

## ADVICE TO MINISTER

### CONFIDENTIAL ISSUES NOTE

Ministry of Transportation and Infrastructure  
Date: February 12, 2016

Minister Responsible: Todd Stone

# Budget 2016/17 and Service Plan

#### ADVICE AND RECOMMENDED RESPONSE:

- Continued investment in our infrastructure contributes to a strong economy, a secure tomorrow and a lasting legacy for future generations of British Columbians.
- The Province has kept its fiscal house in order, and this enables us to continue our strategic investments in transportation infrastructure.
- BC on the Move, our 10 year transportation plan ensures the province's transportation network is safe, efficient and reliable.
- Over the next three years the ministry and its partners are investing \$3.4 billion in priority transportation investments.
- We are also investing to provide an effective emergency management system and to continue improving B.C.'s emergency preparedness.

#### Key Infrastructure

- B.C.'s economy relies on efficient and reliable transportation infrastructure.
- Since 2001, the BC government and its partners have invested over \$18 billion in transportation infrastructure to improve the quality of life for families and strengthen our economy.
- We've made unparalleled investments in road infrastructure, transit, bridges, ports and airports across the province to improve the safe and efficient movement of goods and people.
- Moving forward, we continue to make essential transportation investments across the Province to meet growing demand, ease congestion and support economic growth.
- With the Lower Mainland's population expected to grow by a million people over the next three decades, our infrastructure must be ready. That's why we are moving to fix B.C.'s worst traffic bottleneck by replacing the George Massey Tunnel with a new bridge.
- Over the next three years, the ministry will be making the following priority investments throughout the province:
  - \$638 million in road rehabilitation
  - \$270 million for side road improvements
  - \$60 million to upgrade natural gas roads to ensure safe, reliable year round access to resource areas.
  - \$206 million for Highway 1 between Kamloops and the Alberta Border
  - \$116 million for the Okanagan Valley Corridor
  - \$115 million for the Cariboo Connector
  - \$621 million in major highway corridors and roads
  - \$451 million in transit infrastructure

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- B.C. continues to work with the federal government, and other partners to secure the additional funding needed to support our transportation investments.

### Pacific Gateway

- Our plan continues to support the goals of the “*Canada Starts Here – the BC Jobs Plan*,” which calls for expanding markets for B.C. products, particularly in Asia and strengthening our infrastructure to get goods to market.
- Since 2005, government and industry partners have committed \$22 billion to improve and expand port, rail, road and airport facilities.
- Looking ahead, our “*Pacific Gateway Transportation Strategy 2012-2020*” targets a further \$25 billion in total investment that will capitalize on our ideal location as a gateway to the Asia-Pacific.

### BC Ferries

- The Province’s vision is that coastal communities are connected in an affordable, efficient and sustainable manner.

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### Emergency Management

- Emergency Management BC (EMBC) continues to strive to be the leading organization in Canada for the management of emergencies and disasters at the provincial level.
- EMBC will conduct a full scale earthquake and tsunami response exercise in 2016.
- Over the next three years, we are investing \$95 million in support of emergency management and preparedness.

### KEY FACTS REGARDING THE ISSUE:

- The ministry’s three-year operating budget is
  - \$857.8 million for 2016/17
  - \$861.9 million for 2017/18
  - \$867.1 million for 2018/19
- *Budget 2016* continues the funding of the key capital projects throughout B.C. to ensure our transportation network is safe, efficient and reliable.
- The three-year total investment in infrastructure is \$3.4 billion, including:
  - \$1.2 billion for 2016/17
  - \$1.0 billion for 2017/18
  - \$1.2 billion for 2018/19

This includes \$670 million expected to be leveraged through federal cost-sharing and partnerships with private partners, local governments and other agencies.

Key areas with funding lifts over the next three years:

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## ADVICE TO MINISTER

- BC Transit - s.13,s.17  
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- Emergency Management BC - \$3.4 million

### Budget items of interest:

#### Highway 1 Monte Creek to Pritchard Project:

- For the first time, this project will show in the Budget 2016 table of capital expenditure projects greater than \$50 million. The estimated cost has risen from \$49 million to \$68.9 million due primarily to additional archeological work (realignment around sensitive areas as well as modified excavation and construction techniques).

#### ICBC's Transformation Program:

- As with any major, multi-year business transformation initiative, the individual projects within ICBC's Transformation Program - including the scope, and the budget allocated to each of these projects – are regularly reviewed, refined and audited. However, the overall project will be delivered within the \$400 million funding allocation.

#### George Massey Tunnel Improvement Project:

- Treasury Board will receive and review the final business case for the project and make a final decision on the estimated \$3.5 billion bridge. Once approved, the project will be included in the table of capital expenditure projects greater than \$50 million.

### Status of federal infrastructure funding:

- Through the new Building Canada Fund, B.C. will receive approximately \$1.09 billion from the federal government for infrastructure projects under the Provincial-Territorial Infrastructure Component (PTIC).
- Of the PTIC funding, \$109M federal (matched provincially for a total program fund of \$218M) is for the Small Communities Fund (SCF). During the initial SCF intake in 2015, 55 applications were approved with awards totalling over \$128 M.
- Currently, a second SCF intake is open until April 28, 2016. Approximately \$90M (fed/prov amount) remains to be committed.
- BC is actively working with the federal government, discussing shared priorities for projects under the National and Regional Projects component, funded by \$981M of federal PTIC funds. As part of this process, the province is engaging with larger communities about their infrastructure priorities. New projects will continue to be jointly identified and announced by the Province and Canada.
- We also working with the new federal government on important projects that reflect shared infrastructure priorities including Surrey Light Rail Transit and extending rapid transit service along Broadway.

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387-5798

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Minister's Office	Program Area	ADM/COO	Comm. Dir
	DS	NB	

## MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE

The mission of the Ministry of Transportation and Infrastructure is to create an integrated and safe transportation network that incorporates all modes of transport, reflects regional priorities, and provides a strong foundation for economic growth; to maintain and improve the provincial highway system, ensuring the safe and efficient movement of people and goods provincially, nationally, and internationally; and to lead the development and coordination of an effective emergency management system for British Columbia.

### MINISTRY SUMMARY

(\$000)

	Estimates 2015/16 <sup>1</sup>	Estimates 2016/17
<b>VOTED APPROPRIATIONS</b>		
Vote 43 — Ministry Operations.....	828,904	843,349
Vote 44 — <i>Emergency Program Act</i> .....	14,478	14,475
<b>OPERATING EXPENSES</b>	<u>843,382</u>	<u>857,824</u>
<b>CAPITAL EXPENDITURES <sup>2</sup></b>	5,274	4,072
<b>LOANS, INVESTMENTS AND OTHER REQUIREMENTS <sup>3</sup></b>	—	—
<b>REVENUE COLLECTED FOR, AND TRANSFERRED TO, OTHER ENTITIES <sup>4</sup></b>	—	—

#### NOTES

<sup>1</sup> For comparative purposes, figures shown for the 2015/16 operating expenses; capital expenditures; loans, investments and other requirements; and revenue collected for, and transferred to, other entities are restated to be consistent with the presentation of *2016/17 Estimates*. Schedule A presents a detailed reconciliation of the restatement of operating expenses and capital expenditures.

<sup>2</sup> Details of capital expenditures are presented in Schedule C.

<sup>3</sup> Details of loans, investments and other requirements are presented in Schedule D.

<sup>4</sup> Details of revenue collected for, and transferred to, other entities are presented in Schedule E.



## MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE

## SUMMARY BY CORE BUSINESS

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	2015/16	2016/17 ESTIMATES		
	Net	Gross	External Recoveries	Net
<b>OPERATING EXPENSES</b>				
<b>Core Business</b>				
Transportation and Infrastructure Improvements.....	11,765	913,719	(901,851)	11,868
Public Transportation.....	301,201	637,845	(336,167)	301,678
Highway Operations.....	480,061	609,211	(116,879)	492,332
Commercial Transportation Regulation.....	1,548	2,528	(976)	1,552
British Columbia Pavilion Corporation.....	9,022	9,099	—	9,099
Emergency Management BC.....	14,437	17,045	(2,006)	15,039
Executive and Support Services.....	10,870	13,167	(1,386)	11,781
<i>Emergency Program Act.....</i>	<i>14,478</i>	<i>14,476</i>	<i>(1)</i>	<i>14,475</i>
<b>TOTAL OPERATING EXPENSES.....</b>	<b>843,382</b>	<b>2,217,090</b>	<b>(1,359,266)</b>	<b>857,824</b>
<b>CAPITAL EXPENDITURES</b>				
	Net	Disbursements	Receipts	Net
<b>Core Business</b>				
Highway Operations.....	5,274	4,072	—	4,072
<b>TOTAL CAPITAL EXPENDITURES.....</b>	<b>5,274</b>	<b>4,072</b>	<b>—</b>	<b>4,072</b>

## MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE

## VOTED DESCRIPTIONS

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	Estimates 2015/16	Estimates 2016/17
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## VOTE 43 — MINISTRY OPERATIONS

This vote provides for the programs and operations described in the voted appropriations under the following core businesses: Transportation and Infrastructure Improvements, Public Transportation, Highway Operations, Commercial Transportation Regulation, British Columbia Pavilion Corporation, Emergency Management BC, and Executive and Support Services.

## TRANSPORTATION AND INFRASTRUCTURE IMPROVEMENTS

## Voted Appropriations

Transportation Policy and Programs.....	2,702	2,700
Transportation Investments.....	1	1
Partnerships.....	1	1
Port and Airport Development.....	7,851	7,951
Enhancing Economic Development.....	1,210	1,215
	<u>11,765</u>	<u>11,868</u>

**Voted Appropriations Description:** This sub-vote provides for Transportation Policy and Programs, Transportation Investments, Partnerships, Port and Airport Development, Pacific Gateway, and infrastructure development initiatives. Major activities include transportation, highway and corporate policy, service planning and performance measurement, writing services, the development of legislation, and highway planning; capital program development and monitoring; highway corridor investment strategies; quality management; access management; direction and management of projects; engineering, design, survey, construction, reconstruction, and property acquisition for provincial highways, roads, bridges, and tunnels; asset preservation, including roads and bridges; surfacing, rehabilitation, replacement, seismic retrofit, and safety improvements; rehabilitation of ferries and ferry landings; electrical installations and upgrades; minor roadwork; development and monitoring of public-private partnerships; land base and property management, including port and airport *Land Act* tenures; and managing funding to communities to build and improve infrastructure that contributes to their sustainable development. This sub-vote also provides for transfers to other parties such as local governments to support transportation and infrastructure initiatives such as port and airport development and cycling networks. Costs may be recovered from ministries, the BC Transportation Financing Authority and other Crown corporations, agencies, organizations, individuals, other levels of government, and private sector partners for services described within this sub-vote.

## PUBLIC TRANSPORTATION

## Voted Appropriations

Public Transit.....	107,186	107,663
Coastal Ferry Services.....	194,015	194,015
	<u>301,201</u>	<u>301,678</u>

**Voted Appropriations Description:** This sub-vote provides for annual government contributions and payments towards Public Transit and Coastal Ferry Services. These costs include operating transfers, grants, and payments toward expenses incurred for providing public passenger and transportation services in various communities throughout the province. This sub-vote also includes provincial investments in transit capital infrastructure and operating expenses. Costs may be recovered from ministries, the BC Transportation Financing Authority and other Crown corporations, agencies, organizations, individuals, other levels of government, and private sector partners for services described within this sub-vote.

## HIGHWAY OPERATIONS

## Voted Appropriations

Maintenance and Operations.....	445,751	458,004
Commercial Vehicle Safety and Enforcement.....	23,691	23,708
Inland Ferries.....	10,619	10,620
	<u>480,061</u>	<u>492,332</u>

**Voted Appropriations Description:** This sub-vote provides for Maintenance and Operations, Commercial Vehicle Safety and Enforcement, and Inland Ferries. Major activities include regional, district, and headquarters operations support; avalanche control; rock slope stabilization; traffic operations; development approvals; engineering; inspection station operations; the administration and enforcement of commercial transport road safety programs and vehicle inspection and standards programs, truck licensing programs, and assistance with the enforcement of commercial passenger transportation operations; payments to road and bridge maintenance contractors for the maintenance of highways, roads, bridge structures, and tunnels; payments to contractors for pavement marking, electrical maintenance, and performance payments; the operation and maintenance of inland ferries and terminals; and transfers to other parties such as local governments. Costs may be recovered from ministries, the BC Transportation Financing Authority and other Crown corporations, agencies, organizations, individuals, other levels of government, and private sector partners for services described within this sub-vote.

## MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE

VOTED DESCRIPTIONS  
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	Estimates 2015/16	Estimates 2016/17
<b>COMMERCIAL TRANSPORTATION REGULATION</b>		
<b>Voted Appropriations</b>		
Container Trucking Commissioner.....	1	1
Passenger Transportation Board.....	490	490
Passenger Transportation Branch.....	1,057	1,061
	<u>1,548</u>	<u>1,552</u>
<p><b>Voted Appropriations Description:</b> This sub-vote provides for the offices of the Container Trucking Commissioner, Passenger Transportation Board, and Passenger Transportation Branch. The Container Trucking Commissioner issues, audits, and enforces container trucking licences and oversees key drayage industry activities. The Passenger Transportation Board approves applications to operate inter-city buses and passenger-directed vehicles in British Columbia, and decides appeals on administrative sanctions imposed by the Registrar of Passenger Transportation. The Registrar of Passenger Transportation approves applications for those commercial passenger transportation operations, such as sightseeing buses and hotel and airport shuttles, which are not adjudicated by the Board. The Passenger Transportation Branch verifies safety requirements, conducts investigations, when required, and in cooperation with other programs and agencies, provides overall provincial coordination and direction for enforcement and compliance activities against both licensed and unlicensed operators. This sub-vote also provides for costs associated with the administration of Commercial Transportation legislation. Costs may be recovered from ministries, individuals, and parties external to government for services described within this sub-vote.</p>		
<b>BRITISH COLUMBIA PAVILION CORPORATION</b>		
<b>Voted Appropriation</b>		
British Columbia Pavilion Corporation.....	9,022	9,099
<p><b>Voted Appropriation Description:</b> This sub-vote provides for transfers to the British Columbia Pavilion Corporation.</p>		
<b>EMERGENCY MANAGEMENT BC</b>		
<b>Voted Appropriation</b>		
Emergency Management BC.....	14,437	15,039
<p><b>Voted Appropriation Description:</b> This sub-vote provides for program costs related to provincial emergency planning, preparedness, and mitigation activities, including flood, fire, and other hazard and disaster mitigation; assurance of critical infrastructure; promotion of emergency management capacity within British Columbian communities; and business continuity and integrated public safety planning readiness for response to emergencies. This sub-vote also provides for the Office of the Fire Commissioner, which implements fire safety regulations and activities, promotes fire safety, and assists major fire investigations and the response to major wildland urban interface fire emergencies. Costs may be recovered from ministries, Crown corporations, agencies, organizations, individuals, other levels of government, and private sector partners for services described within this sub-vote.</p>		
<b>EXECUTIVE AND SUPPORT SERVICES</b>		
<b>Voted Appropriations</b>		
Ministers' Offices.....	749	867
Corporate Services.....	10,121	10,914
	<u>10,870</u>	<u>11,781</u>
<p><b>Voted Appropriations Description:</b> This sub-vote provides for the offices of the Minister of Transportation and Infrastructure and the Minister of State for Emergency Preparedness, including salaries, benefits, allowances, and operating expenses for the ministers and the ministers' staff. This sub-vote also provides for the deputy ministers' offices, and services to support program delivery, including finance, administration, strategic human resources, information technology and management, oversight of Crown corporations, and facilities management. Costs may be recovered from ministries, the BC Transportation Financing Authority and other Crown corporations, agencies, organizations, individuals, other levels of government, and private sector partners for services described within this sub-vote.</p>		
<b>VOTE 43 — MINISTRY OPERATIONS</b>	<b>828,904</b>	<b>843,349</b>

## MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE

VOTED DESCRIPTIONS  
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	Estimates 2015/16	Estimates 2016/17
<b>VOTE 44 — EMERGENCY PROGRAM ACT</b>		
This vote provides for the programs and operations described in the voted appropriation under the following core business: <i>Emergency Program Act</i> .		
<b>EMERGENCY PROGRAM ACT</b>		
<b>Voted Appropriation</b>		
<i>Emergency Program Act</i> .....	14,478	14,475
<b>Voted Appropriation Description:</b> This sub-vote provides for operations and operational support described in the <i>Emergency Program Act</i> , including preparedness, response to and recovery from emergencies and disasters, and for hazard mitigation initiatives. This sub-vote allows for statutory appropriation under the <i>Emergency Program Act</i> . Costs may be recovered from ministries, agencies, organizations, other governments, and individuals for services described within this sub-vote.		
<b>VOTE 44 — EMERGENCY PROGRAM ACT</b>	14,478	14,475

## MINISTRY GROUP ACCOUNT CLASSIFICATION SUMMARY

## GROUP ACCOUNT CLASSIFICATION

Salaries and Benefits .....	121,680	128,216
Operating Costs .....	1,755,511	1,785,230
Government Transfers .....	311,017	302,962
Other Expenses .....	1,221	1,258
Internal Recoveries .....	(2,577)	(576)
External Recoveries .....	(1,343,470)	(1,359,266)
<b>TOTAL OPERATING EXPENSES</b> .....	843,382	857,824

# MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE

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## VOTE 43 Ministry Operations

Description	Total 2015/16 Operating Expenses	50	51	52	54	Total Salaries and Benefits	55	57	59	60	63	65	67	68	69
<b>Transportation and Infrastructure Improvements</b>	<b>11,765</b>	<b>52,917</b>	<b>102</b>	<b>12,859</b>	—	<b>65,878</b>	—	<b>5,990</b>	<b>4,667</b>	<b>102,859</b>	<b>4,023</b>	<b>2,224</b>	—	<b>10</b>	<b>99,482</b>
Transportation Policy and Programs	2,702	2,143	1	521	—	2,665	—	51	—	306	8	87	—	—	—
Transportation Investments	1	44,797	76	10,886	—	55,759	—	5,582	4,250	95,214	3,819	1,849	—	8	98,004
Partnerships	1	2,446	—	594	—	3,040	—	145	407	6,817	61	45	—	2	1,478
Port and Airport Development	7,851	1,803	25	438	—	2,266	—	93	10	433	20	207	—	—	—
Enhancing Economic Development	1,210	1,728	—	420	—	2,148	—	119	—	89	115	36	—	—	—
<b>Public Transportation</b>	<b>301,201</b>	<b>1,735</b>	<b>7</b>	<b>422</b>	—	<b>2,164</b>	—	<b>50</b>	<b>551</b>	<b>9,581</b>	<b>300</b>	<b>114</b>	—	—	<b>195,165</b>
Public Transit	107,186	1,735	7	422	—	2,164	—	50	551	9,581	300	114	—	—	1,150
Coastal Ferry Services	194,015	—	—	—	—	—	—	—	—	—	—	—	—	—	194,015
<b>Highway Operations</b>	<b>480,061</b>	<b>29,417</b>	<b>1,646</b>	<b>7,324</b>	—	<b>38,387</b>	—	<b>1,627</b>	<b>4,154</b>	<b>1,497</b>	<b>6,462</b>	<b>1,125</b>	—	<b>248</b>	<b>469,828</b>
Maintenance and Operations	445,751	14,095	1,441	3,600	—	19,136	—	1,004	4,154	1,403	5,248	794	—	58	444,558
Commercial Vehicle Safety and Enforcement	23,691	14,719	205	3,577	—	18,501	—	603	—	15	1,210	320	—	190	153
Inland Ferries	10,619	603	—	147	—	750	—	20	—	79	4	11	—	—	25,117
<b>Commercial Transportation Regulation</b>	<b>1,548</b>	<b>1,020</b>	<b>2</b>	<b>248</b>	—	<b>1,270</b>	<b>311</b>	<b>11</b>	<b>50</b>	<b>622</b>	<b>53</b>	<b>104</b>	—	<b>1</b>	<b>10</b>
Container Trucking Commissioner	1	—	—	—	—	—	171	—	50	620	15	35	—	—	10
Passenger Transportation Board	490	282	—	64	—	326	140	8	—	2	9	5	—	1	—
Passenger Transportation Branch	1,057	758	2	184	—	944	—	3	—	—	29	64	—	—	—
<b>British Columbia Pavilion Corporation</b>	<b>9,022</b>	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Management BC	14,437	5,157	5	1,253	—	6,415	—	106	38	1,627	379	200	—	—	9
Executive and Support Services	10,870	9,689	15	2,401	92	12,197	—	335	17	125	190	575	—	5	1
Ministers' Offices	749	409	—	133	92	634	—	123	—	—	20	20	—	—	—
Corporate Services	10,121	9,280	15	2,268	—	11,563	—	212	17	125	170	555	—	5	1
<b>Total</b>	<b>828,904</b>	<b>99,935</b>	<b>1,777</b>	<b>24,507</b>	<b>92</b>	<b>126,311</b>	<b>311</b>	<b>8,119</b>	<b>9,477</b>	<b>116,311</b>	<b>11,407</b>	<b>4,342</b>	—	<b>264</b>	<b>764,495</b>

