

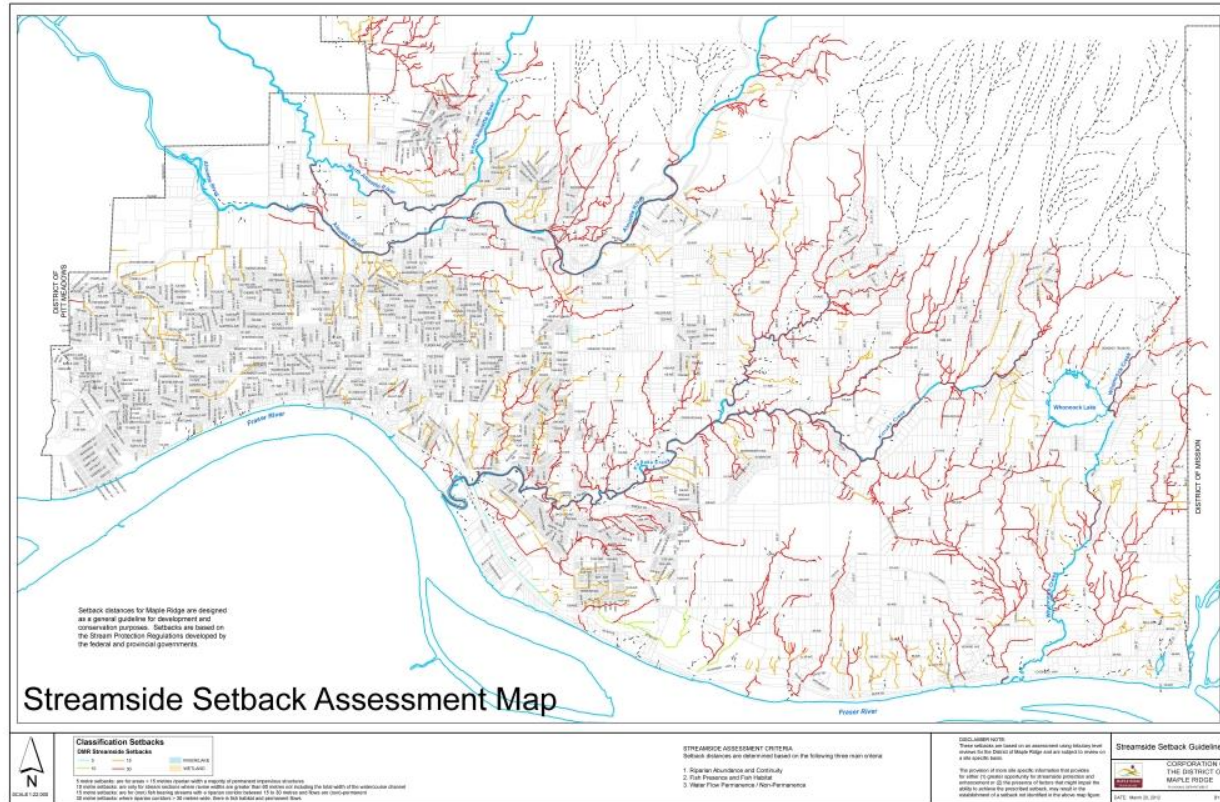
Watercourse Protection Development Process Overview

Prepared by the City of Maple Ridge
November 2022

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
- Protection areas
- Mitigation BMPs
- Enhancement opportunities

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

Checks and Balances Approach

Key Principles For SPR Watercourse Assessments

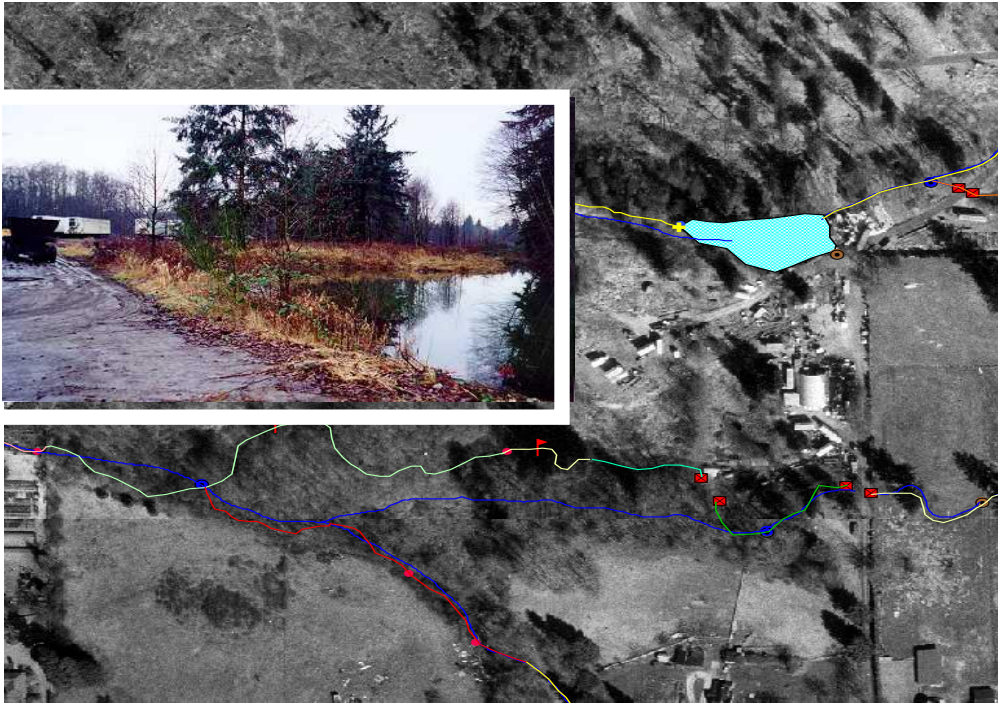
- **Flexible Approach** – Every site is unique and may require unique solutions
- **Progressive** – SPR method based on scientific review and professional recommendations. Variances must result in clear net gains to aquatic habitat
- **Due Diligence** – Provide appropriate supporting studies & best practices both on site as well as for off site water features
- **Transparency** – Ensure clear, timely and appropriate info & recommendations to all of the relevant community stakeholders and senior agencies
- **Consistency** - Well documented, with reliance on external QEPs as well as municipal & senior agency input for appropriate checks/balances

