



City of Richmond

Report to Council

To: General Purposes

Date: June 1, 2004

From: Suzanne Bycraft - Manager, Emergency & Environmental Programs

File: 10-6125-01/2004-Vol 01

Re: Proposed Riparian Areas Regulation

Staff Recommendation

1. That the Mayor send a letter to the Minister of Water, Land and Air Protection expressing the City's concerns regarding the lack of consultation in the development of the draft Riparian Areas Regulation and requesting that the Province delay decision-making pending meaningful and open consultation with affected local governments.

2. That copies of this letter be sent to the Premier of British Columbia, the Deputy Minister of Water, Land and Air Protection, the Union of British Columbia Municipalities, the Urban Development Institute and the Federal Government.

Suzanne Bycraft
Manager, Emergency & Environmental Programs
(3338)

FOR ORIGINATING DIVISION USE ONLY					
ROUTED TO:	CONCURRENCE		CONCURRENCE OF GENERAL MANAGER		
Policy Planning	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				
Development Applications.....	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

The Province has recently prepared draft Riparian Areas Regulation (RAR) to replace existing Streamside Protection Regulations (SPR). The Streamside Protection Regulations establish development set-back requirements to protect urban streams for fish habitat. The proposed RAR were developed to address continuing development sector concerns and better align existing regulations with the new Liberal government direction. The Province is intending to make a decision on the new proposed Riparian Areas Regulation by June 2004. If the amended regulations are not approved, the Province has indicated it will likely withdraw from the policy area. Despite implications to local communities, municipalities have not had the opportunity to contribute meaningful input into the development of the proposed amended regulations.

The lack of consultation with affected municipalities by the Province is an increasing concern. This report provides an overview of the proposed Riparian Areas Regulation and recommends that the City express concern to the provincial government regarding the lack of consultation.

Background

1.0 Streamside Protection Regulation (SPR)

In January 2001, the Province enacted the Streamside Protection Regulations in accordance with the Fish Protection Act. The purpose of the SPR is to protect urban streams by protecting the adjacent vegetated riparian area. Riparian areas provide essential functions for sustaining fish populations. In an effort to protect the riparian area, the SPR establishes:

- development set-back standards, ranging from 5-30 m depending on stream and riparian characteristics
- that local governments include the set-back standards in their planning tools
- an alternative process for modifying set-back standards through intergovernmental agreements.

The regulations apply to new or redevelopment on industrial, commercial and residential lands adjacent to streams. It does not apply to agricultural land. The regulation also only applies to the Lower Mainland, the East Coast of Vancouver Island and the Southern Interior. The SPR define stream to "include a watercourse or source of water supply, whether usually containing water or not, a pond, lake, river, creek, brook, ditch and a spring or wetland that is integral to a stream and provides fish habitat. Ministry staff advise that fish habitat is not limited to the presence of fish but would include waterbodies that provide water, food and nutrients to a downstream fish bearing stream or water body. Accordingly, Richmond ditches which provide water and nutrients to the Fraser River may be included under the definition of a stream in the SPR and subject to the

regulations. Local governments were given a 5 year timeframe for implementing the SPR. Richmond had not yet taken steps to implement the current SPR pending anticipated changes.

2.0 Proposed Riparian Areas Regulation (RAR)

Basis for Review

The Province undertook a review of the SPR in the fall 2001 to examine continuing concerns regarding regulation implementation and ensure consistency with the new governmental approach. In particular, Ministry staff advise that the review was conducted to address development sector concerns that the SPR were too prescriptive and not sufficiently flexible to take into account site-specific conditions.

Legislative Requirements

Richmond staff have not had the opportunity to be involved in the development of the RAR or review the draft regulations. Accordingly, it is difficult to gain an accurate understanding of the proposed regulatory requirements. However, based on the limited information provided to-date by the Ministry, it is staff's understanding that the RAR will set conditions that:

- proposed developments within a designated 30 m riparian assessment area will require that developers conduct an assessment through use of a Qualified Environmental Professional (QEP) to determine appropriate set-back widths and other necessary protection measures (e.g., mitigating design measures, compensation, etc.) for protecting fish,
- local government will not be able to approve developments within the riparian assessment area unless the QEP certifies that, with the identified measures, the development will not result in harmful alteration of riparian fish habitat or Department of Fisheries and Oceans grants approval.

Analysis

Major Proposed Changes (Between RAR and SPR)

It appears that the major suggested changes have been:

- shifting the onus onto developers using Qualified Environmental Professionals to determine set-back requirements based on a site-specific assessment rather than the use of prescriptive standards or intergovernmental agreements
- reduced Provincial involvement/oversight in the assessment process and likely greater role for local government in regulation administration.