## VOTE 44 Emergency Program Act

Description	Total 2015/16 Operating Expenses	50	51	52	54	Total Salaries and Benefits	55	57	59	60	63	65	67	68	69
<b>Emergency Program Act</b>	<b>14,478</b>	<b>1,532</b>	<b>1</b>	<b>372</b>	—	<b>1,905</b>	—	<b>156</b>	<b>20</b>	<b>1,970</b>	<b>500</b>	<b>50</b>	—	—	<b>600</b>
<b>Total</b>	<b>14,478</b>	<b>1,532</b>	<b>1</b>	<b>372</b>	—	<b>1,905</b>	—	<b>156</b>	<b>20</b>	<b>1,970</b>	<b>500</b>	<b>50</b>	—	—	<b>600</b>

70	72	73	75	Total Operating Costs	77	79	80	Total Govt Transfers	81	83	85	Total Other Expenses	86	88	Total Internal Recoveries	89	90	Total External Recoveries	Total 2016/17 Operating Expenses
31,055	551,202	—	665	802,177	—	—	45,261	45,261	—	—	—	404	—	(1)	(1)	(877,234)	(24,617)	(901,851)	11,868
—	—	—	—	452	—	—	—	—	—	—	—	14	—	—	—	(431)	—	(431)	2,700
31,050	551,152	—	200	791,128	—	—	29,076	29,076	—	—	—	285	—	(1)	(1)	(852,193)	(24,053)	(876,246)	1
5	50	—	465	9,475	—	—	454	454	—	—	—	88	—	—	—	(12,492)	(564)	(13,056)	1
—	—	—	—	763	—	—	15,731	15,731	—	—	—	4	—	—	—	(10,813)	—	(10,813)	7,951
—	—	—	—	359	—	—	—	—	—	—	—	13	—	—	—	(1,305)	—	(1,305)	1,215
201	198,360	—	—	404,322	—	—	231,356	231,356	—	—	—	4	—	(1)	(1)	(261,980)	(74,187)	(336,167)	301,678
201	198,360	—	—	210,307	—	—	231,356	231,356	—	—	—	4	—	(1)	(1)	(261,980)	(74,187)	(336,167)	107,663
—	—	—	—	194,015	—	—	—	—	—	—	—	—	—	—	—	—	—	—	194,015
2,484	77,310	4,947	619	570,301	—	—	—	—	—	—	—	524	—	(1)	(1)	(114,034)	(2,845)	(116,879)	492,332
—	77,310	3,969	271	538,769	—	—	—	—	—	—	—	312	—	(1)	(1)	(98,671)	(1,541)	(100,212)	458,004
2,484	—	978	348	6,301	—	—	—	—	—	—	—	210	—	—	—	(1,304)	(1,304)	(1,304)	23,708
—	—	—	—	25,231	—	—	—	—	—	—	—	2	—	—	—	(15,363)	—	(15,363)	10,620
13	—	1	75	1,251	—	—	—	—	—	—	—	8	—	(1)	(1)	(976)	(976)	(976)	1,552
—	—	—	75	976	—	—	—	—	—	—	—	—	—	—	—	(975)	(975)	(975)	1
—	—	—	—	165	—	—	—	—	—	—	—	1	—	(1)	(1)	—	(1)	(1)	490
13	—	1	—	110	—	—	—	—	—	—	—	7	—	—	—	—	—	—	1,061
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9,099
88	—	57	5	2,509	—	—	9,099	9,099	—	—	—	—	—	—	—	—	—	—	15,039
—	—	1	—	1,249	—	—	8,096	8,096	—	—	—	26	—	(1)	(1)	(1)	(2,005)	(2,005)	11,781
—	—	—	—	163	—	—	—	—	—	—	—	291	—	(570)	(570)	(1,064)	(322)	(1,386)	867
—	—	1	—	1,086	—	—	—	—	—	—	—	70	—	(570)	(570)	(1,064)	(322)	(1,386)	10,914
33,841	826,872	5,006	1,364	1,781,809	—	—	293,812	293,812	—	—	—	1,257	—	(575)	(575)	(1,254,313)	(104,952)	(1,359,265)	843,349

70	72	73	75	Total Operating Costs	77	79	80	Total Govt Transfers	81	83	85	Total Other Expenses	86	88	Total Internal Recoveries	89	90	Total External Recoveries	Total 2016/17 Operating Expenses
81	—	44	—	3,421	150	7,550	1,450	9,150	—	—	—	1	—	(1)	(1)	—	(1)	(1)	14,475
81	—	44	—	3,421	150	7,550	1,450	9,150	—	—	—	1	—	(1)	(1)	—	(1)	(1)	14,475

# MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE

## MINISTRY SUMMARY

(\$000)

	Restated Estimates 2015/16	Estimates 2016/17	Increase (Decrease)	Variance Explanations
<b>VOTED APPROPRIATION</b>				
Vote 43 - Ministry Operations	828,904	843,349	14,445	Increases: s.13,s.17
Vote 44 - Emergency Program Act	14,478	14,475	(3)	Net decrease: Wages (union increases and benefit rate reduction)
<b>OPERATING EXPENSE</b>	<u>843,382</u>	<u>857,824</u>	<u>14,442</u>	
<b>CAPITAL EXPENDITURES</b>				
	5,274	4,072	(1,202)	Net Decrease: Due to decreased spending for vehicles in 2016/17 (managed by Procurement Services in the Ministry of Technology, Innovation and Citizen Services). Vehicle purchases fluctuate by fiscal year depending on the age of the fleet.
<b>LOANS, INVESTMENTS AND OTHER REQUIREMENTS</b>	-	-	-	
<b>REVENUE COLLECTED FOR, &amp; TRANSFERRED TO, OTHER ENTITIES</b>	-	-	-	

# MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE

## CORE BUSINESS SUMMARY

(\$000)

	Restated Estimates 2015/16	Estimates 2016/17	Increase (Decrease)	Variance Explanations
<b>OPERATING EXPENSES</b>				
<b>Core Business</b>				
Transportation and Infrastructure Improvements	11,765	11,868	103	Increase: Reflects CPI on port property tax grants (\$80k) and wages (\$23k includes union increases and benefit rate reductions)
Public Transportation	301,201	301,678	477	Net increase: s.13,s.17 s.13,s.17
Highway Operations	480,061	492,332	12,271	Net increase: s.13,s.17 s.13,s.17
				Partially offset by a reallocation to other lines of business (-\$421k)
Commercial Transportation Regulation	1,548	1,552	4	Increase: Wages (union increases and benefit rate reductions)
British Columbia Pavilion Corporation	9,022	9,099	77	Increase: Union wage increases
Emergency Management BC	14,437	15,039	602	Increase: s.13,s.17 s.13,s.17
Executive and Support Services	10,870	11,781	911	Increases: s.13,s.17
Emergency Program Act	14,478	14,475	(3)	Net decrease: Wages (benefit rate reduction, partially offset by union increases)
<b>TOTAL OPERATING EXPENSE</b>	<b>843,382</b>	<b>857,824</b>	<b>14,442</b>	
<b>CAPITAL EXPENDITURES</b>				
<b>Core Business</b>				
Highway Operations	5,274	4,072	(1,202)	Net Decrease: Due to decreased spending for vehicles in 2016/17 (managed by Procurement Services in the Ministry of Technology, Innovation and Citizen Services). Vehicle purchases fluctuate by fiscal year depending on the age of the fleet.
<b>TOTAL CAPITAL EXPENDITURES</b>	<b>5,274</b>	<b>4,072</b>	<b>(1,202)</b>	



# MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE

## OPERATING EXPENSE BY CORE BUSINESS

(\$000)

Voted Appropriations	Restated Estimates 2015/16	Estimates 2016/17	Increase (Decrease)	Variance Explanations
<b>TRANSPORTATION AND INFRASTRUCTURE IMPROVEMENTS</b>				
Transportation Policy and Programs	2,702	2,700	(2)	Net decrease: Wages (benefit rate reduction, partially offset by union increases)
Partnerships	1	1	-	
Port and Airport Development	7,851	7,951	100	Increase: CPI on ports property tax grants (\$80k) and Wages (\$20k, union increases and benefit rate reduction)
Transportation Investments	1	1	-	
Enhancing Economic Development	1,210	1,215	5	Increase: Wages (union increases and benefit rate reduction)
	<u>11,765</u>	<u>11,868</u>	<u>103</u>	
<b>PUBLIC TRANSPORTATION</b>				
Public Transit	107,186	107,663	477	Net Increase: s.13,s.17
Coastal Ferry Services	194,015	194,015	-	s.13,s.17
	<u>301,201</u>	<u>301,678</u>	<u>477</u>	
<b>HIGHWAY OPERATIONS</b>				
Maintenance and Operations	445,751	458,004	12,253	Net Increase: s.13,s.17 and Wage increases (\$561k includes union wage increases and benefit rate decreases) Partially offset a reallocation to other lines of business (-\$421k)
Commercial Vehicle Safety and Enforcement	23,691	23,708	17	Increase: Wages (union increases and benefit rate reduction)
Inland Ferries	10,619	10,620	1	Increase: Wages (union increases and benefit rate reduction)
	<u>480,061</u>	<u>492,332</u>	<u>12,271</u>	

# MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE

## OPERATING EXPENSE BY CORE BUSINESS

(\$000)

Voted Appropriations	Restated Estimates 2015/16	Estimates 2016/17	Increase (Decrease)	Variance Explanations
<b>COMMERCIAL TRANSPORTATION REGULATION</b>				
Container Trucking Commissioner	1	1	-	
Passenger Transportation Board	490	490	-	
Passenger Transportation Branch	1,057	1,061	4	Increase: Wages (union increases and benefit rate reduction)
	<u>1,548</u>	<u>1,552</u>	<u>4</u>	
<b>BRITISH COLUMBIA PAVILION CORPORATION</b>				
British Columbia Pavilion Corporation	9,022	9,099	77	Increase: Union wage increases
	<u>9,022</u>	<u>9,099</u>	<u>77</u>	
<b>EMERGENCY MANAGEMENT BC</b>				
Emergency Management BC	14,437	15,039	602	Increase: s.13,s.17 s.13,s.17
	<u>14,437</u>	<u>15,039</u>	<u>602</u>	
<b>EXECUTIVE AND SUPPORT SERVICES</b>				
Minister's Office	749	867	118	Increase: Annualized costs for the Minister of State for Emergency Preparedness (new office Summer 2015)
Corporate Services	10,121	10,914	793	Increase: s.13,s.17 s.13,s.17
	<u>10,870</u>	<u>11,781</u>	<u>911</u>	
<b>Vote 43 - Ministry Operations</b>	<b>828,904</b>	<b>843,349</b>	<b>14,445</b>	
<b>EMERGENCY PROGRAM ACT</b>				
Emergency Program Act	14,478	14,475	(3)	Net decrease: Wages (union increases and benefit rate reductions)
<b>Vote 44 - Emergency Program Act</b>	<b>14,478</b>	<b>14,475</b>	<b>(3)</b>	

MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE  
MINISTRY GROUP ACCOUNT CLASSIFICATION SUMMARY

GROUP ACCOUNT CLASSIFICATION	Restated Estimates 2015/16	Estimates 2016/17	Increase (Decrease)	Variance Explanations
<b>Salaries and Benefits</b>	121,680	128,216	6,536	<b>Increase: s.13,s.17</b> Emergency Management (\$1.7 million) funding for critical vacancies (\$1 million for IT transformation and other), and Wage increases (\$0.4 million net of benefit reductions).  s.13,s.17 s.13,s.17 The remaining increases were funded by reallocating from other STOBs.
<b>Operating Costs</b> STOB 69 Maintenance & Operating contracts STOB 70 Operating Equipment STOB 72 Capital Projects	1,755,511	1,785,230	29,719	<b>Net Increase :</b> s.13,s.17 s.13,s.17 The balance mainly reflects changes in the composition of the capital program (\$12.6 M).
<b>Government Transfers</b> Grants: BCTFA, BC Transit, PavCo, Translink, Local Govt,	311,017	302,962	(8,055)	<b>Net Decrease:</b> s.13,s.17 <b>Decreases:</b> s.13,s.17 s.13,s.17  <b>Increases:</b> s.13,s.17 s.13,s.17
<b>Other Expenses</b>	1,221	1,258	37	
<b>Internal Recoveries</b> Recoveries between ministries	(2,577)	(576)	2,001	<b>Net Decrease:</b> Mainly due to timing of Flood Protection projects (-\$2.6 million), partially offset by increases for IM/IT capital projects (\$0.6 million)
<b>External Recoveries</b> BCTFA, TI Corp, Feds, ICBC, BC Railway Company, and others	(1,343,470)	(1,359,266)	(15,796)	<b>Net Increase mainly reflects:</b> <b>Increased</b> recoveries from Translink and the Federal Govt under the Building Canada Fund (\$35 million), s.13,s.17 Partially offset by: <b>Decreased</b> s.13,s.17 s.13,s.17 and decreased recoveries from the Federal Govt for EMBC's Flood Protection program due to project completions (-\$3 million)
<b>TOTAL OPERATING</b>	<u>843,382</u>	<u>857,824</u>	<u>14,442</u>	

## Resource Summary

Core Business Area	2015/16 Restated Estimates <sup>1</sup>	2016/17 Estimates <sup>2</sup>	2017/18 Plan	2018/19 Plan
<b>Operating Expenses (\$000)<sup>3</sup></b>				
Transportation and Infrastructure Improvements .....	11,765	11,868	11,932	12,018
Public Transportation <sup>4</sup> .....	301,201	301,678	304,166	307,828
Highway Operations .....	480,061	492,332	493,523	494,725
Commercial Transportation Regulation...	1,548	1,552	1,571	1,576
British Columbia Pavilion Corporation ....	9,022	9,099	9,179	9,266
Emergency Management BC .....	14,437	15,039	15,125	15,179
Executive and Support Services .....	10,870	11,781	11,933	12,043
Emergency Program Act <sup>5</sup> .....	14,478	14,475	14,483	14,496
<b>Total .....</b>	<b>843,382</b>	<b>857,824</b>	<b>861,912</b>	<b>867,131</b>
<b>Ministry Capital Expenditures (Consolidated Revenue Fund) (\$000)</b>				
Highway Operations .....	5,274	4,072	3,107	3,107
<b>Total .....</b>	<b>5,274</b>	<b>4,072</b>	<b>3,107</b>	<b>3,107</b>

<sup>1</sup> For comparative purposes, the amounts shown for 2015/16 have been restated to be consistent with the presentation of the 2016/17 Estimates.

<sup>2</sup> Further information on program funding and vote recoveries is available in the [Estimates and Supplement to the Estimates](#).

<sup>3</sup> Operating expenses are reported net of funding from external sources, primarily the BC Transportation Financing Authority.

<sup>4</sup> Public Transportation operating expenses include government contributions towards public transit and coastal ferry services.

<sup>5</sup> The *Emergency Program Act* provides for preparedness, response to and recovery from emergencies and disasters, and for hazard mitigation initiatives.

## Transportation Investments

(\$ millions)	2016/17	2017/18	2018/19	Total
<b>Provincial Investments</b>				
Highway Rehabilitation	210	213	215	638
Side Road Improvement Program	90	90	90	270
Natural Gas Road Upgrade Program	20	20	20	60
Highway 1 – Kamloops to Alberta Border	48	57	101	206
George Massey Tunnel Replacement Project <sup>1</sup>	7	-	-	7
Okanagan Valley Corridor	35	50	31	116
Cariboo Connector	40	35	40	115
Major Highway Corridors and Roads	188	171	262	621
Other Transportation Programs	98	65	62	225
Transit Infrastructure	158	157	136	451
<b>Total Provincial Transportation Investment<sup>2</sup></b>	<b>894</b>	<b>858</b>	<b>957</b>	<b>2,709</b>
<b>Investments funded through contributions from Federal Government and other partners</b>				
Contributions from all partners	240	159	271	670
<b>Total Investment in Transportation Infrastructure</b>	<b>1,134</b>	<b>1,017</b>	<b>1,228</b>	<b>3,379</b>

<sup>1</sup> Subject to Treasury Board approval of the final project business case.

<sup>2</sup> Total provincial investments include operating and capital spending.

Transportation Investment Corporation (\$ millions)	2016/17	2017/18	2018/19	Total
<b>Port Mann Highway 1</b>				
Capital Project	10	-	-	10
Rehabilitation	6	4	4	14
<b>Total Investments</b>	<b>16</b>	<b>4</b>	<b>4</b>	<b>24</b>
<b>Total Investments in Transportation Infrastructure including the Port Mann Highway 1 Improvement Project</b>	<b>1,150</b>	<b>1,021</b>	<b>1,232</b>	<b>3,403</b>

# TRANSPORTATION INVESTMENT PLAN

## Estimates Note

Ministry of Transportation and Infrastructure

Date: February 25, 2016

### ISSUE

- Provincial transportation investments under the Ministry's 2016/17-2018/19 Service Plan.

### ADVICE AND RECOMMENDED RESPONSE

- Ministry will invest \$2.709 billion in transportation improvements over the next 3 years, \$3.379 billion inclusive of partner contributions.
- In addition, Transportation Investment Corporation (TI Corp) will invest \$24 million over the next three years to complete remaining works on the Port Mann/Highway 1 project and undertake rehabilitation works.
- Provincial expenditures include both capital spending and operating spending (i.e. grants to 3<sup>rd</sup> parties and non-capital expenditures).
- Partner contributions include expected contributions under federal infrastructure programs.
- Funding allocation for the George Massey Tunnel Replacement project assumes, subject to Treasury Board approval of the supporting business plan that costs incurred after July 1, 2016 will be recorded under TI Corp.

### BACKGROUND

- Provincial transportation investments are funded through the BC Transportation Financing Authority (BCTFA) within the debt and net income limits established by Treasury Board.
- Transportation investments under the Transportation Investment Plan over a three year period are reported in the Ministry of Transportation and Infrastructure's annual Service Plan.
- Provincial investments are net of contributions from 3<sup>rd</sup> parties such as cost sharing under federal infrastructure programs (e.g. Building Canada Fund).
- Provincial expenditures include both capital and operating (i.e. grants to 3<sup>rd</sup> parties and non-capital expenditures) spending.
- The Transportation Investment Plan supports:
  - Preservation of provincial highway assets through the Highway Rehabilitation and Side Road Improvement Programs;
  - Continued support for natural gas development through the Natural Gas Road Upgrade Program;
  - Continued four-laning on Highway 1 between Kamloops and the Alberta Border;
  - Continued project development activity for replacement of the George Massey Tunnel to allow construction to proceed in 2017;
  - Continued improvements to highway corridors in the Okanagan Valley;
  - Continued implementation of Phase 2 of the Cariboo Connector Strategy;

- Improvements to major highway corridors throughout the province such as Highway 3, 5, 16, 37 and 97 north;
  - Other transportation investments such as trucking strategy projects, environmental enhancement, Inland Ferries upgrades, 3<sup>rd</sup> party infrastructure grants, project development, cycling and airport grants and interest during construction; and,
  - Continued investment in Public Transit through completion of the Evergreen Rapid Transit Line, annual Canada Line performance payments, grants to BC Transit for asset replacement and Expo Line station upgrades; UPASS Program, Faregates & Smartcards, etc.
- Expenditure levels fluctuate over the Service Plan period due to the cash flow profile of major projects such as the Evergreen Line Rapid Transit project.
  - The Transit Plan reflects the investment outlook over the next three years and the capacity of local government and TransLink to fund capital improvements.

