



BIODIVERSITY STRATEGY

FEBRUARY 1, 2016



Recommendation



Final Amended Motion:

- A. THAT the Board approve the **Biodiversity Strategy** to guide the Park Board's ongoing work to protect, enhance, and restore biodiversity throughout the park system; and
- B. THAT the Board direct Park Board staff to:
 - i. Implement the priority actions identified in the Strategy;
 - ii. Integrate the strategies and actions of the Strategy into upcoming park plans and other strategies including the Urban Forest Strategy;
 - iii. Work and partner with City of Vancouver departments, including Engineering and Planning, and appropriate regional, provincial, and federal authorities to better support biodiversity across the city.

1. What is Biodiversity?
2. Patterns of Biodiversity in Vancouver
3. Structure of Biodiversity Strategy
4. Goal and Objectives
5. Biodiversity Target
6. Priority Actions



What is Biodiversity?



What is Biodiversity?

- Biodiversity is the number of plant and animal species, their ecosystems, and the ecological processes that sustain them.
- It includes marine and terrestrial ecosystems within the City's boundary and includes portions of English Bay, False Creek, the Fraser River, and the Point Grey peninsula.



Grey Whale in English Bay



The world's most spectacular urban forest



Chum salmon spawning in Still Creek



Overwintering seaducks in English Bay





Habitat Island in False Creek



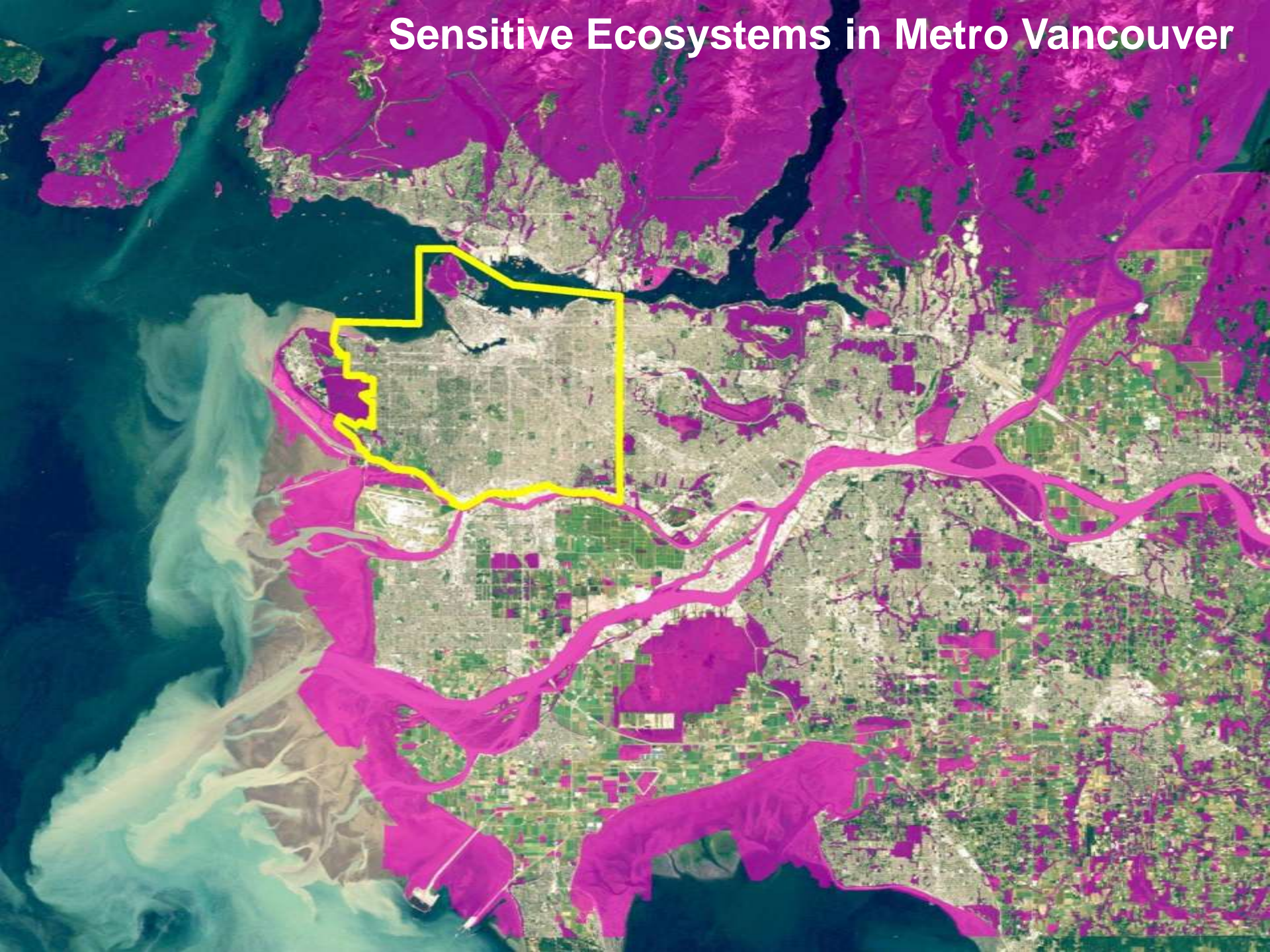
Stream creation in Creekside Park



