

Re:	2016 Submission to the National Disaster Mitigation Program: Steveston Island Flood Mitigation Planning Project and the Flood Mitigation Strategy Update			
From:	John Irving, P.Eng. MPA Director, Engineering	File:	10-6060-01/2016-Vol 01	
То:	Public Works and Transportation Committee	Date:	September 30, 2016	

Staff Recommendation

- 1. That the submission to the National Disaster Mitigation Program requesting funding for up to 100 % of the \$2,120,000 cost for Steveston Island Flood Mitigation Planning Project and the Flood Mitigation Strategy Update be endorsed;
- 2. That the Chief Administrative Officer and the General Manager of Engineering and Public Works be authorized to enter into funding agreements with the Government of Canada and/or the Province of BC for the above mentioned projects should they be approved for funding by the Government of Canada; and
- 3. That, should the above mentioned projects be approved for funding by the Government of Canada, the 2017 Capital Plan and the 5-Year Financial Plan (2017-2021) be updated accordingly.

John Irving, P.Eng. MPA Director, Engineering (604-276-4140)

Att. 3

REPORT CONCURRENCE					
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER			
Finance Department Sewerage & Drainage	e e	(2)			
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	Initials: DW	APPROVED BY CAO			

Staff Report

This report supports Council's 2014-2018 Term Goal #5 Partnerships and Collaboration:

Continue development and utilization of collaborative approaches and partnerships with intergovernmental and other agencies to help meet the needs of the Richmond community.

This report supports Council's 2014-2018 Term Goal #6 Quality Infrastructure Networks:

Continue diligence towards the development of infrastructure networks that are safe, sustainable, and address the challenges associated with aging systems, population growth, and environmental impact.

6.1. Safe and sustainable infrastructure.

This report supports Council's 2014-2018 Term Goal #7 Strong Financial Stewardship:

Maintain the City's strong financial position through effective budget processes, the efficient and effective use of financial resources, and the prudent leveraging of economic and financial opportunities to increase current and long-term financial sustainability.

7.4. Strategic financial opportunities are optimized.

Origin

On September 22, 2016, Emergency Management BC (EMBC) announced a call for proposals from local governments for the National Disaster Mitigation Program (NDMP). Each project is eligible to receive up to 50% federal funding and up to 50% provincial funding. Funding under the NDMP is intended to reduce, or even negate, the effects of flood events. Funding is available for risk assessments, flood mapping, mitigation planning and investments in non-structural and small scale structural mitigation projects. A summary of the program is included (Appendix 1) for information. EMBC will review and prioritize all submissions and forward their recommendations to the Government of Canada for funding consideration.

The deadline for proposals was October 7, 2016. Given the short deadline, staff submitted two proposals: the Steveston Island Flood Mitigation Planning Project and the Flood Mitigation Strategy Update. The purpose of this report is to seek Council's endorsement on the submission to EMBC for the NDMP grant funding for up to 100% of the cost of both projects of \$2,120,000.

Analysis

In recognition of increasing disaster risks and costs, the Federal Budget 2014 earmarked \$200 million over five years to establish the National Disaster Mitigation Program (NDMP) as part of the Federal Government's commitment to build safer and more resilient communities. The NDMP is intended to address rising flood risks and costs, and build the foundation for informed mitigation investments that could reduce, or even negate, the effects of flood events.

The NDMP will be an annual program, with a yearly intake to the Province of BC through EMBC every October 31, following this initial intake. The Province will apply on behalf of the

submitted projects they have prioritized and redistribute the funds to municipal and regional governments responsible for disaster mitigation.

Four funding streams have been identified by the program:

- 1. Risk Assessments
- 2. Flood Mapping
- 3. Mitigation Planning
- 4. Investments in Non-structural and Small Scale Structural Mitigation Projects

Staff submitted two projects to NDMP requesting grant funding:

Project	Total Estimated Cost	Category	Potential Provincial Contribution	Potential Federal Contribution
Steveston Island Flood Mitigation Planning	\$1,620,000	Mitigation Planning	Up to 50% of eligible costs (\$810,000)	Up to 50% of eligible costs (\$810,000)
Flood Mitigation Strategy Update	\$500,000	Mitigation Planning	Up to 50% of eligible costs (\$250,000)	Up to 50% of eligible costs (\$250,000)
Total Request	\$2,120,000			

Steveston Island Flood Mitigation Planning is in the 5 Year Financial Plan for 2017 and will be brought forward for Council's consideration as part of the 2017 Capital Plan.

Flood Mitigation Strategy Update includes the Dike Master Plan Phase 3, Flood Management Strategy Update and Pump Station Condition Assessment Update. There is existing capital funding for the Dike Master Plan Phase 3. The Flood Management Strategy Update and Pump Station Condition Assessment Update are in the 5 Year Financial Plan for 2017 and will be brought forward for Council's consideration as part of the 2017 Capital Plan.

Funding Details

The NDMP operates through a 50% federal and 50% provincial funding model. The maximum level of assistance from all federal institutions must not exceed 50% of total eligible project costs for provinces. The Province of BC has indicated that if there is no funding available from the Provincial Government, the City of Richmond will only receive up to 50% funding from the Government of Canada.

Should the funding requests be successful, the City would be required to enter into funding agreements with the Province of BC and/or the Government of Canada. The agreements are standard form agreements provided by senior levels of government and include an indemnity and release in favour of the Provincial and Federal Government. As with any submission for funding to external sources, funding is not guaranteed to be granted to assist with this project.

Financial Impact

The City of Richmond will be requesting up to \$2,120,000 for funding for two mitigation planning projects from the National Disaster Mitigation Program through Emergency Management BC. The fund may grant up to 100 % of total eligible costs.

Steveston Island Flood Mitigation Planning will be brought forward for Council's consideration as part of the 2017 Capital Plan.

Flood Mitigation Strategy Update includes the Dike Master Plan Phase 3, Flood Management Strategy Update and Pump Station Condition Assessment Update. There is existing capital funding for the Dike Master Plan Phase 3. The Flood Management Strategy Update and Pump Station Condition Assessment Update will be brought forward for Council's consideration as part of the 2017 Capital Plan.

Conclusion

Staff are seeking Council's endorsement on two projects already submitted to the National Disaster Mitigation Program. The projects have been submitted to the Province of BC and will be initially evaluated through Emergency Management BC. Richmond is requesting up to 100% funding for Steveston Island Flood Mitigation Planning Project and the Flood Mitigation Strategy Update.

Lloyd/Bie, P. Eng Manager, Engineering Planning (604-276-4075)

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Denise A Tambellini Manager, Intergovernment Relations and Protocol Unit (604-276-4349)

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- Att. 1: National Disaster Mitigation Program Summary
 - 2: National Disaster Mitigation Program Project Proposal Form Steveston Island Flood Mitigation Planning Project
 - 3: National Disaster Mitigation Program Project Proposal Form Flood Mitigation Strategy Update

Attachment 1: National Disaster Mitigation Program Summary

National Disaster Mitigation Program (NDMP)

Overview

In recognition of increasing disaster risks and costs, Budget 2014 earmarked \$200 million over five years to establish the National Disaster Mitigation Program (NDMP) as part of the Government's commitment to build safer and more resilient communities. The NDMP will address rising flood risks and costs, and build the foundation for informed mitigation investments that could reduce, or even negate, the effects of flood events.

The NDMP fills a critical gap in Canada's ability to effectively mitigate, prepare for, respond to, and recover from, flood-related events by building a body of knowledge on flood risks in Canada, and investing in foundational flood mitigation activities. Knowledge that is up-to-date and accessible will not only help governments, communities and individuals to understand flood risks and employ effective mitigation strategies to reduce the impacts of flooding, but will also further discussions on developing a residential flood insurance market in Canada.

Main Objectives

The NDMP was established in April 2015 to reduce the impacts of natural disasters on Canadians by:

- Focusing investments on significant, recurring flood risk and costs; and
- Advancing work to facilitate private residential insurance for overland flooding.

Eligibility

Provincial and territorial governments are the eligible recipients for funding under the NDMP. However, provincial and territorial authorities may collaborate with, and redistribute funding to eligible entities, such as municipal or other local governments, public sector bodies, private sector bodies, band councils, international non-government organizations or any combination of these entities.