It does not appear that there are any changes to where the regulations would apply.

Lack of Consultation

Local governments have not been provided with the opportunity to contribute meaningful input into the development of the Riparian Areas Regulation. Initially, an Advisory Committee was established with representatives from the Ministry of Water, Land and Air Protection, Fisheries and Oceans, District of Maple Ridge, Union of B.C. Municipalities, Urban Development Institute, BC Real Estate Association and environmental stewardship groups. The task group was unable to achieve consensus and was disbanded in 2002. An internal working group, involving staff from Fisheries and Oceans and the Ministry was then established to complete the review.

Richmond staff were first informed about the proposed amendments during a briefing session held on May 12, 2004. Staff was subsequently invited to review the draft Regulation on the condition that a confidentiality agreement be signed, precluding discussion with any other parties, including other City staff, Council or members of the community. This approach was considered unacceptable and staff requested that an open discussion process be initiated to ensure that all interests and concerns be properly evaluated and duly considered.

It is understood that staff from UBCM have been involved to some degree in the development of the new regulation but were subject to provincial government confidentiality requirements which prohibited the UBCM from sharing any information with member municipalities. The Province has advised that many details would be worked out during the development of implementation tools and that local governments would be consulted at this time.

Potential Implications - Concerns and Benefits

The UBCM recently sent a Memo to Mayor and Council providing information about the RAR and identifying potential issues of concern that have been identified by staff in various municipalities (Attachment 1).

Key municipal issues include:

- potential workload and financial impact to local government
- liability issues pertaining to land use decision-making based on QEP
- ensuring effective integration between development and fish protection
- lack of integration of fish protection objectives with other important community and provincial objectives (e.g., flood management and protection practices)
- lack of harmonization with already existing inter-jurisdictional process (e.g., Fraser River Estuary Management Program)
- uni-lateral decision-making by a QEP and no known process for resolving disputes
- inequitable application and
- fragmented environmental management which does not address cumulative impacts or holistic ecosystem preservation.

While there are a number of areas of concern, a key objective of the original SPR and now revised RAR is to provide clarity and certainty to developers and local governments on what development practices would be compliant with the Federal Fisheries Act. The Federal Fisheries Act prohibits the harmful alteration of fish habitat and can impose significant penalties should harmful alteration occur. However, this legislation does not provide any clarification on what preventative measures establish due diligence and thereby, afford liability protection. It is envisioned that the Provincial RAR would fulfill this function.

Recommended Action

Staff recommends that:

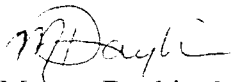
1. Council express its concern regarding the lack of consultation with respect to the RAR and request that local governments be given the opportunity to provide input on the RAR prior to Cabinet decision-making.
2. Staff continue working with representatives from other municipalities to develop a proposed resolution to the UBCM for consideration by Council. It is staff's understanding that the Province is seeking to develop a tri-party cooperation agreement between the UBCM and Federal Fisheries and Oceans for facilitating the implementation of the regulation should they be approved. The proposed resolution would recommend that the UBCM not sign an agreement unless certain conditions are met.

Financial Impact

There is no financial impact associated with the proposed City action in this report.

Conclusion

The Ministry of Water, Land and Air Protection has developed draft Riparian Areas Regulation to amend existing regulations pertaining to streamside protection in urban areas. These proposed regulations have been developed without meaningful consultation with affected municipalities. However, there are a number of potential issues of concern to municipalities, including liability protection, roles and responsibilities, workload and financial impact, variances and dispute resolution, fragmented environmental management and ensuring balanced integration of fish protection objectives with development and other community needs. It is recommended that Council send a letter to the Provincial government urging that consultation be conducted prior to final decision-making.



Margot Daykin, M.R.M
Assistant Manager - Environmental Programs (4130)
MD:md

TO: Mayor and Council
Chair and Regional District Board

FROM: Chair Robert Hobson, Chair, UBCM Environment Committee
Ken Vance, Senior Policy Analyst

DATE: May 17, 2004

RE: **RIPARIAN AREA MODEL: NEW REGULATORY FRAMEWORK**

GENERAL OVERVIEW

In the fall of 2001 and spring of 2002 the provincial government undertook a review of the current regulation on streamside protection and determined that the regulation needed to be changed as it was not supported by all of the key stakeholders. The provincial government made a decision that it would either develop a new streamside protection regulation based on a 30 metre assessment zone that key stakeholders could work with or it would rescind the old regulation and withdraw from the policy area.

