this regard, it may take several years to complete the total flood recovery process. Any shortfall in recoveries, once known, are expected to be covered from internal sources.

Because provincial funding has been dedicated for hazard mitigations and resiliency related to the watershed only, there is currently a critical resilience funding gap amongst all funding streams for the protection of buildings and other infrastructure (*Jacobs Consulting: City of Calgary – Disaster Recovery Funding Analysis, 2014 February 14*)

Capital budgets approved to date resulting from the flood total \$445.1 million. \$63 million advance has been provided to The City through the DRP submission. A \$50 million advance on insurance has been received. \$12.6 million has been received from the Province through the Flood Recovery Erosion Control program. \$3 million has been approved by the Province through the Flood Readiness Supply Grant, and a second application has been requested by the Province for its consideration. A summary of flood financials is provided in Attachment 4, page 1.

Administration is requesting that Council approve limited term and contract positions for recovery work on the basis that the funding for these positions can be recoverable. To date, Administration has submitted a \$5.3 million application (over three years) to the Province's Municipal Staffing Grant Program. The City has received \$1 million related to these costs to 2014, March 31 with additional future years approval pending proof of the use of these funds. There is a time delay in funding cycles between the Province and The City. Council's approval is required to hire the \$5.3 million in staff, and to approve in principle the hiring of additional staff as needed pending their costs are recoverable. A revised Municipal Staffing Grant application would be submitted to the Province quarterly should Council approve this direction.

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The Fiscal Stability Reserve (FSR) was identified by Council at 2014 November 25 Budget Adjustment process (*C2013-0668 Proposed Amendments to the 2014 Business Plans and Budgets*) for Administration to use, as required, the residual tax supported flood-related capital projects funding shortfalls to a maximum of \$100 million. Administration has developed a first list, with costs, of flood resilience projects that could be funded through the FSR. Should Council approve all of this report's recommendations the balance of the FSR is estimated at \$42.9 million (Attachment 4, page 2). Of the total request of Council captured in Attachments 1 and 2, \$28.5 million is being sought through the Provincial Resilience and Mitigation Funding program.

At the direction of Council, Administration has investigated further the resiliency of the Calgary Zoo, and information and funding requests for the Zoo are contained in companion report *PFC2014-0279 Flood Mitigation Project for Calgary Zoo* (2014 April 01).

### **Current and Future Operating Budget:**

Request for Council consideration of operating budgets, for resiliency projects:

As per Community Resiliency Projects category (Attachment 1);

- a) approve the one-time 2014 operating budget of \$530 thousand with costs to be incurred over two years funded from Fiscal Stability Reserve; and
- b) direct Administration to include any continuing operating costs not identified over two years in Attachment 1 as part of the 2015-2018 Action Plan process.

As per Infrastructure / Operations: Flood Resiliency Projects category (Attachment 2);

- a) approve the associated one-time operating budget for 2014 of \$1.3 million funded from Fiscal Stability Reserve; and
- b) direct Administration to include any continuing operating costs not identified in Attachment 2 as part of the 2015-2018 Action Plan process.

Approve a staffing budget request for \$5.3 million, to be funded from Fiscal Stability Reserve, for the period 2014-2016 with reimbursement of these funds to be applied for under the Province's Municipal Staffing Grants Program.

Some associated operating is included with the projects identified in the Submission to Provincial Mitigation and Resiliency Program Funding (Attachment 3). This operating would need to be identified within 2015-2018 Action Plan should these projects be approved for funding.

Administration anticipates that the impact of the flood event will significantly affect both current and future operating budgets. Through the ongoing efforts of ROC working with Finance & Supply, Action Plan leaders and other stakeholders these will be incorporated into existing business planning and budgeting processes while ensuring that the integrity of an overarching resilient city theme is maintained and integrated.

### **Current and Future Capital Budget:**

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Request for Council consideration of capital budgets, for resiliency projects:

As per Community Resiliency Projects category (Attachment 1), of which \$26.6 million is potentially recoverable through submission to the Provincial Mitigation and Resiliency Program Council is asked to approve the identified projects, and approve the capital budget of \$30.2 million funded from Fiscal Stability Reserve.