Program Components

Of the NDMP's \$200 million, the NDMP has an allotment of approximately \$183 million for NDMP projects that will be cost-shared with the provinces and territories (up to 50 per cent of eligible provincial projects and up to 75 per cent of eligible projects in the territories). Projects will be selected for funding through a competitive, merit-based process using objective and measurable criteria.

There are four funding streams available under the NDMP:

Risk Assessments

This stream provides funding for the completion of risk assessments to inform flood risks. Risk assessments are the foundational step in disaster mitigation. These risk assessments will identify flood hazards; potential impacts; and community and infrastructure vulnerabilities as well as the overall flood risk profile for the area.

Flood Mapping

This stream provides funding for the development and/or modernization of flood maps to further address flood risks. A flood map identifies the boundaries of a potential flood event based on type and likelihood and can be used to help identify the specific impacts of a flood event on, for example, structures, people and assets.

Mitigation Planning

This stream provides funding for the development and/or modernization of mitigation plans to address flood risks. A comprehensive mitigation plan allows applicants to develop realistic and sustainable mitigation solutions by clearly outlining the plan's objectives, key activities, expected outputs, timelines, and roles and responsibilities.

Investments in Non-structural and Small Scale Structural Mitigation Projects

This stream provides funding for other non-structural and small scale structural disaster mitigation projects. Eligible projects would include actions such as the replacement of storm culverts, or projects that improve flood resilience by proactively preventing or mitigating damages and losses.

In general, provinces and territories can access any funding stream; however, there must be evidence to indicate that proposals are evidence-based. For example, applicants for flood mapping funding must indicate that their perceived need for flood mapping was informed by a risk assessment. Applicants for mitigation planning must demonstrate that their proposals reflect a need to prevent or mitigate identified and significant flood risks.

Further, provinces and territories can apply to access different streams of funding for different projects.

In addition to the funds that will be dedicated to cost-shared projects with provinces and territories, the NDMP will also assist in building the foundation for future, informed proactive prevention and mitigation by investing \$17 million in three key areas:

- Risk, resilience and return on investment tools to provide provinces, territories and communities with the needed information and capacity to plan and evaluate their flood mitigation projects;
- A risk and resilience repository that will collect, store, manage and share NDMP information to inform future policy and program direction for all levels of government; and
- Public awareness and engagement activities

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ATTACHMENT 2

National Disaster Mitigation Program

Project Proposal Form

A) Applicant Contact Information

i) Province/Territory

Note: If more than one province/territory is involved in this proposed project, please identify the province/territory that will be leading this project.

1) Name:	· · · · · · · · · · · · · · · · · · ·	-	2) Title:			
Province of British Colum	bia	-				
3) Organization (i.e. Province/Territory):			4) Telephone Number:	5) Facsimile Nun	ıber:	
Emergency Management BC (EMBC)			(604) 586-4390 (604) 586-4334			
6) Email Address:				7) Date (dd/mm/	уууу):	
embcfloodprotection@go	v.bc.ca					
ii) Original Applicat	nt(s) (i.e. "the entity/	ies", if applica	able)			
1) Name:			2) Title:		-	
Denise Tambellini			Manager Intergovernme	ntal Relations and Protocol	Unit	
3) Organization:			4) Telephone Number:	5) Facsimile Nur	5) Facsimile Number:	
City of Richmond			(604) 276-4349	(604) 276-4222		
6) Email Address:				7) Date (dd/mm/	уууу):	
dtambellini@richmond.ca				30/09/2	.016	
B) Project Details an	d Attestations					
8) Project Stream			Stream 1: R	isk Assessment(s)		
Identify the NDMP Pro	oject Stream relative to	this project sub	mission.	lood Mapping		
Note: Each project str	eam has different requi	rements and me				
Criteria.	ocifics on each stream		🔀 Stream 3: N	litigation Planning		
See Section C for shi			🔄 Stream 4: Ir	vestment in Non-Structur	alor	
				Small Scale Structural Mitig	jation	
9) Project Title:						
Flood Mitigation Strategy	Update					
10) Project Timeline:			-			
a) Duration of Project:		b) Projected St	art Date or proposed c) Projected End Date of propose		proposed	
Months:	Years:	project: (dd/	ппп/уууу)	project: (dd/mm/yyyy)		
3	1	0	1/01/2017	31/03/2018		
11) Estimated Total Cos	st of Project		a) Total of non-federal	costs:	\$250,000.00	
(Please complete th	e Budget Template [Se	ection D]).	b) Total federal costs:	al federal costs:		
			c) Total Project cost (i.e. a + b): \$500,000.0			
12) Project Description						
a) Provide a brief description of your proposed project. Climate change scientists estimate that sea level will rise approximately 1 m over the next 100 years. Combined with 0.2 m of subsidence that is expected in that same time period, Richmond will be required to raise dikes by 1.2 m to accommodate these changes.						
As a city surrounded by ocean and river, the City of Richmond is under constant threat of flooding. In our Flood Protection Strategy, the City has identified risks, mitigation goals, and objectives/strategies required to make more informed planning decisions for the citizens and businesses that call Richmond home.						
The Flood Mitigation Strategy Update includes the mitigation planning for the Dike Master Plan Phase 3, Flood Management Strategy Update and Pump Station Condition Assessment Update.						

- Environmental Permitting and Monitoring (for Investigation Work only)
- Archaeological Permitting and Monitoring (for Investigation Work only)
- b) Describe how this project addresses one or more high risk communities and/or a flood mapping activity.
 Note: b) is not applicable for Stream 1: Risk Assessment(s). Risk Assessments will help identify areas that may be at risk, as well as help to determine the level of risk.

(Please provide your responses in bullet form.)

The City of Richmond is at the forefront of flood protection in the Province of BC as the entire community is contained within the floodplain of the Fraser River, below historic high water levels and subject to freshet events, tidal flood events and internal drainage challenges. Richmond is approximately 1m above mean sea level and protected by 49 km of dike. Climate change scientists estimate that sea level will rise approximately 1 m over the next 100 years. Combined with 0.2 m of subsidence that is expected in that same time period, Richmond will be required to raise and build new dikes to meet future water levels. This project addresses the flood mitigation planning required to build a new dike on Steveston Island as recommended and endorsed by Council through Richmond's Dike Master Plan Phase 1.

Disaster mitigation is essential to protect not only residents, farms and businesses, but municipal, Provincial and Federal infrastructure. On land, this includes Highway 99 which is the main thoroughfare connecting the 15 freeway from Seattle to Vancouver and Vancouver International Airport (YVR). On water, Richmond is along a major shipping route to the port terminals along the Fraser River. Other risks to Richmond include toxic spills along the Fraser River, train and aircraft accidents as Richmond is home to YVR. Partners that may be impacted without disaster mitigation infrastructure from this project include YVR, Transport Canada, BC Ministry of Transportation and Infrastructure and others.

Approximately 220,000 people, \$50 billion worth of assets and over 13,000 businesses that employ 140,000 people call Richmond home. The rapidly growing City Centre has over 4,000 businesses, total commercial space of almost 10 million ft2 and over 30,000 employees. The City Centre population is anticipated to increase by 30,000 residents in the next 10 years. Without this disaster mitigation planning as delivered under the Flood Mitigation Strategy Update, the impact on human lives and Canada's economy that would result from a flood disaster is tremendous and cannot be quantified.