#### **PROGRAM CONTACT**

David Marr, Executive Director, Planning & Programming, Infrastructure Department  
 Telephone: 250 356-2100

## Transportation Investments (2015/16-2017/18 Service Plan)

Investment Programs \$ millions	2015/16 Forecast	Service Plan			
		2016/17	2017/18	2018/19	Total
Provincial Investments					
• Highway Rehabilitation	216	210	213	215	638
• Side Road Improvement Program	90	90	90	90	270
• Natural Gas Road Upgrade Program	20	20	20	20	60
• Hwy 1 - Kamloops to Alberta Border	49	48	57	101	206
• George Massey Tunnel Replacement	24	7	-	-	7
• Okanagan Valley Corridor	42	35	50	31	116
• Cariboo Connector Program	36	40	35	40	115
• Major Highway Corridors and Roads	112	188	171	262	621
• Other Transportation Programs	42	98	65	62	225
• Transit Infrastructure	176	158	157	136	451
Total (Provincial Investments)	807	894	858	957	2,709
Investments funded through contributions from other Partners					
Contributions from all partners	259	240	159	271	670
Total investments through contributions	1,066	1,134	1,017	1,228	3,379
Transportation Investment Corporation	2015/16 Forecast	2016/17	2017/18	2018/19	Total
Port Mann Highway 1 (Capital project)	34	10	-	-	10
Port Mann Highway 1 (Rehabilitation)	2	6	4	4	14
Total Investments (TIC)	36	16	4	4	24
Total Investments in Transportation including Port Mann Highway 1	1,102	1,150	1,021	1,232	3,403



# BC Transportation Financing Authority

## Statement of Operations

	2015/16 Forecast	2016/17 Budget	2017/18 Plan	2018/19 Plan
<b>Revenue(\$000)</b>				
Tax Revenue <sup>1</sup>	426,500	430,000	433,000	436,000
Amortization of deferred contributions <sup>2</sup>	168,830	172,760	181,742	178,855
Other operating revenue <sup>3</sup>	32,953	58,940	43,970	16,751
<b>Total</b>	<b>628,283</b>	<b>661,700</b>	<b>658,712</b>	<b>631,606</b>
<b>Expenditures(\$000)</b>				
Highway Operations	559,483	577,610	563,145	572,068
Transit Programs	92,003	120,136	127,495	132,880
Ferry Operations	25,267	29,468	19,962	21,470
Other	43,949	58,445	46,305	48,657
Debt Servicing Costs <sup>4</sup>	349,585	401,699	466,488	532,173
<b>Total</b>	<b>1,070,287</b>	<b>1,187,358</b>	<b>1,223,395</b>	<b>1,307,248</b>
<b>Net Loss(\$000)</b>				
<b>Net operating loss</b>	<b>(442,004)</b>	<b>(525,658)</b>	<b>(564,683)</b>	<b>(675,642)</b>

<sup>1</sup> Tax revenue includes 6.75 cents per litre motor fuel tax and a provincial sales tax on short-term car rental of \$1.50 per day.

<sup>2</sup> Contributions towards capital assets are deferred and amortized to income at the same rate as the related highway infrastructure is amortized to expense.

<sup>3</sup> Other operating revenue includes property sales, rental revenues, earnings from the British Columbia Railway Company, and grants from the Province.

<sup>4</sup> Interest on borrowing used to finance construction work in progress is capitalized. Upon completion, related interest costs are expensed.

# **Ministry of Transportation and Infrastructure**

## **2016/17 – 2018/19 SERVICE PLAN**

**February 2016**



For more information on the British Columbia Ministry of Transportation and Infrastructure see  
Ministry Contact Information on Page 31 or contact:

**Ministry of Transportation and Infrastructure:**

PO BOX 9850  
STN PROV GOVT  
VICTORIA, BC V8W  
9T5

or visit our web site at

[www.gov.bc.ca/tran/](http://www.gov.bc.ca/tran/)

Published by the Ministry of Transportation and Infrastructure

## **Minister Accountability Statement**



The *Ministry of Transportation and Infrastructure 2016/17 - 2018/19 Service Plan* was prepared under my direction in accordance with the *Budget Transparency and Accountability Act*. I am accountable for the basis on which the plan has been prepared.

A handwritten signature in dark ink, appearing to be 'Al Williams', written over a horizontal line.

Honourable Todd G. Stone  
Minister of Transportation and Infrastructure February  
9, 2016

## **Minister of State for Emergency Preparedness Accountability Statement**



I am the Minister of State for Emergency Preparedness and under the *Balanced Budget and Ministerial Accountability Act*, I am accountable for achieving the results listed in Appendix B of this Service Plan.

A handwritten signature in black ink, appearing to read 'Naomi Yamamoto', written in a cursive style.

Honourable Naomi Yamamoto  
Minister of State for Emergency Preparedness  
February 4, 2016

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## Purpose of the Ministry

The Ministry of Transportation and Infrastructure plans transportation networks, provides transportation services and infrastructure, develops and implements transportation policies, leads emergency management and administers related acts and regulations as well as federal-provincial

funding programs, including the Building Canada Fund. The Ministry moves people and goods safely and fuels our provincial economy through innovative, forward-thinking transportation strategies like B.C. on the Move: A 10-Year Transportation Plan. Our key goals are improving vital infrastructure, enhancing the competitiveness of B.C.'s transportation industries, reducing transportation-related greenhouse gas emissions, providing a safe and reliable highway system and providing an effective emergency management system.

The Minister is responsible for two internal-reporting Crown corporations, BC Railway Company and the BC Transportation Financing Authority, which are reported in this service plan.

- BC Railway Company (BCRC) is incorporated under the *British Columbia Railway Act* and supports the *Pacific Gateway Transportation Strategy 2012–2020* by acquiring and holding railway corridors and strategic port lands, and making related infrastructure investments to benefit the province, including the strategic sale of surplus land. BCRC also administers the Canadian National Railway Company (CN Rail) Revitalization Agreement and operates the Roberts Bank port subdivision.
- The BC Transportation Financing Authority (BCTFA) is established under the *Transportation Act* to plan, acquire, construct, hold, improve or operate transportation infrastructure throughout the province. The BCTFA owns all provincial highways and land held for construction of future transportation infrastructure.

The Ministry is also responsible for four self-reporting Crown corporations: BC Transit, Transportation Investment Corporation (TI Corp), the Insurance Corporation of British Columbia (ICBC), and British Columbia Pavilion Corporation (PavCo). More information can be found on their web sites: [bctransit.com](http://bctransit.com), [pmhlproject.com](http://pmhlproject.com), [icbc.com](http://icbc.com) and [bcpavco.com](http://bcpavco.com).

***B.C. on the Move: A 10-Year Transportation Plan***

*The provincial government launched B.C. on the Move: A 10-year Transportation Plan in 2015. The plan will help guide transportation improvements over the next 10 years and prioritizes moving people and goods safely and efficiently, growing the economy, connecting and strengthening communities, and maximizing collaboration and investment with partners including First Nations, the federal government, local governments and the private sector.*

# Strategic Direction and Context

## Strategic Direction

As demonstrated by [B.C. on the Move: A 10-Year Transportation Plan](#), the Ministry of Transportation and Infrastructure makes strategic investments in British Columbia's transportation infrastructure to create a safer and more reliable transportation network, support a strong economy and lead emergency management. The Ministry's work is guided by the [Mandate Letter](#) provided by the Premier, as well as the [Taxpayer Accountability Principles](#). This plan identifies the Ministry's key priorities in supporting government's goals and ensuring the best possible use of government resources to represent the interests of taxpayers.

## Strategic Context

**Economic Forecast.** The Economic Forecast Council expects British Columbia's real GDP to grow by 2.7 per cent in 2016 and 2.6 per cent in 2017. Downside risks to B.C.'s economic outlook include the potential for a slowdown in North American economic activity, ongoing fragility in Europe, and slower than anticipated Asian demand, particularly in China. Additional risks include uncertainty in the outlook for the Canadian dollar and weak inflation.

**Federal Infrastructure Programs.** The Ministry has been successful in leveraging federal funding to help deliver improvement projects and is working with the federal government to confirm priorities for funding under the \$1.09 billion allocated to B.C. through the Building Canada Fund. Funding is also being pursued through programs such as the National Infrastructure Component and the P3 Canada Fund. The newly elected federal government has committed \$60 billion in incremental funding over the next decade: \$20 billion each for public transit infrastructure, green infrastructure and social infrastructure. The Ministry is also working to secure funding through the

[National Disaster Mitigation Program](#) for flood mitigation projects. Continuing to take advantage of federal funding provides excellent value to taxpayers and may influence future investment programs.

**Growth and Facilitation of Asia-Pacific Trade.** B.C.'s economic success is reflected in its diversification of trading partners. Canada's new trade agreements are creating opportunities for increased exports by opening up market access for Canadian commodities in partner countries. To support international trade, the Ministry is implementing the [Pacific Gateway Transportation Strategy 2012-2020](#), which identified investments worth \$25 billion to improve and expand port, rail, road and airport facilities in addition to the \$20 billion invested since 2005. Of particular importance are the transportation corridors for new LNG facilities, which are integral to economic growth in the North. Studies are underway in the Lower Mainland to identify priority transportation infrastructure to support and facilitate growth in international trade, and there is unprecedented private sector investment at ports across the province. New and expanding port capacity will support growing volumes of agricultural exports, forestry products, project cargo and containers. Continued Pacific Gateway expansion will help sustain it as North America's preferred gateway for Asia-Pacific trade.

**Regional Economies.** B.C.'s rural economies continue to diversify and will rely on a range of infrastructure improvements to facilitate this evolution. With increased natural resource development, such as oil and gas, mining and forestry, industrial traffic places significant demands on existing transportation infrastructure. To support these activities and ensure roads remain suitable for all users,

the Ministry will make additional investments in affected road networks, including maintenance and rehabilitation due to incremental wear and tear.

## **Goals, Objectives, Strategies and Performance Measures**

The Ministry of Transportation and Infrastructure promotes economic growth and diversification in support of Government's priority of creating jobs to secure a strong tomorrow for communities across the province. The Ministry also leads emergency management so the Province is prepared for emergencies or disasters, and to ensure stability of leadership and service to British Columbians. Our integrated transportation network is the backbone of the economy, and investing in safe and reliable infrastructure makes our transportation industries globally competitive and positions them to support the movement of people and goods. The Ministry invests in transit, cycling and walking infrastructure to provide British Columbians with sustainable transportation options, and in support of Government's continued commitment to lead the world in sustainable environmental management.

To accomplish its mandate, the Ministry of Transportation and Infrastructure has the following goals:

1. Improved infrastructure drives economic growth and trade;
2. British Columbia's transportation sector is globally competitive;
3. Greenhouse gas emissions from the transportation sector are reduced;
4. British Columbia's highway system is safe and reliable; 5. The Province is prepared to respond to emergency events; and,
6. Excellent customer service.

### **Goal 1: Improved infrastructure drives economic growth and trade.**

**Objective 1.1: Improve mobility on routes servicing major economic gateways.**

#### **Strategies**

- Undertake improvements that reduce bottlenecks on major urban and rural trade corridors;
- Promote efficiencies at Canada/United States border crossings through infrastructure improvements and the deployment of intelligent transportation technology to reduce border wait times; and,
- Use the Regional Transportation Management Centre to improve mobility and reliability on the transportation network through advanced incident management and information systems.



**Objective 1.2: Implement B.C. on the Move: A 10-Year Transportation Plan priority projects.**

**Strategies**

- Develop, evaluate, prioritize and build business cases for B.C. on the Move: A 10-Year Transportation Plan improvement projects.

**Objective 1.3: Use Provincial investment dollars as effectively as possible.**

**Strategies**

- Complete projects on budget and on time;
- Develop public-private partnerships in consultation with Partnerships BC, where appropriate; and,

**Performance Measure 1: Project Performance**

Performance Measure	2015/16 Forecast <sup>2</sup>	2016/17 Target	2017/18 Target	2018/19 Target
The percentage of projects that meet their budget and schedule.	91.5%	91.5%	91.5%	91.5%

**Data Source:** Ministry of Transportation and Infrastructure.

**Discussion**

This performance measure reflects the goal of being cost conscious, as outlined in the Taxpayer Accountability Principles, and evaluates all Ministry capital construction and rehabilitation projects completed each year within the overall Transportation Investment Plan. The number and total value of these projects varies from year –to –year as new investments are made. The performance measure allows the Ministry to assess how efficiently and effectively it delivers a large suite of projects. Projects range in size, scope and value and use a variety of procurement methods. Programs continuously evolve to maintain infrastructure and best serve the citizens of the province. The consistent target represents the Ministry's ability to maintain a high level of achievement despite these challenges and the broad range of projects included in the target.

**Objective 1.4: Improve access for resource industries and rural residents.**

**Strategies**

- Invest in priority rehabilitation and improvement projects on roads serving industry and rural residents, including B.C. on the Move: A 10-Year Transportation Plan projects and Major Programs as defined in Appendix A; and,
- Undertake projects that support increased industrial growth, such as four-laning, strengthening of roadways and improving overhead clearances, alignments and bridge capacity.

## Objective 1.5: Leverage available federal funding and administer cost-sharing programs to support and sustain B.C.'s infrastructure.

### Strategies

- Lead negotiations for the next round of federal/provincial infrastructure programs; and,
- Take a leadership position in partnership with other Provincial Ministries to support local governments' priority infrastructure projects.

## Goal 2: B.C.'s transportation sector is globally competitive.

### Objective 2.1: Develop Canada's Pacific Gateway. Strategies

- Implement [The Pacific Gateway Transportation Strategy 2012–2020: Moving Goods and People](#); and,
- Undertake transportation trade network development and integration in conjunction with the Pacific Gateway Alliance, the private sector, other levels of government and First Nations to build capacity for long-term growth.

### Performance Measure 2: Pacific Gateway Supply Chain Investments

Performance Measure	2015/16 Forecast	2016/17 Target	2017/18 Target	2018/19 Target
Cumulative completed provincial strategic investment in Pacific Gateway supply chain infrastructure.	\$5.77 billion	\$5.79 billion	\$6.51 billion	\$6.53 billion

**Data Source:** Total completed investment spending (cumulative) on provincial supply chain infrastructure by B.C. since 2005. Does not include partner contributions.

### Discussion

Through British Columbia's *Pacific Gateway Transportation Strategy*, the Ministry participates with private and public agencies in the planning and development of infrastructure projects to fulfill the long-term vision of British Columbia as North America's gateway of choice for Asia Pacific trade. [The Pacific Gateway Alliance](#) is the unique public-private partnership that oversees the Pacific Gateway's expansion of port, rail, road and airport facilities. These partners are working together to take advantage of Canada's strategic location at the crossroads of the North American marketplace.

Market access for natural resources is imperative to economic growth. Several studies are underway in the North and the Lower Mainland to better understand the capacity of B.C.'s multi-modal transportation network and to identify where improvements are needed to ensure the efficient reliable movement of goods while maintaining quality of life for citizens.

## Goal 3: Greenhouse gas emissions from the transportation sector are reduced.

### Objective 3.1: Increase transit use, cycling and other alternative modes of personal transportation.

#### Strategies

- In partnership with various levels of government and other stakeholders, support provision of rapid transit and frequent bus service to make transit an attractive option;
- Invest in public transit infrastructure, where supported by strong business cases;
- Improve High Occupancy Vehicle (HOV) and transit priority measures;
- Encourage compact and mixed land- use around transit stations and along transit corridors through policy and funding agreements; and,
- Invest in an integrated cycling and walking network.

#### Performance Measure 3: Transit Ridership

Performance Measure	2015/16 Forecast	2016/17 Target	2017/18 Target	2018/19 Target
Annual public transit ridership in B.C.	286.5 million	291.2 million	295.6 million	300.8 million

**Data Source:** Estimates based on BC Transit and TransLink forecasts adjusted to reflect current conditions.

#### Discussion

Measuring transit ridership – the number of rides taken by people using public transit – assists the Province to monitor the success of transit investments on a year to year basis. Ridership is forecast to increase over the next few years, but from a smaller ridership base and at a slower rate than projected in previous plans. This reflects ridership declines experienced by TransLink in 2014 and the first half of 2015 and a limited service expansion by both TransLink and BC Transit. This is partially offset by population and employment growth, TransLink actions to transfer services from lower to higher occupancy routes, and contributions from past and current investments, including the Evergreen Line in 2016.

### Objective 3.2: Improve supply chain efficiency for the movement of goods.

#### Strategies

- Reduce commercial truck permit wait times;
- Improve rural road infrastructure;
- Build rail grade separations; and,
- Free up road capacity for goods movement by reducing the use of single-occupant vehicles.

**Objective 3.3: Reduce greenhouse gas emissions.****Strategies**

- Invest in new buses that use the latest technology;
- Increase the use of weigh-in-motion technology at inspection stations;
- Implement intelligent traffic control systems to reduce idling and create advantages for transit; and,
- Promote the use of natural gas as the fuel of choice for heavy duty commercial vehicles, transit buses and coastal ferries.

**Goal 4: B.C.'s highway system is safe and reliable.****Objective 4.1: Ensure a high standard of provincial highway maintenance.****Strategies**

- Consider future improvements to continue delivery of high quality maintenance and rehabilitation programs; and,
- Administer highway maintenance contracts and assess service delivery through the Contractor Assessment Program.

**Performance Measure 4: Contractor Assessment**

Performance Measure	Baseline	2015/16 Forecast	2016/17 Target	2017/18 Target	2018/19 Target
Rating of maintenance contractor performance using Contractor Assessment Program.	93%	93%	93%	93%	93%

**Data Source:** Ministry of Transportation and Infrastructure, Construction and Maintenance Branch.

**Discussion**

The Ministry created the Contractor Assessment Program as a means to systematically assess the performance of our contractors to ensure they are meeting our high maintenance standards throughout the year. The baseline and targets of 93 per cent demonstrate that British Columbians are receiving a high level of service from the Ministry's contractors and that the Ministry expects continued high service levels.

Contractor ratings are generated through three processes: a local assessment by Ministry District staff, overseen by the local District Operations Manager; a regional assessment by a team of auditors from outside the service area, typically overseen by an outside District Operations Manager; and interviews led by the local District Operations Manager with local stakeholders. Information about the obligations of maintenance contractors is available online on the Ministry's [web site](#).

## Objective 4.2: Rehabilitate the highway system on a lowest life-cycle cost basis.

### Strategies

- Invest in the main highway system (roads and bridges) to maintain safety and efficiency and mitigate the onset of deterioration and maximize the return on infrastructure investment;
- Systematically assess the condition of infrastructure to determine priority in the annual resurfacing and structure rehabilitation and replacement programs; and,
- Integrate climate change and seismic resilience considerations into rehabilitation design and cost.

## Objective 4.3: Improve highway safety and reliability.

### Strategies

- Monitor highway safety and improve high-risk locations in consultation with local and regional authorities and stakeholders;
- Maximize highway safety and reliability through both safety-focused enhancements and low-cost improvements, such as signs, lighting and lane markings;
- Work with safety partners such as the Insurance Corporation of British Columbia, local law enforcement and the Ministry of Public Safety and Solicitor General to identify areas for safety improvements; and,
- Examine highway safety and reliability issues, considering climate forecasts, seismic hazards and the adaptive capacity of transportation infrastructure. Address and revise standards where appropriate using results of studies on climate and highway infrastructure interactions.

## Performance Measure 5: Highway Safety

Performance Measure	Baseline	2015/16 Forecast	2016/17 Target	2017/18 Target	2018/19 Target
Crash reduction after construction of safety improvement capital projects.	100 collisions	20% reduction from baseline	TBD	TBD	TBD

**Data Source:** The RCMP and ICBC.

### Discussion

Reducing collisions improves highway safety and provides British Columbians with a safer and more reliable highway system. This measure demonstrates achievement of Ministry progress towards providing a safe highway system. Reporting against targets is based on safety improvement capital projects that are completed or substantially completed over the course of the annual reporting period. The measure compares baseline collisions to actual collisions at the location of the safety improvement capital projects. The baseline is the yearly average collision history measured over the

five-year period preceding the start of construction of the safety improvement capital projects. This measure is a cycle in which current targets were established in 2012/13 and set for the period up to 2015/16. Beginning in 2016/17, new safety measures, baseline and targets will be established.

**Objective 4.4: Provide effective road safety enforcement, education and programs for the commercial transport industry.**

**Strategies**

- Establish and enforce regulations to enhance vehicle safety in B.C. and to ensure public safety;
- Participate with other jurisdictions on initiatives to coordinate and harmonize programs, policies and standards for commercial vehicles;
- Ensure information systems provide quality and timely commercial vehicle safety data for compliance and enforcement; and,
- Build on existing technologies and policies to promote safety and improve efficiency for the commercial transport industry.

**Goal 5: The Province is prepared to respond to emergency events.**

**Objective 5.1: Continue improving B.C.'s emergency preparedness.**

Emergency Management British Columbia (EMBC), operating under the *Emergency Program Act*, continues to strive to be the leading organization in Canada for the management of emergencies and disasters at the provincial level. EMBC's leadership will solidify a cooperative and effective approach to emergency management to ensure the province is resilient, adaptive and confident in its abilities to meet challenges to public safety from known and emergent threats.

