

Community Resiliency Projects (in 000's)

PFC2014-0316
ATTACHMENT 1

Identifier	Provincial Submission #	Department	Business Unit	Project Summary	Project Outcome (Benefits)	Capital Program #	2014 Capital Budget (000's)	2014 Operating Program #	Annual Operating Budget (000's)	Future Years	Recommended for Approval Yes/No	Rationale
C-1		Community Services & Protective Services	CEMA Servicing	Community Out-Reach Coordinator	Maintain good community relations and communication			001	130		Yes	
C-2	P3	Community Services & Protective Services	CFD	Community Support Centres	Community Resiliency – Fire Stations to support community in event	935	1,250				Yes	Pods & supplies for 24-36 hrs for citizens & staff
C-3	P5	Community Services & Protective Services	CFD	Alert and Warning Notification System	Emergency / hazardous condition siren / loudspeaker with notification systems installed on fire facilities throughout the city.	935	1,000	001	100	2015 3,000	Yes	Adapt current notification system in fire halls
C-4	P-8 P-9 P-10	Community Services & Protective Services	Parks	Bowmont Park - High water from the 2013 flood caused significant damage to gravel trails and to pedestrian boardwalk transitions. Further the flood eroded approximately 100 linear meters of riverbank, leaving an unsafe condition for park users.	The intent of the restoration work is to not only re-establish the functionality of the site, but to add resiliency for any potential future high water events. If the resiliency measures are effective, costs related to similar events in the future can be minimized and public safety will be maintained.	932	25			2015 100	Yes	Consulting framework & signage for 2014
C-5	P-8 P-9 P-10	Community Services & Protective Services	Parks	Inglewood Bird Sanctuary Riparian Uplift - The riverbanks adjacent to the outlooks and viewing platforms	Incorporating resilience measures through the installation of a riparian uplift will provide added protection to the riverbanks and the	932	100			2015 50	Yes	Consulting Roll up for C-5, 6 & 7 & design needs 2014 & 2015 completion

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				were severely eroded. Enhancement of the riverbanks will be achieved through the application of bioengineering techniques.	infrastructure.							
C-6	P-8 P-9 P-10	Community Services & Protective Services	Parks	Inglewood Bird Sanctuary Outlooks - The outlooks are viewing platforms and seating areas that overlook backchannels and oxbows of the Bow River. During the 2013 flood the outlooks suffered varying degrees of damage from complete destruction to the structures being lifted from their foundations. The riverbanks adjacent to the structures were severely eroded. While restoration of the individual outlooks may be unique to that structure the intent of the proposed work is to not only restore the amenities'	Incorporation of the resilient measures described should protect the structure and minimize damage caused by future flood events, resulting in reduced repair costs and improved safety for the park users.	932				2015 400	No	Consulting Roll up for C-5, 6 & 7 & design needs 2014 & 2015 completion

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				function but to also provide resilience to future flood events. Resilience measures may include the use of resilient materials, increased riverbank protection or providing a more robust foundation to support the structure.								
C-7	P-8 P-9 P-10	Community Services & Protective Services	Parks	Inglewood Bird Sanctuary Island Bridge - The island bridge suffered significant damage during the 2013 flood. The bridge was dislodged from the foundation, the adjacent riverbank was eroded and the structural integrity of the bridge may have been negatively impacted. While the planning and design for repairing the damage is in the preliminary stages, the restoration plan will include fortification of the bridge foundations and superstructure and additional	Incorporation of resilient measures in the repair to the bridge and restoration of the riverbank should protect the structure and minimize damage caused by future flood events, resulting in reduced repairs costs and improved public safety.	932				2015 350	No	Consulting Roll up for C-5, 6 & 7 & design needs 2014 & 2015 completion Related to I-44

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				protection to the riverbank.								
C-9	P-8 P-9 P-10	Community Services & Protective Services	Parks	Elbow River Stampede Pathway - The pathway along the Elbow River from the MacDonald Bridge to 25th Ave. was severely damaged during the 2013 flood. While currently in the planning and design phase consideration is being given to constructing a more robust structure capable of withstanding a similar event.	Given the severity of the damage to this segment of pathway and the critical connection to the transportation network it represents, building resilience into the repaired product will result in reduced future flood related costs and provide infrastructure that can be returned to public use faster, in the face of a similar event.	932	250				Yes	To be completed immediately, critical connection to transportation network & reduce future flood costs
C-10	P-8 P-9 P-10	Community Services & Protective Services	Parks	Sue Higgins to Anderson Road (Lafarge) - This segment of pathway has a history of being susceptible to flood damage. In 2005 approximately 300 linear metres of pathway and the land it was based on was washed out. Currently two segments of the pathway totalling approximately 330	Given the magnitude of the damage to this pathway and factoring in the value of the transportation link, incorporating resilient measures in the eventual repair will ensure the pathway will be able to sustain a similar event.	932	100			2015 650	Yes	Planning & design for 2015 construction FREC approved project