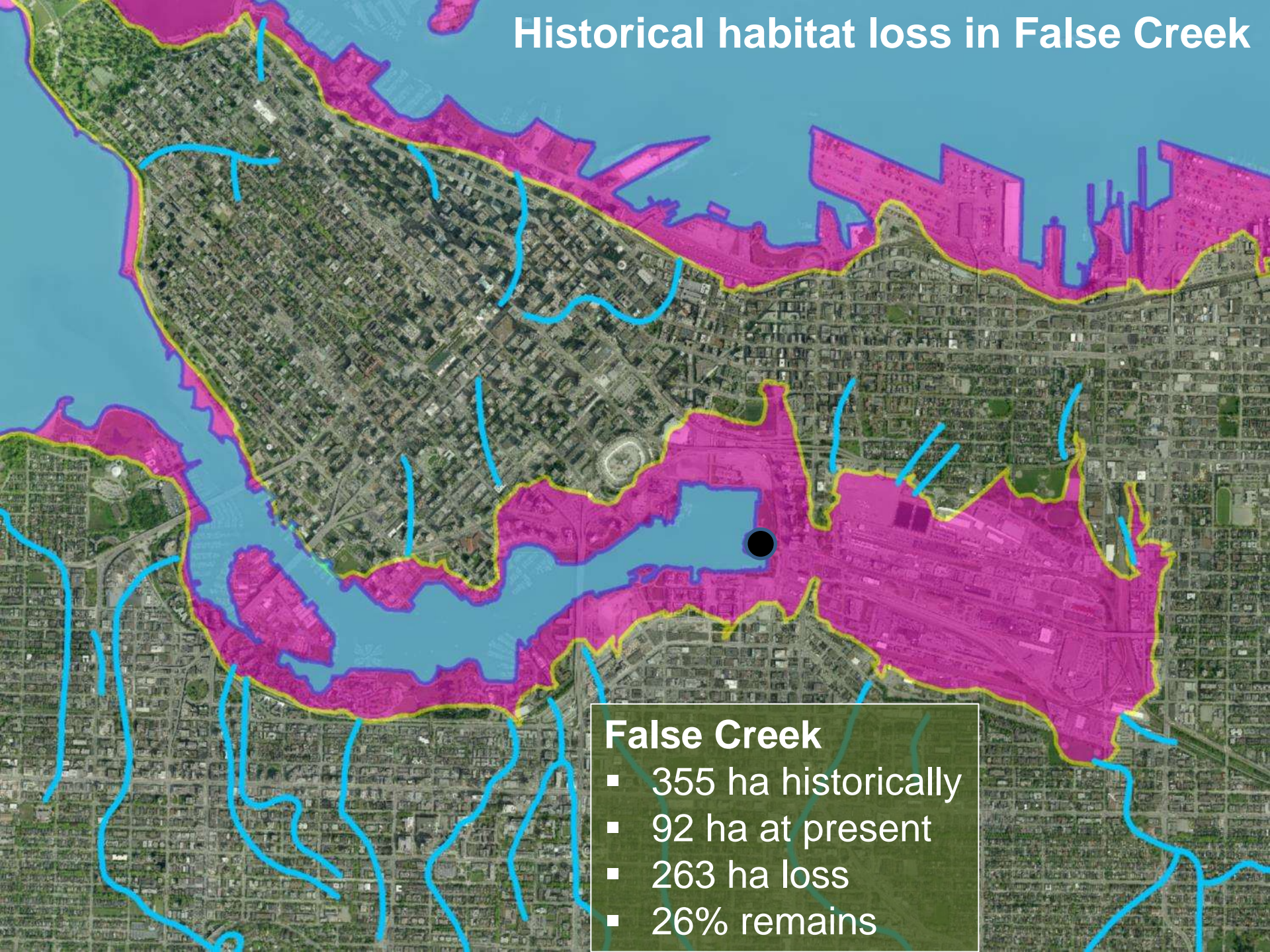
Patterns of Biodiversity in Vancouver



Sensitive Ecosystems in Metro Vancouver



Historical habitat loss in False Creek



False Creek

- 355 ha historically
- 92 ha at present
- 263 ha loss
- 26% remains

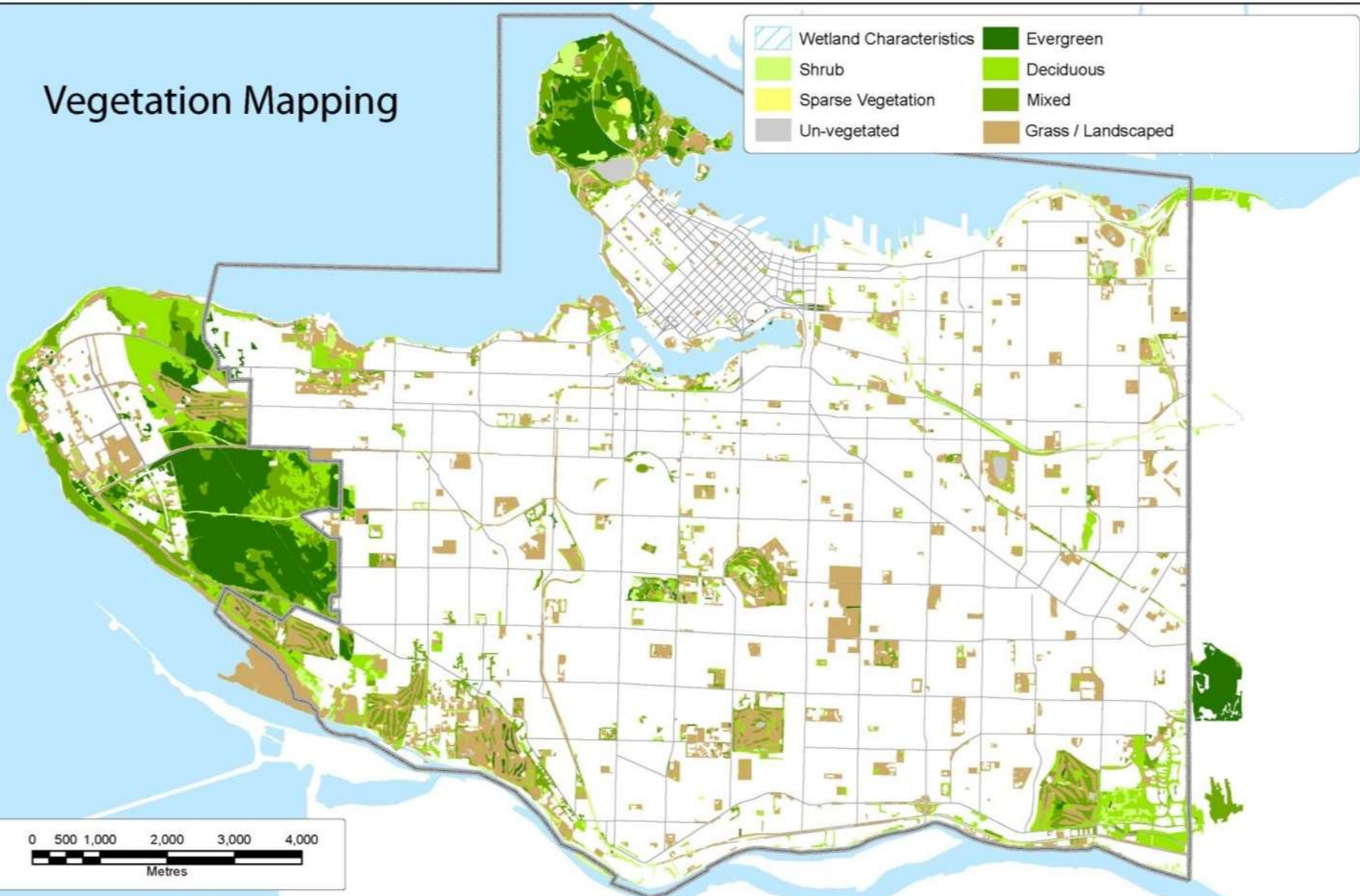
Loss of many wildlife species



The slain Cougar & his Hunters.
shot in Stanley Park Oct 26th 11

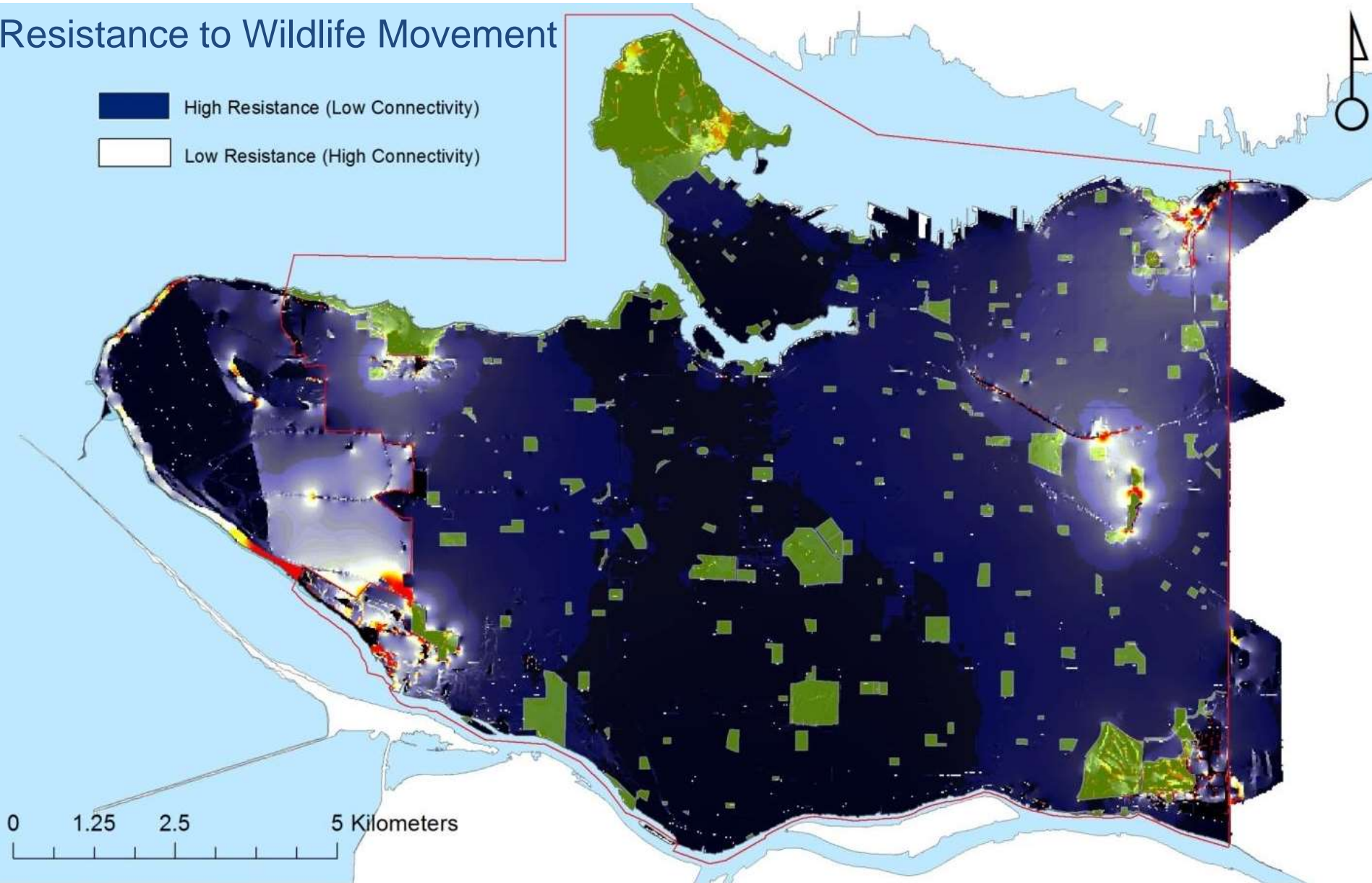
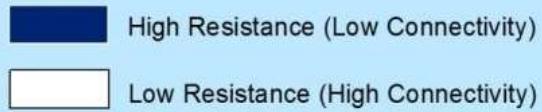
Vegetation as an Indicator of Biodiversity Value