As per Infrastructure / Operations: Flood Resiliency Projects category (Attachment 2), of which \$1.9 million is potentially recoverable through submission to the Provincial Mitigation and Resiliency Program, Council is asked to approve the identified projects, and approve the capital budget of up to \$15.7 million funded from Fiscal Stability Reserve.

Council is requested to relinquish \$3.640 million from Parks Flood Capital Program 932 which were approved during the 2014 Budget Adjustment Process (*C2013-0668 Proposed Adjustments to the 2014 Business Plans and Budgets*). These resilience requests are now included in Attachment 1 and Attachment 2.

The City of Calgary has submitted a list of projects to the Provincial Mitigation and Resiliency Program Funding (Attachment 3). It is anticipated that funding will be awarded in the third quarter of 2014. Administration will monitor this application and report back by November 2014 on any funding approved through the Government of Alberta Mitigation and Resilience funding grant for consideration of projects to be identified within the 2015-2018 Action Plan.

Administration anticipates that the impacts of the flood event will affect both current and future capital budgets. Through the ongoing efforts of ROC working with Finance, Action Plan leaders and other stakeholders these will be incorporated into existing business planning and budgeting processes while ensuring that the integrity of an overarching resilient city theme is maintained and integrated.

### **Risk Assessment**

The cost of The City's property insurance increased substantially from 2013 to 2014. The increase in premium was as a direct result from the flood claim presented to its insurers. During initial renewal negotiations with the insurers it was evident that the industry was reluctant to continue underwriting flood risk in Calgary. Many long time insurers on The City's insurance program either opted to not provide any quotes or they opted to reduce their exposure on the risk so that in the event of a future flood their exposure would be lower. As a result The City was not able to achieve the same level of flood insurance at any cost for 2014 and the cost for the insurance that was secured was substantially higher.

The City may be unable to purchase flood insurance in the future. It is important that The City demonstrate to its insurers that it is actively looking for ways to reduce the likelihood of a flood loss or mitigate the amount of damage from a flood. Should The City take these steps to implement resiliency projects, the insurers may be encouraged to continue to offer flood coverage and the cost of the coverage should reduce over time.

There are a number of risks should The City of Calgary not invest in resilience. Risk of loss of public confidence and corporate reputation due to failure to address public infrastructure

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resilience, provide correct and consistent information effectively, and deliver services that citizens have come to expect (both flood related and regular operations)  
Finally, The City faces significant risks down the road if it fails to consider resiliency options now. Failure to consider resiliency will increase The City's vulnerability to future weather related events, such as floods and severe winter and summer storms, and hinder its ability to support citizens when disaster strikes. While these risks are recognized and are being managed through the best efforts of Administration, the continued support of Council is needed in order to ensure these risks do not become significant issues.

### REASON(S) FOR RECOMMENDATION(S):

The 2013 June flood event created significant damage to municipal infrastructure and service delivery. While Administration continues efforts to repair and replace damaged infrastructure and restore services to pre-flood levels, a longer term goal of building up resiliency is imperative. An outcome from the flood event is a deeper recognition of the importance of having the right conditions in place for the community to respond and recover in the most effective and efficient ways. Administration recognizes the key role it plays in supporting resiliency. An ongoing commitment to supporting resiliency and investing in capabilities is key to the city of Calgary being able to deal with adversity when incidents occur.

At the 2014 November Business Plan and Budget Adjustments meeting of Council, Administration was directed to identify and cost a *first list* of flood resilience projects. Administration has taken a collaborative approach to understanding current efforts toward resilience and to develop recommendations that will support the development of overall City of Calgary resilience to future high water events. The information attached within this document illustrate a *first list* of projects organized into categories that illustrate community, infrastructure and operations. Administration continues to identify recovery, mitigation and resilience objectives that will be included within the 2015-2018 Action Plan. A final list is attached to this report that identifies projects that The City will submit for funding through the Provincial Mitigation and Resilience program.

Future recommendations for continued recovery, mitigation and resilience are expected to be brought forward to Council pending decisions by the Government of Alberta and as part of the 2015-2018 Action Plan.

### ATTACHMENT(S)

1. Community Resiliency Projects
2. Infrastructure/Operations Resiliency Projects
3. Submissions to Provincial Mitigation / Resiliency Program Funding
4. 2013 Flood Financials and Fiscal Stability Reserve Balance