



Deborah Curran, Executive Director

Action for Adaptation: Biodiversity Mapping for SW British Columbia

22 November 2023



# Outline

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## Connecting Mapping to Policy

1. Context: Jurisdiction and UNDRIP
2. Connectivity, Systems, Scale
3. DPAs for Protection of the Natural Environment



# Local Government Jurisdiction: Nested Approach

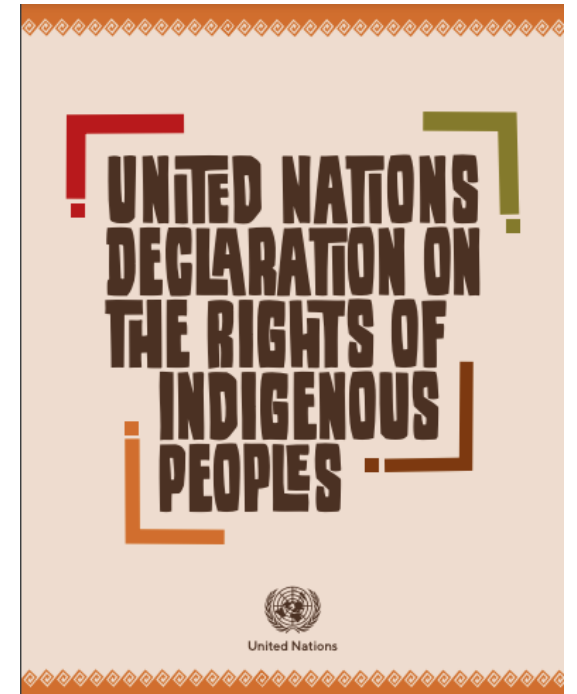
Regional Growth Strategies (RGS)	Local Government Act Part 25 (RGS)	Local Government Act Part 25 (RGS)
Official Community Plans (OCP) (including Local Area & Watershed Plans)	Local Government Act ss.875-879, 882, 884, 941 (OCP) Community Charter s.69 (drainage)	Local Government Act ss.875-879, 882, 884, 941 (OCP) Local Government Act ss.540-542 (drainage)
Zoning Density Bonus/Amenity Zoning Parking Runoff Control & Impermeable Surfaces	Local Government Act s.903 Local Government Act s.904 Local Government Act s.906 Local Government Act s.907	Local Government Act s.903 Local Government Act s.904 Local Government Act s.906 Local Government Act s.907
Development Permit Areas	Local Government Act ss.919.1-920	Local Government Act ss.919.1-920
Riparian Tax Exemption	Community Charter s.225	Local Government Act ss.811-811.1
Impact Assessment Development Approval Information Areas Development Process	Local Government Act ss.919-920.01 Local Government Act s.895	Local Government Act ss.919-920.01 Local Government Act s.895
Watercourse Protection Bylaw	Community Charter ss.8(3)(j) & 9(3)(a) Spheres of Concurrent Jurisdiction - Environment and Wildlife Regulation s.2(1)(a)	
Rainwater Management Bylaw	Local Government Act s.907 (impermeable surfaces) Community Charter s.69 (drainage)	Local Government Act s.907 (impermeable surfaces) Local Government Act ss.540-542 (drainage)
Landscaping Bylaw	Local Government Act s.909	Local Government Act s.909
Tree Protection Bylaw	Community Charter ss.8(3)(c) & 50	Local Government Act s.923
Soil Removal & Deposit Bylaw	Community Charter ss. 8(3)(m) & 9(1)(e)	Local Government Act s.723
Pesticide Use Bylaw	Community Charter ss.8(3)(j) & 9(3)(a) Spheres of Concurrent Jurisdiction - Environment and Wildlife Regulation s.2(1)(b)(ii)	
Invasive Species Bylaw	Community Charter ss.8(3)(j), 8(3)(k) & 9(3)(a) Spheres of Concurrent Jurisdiction - Environment and Wildlife Regulation s.2(1)(b)(iii) (control and eradication)	
Security	Community Charter ss.8(8)(c), 17 & 19 Local Government Act s.925	Local Government Act s.925
Subdivision Servicing Bylaw	Local Government Act s.938 Land Title Act ss.83, 86	Local Government Act s.938 Land Title Act ss. 83, 86
Development Cost Charges Bylaw	Local Government Act s.933	Local Government Act s.933