EMBC works with the Minister of State for Emergency Preparedness to deliver the expected results outlined in Appendix B, and remains responsible to British Columbians for leading the management of provincial-level emergencies and disasters while supporting other authorities, such as municipalities, regional districts and First Nations, within their areas of jurisdiction. **Strategies**

- Expertly lead management of catastrophic disasters of provincial significance and impact;
- Support other authorities in their mandate to mitigate and manage emergencies and disasters;
- Empower and strengthen volunteer organizations that support emergency management;
- Excel in providing the Office of the Fire Commissioner with unique services; and, □ Support a learning culture of continuous organizational improvement.

EMBC's strategic activities are detailed in its [2014/15-2016/17 Strategic Plan](#). These strategies are in turn supported by six strategic lines of effort and specific deliverables that align with and empower EMBC, on behalf of the Ministry, to ensure British Columbia is prepared to respond to emergency events. The Strategic Plan will be updated in 2016/17.

**Performance Measure 6: Develop a Long-Term Program of Emergency Response Exercises**

Performance Measure	Baseline	2016/17	2017/18	2018/19
Develop and implement an integrated emergency response exercise program that engages all levels of government and stakeholders in testing emergency preparedness in B.C.	Appoint an emergency response program team and develop an initial emergency response exercise schedule.	Conduct a full-scale earthquake and tsunami response exercise.	Conduct a follow-up emergency response exercise to challenge preparedness of interagency jurisdictions for other hazards.	Conduct a follow-up emergency response exercise to challenge preparedness of interagency jurisdictions for other hazards.

**Data Source:** Data for this performance measure will be sourced from reports and assessments after each exercise, developed in collaboration with stakeholders, participants and observers.

### Discussion

While currently mandated to conduct a specific earthquake and tsunami exercise in 2016, in future years our response to other emergency or disaster scenarios will be challenged and assessed in accordance with the British Columbia Emergency Management System. Reports and assessments from a series of planned emergency response exercises will form a data record to help the Ministry make improvements to emergency preparedness and measure future improvement in performance during exercises.

## Goal 6: Excellent customer service.

### Objective 6.1: Continue improving service to B.C.'s business community.

#### Strategies

- Participate in cross-government integration of permitting processes;
- Streamline application and review processes for rural subdivisions; and,
- Implement online permit application and tracking tools to support reduced turnaround times.

### Objective 6.2: Provide excellent customer service to all British Columbians.

#### Strategies

- Communicate and engage more efficiently and effectively with Ministry stakeholders;
- Undertake annual surveys to better understand customer expectations and level of service; and,
  - Evaluate results to determine how to enhance customer service and act on the findings.

**Performance Measure 7: Customer Service**

Performance Measure	Baseline	2015/16 Forecast	2016/17 Target	2017/18 Target	2018/19 Target
Customer Satisfaction Survey: Stakeholder satisfaction with Ministry services and processes, rated on a scale of 1 to 5.	3.9	4.10	4.10	4.10	4.10

**Data Source:** The Ministry's Customer Satisfaction Survey is based on the Common Measurement Tool (CMT), a survey framework designed by the Institute for Citizen-Centred Service to be administered by public-sector organizations to facilitate the measurement of citizen satisfaction.

**Discussion**

This performance measure helps assess how the Ministry meets the three goals of Accountability, Service and Respect that are set out in the Taxpayer Accountability Principles. The customer satisfaction score is based on British Columbians' ratings of service they received from the Ministry. The survey focuses on the six core drivers of customer satisfaction: fairness, staff knowledge, timeliness, accessibility, staff respect and courtesy, and information. The Customer Satisfaction Survey uses a web-based and in-person questionnaire to complete the study. Survey respondents include local governments, stakeholders and the general public. The Ministry uses the survey results to identify areas and processes to improve service delivery. The persistent targets represent the Ministry's ability to consistently deliver high quality customer service.



## Resource Summary

Core Business Area	2015/16 Restated Estimates <sup>1</sup>	2016/17 Estimates <sup>2</sup>	2017/18 Plan	2018/19 Plan
<b>Operating Expenses (\$000)<sup>3</sup></b>				
<b>Transportation and Infrastructure Improvements</b> .....	11,765	11,868	11,932	12,018
<b>Public Transportation<sup>4</sup></b> .....	301,201	301,678	304,166	307,828
<b>Highway Operations</b> .....	480,061	492,332	493,523	494,725
<b>Commercial Transportation Regulation ...</b>	1,548	1,552	1,571	1,576
<b>British Columbia Pavilion Corporation ....</b>	9,022	9,099	9,179	9,266
<b>Emergency Management BC</b> .....	14,437	15,039	15,125	15,179
<b>Executive and Support Services</b> .....	10,870	11,781	11,933	12,043
<b>Emergency Program Act<sup>5</sup></b> .....	14,478	14,475	14,483	14,496

<sup>1</sup> For comparative purposes, the amounts shown for 2015/16 have been restated to be consistent with the presentation of the 2016/17 Estimates.

<sup>2</sup> Further information on program funding and vote recoveries is available in the [Estimates and Supplement to the Estimates](#).

<sup>3</sup> Operating expenses are reported net of funding from external sources, primarily the BC Transportation Financing Authority.

<sup>4</sup> Public Transportation operating expenses include government contributions towards public transit and coastal ferry services.

<sup>5</sup> The *Emergency Program Act* provides for preparedness, response to and recovery from emergencies and disasters, and for hazard mitigation initiatives.

<b>Total</b>	843,382	857,824	861,912	867,131
<b>Ministry Capital Expenditures (Consolidated Revenue Fund)</b> <b>(\$000)</b>				
<b>Highway Operations</b>	5,274	4,072	3,107	3,107
<b>Total</b>	5,274	4,072	3,107	3,107

## Major Capital Projects

Major Capital Projects	Targeted Completion Date (Year)	Approved Anticipated Total Cost of Project (\$ millions)	Project Cost to Dec 31, 2015
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<p><b>Evergreen Line Rapid Transit</b></p> <p><b>Objective:</b> Extend Metro Vancouver's rapid transit network to the growing northeast sector communities, providing alternative transit choices, increasing transit ridership and reducing greenhouse gas emissions and road congestion.</p> <p><b>Costs:</b> Estimated project cost is \$1.431 billion, with the Government of Canada contributing up to \$424 million, the Government of B.C. contributing \$586 million, other partners contributing \$21 million, and TransLink contributing the remaining \$400 million and operating the system as part of the overall rapid transit network.</p> <p><b>Benefits:</b></p> <ul style="list-style-type: none"> <li>• Provide fast, frequent and convenient service;</li> <li>• Increase transit ridership and capacity, with 70,000 riders per day by 2021;</li> <li>• Reduce traffic congestion;</li> <li>• Support regional and municipal growth management plans; and,</li> <li>• Provide economic opportunities by creating 8,000 new jobs during construction.</li> </ul> <p><b>Risks:</b></p> <ul style="list-style-type: none"> <li>• Construction through a developed urban area;</li> <li>• Managing traffic during construction along busy urban commuter routes; and,</li> <li>• Construction of a two-kilometre bored tunnel.</li> </ul> <p>More information about the project can be found at <a href="http://evergreenline.gov.bc.ca">evergreenline.gov.bc.ca</a>.</p>	2017	1,431	1,133
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Major Capital Projects	Targeted Completion Date (Year)	Approved Anticipated Total Cost of Project (\$ millions)	Project Cost to Dec 31, 2015
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	2016	68.9	60.5
<p><b>Highway 1 - Monte Creek to Pritchard</b></p> <p><b>Objective:</b> Upgrading 10.5 kilometres of Highway 1 between the junction with Highway 97 at Monte Creek and Pritchard to a four-lane standard. Associated upgrades include side road network connections to the highway, construction of interchanges and new frontage roads, two emergency vehicle turn around points and median barrier and drainage facilities to provide continuity between this project and the Pritchard to Hoffman's Bluff project.</p> <p><b>Costs:</b> Estimated project cost is \$68.9 million, with the Government of Canada contributing \$16.7 million.</p> <p><b>Benefits:</b></p> <ul style="list-style-type: none"> <li>• Improved safety, mobility and reliability of this section of Highway 1 for all road users;</li> <li>• Increased capacity on a vital transportation link between B.C. and the rest of Canada, supporting regional, provincial and national economic growth;</li> <li>• Improved access for cyclists and pedestrians; and,</li> <li>• Mitigation of impacts on First Nations interests.</li> </ul> <p><b>Risks:</b></p> <ul style="list-style-type: none"> <li>• Costs associated with resolving potential construction contractor claims;</li> <li>• Potential costs and time associated with completing archaeological investigations; and,</li> <li>• Potential additional costs related to completing property acquisition.</li> </ul> <p>More information about the project can be found at <a href="http://engage.gov.bc.ca/bchwy1/projects">engage.gov.bc.ca/bchwy1/projects</a>.</p>			

Major Capital Projects	Targeted Completion Date (Year)	Approved Anticipated Total Cost of Project (\$ millions)	Project Cost to Dec 31, 2015
<p><b>Highway 1 Widening and 216 Street Interchange</b></p> <p><b>Objective:</b> Widening the Trans-Canada Highway to six lanes between 202 Street and 216 Street and construction of a diamond interchange at 216 Street to improve traffic flow, reliability and congestion on a core National Highway System route used extensively for moving people and goods in Metro Vancouver. <b>Costs:</b> The estimated project cost is \$59 million, inclusive of property acquisition costs, escalation and contingency. The Government of Canada is contributing one half of eligible costs up to a maximum of \$22.333 million under the Provincial-Territorial Infrastructure Component of the new Building Canada Fund. The Township of Langley is contributing \$14.333 million toward the cost of the interchange.</p> <p><b>Benefits:</b></p> <ul style="list-style-type: none"> <li>• Improve safety for all road users;</li> <li>• Reduce congestion and improve travel times through a key corridor;</li> <li>• Support transit use, cycling and other alternatives to single occupant vehicles; and,</li> <li>• Keep regional traffic off local streets.</li> </ul> <p><b>Risks:</b></p> <ul style="list-style-type: none"> <li>• Unknown geotechnical conditions, property impacts, community support, First Nations archeological impacts and environmental permits;</li> <li>• Maintaining adequate traffic flow during construction may require temporary works and and development of comprehensive traffic control plans; and,</li> <li>• Schedule risk associated with the acquisition of property and securing Agricultural Land Commission approval for non-farm use of lands required for the interchange.</li> </ul>	2018	59.0	3.5

Major Capital Projects	Targeted Completion Date (Year)	Approved Anticipated Total Cost of Project (\$ millions)	Project Cost to Dec 31, 2015
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	2019	85.0	1.7
<p><b>Highway 1 – Admirals Road/McKenzie Avenue Interchange</b></p> <p><b>Objective:</b> Construction of an interchange on the Trans-Canada Highway at the intersection with Admirals Road and McKenzie Avenue to improve traffic flow and reliability and reduce congestion on a core National Highway System route. The project includes construction of shoulder bus lanes, extension of the merge lanes, a westbound on-ramp from Burnside Road and grade-separated structures for the Galloping Goose Regional Trail. <b>Costs:</b> The estimated cost is \$85 million, inclusive of property acquisition costs, escalation and contingency. The Government of Canada is contributing one half of eligible costs up to a maximum of \$32.648 million under the Provincial-Territorial Infrastructure Component of the new Building Canada Fund.</p> <p><b>Benefits:</b></p> <ul style="list-style-type: none"> <li>• Improve safety for all road users;</li> <li>• Reduce congestion and improve travel times through a key corridor;</li> <li>• Support transit use, cycling and other alternatives to single occupant vehicles; and,</li> <li>• Provide sufficient cross-section through the interchange to allow for the future introduction of HOV lanes along the corridor.</li> </ul> <p><b>Risks:</b></p> <ul style="list-style-type: none"> <li>• Unknown geotechnical conditions, property impacts, First Nations archeological impacts and relocation of a large Capital Regional District waterline;</li> <li>• Maintaining adequate traffic flow during construction may require temporary works and development of comprehensive traffic control plans; and,</li> <li>• Schedule risk associated with the acquisition of property and securing environmental approvals and permits. More information is available on the project web site at <a href="http://engage.gov.bc.ca/mckenzieinterchange">engage.gov.bc.ca/mckenzieinterchange</a>.</li> </ul>			

Major Capital Projects	Targeted Completion Date (Year)	Approved Anticipated Total Cost of Project (\$ millions)	Project Cost to Dec 31, 2015
<p><b>Highway 97 Widening from Highway 33 to Edwards Road</b></p> <p><b>Objective:</b> Six-laning Highway 97 through Kelowna from Highway 33 to Edwards Road, intersection improvements at Leathead, McCurdy, Findlay/Hollywood and Sexsmith, access consolidation and realignment of Rutland Road to provide separation from intersections on Highway 97.</p> <p><b>Costs:</b> The estimated cost is \$59.7 million inclusive of property costs, escalation and contingency. The Government of Canada is contributing half of eligible costs up to a maximum of \$18 million under the Major Infrastructure component of the Building Canada Fund.</p> <p><b>Benefits:</b></p> <ul style="list-style-type: none"> <li>• Improved traffic flow and reduced congestion on a core National Highway System route;</li> <li>• Improved safety for road users;</li> <li>• Improved reliability for Rapid Bus service between West Kelowna and UBCO;</li> <li>• More efficient and safer connections to UBCO, Quail Ridge, Rutland, Glenmore, Ellison, Lake Country and beyond for motorists, cyclists and transit users; and, □ Safer access to and from adjacent properties.</li> </ul> <p><b>Risks:</b></p> <ul style="list-style-type: none"> <li>• Unknown sub-surface conditions and First Nations archeological impacts;</li> <li>• Maintaining adequate traffic flow during construction will require development of comprehensive traffic control plans; and,</li> <li>• Schedule risk associated with the acquisition of property.</li> </ul> <p>More information is available on the project web site at <a href="http://OkanaganValley/projects/hwy97_six-laning/">OkanaganValley/projects/hwy97_six-laning/</a>.</p>	2017	59.7	12.5



Major Capital Projects	Targeted Completion Date (Year)	Approved Anticipated Total Cost of Project (\$ millions)	Project Cost to Dec 31, 2015
<p><b>Port Mann Bridge / Highway 1</b></p> <p><b>Objective:</b> The vast majority of Port Mann/Highway 1 Improvement Project construction was declared complete in September 2015. The new 10-lane Port Mann Bridge and 37 kilometres of highway improvements cleared the worst bottleneck in the province and drivers are saving several hours per week on the faster, more efficient corridor. Work on the Golden Ears Connector, an off-corridor improvement included as part of the Port Mann/Highway 1 Improvement Project, will be completed in 2016/17.</p> <p>As a provincial Crown corporation, Transportation Investment Corporation is responsible for delivering this project and prepares its own service plan and annual service plan report, separate from the Ministry's, which can be found at: <a href="http://www.pmh1project.com/">www.pmh1project.com/</a>.</p>	2017	3,319	3,296

## Planned Major Capital Projects

### Phase Four of the Kicking Horse Canyon Project

**Objective:** Upgrade the final 4.8 kilometres of the 26-kilometre Kicking Horse Canyon section of the Trans-Canada Highway to a modern, four-lane standard, completing the corridor improvements from the junction of Highway 95 at Golden to the western boundary of Yoho National Park. This portion of the Trans-Canada Highway serves as a gateway between B.C. and the rest of North America, connecting resource extraction sites with processing, manufacturing, and distribution centres, and is a key part of the province's resource economies, tourism and inter-provincial trade. The first three phases of the project have been completed and are now in operation.

**Costs:** The current estimate for Phase 4 is \$450 million.

**Benefits:**

- Safer, more reliable roads and increased capacity on a critical provincial and national gateway; and,
  - Economic development through increased tourism and efficient movement of goods and services.

**Risks:**

- Challenging climatic and geographic conditions; and,
- Managing traffic during construction.

More information about the project can be found at [www.th.gov.bc.ca/kickinghorse](http://www.th.gov.bc.ca/kickinghorse).

### George Massey Tunnel Replacement Project

**Objective:** The George Massey Tunnel experiences significant congestion and delays. Without improvements, safety, economic growth and regional livability will be constrained. The tunnel is being replaced with a bridge with dedicated transit/HOV lanes, a multi-use pathway for cyclists and pedestrians and related Highway 99 improvements (three replacement interchanges and highway widening). The Project will reduce congestion, address safety and reliability concerns and improve transit service along the corridor. Construction is expected to begin in 2017.

**Costs:** The current cost estimate is \$3.5 billion. The cost estimate will continue to be refined until the detailed project scope is confirmed following Phase 3 Consultation and environmental review. The environmental assessment process is currently underway.

**Benefits:**

- Improved safety and reliability with present-day seismic standards and fewer crashes;
- Improved travel times and movement of people and goods on Highway 99 and Highway 91;
- More opportunities for transit, HOV, cyclists and pedestrians;
- Improved access to major trade gateways, industrial and local business areas and recreational opportunities, and improved access for local agricultural and residential communities; and, □ Vehicle operating cost savings and reduced congestion and idling.

**Risks:**

- Construction on soft soils; and,
- Maintaining traffic during construction for road and marine users.

More information about the project can be found at [engage.gov.bc.ca/masseytunnel](https://engage.gov.bc.ca/masseytunnel).

## Transportation Investments

(\$ millions)	2016/17	2017/18	2018/19	Total
<b>Provincial Investments</b>				
<b>Highway Rehabilitation</b>	210	213	215	638
<b>Side Road Improvement Program</b>	90	90	90	270
<b>Natural Gas Road Upgrade Program</b>	20	20	20	60
<b>Highway 1 – Kamloops to Alberta Border</b>	48	57	101	206
<b>George Massey Tunnel Replacement Project<sup>1</sup></b>	7	-	-	7
<b>Okanagan Valley Corridor</b>	35	50	31	116
<b>Cariboo Connector</b>	40	35	40	115
<b>Major Highway Corridors and Roads</b>	188	171	262	621
<b>Other Transportation Programs</b>	98	65	62	225
<b>Transit Infrastructure</b>	158	157	136	451
<b>Total Provincial Transportation Investment<sup>2</sup></b>	894	858	957	2,709
<b>Investments funded through contributions from Federal Government and other partners</b>				
<b>Contributions from all partners</b>	240	159	271	670
<b>Total Investment in Transportation Infrastructure</b>	1,134	1,017	1,228	3,379

<sup>1</sup> Subject to Treasury Board approval of the final project business case.

<sup>2</sup> Total provincial investments include operating and capital spending.

Transportation Investment Corporation (\$ millions)	2016/17	2017/18	2018/19	Total
<b>Port Mann Highway 1</b>				
Capital Project	10	-	-	10
Rehabilitation	6	4	4	14
<b>Total Investments</b>	16	4	4	24

<b>Total Investments in Transportation Infrastructure including the Port Mann Highway 1 Improvement Project</b>	1,150	1,021	1,232	3,403
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## Crown Corporations

The Minister is responsible for the following Crown corporations: the BC Railway Company (BCRC), BC Transportation Financing Authority (BCTFA), BC Transit, the Transportation Investment Corporation (TI Corp), the Insurance Corporation of British Columbia (ICBC) and the B.C. Pavilion Corporation (PavCo). BCRC and BCTFA are reported in this service plan. BC Transit, TI Corp, ICBC and PavCo are self-reporting Crowns and more information can be found on their respective web sites, [bctransit.com](http://bctransit.com), [pmhlproject.com](http://pmhlproject.com), [icbc.com](http://icbc.com) and [bcpavco.com](http://bcpavco.com).

## British Columbia Railway Company

### Organizational Overview:

BCRC's primary mandate is to support *The Pacific Gateway Transportation Strategy 2012–2020: Moving Goods and People* by acquiring and holding railway corridor and strategic port lands, and by making related infrastructure investments to provide benefits to the province. BCRC owns the former BC Rail railway lands and track infrastructure, which is leased to CN Rail through the Revitalization Agreement. Consistent with *The Pacific Gateway Transportation Strategy*, BCRC owns and operates the Roberts Bank Port Subdivision rail line (a 40- kilometre track from Surrey to Roberts Bank coal and container terminals). BCRC, through its subsidiary BCR Properties Ltd., owns port-related lands which are leased to terminal operators, including those upon which the Vancouver Wharves and Squamish Terminals port facilities operate.

BCRC is a corporation incorporated under the *British Columbia Railway Act*. On April 1, 2010, BCRC moved under the control and management of the Ministry of Transportation and Infrastructure, becoming a wholly- owned subsidiary of the BC Transportation Financing Authority (BCTFA).