Vegetation Mapping



Landscape Connectivity in Vancouver

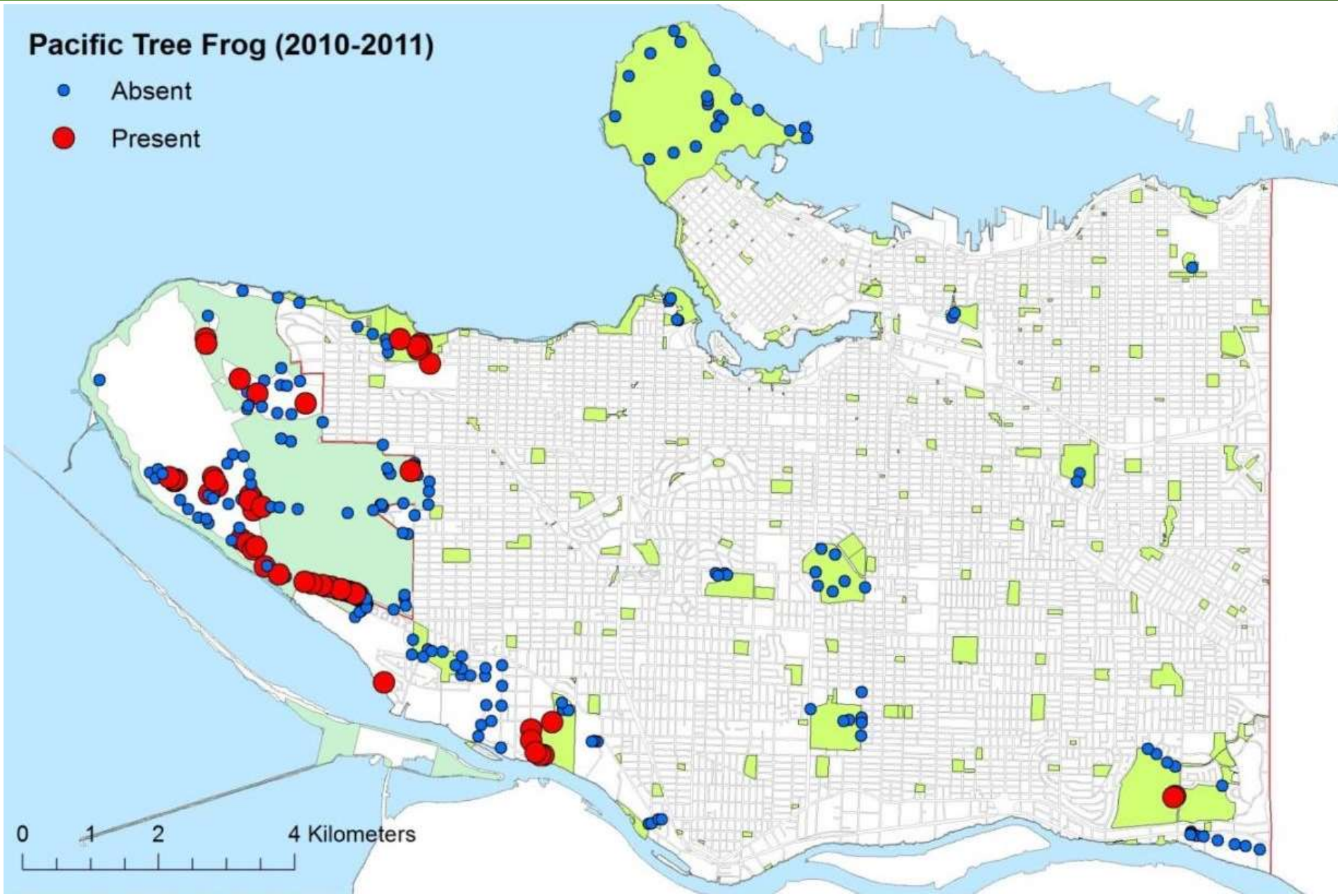
Resistance to Wildlife Movement



Pacific Tree Frog Distribution

Pacific Tree Frog (2010-2011)

- Absent
- Present



Structure of the Biodiversity Strategy

1. Biodiversity Strategy

- Primary document includes: 1 goal, 5 objectives, 10 principles, 14 strategies and 38 actions

2. New Biodiversity Target

- Numerical target to increase natural areas across the city by 2020

3. Technical Appendices

- Ecological network, species at risk, priority species, and habitats, biodiversity regulation, etc.

Six or more web-based living documents that cover important technical topics:

- Appendix 1. Vancouver's Ecological Network
- Appendix 2. Biodiversity Hotspots
- Appendix 3. Species and Ecological Communities at Risk
- Appendix 4. Biodiversity Regulation
- Appendix 5. Priority Species and Habitats
- Appendix 6. Vegetation Communities



Goals and Objectives



One Goal

Increase the amount and ecological quality of Vancouver's natural areas to support biodiversity and enhance access to nature.

Five Objectives

1. Restore habitats and species.
2. Support biodiversity within parks, streets, and other City-owned lands.
3. Protect and enhance biodiversity during development.
4. Celebrate biodiversity through education and stewardship.
5. Monitor biodiversity to track change and measure success.