13)

•					
 a) How will this project benefit the defined geographical area an (Please provide your response in bullet-form.) The existing Steveston dike is in close proximately to commercial current dike would be extremely disruptive to the community. Additionally, historic assets are out of the dike and prone to seas The Steveston Island alignment preserves the heritage nature of S change induced sea level rise for Richmond. 	d the surrounding communities? and residential buildings. Increasi onal flooding. Steveston while providing long term	ng the elevatio m protection fro	n of this om climate		
b) Were surrounding communities informed of this projected pro	posal? Xes	No			
Comments: Through the Dike Master Plan Phase I, between September and D held. Key stakeholders generally favoured the creation of a new dik community disruption and maximizing scope for long-term dike up - Steveston 20/20 - Provincial Inspector of Dikes - Steveston Harbour Authority - Department of Fisheries and Oceans - Port Metro Vancouver - Provincial Land Tenure Department - The City's Advisory Committee for the Environment - The City's Heritage Commission - The Urban Development Institute	ecember 2012, a series of key sta ke alignment on Steveston Island I grades. Key stakeholders included	keholder meet based on minin d:	ngs were nizing		
14) Affected Community(ies)					
Notes: a) Identify all communities that are affected by this project. b) Indicate the population of all identified communities. c) Indicate if each identified community has been engaged in relation to this proposed project (E); and d) Indicate if each identified community has commited to support this proposed project (C).					
Name:	Population:	(E)	(C)		
City of Richmond	220,000	\boxtimes	\boxtimes		
Name:	Population:	(E)	(C)		
Metro Vancouver (including Richmond)	2,464,000	\boxtimes	\bowtie		

		Population:	(E)	(C)
Musqueam li	ndian Band	1,500	\square	\square
5) How will this	project contribute to the following?			• • • • • • • • • • • • • • • • • • • •
(please prov	ide your responses in bullet-form)			
i.e. Descri	be, in bullet form, how the proposed miti	gation project will reduce or negate the impa	ct and/or likelihoo	d of disasters
- The Steves	ton Dike Upgrade Project will provide fut	ure flood protection to all of Richmond to a	dress long-term	sea level rise
and associat	ed flood risks. Building a long-term dikin	g solution on Steveston Island will protect \$	50 billion worth o	f assets on
- Flooding is	a primary risk for the City of Richmond a	and maintaining a high level of flood protecti	on is the primary (aoal of this
program.				
- The Dike M	aster Plan Phase 1 outlined two distinct	alignment concepts for Steveston. One alig	nment option was	s to raise the
Island to clos	se the harbour. The recommendation out	t of the Dike Master Plan Phase 1 was the s	econd alignment	to re-align th
dike along St	eveston Island and this recommendation	n was endorsed by Council.		
- The 3km lo	ng section of dike that stretches betwee I term to address the changes in flood ris	n Garry Point Park and London Farm will re sk posed by climate change induced sea lev	quire raising and s el rise	strengthening
- The Steves	ton Island Flood Mitigation Planning Proj	ect will identify geotechnical, environmental	and archaeologic	al conditions
on Stevestor	Island to determine if appropriate for di	ke construction.	m diko olimeneet	e e Chausete
Island will no	t be possible. If construction of the long-	term dike alianment on Steveston Island do	es not occur. Ste	veston and
potentially Ri	chmond will be inundated by climate cha	ange induced sea level rise.		
b) Reducing	disaster related financial liabilities for all l	evels of government?		
	n Icland dika will protect over \$60 billion	in accose including Highway 00 roll facilitie	c and Dort of Va	ncouvor
shipping faci	on Island dike will protect over \$50 billion lities.	in assets, including Highway 99, rail facilitie	s, and Port of Va	ncouver
c) Reducing	on Island dike will protect over \$50 billion lities. risk, developing capacity and/or enhanci	in assets, including Highway 99, rail facilitie	s, and Port of Va	ncouver
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 c) Reducing Will protect F 6) Prioritized L a) Provide ye equals the Number: 1 Number: 2 b) Indicate ti 7) Provide a raprioritized p Richmond's dike improve for Stevestor complete Stedate. 8) Work Plan: The propose which the fir 	on Island dike will protect over \$50 billion lities. risk, developing capacity and/or enhanci Richmond from flooding that could result ist of all project proposals in this Proj bur prioritized list of all proposed project e second highest priority, etc.) Project Title: Steveston Island Flood Mitigation Pl Project Title: Flood Mitigation Strategy Update he priority ranking of this proposed pro- tionale/justification for implementing roject list. (500 characters max.) 2008-2031 Richmond Flood Protection ment program." Richmond's Dike Master h. As the next step for implementing this eveston Island Flood Mitigation Planning. ed project's work plan should clearly ar- hancial contribution is being requested	in assets, including Highway 99, rail facilitient ng resilience? from climate change induced sea level rise ect Stream: cts (E.g. #1 equals the highest priority proj anning ject. #: 1 this mitigation activity instead of the other Strategy identified the need to "Prepare and er Plan Phase I identified Steveston Island as long-term solution, Richmond obtained ten . The tenure expires April 2018 and this proj ticulate all activities (i.e. tasks, deliverable for each fiscal year.	s, and Port of Val ect, #2 er mitigation pro l implement a corr the long-term dil ure from the Prov ect must be comp s, resources, time	jects on the nprehensive king solution ince to oleted by tha elines, etc.) f
 c) Reducing Will protect F 6) Prioritized L a) Provide ye equals the Number: 1 Number: 2 b) Indicate ti 7) Provide a ra prioritized p Richmond's dike improve for Stevestor complete Ste date. 8) Work Plan: The propose which the fir The work plate to support the state sta	on Island dike will protect over \$50 billion lities. risk, developing capacity and/or enhancia Richmond from flooding that could result ist of all project proposals in this Proj bur prioritized list of all proposed project e second highest priority, etc.) Project Title: Steveston Island Flood Mitigation PI Project Title: Flood Mitigation Strategy Update ne priority ranking of this proposed pro- tionale/justification for implementing roject list. (500 characters max.) 2008-2031 Richmond Flood Protection ment program." Richmond's Dike Master A sthe next step for implementing this eveston Island Flood Mitigation Planning. ed project's work plan should clearly ar- hancial contribution is being requested an should include all products, method	in assets, including Highway 99, rail facilitiend of the change induced sea level rise from climate change induced sea level rise ect Stream: cts (E.g. #1 equals the highest priority project is anning induced sea level rise is anning it is a strategy identified the need to "Prepare and the related of the other strategy identified the need to "Prepare and the related of the strategy identified the need to "Prepare and the related of the strategy identified the need to "Prepare and the related of the strategy identified the need to "Prepare and the strategy identified the need to s	s, and Port of Val ect, #2 er mitigation pro implement a cor is the long-term dil ure from the Prov ect must be comp s, resources, time nents, etc. that w	jects on the prehensive king solution ince to bleted by that elines, etc.) vill be create

 19) Stakeholders: a) Identify all stakeholders/partnerships and describe their current and/or potential level of engagement, as applicable. b) Identify those stakeholders/partners who have committed support, either in-cash or in-kind, for the proposed project. c) Provide a description/summary of the stakeholder list, and how this information provides a rationale/justification for implementing this mitigation activity.
Please provide your answers in the Stakeholders Template (Section D).
 a) Identify any project implementation risks that may impact your ability to deliver the project as planned/scheduled Steveston Island Mitigation Planning project scheduling is dependent upon appropriate timing windows as described in detail in the Preliminary Investigation Management Plan by Golder Associates to accommodate active breeding season for species at risk, in-water drilling during the window of least risk for the Fraser River Estuary to protect fish and site prep and drilling outside of breeding bird season where possible. Optimization of project schedule is crucial to reduce potential environmental effects.
 b) Outline the mitigation measures that you will take to minimize and/or address your project's implementation risks Complete field survey in advance of other investigation components so that the preliminary dike design and alignment can be confirmed prior to laying out actual test hole locations Investigation, survey work, Phase 1 ESA and initial ecological assessment be carried out at the same time and in advance of drilling and environmental investigations Geotechnical and Phase 2 ESA drilling be combined to reduce potential disturbance to environmentally sensitive areas.
21) Monitoring and Performance Management (Please provide your response in bullet-form):
Describe the internal measures that you will implement to monitor your project and manage performance. - Hire a consultant to full-time project manage the scope of the Steveston Island Mitigation Planning Project - Hold weekly conference calls between the City and the consultant to ensure targets and major milestones are met - Hold monthly meetings between the City and consultant to manage performance
22) Official Languages In order to support Public Safety Canada's obligations under Part VII of the Official Languages Act, the applicant must indicate whether the needs of official language minority communities were considered, where appropriate (such as for stakeholder engagement activities)
a) Have the needs of official language minority communities been considered?
 b) What will the (lead) province or territory do to address official languages requirements for linguistic minorities, as per the Official Languages Act, with respect to this project? All needs and considerations of official language minority communities have been addressed as part of the project's ongoing community stakeholder consultations.
Project Attestations
23) The province or territory responsible for the implementation of this project agrees to share information with the
government of Canada, including risk information/data, including the completed risk assessment information template;

flood maps and associated data, based on the criteria established by PS, for inclusion in a national flood database; and

contribution agreement, on topics such as the project implementation status, measures for successful implementation,