The intent of the regulation that is being developed is to provide a 30 metre assessment zone that is scientifically based and can be used by a qualified professional to determine the distance that development can take place from a stream and still protect fish habitat.

The provincial government in the development of this new riparian area process made a decision - given that the new regulation still intended to protect fish habitat - not to undertake a broad consultative process on the new regulation, but rather to use the information from the previous consultations and to undertake strategic discussions with affected groups. It has undertaken discussions with the development industry and some environment groups.

At the 2002 UBCM Convention local governments were consulted on the province's decision to develop a new regulation and endorsed the following position outlined in the 2002 Environment Committee Report regarding development of a new riparian assessment regulation:

Action: UBCM request that a new riparian assessment regulation:

- *Provide liability protection for local government when making land use decisions based on a report by a Qualified Environment Professional on fish habitat;*
- *Ensure that no new responsibilities are downloaded on local government and that all training costs and management costs required to implement the new regulation are paid for by either the federal or provincial government;*
- *ensure the process is timely and cost effective, from the community perspective;*
- *ensure an integrated approach is implemented to avoid conflicts between the different levels of government;*
- *ensure that a balance is maintained between development and protection of the environment.*

UBCM has been asked to provide comments on the framework for a cooperation agreement (no discussion on details), outline of guidebook, development of the new assessment process and the development of the regulation (under provincial government confidentiality requirements).

The UBCM has met with the new Minister of Water, Lands and Air Protection, the Honourable Bill Barisoff, on March 4, 2004 and May 7, 2004. The issue of the riparian area protection was raised on both occasions and the Minister made it clear that the province intended to develop a new regulation or withdraw from the policy area.

BRIEFING SESSION

Attached is a copy of the presentation made by the Ministry of Water, Land and Air Protection on the regulatory framework and new assessment model at the briefing session held on May 12, 2004 in Richmond which was attended by approximately 40 local governments.

Ministry staff indicated that the province did not intend to expand the geographic scope of the regulation (Vancouver Island, Sunshine Coast, Squamish Lillooet Area, Thompson-Nicola Area, Columbia-Shuswap Area, Okanagan Valley, Fraser Valley and Lower Mainland) at this time, however, it may be expanded province wide at some point in the future.

Ministry staff implied that they were contemplating a one year implementation time frame for the new regulatory framework and assessment model.

Both the Ministry of Water, Lands and Air Protection and the Fisheries and Oceans Canada indicated that they were facing a different regulatory environment today and that they intended to implement this new assessment model by re-allocating existing resources.

The Ministry of Water, Land and Air Protection and Fisheries and Oceans Canada stated that they have been working together to:

- Develop a scientific based assessment process to protect fish habitat - this has been done with scientists from UBC, various provincial ministries and Fisheries and Oceans Canada;
- Develop a new regulation based on the scientific based riparian area assessment process.

The Ministry of Water, Lands and Air Protection outlined a number of steps in implementing the new regulatory framework for the protection of riparian areas:

- Cabinet approval of new riparian assessment regulation (June);
- Development of Cooperation Agreement between Water, Lands and Air Protection, Fisheries and Oceans Canada and UBCM;
- Development of Guidebook and training to assist users in implementing the new regulation;
- Implementation of pilot projects to test new assessment process and regulatory framework;
- Development of monitoring and compliance strategy.

The ministry has indicated that the new directive is intended to:

- Provide a scientific framework to assist in the protection of fish habitat,
- Promote cooperation between the three levels of government, and
- Provide a more effective and efficient framework for decision-making.

LOCAL GOVERNMENT COMMENTS AND CONCERNS

At the briefing session on the new regulatory framework and assessment model, held on May 12, 2004, local government representatives in attendance raised a number of issues, outlined below is a summary of some of the comments provided:

- Lack of a transparency and open consultation process;
- Concern over the decision by the provincial government not to include the current 'SPR process as a policy option;
- Volume of regulatory changes being downloaded on to local government;
- Development of the new assessment model – lack of external peer review of model; failure to consider hydrological factors in new model; model does not address erosion issues;
- Need to undertake pilot projects and test the new tools in the assessment model;
- Limited scope of the new regulatory framework – does not address water quality; values other than fish will be lost; does not include institutional development and agricultural areas;
- Concern over the use of Qualified Professionals in approval process – increased liability to local government; lack of accountability; lack of creditability in new process; need for a conflict/resolution mechanism in the event that there are disagreements;
- Timing of reports from qualified professionals to ensure riparian area is protected – design stage, pre-construction and build stage;
- Need for detailed training process for qualified professionals undertaking riparian assessments;
- Concern over limited time frame to implement new model – local government may need to undertake public consultation; amend bylaws and make other policy changes etc.;
- Need to clarify the role of local government in new regulatory framework;
- Lack of federal and provincial resources in implementation of the new regulatory framework and development of the new assessment model;
- Concern over compliance and enforcement monitoring by the federal and provincial government – adoption of new model brings risks; who will ensure that the new methodology is working; what happens if there is non-compliance;
- Loss of working relationship and partnerships – between local government and streamkeepers groups and federal and provincial agencies.

