

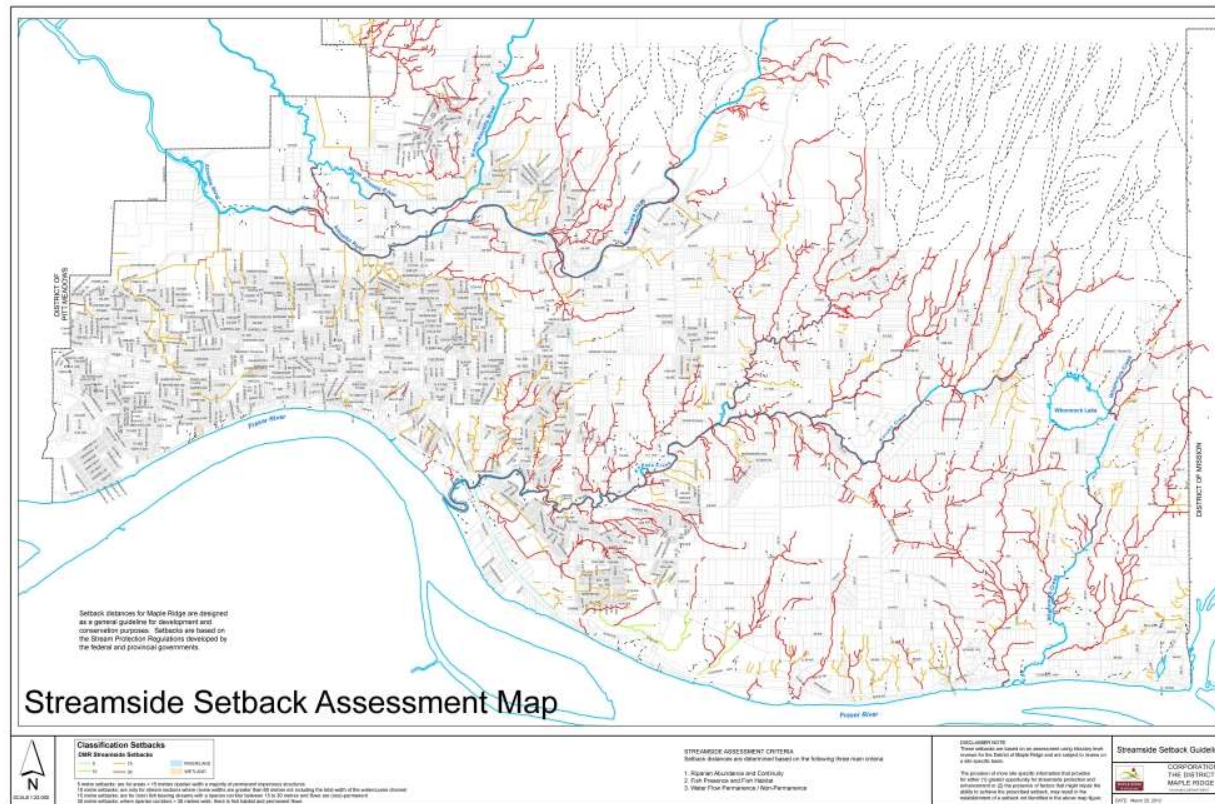
Watercourse Protection Development Process Overview

Prepared by the City of Maple Ridge
May 5 2015

Introduction

1. A Background History
2. Procedures for Review of SPR
3. A Review Of Successes and Challenges
4. Recommendations

What is the Streamside Protection Mapping About?