24) The province or territory responsible for the implementation of this project agrees to report, in accordance with its

25) The province or territory responsible for the implementation of this project agrees to publicly recognize the federal

all other relevant project information, such as lessons learned.

project risk mitigation measures, and financial expenditures.

government's contribution in any announcement

🔀 l agree

🔀 l agree

🔀 I agree

26) The province or territory responsible for the implementation of this project agrees to ensure that it takes all necessary steps to prevent the risk of conflicts of interest, including:
• Disclosure of any apparent, actual or potential conflict of interest in compliance with Canada or the Province's laws, regulations or policies, as the case may be, and disclosure of the involvement of any former public servants or public office holders subject to the <i>Values and Ethics Code for the Public Sector</i> , the <i>Conflict of Interest Act</i> , and the conditions of the <i>Parliament of Canada Act</i> ;
 Registrant as lobbyists as required under the Lobbying Act (applicants shall provide assurance that, where lobbyists are utilized, they are registered in accordance with the Lobbying Act and that no actual or potential conflict of interest exists nor any contingency fee arrangement);
 Role of any Government of Canada official, if a Government of Canada official is to participate on an advisory committee or board. Such involvement must not be seen to be exercising control on the committee or board on the use of funds.
A lagree
 27) NDMP contributions may be provided for the following types of mitigation projects: a) new projects or existing projects that have been developed but have not been identified for funding; and b) non-structural or small scale structural projects.
Does your proposed NDMP meet this description?
C) Additional Required Information for Each NDMP Stream (1-4)

Stream 3: Mitigation Planning
1) Was a copy of your completed and up-to-date NDMP risk assessment information template (RAIT) covering the
$ = \sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{i=1}^{n} \sum$
(500 characters max.)
Flood Risk Economic Assessments conducted for the City indicates a clear need to improve the perimeter ring dike protections for the City. Upgrading 49 kilometres of dike to accommodate climate change induced sea level rise will be performed over the next 25 years in alignment with current sea level rise predictions. The City of Richmond has identified the Steveston Island Flood Mitigation Planning Project as a priority project.
3)
a) Copy(ies) of the valid flood map(s) covering the geographic area related to this proposed project.
Was a copy of all valid/current maps provided?
Yes, Previously - File #: Yes, Attached
b) Description/Summary
Provide a description/summary of your valid/current map(s). Richmond's primary line of defense against flooding during freshet events or tidal surges is the existing perimeter diking system. As the elevation of Lulu Island is generally below high water , the area would be flooded without this system during extreme events. The estimated economic damage from an event similar to the 1894 Fraser River flood is \$7.1 billion.
 Describe how the information in your risk assessment(s) and flood map(s) provide(s) a rationale/justification for completing this mitigation activity.
Increasing mitigation planning is in direct response to climate change induced sea level rise and increasing rainfall intensity. Flooding is a primary risk for the City of Richmond and maintaining a high level of flood protection is the primary goal of this project. Approximately 220,000 people, \$50 billion in assets, and a high value of economic activity are protected by the City's flood protection system and the Steveston Island Flood Mitigation Planning Project is necessary for mitigation.
5) Project Output Attestation:
 a) All Stream 3 projects must produce a comprehensive mitigation plan and provide it to Public Safety Canada upon completion. b) This project will respect the applicable guidelines, standards and/or methodologies of the province/territory in which it is
being undertaken.
X I agree

D) Templates		
1. Budget Template	Add Template	Remove Template

Project Budget Revenues for Fiscal Year (April 1 - March 31)

2017 ⁻ **20**18

Project Title: Steveston Island Mitigation Planning

Government Funding: Cash (Municipal, provincial, territorial, and federal) (Note: For federal funding, please specify the federal government department)	Amount
City of Richmond	\$810,000.00
Federal Government	\$810,000.00
Subtotal – Cash	\$1,620,000.00
Government Funding: In-Kind (Municipal, provincial, territorial, and federal) (Note: For federal funding, please specify the federal government department)	Amount
Subtotal – In-Kind	\$0.00
Total Government Funding (subtotal of Cash + subtotal of In-Kind from municipal, provincial, territorial, and federal government sources)	\$1,620,000.00
Total <u>Federal Government</u> Funding (subtotal of Cash + subtotal of In-Kind from all federal government sources)	\$810,000.00
Proportion of Federal Government Contribution (Note: The maximum Federal Contribution is 50% for Provinces and 75% for Territories)	<u>50</u> %
Non-government Funding and other: Cash	Amount
Subtotal – Cash	\$0.00
Non-government Funding and other: In-Kind	Amount
Subtotal – In-Kind	\$0.00
Total Non-government Funding and other (subtotal of Cash + subtotal of In-Kind from non-government funding and other sources)	\$0.00
Total Government Funding (Total of government funding + total of non-government funding and other)	\$1,620,000.00

Cash: actual dollar value or revenues/funding received
 In-Kind: non-cash input which is given a cash value.

Project Budget Eligible Expenses for Fiscal Year (April 1 - March 31) 2017 ⁻ 2018

Project Title: Steveston Island Flood Mitigation Plan

			Eligible Expen	ditures: Cash	
Eligible Costs (i.e. Categories of work)	Details	Public Safety Canada Funding (NDMP Funds)	Other Government Funding	Non- Government Funding and Other	Total
Consultant Fees	Project Management	\$27,000.00	\$27,000.00		\$54,000.00
Professional Services Support	Geotechnical Investigation - Off-shore and on-shore investigation work, including bore holes, electronic CPTs, marine investigation activities	\$600,000.00	\$6 0 0,000.00		\$1,200,000.00
Professional Services	Field and Bathymetric	\$75,000.00	\$75,000.00		\$150,000.00
Professional Services Support	Environmental Site Assessment - Phase 1 and Phase 2, including aquatic and wildlife habitat identification, at risk species identification and Environmental Protection Plan	\$30,000.00	\$30,000.00		\$60,000.00
Consultant Fees	Environmental Permitting and Monitoring (for investigative work)	\$60,000.00	\$60,000.00		\$120,000.00
Consultant Fees	Archaeological Permitting and Monitoring (for investigative work)	\$15,500.00	\$15,500.00		\$31,000.00
Professional services support	For building a business case	\$2,500.00	\$2,500.00		\$5,000.00
	Subtotal – Cash	\$810,000.00	\$810,000.00	\$0.00	\$1,620,000.00
			Eligible Expend	litures: In-Kind	
Eligible Costs (i.e. Categories of work)	Details	Public Safety Canada Funding (NDMP Funds)	Other Government Funding	Non- Government Funding and Other	Total
					\$0.00
	Subtotal – In-Kind	\$0.00	\$0.00	\$0.00	\$0.00
(Subtotal of Ca	Total Expenditures: sh + subtotal of In-Kind)	\$810,000.00	\$810,000.00	\$0.00	\$1,620,000.00

CNCL - 210

List: Eligible Costs

#	Eligible Costs
1	New research and data collection.
2	Flood mapping and forecasting.
3	Flood resistant construction techniques.
4	Hazard mapping and forecasting.
5	Professional services support
6	Purchase of equipment used to undertake mitigation and/or support the implementation of permanent structural mitigation measures
7	Building community partnerships for the purpose of disaster risk reduction.
8	Consultant fees.
9	Hazard, impact, risk, vulnerability and assessments.
10	Development of disaster mitigation plans.
11	Public awareness and education.
12	Building standards and enforcement.
13	Non-structural retrofitting.
14	Land use planning controls.
15	Planning and feasibility activities for structural mitigation investments
16	Land purchases
17	Non-structural measures that will enhance proactive whole-of-community flood mitigation measures and resilience to associated hazards and risks
18	Small-scale structural flood mitigation measures
19	Construction of new permanent structural measures designated to mitigate the impacts of flooding
20	Improvement or modernization of existing permanent structural measures.
21	Post-flood finishing costs for measures undertaken within the eligible period.
22	Measures taken to protect primary residences only.
23	Other permanent structural flood mitigation measures and costs related to post-flood finishing measures
24	Exceptional salary costs, benefits and incidentals.
25	Exceptional administrative costs.
26	Materials.
27	Facilities.
28	Exceptional transportation costs.
29	Other incurred costs that are directly attributed to the implementation of permanent structural and non- structural flood mitigation measures.