NEXT STEPS

UBCM will be forwarding the concerns identified by local government to the Minister of Environment, Lands and Parks.

UBCM will be having further discussions with the Ministry of Water, Lands and Air Protection around the development of the regulation and the implementation of the new regulatory framework.

There are a number of specific issues that came out of the briefing session regarding the new riparian area regulation and assessment model that the UBCM will pursue with the province:

- Use of qualified professionals and liability protection for local government;
- Time frame for implementation of the proposed directive;
- Role of local government in implementing the new riparian assessment model;
- Need for additional resources for implementation: training, monitoring and compliance etc.;
- Development of pilot projects.

Proposed
Riparian Areas Regulation
Local Government Briefing
May 12, 2004



1

Objectives for the Day

- Provide briefing on proposed Riparian Areas Regulation and associated documents
- Receive comments on proposed approach
- Outline path forward leading to implementation

2

The Day in Context

- Minister will be advised of results
- Minister is keen to take to Cabinet
- UBCM actively engaged throughout and we believe interests identified have been addressed
- Will continue to collaborate in the period leading to implementation and beyond

3

UBCM Perspectives

> From outset of discussions, UBCM staff and officials have emphasized

- Minimizing costs to local government
- Minimizing liability to local government
- Respecting local government land use decision-making responsibility
- Enabling continued use of SPR defined setbacks

4

Outline of Presentation

1. Policy overview
2. Review and Decision Process
3. Riparian Areas Regulation
4. Riparian Assessment
5. Local Government Role

5

1. Policy Overview

Development sector concerned that ability to apply site specific option is limited based on:

- a. Provincial and federal resources to zone the landscape and to staff referral committees
- b. Local governments ability and willingness to entertain the site specific approach

Provincial government looking to adopt science and results-based regulation

6

The Assignment

- > Work with MLA advisory group
- > Develop new regulation to replace existing Streamside Protection Regulation that maintains same level of protection as SPR
- > Incorporating the following design principles.....

7

Key Design Principles

- > Satisfy requirements of federal *Fisheries Act*
- > Certainty and flexibility to developers
- > Not dependent on limited local, provincial and federal government resources
- > Shift cost to land developer

8

Solutions

- > Define the site specific option in the SPR
- > Standardize the approach to this option
- > Make best use of government resources
- > Onus on developers using QEPs to determine appropriate protection

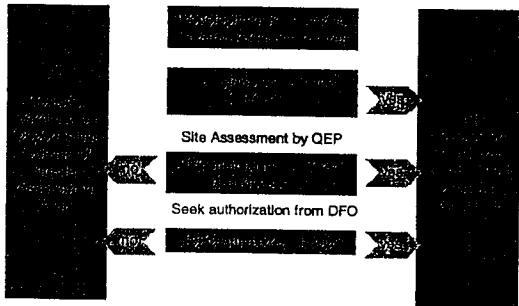
9

Riparian Assessment Areas Model

- > Local governments may allow development within 30 meter riparian assessment area only if certified by Qualified Environmental Professionals (QEP) that development will not result in harmful alteration of riparian fish habitat (features functions and conditions).
- > QEPs hired by proponents help design development to assess impacts, avoid impacts, develop mitigation measures or recommend compensatory strategies.
- > Shifts cost of assessing development to proponent allowing governments' to focus on monitoring and enforcement