# Indigenous Rights

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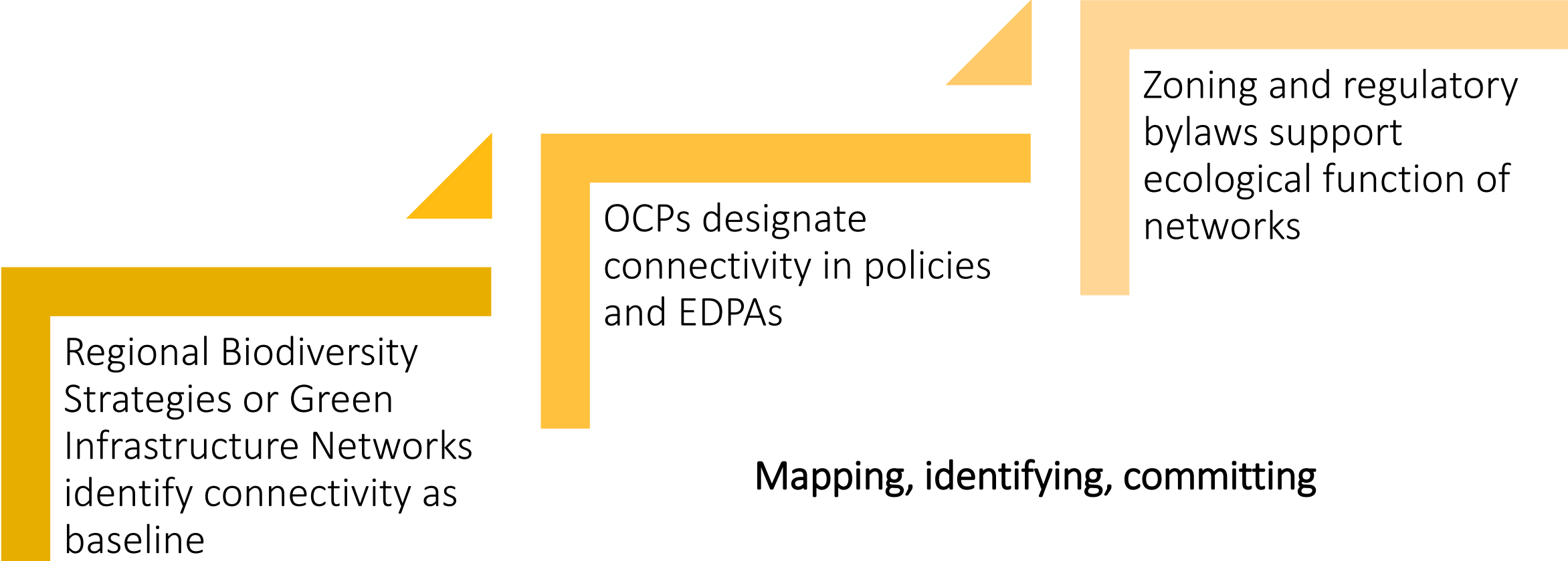
## United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)

- *Declaration on the Rights of Indigenous Peoples Act*
- Implications for local governments



# Connectivity Approaches

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Regional Biodiversity Strategies or Green Infrastructure Networks identify connectivity as baseline

OCPs designate connectivity in policies and EDPAs

Zoning and regulatory bylaws support ecological function of networks

**Mapping, identifying, committing**

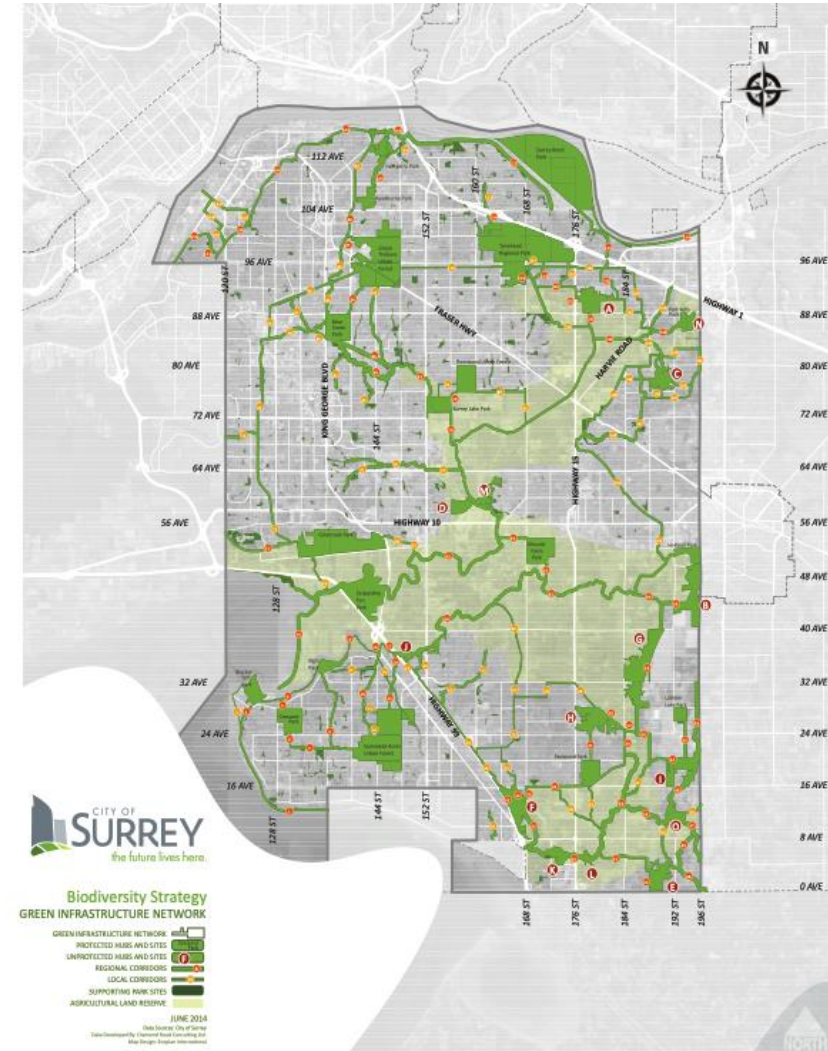
*\*Enhance existing bylaws and permitting processes first before creating something new*