List: Ineligible Costs

#	Ineligible Costs
1	Costs relating to events and equipment which are considered to be the routine responsibility of provincial ministries or first responder agencies such as police, fire and ambulance.
2	Ongoing operating and maintenance costs for NDMP initiatives following completion of the project.
3	The value assigned to data that was procured or collected prior to the establishment of the project Contribution Agreement.
4	Administrative costs which are not directly related to a specific NDMP project. Each recipient is expected to absorb the routine costs of doing business. Examples such as regular salaries and benefits, audit costs, office furniture, equipment, office supplies, committee work, administration and supervision of NDMP, are not to be cost-shared. It is recognized that certain proposals incur extraordinary administrative expenses, which are incremental to the routine costs of providing government services; these expenses can be considered for cost-sharing and shall be clearly identified in detail at the proposal stage.
5	Hospitality costs.
6	Mitigation project that would yield only temporary measures (e.g., use of sandbags).
7	Mitigation projects that would create ongoing need for funds from the federal government or from its recipient that cannot be absorbed in their current budget.
8	Any expenditures related to a project already started prior to application for funding and prior to approval.
9	Any expenditures related to a project already started prior toDamages and interests resulting from any action or omission causing harm to a third party for which the Recipient is held civilly liable by a Court and has to pay; or fines under any municipal, provincial, territorial or federal legislation resulting from a transgression by the Recipient, or any amount resulting from any settlement entered into by the Recipient, or imposed by a Court, including an Arbiter, to the Recipient in relation with the funded NDMP project. application for funding and prior to approval.
10	Taxes other than the PST or provincial part of the HST.
11	Projects that address needs that are not related to prevention/mitigation.
12	Costs reimbursed under another Government of Canada program.

2) Work Plan Template

Activities	Tasks	Deliverable(s)/ Product(s)	Resources	Timelines (Start and End Dates)	Considerations/ Comments
KRI S ^a Rom Sidowendorn	Draft and release and award RFP	NI P	Staff	Shart Date: 01/01/2011	Staff will be pre-draft RFP for public tender
maxim Mitogation Planning Project		ale in		End Date: 20.0212017	
Geotestanikal	Off-shore and on- shore investigation work, including bore holes, electronic CPTs, marine investigation activities	Hincludes mistimum of 3 detailed set holes (10m to 20m depth) for every 300 lineal meters of new dike construction tast holes will be across the dike cross-section at these intervals - Additional test holes at specialized atructures such as flood gates and pump house structures	Consultant - Solid or hollow stem auger techniques for on- shore holes - mud-rotany techniques for off- shore holes - on-shore CPT locations will use a track-mounted drill rig - marine CPT locations will use a drill rig stationed on a floating or jack-up barge platform	Shan Dute 19/07/2015 End Date: 20/02/2019	 In-water drilling to be complete between July 16 and February 28, this is least risk for the Fraser River Estuary for the protection of fish Site preparation on- shore and drilling to be complete between August 18 and March 18, to prevent disturbance of bird nests
Fields and Barnymetric Scawey	Survey	 Freid survey for on- shore ereas Bathymetrik survey for off-shore ereas 	Consultant - off-shore survey requires motorized boat using a side- scan sonar to determine bottom profiling	Scart Dune: 01/02/2017 End Dane 3/0/02//2017	Nàome
Empliconmential Silie Assessument	Phase 1 and Phase 2, including aquatic and wildlife habitat identification, at risk species identification and Environmental Protection Plan	-Phase 1 - Desktop study to determine the potential for sold and/or groundwater containuration within the properted dike bootprint - Phase 2 - includes field investigation sampling and lesting	Consultant	Source Chanas: CONVOL2/200172 Evrust Channe SCONOCOL200172	 Phase 2 is dependent upon results of Phase 1 At-risk wildlife species survey should be conducted during active breeding season (early spring, but dependent upon weather) At-risk plant species should occur during growing season (March to September, but dependent upon weather)
Environmental Permissing and Monisoring	For inwestigative work	 Idensification of documented fisherins resources and aquatic habitats, wildlife and wildlife habitat and species at risk within gestechnical investigation footsigation 	Consultant	Shant Dune Int/02/20113 End Dane SC/Oni/20112	None

Archaeological Permitting and Monitoring	For investigative work	Archaeological evenview assessment (AOA) that includes desktop assessment of the project area and undertake preliminary field recommission fine project area and undertake preliminary field recommission f	Consultant	Shart Date 01/02/2017 End Date 00/00/2017	- complete prior to conduction geotechnical investigation activities
Report	Results of studies	Erant Steveston Island Flood Moigacion Planning: report Review and final approxial	Staff Consultants Council	Skart Dane 01/11/2017 Envel Dane 31/01/2018	Staff to review and comment; City Council to finalize and accept
Schalang	Provide report to NDMP	Sarweston Island Flood Mingation Planning report	Staff Federal Government	Shart Date 01/00/2013 Find Date 31/02/2015	For sharing of knowledge and best practices in flood planning and mitigation

3) Stakeholder Template

Notes:

- a) Identify all stakeholders/partnerships and describe their current and/or potential level of engagement, as applicable.
- b) Identify those stakeholders/partners who have committed, in-cash or in-kind, support for the proposed project.
- c) Provide a description/summary of the stakeholder list, and how this information provides a rationale/justification for implementing this mitigation activity.

			Financial Support		
Name of Stakeholder	Title, Organization Level of Engagement/Commitment (current and/or potential in the future)	In-Kind Contribution (Name of Items)	Value of In-Kind Contribution (\$)	In-Cash (\$)	
	Steveston 20/20		N/A	\$0.00	\$0.0
	Provincial Inspector of Dikes		N/A	\$0.00	\$0.0
	Steveston Harbour Authority		N/A	\$0.00	\$O.C
	Department of Fisheries and Oceans		N/A	\$0.00	\$0.0
	Port Metro Vancouver		N/A	\$0.00	\$0.0
	Provincial Land Tenure Department		N/A	\$0.00	\$0.0
	The City's Advisory Committee for the Environment		N/A	\$0.00	\$0.0
	The City's Heritage Commission		N/A	\$0.00	\$0.0
	The Urban Development Institute		N/A	\$0.00	\$O.C

Key stakeholders generally favoured the creation of a new dike alignment on Steveston Island based on minimizing community disruption and maximizing scope for long-term dike upgrades. The Steveston Island dike alignment is consistent with long term habour improvements proposed by the Steveston Harbour Authority.

ATTACHMENT 3

National Disaster Mitigation Program

Project Proposal Form

A) Applicant Contact Information

i) Province/Territory

Note: If more than one province/territory is involved in this proposed project, please identify the province/territory that will be leading this project.