Baseline info

- Location/condition
- Classification info
- Natural hazards
- Enhancement opportunities

Development within 50 metres of a watercourse/wetland triggers a WPDP application process

Checks and Balances Approach

Key Principles For SPR Watercourse Assessments

- Flexible Approach – Every site is unique and may require unique solutions
- Consistent – Always results in clear Net Gains to aquatic habitat
- Due Diligence – Provide appropriate supporting studies & best level of effort
- Transparency – Ensure clear, timely and appropriate refers to stakeholders
- Consistency - Well documented and appropriate checks/balances

Checks and Balances Approach

Key Checks and Balances

1. Initial LUI inquiry process or pre-application inquiry with request for context map
2. Field assessment by QEP for determining environmental sensitive areas including SPR setbacks, steep slopes, natural hazards, significant sized trees, through EA & EIA
3. Municipal review of QEP reports with discussion around protection, mitigation, enhancement opportunities & setback variances/compensation requirements. Coordination with other municipal departments also may be required.
4. Possible senior agency review and approval required for major variances, relocation, or major disturbance. Ongoing dialogue encouraged with all parties concerned.
5. Habitat Balance report - where compensation or variances requested:
 - Biological justification;
 - Quantitative and qualitative assessment of habitat gains vs. losses;
 - Demonstrate clear net gains with best effort on LID designs.

Municipal Stream Mapping & Mgmt. System



Section Number	34
Crew:	Stott
Date:	01242000
State:	Natural
Flow Type:	Riffle/Pool
Wetted Width:	1.5m
Wetted Depth:	0.01 - 0.5m
Bank Width:	2.0m
Bank Depth:	2.0m
Gradient:	3 Percent
Substrate:	Clay 30% Sands 25% Gravel 30%, Cobbles 15%
Riparian Extent Right	> 30 m
Riparian Extent Left	>30 m

- Bio-Physical Inventory of 600 km Watercourses
- Enhancement Efforts A Requirement
- Integrated Approach

Procedures For Environmental Review Process

Step One. Pre-application inquiry & review

1. Identify ESAs - water features, steep slopes, or natural hazard areas using City's GIS mapping with request for a site context map by Environment Staff
2. Confirm presence, status & setbacks to determine developable and non developable area with help of a environmental professional (QEP)
3. Determine what other appropriate permits or studies might be required
4. Identify protection, mitigation, and setback variance requests & habitat balance opportunities early on in the process to determine developable area.

Procedures

Step Two. Before Second Reading for Zoning or Early on in the Subdivision Servicing Review Process

1. Staff review reports, plans, and information provided by QEP;
2. Staff refer and coordinate with other departments, professional consultants, and possibly senior agencies;
3. Determine if additional studies, info, coordination and/or integration of solutions is required by staff or from professionals of record;
4. City Approvals in principal for setbacks, mitigation, enhancement plans, compensation plans, tree mgmt. plans, SMP on site stormwater, natural hazards, & potential senior agency submissions required before 2nd reading.

Procedures

Step Three. Third and Final Reading and/or Before Approval of Any Subdivision Plans:

1. Confirm receipt of final site plans, surveys, security deposits, legal agreements, inspection and approval letters from QEP's, DP report checklists, Final DP reports signed;
2. Receive confirmation from senior environmental agencies of approvals or authorizations;
3. Provide feedback to general public if questions or concerns at public open house sessions or Council workshop meetings;
4. Provide final report to Director of Planning for approval and provide presentation to Council if requested.

What Information Does Maple Ridge Require?

