

Report to Council



Date: April 9, 2018

File: 1910-10

To: City Manager

From: Shayne Dyrdal, Senior Airport Finance & Corporate Services Manager

Subject: 2017 Freshet Infrastructure Recovery for Kelowna International Airport

Report Prepared by: Toni McQueenie, Administration Manager

Recommendation:

THAT Council receive for information, the report from the Senior Airport Finance & Corporate Services Manager dated April 9, 2018 with respect to the 2017 Freshet Infrastructure Recovery at Kelowna International Airport;

AND FURTHER THAT the 2018 Financial Plan be amended to include \$1,063,000 for the 2017 Freshet Infrastructure Recovery at Kelowna International Airport of which up to \$802,380 is anticipated to be recoverable through the provincial Disaster Financial Assistance (DFA) program with the remaining amount to come from Airport reserves.

Purpose:

To provide Council with an overview of the infrastructure recovery and associated costs resulting from the 2017 freshet event at Kelowna International Airport (the Airport).

Background:

The 2017 spring freshet in Kelowna brought extreme flooding in early May and record high levels in Okanagan Lake that persisted from May until July resulting in significant damage to creek channels, culverts, and City infrastructure. The Airport suffered damages that are anticipated to cost \$1,063,000 to repair or restore as part of the 2017 Airport Freshet Flooding Recovery Program (the Recovery Program) and the direct cost to the Airport for this program is estimated at \$260,620. Included within the Recovery Program are drainage and channel works that are urgent in nature and should be completed before the 2018 spring freshet to mitigate the risk of further flooding and additional damage. Amendments to the City's 2018 Financial Plan are required to proceed with this work.

Funding of the recovery work can be broken into two categories for the purpose of financial planning: costs eligible for the provincial Disaster Financial Assistance (DFA) program and costs not eligible for the DFA program, which must be fully funded by the Airport.

DFA is a provincial program that supports local government and private property owners to recover after catastrophic events. DFA pays 80% of eligible recovery costs to restore many types of infrastructure to pre-disaster conditions. It does not fund enhancements or upgrades that improve infrastructure or prevent future problems. Not all damage caused by a disaster is eligible for DFA: erosion, landscaping, insured assets and non-critical items are not. Enhancements over and above the pre-existing condition are at the Airport's expense. The enhancement included in the Recovery Program consists of the construction of a road access to restore the function of an existing sediment trap.

DFA has received submission from the Airport for review and preapproval. No approvals have been granted yet as formal notification may take some time. After the initial preapproval from DFA, each project and component of work will be looked at on its merits to determine its ultimate eligibility for DFA funding. Given the high level of estimating and need to develop detailed scopes of work for each project, some elements of work in the recovery program may ultimately not be eligible. A contingency budget of 20% has been added to the program to address this uncertainty.

The Recovery Program:

There are discrete locations or areas of damage within three creeks identified within the Recovery Program. Aerial photographs of the Airport and surrounding creeks have been included as Schedule A. The Recovery Program is anticipated to cost \$1,062,297 with \$802,382 anticipated to be funded by DFA and \$259,915 anticipated to be funded by the Airport.

Description	DFA Eligible	Not DFA Funded	Total
Mill Creek and Wagner Creek	\$ 428,900	\$ 0	\$ 428,900
Scotty Creek	574,078	16,000	590,078
Total Estimated Damage	\$ 1,002,978	\$ 16,000	\$ 1,018,978
DFA 80%/20% split	802,382	200,596	
20% Contingency		\$ 216,596	
		43,319	\$ 43,319
Total Estimated Cost	\$ 802,382	\$ 259,915	\$ 1,062,297

Mill Creek and Wagner Creek:

Professional engineering consultants completed a post-flood inspection of Mill Creek and provided a report that identified a number of issues which include erosion of the channel banks, sediment aggradation, and woody debris blockages. The report states that the entire alignment of the creek was impacted by the significant influx of sediments that significantly reduces the capacity of the channel to carry flow, thereby increasing the potential for flooding. In addition, the report identified that the majority of the gravels removed in 2015 when the Airport dredged this portion of Mill Creek, were replaced during the 2017 freshet by an equivalent amount of sediment. The costs associated with the proposed work are shown in the table below.

Description	DFA Eligible	Not DFA Funded	Total
Removal of sediment	166,000	0	166,000
Restoration of creek bank	101,400	0	101,400
Sediment control and coffer dams	100,900	0	100,900
Removal and replacement of Rip Rap	60,600	0	60,600
Total Estimated Damage	\$ 428,900	\$ 0	\$ 428,900
DFA 80%/20% split	343,120	85,780	
20% Contingency		\$ 85,780	17,156
		17,156	
Total Estimated Cost	\$ 343,120	\$ 102,936	\$ 446,056

Scotty Creek:

Professional engineering consultants completed a post-flood inspection and provided a report that identified a number of issues which include erosion of the channel bed and banks, sediment aggradation, woody debris blockages, and the wash out of three culverts. According to the report, the proposed work includes the replacement of a bridge located on Shadow Ridge golf course, replacement of culverts with a single box culvert, road works to restore existing roads and provide access to existing sediment traps, and the installation of a gabion basket sediment trap which is necessary to maintain pre-flood creek conditions and avoid costly, more frequent dredging along the creek. The costs associated with the proposed work are shown in the table below.

Description	DFA Eligible	Not DFA Funded	Total
Bridge	\$ 201,778	0	\$ 201,778
Restoration of culverts	185,700	0	185,700
Removal of sediment and debris	95,300	0	95,300
Road works	41,000	16,000	57,000
Restoration of sediment trap	30,200	0	30,200
Sediment control and coffer dams	20,100	0	20,100
Total Estimated Damage	\$ 574,078	\$ 16,000	\$ 590,078
DFA 80%/20% split	459,262	114,816	
20% Contingency		\$ 130,816	26,163
		26,163	
Total Estimated Cost	\$ 459,262	\$ 156,979	\$ 616,241

Internal Circulation:

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George King, Financial Planning Manager

Alan Newcombe, Infrastructure Divisional Director

Lance Kayfish, Manager, Risk & Safety

Jodie Foster, Community Communications Manager

Financial/Budgetary Considerations:

The 2017 Freshet Airport Infrastructure Recovery in the amount of \$1,063,000 is not part of the Airport's current Financial Plan. The 2018 Financial Plan will require the addition of the 2017 Freshet Airport Infrastructure Recovery of which \$802,380 is anticipated to be recovered from the provincial Disaster Financial Assistance (DFA) program, \$103,000 will be funded from the Airport's Airside Reserve and \$157,620 will be funded from the Airport's Groundside Reserve.

Considerations not applicable to this report:

Legal/Statutory Authority:

Legal/Statutory Procedural Requirements:

Existing Policy:

Personnel Implications:

External Agency/Public Comments:

Communications Comments:

Alternate Recommendation:

Submitted by:

S. Dyrdal, Senior Airport Finance & Corporate Services Manager

Approved for inclusion:



Joe Creron, Acting City Manager
Sam Samaddar, Airport Director

cc:

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Schedule A



Schedule A