1) Name:	1) Name: 2) Title:					
2) Organization (i.e. Dro	Ince of British Columbia					5) Facsimile Number
Emorgonov Management	RC (EMRC)				5	(604) 586-4334
Chergency Management			[(004) 30	0-4390		(004) 500-4354
embefloodprotection@ac	iv hc ca					n Date (dd/min/yyyy).
			-			
ii) Original Applica	nt(s) (i.e. "the entity/	ies", if applica	able)			
1) Name:			2) Title:			
Denise Tambellini			Manage	r Intergovernme	ntal Relat	ions and Protocol Unit
3) Organization:			4) Telep	hone Number:		5) Facsimile Number:
City of Richmond			(604) 27	6-4349		(604) 276-4222
6) Email Address:						7) Date (dd/mm/yyyy):
dtambellini@richmond.ca	1	- 1				30/09/2016
B) Project Details an	d Attestations					
8) Project Stream				Stream 1: R	isk Asse	ssment(s)
Identify the NDMP Pr	oject Stream relative to	this project sub	mission.	Stream 2: F	lood Mar	pina
Note: Each project st	Note: Each project stream has different requirements and merit					
See Section C for sp	ecifics on each stream.				liuyauon	Flamming
					nvestmer Small Sca	ale Structural Mitigation
9) Project Title:						
Steveston Island Flood N	litigation Planning					
10) Project Timeline:						
a) Duration of Project:		b) Projected St	art Date	or proposed	c) Proje	ected End Date of proposed
Months:	Years:	project: (dd/	mm/yyyy	/)	proje	ect: (dd/mm/yyyy)
3	1	0	1/01/201	7		31/03/2018
11) Estimated Total Co	st of Project		a) Tota	of non-federal	costs:	\$810,000.00
(Please complete th	e Budget Template [Se	ection D]).	b) Tota	federal costs:		\$810,000.00
	0		c) Total Project cost (i.e. a + b): \$1		\$1,620,000.00	
12) Project Description	1		1			
a) Provide a brief de The Steveston Island studies evaluating va term barrier for pote geotechnical, enviro diking. Please see a Key study activities i	Scription of your proposes Flood Mitigation Plannin Prious options for flood printial flooding caused by conmental and archaeologic Ittached Risk Assessment	sed project. Ing is intended to rotection have be climate change ir cal as part of a fe its and engineeri	provide f een comp nduced se easibility l ng report	uture flood prote leted and Steve ea level rise. The evel assessment s for more detail	ction to t ston Islan scope of of Steve s.	he City of Richmond. Previous Id has been identified as the long this project is identifying ston Island for the purpose of
Geotechnical Investigation (Off-shore and On-shore Investigation Work) Field and Bathymetric Survey						

Phase 1 and Phase 2 Environmental Site Assessment

b) Describe how this project addresses one or more high risk communities and/or a flood mapping activity. Note: b) is not applicable for Stream 1: Risk Assessment(s). Risk Assessments will help identify areas that may be at risk, as well as help to determine the level of risk.

(Please provide your responses in bullet form.)

The City of Richmond is at the forefront of flood protection in the Province of BC as the entire community is contained within the floodplain of the Fraser River, below historic high water levels and subject to freshet events, tidal flood events and internal drainage challenges. Richmond is approximately 1m above mean sea level and protected by 49 km of dike. Climate change scientists estimate that sea level will rise approximately 1 m over the next 100 years. Combined with 0.2 m of subsidence that is expected in that same time period, Richmond will be required to raise and build new dikes to meet future water levels. This project addresses the flood mitigation planning required to make more informed planning decisions for the citizens and businesses that call Richmond home.

Disaster mitigation is essential to protect not only residents, farms and businesses, but municipal, Provincial and Federal infrastructure. On land, this includes Highway 99 which is the main thoroughfare connecting the 15 freeway from Seattle to Vancouver and Vancouver International Airport (YVR). On water, Richmond is along a major shipping route to the port terminals along the Fraser River. Other risks to Richmond include toxic spills along the Fraser River, train and aircraft accidents as Richmond is home to YVR. Partners that may be impacted without disaster mitigation infrastructure from this project include YVR, Transport Canada, BC Ministry of Transportation and Infrastructure and others.

Approximately 220,000 people, \$50 billion worth of assets and over 13,000 businesses that employ 140,000 people call Richmond home. The rapidly growing City Centre has over 4,000 businesses, total commercial space of almost 10 million ft2 and over 30,000 employees. The City Centre population is anticipated to increase by 30,000 residents in the next 10 years. Without this disaster mitigation planning as delivered under the Flood Mitigation Strategy Update, the impact on human lives and Canada's economy that would result from a flood disaster is tremendous and cannot be quantified.

13)

a) H	ow will this project benefit the defined geographica	l area and t	he surrounding	communities?
(F	lease provide your response in bullet-form.)			

-	The existing perimeter diking system was originally constructed t	o the provincial design standards	and levels to wi	ithstand the				
ן ר	1:200 period storm surge and the 1894 Flaser River lood profile. Significant diking improvements will be required over the next							
2	approximately 1 m over the next 100 years due to climate change. The increasing sea level will increase the probability of							
ir	approximately i mover the next roo years due to climate change, the increasing sea level will increase the probability of inundation if Richmond does not improve the height of its dikes in keeping with sea level rise. The Flood Mitigation Strategy							
Ï	Inducation in Richmond does not improve the height of its dires in reeping with sea level rise. The Flood Milligation Strategy Lindate addresses these issues							
_	Climate change science also indicates that storms will become n	nore intense in the coming decade	s. As such, dra	ainage system				
С	apacity must be improved to accommodate the storms of tomor	row. If the pump station capacity p	projects are not	completed.				
fl	ooding from rainfall events will become more common and will ca	ause significantly more property da	mage. The mit	igation				
p	lanning upgrade and subsequent improvement of the City's drair	hage pump stations that are part o	f the Flood Miti	gation				
Ś	trategy Update are critical to the protection of lives, essential for	the maintenance and safeguarding	g of a communi	ity, and				
С	onsistent with the goal and guiding principles of the National Disa	ster Mitigation Strategy.		5				
-	Upgrading the flood protection offered by the perimeter dike gen	erally takes the form of increasing	dike height and	d increasing				
d	ike strength. Improving pumping capacity to deal with water behi	nd the dike from seepage or rainfa	all events is also	o an essential				
р	art of the perimeter dike system. Upgrading 49 kilometres of dik	e cannot be done instantly but get	ting it done as	quickly as				
р	ossible is a priority for the City of Richmond and essential to redu	icing the flood risk in Richmond.						
b) Were surrounding communities informed of this projected pro	oposal? 🛛 🕅 Yes	No					
. C	Comments:							
T	he City of Richmond, Metro Vancouver (including Richmond) and	the Musqueam Indian Band						
1 4) 6	ffeeted Community/ice)							
14) A	mected Community(les)							
۸	lotes: a) Identify all communities that are affected by this proje	ct.						
	b) Indicate the population of all identified communities.							
	c) Indicate if each identified community has been engaged in relation to this proposed project (E); and							
	d) indicate if each identified community has committed to	support this proposed project (
N	lame:	Population:	<u>(E)</u>	(C)				
C	City of Richmond	220,000						
N	lame:	Population:	(E)	(C)				
٨	Aetro Vancouver (including Richmond)	2,464,000						