Objective 1: Restore habitats and species.

Strategies are broad approaches for achieving the objective.
For example:

- Strategy 2-1. Restore populations of important plants and animals.

Actions are specific tasks or projects with a defined outcome and schedule. For example:

- Action 4. Restore ecologically important species, such as native squirrels, surf smelt, and Pacific tree frog.
- Action 5. Assist the BC Ministry of Environment and others on species at risk recovery.



Biodiversity Target



Proposed New Biodiversity Target



Proposed New Target

- Restore or enhance 25 ha of natural areas by 2020.

What are Natural Areas?

- Natural areas are forests, wetlands, streams, and other ecosystems that are composed primarily of native plants and animals.

How Do We Meet the Target?

- Restoring native forests (over half the target)
- Creating wetlands and daylighting streams
- Incorporating small natural habitats such as wildflower meadows

Completed & Future Biodiversity Projects



Completed Projects (2010-2015)

▪ Jericho Shoreline	1.7 ha
▪ Avalon Pond	0.5 ha
▪ Creekway Park	0.7 ha
▪ Still Creek	0.2 ha
▪ Hinge Park and Habitat Island	1.7 ha
▪ Forest Restoration	11.5 ha
Total	16.3 ha

Future Projects (2016-2015)

▪ New Brighton Park	1.7 ha
▪ Tatlow Creek	0.8 ha
▪ Beaver Lake	2.0 ha
▪ River District Shoreline	1.5 ha
▪ Pollinator Meadows	0.8 ha
▪ Forest Restoration	9.0 ha
Total	15.8 ha

