



City of Richmond

Report to Committee

To: Public Works and Transportation Committee

Date: February 7, 2011

From: John Irving, P.Eng. MPA
Director, Engineering

File: 10-6045-09-01/2011-
Vol 01

Re: Diking Authorities for New Dikes

Staff Recommendation

That the "Diking Authorities for New Dikes" report from the Director of Engineering be received for information.

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

FOR ORIGINATING DEPARTMENT USE ONLY			
ROUTED TO:	CONCURRENCE		CONCURRENCE OF GENERAL MANAGER
Roads and Dikes	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	
Parks	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	
Policy Planning	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	
REVIEWED BY TAG	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	REVIEWED BY CAO
			YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

Staff Report

Origin

On December 6, 2010, The Ministry of Environment & Ministry of Natural Resource Operations made effective a new policy to formalize operational practices for the approval of new dikes constructed in British Columbia: Diking Authorities for New Dikes (the Policy).

The purpose of this report is to identify the Policy's key points, how it affects the City and how it relates to recently prepared dike staff reports and letters.

Analysis

The Policy (Attachment 1) states that the construction of new dikes will only be approved where local government jurisdiction has:

1. agreed (through a Council or Board resolution) to become the diking authority and to be fully responsible for operation and maintenance of the new dike; and
2. acquired legal access to the lands on which the new dike is to be constructed.

The Policy seeks to prevent the construction of new dikes by organisations that lack adequate resources or longevity to operate and maintain dikes that protect public interest and safety.

The City became a responsible Local Diking Authority in 2003 and will continue to construct dikes under the Policy, subject to an unchanged approval process under the Dike Maintenance Act.

While the Policy attempts to ensure operations and maintenance costs are adequately funded by diking authorities, it remains silent on dike upgrade costs.

The Staff Report Sea Dike Provincial Guidelines, Sept 13, 2010, analysed the draft Provincial Sea Dike Guidelines, June 2010 that assesses the need to raise dikes to meet future sea level rise and enhanced flood protection service levels. An estimated order of magnitude cost to raise the City's 49km long dike to meet the draft guidelines is \$100 Million. Council adopted a motion to send a letter (Attachment 2) to the Provincial Environment Minister requesting dedicated funding to meet the requirements of the proposed guideline. This letter has been sent.

Staff continue to press the Province for dike raising and dike improvement funds.

Financial Impact

None.

Conclusion

The Diking Authorities for New Dikes policy has no impact to the City.

February 7, 2011

- 3 -

As guided by the City's 2008-2031 Flood Protection Strategy, the City will continue to implement a comprehensive perimeter dike improvement program to address dike raising and related issues, subject to available City funding.



Andy Bell
Drainage and Roads Project Engineer
(604-247-4656)

AB:ab

Att.
Provincial Policy: Diking Authorities for New Dikes
Mayor's Letter: Funding Requirements to Meet Proposed Sea Dike Guidelines



**Ministry of Environment
&
Ministry of Natural Resource
Operations**

NAME OF POLICY: Diking Authorities for New Dikes

APPLICATION: This policy will guide approvals for new dikes constructed in British Columbia.

ISSUANCE: Director, Water Management Branch, MNRO

IMPLEMENTATION: MNRO and MOE staff, including the Inspector and Deputy Inspectors of dikes.

REFERENCES: *Dike Maintenance Act* Section 2(4)(e)

RELATED POLICIES: n/a

RELATIONSHIP TO PREVIOUS POLICY: This new policy formalizes operational practice.

POLICY AMENDMENT: Any formal request for amendment to this policy is to be directed in writing to the Director, Water Management Branch.

Glen Davidson
Director and CWR
Water Management Branch
Ministry of Natural Resource Operations

10/12/14

Date:

Lynn Kriwoken
Director
Water protection & Sustainability Branch
Ministry of Environment

Dec 14/10.