Niecza		Deputation	/٣)	(0)		
Name:		Population:	(E)	(C)		
Musqueam India	in Band	1,500		Ä		
(please provide	oject contribute to the following? your responses in bullet-form)					
a) Reducing imp (i.e. Describe,	bacts of disasters on Canadians? in bullet form, how the proposed mitigation project	t will reduce or negate the impact a	nd/or likelihood	of disasters)		
 1:200 period sto 25 years to mair approximately 1 inundation if Ric Update which in Climate chang capacity must b flooding from rai planning upgrad Strategy Update consistent with 1 b) Reducing disa Building and pla (Richmond). c) Reducing risk There are \$50 b 	 The existing perimeter diking system was originally constructed to the provincial design standards and levels to withstand the 1:200 period storm surge and the 1894 Fraser River flood profile. Significant diking improvements will be required over the next 25 years to maintain the current level of flood protection and meet provincial standards. Sea levels are expected to rise approximately 1 m over the next 100 years due to climate change . The increasing sea levels will increase the probability of inundation if Richmond does not improve the height of its dikes in keeping with sea level rise. The Flood Mitigation Strategy Update which includes the Dike Master Plan Phase 3 and the Flood Management Strategy Update addresses these issues. Climate change science also indicates that storms will become more intense in the coming decades. As such, drainage system capacity must be improved to accommodate the storms of tomorrow. If the pump station capacity projects are not completed, flooding from rainfall events will become more common and will cause significantly more property damage. The mitigation planning upgrade and subsequent improvement of the City's drainage pump stations that are part of the Flood Mitigation Strategy Update are critical to the protection of lives, essential for the maintenance and safeguarding of a community, and consistent with the goal and guiding principles of the National Disaster Mitigation Strategy. b) Reducing disaster related financial liabilities for all levels of government? Building and planning a long-term diking and flood mitigation solution will protect \$50 billion worth of assets on Lulu Island (Richmond). c) Reducing risk, developing capacity and/or enhancing resilience? 					
16) Prioritized List a) Provide your	of all project proposals in this Project Stream: prioritized list of all proposed projects (E.g. #1 e	equals the highest priority project	, #2			
equals the se	econd highest priority, etc.)					
Number:	Project Title:					
1	Steveston Island Flood Mitigation Planning					
Number:	Project Title:					
2	Flood Mitigation Strategy Update					
b) Indicate the	priority ranking of this proposed project. #:	2				
 17) Provide a rationale/justification for implementing this mitigation activity instead of the other mitigation projects on the prioritized project list. (500 characters max.) Richmond's 2008-2031 Richmond Flood Protection Strategy identified the need to "Prepare and implement a comprehensive dike improvement program." Upgrading 49 kilometres of dike cannot be done instantly but getting it done as quickly as possible is a priority for the City of Richmond and essential to reducing the flood risk in Richmond. The City of Richmond has identified the Flood Mitigation Strategy as a priority project. 						
 18) Work Plan: The proposed project's work plan should clearly articulate all activities (i.e. tasks, deliverables, resources, timelines, etc.) for which the financial contribution is being requested for each fiscal year. The work plan should include all products, methods, information materials, protocols, agreements, etc. that will be created to support the completion of this proposed project. 						
Please complet	Please complete the Work Plan Template (Section D).					
 19) Stakeholders: a) Identify all stakeholders/partnerships and describe their current and/or potential level of engagement, as applicable. b) Identify those stakeholders/partners who have committed support, either in-cash or in-kind, for the proposed project. c) Provide a description/summary of the stakeholder list, and how this information provides a rationale/justification for implementing this mitigation activity. 						
Please provide	your answers in the Stakeholders Template (Se	ection D).		· · · · · · · · · · · · · · · · · · ·		
20) Project Implem	entation Risks (Please provide your response ir	n bullet-form):				

a) Identify any project implementation risks that may impact your ability to deliver the project as planned/scheduled

None.

- b) Outline the mitigation measures that you will take to minimize and/or address your project's implementation risks - Engage a consultant to full-time project manage the scope of the Flood Mitigation Strategy Update
- Hold weekly conference calls between the City and the consultant to ensure targets and major milestones are met
- Hold monthly meetings between the City and consultant to manage performance

21) Monitoring and Performance Management (Please provide your response in bullet-form):

Describe the internal measures that you will implement to monitor your project and manage performance.

- Engage a consultant to full-time project manage the scope of the Flood Mitigation Strategy Update
- Hold weekly conference calls between the City and the consultant to ensure targets and major milestones are met
- Hold monthly meetings between the City and consultant to manage performance

22) Official Languages

In order to support Public Safety Canada's obligations under Part VII of the Official Languages Act, the applicant must indicate whether the needs of official language minority communities were considered, where appropriate (such as for stakeholder engagement activities)

a) Have the needs of official language minority communities been considered?

🛛 Yes 📃 No

b) What will the (lead) province or territory do to address official languages requirements for linguistic minorities, as per the Official Languages Act, with respect to this project?

All needs and considerations of official language minority communities have been addressed as part of the project's ongoing community stakeholder consultations.

Project Attestations

23) The province or territory responsible for the implementation of this project agrees to share information with the government of Canada, including risk information/data, including the completed risk assessment information templa flood maps and associated data, based on the criteria established by PS, for inclusion in a national flood database; all other relevant project information, such as lessons learned.	ate; and
24) The province or territory responsible for the implementation of this project agrees to report, in accordance with its contribution agreement, on topics such as the project implementation status, measures for successful implementat project risk mitigation measures, and financial expenditures.	ion,
X I agree	
25) The province or territory responsible for the implementation of this project agrees to publicly recognize the federal government's contribution in any announcement	
X I agree	
26) The province or territory responsible for the implementation of this project agrees to ensure that it takes all necessa steps to prevent the risk of conflicts of interest, including:	ry
 Disclosure of any apparent, actual or potential conflict of interest in compliance with Canada or the Province's laws, regulations or policies, as the case may be, and disclosure of the involvement of any former public servants or public office holders subject to the Values and Ethics Code for the Public Sector, the Conflict of Interest Act, and the conditi of the Parliament of Canada Act; 	ons
 Registrant as lobbyists as required under the Lobbying Act (applicants shall provide assurance that, where lobbyists a utilized, they are registered in accordance with the Lobbying Act and that no actual or potential conflict of interest exi nor any contingency fee arrangement); 	are sts
 Role of any Government of Canada official, if a Government of Canada official is to participate on an advisory commit or board. Such involvement must not be seen to be exercising control on the committee or board on the use of funds 	tee
X I agree	
27) NDMP contributions may be provided for the following types of mitigation projects:	
 a) new projects or existing projects that have been developed but have not been identified for funding; and b) non-structural or small scale structural projects. 	
Does your proposed NDMP meet this description? Xes No	

C) Additional Required Information for Each NDMP Stream (1-4)

Stream 3: Mitigation Planning		
1) Was a copy of your completed and up-t geographic area related to this propose	o-date NDMP risk assessme d project provided to PS?	ent information template (RAIT) covering the
Yes, Previously - File #:	Yes, Attached	No
2) Description/Summary of your risk asses (500 characters max.)	sment findings.	
Flood Risk Economic Assessments cond for the City. Upgrading 49 kilometres to a in alignment with current sea level rise pro project.	ucted for the City indicates a c ccommodate for climate chan edictions. The City of Richmor	clear need to improve the perimeter ring dike protections nge sea level rise will be performed over the next 25 years nd has identified the Flood Mitigation Strategy as a priority
3) a) Copy(ies) of the valid flood map(s) co	vering the geographic area re	elated to this proposed project.
Was a copy of all valid/current maps pro	ovided?	
Yes, Previously - File #:	Yes, Attached	No
b) Description/Summary		
Provide a description/summary of your Richmond's primary line of defense again As the elevation of Lulu Island is generally events. The estimated economic damage	valid/current map(s). ist flooding during freshet ever v below high water , the area v e from an event similar to the 1	nts or tidal surges is the existing perimeter diking system. vould be flooded without this system during extreme 894 Fraser River flood is \$7.1 billion.
4) Describe how the information in your ris completing this mitigation activity.	k assessment(s) and flood r	nap(s) provide(s) a rationale/justification for
Increasing mitigation planning is in direct Flooding is a primary risk for the City of R program. Approximately 220,000 people flood protection system and the Flood Mi	response to climate change in ichmond and maintaining a hig e, \$50 billion in assets, and a h tigation Strategy Update is ne	duced sea level rise and increasing rainfall intensity. gh level of flood protection is the primary goal of this igh value of economic activity are protected by the City's cessary for mitigation.
5) Project Output Attestation:		
 a) All Stream 3 projects must produce a completion. b) This project will respect the applicable being undertaken. 	comprehensive mitigation p le guidelines, standards and/	lan and provide it to Public Safety Canada upon or methodologies of the province/territory in which it is

D) Templates

1. Budget Template

Add Template

Remove Template

Project Budget Revenues for Fiscal Year (April 1 - March 31) 2017 - 2018

Project Title: Flood Mitigation Strategy Update

Government Funding: Cash	
(Note: For federal funding, please specify the federal government department)	Amount
City of Richmond	\$250,000.00
Federal Government	\$250,000.00
Subtotal – Cash	\$500,000.00
Government Funding: In-Kind (Municipal, provincial, territorial, and federal) (Note: For federal funding, please specify the federal government department)	Amount
Subtotal – In-Kind	\$0.00
Total Government Funding (subtotal of Cash + subtotal of In-Kind from municipal, provincial, territorial, and federal government sources)	\$500,000.00
Total <u>Federal Government</u> Funding (subtotal of Cash + subtotal of In-Kind from all federal government sources)	\$250,000.00
Proportion of Federal Government Contribution (Note: The maximum Federal Contribution is 50% for Provinces and 75% for Territories)	<u>50</u> %
Non-government Funding and other: Cash	Amount
Subtotal – Cash	\$0.00
Non-government Funding and other: In-Kind	Amount
Subtotal – In-Kind	\$0.00
Total Non-government Funding and other (subtotal of Cash + subtotal of In-Kind from non-government funding and other sources)	\$0.00
Total Government Funding (Total of government funding + total of non-government funding and other)	\$500,000.00

Cash: actual dollar value or revenues/funding received
 In-Kind: non-cash input which is given a cash value.