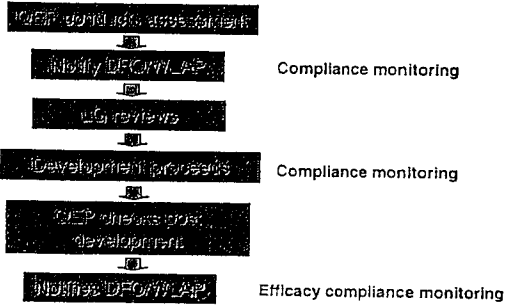
10

2. Process

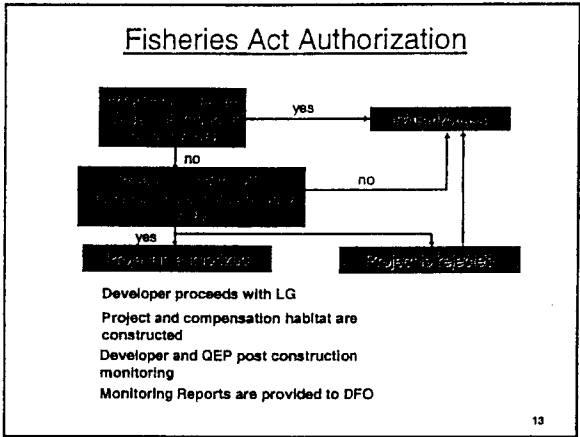


11

Detailed Process



12



- ### Key Accountability Tools
- Clear Science Based Standards for the QEP conducted assessment, directly referenced in the regulation
 - Required qualifications for QEPs identified
 - Governments notification of assessment
 - Monitoring, both compliance and efficacy
- 14

- ### Products
- Riparian Areas Regulation
 - Science-based assessment for QEPs
 - Monitoring strategy, including notification
 - Agreement confirming implementation responsibilities of three governments
 - Guidebook on implementation
- 15

3. Riparian Areas Regulation

- > Through Section 12 of the Fish Protection Act provide direction to specified local governments to use their powers under Section 26 of the Local Government Act to protect riparian areas
- > RAR directs local government not to approve unless assessment completed
- > RAR being developed with Ministry of Attorney General, UBCM and MCAWS

16

Riparian Area Regulation

Outline

- > **Definitions and interpretation**
- > **Purposes of this regulation**
- > **Application**
- > **Conditions for development**
- > **Develop strategies with the WLAP and DFO**
- > **Protection and enhancement of areas**
- > **Preparation of assessment report by qualified environmental professional**
- > **Appendix: Assessment Methodology**

17

Riparian Area Regulation

- > The purpose of this regulation is to:
 - protect SPEAs so they can provide natural features, functions and conditions (FFC) that support fish life processes, and
 - establish policy directives that reflect the intergovernmental protocol agreement between WLAP, DFO and the UBCM

18

Application

- > Applies to use of Local Government powers under Part 26 of Local Govt Act
- > Does not apply for reconstruction or repair of existing structure on existing foundation

19

Conditions for Development

Direction to Local Government that development in assessment area requires

- > QEP certifies that:
 - they are qualified to do the assessment,
 - have followed the assessment methodology,
 - no alteration of FFC if SPEA width and measures are maintained.
- > There is proof that:
 - WLAP and DFO have been notified and sent copy of assessment report or
- > DFO authorizes harmful alteration of features functions and conditions

20

Develop Strategies

Local government to work with DFO and WLAP to develop strategies for:

- QEP to certify post development that SPEA recognized and measures followed
- Monitoring and enforcement
- Public education with respect to the protection of riparian areas

21

Protection of SPEAs

- Local Govt must use powers to protect the streamside protection and enhancement areas identified in the assessment report

22

Preparation of assessment report by qualified environmental professional

- > Assessment Report must:
- follow assessment methodology
 - Report on:
 - . Width of the streamside protection and enhancement area
 - . Measures necessary to protect the integrity of the streamside protection and enhancement area.

23

SPR vs RAR

SPR



Accept standard setbacks

Option for site specific solution

Methodology for Option

Role of QEP

Measures to maintain the SPEA

RAR



24

4. Riparian Assessment

Key Elements

- Developed through consultation with a number of scientists and review of literature
- Potential fish habitat impacts examined in 30 meter (or beyond) riparian assessment area
- Specified methods and standards
- Undertaken by Qualified Environmental Professional (QEP)
- Development proceeds if QEP certifies no harmful alteration of fish habitat
- If harmful alteration, Fisheries Act approval required

25

Local Government Role

- > Local Government application
- > QEPs and Liability
- > Partnership approach
 - Cooperation Agreement
 - Guidebook
 - Monitoring
 - Training
- > Time Frame

26

Local Government Applications

- > Use Part 26 tools for development
 - i.e., Zoning and Development permits
- > Other Tools
 - i.e. tree protection, covenants,
- > Other issues
 - i.e. drainage, geotech
- > Differences

27

Liability and Use of QEPs

- Risk Management strategies to reduce potential for litigation
 - Detailed assessment,
 - Design to avoid impact
 - Requirement for notifications to senior governments with the results of the assessment,
 - Final review sign off and reporting back to senior governments by the QEPs of the implementation of the assessment prescriptions,
 - Compliance and efficacy monitoring,
 - Working with professional associations on training, responsibility, and accountabilities of members.