# Surrey Green Infrastructure Network



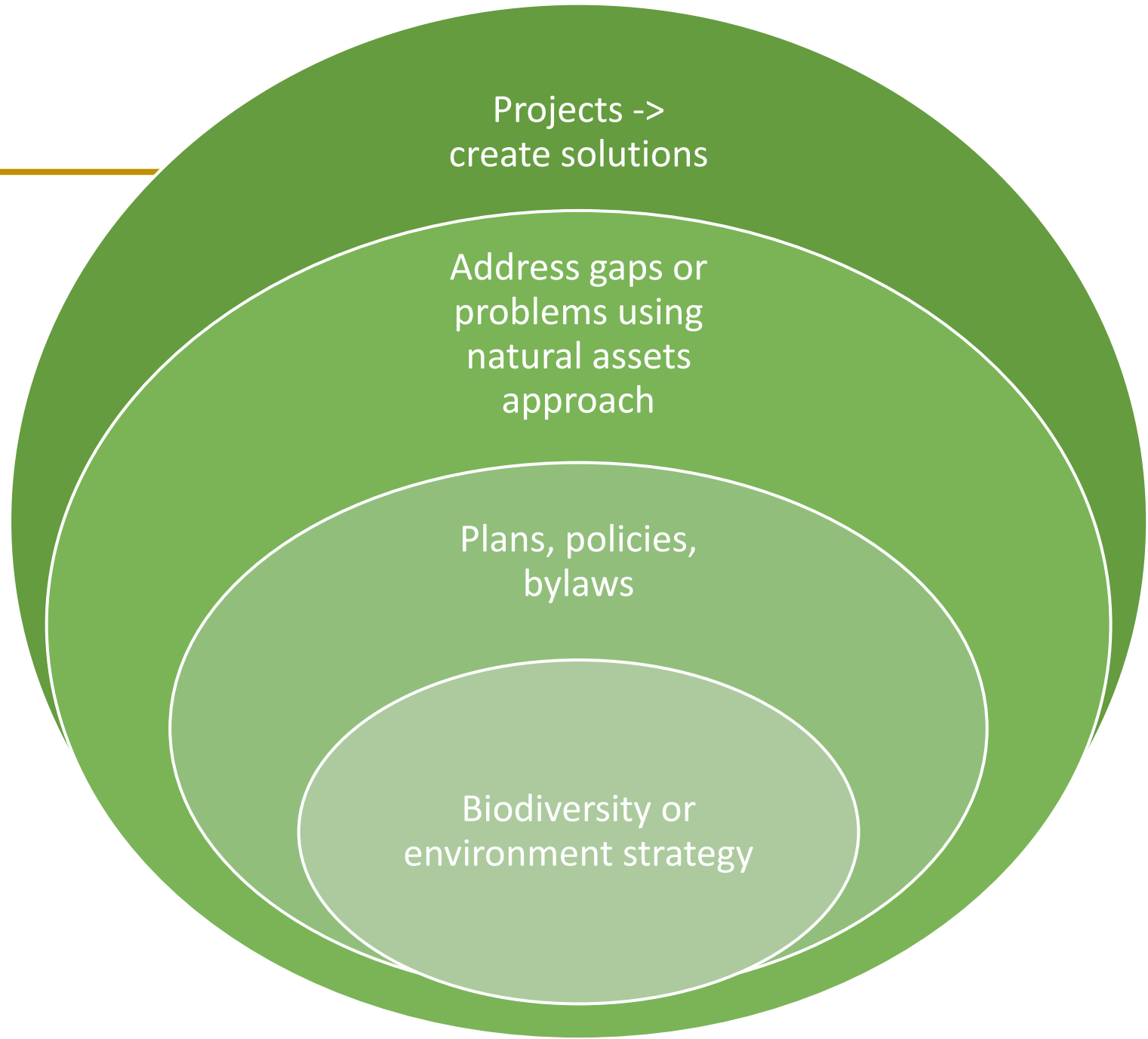
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# Systems Approaches