Date:

EFFECTIVE DATE: December 6, 2010
AMENDMENT NO:

FILE: 35050-00

Diking Authorities for New Dikes

APPROVED AMENDMENTS:		
Effective date	Briefing Note /Approval	Summary of Changes:

FILE: 35050-00

EFFECTIVE DATE: December 6, 2010

AMENDMENT NO:

Table of Contents

1. POLICY STATEMENT	1
2. DEFINITIONS	1
3. PREFACE	2
4. STRATEGIC PRINCIPLES	3
5. POLICY APPLICATION	3
6. APPROVAL PROCEDURES	4

1. POLICY STATEMENT

To protect the public interest and safety of life and property, the construction of new dikes shall only be approved where the local government jurisdiction has:

1. agreed (through a Council, or Board resolution) to become the diking authority and to be fully responsible for operation and maintenance of the new dike; and
2. acquired legal access to the lands on which the new dike is to be constructed.

2. DEFINITIONS

“construction of a new dike” - means the construction of new flood protection dikes and the upgrading of existing orphan dikes to provincial dike standards.

“orphan dikes” - means flood protection dikes that are not being maintained by an owner or diking authority.

Additional relevant terms are defined in the *Dike Maintenance Act*.

3. PREFACE

Two of the essential aspects of British Columbia’s flood protection standards, as set out in the “Guidelines for Management of Flood Protection Works in British Columbia” Ministry of Environment, March, 1999, are:

- 1) implementation by a diking authority of an ongoing, adequately funded dike management program including inspection, patrolling, emergency planning, operation, maintenance and repairs in accordance with an approved Operation and Maintenance (O&M) manual; and
- 2) the diking authority acquiring and maintaining full legal access (land ownership or permanent rights of way) and physical accesses to allow effective operation and maintenance of the dike.

For historical reasons, the approximately 100 diking authorities in BC are comprised of several types of legal entities including municipalities, regional districts, improvement districts, diking districts under the *Drainage Ditch and Dike Act*, strata corporations, rate-payers associations, government agencies, non-government organizations, private corporations and private individuals.

Operational experience over the past few decades has shown that many of these “diking authorities” have had significant difficulties in maintaining an “ongoing, adequately funded dike management program...” and “acquiring and maintaining legal access..” This has been particularly true for those diking authorities that do not have the powers

that are provided to local governments with respect to taxation, emergency response, land use approvals, expropriation, and other regulatory authority.

For more than ten years it has been provincial government practice to require that the diking authority for the new dike must be a local government. Examples include the Resort Municipality of Whistler's Whistler Creek Flood Protection Works; the Fraser Valley Regional District's Elbow Creek dike on the Harrison River and the Wilson Road dike on the Chilliwack River; and the Squamish Lillooet Regional District's dike at Furry Creek.

4. STRATEGIC PRINCIPLES

Local governments are the most appropriate legal entities to assume responsibility for new flood protection structures as demonstrated by the following principles:

- 1) **Emergency Response:** Local governments are legally required to have an emergency management plan under the *Emergency Program Act* and to be the first responder to flooding. Other types of diking authorities have no comparable requirement or responsibility. For those dikes where the local government is responsible for inspection and maintenance of protection works, dike patrols and flood fighting, as well as overall emergency response, the local government can effectively coordinate the flood response.
- 2) **Access to Funds:** Local governments have much greater access to flood protection funds from senior levels of government than other types of diking authorities and are therefore in a better position to sustain adequate operation and maintenance. Examples include access to cost sharing programs for major repairs or upgrades (i.e. Build Canada Fund) and emergency response funds (Disaster Financial Assistance) during and after damaging flood events.
- 3) **Technical and Management Issues:** Technical and project management skills are required to operate and maintain flood protection works. Local governments typically have greater capabilities in this area than other types of diking authorities.
- 4) **Authority to Undertake Instream Work:** When maintenance work involving cleaning out structures and/or stream channels is required local governments are enabled under the *Water Act* regulations, whereas, other types of diking authorities are not.