28

Cooperation Agreement

- MWLAP, DFO and UBCM
- Detailed agreement framework completed
- Key element will be the roles and responsibility matrix
- Detailed content will be developed with UBCM, DFO and legal advisors

29

Outline of Cooperation Agreement

1. Effect and Interpretation
2. Purpose and objectives
3. Principles
4. Goals
5. Roles and responsibilities
6. Negotiation of local intergovernmental cooperation agreements
7. Financial resources
8. Information sharing
9. Training

30

Guidebook

Content

1. Principles of Approach
2. Legislative Tools
3. Process and Implementation
4. No Net Loss Proposals
5. Local Government Flexibility

31

Guidebook

- Implementation advice to local government
- Direction from DFO on No Net Loss proposal
 - compliant projects do not require an authorization
 - because they have applied location, design principles and mitigation measures to avoid creating a HADD "

32

Notification and Monitoring

- Key aspect of process is notification of development and monitoring and reporting of results to DFO and MWLAP
- Notification system designed and final development underway
- Detailed framework of monitoring strategy
- Working out roles and responsibilities of three levels of government
- Determining resource requirements

33

Monitoring Strategy

- > DFO, MWLAP and LG involved in monitoring
- > Monitoring will be stratified by:
 - Time (before, during and after development)
 - Risk (watershed sensitivity, and impact of development)
 - Proactive (planned) and Reactive (complaints)

34

Division of Labour.

- > Five participants in the monitoring strategy for the RAR. These are:
 - Provincial government – MWLAP, MSRM
 - DFO
 - Local Governments
 - Possibly, NGOs such as Stream Keepers; and the general public.
 - Professional Associations

35

Members of the Public

- > Two potential roles:
 - monitoring, using methods and guidelines developed by government agencies
 - generate a complaint.

36

Professional Associations

- > Holding members accountable
- > Ensuring that members are qualified ie training
- > Addressing process in guidebook ie how to lodge a complaint
- > Feedback on complaints:
 - How resolved
 - Recommendations for improvement

37

Training

- WLAP and DFO
 - LG contact
 - Monitoring
 - Adaptive Management
- Local Government Staff
 - Choice of tools
 - Monitoring
 - Adaptive management
- QEP
 - Assessment training
- Public

38

6. Implementation

- > Develop Cooperation Agreement
- > Implementation Guide
- > Training
- > Notification System
- > Adaptive Management
- > Monitoring

39

Time Frame

> Depends on:

- What regulatory strategy used
- What land use strategy currently in place
- Implementation strategy

40

4. Riparian Assessment

Key Elements

- Developed through consultation with a number of scientists and review of literature
- Potential fish habitat impacts examined in 30 meter (or beyond) riparian assessment area
- Specified methods and standards
- Undertaken by Qualified Environmental Professional (QEP)
- Development proceeds if QEP certifies no harmful alteration of fish habitat
- If harmful alteration, Fisheries Act approval required

1

Riparian Assessment

Components of the Model

- Addresses DFO's requirements and QEP accountability issues
- Provides clear direction to QEPs
- Determines the qualifications of QEPs,
- Establishes the due diligence test for development
- Forms the content of notification and monitoring
- Establishes SPEA width and Measures

2

Assessment Report

1. Description of Fisheries Values
2. Results of the Assessment (SPEA Width)
3. Description of Proposed Development
4. Measures to Protect and Maintain the SPEA
5. Environmental Monitoring

3

Assessment Report

- Two main outcomes
1. Determines width of buffer (SPEA width)
 2. Outlines measures to maintain integrity of SPEA

SPEA = Streamside Protection and Enhancement Area

4

Key Definitions:

High Water Mark

"means the visible high water mark of a stream where the presence and action of the water are so common and usual, and so long continued in all ordinary years, as to mark on the soil of the bed of the body of water a character distinct from that of its banks, its vegetation, as well as in the nature of the soil itself. The high water mark includes the active floodplain"

High water mark

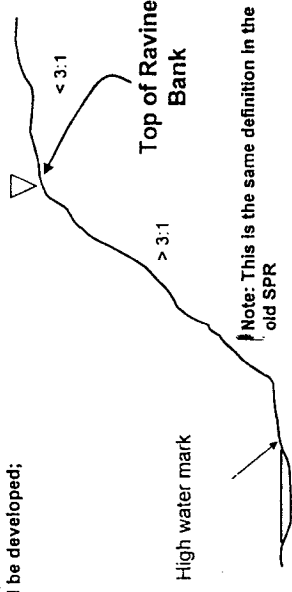


Note: This is essentially the same point as TOB for streams less than 3:1 slope under the SPR