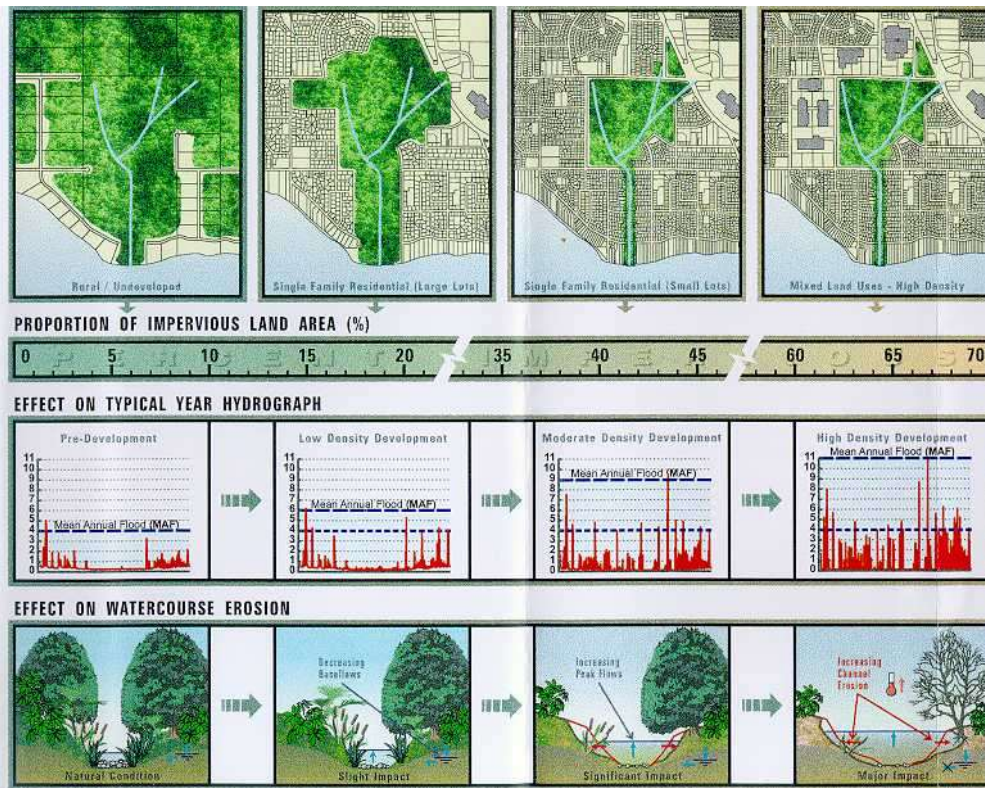
1. Environmental Assessments
2. Steep Slope Assessments (using City Lidar)
3. Natural Hazard Assessments
4. Tree Mgmt. report or Arborist report
5. Enhancement and Restoration Plans
6. SMP 3 Tier On Site Detailed Conceptual Plans
7. BCLS Survey of Protected Areas
8. Environment Impact Assessment & Habitat Balance
9. Cost Estimates and Security Deposits

Why Has This Approach Been Successful?

Successes

- Checks and Balances Approach;
- Initial background info provided to stakeholders early on in the process with substantial cost savings to developers
- Good track record & relations with senior agencies;
- Flexible approach to dealing with complex sites with emphasis on tailored solution for stakeholders;
- Multi beneficial and integrated approach – steep slopes, natural hazard abatement, integrated SMP plans, cumulative enhancement impacts
- Community support

Services/ Benefits from SPR Buffers



Protection for Sensitive Fish habitat
Wildlife habitat and Species At Risk
Ecological Health and Biodiversity