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- Focus is equally on restoration and conservation
- Leads to a nested and connected web of plans and bylaws pointing to long term ecological health
- What does mapping leave out?



# Scale

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- Green Bylaws operate at all scales; mapping at all scales
- Regional -> Local -> Individual Property
- Nested within policies, plans, strategies, regulatory bylaws
- Data collection and mapping needs alignment with implementation approaches



# DPAs for the Protection of the Natural Environment

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Purpose s 488(1)(a): protection of the natural environment, its ecosystems and biodiversity

EDPAs can:

- Specify areas to remain free of development
- Preserve, protect, restore specific features
- Require dedication of natural watercourses
- Require construction of works or protection measures to protect or restore natural features
- Impose conditions on construction sequence and timing

Challenges

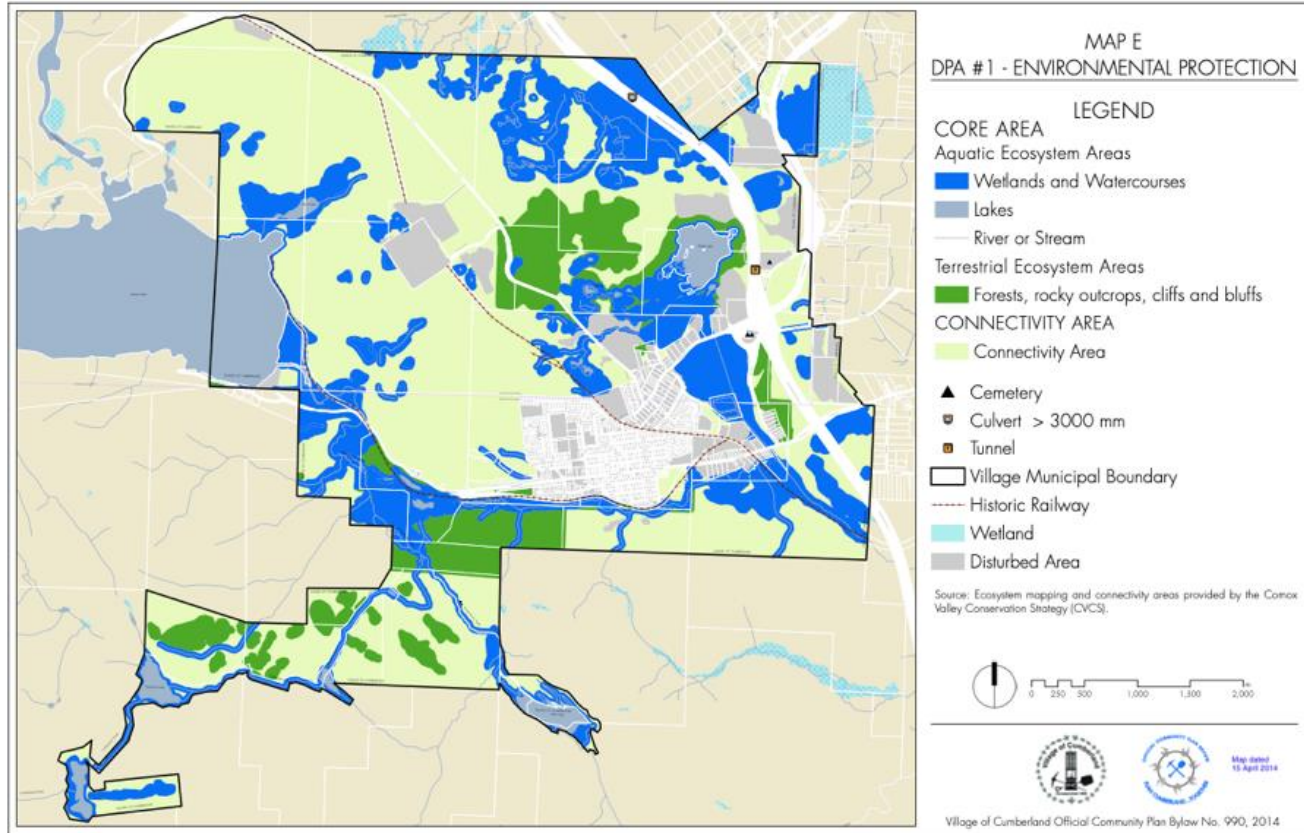
- Staff time and expertise
- Enforceability