Key Definitions:

Top of Ravine Bank

"means the first significant break in a ravine slope where the break occurs such that the grade beyond the break is flatter than 3:1 for a minimum distance of 15 metres measured perpendicularly from the break, and the break does not include a bench within the ravine that could be developed;



Riparian Assessment

> Two options available to QEP

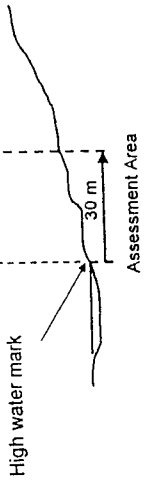
1. Simple Assessment
2. Detailed Assessment

Simple Assessment

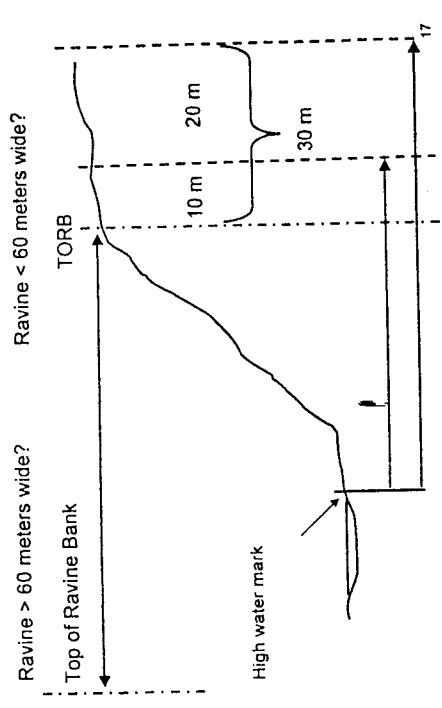
> Based on Section 6 of SPR:

- Fish Bearing
- Permanent
- Condition of Potential Vegetation

Detailed Assessment Area: <3:1 slope



Detailed Assessment Area > 3:1 slope



SPEA Determination

- > Focus is on riparian vegetation and its functional role in maintaining fish habitat
- > Determination of how the site provides the features functions and conditions
- > Determine the processes that create the habitat, and how the sites riparian vegetation interacts with those processes

Step 1
Determine Site Vegetation

- > Influences how a site provides LWD, Bank and Channel stability, Shade, and Food and Nutrients.
- > Need to establish what vegetation would occur naturally – 3 categories

- Trees dominate (default)
- Shrub
- Low Cover or Grass/Sedge

> How?

- MOF field guides
- Adjacent undisturbed riparian areas with similar ecological characteristics
- Historical air photographs
- Vegetation and/or soils mapping
- Local ecologists

20

Step 2: Assessment 2

LWD, Channel and Bank Stability

- > This assessment determines a zone of sensitivity for LWD and riparian vegetation by establishing:
 - > the role of large wood in maintaining channel morphology, and fish habitat, and
 - > the role of riparian vegetation in forming and stabilizing stream banks

21

Assessment 2: Assumptions

- > The importance of LWD to channel structure is related to the channel morphological type
- > Some channel types do not rely on wood to maintain their channel morphology
- > Three main channel morphologies are used here (riffle-pool, cascade-pool and step-pool) to gain an understanding of the importance of wood to channel structure
- > Bank stability is also related to channel type
- > The channel becomes more stable as slope, relative width, relative depth increases

22

Assessment 2

Rifle - Pool



Cascade - Pool

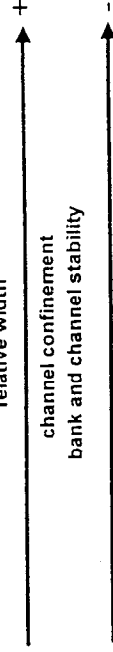


Step - Pool



slope
relative roughness
relative width

channel confinement
bank and channel stability



LWD

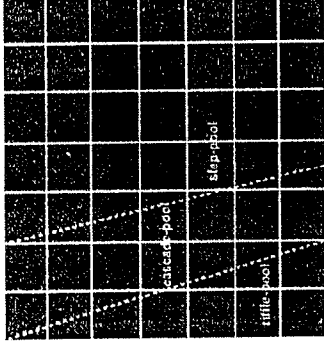
23

2. How to Determine Channel Type

- > Use Channel Assessment Procedure (CAP)
- > Highly modified channels use...