Checks and Balances Approach

Key Checks and Balances Process

1. **Initial preliminary development inquiry** with request for background info & 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 environmental reports** with discussion around protection, mitigation, enhancement opportunities & possible 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 to make sure it results in clear net habitat gains;
 - 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 700+ km watercourses
- Share baseline info with community stakeholders
- Promote an informed and integrated approach

Procedures For Environmental Review Process

Step One. Before First Reading or Initial Subdivision step

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 For Environmental Review Process

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

1. **Staff receive tech reports, plans, and information** provided by QEP and other relevant professionals i.e. geotech, drainage, trees;
2. **Staff review, 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. **Final details with supporting information** for protection, mitigation, enhancement plans, compensation plans, tree mgmt. plans, on site stormwater, natural hazards, & potential senior agency submissions.

Procedures For Environmental Review Process

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

1. Confirm completion of final site plans, surveys, security deposits, legal agreements, inspection letters, DP report checklists signed;
2. Receive confirmation from QEP of submissions to senior environmental agencies for 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 Environment Require to complete Watercourse Protection DP Applications?

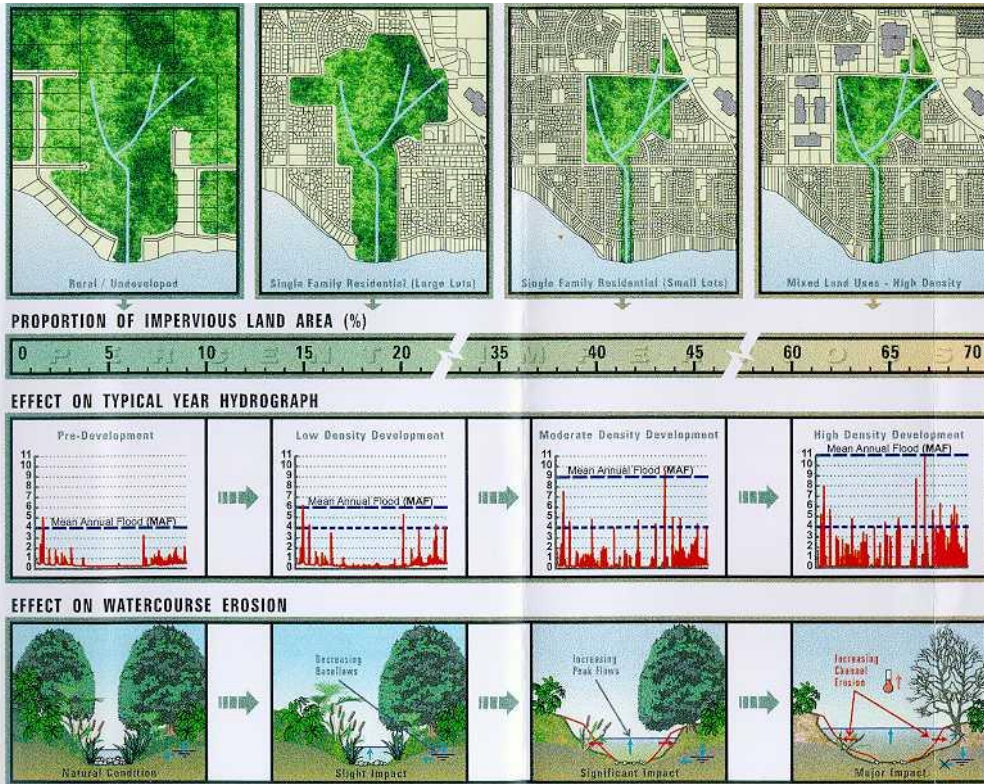
1. Initial Environmental Assessment Report – current status
2. Steep Slope Assessments (City Lidar data available)
3. Natural Hazard Assessments
4. Tree Mgmt. report or Arborist report
5. Enhancement and Restoration Plans
6. SMP 3 Tier On Site Detailed Conceptual Plans
7. BCLS Survey of Protected Areas
8. Environment Impact Assessment - Habitat Balance
9. Coordination of various site plans, studies, senior agency submissions, legal agreements with larger site requirements
10. Cost Estimates and Security Deposits

Why Has This Approach Been Successful?