Priority Actions



Priority Action 1



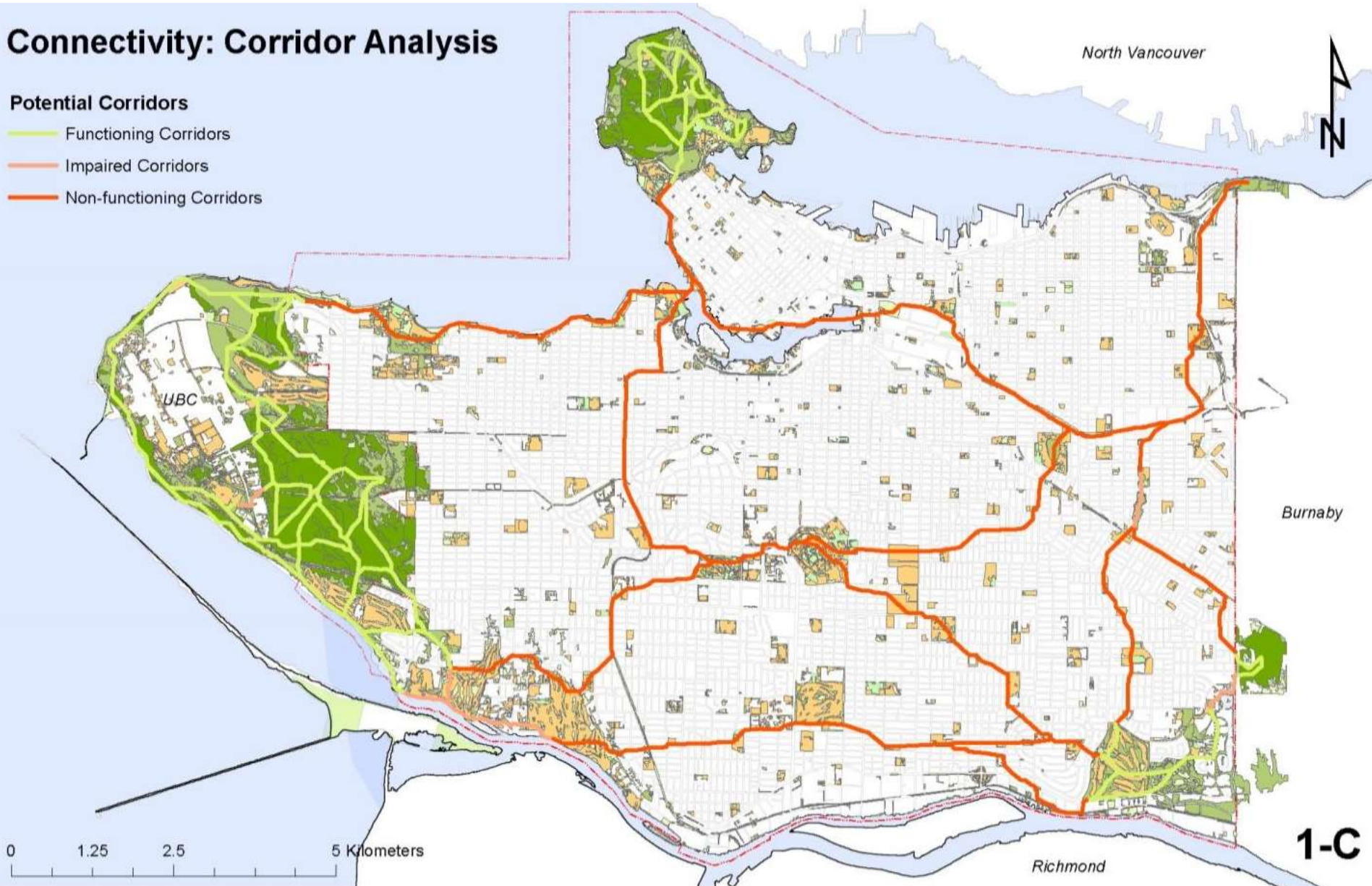
Use park acquisition, tree planting, and the development planning process to connect parks and build the city's ecological network.

How do we build an ecological network?

Connectivity: Corridor Analysis

Potential Corridors

- Functioning Corridors
- Impaired Corridors
- Non-functioning Corridors



Park Acquisition in Renfrew Ravine Park



Acquired to improve ecological integrity and opportunities for a perimeter trail

Redevelopment Opportunities



Priority Action 2



Develop a city-wide Invasive Species Action Plan,
and control priority invasive species in parks.