25

Determining Channel Type (Modified Channels)



26

Step 3: Assessment 3 - Shade

- > Factors that determine the importance of shade:
 - solar angle
 - geographic stream orientation
 - stream width
 - the surface-to-volume ratio (width-to-depth ratio) of the stream and
 - the height of natural vegetation

29

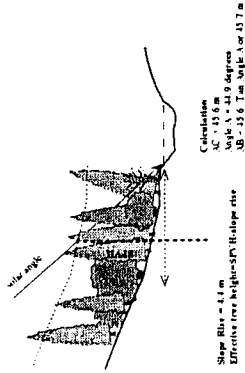
Step 4: Assessment 4 - Shade

- > 2 Methods available – quick or long
- > Both are based on:
 - solar angle,
 - stream aspect and
 - height of the natural vegetation

30

Shade: long method

- > Calculates the ZOS based on stream orientation, solar angle and bank slope adjacent to the stream using trigonometry, solar tables and site survey.



32

Step 4: Assessment 4 - Food and Nutrients

- Assumptions
- > Fine litterfall - (leaves, needles, bark, cones and fine wood) constitutes main source of nutrients.
 - > Vegetation height and channel width are main influencing factors

37

Step 5: Assessment 5 - Filtration

- > The ZOS for filtration is considered to be the entire assessment area (30 meters).

Therefore:

- All development planned within the 30 meters must be designed to replicate the functions of a naturally vegetated watershed
- Appropriate sediment and erosion control mechanisms must be in place for all development activity within 30 m

39

Target

- > Restore 90% of average annual rainfall volume to natural hydrologic pathways within 30 meters

40

How?

- > Preserving natural vegetation cover
- > Preserving or restoring natural infiltration capacity by infiltrating runoff from impervious surfaces and applying absorbent landscaping
- > Landscaping and application of green roofs
- > Re-using rainwater for irrigation and indoor uses

41

Step 6: - Develop Measures

- > QEP must evaluate the risk to the integrity of the SPEA
- > Based on the site and nature of the development
- > Develop measures to maintain the integrity of SPEA
- > Measures must address:
 - Provision of large trees due to Hazard tree removal
 - Windthrow
 - Slope Stability
 - Drip Zone and Rooting Strength
 - Encroachment
 - Sediment and Erosion control

44



City of Richmond

6911 No.3 Road, Richmond, BC V6Y 2C1
Telephone (604) 276-4000
www.city.richmond.bc.ca

June 3, 2004
File:

Engineering
Telephone: (604) 276-4289
Fax: (604) 276-4197

Minister Bill Barisoff
Ministry of Water, Land and Air Protection
PO Box 9047
STN PROV GOVT
Victoria BC
V8W 9E2

Dear Minister Barisoff:

Re: Proposed Riparian Areas Regulation

The City of Richmond is very concerned about the lack of transparency and meaningful consultation with affected local governments in the development of the Provincial Riparian Areas Regulation (RAR). We understand from staff in your Ministry that City Councils and community constituents will not be given the opportunity to provide meaningful input into the development of the RAR despite potential significant impact to local communities. The opportunity presented for individual staff members to review the draft Regulation on the condition that a confidentiality agreement be signed, precluding discussion with Council and any other parties, is considered unacceptable.

It is difficult to assess the proposed regulations without the opportunity to review them. However, a number of concerns were identified as a result of information recently provided by your Ministry. Key areas of concern to the City of Richmond include:

- Increased workload for local governments
- Increased cost to local government
- Lack of adequate liability protection
- Fragmented environmental management which does not effectively integrate site-specific fisheries protection with broader ecosystem preservation objectives
- Lack of harmonization with already existing legislation and inter-jurisdictional coordinated management strategies, such as FREMP
- Integration with other important community and provincial objectives such as flood management and protection practices.

The City of Richmond recognizes that the long-term sustainability of our region depends upon effective partnerships and collaborative efforts. The City also acknowledges that the Community Charter identifies consultation between the Province and municipalities as a foundational guiding principle for addressing matters of mutual interest and any proposed changes to Provincial programs that may have a “significant impact in relation to matters that are within municipal authority” (Section 2-2). Accordingly, the City of Richmond requests that the Provincial Government engage in meaningful dialogue with local governments and their constituents prior to Cabinet decision-making on the Riparian Areas Regulation.

Yours truly,

Malcolm D. Brodie
Mayor

JH:le

pc: Premier Gordon Campbell, Provincial Government
Gord Macatee, Deputy Minister, Water, Land and Air Protection
Bruce Morgan, Director, Biodiversity Branch, Ministry of Water, Lands and Air
Protection
Sue Farlinger, Director, Habitat and Enhancement Branch, Fisheries and Oceans Canada
Robert Hobson, Chair, UBCM Environment Committee