Successes

1. Consistent and fair checks and balances approach;
2. Scientifically proven to be effective;
3. Access to reliable and accurate background info for stakeholders early on in the process with substantial cost savings to developers
4. Due diligence & effective efficient relations with senior agencies;
5. Flexible approach to dealing with complex sites with emphasis on tailored solutions for reasonable solutions for stakeholders;
6. Comprehensive and integrated approach. Pro-active efforts to work with the natural environment and support nature based solutions;
7. Extensive community & professional support over the past 20 years;
8. Local pride in the natural environment.

Services/ Benefits from SPR Buffers



Stormwater Mgmt. Greenway Trails
Rainwater Mgmt. Recreation

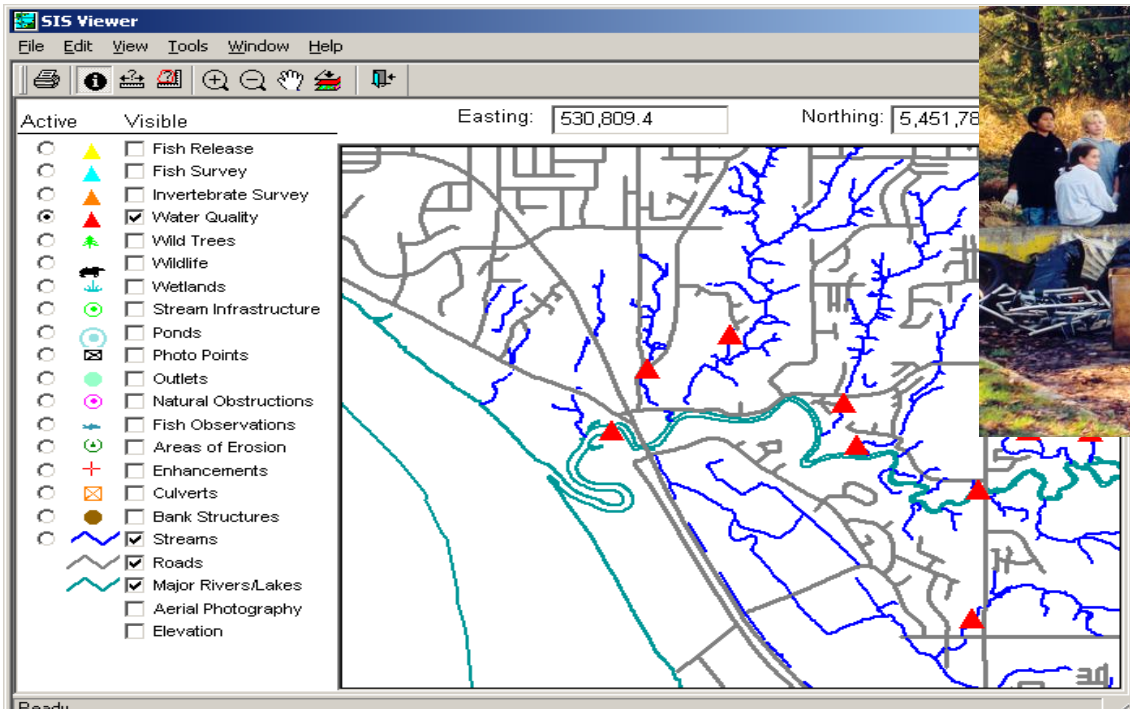
Groundwater Mgmt. Park Areas
Aquifer Mgmt.

Watershed Mgmt. Erosion Control /
Air Quality Mgmt Slope Stability

Ecological Health Biodiversity
Fisheries Protection Species At Risk

Floodplain Mgmt Wetland Protection

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?

1. **Limited staff resources** to carry out increasing demand for growth and review of reports by professionals;
2. **Limited senior agency resources** for assisting the City with review of approvals and enforcement related items;
3. **Setback variance requests** - the more aggressive the proposal, the more negotiations, time & risk involved;
4. **Timing of approval** from senior environmental agencies;
5. **Coordination with stakeholders** – more complex sites required greater coordination with stakeholders.

Protection For Watercourses and Ditches



Watercourses & Ditches

- Rivers (Fraser foreshore)
- Streams/Watercourses
- Historical (Ditch) Streams
- Ponds / Lakes
- Wetlands
- Riparian Areas

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 & Approval Process:

1. **SPR methods used to determine setbacks**
2. **Size, Significance, and Sensitivity of Water Features**
Greater protection & review required for Class A stream;
3. **Does it meet or beat Provincial RAPR requirements**
minimum setbacks and *Provincial WSA* requirements?
4. **Can QEP provide adequate justification –**
 - Biological justification, evaluate habitat gains/losses, prove clear habitat gains & best effort on site using LID
5. **Approval or Confirmation Required** from senior agencies before development approvals provided by City.

Thank You