Project Budget Eligible Expenses for Fiscal Year (April 1 - March 31) 2017 ⁻ 2018

Project Title: Flood Mitigation Strategy Update

		Eligible Expenditures: Cash				
Eligible Costs (i.e. Categories of work)	Details	Public Safety Canada Funding (NDMP Funds)	Other Government Funding	Non- Government Funding and Other	Total	
Consultant Fees	Dike Master Plan Phase 3	\$100,000.00	\$100,000.00		\$200,000.00	
Consultant Fees	Sultant Fees Pump Station Condition Assessment Update		\$75,000.00		\$150,000.00	
Consultant Fees	Flood Management Strategy Update	\$72,500.00	\$72,500.0 0		\$145,000.00	
Professional Services Support	Building a business case	\$2,500.00	\$ 2 ,500.0 0		\$5,000.00	
	Subtotal – Cash	\$250,0 0 0.00	\$250,000.00	\$0.00	\$500,000.00	
		Eligible Expenditures: In-Kind				
Eligible Costs (i.e. Categories of work)	Details	Public Safety Canada Funding (NDMP Funds)	Other Government Funding	Non- Government Funding and Other	Total	
					\$0.00	
	Subtotal – In-Kind	\$0.00	\$0.00	\$0,00	\$0.00	
(Subtotal of Ca	Total Expenditures: sh + subtotal of In-Kind)	\$250,000.00	\$250,000.00	\$0.00	\$500,000.00	

1) Cash: actual dollar value or revenues/funding received

2) In-Kind: non-cash input which is given a cash value.

List: Eligible Costs

#	Eligible Costs			
1	New research and data collection.			
2	Flood mapping and forecasting.			
3	Flood resistant construction techniques.			
4	Hazard mapping and forecasting.			
5	Professional services support			
6	Purchase of equipment used to undertake mitigation and/or support the implementation of permanent structural mitigation measures			
7	Building community partnerships for the purpose of disaster risk reduction.			
8	Consultant fees.			
9	Hazard, impact, risk, vulnerability and assessments.			
10	Development of disaster mitigation plans.			
11	Public awareness and education.			
12	Building standards and enforcement.			
13	Non-structural retrofitting.			
14	Land use planning controls.			
15	Planning and feasibility activities for structural mitigation investments			
16	Land purchases			
17	Non-structural measures that will enhance proactive whole-of-community flood mitigation measures and resilience to associated hazards and risks			
18	Small-scale structural flood mitigation measures			
19	Construction of new permanent structural measures designated to mitigate the impacts of flooding			
20	Improvement or modernization of existing permanent structural measures.			
21	Post-flood finishing costs for measures undertaken within the eligible period.			
22	Measures taken to protect primary residences only.			
23	Other permanent structural flood mitigation measures and costs related to post-flood finishing measures			
24	Exceptional salary costs, benefits and incidentals.			
25	Exceptional administrative costs.			
26	Materials.			
27	Facilities.			
28	Exceptional transportation costs.			
29	Other incurred costs that are directly attributed to the implementation of permanent structural and non- structural flood mitigation measures.			

List: Ineligible Costs

#	Ineligible Costs
1	Costs relating to events and equipment which are considered to be the routine responsibility of provincial ministries or first responder agencies such as police, fire and ambulance.
2	Ongoing operating and maintenance costs for NDMP initiatives following completion of the project.
3	The value assigned to data that was procured or collected prior to the establishment of the project Contribution Agreement.
4	Administrative costs which are not directly related to a specific NDMP project. Each recipient is expected to absorb the routine costs of doing business. Examples such as regular salaries and benefits, audit costs, office furniture, equipment, office supplies, committee work, administration and supervision of NDMP, are not to be cost-shared. It is recognized that certain proposals incur extraordinary administrative expenses, which are incremental to the routine costs of providing government services; these expenses can be considered for cost-sharing and shall be clearly identified in detail at the proposal stage.
5	Hospitality costs.
6	Mitigation project that would yield only temporary measures (e.g., use of sandbags).
7	Mitigation projects that would create ongoing need for funds from the federal government or from its recipient that cannot be absorbed in their current budget.
8	Any expenditures related to a project already started prior to application for funding and prior to approval.
9	Any expenditures related to a project already started prior toDamages and interests resulting from any action or omission causing harm to a third party for which the Recipient is held civilly liable by a Court and has to pay; or fines under any municipal, provincial, territorial or federal legislation resulting from a transgression by the Recipient, or any amount resulting from any settlement entered into by the Recipient, or imposed by a Court, including an Arbiter, to the Recipient in relation with the funded NDMP project. application for funding and prior to approval.
10	Taxes other than the PST or provincial part of the HST.
11	Projects that address needs that are not related to prevention/mitigation.
12	Costs reimbursed under another Government of Canada program.

2) Work Plan Template

Activities	Tasks	Definierable(s)/ Product(s)	Resources	Timelines (Start and End Dates)	Considerations/ Comments	
Rol P* for Hood Megarian Strategy Update	Draft and release RFPs for each update: Dike Master Plan Phase 3, Pump Station Condition Assessment Update, and Flood Management Strategy Update	All phy.	Staff	Start Data: .01/01/2017	Ins. Staff will be pre-draft N/01/2017 RFPs for public tenders	
				End Georg 3(3/03/2015)		
REP Award	Submission review	Asvanded contract based on response to public lenders	Staff	Start Date: 31/01/2017	Assumes funding approvals in place	
				2/45 Clase 2/8/02/2017		
Seadles	Dike Master Plan Phase 3: Flood Management Strategy Update; and Pump Station Condition Assessment Update	Respective studies for Hood Mitigeson Strategy Update	Staff Consultants	Start Data 01/03/2017	Nuome	
				Trid Deta 31/10/2017		
Report	Results of studies	Draft Flood Mitigation Strategy Update report review and final approval	Staff Consultants Council	Start Date 01/11/2017	Staff to review and comment; City Council to finalize and accept	
				End Date: 31/01/2018		
Silhariing	Provide report to NDMP	Rood Misigation Scrategy Update report	Staff Federal Government	Toes Date: 01/02/2018	For sharing of knowledge and best practices in	
				End Care 31/03/2016	mbigation	

3) Stakeholder Template

Notes:

- a) Identify all stakeholders/partnerships and describe their current and/or potential level of engagement, as applicable.
- b) Identify those stakeholders/partners who have committed, in-cash or in-kind, support for the proposed project.
- c) Provide a description/summary of the stakeholder list, and how this information provides a rationale/justification for implementing this mitigation activity.

Name of Stakeholder	Title, Organization	Level of Engagement/Commitment (current and/or potential in the future)	Financial Support		
			In-Kind Contribution (Name of Items)	Value of In-Kind Contribution (\$)	In-Cash (\$)
City of Richmond	City of Richmond		N/A	\$0.00	\$250,000.00
Metro Vancouver	Metro Vancouver		N/A	\$0.00	\$0.00
Musqueam Indian Band	Musqueam Indian Band		N/A	\$0.00	\$0.00

Part 2: Description/Summary

How does the engagement of these stakeholders support and/or justify the implementation of this mitigation activity?

Approximately 220,000 people and over 13,000 businesses that employ 140,000 people call Richmond home. The rapidly growing City Centre has over 4,000 businesses, total commercial space of almost 10 million ft2 and over 30,000 employees. The City Centre population is anticipated to increase by 30,000 residents in the next 10 years. Without this disaster mitigation planning as delivered under the Flood Mitigation Strategy Update, the impact on human lives and Canada's economy that would result from a flood disaster is tremendous and cannot be quantified.