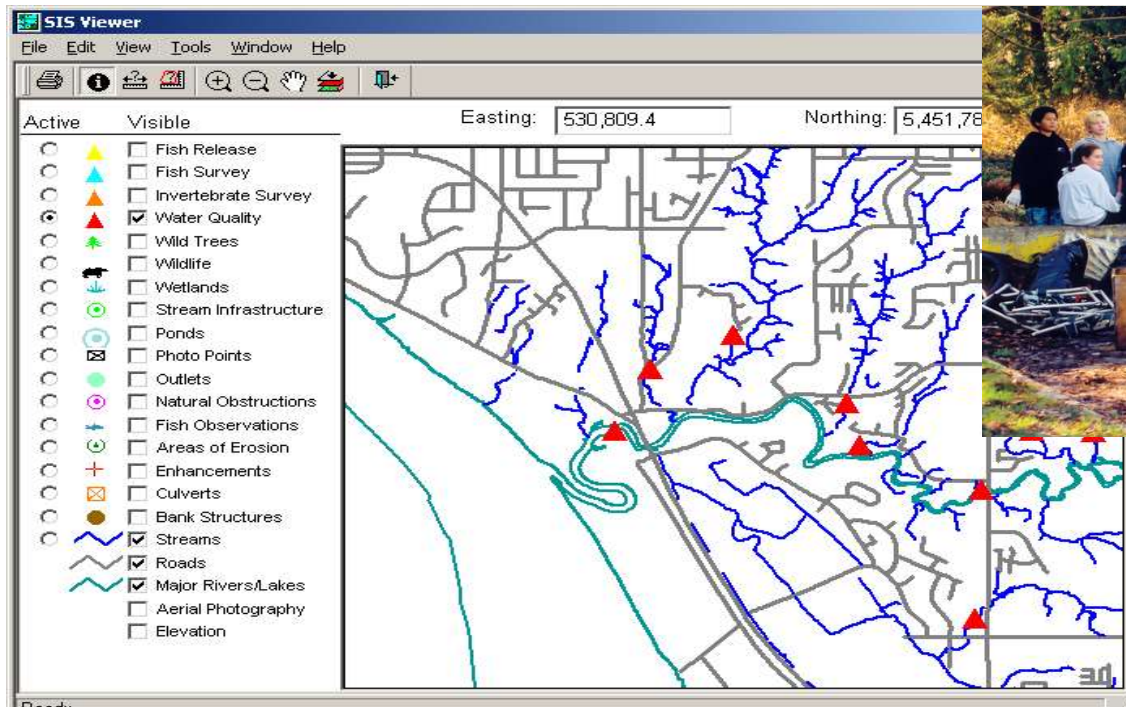
Stormwater Mgmt. & Rainwater Mgmt. Aquifer Mgmt. & Groundwater

Floodplain Mgmt Slope Stability Erosion Control Exfiltration/Storage

Access to Nature Parks & Recreation Tree Retention Greenway Trails

Watershed & Air Shed Mgmt
Climate Change Resiliency
GHG Offsets/Carbon Sequestration

Community Partnership & Enhancement Program



Water Quality Monitoring
Enhancement Opportunities
Fish Surveys
Community Cleanup sites

Promoting A Strong Stewardship Ethic In The Community

What Are Some of the Key Challenges?

- **Complex or larger site** may require additional time for staff to carry out site visits and review of reports by professionals;
- **Limited staff resources** for dealing with large volumes of work, development demands & review of complex sites;
- **Setback variance & habitat balance requests** the more aggressive the proposal, the more review, negotiations & delays;
- **Approval review timing** from senior environmental agencies;
- **Coordination with stakeholders** – more complex sites & legal requirements means greater coordination with stakeholders.

Protection For Watercourses and Ditches



Watercourses & Ditches

- Rivers (Fraser foreshore)
- Streams/Watercourses
- Fragmented Streams
- Conveyance channels
- Bio-swales or Eco-swales

Protection Mechanisms & Incentives

1. **Dedication** as park conservation lands if re-zoning.
2. **Habitat Conservation Covenant** for subdivision or permits
3. **Restrictive Covenants** – trail corridors, flood management, stormwater management, steep slopes, and enhancement areas
4. **ROW's and Easements** – access roads, trails, stormwater
5. **Land Conservancy Agreements** - conservation agreements
6. **Eco-Clusters**– density bonus tool for additional protection of non regulated environmental sensitive features

Setback Variance Process:

1. SPR methods used to determine setbacks
2. Significance and Sensitivity of Water Features
Additional protection & review required for Class A;
3. Does it meet or beat Provincial RAPR minimum setbacks in addition to WSA habitat requirements?
4. Provide Habitat Balance Report –
 - Biological justification, evaluate habitat gains/losses, prove functional improvements & best effort for LID
5. **Approval or Confirmation Required** from senior agencies before development approvals provided by City.

Thank You