BCRC has retained its legislative authority and is governed by two principal pieces of legislation. The *British Columbia Railway Act* establishes the corporation's structure, governance, responsibilities and accountabilities. The *British Columbia Railway Finance Act* establishes the borrowing and investment framework for BCRC. BCRC must also meet the requirements common to other government corporations and organizations under the *Financial Administration Act* and the *Budget Transparency and Accountability Act*.

BCR Properties Ltd. also owns surplus real estate holdings not required for railway and port operations. Its mandate is to dispose of all land holdings not required to support railway and port operations. This mandate is carried out by staff in the Ministry of Transportation and Infrastructure.

### **Corporate Governance:**

BCRC's governance practices are in accordance with the best practices outlined in the *BC Governance and Disclosure Guidelines for Governing Boards of British Columbia Public Sector Organizations*, Board Resourcing and Development Office, February 2005.

The Deputy Minister of the Ministry of Transportation and Infrastructure, is the sole member and chair of the Board of Directors. More information on BCRC's governance is available on its [web site](#).

### **Goals and Strategies:**

**Goal 1: Provide open access for the three class one railways serving the Roberts Bank port terminals via BCRC's Port Subdivision and ensure safe, reliable and efficient freight train operations.**

#### **Strategies:**

- Conduct dispatching, train control and yard management in a manner that provides fair and equal access to Roberts Bank port terminals;
- Maintain railway track and infrastructure in compliance with standards acceptable to the BC Safety Authority and Transport Canada; and,
- Maintain cooperative relationships with port terminal operators and neighbouring municipalities of Delta and Surrey.

**Goal 2: Participate in joint planning and development initiatives related to the Pacific Gateway Transportation Strategy.**

#### **Strategies:**

- Provide advice and support to further the Pacific Gateway Transportation Strategy;
- Secure through purchase option, or other means, lands suitable for supporting Pacific Gateway Strategy objectives; and,
- Make investments in infrastructure projects that support the Pacific Gateway Strategy.

**Goal 3: Effective and efficient management of the long-term leases of BCRC's strategic assets, including the Revitalization Agreement with CN Rail, the Operating Lease Agreement with Kinder Morgan Canada Terminals and the property lease with Squamish Terminals.**

#### **Strategies:**

- Manage a positive landlord-tenant relationship with Squamish Terminals, CN Rail and Kinder Morgan;
- Monitor CN Rail compliance with terms of the Revitalization Agreement and Kinder Morgan compliance with terms of the Operating Lease Agreement; and,
- Protect the strategic interests of BCRC and the Province whenever terms of the Revitalization Agreement and the Operating Lease Agreement require enforcement or interpretation.

**Goal 4:        Dispose of all surplus real estate holdings and other assets not required for freight railway corridors or port terminal operations.**

**Strategies:**

- Dispose of surplus real estate holdings in a manner that maximizes commercial returns;
- Subdivide larger land holdings where total net proceeds of disposition can be increased;
- Obtain market rates on leases, encroachments, easements etc. on retained lands; and,
- Fulfill obligations and oversight responsibilities relating to environmental laws and regulations.

## **BC Transportation Financing Authority**

### **Organizational Overview:**

The BC Transportation Financing Authority (BCTFA) was established in 1993 as a Crown corporation operating under the *Transportation Act* with a mandate to plan, acquire, construct, hold, improve or operate transportation infrastructure throughout B.C. The BCTFA owns all provincial highways and land held for construction of future transportation infrastructure. However, administration, regulatory responsibility and operational authority for management of highways, as set out in the *Transportation Act*, are the responsibility of the Minister and the Ministry of Transportation and Infrastructure. The BCTFA has no dedicated staff. Management is provided by staff at the Ministry of Transportation and Infrastructure.

### **Corporate Governance:**

The Minister of Transportation and Infrastructure is the Minister responsible for the BCTFA and the sole member of the Board of Directors. The Deputy Minister of the Ministry of Transportation and Infrastructure is appointed as the Chief Executive Officer and is responsible for the business and operations of the BCTFA.

**Goal 1: Maximize the financial, social and economic benefits of provincial transportation investments.**

**Strategies:**

- Protect existing transportation infrastructure by replacing, rehabilitating and seismic retrofitting of the transportation networks;
- Invest wisely with comprehensive transportation investment plans that support long-term and sustainable economic growth;
- Develop strategic partnerships with federal and other local government agencies, communities and private sectors that serve the best interest of British Columbians; and,
- Use innovative solutions and best practices to deliver the most cost effective transportation investment plans.

## BC Transportation Financing Authority Statement of Operations

	2015/16 Forecast	2016/17 Budget	2017/18 Plan	2018/19 Plan
<b>Revenue (\$000)</b>				
<b>Tax Revenue<sup>1</sup></b>	426,500	430,000	433,000	436,000
<b>Amortization of deferred contributions<sup>2</sup></b>	168,830	172,760	181,742	178,855
<b>Other operating revenue<sup>3</sup></b>	32,953	58,940	43,970	16,751
<b>Total</b>	628,283	661,700	658,712	631,606
<b>Expenditures (\$000)</b>				
<b>Highway Operations</b>	559,483	577,610	563,145	572,068
<b>Transit Programs</b>	92,003	120,136	127,495	132,880
<b>Ferry Operations</b>	25,267	29,468	19,962	21,470
<b>Other</b>	43,949	58,445	46,305	48,657



<b>Debt Servicing Costs<sup>4</sup></b>	349,585	401,699	466,488	532,173
<b>Total</b> .....	1,070,287	1,187,358	1,223,395	1,307,248
<b>Net loss (\$000)</b>				
<b>Net operating loss</b>	(442,004)	(525,658)	(564,683)	(675,642)

<sup>1</sup> Tax revenue includes 6.75 cents per litre motor fuel tax and a provincial sales tax on short-term car rental of \$1.50 per day.

<sup>2</sup> Contributions towards capital assets are deferred and amortized to income at the same rate as the related highway infrastructure is amortized to expense.

<sup>3</sup> Other operating revenue includes property sales, rental revenues, earnings from the British Columbia Railway Company, and grants from the Province.

<sup>4</sup> Interest on borrowing used to finance construction work in progress is capitalized. Upon completion, related interest costs are expensed.

## Appendices

### Appendix A: Major Programs

**Highway Rehabilitation** – Invest \$566 million from 2016/17 through 2018/19 in main highways and bridge surfacing, bridge rehabilitation and replacement and seismic retrofits, and \$72 million in safety projects across the province, including community safety projects, intersection improvements, snow avalanche infrastructure and guardrail and livestock fencing installation.

**Side Roads Improvement Program** – Invest \$270 million from 2016/17 through 2018/19 to make side roads safer and more reliable and improve connections between communities.

**Natural Gas Road Upgrade Program** – Invest \$60 million from 2016/17 to 2018/19 for rehabilitating and upgrading the existing public road infrastructure in the Northeast region of the province to attract new investment, create jobs and improve safety for both industry and residents.

**Okanagan Corridor Improvements** – Continue the Central Okanagan Planning Study, support trade and tourism, enhance safety, reduce congestion and support the use of transit in Okanagan Valley corridors by allocating \$116 million over the next three years to improve the local highway system.

**Cariboo Connector Program** – The Cariboo Connector Program will continue to expand the 460 kilometre portion of Highway 97 from Cache Creek to Prince George. This major route expansion



is designed to increase safety and decrease travel times, while providing northern communities with a first-class trade corridor that meets the needs of a rapidly expanding economy.

**Other Highway Corridors and Programs** – As outlined in B.C. on the Move: A 10-Year Transportation Plan, the Ministry will work with local governments and stakeholders to undertake priority infrastructure improvements and continue to four lane sections of the Trans-Canada Highway between Kamloops and the Alberta border to improve the flow of trade and increase safety on this corridor. More information on these projects is available on the Ministry's web site.

**BikeBC** – The BikeBC program helps local governments develop their cycling infrastructure to help encourage cycling and walking for commuting, recreation and tourism. This provides alternatives to car travel, resulting in reduced traffic congestion and greenhouse gas emissions and a healthier population. The latest BikeBC investment is \$23 million over the next three years.

**Investing in Transit** – Access to public transit – to support the economy, community livability, and the environment – is a key objective of B.C. on the Move: A 10-Year Transportation Plan. Transit contributes to a strong provincial economy and to prosperous communities by providing an affordable transportation alternative that connects people with jobs, education, health care and recreation. It also reduces congestion, allowing for more efficient people and goods movement, supports efficient land use and contributes to reductions in greenhouse gas and other emissions. Priorities for action include maintaining high levels of operating support for BC Transit systems, partnering with local communities outside Metro Vancouver to replace and upgrade assets, funding one-third of the cost of major new rapid transit projects in Metro Vancouver and securing federal funding for transit investments.

## **Appendix B: Minister of State for Emergency Preparedness**

### **Expected Results for 2016/17**

These expected results are set out in section 5(3) of the *Balanced Budget and Ministerial Accountability Act* as follows:

- a) Engage with British Columbia's provincial and territorial counterparts, local governments, First Nations and external partners in participation with the federal government to meet Canada's mandated commitment to better predict, prepare for, and respond to weather-related emergencies and natural disasters;
- b) Support the Minister of Transportation and Infrastructure in finalizing discussions respecting the New Building Canada Fund and the National Disaster Mitigation Program;
- c) Continue working with Emergency Management BC to support the implementation of initiatives that contribute to the delivery of Emergency Management BC's mandate;
- d) Work with Emergency Management BC to support the conduct of Exercise Coastal Response, a full-scale earthquake and tsunami response exercise expected to be implemented in the Port Alberni region in June 2016;

- e) Support further development of the BC Earthquake Immediate Response Plan based on the lessons learned from Exercise Coastal Response described in paragraph (d),
- f) Continue to promote emergency preparedness within British Columbia;
- g) Review legislation respecting emergency preparedness and fire prevention, suppression and investigation to determine whether to make recommendations about legislative changes;
- h) Submit to Cabinet a report on the results referred to in paragraphs (a) to (g) on or before March 31, 2017.

## **Appendix C: Ministry Contact Information Web site**

[www.gov.bc.ca/tran](http://www.gov.bc.ca/tran)

### **Ministry Contacts**

[www.gov.bc.ca/tran/contacts](http://www.gov.bc.ca/tran/contacts)

### **General Inquiries**

Email: [tran.webmaster@gov.bc.ca](mailto:tran.webmaster@gov.bc.ca)

Phone: 250 387-3198 Fax:  
250 356-7706

### **Mailing Address**

PO Box 9850 Stn Prov Govt  
Victoria, BC V8W 9T5  
Canada

### **Regional Offices**

#### **South Coast Regional Office**

1500 Woolridge Street, Suite 310  
Coquitlam, BC V3K 0B8

604 527-2221

**Southern Interior Regional Office**

447 Columbia Street  
Kamloops, BC V2C 2T3 250  
828-4220

**Northern Regional Office**

1011 4th Avenue, Suite 213  
Prince George, BC V2L 3H9 250  
565-6185

**Emergency Management BC**

2261 Keating Cross Road, Block A - Suite 200  
Saanichton, BC V8M 2A5  
250 953-4002

## **Appendix D: Hyperlinks to Additional Information**

Additional information can be found online at the following:

Ministry of Transportation and Infrastructure

[www.gov.bc.ca/tran](http://www.gov.bc.ca/tran)

[www.twitter.com/tranbc](https://www.twitter.com/tranbc) [www.drivebc.ca](http://www.drivebc.ca)

Legislation governing the Ministry's activities

[www.th.gov.bc.ca/key\\_initiatives/legislation/statutes.htm](http://www.th.gov.bc.ca/key_initiatives/legislation/statutes.htm)

Evergreen Line Rapid Transit Project [www.evergreenline.gov.bc.ca](http://www.evergreenline.gov.bc.ca)

George Massey Tunnel Replacement Project [engage.gov.bc.ca/masseytunnel](http://engage.gov.bc.ca/masseytunnel)

Provincial Transit Plan [www.th.gov.bc.ca/transit\\_plan](http://www.th.gov.bc.ca/transit_plan)

BC Railway Company [www.bcrco.com](http://www.bcrco.com)

Transportation Investment Corporation and the Port Mann/Highway 1 Improvement Project

[www.pmh1project.com](http://www.pmh1project.com)

BC Transit [www.bctransit.com](http://www.bctransit.com)

The Insurance Corporation of British Columbia [www.icbc.com](http://www.icbc.com)

The B.C. Pavilion Corporation [www.bcpavco.com](http://www.bcpavco.com)

Office of the Fire Commissioner

[www2.gov.bc.ca/gov/content/safety/emergency-preparedness-response-recovery/fire-safety](http://www2.gov.bc.ca/gov/content/safety/emergency-preparedness-response-recovery/fire-safety)

Emergency Management

[www2.gov.bc.ca/gov/content/safety/emergency-preparedness-response-recovery](http://www2.gov.bc.ca/gov/content/safety/emergency-preparedness-response-recovery)

# 2016 SPRING ESTIMATES

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# Emergency Program Act Review and Consultation Estimates Note

Ministry of Transportation and Infrastructure

Date: April 6, 2016

## ISSUE

- On July 30, 2015, the Minister of State for Emergency Preparedness, was mandated to review the *Emergency Program Act* (the Act) to ensure it is up to date and effective in managing the impacts of emergencies in British Columbia and to make a report to the Cabinet Committee on Secure Tomorrow (CCST) by March 31, 2016.

## ADVICE AND RECOMMENDED RESPONSE

- On January 11, 2016, we launched an online public consultation with British Columbians that will conclude on April 22, 2016; through this and other outreach, we will hear from local governments, stakeholders and the public to get their feedback on a variety of potential proposals with respect to the Act - these discussions, will help us shape and modernize the Act
- Governments and first responders need to be able to respond effectively and quickly to emergencies; and the Act sets out the authority that governments have, and guides the decisions that we and local governments can make.
- The Act was introduced well over two decades ago and has not kept pace with the increasing frequency and scale of emergencies, or the evolution of best practices within the field of emergency management.
- The Minister of State for Emergency Preparedness was mandated to review the legislation for opportunities to modernize it in order to help foster a more resilient British Columbia and to provide a solid legal foundation to meet the challenges of managing emergencies of a variety of magnitudes and types.

s.12,s.13

## BACKGROUND

- The Act requires local authorities, ministries, crown corporations, government agencies, and other persons to develop plans and programs to prepare and respond to emergencies and disasters in the Province.
- While the structure and best-practice framework for emergency management has changed over the last two decades, the Act has undergone few amendments since it was introduced in 1993.
- In the Premier's July 30, 2015, mandate letter to Minister Yamamoto, the new Minister of State for Emergency Preparedness was directed to lead a review of the Act to ensure the legislation is up to date and effective in managing the emergencies in BC.

s.12,s.13

- The Act has not changed much since it was introduced in 1993. Updating the Act legislation will modernize the legislative framework for emergency management, improving the Province's preparedness for catastrophic events and integration and coordination of emergency plans.
- Following internal, cross-ministry consultation, government is now embarking on a strategy to engage with external stakeholders to help guide potential amendments to the Act - these consultations with external stakeholders will bolster further policy development on potential legislative amendments.
- A discussion paper has been drafted to guide the consultations. It was posted online on January 11, 2016, and provides the opportunity for public feedback over a fifteen-week period.
- The following potential amendments being discussed as proposals in the discussion paper:
  - Change the Emergency Program Act to Emergency Management Act;
  - Define emergency plans to comprise elements of emergency preparation, mitigation, response and recovery;
  - Clarify the definition of emergency and include damage to the environment;
  - Change the definition of local authority to include Treaty First Nations;
  - Clarify the role/responsibility of EMBC and local authorities in emergencies;
  - Allow the Minister's delegate the authority to order local authorities and other government bodies (e.g. Crown Corps) to prepare or amend emergency plans;
  - Define critical infrastructure services and require owners of critical infrastructure assets to provide information about them;
  - Outline criteria to guide the exceptional powers allowed during a declared state of emergency. Currently these exceptional powers include: assuming use or demolition of personal land or property, authorizing civilian assistance, forcible entry without a warrant, and the ability to procure, ration and fix prices on essential supplies.
  - Additional proposed powers are the authority to collect/use/disclose information in an emergency, as well as expedite accreditation of medical personnel from other Canadian jurisdictions;

- Provide measures to enforce evacuation orders (e.g. arrest and remove) and make those forcibly removed financially responsible for their evacuation; and
- Consider the terms for limitation and expansion of employment protection for the local authority during a state of emergency.

## **PROGRAM CONTACT**

Gord Sharpe, Manager Strategic Plans, Policy and Legislation, EMBC, Plans & Mitigation –  
Cell: s.17



# Emergency Preparedness Public Education Estimates Note

Ministry of Transportation and Infrastructure

Date: April 8, 2016

## ISSUE

- Both the Auditor General's Report (2014) and the Henry Renteria Consultation Report (2014) identified a need for the Province to strengthen public education efforts in support of individual and community preparedness for resilience in the event of a major earthquake. The key recommendations from both studies included working together with significant agencies at all levels of government and private sector partners, to launch a long-term and coordinated earthquake preparedness public education and awareness program.

## ADVICE AND RECOMMENDED RESPONSE

- The Province recognizes that emergency management public education is a shared responsibility and success is dependent upon support from all levels of government.
- In response to the Auditor General's Report and the Earthquake Consultation, in 2015 EMBC conducted a Public Education Needs Assessment and struck a provincial working group comprised of key local government and private sector stakeholders to strategically identify organizational and provincial public education priorities.
- This project included an extensive review of current literature on effective public education research and practices, as well as qualitative research consisting of 58 interviews with government, nongovernmental organizations, private sector partners, and stakeholders across all regions of B.C.
- The literature review yielded valuable information regarding effective public education strategies, offering insight into topics such as behaviour change processes; variables that influence and motivate risk reduction behaviour; suggestions for effective practice and public education approaches; effective message content delivery methods; and tools for monitoring and evaluating campaign activities.
- In May 2015, EMBC launched PreparedBC – The province's official preparedness brand to ensure the consistent delivery of information and campaigns, and help build a lasting culture of preparedness.

## BACKGROUND

### PreparedBC: "In It Together":

- The program is centred around [www.gov.bc.ca/PreparedBC](http://www.gov.bc.ca/PreparedBC), a one-stop site for disaster readiness information.
- The comprehensive website houses core preparedness resources, including printable guides for both the public and local governments. They are:
  - A household preparedness guide and fill-in-the-blanks emergency plan.
  - The "In it Together" Neighbourhood Preparedness Guide.
  - The Earthquake and Tsunami Smart Manual.
  - Guides for people with disabilities and those living in multiple dwellings.
- In late 2015, PreparedBC also conducted an online survey asking British Columbian's to rate their preparedness and list any barriers to getting ready.

PreparedBC is using the findings to develop targeted resources and education campaigns in 2016, as part of a sustainable and multi-year public education program.

#### **Areas of Focus for 2016:**

- Development of learning modules for BC schools focused on Grade 6, building on successful "In It Together" preparedness suite of materials to enhance British Columbians preparedness
- Refresh EMBC website, shifting to new theme-based BC government website to ensure topics, themes and sub-themes best represent EMBC and its services to the public and stakeholders.
- Development of new resources to support various seasonal and cyclical campaigns i.e. "High Ground Hike" theme for Tsunami Preparedness Week, Preparedness Guide for Condominiums, etc. All campaigns include underlying theme of personal preparedness for resilience and positive messaging to ensure a consistent approach and focus.

#### **PROGRAM CONTACT**

Carol McClintock, Director, Organizational Learning, Emergency Management BC –  
Cell: s.17

# Fire Safety Act Estimates Note

Ministry of Transportation and Infrastructure

Date: April 12, 2016

## ISSUE

- The existing *Fire Services Act* (the Act) is being repealed and replaced by the new *Fire Safety Act* which is currently before the House as Bill 4. This will modernize the legislation and create an effective means for ensuring compliance with the BC Fire Code.

## ADVICE AND RECOMMENDED RESPONSE

- The goal of the proposed amendments is to modernize the Act and to make improvements.
- A new risk based approach takes into account the nature and use of buildings in guiding the need and frequency of fire inspections.
- It includes a manageable and streamlined out-of-court enforcement system with administrative penalties that will improve compliance.
- The Act provides local authorities with the power to evacuate or close a building where there is immediate danger to life and/or property.
- The fire inspection and investigation process becomes streamlined with the elimination of Local Assistant to the Fire Commissioner appointments and provides for improved powers.
- The Fire Commissioner will set the qualification standards – these will ultimately provide inspection and investigation consistency in BC.
- The *Fire Safety Act* will be enacted by OIC once the necessary regulations and policies are created.