# EDPAs in Practice and in Case Law

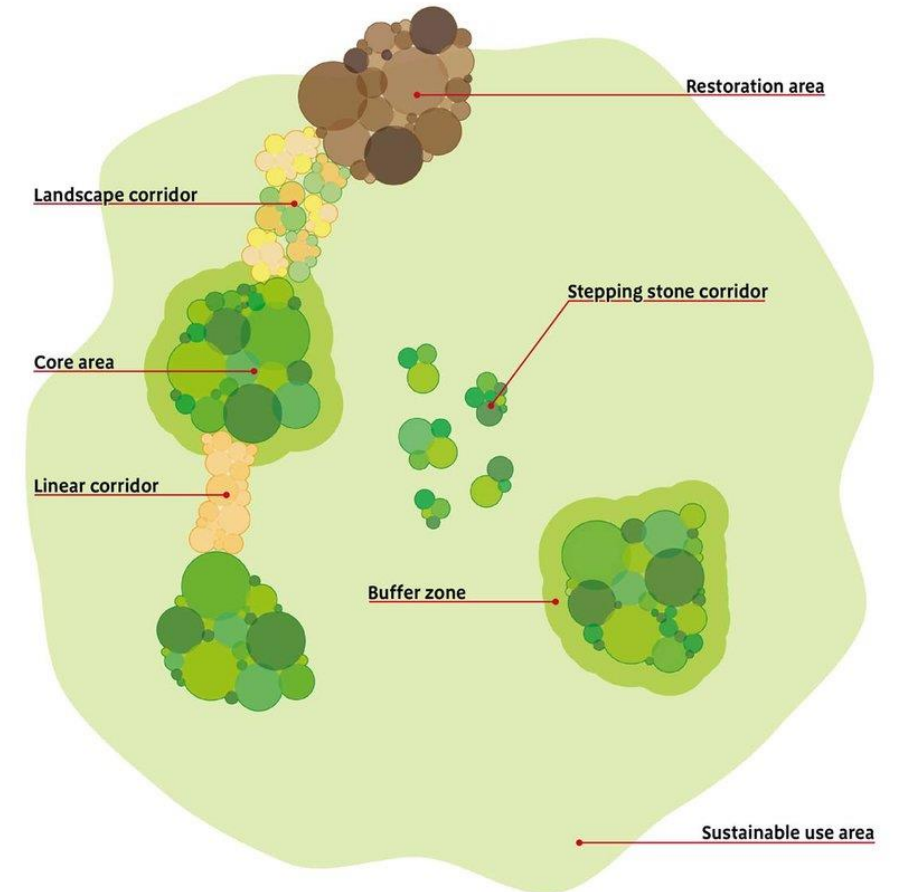
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- Courts will uphold EDPAs where they are designated on reasonable evidence and with reasonably certain boundaries.
- Council must be able to demonstrate that they considered the application for a DP in the context of the guidelines set out in the OCP e.g. 2023 Cowichan case
- If council rejects a permit application, decision-makers must provide reasons for rejection in order to inform the applicant how they can meet the guidelines in the future.
- Courts have not overturned any EDPA regime in the province, and courts have directed that very few decisions on EDPA permits be reconsidered.
- No compensation for reduction in property value – Section 458.