- 5) **Longevity:** Although jurisdictional boundaries can change, the longevity of local government can be relied on. Other types of diking authorities such as strata councils, management companies and private corporations change with time along with their priorities, making them a less stable entity.
- 6) **Continuity, Communication and Coordination:** Often times there are several decades between larger floods and/or debris flow events. Diking district and strata council members are comprised of volunteers, whose membership typically changes frequently. These individuals are used to dealing with more regular occurring issues and historically have tended to neglect inspection and maintenance once the land development was approved. The Ministry of Natural Resource Operations does not have the resources to track down the individuals responsible when inspection reports are not submitted. Nor does the Ministry of Natural Resource Operations have the resources to undertake the increased need for auditing, monitoring and training to support compliance with dike safety requirements.
- 7) **Legal Access:** Local governments have the full legal powers for land use planning, development approval, and expropriation. It is critical for effective operation and maintenance that the diking authority have either statutory rights of way, or ownership of land to ensure that works are not disturbed and to ensure continued access for inspection, maintenance and dike upgrading over time. Also local governments have extra powers to act and access property under *Emergency Program Act* when an emergency is declared.
- 8) **Amalgamation With Other Services:** Local governments typically provide many, if not all, of locally available public services, including roads, drainage, water, and sewer. Coordination of public service delivery, including taxation, is facilitated by combining the responsibilities within local government. Other types of diking authorities typically only have the dike maintenance responsibility. For example, there are administrative barriers for strata councils and improvement districts to amalgamate services such as water supply and flood protection.

5. POLICY APPLICATION

This policy applies to situations where the Ministry of Natural Resource Operations has received a *Dike Maintenance Act* (DMA) approval application for the construction of a new dike.

EFFECTIVE DATE: December 6, 2010
AMENDMENT NO:

FILE: 35050-00
PAGE: 3

6. APPROVAL PROCEDURES

- 6.1 The Ministry of Natural Resource Operations should advise proponents of new dikes, and their respective local government of this policy as early as possible in the development process.
- 6.2 The Ministry of Natural Resource Operations should not issue a DMA approval for a new dike until the local government has both :
- a) passed a Council, or Board resolution agreeing to become the diking authority, and
 - b) acquired the necessary land for dike ownership and maintenance through fee simple ownership, or through the registration of statutory rights of way.



February 4, 2011

Honourable Murray Coell
 BC Minister of Environment
 PO Box 9047
 STN PROV GOVT
 Victoria BC
 V8W 9E2

Dear Minister of Environment Coell:

Funding Requirements to Meet Proposed Sea Dike Guidelines

On behalf of the City of Richmond and its citizens, we would like to thank your government for providing approximately \$8.6 million dollars of Flood Protection Program grant funding during the period from 2007 to 2010. Since transfer of the Dike's ownership in 2003, the City has proactively initiated flood protection upgrade projects to protect residents from flooding, and we will continue to do so.

The City appreciates the opportunity to review and comment on the Province's proposed 2010 draft Sea Dike Design Guidelines. From reviewing the guidelines, it is apparent that the Province intends to increase flood protection service levels that will require the City to raise its Dike.

Raising the City's 49km long Dike presents many complex challenges. The City does not have the financial resources to implement upgrades required by the draft Sea Dike Guidelines. The City is highly concerned about the potential flood risks of not raising the Dike and requests that the Province of British Columbia designate funding to raise sea dikes either through existing or new programs, to meet new Provincial Guidelines, should they be adopted.

When previously applying to the Flood Protection Program, administered by Emergency Management BC, the City only received a small portion of monies requested. We are concerned that the current grant program is insufficiently funded to meet the proposed guidelines. As such, we look forward to your review and positive response in establishing a suitable program.

We would be pleased to meet with you or any provincial officials to further discuss this matter.

Once again on behalf of our community, thank you for your government's past financial assistance since the Dike's ownership change in 2003.

Yours truly,

Malcolm D. Brodie
 Mayor