## BACKGROUND

- The Act was last revised in 1979 and has been the subject of several revision efforts over the past 10 years. It is the foundation legislation that provides power to the Fire Commissioner to conduct inspections, investigations and to ensure compliance with the Act and *BC Fire Code*.
- The passing of legislation such as the *Charter of Rights and Freedoms* as well as the *Community Charter*, created since the last revision of the Act, have created the need to update aspects of the Act to reflect their impacts.
- Members from the Fire Services Liaison Group (FSLG) have been part of the key consultation body involved in the previous review work and they have participated in the revision of the Act. The information developed from all the consultations has been used to develop the new Fire Safety Act.
- The changes are intended to address a number of the recommendations within the FSLG report.

- The Coroner's (Lakeland) Inquest recommendation to amend the Act and improve compliance is addressed through the new Act.
- Consultations included UBCM and Local Government Management Association of BC members, the Fire Chiefs' Association, Fire Training Officers Association, Fire Prevention Officers Association of BC, Volunteer Fire Fighters' Association of BC, BC Professional Fire Fighters' Association, and Wildfire Management Branch (FLNRO).
- First Nations reserves are the responsibility of Indigenous and Northern Affairs Canada. Treaty First Nations are subject to the Fire Safety Act.

## **PROGRAM CONTACT**

Gordon Anderson, Fire Commissioner, Emergency Management BC – Cell<sup>s.17</sup>

# Disaster Financial Assistance Program - Provincial Estimates Note

Ministry of Transportation and Infrastructure

Date: April 1, 2016

## ISSUE

- BC has a program to help local governments and individuals impacted by a disaster cope with the cost of recovery from property damage for those events specifically designated as eligible for Disaster Financial Assistance (DFA).

## ADVICE AND RECOMMENDED RESPONSE

- Since 2000, BC has paid over \$52 million in DFA to individuals and local governments.
- For large events, BC can recover a portion of its disaster response and recovery costs from the federal government through the Disaster Financial Assistance Arrangements.

## BACKGROUND

- The DFA program is delivered under the *Emergency Program Act* and the ensuing Compensation and Disaster Financial Assistance Regulation. The DFA program, in effect since 1995, is obliged to provide compensation in compliance with this legislation.
- When DFA has been authorized for an event, DFA can pay 80% of the amount by which the accepted claim exceeds \$1,000, to a maximum accepted claim of \$300,000. There is no maximum for local governments.
- DFA is not insurance. The purpose of DFA is to provide assistance to individuals for their principal residence and to help farmers and small business owners when their livelihood is at risk. Insurable losses in the private sector are not eligible for DFA.
- For local government bodies, the DFA can help to restore essential infrastructure including roads, dikes and bridges.
- Most private sector DFA claims are for overland flooding disasters. Although overland flood insurance is available for commercial buildings, until recently this insurance was not available for single family residential homes.
- In the past year DFA has been available for flash flood, landslide and windstorm disasters in the Province. During this time DFA has paid over \$4.5 million to help 138 individuals and 28 local governments (local government assistance also includes disasters that occurred in earlier years). Average individual claim is about \$12,000.

## PROGRAM CONTACT

Johanna Morrow, Manager, Recovery and Funding Programs, Emergency Management BC,  
Cell: s.17

Attachments: Table: DFA events in the last two fiscal years  
Table: Summary of DFA event costs since 2000

Attachments:

Disaster Financial Assistance (DFA) Events in the Last Two Fiscal Years:

Event #	Geographic Locations	Effective Dates
1516-04	(Landslide & Flooding) SWE: Squamish Lillooet Regional District (Electoral Areas B, C & D), Village of Pemberton, Resort Municipality of Whistler, District of Squamish, Seton Lake First Nation, N'Quatqua Band, Squamish Nation, Lil'wat Nation	Sept 20 - 21, 2015
1516-03	LOCAL GOVERNMENT ONLY (Severe Windstorm) SWE: Sunshine Coast RD & Municipalities, Metro Vancouver RD & Municipalities, Fraser Valley RD & Municipalities	Aug 26 - Sept 2, 2015
1516-02	(Flash Flood) CTL: City of Kamloops	June 30 - July 1, 2015
1516-01	(Landslide & Flooding) CTL: Thompson Nicola Regional District (Electoral Areas E, I, M & N), Village of Cache Creek, City of Merritt, District of Logan Lake, Village of Lytton	May 23, 2015
1415-07	(Landslide & Flooding) CTL: Regional District of North Okanagan, Spallumcheen, Enderby, Coldstream, and other smaller communities in the Regional District of North Okanagan, District of West Kelowna, Thompson Nicola Regional District - Blackpool, Columbia Shuswap Regional District (Areas C, D, E, F)	Feb 2-23, 2015
1415-06	(Landslide & Flooding) SEA: Regional District of Central Kootenay – (Areas A, D, F, H, I, K, J)	Feb 5-9, 2015
1415-05	(Flooding) SWE: City of Delta, Douglas First Nation, Fraser Valley Regional District, Town of Gibsons, Village of Lions Bay, Mount Currie Nation, City of North Vancouver, District of North Vancouver, Village of Pemberton, City of Richmond, Samahquam First Nation, District of Sechelt, Skatin First Nation, Squamish Lillooet Regional District, District of Squamish, Sunshine Coast Regional District, District of West Vancouver, Resort Community of Whistler	Dec 8-12, 2014
1415-04	(Landslide) VIR: Alberni Clayoquot Regional District, City of Campbell River, Comox Valley Regional District (Areas A,B,C), Town of Comox, City of Courteney, Village of Cumberland, Hupacasath First Nation, Nanaimo Regional District (All Areas), City of Nanaimo, City of Parksville, City of Port Alberni, Powell River Regional District (Area A,B,C), City of Powell River, Town of Qualicum Beach, Snuneymuxw First Nation, Strathcona Regional District (Areas A,D), Tsehaht First Nation	Dec 8-12, 2014
1415-03	(Flooding) VIR: Alberni Clayoquot Regional District, City of Campbell River, Comox Valley Regional District (Areas A,B,C), Town of Comox, City of Courteney, Village of Cumberland, Hupacasath First Nation, Town of Ladysmith, Nanaimo Regional District (All Areas), City of Nanaimo, City of Parksville, City of Port Alberni, Powell River Regional District (Area A,B,C), City of Powell River, Town of Qualicum Beach, Snuneymuxw First Nation, Strathcona Regional District (Areas A,D), Tsehaht First Nation	Dec 8-12, 2014
1415-02	(Flooding) SWE: District of North Vancouver, District of West Vancouver, City of North Vancouver	Nov 3-4, 2014
1415-01	(Flooding) CTL: City of Kamloops, Tk'emlúps te Secwépemc First Nation (incl. Sun River Estates)	23-Jul-14

Summary of Disaster Financial Assistance (DFA) Events Since 2000:

<b>Fiscal Year</b>	<b>Event</b>	<b>DFA payments made to date</b>
2015/16	General	1,975,585
2014/15	General	2,141,122
	<b>2013 June</b>	<b>4,908,915</b>
2013/2014	General	264,674
2012/2013	General	1,960,610
	<b>2012 Freshet</b>	<b>2,449,831</b>
2011/2012	General	377,811
	<b>2011 June Flooding</b>	<b>3,062,351</b>
2010/2011	General	1,009,403
	<b>2010 September Flooding</b>	<b>2,903,510</b>
2009/2010	General	1,814,371
2008/2009	General	84,961
	<b>2009 Extreme Weather</b>	<b>7,621,038</b>
2007/2008	General	8,074,791
	<b>2007 Freshet</b>	<b>2,614,212</b>
2006/2007	General	1,705,376
	<b>2006 November Weather</b>	<b>726,631</b>
2005/2006	General	509,481
2004/2005	General	264,887
	<b>2005 Jan Severe Weather</b>	<b>1,739,690</b>
2003/2004	General	4,096
	<b>2003 Fall Flooding</b>	<b>2,212,001</b>
2002/2003	General	2,022,197
2001/2002	General	482,472
	<b>Pink Mountain/Halfway River</b>	<b>284,156</b>
	<b>Dawson Creek/McBride</b>	<b>259,225</b>
2000/2001	General	664,841
		<b>52,138,238</b>

Major DFA events eligible for federal cost-sharing under the DFAA are **bolded**. Other DFA events during the year are combined as a single line item under 'General'.

# Disaster Financial Assistance Arrangements - Federal Estimates Note

Ministry of Transportation and Infrastructure

Date: April 1, 2016

## ISSUE

- The federal Disaster Financial Assistance Arrangements (DFAA) are designed to assist provinces with the costs of dealing with a disaster where those costs would otherwise place a significant burden on the provincial economy and would exceed what provinces might reasonably be expected to fully bear on their own.

## ADVICE AND RECOMMENDED RESPONSE

- Since 2000, BC has spent \$772 million to respond to and recover from such major disasters and expects to recover \$511 million of these costs via the federal DFAA. See attached list of DFAA eligible disaster events since 2000 and the federal recoveries.
- The DFAA funding formula provides for a progressively higher share of federal funding when the Province's disaster response and recovery costs exceed \$3 per capita of the provincial population. BC's population is approximately 4.7 million. See attached table.
- BC has requested DFAA for the 2015 Wildfires. Response and recovery costs to fight only those wildfires that placed communities at risk are estimated at \$53 million. If approved, BC could recover about \$20 million through the DFAA.

## BACKGROUND

- To request the DFAA, the provincial minister responsible for emergency management sends a letter to the federal Minister of Public Safety. Approval is granted via a federal Order in Council (OIC).
- When a provincial disaster event is eligible for DFAA, Emergency Management BC (EMBC) reimburses other ministries for their current year disaster response and recovery costs. EMBC then gathers these costs along with other ministry prior year costs and its own response and Disaster Financial Assistance (DFA) recovery costs and submits a claim to Public Safety Canada for BC's proportional share of the federal DFAA.
- Key ministry stakeholders for provincial infrastructure damage include: the Ministry of Transportation and Infrastructure; Ministry of Forests, Lands and Natural Resource Operations; and the Ministry of Environment.
- Typical DFAA eligible costs include: operating provincial and local emergency operation centres; providing food and shelter for evacuated residents; compensating individuals, local authorities, and small businesses for uninsurable losses (see separate DFA note); providing sandbags and temporary dikes; fighting wildfires that place communities at risk; repairing provincial roads, bridges, parks and range fencing; and restoring fish bearing streams and rivers.



## **PROGRAM CONTACT**

Johanna Morrow, Manager, Recovery and Funding Programs, Emergency Management BC  
Cell: s.17

Attachments: DFAA Cost Sharing Formula  
Summary of DFAA Events Since 2000

Attachments:

DFAA Eligible Cost-Sharing Formula:

Eligible provincial expense thresholds (per capita of population)	Government of Canada share
First \$3 <i>(first \$14M)</i>	Nil
Next \$6 <i>(next 28M)</i>	50%
Next \$6 <i>(next 28M)</i>	75%
Remainder	90%

Summary of DFAA Events Since 2000:

Eligible Damage	Event	Total Expenditure	Federal Share
Wildfire	2015 Fire Season	53,483,017 <sup>*1 *3</sup>	20,000,000 <sup>*2</sup>
Wildfire	2014 Fire Season	73,404,829 <sup>*1 *3</sup>	55,000,000 <sup>*2</sup>
Flooding	2013 June Flooding	19,373,210 <sup>*1</sup>	8,000,000 <sup>*2</sup>
Flooding	2012 Spring Flooding	20,827,569 <sup>*1</sup>	8,000,000 <sup>*2</sup>
Flooding	2011 September Flooding	20,598,541	9,000,000 <sup>*2</sup>
Flooding	2011 June Flooding	65,196,538 <sup>*1</sup>	47,500,000 <sup>*2</sup>
Flooding	2010 September Flooding	64,643,738 <sup>*1</sup>	47,500,000 <sup>*2</sup>
Wildfire	2010 Fire Season	50,918,140	36,600,000 <sup>*2</sup>
Wildfire	2009 Fire Season	102,798,923	83,723,277 <sup>*2</sup>
Flooding	2009 Extreme Weather	15,459,712	4,600,000 <sup>*2</sup>
Flooding	2007 Freshet	17,875,029	4,861,308
Flooding	2006 November Weather	5,745,090	709,633
Flooding	2005 Jan Severe Weather	13,153,845	4,337,646
Flooding	2003 Fall Flooding	18,460,715	8,958,966
Wildfire	2003 Fire Storm	185,722,186	159,052,448
Flooding	Pink Mountain Flooding	29,303,211	10,682,445
Flooding	Dawson Creek/McBride	14,634,931	2,614,742
	<b>Total</b>	<b>771,599,224</b>	<b>511,140,465</b>

<sup>\*1</sup> Estimated costs until all recovery work has been completed

<sup>\*2</sup> Accounts Receivable until final payment is received

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# Flood Protection Program - Overview

## Estimates Note

Ministry of Transportation and Infrastructure

Date: April 5, 2016

### ISSUE

- The Flood Protection Program (FPP) within Emergency Management BC (EMBC) includes three distinct functions. Providing funds to local governments for construction of permanent flood protection works, overseeing the Fraser River Sediment Management Program and the administration of the Fraser River Debris Trap.
- The permanent works funding component of the FPP was a ten year commitment in 2007 and concluded on March 31, 2016. s.13,s.16  
s.13,s.16

### ADVICE AND RECOMMENDED RESPONSE

- The FPP was established in 2007 to fulfill government's commitment to provide flood mitigation funding of \$100 million over 10 years to local communities across the Province.
- As the FPP program is concluding, EMBC is working with partner ministries and the federal government to develop a new, enhanced program to help address the impacts of natural hazards and climate change.
- Through the FPP, the Province, federal government and local communities have committed over \$173 million for 168 flood protection projects across the Province since 2007.
- Mitigation works protect communities, reducing personal, social and economic losses and provincial response and recovery costs in the event of a flood. The return on investment for flood protection works generally ranges from 1:3 to 1:10.
- EMBC works closely with other ministries and local governments to coordinate and integrate planning, response and recovery activities related to flooding.

### BACKGROUND

#### Structural/ Permanent flood protection works:

- The FPP administers funding to local governments for permanent flood mitigation works to lessen the incidence and severity of flooding. The program is cost shared equally by federal, provincial and local governments resulting in the Province leveraging 3:1 dollar contributions.
- The federal funding (\$55 million) was made available through Infrastructure Canada's Building Canada Plan (BCP), and was accessible to the Province by matching funding. The defined term of the federal BCP funding program is from 2008/09 through 2015/16.
- With the conclusion of the current Infrastructure Canada BCP on March 31, 2016, the federal government has announced two new programs to support flood and natural hazard mitigation efforts.

- The 2014 federal budget included the announcement of \$200 million over 5 years for the new National Disaster Mitigation Program. The Province is currently working with the federal government to leverage this funding.
- The federal government's 2016 budget announced the continuation of infrastructure funding under the New Building Canada Plan and through the new Green Infrastructure Fund to assist adaptation measures to offset the impacts of climate change. s.13,s.16  
s.13,s.16

#### **Fraser River Sediment Management Program:**

- The Fraser River Sediment Management Program was established to maintain the existing flood profile by preventing the build-up of river bed materials through the removal of sediment equal to the amount deposited annually (approximately 230,000 cubic metres).
- Sediment management is an accepted flood mitigation technique; s.13  
s.13

s.13

**Fraser River Debris Trap is included within a separate note.**

#### **PROGRAM CONTACT**

Carol Loski, Director, Flood Protection Program, Emergency Management BC –  
Cell: s.17

# Flood Protection – Lower Mainland Structures

## Estimates Note

Ministry of Transportation and Infrastructure

Date: April 5, 2016

### ISSUE

- Would Greater Vancouver withstand a flood event similar to the Calgary event that occurred in June 2013?

### ADVICE AND RECOMMENDED RESPONSE

- Determining the flood risk of any area is complex and a comparison to other areas and events is problematic. The physical geography of the area dictates that flooding may be caused from several different or a combination of sources, some of which cannot be easily predicted. Rapid snow melt, high precipitation, tidal influences and storm surges can occur individually or in combination to cause widespread flooding.
- The most frequent flood threat in the lower mainland is freshet flooding, which occurs in the spring, as a result of snowpack melt combined with heavy spring rains. Freshet flooding tends to be gradual, normally taking weeks and in some cases months to occur compared to the rapid nature of flooding seen in Calgary.
- The Province takes the threat of flooding very seriously. In addition to ongoing support to local governments prior to, during and after a flood event, British Columbia has taken significant flood mitigation actions.
- Emergency Management BC (EMBC), its partner ministries and local governments are working together to identify areas of regional concern or risk. In particular, the Province is supporting the Fraser Basin Council's work with local communities to develop a Lower Mainland Regional Flood Management Strategy. The Strategy will help to better understand the risks and vulnerabilities to flooding and will assist with defining priorities and options for flood mitigation.
- It is also important to note that preparedness and mitigation is a shared responsibility. That's why EMBC is working on public education and awareness campaigns to increase the level of personal preparedness for all our citizens.

### BACKGROUND

- In addition to freshet flooding, BC's economic and critical infrastructure such as commercial, rail, and port operations can also be vulnerable to flooding from sea level rise and storm surges. EMBC is working with infrastructure stakeholders regarding these risks.
- The Flood Protection Program (FPP) was established in 2007 to fulfill government's commitment to provide flood mitigation funding of \$100 million over 10 years to local communities across the Province. As this program is concluding, EMBC is working with partner ministries and the federal government to develop a new program to help address the impacts of natural hazards.
- Since EMBC was established in 2006, the Province partnered with the federal and local governments to fund 78 flood mitigation projects worth nearly \$90 million dollars in the lower mainland Fraser River area. Twenty-eight of these projects were completed in 2007 as part of the urgent mitigation works initiative and the remaining 50 projects were contributed to by EMBC's FPP. The Province's total contribution to these cost shared projects in the lower mainland is nearly \$40 million dollars.

## ISSUE: What are the current diking standards in the lower mainland?

- In addition to undertaking emergency planning and local response activities, local governments are responsible for land use, permitting development, identifying vulnerable or high hazard areas, designating flood plain bylaws and providing mapping.
  - The Ministry of Forests, Lands and Natural Resource Operations (FLNRO), Water Stewardship and Inspector of Dikes is responsible for establishing and regulating dike standards in British Columbia.
  - The Province began supporting local governments with funding for the construction of a comprehensive system of flood defense in the 1970's. EMBC's FPP is continuing this work by providing federal and provincial funding to local governments.
  - There are approximately 350 km of dikes located in the lower mainland owned by 30 diking authorities that manage over 50 separate dikes.
  - The flood of record in the lower mainland occurred in 1894 and represents a 1:500 year return period event. This 1:500 standard is the current design flood profile level that lower mainland dikes should be constructed to withstand.
  - Approximately 250 km of dikes in the Fraser Valley dikes were re-constructed between 1970 and 1990 to a relatively uniform standard under the Fraser River Flood Control Program. s.13
  - The flood of 1948 was smaller than the flood of 1894, but caused far more damage due to increased floodplain development. The widespread flooding occurred due to dike breaches caused by both over topping and seepage failures. The extensive work on the diking system in the Fraser Valley protects vast amounts of land. During periods of concern, dikes are patrolled and inspected to identify areas of high risk and to provide emergency works if necessary. s.13
  - Designing a dike for overtopping is only one of many aspects of dike design. Of the more than 50 known dike failures in BC, the majority of failures have been caused by other factors (i.e. erosion, seepage, stability, recreational use damage, tree collapse, flood box and pump station failure etc). Dikes are also vulnerable to seismic damage during earthquake events.
  - The current system of more than 50 dikes in the Fraser Valley is unique with respect to its design and construction history –s.13
  - A dike is only as strong as its weakest section. While the diking system of defence is substantial, many dikes need to be updated to meet current standards. Lower mainland dikes met the design standards when constructed in the past, but due to morphological/ hydrological changes, may not continue to meet current standards.
  - Due to the dynamic nature of the Fraser River, climate change and sea level rise, the flood profile of the Fraser River can change. The most recent flood profile, developed and published in Summer 2014,s.13
- Sea level rise and larger flood flows due to climate change are expected to increase flood risk in the future.

- Sea level rise and the increased frequency of storms are of particular concern for our coastal areas. Current diking projects with a design life of approximately 100 years, are incorporating design provisions to allow flexibility for upgrades or modifications to account for sea level rise of at least one meter.