# Cumberland Environmental DPA



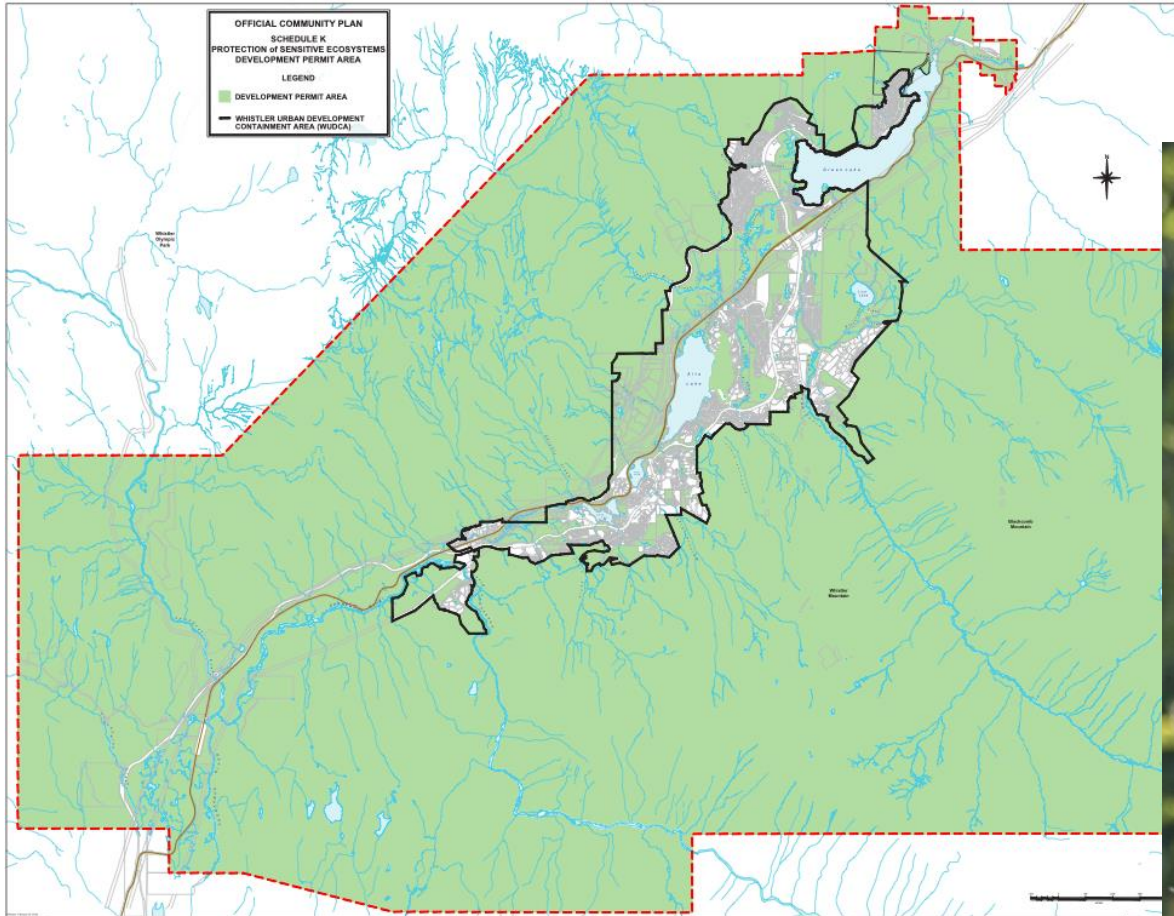
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Source: Making Space for Nature: A Review of England's Wildlife Sites and Ecological Network, 2010. J.H. Lawton et. al.



# Whistler Environmental DPA





# Regional District of Central Okanagan – Aquatic DPA Example

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## Environmental Development Permit Areas

- Sensitive Terrestrial Ecosystems
- **Sensitive Aquatic Ecosystems**
- Slope Stability & Rural Hillsides
- Wildfire Interface Hazards









# Regional District of Central Okanagan Example

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## Aquatic DP Guidelines

- Triggered before any land disturbance in the DPA
- Leavestrips must be protected where they exist, restored where they have been lost
- Minimum setbacks can exceed Provincial regulation
- Performance-based criteria



# Environmental Planning BMPs & Mapping Tools

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## Best Management Practices

- Develop with Care: Provincial Environmental Guidelines for Urban & Rural Development
- Federal Environmental Assessment Best Practice Guides:
  - Wildlife/Species at Risk
  - Raptors

(among others)

## Inventories & Mapping

- Sensitive Ecosystem Inventory (SEI)
- Sensitive Habitat Inventory (SHIM)
- Foreshore Inventory & Mapping (FIM)
- Wetland Habitat Inventory & Mapping (WIM)
- LiDAR & Orthophoto Imagery