Before: October 17, 2014



After: October 28, 2014

Blackberry removal in Everett Crowley Park

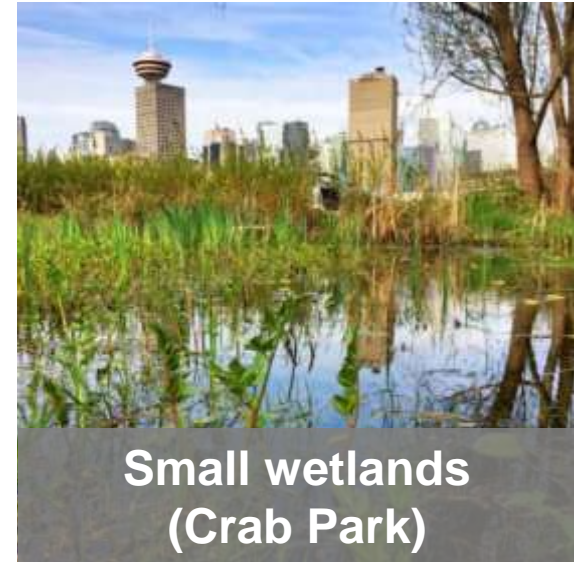
Priority Action 3

Partner with Port Metro Vancouver to restore shoreline and shallow subtidal habitats along Burrard Inlet, English Bay, and the Fraser River.



Priority Action 4

Incorporate smaller natural areas and features such as pollinator meadows into new and redeveloping parks and city-owned lands.



Priority Action 5

Use the Urban Forest Strategy to restore native forests in Stanley, Jericho Beach, Musqueam, Everett Crowley, Renfrew Ravine and other large parks.



Replanting native forests in Everett Crowley Park



Restoring Native Forests in Everett Crowley Park

2015 Underplanting

2017

2015

2016

2009

2015

2016

2016

2016

2015

2009

2009

2017

2017

2018-2020

2018-2020

2018-2020

2018-2020

Create a Biodiversity Advisory Committee composed of public members, technical experts, and staff to guide the Park Board's biodiversity conservation efforts.

Priority Action 7



Hire a Stewardship Coordinator to assist community groups in the planning and implementation of biodiversity and urban forest projects.

Priority Action 8

Assist landowners in increasing biodiversity values on private property through education and stewardship.



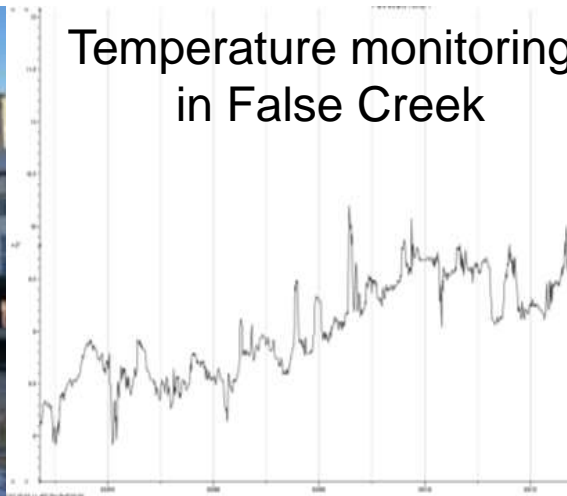
Priority Action 9



Improve the ecosystem health of False Creek, Still Creek, and Musqueam Creek.

Priority Action 10

Develop a city-wide biodiversity monitoring plan.



- The Biodiversity Strategy was developed over 2 years with engagement with other City departments, experts, stewardship groups, and the public.
- A staff team and an external advisory committee directed the development of the strategy.
- In fall 2014, a second round of staff (PB/COV) reviews was undertaken around the proposed biodiversity target.
- The final draft strategy was reviewed in spring 2015 by over 20 individuals representing stewardship groups, university researchers, and the public.
- Additional engagement is undertaken prior to implementation ranging from project signs to open houses and advisory committees.

Acknowledgements



- **Park Board staff**
- **City of Vancouver** (Sustainability, Planning, and Engineering Departments)
- **Stewardship Groups and Individuals**
Still Moon Arts Society, False Creek Watershed Society, Evergreen Canada, Nature Vancouver, Everett Crowley Park Committee, UBC Forestry, Environmental Youth Alliance, Jericho Stewardship Group, Green Club, Green Teams of Canada, David Suzuki Foundation, South Coast Conservation Program, Stanley Park Ecology Society

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