#### **ISSUE: What is the status of flood forecasting in BC?**

- The watershed feeding the Fraser River is roughly equal to half the size of California, making forecasting very complex. British Columbia's River Forecast Centre dedicates between 30 – 50 per cent of its resources to forecasting the Fraser River. This is in addition to the hydraulic modelling of the river undertaken by FLNRO.
- The Fraser River is continuously monitored by the River Forecast Centre (RFC) and during periods of increasing flow, five day forecasts are provided, with the frequency of forecasts increasing as necessary. During period of heightened concern, the RFC can produce forecasts up to several times a day. Generally, forecasts of high reliability can be produced two to three days in advance.
- British Columbia has an excellent working relationship with Environment Canada's meteorologists. Weather systems are continuously monitored and potential extreme weather events are effectively communicated with provincial partners and externally with local governments and stakeholders through EMBC's dedicated flood coordination readiness calls.

#### **PROGRAM CONTACT**

Carol Loski, Director, Flood Protection Program, Emergency Management BC –  
Cell: 5.17

# Fraser River Debris Trap Estimates Note

Ministry of Transportation and Infrastructure

Date: April 5, 2016

## ISSUE

- EMBC assumed the administration for the operation of the Fraser River Debris Trap (FRDT) from the Fraser Basin Council in 2011. The FRDT has been in operation since 1979, and is located on Crown land adjacent to the SFN (SFN) Indian Reserve (IR).
- Traditionally, SFN IR land was used to store and process woody debris removed from the FRDT. The SFN has raised concerns regarding environmental impacts to the land as a result of trap operations.

s.13,s.16

## ADVICE AND RECOMMENDED RESPONSE

- The FRDT is a vital public safety and environmental asset. The FRDT, located on the Fraser River just south of Hope, captures up to 100,000 cubic metres of debris annually. It prevents woody debris from floating downstream posing a risk to human safety, the environment, navigation and foreshore structures.
- A cost-benefit analysis conducted in 2006 concluded that for every dollar spent on the operation of the trap, \$12 in downstream infrastructure damage costs are avoided.
- The Province has been negotiating with the neighbouring SFN regarding the use of IR lands for the operation of the trap. To address the SFN's concerns regarding impacts to the IR, EMBC relocated the access to the FRDT from IR land to Crown land in October, 2015.
- EMBC has hired a consultant to perform a Phase 1 and 2 Environmental Site Assessment to understand the potential environmental impacts to the land. Phase 2 will be completed in April 2016.

## BACKGROUND

- EMBC assumed management of the FRDT in 2011 from the Fraser Basin Council.
- The annual cost of operating the FRDT is approximately \$623,000. Operating contributions are provided from provincial ministries and historically from Port Metro Vancouver.

s.13,s.16

- The Flood Protection Program is working with the provincial funding partners to determine options for funding the FRDT and engaging Port Metro Vancouver and external stakeholders.
- Historically, the FRDT has been accessed across a SFN IR and a portion of the IR was used for the operation of the FRDT.



- The protracted negotiations caused a delay in debris removal from the FRDT the past two years, resulting in the use of an alternate removal method and approximately 55,000 cubic metres of debris piled on Crown Land and in the trap.
- EMBC is working with partner ministries and relevant stakeholders to determine the best options for managing the piled debris in a safe, cost-effective and environmentally-sensitive manner. The contract term for operating the FRDT expired on March 31, 2016. The contract for operations is currently posted for public tender. It is anticipated that a new contractor will be in place by June 2016.

s.13,s.16

## **PROGRAM CONTACT**

Carol Loski, Director, Flood Protection Program, Emergency Management BC –  
Cell: s.17

# Climate Change and Natural Hazards Estimates Note

Ministry of Transportation and Infrastructure

Date: April 5, 2016

## ISSUE

- Climate change has been demonstrated to contribute to severe storms, drought and sea level rise.
- Recent trends indicate that the frequency and magnitude of severe weather events due to climate change is increasing. This may add to the current risk for riverine and urban flooding, debris flows, avalanches and landslides as well as other natural hazards.

## ADVICE AND RECOMMENDED RESPONSE

- The Province takes the threat of flooding very seriously. In addition to ongoing support to local governments prior to, during and after a flood event, British Columbia has taken significant action to help protect communities through flood mitigation.
- Emergency Management BC (EMBC) is working closely with the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) and the Climate Change Action Secretariat at the Ministry of Environment (MoE) to identify options to support local governments in addressing risks associated with climate change.

## BACKGROUND

- Climate change, and the severe weather events associated with it, will lead to more frequent and diverse natural hazard disaster events.
- Periods of drought may lead to increased wildfires, landslides, debris flows and sink holes. Severe rain after a period of drought or wildfires can result in flash flooding.
- Prolonged rain events can lead to urban flooding, overwhelm storm sewers and cause flooding in areas that have never experienced flooding in the past. Severe rain is typically associated with debris flows and landslides in populated areas.
- Increased storm activity, coupled with sea level rise, has resulted in more frequent storm surges impacting coastal and low lying areas of the Province.
- Fluctuating winter temperatures and snow destabilizes the snow pack and leads to more frequent avalanches. Additionally, temperature fluctuations are predicted to increase freshet snow melt that will result in greater pulses of high water.
- EMBC is working with partner ministries to identify options and priorities for identifying and mitigating the impacts of climate change.
  - FLNRO can provide additional detail on recent design standard changes for diking infrastructure to account for sea level rise, on updates to land use guidelines for development in coastal areas and on the fuel suppression program to limit wildfire damage.
  - MoE and Climate Action Secretariat can provide detailed information on joint research on atmospheric rivers, sea level rise and other hazard related climate items.

- The Flood Protection Program was established in 2007 to fulfill government's commitment to provide flood mitigation funding of \$100 million over 10 years to local communities across the Province. As this program is concluding, EMBC is working with partner ministries and the federal government to develop a new program to help address the impacts of natural hazards associated with climate change.

#### **PROGRAM CONTACT**

Carol Loski, Director, Flood Protection Program, Emergency Management BC –  
Cell: s.17

# National Disaster Mitigation Program Estimates Note

Ministry of Transportation and Infrastructure

Date: April 5, 2016

## ISSUE

- The federal government launched the \$200-million fund for the National Disaster Mitigation Program (NDMP) in April 2015, primarily focused on flood mitigation to better protect residents, their homes and communities. The Province, as of Feb. 15, 2016, has not yet received NDMP funds.

## ADVICE AND RECOMMENDED RESPONSE

- Our government values the public safety of all British Columbians.
- The impacts of natural disasters in BC and across Canada, produce a significant economic, social and physical strain on individuals, communities and all levels of government, and a reactive approach to emergency management is not sufficient.
- The Province is working with the federal government to focus on a proactive, sustainable approach that includes investments in disaster prevention and mitigation to reduce the impact of these events on Canadians.

## BACKGROUND

- Through the federal NDMP, provinces and territories are able to apply for cost-sharing for flood prevention and mitigation projects. Public Safety Canada will work with BC, the other provinces and territories, and other partners on the assessment criteria for projects funded by the NDMP.
- The NDMP will be a merit-based process where projects may be selected using objective and measurable criteria such as: risk assessments; project readiness; and return on investment for proposed projects.
- Eligible projects could include both non-structural investments, such as flood-mapping and forecasting, and small-scale structural investments, such as retrofitting or modernizing existing buildings to improve resiliency.
- The Province is also eligible for support through the New Building Canada Fund which provides \$14 billion to support significant infrastructure projects across the country which can include mitigation infrastructure to help mitigate the impacts of natural disasters. s.13,s.16  
s.13,s.16
- Prevention and mitigation refer to proactive steps to eliminate, or reduce, the risks of disasters. These activities are the most effective means of reducing disaster costs. Prevention and mitigation strategies benefit individuals and communities and help to secure critical infrastructure.

## PROGRAM CONTACT

Carol Loski, Director, Flood Protection Program, Emergency Management BC –  
Cell:s.17

# Earthquake Preparedness Estimates Note

Ministry of Transportation and Infrastructure

Date: April 5, 2016

## ISSUE

- In March 2014, the Office of the Auditor General of BC (OAG) released a report on “Catastrophic Earthquake Preparedness” that stated EMBC was not adequately prepared for a catastrophic earthquake. Following this report, EMBC has taken substantial steps to ensure the OAG’s recommendations are met and has significantly improved its ability to be prepared for a catastrophic earthquake event.

## ADVICE AND RECOMMENDED RESPONSE

- Released the BC Earthquake Immediate Response Plan that details how the Province will lead and coordinate following a catastrophic earthquake and articulates the roles, responsibilities and integration of the provincial government, its agencies, and partners, including Federal government, local authorities and First Nations, critical infrastructure owners, bordering jurisdictions, and non-governmental organizations.
- Developing a model and concept of operations for a Provincial Earthquake Response and Recovery Centre that illustrates how the Province and its partners will integrate to ensure a coordinated response to a catastrophic earthquake.
- Designing and implementing a provincial supply chain strategy and governance framework through broad stakeholder engagement that will leverage the strengths and capabilities of key supply chain partners to support the Province in executing a coordinated response to a catastrophic earthquake.
- Developing a concept of operations for mass care to assist local authorities, First Nations and non-governmental organizations to address provision of food, water, shelter, sanitation and basic first aid to mass displaced persons following a catastrophic event.
- Increased capacity for provincial level emergency operational co-ordination by employing 24/7 provincial duty managers to respond to emergencies.
- Undertaken plans to provide a \$1-million provincial-level catastrophic exercise in June 2016 with partners (Exercise Coastal Response 2016).
- Launched public education initiatives, including the PreparedBC site and corresponding guides and guidance for personal and neighborhood preparation.
- Invested \$95,000 in improvements to the provincial emergency notification system to help get emergency information into the hands of those that need it faster.
- Engaged in the testing that began last May of the new national emergency broadcast alerting system.
- We also support partner agencies, including funding to Search and Rescue (SAR), Vancouver’s Heavy Urban SAR and \$50,000 to Ocean Networks Canada (ONC) to gather data sets related to tsunami mapping.

- Contributed financial support to fund a collaborative project with the Global Earthquake Model Foundation and Natural Resources Canada to further an integrated earthquake risk assessment for BC which will include community engagement workshops.
- Proposing to contribute financial support for a regional study to expand microzonation mapping to include the Saanich Peninsula and 5 communities in the Lower Mainland.
- Contributed \$5 million to ONC to coordinate the development of an earthquake early warning system in British Columbia, including installing, maintaining and collecting data in real time from offshore and coastal seismic sensors positions to effectively monitor seismic activity from the Cascadia Subduction Zone.
- Since 2001, BC has either committed or already invested approximately \$19 billion in capital funding and seismic infrastructure upgrades. This includes:
  - Over \$4 billion in new bridge and large highway infrastructure projects, built to modern day seismic standards;
  - \$2.2 billion in seismic upgrades for 213 high-risk schools;
  - \$2.6 billion in capital projects to seismically upgrade advanced education schools; and,
  - \$10 billion for health capital spending, about half of which went toward new builds and major capital improvements that included seismic upgrading.

## **BACKGROUND**

- In March 2014, the OAG released a report concluding that EMBC was not adequately prepared for a catastrophic earthquake. Government accepted the OAG's report, but noted that disaster preparedness is a shared responsibility. Action is already underway, noting that long-term preparedness efforts must be informed by input from a wide variety of stakeholders.
- In response to the OAG report, government appointed Mr. Henry Renteria as Chair of its Earthquake Consultation. After a year of meeting with stakeholders, his report, released publicly on March 26, 2015, focused on the following themes:
  - Additional public education.
  - A province-wide risk analysis along with additional availability of risk management maps and information.
  - A comprehensive training and exercise strategy with EMBC leadership.
  - Enhanced authority and resources for EMBC.
  - Ensuring that funding system-wide is adequate, creates appropriate incentives and, addresses all phases of emergency management.
  - Implementation of performance and accountability measures for ministries and local governments.
  - Development of cross-ministry plans and capacity for catastrophic events.

## **PROGRAM CONTACT**

Heather Lyle, A/Executive Director – Plans and Mitigation, EMBC – Cell: <sup>s.17</sup>

# Exercise Coastal Response Estimates Note

Ministry of Transportation and Infrastructure

Date: April 8, 2016

## ISSUE

- Development and delivery of a multi-year exercise program beginning with Exercise Coastal Response in June, 2016 to test elements of the province's Immediate Response Plan (IRP) and select local authority plans in response to a catastrophic earthquake.

## ADVICE AND RECOMMENDED RESPONSE

- The Province of BC is vulnerable to a catastrophic earthquake with the potential of major impacts to public safety and significant loss of life in addition to billions of dollars in damage to critical infrastructure.
- Aside from an actual event, exercises offer the highest degree of realism to test the province's operational readiness for a major or catastrophic earthquake.
- The Office of the Auditor General Report (2014) and Henry Renteria's independent report of the state of BC's operational readiness, strongly recommended a need to strengthen EMBC's training and exercise program to prepare for an earthquake event.

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- Ex Coastal Response represents the first step towards a series of exercise events to prepare the province for a large scale earthquake disaster response.
- Ex Coastal Response will take place in Port Alberni which has historical significant due to the 1964 earthquake and tsunami.
- Highly qualified training and exercise staff have recently been hired by EMBC to support training and exercises.
- An operating increase of \$1 million was approved to support the series of exercises leading up to and including Coastal Response 2016.

## BACKGROUND

### Exercise Coastal Response 2016

- Earthquakes are a major concern across the globe causing catastrophic impacts to individuals, communities and nations. For example, the 2004 Indian Ocean earthquake triggered a series of devastating tsunamis along the coast of most land masses bordering the Indian Ocean, killing over 230,000 people in fourteen countries, and inundating coastal communities with waves up to 30 meters high. The relative rarity and unpredictability of earthquakes makes planning difficult, but it is important to recognize that these events can occur anywhere and that the threat to public safety is expected to continue.
- In Canada, the province of British Columbia has the highest risk of a major earthquake. A future large earthquake close to Vancouver, Victoria, or Seattle would cause tens of billions of dollars in damage and would seriously impact the economies of Canada and the United States. Scientists have noted that parts of Metro Vancouver region are at great risk from earthquakes because important

infrastructure, including energy and transportation lifelines, would likely be damaged or destroyed by secondary phenomena such as landslides and liquefaction induced ground failure. Improved understanding of this seismic risk has gained the attention of all levels of government and emergency management practitioners and has pointed to the need for strengthened stakeholder relationships in terms of joint planning and preparedness with a specific focus on training and exercising.

- Exercise Coastal Response 2016 will bring together EMBC staff, provincial ministries, federal departments and agencies, Local Authorities and First Nations, Crown Corporations, non-government organizations involved in provincial-level response, volunteers, and critical infrastructure owners to test key elements of the IRP.
- The degree of realism for Exercise Coastal Response 2016 will include the full scale activation of the PECC, PREOCs, and select EOC's to move and deploy critical resources such as the Provincial Coordination Team (PCT) and the Vancouver Heavy Urban Search and Rescue (HUSAR) unit. Provincial staging areas will also be tested and potential impacts for exercise play will include the blockage of roads and airports, unusable port facilities, multiple power outages affecting hospitals and care facilities, and a significant number of casualties and displaced persons.
- EMBC's will lead the coordination and implementation associated with British Columbia's participation in Ex Coastal Response and include a full After Action Report post June, 2016 in support of continuous improvement for enhanced readiness in response to a major earthquake event in BC.

## **PROGRAM CONTACT**

Carol McClintock, Director, Organizational Learning, Emergency Management BC –  
Cell:s.17



# Ground Search and Rescue Funding Estimates Note

Ministry of Transportation and Infrastructure

Date: April 20, 2016

## ISSUE

- On January 27, 2016, The Province announced \$10 million in funding for the BC Search and Rescue Association (BCSARA).
- This funding was provided to make investments at the community level and is to replace or update equipment, provide administrative support and paying for new or additional training.
- Since January BCSARA has been working on confirming Ground Search and Rescue (GSAR) group capabilities to be able to distribute the funding based on the funding allocation model within the Alternative Support Model proposal.
- A proposal for funding distribution was approved by the BCSARA Board on April 5, 2016 and proposes distributing funds over a 2 year period.
- The proposal indicates 90% of the funds will be distributed directly to the GSAR groups. The remaining 10% will support provincial level initiatives such as Adventure Smart and Critical Incident Stress Management (CISM).

## • BCADVICE AND RECOMMENDED RESPONSE

- The \$10 million in one-time funding, recently announced on January 27, 2016, is to help support the BCSARA in capacity building as we work with them toward a longer-term funding model.
- This funding will help meet the search and rescue team's immediate needs while Emergency Management BC (EMBC) continues to work together with BCSARA on a long term solution.
- The Province remains committed to working collaboratively with BCSARA in this review and will provide them with initial feedback at a meeting scheduled for April 11, 2016.

## BACKGROUND

- The Province recognizes GSAR teams as a critical resource in BC through over \$9.0 million in funding last year (FY 2015/16):
  - \$4.55 million in support of operational tasks (equipment repair/replacement, helicopter costs, mileage and meals).
  - \$3.9 million from gaming funds (equipment and training).
  - \$250k GSAR training (JIBC contract).
  - \$35k to support administrative functions in BCSARA.
  - \$25k to support travel for the annual BCSARA board meeting.
  - \$233k in Algoma Liability Insurance for Volunteer GSAR Directors.
  - \$50k in one-time funding to the BCSARA to kick off the new first aid requirements.
- In 2012, BCSARA led a multi-agency group to identify existing best practices, challenges and gaps in the delivery of GSAR services in BC. Some of the major

challenges identified was the inability to maintain volunteer recruitment, training, certification and fundraising in balance of response capacity. Increasing demand for services, despite static funding levels and an onerous process of accessing funding, this often is a one-time grant.

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#### **PROGRAM CONTACT**

Andrew Morrison, SAR Specialist, EMBC, Operations and recovery Unit – Cell: s.17

# Road Rescue Service Delivery Estimates Note

Ministry of Transportation and Infrastructure

Date: April 8, 2016

## ISSUE

- Response to any questions arising regarding Road Rescue Service Delivery.

## ADVICE AND RECOMMENDED RESPONSE

- Emergency Management BC (EMBC) has collaborated with the Fire Chief's Association of British Columbia to establish new road rescue reimbursement rates which were implemented in the fall of 2013.
- EMBC finalized policy in July 2014 that created a more equitable policy and compensation framework across all three categories of road rescue services providers.
- Road Rescue is a partnership with various entities such as fire departments, and Road Rescue and Search and Rescue societies that provide services and the province reimbursement policy helps offset their operational costs.
- The Province is continuing to work with internal and external stakeholders to identify a more permanent and sustainable solution to the issues of governance and funding associated with road rescue within the province to protect public safety.

## BACKGROUND

- There are approximately 50,000 motor vehicle accidents in BC each year. There are 179 road rescue organizations in BC that respond to motor vehicle accidents outside of jurisdictional boundaries. These organizations consist of six search and rescue groups; thirteen road rescue societies, and 160 fire departments including career, paid/on call and volunteer departments.
- There is no provincial legislation governing the provision of road rescue services in BC. It is a discretionary service delivered by a combination of fire departments and volunteer road rescue groups throughout the province. The Province has no mandate or budget to lease or purchase road rescue equipment.
- Some road rescue groups have been successful in securing provincial gaming grants to support the purchase of new road rescue trucks and equipment. This funding is not guaranteed or sustainable and applications are assessed on their own merit and within the context of available funding.
- Many local authorities recognize this service as a community investment or civic responsibility and support directly or through mutual aid partnerships.
- The continued provision of road rescue services by fire departments and road rescue groups has been challenged by a lack of capacity/funding to support ongoing vehicle and equipment replacement.

## PROGRAM CONTACT

Gord Anderson, Fire Commissioner, Emergency Management BC – Cell: 9.17

# One-Time Preparedness and Mitigation Funding Estimates Note

Ministry of Transportation and Infrastructure

Date: April 22, 2016

## ISSUE

- \$64.2 million has been identified within the Consolidated Revenue Fund (CRF) for new grants to support public safety preparedness and community public safety and hazard mitigation projects.
- A list of priority projects was developed based on; provincial priorities, prior submissions to Emergency Management BC's (EMBC) Flood Protection Program (FPP), the Building Canada Fund – Communities Component and community preparedness supports.
- The funding is for one-time mitigation projects and is not intended to replace any current or future mitigation program. Infrastructure projects will maintain the local authority contribution of one-third of the total project cost.

## ADVICE AND RECOMMENDED RESPONSE

- Emergency preparedness is a shared responsibility and to be truly effective a comprehensive approach of structural and non-structural works is required.
- The Province is demonstrating our commitment by supporting \$64.2 million of new community preparedness and mitigation projects in communities around the Province.
- The new projects will improve our ability to identify flood and earthquake risks, support BC Search and Rescue efforts, and fund upgrades and construction of new diking and flood mitigation infrastructure.