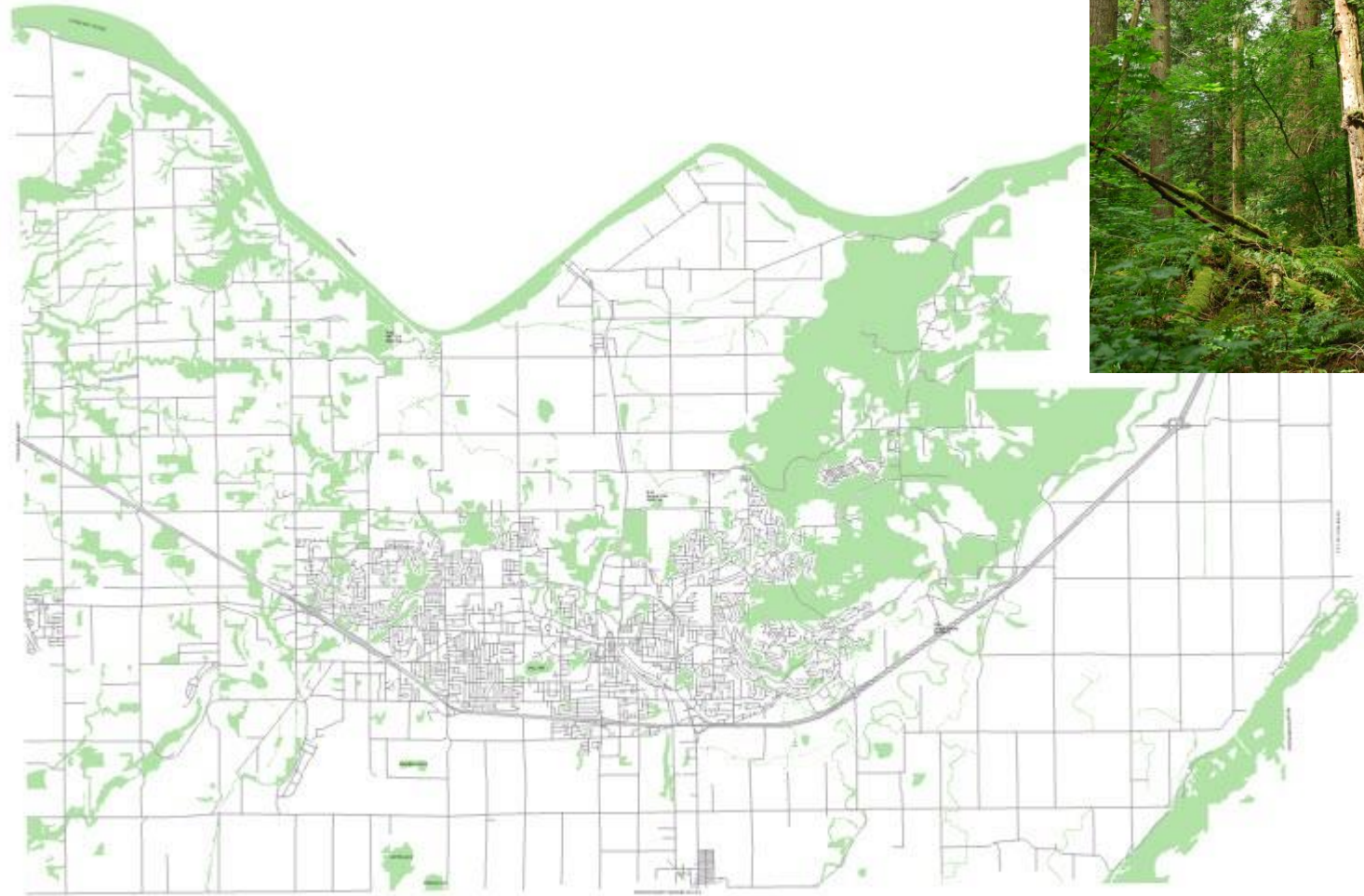
# City of Abbotsford Example – SEI

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Natural Environment  
DPA composed of:

1) Sensitive Ecosystem  
Inventory

- Sensitive Ecosystem
- Modified Ecosystem





# City of Abbotsford Example – Streams

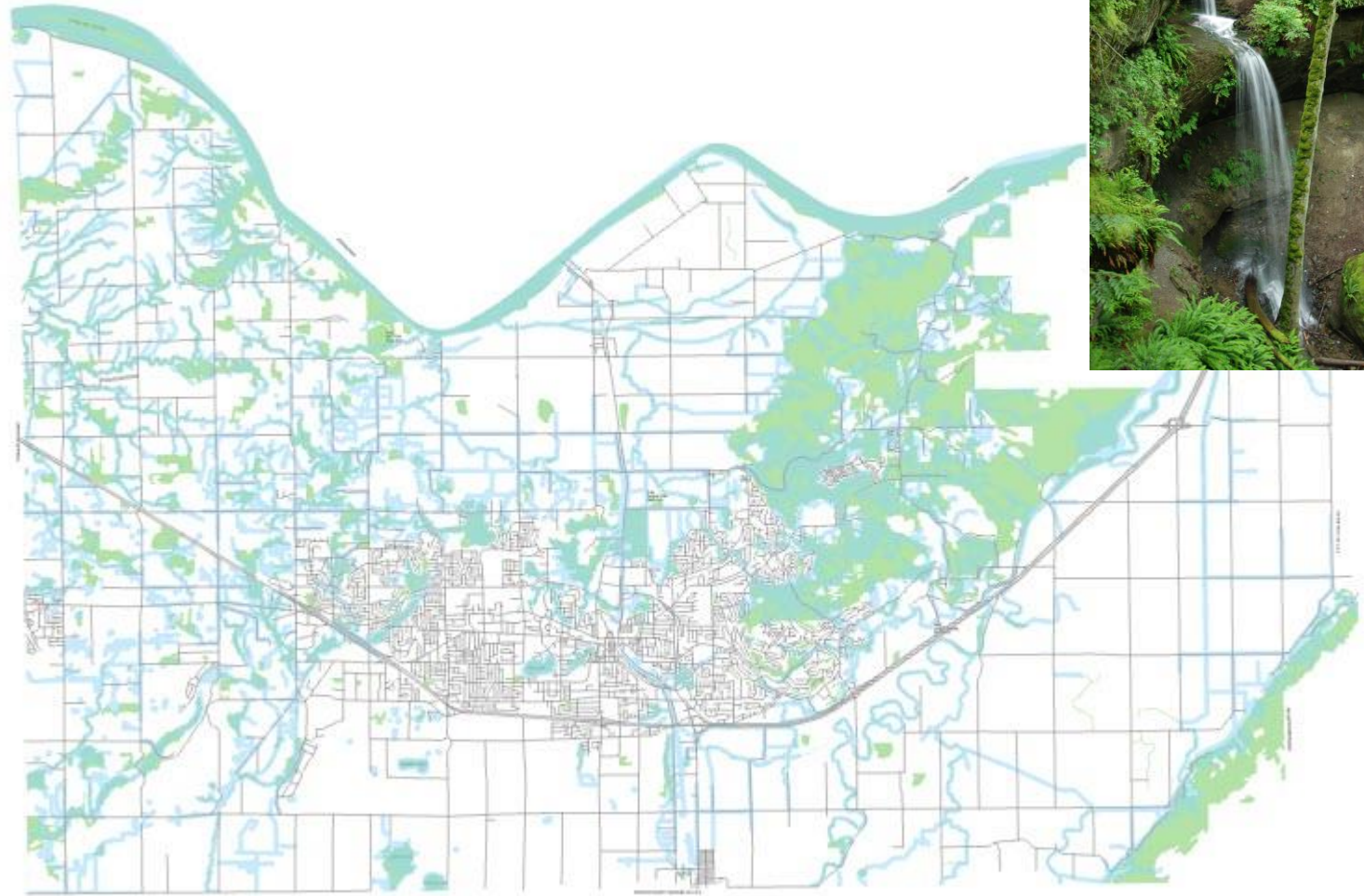
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Natural Environment  
DPA composed of:

1. Sensitive Ecosystem  
Inventory

- Sensitive Ecosystem
- Modified Ecosystem

2. 50m stream buffer on  
Class A and B streams



# City of Abbotsford Example - Guidelines

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- Riparian setbacks as per Streamside Protection Bylaw
- “No net loss” achieved
- Where loss of riparian habitat is unavoidable, replace at a ratio of 2:1
- Protect habitat where species at risk have been identified by a QEP
- Where loss of terrestrial habitat is unavoidable, provide mitigation to offset loss
- Design a project to fit the site rather than altering the site to fit the project





# District of Saanich Env DPA

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## 2012 Saanich EDPA:

- Extensive mapping + buffers
- Citizen opposition
- Council rescinded

## Lessons learned:

Mapping – less is more

Regulations that affect specific properties must nest within a larger policy and planning framework

Work needed in both the community information/outreach and policy infrastructure venues





# Conclusions

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In order to adopt and implement successful Green Bylaws:

- Create a culture of conservation to maintain community support
- Policy and bylaw framework that embeds site- and development-specific bylaws within this framework
- Adapting from protecting specific sites and sensitive ecosystem elements to whole systems and connectivity
- Use the 3<sup>rd</sup> Edition of the Green Bylaws Toolkit for assistance

# Q&A

[https://stewardshipcentrebc.ca/PDF\\_docs/GreenBylaws/GreenBylawsToolkit3rdEdition2021.pdf](https://stewardshipcentrebc.ca/PDF_docs/GreenBylaws/GreenBylawsToolkit3rdEdition2021.pdf)

## Green Bylaws Toolkit

for Protecting and Enhancing  
the **Natural Environment** and  
**Green Infrastructure**