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				linear metres were scoured out during the 2013 flood. As The City's access to land in this area is limited the eventual repair solutions must incorporate resilient measures to ensure similar failures are not incurred in future flood events.								
C-11	P-8 P-9 P-10	Community Services & Protective Services	Parks	Stanley Park - Depot - Flooring upgraded from tile to acrylic, raised mechanical in garage portion of depot. Pavilion offices – flooring upgraded from tile to acrylic, changed conventional furnace to rooftop units	Relocation of electrical or mechanical components above or out of areas susceptible to flood damage will protect them from damage due to future flood events.	932	200				Yes	Required for flood resiliency, building was impacted by flood
C-12	P-8 P-9 P-10	Community Services & Protective Services	Parks	Riparian Resiliency - Riparian health can be correlated with a riverbank's ability to withstand flood impacts. Areas with healthy, established riparian vegetation withstood the 2013 flood better than less healthy areas, protecting infrastructure, filtering flood debris,	Creating a healthier riparian habitat would have economic, social and environmental benefits. Establishing healthier riparian areas, planted with a mix of native trees, shrubs and grasses would improve resiliency to high water events and provide better projection of the riverbanks. In turn, it would have a positive aesthetic impact for the	932	400			2015 & 2016 2,600	Yes	Planning design & site assessment, working with Water Resources Related to I-14

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				and providing terrestrial and aquatic habitat benefits. Habitat benefits may include nutrient loading for invertebrates, maintaining stream temperatures, nesting habitat, resting areas, and cover for a variety of species. Using work that supported the City's 2013 Riparian Strategy, this request will plant sites identified as "unhealthy" or "healthy but with problems" across approximately 20 parks, including sites identified as critical, high or moderate priority erosion sites. In total, approximately 20 hectares would be planted across the entire length of the Bow and Elbow Rivers within the limits of the City of Calgary. Funding from the resiliency fund would: 1)	user of Park areas.							

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				further refine the project list and develop designs for each site; 2) site prep and planting; and 3) maintenance over a three-year period to establish plantings.								
C-13	P-8 P-9 P-10	Community Services & Protective Services	Parks	Weaselhead Park - Weaselhead Park suffered significant damage to multiple assets throughout the park, including post & rail fencing, wooden boardwalks, pedestrian gates, service gates, gravel trails, regional pathway and post and rail fencing, While it is anticipated resilient measures will be incorporated into the restoration efforts, due to the threat of un-detonated ordinance washed into the park from the old Canadian Armed Forces base, detailed site inspections and assessments have yet to be completed. Upon receipt of the	Incorporating resilience into the proposed repairs will serve to protect the park infrastructure and valuable land from damage due to future flood events.	932	50			2015 150	Yes	Planning & design for 2015 construction

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				initial site assessments and preliminary engineering reports it is reasonable to anticipate typical resilient measures such as bank protection, providing more robust boardwalks and stronger foundations will be incorporated in the final design.								
C-14		Corporate Services	Human Resources	Human Capital Skills Inventory	Assignment of the right resources to priority and emerging work on a timely basis. Accurate and timely reporting of employee status and availability			792	200		Yes	
C-15		Corporate Services	Office of Land Servicing & Housing	Establish housing site with ability to increase bed & boarding	To relocate tenants to a site that is able to deliver needs of tenants	943	35				Yes	Implementation of plan with CHC for cots and kitchen facilities
C-16		Transportation	Calgary Parking Authority	Flood doors for vehicle entrances and pedestrian doors to parkades at City Hall, James Short, McDougall, TCC	Prevent flood waters through parkade doors as main point of entry as per 2013 Civic Plaza event	957	500				Yes	Install flood doors @ Municipal Building parkade
C-17		Transportation	Calgary Parking Authority	Inflatable water barriers	Prevent flood waters into parkade or building through non pedestrian or vehicle	957	25				No	

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					access points							
C-18		Transportation	Roads	Underground Signal Duct Replacement	Replacement of underground signal infrastructure at flood impacted areas scheduled for construction/repair in next 2 yrs.	948	75			2015 75	Yes	Start in 2014 & complete in 2015 Related I-43
C-19	P-32	Transportation	Roads	Relocate Streetlight Controllers/ Relays located in EPC's utility vaults & man holes in downtown to "above ground" installation (i.e. pole mounted). Project range is estimated between 1,800 and 2,400	Facilitates traffic movement and ensures vehicles are not blocked from travel.	948	1,200			2015 1,200	Yes	Start in 2014 & complete in 2015 Related to I-44
C-20		Utilities & Environmental Protection	Environmental & Safety Management	Solar panels for community association buildings	Energy independency for community association buildings to act as a emergency shelter in case of emergencies, power outages, heat waves	948	500	817	70		No	Removed at request of Director
C-21	P49	Calgary Police Service	Calgary Police Service	Relocate CPS Arrest Processing Unit from the downtown location to Spyhill	This project has partial funding only. This project would eliminate the risk and exposure of having the CPS Arrest Processing functions in the downtown core. The Arrest Processing Unit is fundamental to CPS operations and was flooded in 2013 causing significant	953	12,000				No	Removed at request of CPS

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					operational problems during the initial response phase to the flood. \$12 million would move APU from the flood plain to a secure location.							
C-22	P50	Calgary Police Service	Calgary Police Service	Mobile Command Support Vehicle and Trailers	This project would provide command/logistic support at disaster site(s).	953	1,300				Yes	
C-23	P-51	Calgary Police Service	Calgary Police Service	Radio System - Tower Equipment upgrade	Upgrade the Quantar Repeaters that exist at each radio tower and provide the channels for the system but have reached the end of manufacturers support. This will help ensure system remains viable until at least 2020	953	1,600				Yes	
C-24		Calgary Police Service	Calgary Police Service	Radio System - Additional Site	Provide additional coverage to Public Safety users in far North Central Calgary	953	1,000	070	30		Yes	
Total of all Recommendations							<u>\$21,610</u>		<u>\$530</u>	<u>\$8,575</u>		
Total Community Resiliency Projects Recommended for Immediate Funding							\$9,085		\$460			

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