## BACKGROUND

- Evidence indicates that the frequency and magnitude of hazard events is increasing. Mitigation is the most effective method to minimize the impact and cost of hazards. Since 2007, the Province has incurred total costs of \$522 million related to recovery from natural hazards. A change to the eligibility threshold for Disaster Financial Assistance Arrangements (DFAA) from \$4.7 million to \$14.1 million is estimated to reduce federal DFAA recoveries by \$12.4 million annually.
- The need for mitigation works in the lower mainland is supported by studies indicating that:
  - The preliminary estimates for a catastrophic flood in the lower mainland could be as high as \$23 billion.
  - Diking infrastructure in the lower mainland does not meet current technical standards. The estimated cost of upgrading the dikes is approximately \$9.5 billion.
- Sixteen projects were identified, prioritized and funded (see attached list). The considerations and criteria for selecting and prioritizing these projects included:
  - Projects that were submitted through application processes to the FPP or the Building Canada Fund – Communities Component (flood mitigation);
  - Projects that advanced knowledge or understanding to support achieving community and provincial objectives for emergency preparedness;
  - Projects that supported community Search and Rescue efforts;

- State of readiness. Projects were assessed for the likelihood of completion, including past performance and design drawings in place;
- Provincial significance. Projects that included critical infrastructure, provincial assets, or those that will contribute to the on-going economic and environmental sustainability of the Province;
- Benefit. Broad benefit to large areas, and consideration of regional issues such as areas that serve remote locations or more than one community.
- Risk and impact. High risk areas with demonstrated need for support.

#### **Need and Benefit:**

- Requests for funding public safety projects far exceed the capacity of provincial programs. Implementation of these projects will not affect the Province's ability to undertake new projects and will lessen the cost and impact of disaster events. For example, the ten year FPP included five application intakes, during which time 470 applications were received representing project costs in excess of \$665 million. The FPP completed 156 projects worth a total project value of \$145 million.
- Funding for public safety preparedness and mitigation has been a consistent topic at UBCM conventions and is regularly highlighted in the media. In addition to funding local mitigation works, three community public safety projects were included. These projects demonstrate the following benefits:
  - BC relies on volunteer organizations to provide search and rescue services. In 2014/15, 1352 search and rescue incidents were opened. The BC Search and Rescue Association Training and Capacity Building project will affect over 80 groups across the Province and will increase the capabilities of the groups to respond to life safety events.
  - Early warning system for earthquakes is emerging technology that will benefit the entire pacific coastal region. This project provides an opportunity to promote cutting edge technology and will provide an immediate benefit to vulnerable communities along the coast.
  - Fraser Basin Council has been working with Lower Mainland local authorities, the Province and industry to develop a long term Flood Management Strategy. Funding will be used to build on this work and further the initiative. The information provided will benefit the Province by assisting with identifying highest need mitigation areas, will benefit local authorities in planning and land use decisions and will provide residents with information on risk.

Attachment: Public Safety Preparedness and Community Hazard Mitigation Grant Opportunities

#### **PROGRAM CONTACT**

Carol Loski, Director, Flood Protection Program, Emergency Management BC –  
Cell: s.17

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## **Excerpt from Office of Auditor General of BC report**

**March 2014**

### **Catastrophic Earthquake Preparedness**

**Page 30**

#### **Responsibility to First Nations**

We also noted an inconsistency in the roles and responsibilities of the provincial and federal governments in terms of providing First Nations assistance in the event of a catastrophic earthquake. EMBC's 1998 draft earthquake response plan identifies that assistance for First Nations will be federally provided by Indian and Northern Affairs Canada. However, a 1993 letter of understanding between the provincial and federal governments states, "When immediate action is required to preserve life or property on Indian Reserves and when local bands so request, the Provincial Emergency Program (now EMBC) will assist, support or arrange for such required emergency measures." EMBC has advised our Office that it does not have the dedicated capacity to assist First Nations during a catastrophic earthquake. Further discussions with the federal government will be necessary to resolve this issue.'

# Emergency Program Act Delegation Order – Legislated Roles and Responsibilities Estimates Note

Ministry of Transportation and Infrastructure

Date: April 6, 2016

## ISSUE

- With the appointment of a new statutory Minister responsible for the emergency management program, a new Delegation Order was needed to confirm and formalize the Minister's intent and direction regarding the transfer of selected duties and powers under the *Emergency Program Act* (the Act).

## ADVICE AND RECOMMENDED RESPONSE

- The issuance of a Delegation Order by the Minister responsible for the Act to the designated Director of the emergency management program transfers selected duties and powers of the Act to facilitate program delivery for the timely provision of a comprehensive and effective emergency management program in British Columbia.
- The use of a Delegation Order has been the practice since the Act became law in 1993 and has traditionally been issued at each appointment of a new Minister responsible for the Act; the most recent delegation order was issued in January 2016.
- The powers and duties that are delegated to the Director of the Provincial Emergency Program, the Assistant Deputy Minister of Emergency Management BC, allows for all functions and services that are required to sustain an effective and comprehensive public safety program to be carried out without overwhelming or unduly involving the Minister; this is desirable not only during the day-to-day management of the program, but also during times of emergency.

## BACKGROUND

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- A delegation of authority can be rescinded but while the delegation is in place, the Minister cannot also exercise the authority in addition to the Director; furthermore, the person delegating the authority is bound by the decisions of the delegate and cannot vary or rescind a valid decision.
- The duties and powers in the most recent delegation are almost entirely the same as has been in place under previous Delegation Orders - the only change was a refinement of the delegation of section 3; the authority to appoint committees in order to advise or support of the Director; by limiting the delegation to section 3 (1) for technical reasons only; for greater accuracy, it was recommended that the new delegation order specify that subsection 3(1) be delegated rather than all of section 3 because subsection 3(2) is a statement rather than an authority or duty of the Minister.



Attachment: Emergency Program Act Delegation Order  
Emergency Program Act Overview

### **PROGRAM CONTACT**

Gord Sharpe, Manager Strategic Plans, Policy and Legislation, Emergency Management BC,  
Plans & Mitigation – Cell: <sup>s.17</sup>

Ministerial Order No.

## DELEGATION ORDER

### *Emergency Program Act*

#### General

The Government of British Columbia is responsible for an emergency management system to minimize human suffering in an emergency or disaster. Emergency Management British Columbia (EMBC) was formed in 2006 to be the lead agency in government for all of Governments' emergency management activities. EMBC's purpose is to enhance safety for individuals and communities through integrated emergency mitigation/prevention, preparedness, response and recovery. Prompt coordination by Government enhances public safety and reduces property and economic loss from actual or imminent emergencies or disasters. EMBC provides emergency management through a number of programs, including the administration of the *Emergency Program Act*.

#### Delegation

The following powers and duties of the *Emergency Program Act*, R.S.B.C. 1996, ch.111, are hereby delegated to the appointed director of the Provincial Emergency Program, as authorized by section 4(2)(i) of that Act:

- (a) The powers and duties set out in sections 4(2) (a) to (d) and (f) to (h), 5(a), (c) and (d), 7, 10(1) (a), (b) and (d) to (l), 16, and 20(2).
- (b) The power to appoint committees to advise or assist the director under section 3(1).

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Date

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Todd G. Stone  
Minister of Transportation and Infrastructure

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*(This part is for administrative purposes only and is not part of the Order.)*

#### Authority under which Order is made:

Act and section: *Emergency Program Act*., R.S.B.C. 1996, c.111, s. 4(2)(i)



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# Beechwood Street – Artesian Well/Aquifer Breach

## Estimates Note

Ministry of Transportation and Infrastructure

Date: April 6, 2016

### ISSUE

- The property at 7084 Beechwood Street in Vancouver is the site of an uncontrolled well that is spilling groundwater. This occurred as a result of a drilling operation undertaken by the owner of the property to install a geo-exchange system. The drilling hit a pressurized aquifer (large, underground water stream), creating the uncontrolled, flowing well that was left uncapped.
- While work is being completed to cap the well two residences need to be evacuated for an estimated 6 week period. Fortunately only one of the residences is currently occupied.

### ADVICE AND RECOMMENDED RESPONSE

- Emergency Management BC (EMBC) regional staff are assisting the City of Vancouver in arranging for temporary accommodation for the affected resident.
- EMBC will continue to work with the City of Vancouver on providing Emergency Social Service coverage and supporting the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) as required.
- FLNRO is providing funding support through contingencies to cost-share with the City of Vancouver to ensure the required works can be completed.

### BACKGROUND

- FLNRO has jurisdiction over management of groundwater and closure of the uncapped well. This matter is the legal responsibility of the owner of this property, and remains under the jurisdiction of the Province pursuant to the *Water Act* (now the *Water Sustainability Act*). The property is subject to City by-laws and Council has declared the breached aquifer to be a nuisance under the Vancouver Charter.
- BC Ground Water Services (BCGWS) is the hydrogeology firm retained by the property owner to resolve the uncontrolled well in accordance with the Order issued by the Province.
- The plan being implemented by the Province, the City of Vancouver and BCGWS includes three phases: pipeline construction (underway), well control (to begin upon completion of the pipeline), and well closure (to start upon completion of well control).

### PROGRAM CONTACT

Ian Cummings, Senior Regional Manager, EMBC – Cell: 604-785-7669

# Emergency Program Act Amendment Estimates Note

Ministry of Transportation and Infrastructure

Date: April 6, 2016

## ISSUE

- On March 10, 2016 an amendment to the *Emergency Program Act* (the Act) introduced within Bill 10, the *Budget Measures Implement Act*, 2016 received Royal Assent providing a mechanism for the statutory appropriation for payments and grants made to local authorities or other persons or organizations under the Act.

## ADVICE AND RECOMMENDED RESPONSE

- This amendment provides a statutory appropriation for payments and grants made to local authorities or other persons or organizations under section 4 of the Act.
- Previously, statutory appropriation under section 16 of the Act was limited to expenditures considered necessary to implement an emergency plan or emergency measures in response to the imminent threat of or on-going emergencies and disasters.
- The change adds the authority to make payments and grants to “other persons and organizations” for the purposes of emergency prevention, preparedness and response and will expand the existing statutory appropriation to payments and grants provided under sections 4(2)(c) or (d) of the Act.
- These amendments will authorize provincial expenditures made in support of local community and other initiatives to help mitigate the impact and costs of future emergencies and disasters

## BACKGROUND

- Emergency prevention and preparedness is a shared responsibility in collaboration with all levels of government and British Columbians and it is also instrumental in keeping our communities safe.
- Local authorities may not always be in a position to fully fund important emergency prevention and preparedness initiatives (e.g. upgrading their diking infrastructure and other flood mitigation projects). Risk of flooding or other natural disasters as a result could have a significant impact on local communities and the costs borne by the Province to respond and help those communities recover.
- This amendment will authorize provincial expenditures made in support of local community and other initiatives to help mitigate the impact and costs of future emergencies and disasters.
- Mitigation works protect communities by reducing personal, social and economic losses. Further benefits include more efficient and rapid provincial response, lessened response costs and facilitating faster recovery in the event of a disaster. Established data calculates the return on investment for flood protection works ranges from \$1:\$3 to \$1:\$10. In the case of Manitoba's Red River Floodway works, the return on investment is estimated to be nearly \$1:\$30.

- Areas for potential funding include key public safety initiatives intended to: better identify flood and earthquake risks; increase BC Search and Rescue capacity; upgrade important diking infrastructure in vulnerable communities; and, ultimately, to keep people safer.
- This new statutory appropriation can be relied upon once the voted appropriation is exhausted.
- For fiscal management purposes, Treasury Board can still, by directive, control, limit or put conditions on expenditures under this statutory appropriation.
- This will provide government with flexibility to respond if there are opportunities in the fiscal year to fund additional emergency management initiatives to prevent or mitigate potential disasters.

## **PROGRAM CONTACT**

Gord Sharpe, Manager Strategic Plans, Policy and Legislation, EMBC, Plans & Mitigation –  
Cell: s.17

# Ocean Networks Canada Society- Earthquake Early Warning System Estimates Note

Ministry of Transportation and Infrastructure

Date: April 5, 2016

## ISSUE

- Emergency Management BC (EMBC) has made a one-time project funding contribution to Ocean Networks Canada Society (ONC) to develop an Earthquake Early Warning (EEW) system for offshore earthquake events that occur in or near the Cascadia Subduction Zone (CSZ) near Vancouver Island.

## ADVICE AND RECOMMENDED RESPONSE

- On February 29<sup>th</sup>, 2016 the Province of British Columbia announced the investment of \$5-million to Ocean Networks Canada that aims to develop an earthquake early warning system in southwestern BC.
- The funding will increase the development and use of earthquake early warning systems in B.C. that could enhance life safety for British Columbians living in areas of the province with seismic risk.
- As part of the system, additional offshore strong motion sensors are to be installed and later integrated with land-based sensors for more robust collection and analysis of seismic activity, with the aim of contributing to early detection and notification tools for the public.
- Ocean Networks Canada currently collects data from offshore and coastal strong motion sensors that will link into networks of land based sensors from other agencies including those owned and operated by the Ministry of Transportation and Infrastructure, Natural Resources Canada, and the University of BC.
- The investment looks to bolster the integrated network of earthquake sensors, increase the reliability and effectiveness of the data and analysis that comes from them, feed it to a centralized source that in turn can immediately deliver early detection notifications prior to the arrival of the damaging waves of an earthquake.

## BACKGROUND

- The 2014 Office of the Auditor General report had identified that EMBC was not adequately prepared for a catastrophic earthquake event. In response to these findings, EMBC has taken action to improve catastrophic earthquake preparedness in BC within a number of different areas including EEW.
- EEW systems can provide warning to the general public about the imminent threat of an earthquake event allowing British Columbians to take the necessary steps to prepare themselves for the event. In addition, this project will enhance data sharing between several partner organizations and coordinate efforts towards a comprehensive EEW system in BC.
- ONC currently operates the NEPTUNE and VENUS cabled ocean observatories located within the Pacific Ocean west of Vancouver Island to collect data on physical, chemical, biological, and geological aspects of the ocean. Seismographs on ONC's NEPTUNE observatory monitor earthquake activity.



- ONC was the chosen as the organization to receive the investment for creating the EEW system for the following reasons:
  - ONC has existing underwater cable infrastructure that links its ocean observatories which components of an offshore EEW system can be connected in to.
  - ONC has an existing offshore EEW system that has operational capabilities.
  - ONC has the means to analyze seismic data and deliver early warning for an offshore earthquake event.
- The EEW system will provide early warning primarily for offshore earthquake events that occur in or near the CSZ west of Vancouver Island and, as feasible, onshore earthquake events that occur on Vancouver Island.

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- ONC will share EEW data and integrate the EEW system with other organizations in the province that own and/or operate EEW systems or seismic networks through data sharing and integration agreements. EEW data sharing and EEW system integration may be conducted with EEW systems or seismic networks in neighbouring jurisdictions such as Washington State.
- The investment covers capital costs, including labour costs that are directly attributable to the creation of the EEW system. ONC will look to pursue other funding sources to cover operational, maintenance, and any additional costs associated with the EEW system.
- ONC and other organizations in the province including EMBC are part of the Earthquake Early Warning Working Group, a subgroup of the BC Seismic Safety Council, which aims to support and advance EEW within BC.
- Several organizations in BC are pursuing the development of strong motion networks and EEW systems including amongst others the Ministry of Transportation and Infrastructure, Natural Resources Canada, the University of BC, and ONC.

## **PROGRAM CONTACT**

Robert White, Seismic Specialist, Integrated Public Safety, EMBC – Cell: s.17

# Provincial Emergency Notification System (PENS) Estimates Note

Ministry of Transportation and Infrastructure

Date: April. 8, 2016

## ISSUE

- It is important that coastal communities at risk, key stakeholders, and the media be notified of an impending tsunami as quickly as possible.
- Communities require notification to ensure that they can activate their emergency plans to protect the public.
- Emergency Management BC's (EMBC) notification system is a key tool in ensuring local authorities and public safety partners receive timely notification of any tsunami threats.
- The National Tsunami Warning Center (NTWC) is the earthquake and potential tsunami threat notification source for all pacific coastal authorities, including those in BC.
- Upon EMBC receiving NTWC notification of a potential tsunami threat to BC, EMBC utilises the Provincial Emergency Notification System (PENS) to notify emergency management contacts in affected coastal communities.
- EMBC initiated the PENS Renewal project in 2014 with the goal of decreasing the time to issue a notification, ensuring the right people are notified at the right time, ensuring that the alerting process is resilient and reliable, and providing a notification system that is more efficient and easier to launch.
- The new PENS was implemented in March 2015 following testing and verification and has been used operationally several times.

## ADVICE AND RECOMMENDED RESPONSE

- EMBC is committed to getting the timeliest message out to stakeholders and the PENS system allows for timely notifications.
- To ensure the quickest response to notifications EMBC has hired six Provincial Duty Managers that work on a 24/7 shift to maintain a constant PENS notification launch.
- The new system significantly enhances the launch of PENS in response to any tsunami threats to coastal BC.

## BACKGROUND

- The PENS transmits approximately 800 automated voice notices and 450 emails to these key agencies. These are then further redistributed by partner agencies, including ministry social media channels, Environment Canada's Weatheradio, marine radio, and a number of other agency systems.
- Following the Japan 2011 earthquake and tsunami, EMBC established a new public information website, EmergencyInfo BC, which makes use of social media tools to further educate and alert the public, and integrates with the PENS.

- EMBC utilizes PENS, in conjunction with its social media tools, for earthquake and tsunami events near the BC coastline including information shared after the Dec. 29 earthquake and the Chilean earthquake earlier in 2015.
- EMBC tests PENS regularly to ensure the notification process functions effectively.
- There are currently longer term national initiatives exploring comprehensive alerting and notification tools. This includes the National Alert Aggregation and Dissemination System (NAADS). BC is participating with provinces, territories and federal partners to develop and operationalize this system.
- Alert Ready is the new, standardized Canada-wide program that allows government officials in each province and territory to issue broadcast-intrusive emergency alerts through major television and local radio broadcasters.
- The BC Emergency Alerting System is the BC-specific name for the Alert Ready program, and is part of a new public alerting program at EMBC. The system will be used to interrupt television and local radio broadcasts with information on disasters and emergencies, where lives are at risk. BC began testing the Alert Ready system in May of last year and the system was just recently tested on March 16 at 1:55PM and is currently available for alerting the public for tsunami hazards. (TV and radio stations)

## **PROGRAM CONTACT**

Ralph Mohrmann, Ast. Director Operations, EMBC, Operations and Recovery Unit – Cell: s.17  
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# Seton River Debris (Anderson Lake) Flow Estimates Note

Ministry of Transportation and Infrastructure

Date: April 1, 2016

## ISSUE

- On Sept 20, 2016 a debris flow impacted the Seton River blocking its normal channel. The Seton River drains Anderson Lake into Seton Lake.
- Response efforts funded by Emergency Management BC (EMBC) were successful in determining the area and extent of the emergency, reduced the extent of damage and contained the emergency.
- Ongoing recovery work is required to return the Seton River's flow to pre-event levels.
- Anderson Lake has been observed at "higher than normal levels for this time of year."

## ADVICE AND RECOMMENDED RESPONSE

- The Squamish-Lillooet Regional District (SLRD) has been encouraged to seek recovery funding to complete the required works. As per the Compensation and Disaster Financial Assistance Regulation, recovery work is 80% reimbursable. EMBC has offered to work with Indigenous and Northern Affairs Canada (INAC) on co-funding options that would cover the SLRD's portion of the work (20%).
- SLRD, Fisheries and Oceans Canada (DFO) and a representative from the Ministry of Forests, Lands and Natural Resource Operations' (FLNRO) Water Stewardship Branch are meeting on Thurs April 7, 2016 to conduct a site/risk assessment and results of this assessment will be shared as soon as they become available.

## BACKGROUND

- The SLRD has chosen to not take action insisting that costs should be reimbursed as a response cost of 100%.

Works already funded:

- Seton River response works already funded and completed (EMBC):
  - Temporary Channel to restore drainage flow: \$5020.00
  - Restore Channel Capacity: \$118, 651.36
- Whitecap Creek (tributary into Seaton River) works federally funded (INAC):
  - Channel improvements: \$130,872.35

Additional works still required:

- Seton River recovery works
  - Removal of additional gravel depositions to increase flow rates: cost estimates being developed by SLRD in conjunction with DFO and FLNRO's Water Stewardship Branch.

## **BACKGROUND (Continued)**

Applicable funding mechanisms:

- Response costs for: “Measures taken to reduce the extent of damage...; Measures to determine the area and extent of the disaster; containment of the disaster...”
- Recovery costs for: “Removal of emergency works and the restoration of their sites to pre-disaster condition; necessary clearance of debris and wreckage from channels and streams...”

## **PROGRAM CONTACT**

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