

# Develop with Care 2014

Environmental Guidelines for Urban and Rural Land Development in British Columbia





## Acknowledgements

### Project Teams:

*Develop with Care 2006* was prepared under the leadership of Marlene Caskey, Bob Cox, Grant Bracher, Susan Latimer, Margaret Henigman, and Peter Law of the British Columbia (B.C.) Ministry of Environment.

Revisions to *Develop with Care 2012* were led by Marlene Caskey, with assistance from Margaret Henigman, of the B.C. Ministry of Forests, Lands and Natural Resource Operations.

Revisions to *Develop with Care 2014* were led by Helene Roberge of the B.C. Ministry of Environment and Margaret Henigman of the B.C. Ministry of Forests, Lands and Natural Resource Operations.

### Writing and Editing:

The principal creators of the original document were Dave Polster (Polster Environmental Services) and Judith Cullington (Judith Cullington & Associates); with assistance from Tanis Douglas (Fernhill Consulting) and Tracey Hooper. Initial concepts were provided by Lanarc Consultants Ltd.

Revisions to *Develop with Care 2012* and *Develop with Care 2014* have been prepared by Judith Cullington (Judith Cullington & Associates) with assistance from Marlene Caskey.

Document design is by Judith Cullington (Judith Cullington & Associates).

### Review and Comments:

A great many people have provided ideas, comments and reviews in the preparation of *Develop with Care 2006*, *Develop with Care 2012* and *Develop with Care 2014*. The authors would like to thank all of the people who have contributed to the development of this document in so many ways.

Thank you!

## Quick Reference Guide

Topic		Community level	Site level	General
		<i>Pages</i>	<i>Pages</i>	<i>Pages</i>
<b>Agricultural lands</b>	Edge planning	2-25		
	Management of agricultural wastes		2-65	
<b>Air quality</b>		2-39	3-26	
<b>Benefits of protecting Environmentally Valuable Resources</b>		2-3	3-3	App C
<b>Bio-inventory</b>		2-12	3-5; App B	App B App D
<b>Buffers</b>		2-24	3-11; 4-23 - 4-26;	
<b>Climate change</b>	Mitigation	2-32	3-15	
	Adaptation	2-37	3-16	
<b>Contaminated sites</b>			3-31	
<b>Construction</b>	Sediment and erosion control	2-49	3-24	
	Protection of EVRs	2-21	3-11; 4-17; 4-29	
	Spill prevention	2-58	3-34	
	Landscaping	2-27	3-12	
	Monitoring		3-12	
<b>Cumulative effects</b>		2-18		
<b>Ecosystems</b>	Ecosystem protection	2-16 - 2-18, 2-21	3-8; 3-11; 4-16; 4-17; App E	4-4
	Terrestrial ecosystems			4-4
	Aquatic ecosystems (wetlands, riparian)		4-19; 4-27	4-7; 4-8
	Coastal ecosystems		4-21	4-9
	Grasslands			4-5; Section 5
	Garry Oak and associated ecosystems			4-5; Section 5
	Restoration	2-31	4-33	
<b>Environmentally Valuable Resources</b>		2-13	3-8	2-5; 4-4

Topic		Community level	Site level	General
		<i>Pages</i>	<i>Pages</i>	<i>Pages</i>
<b>Green buildings</b>		2-35	3-17	
<b>Green developments</b>		2-6; 2-7; 2-35	3-17	
<b>Heritage and archaeology</b>		2-15	3-7	
<b>Hazard management</b>	Flooding and tsunamis	2-50	3-28	
	Sea level rise	2-52	3-28; 4-21	
	Landslides, earthquakes	2-13; 2-52	3-28	
	Wildfires	2-53		
	Wildlife conflicts	2-55	3-28	
	Hazardous materials	2-58		
	Contaminated sites; brownfields	2-11; 2-45	3-31	
	Spill management		3-34	
	Pesticides and Integrated Pest Management		3-35	
<b>Healthy Communities</b>	Healthy built environment	2-8		
<b>Invasive species</b>	Plants	2-29	3-13	
	Animals	2-30		
<b>Inventory and mapping</b>		2-12	3-5	App B; App D
<b>Planning tools for protection of EVRs</b>		2-16	4-17	App F
<b>Smart Communities</b>	Smart planning	2-6		
	Transportation	2-35; 2-41	3-16	
	Local food	2-36		
<b>Species and habitats</b>	Regionally significant species			4-11; Section 5; App F; App G
	Specialized habitats			4-4; Section 5
	Species at risk			4-12; 4-17; Section 5; App F
	Wildlife corridors	2-24	3-9	

Topic		Community level <i>Pages</i>	Site level <i>Pages</i>	General <i>Pages</i>
Timing windows			4-26; 4-31	Section 5; App G
Trails			3-14; 4-32	
Trees and urban forests		2-27		
Waste management	Liquid waste and biosolids	2-59	3-36	
	Solid waste and recycling	2-60	3-37	
	Integrated Resource Recovery	2-59		
	Composting and organics management	2-62		
	Extended Producer Responsibility	2-61		
	Hazardous waste	2-63		
	Agricultural wastes	2-65		
Water	Water quality	2-45	3-22	
	Water quantity	2-46	3-22	
	Groundwater	2-47	3-23	
	Rainwater/Stormwater	2-43	3-19	







## Preface to the 2014 Edition of *Develop with Care*

This 2014 edition of *Develop with Care* (*Develop with Care 2014: Environmental Guidelines for Urban and Rural Land Development in British Columbia*) replaces the 2012 version (*Develop with Care 2012: Environmental Guidelines for Urban and Rural Land Development in British Columbia*).

Significant changes to this version include the following:

- Information in Sections 2 and 3 provides enhanced and updated information on:
  - Water management (surface and groundwater, water quality),
  - Waste management (integrated resource recovery, composting, biosolids, extended producer responsibility, agricultural wastes), and
  - Hazard management, pesticides, contaminated sites, and spill prevention and management;
- New information on Edge Planning adjacent to agricultural lands and creating Healthy Built Environments has been included;
- New information on Coastal Foreshore management has been added;
- Minor changes and updates have been made to the Air Quality and Climate Change information in Sections 2 and 3;
- Buffer distances have been adjusted to conform with the guidelines in the updated *Guidelines for Raptor Conservation during Urban and Rural Land Development in British Columbia (2013)*;
- A new fact sheet on forage fish has been added;
- The Quick Links (Preface) and Checklists (Appendix E) have been updated to reflect new materials; and
- Weblinks throughout the document have been revised and updated.

We hope that readers will continue to find this a helpful resource.



## Document Organization

*Develop with Care 2014: Environmental Guidelines for Urban and Rural Land Development in British Columbia* is presented in five sections with supporting appendices.

[Section 1: Introduction](#) is an overview of the document and an introduction to its purpose, and describes the Province's approach to results-based management.

[Section-2: Community-Planning](#) describes the objectives and guidelines for local governments and other approval agencies in environmental planning at a community level, thereby providing the foundation for good environmental planning at the site level.

[Section 3: Site Development and Management](#) describes the objectives and guidelines for good environmental planning, development, and management at the site level.

[Section 4: Environmentally Valuable Resources](#) describes the objectives and guidelines for land development where high environmental values are present on or near the development site.

[Section 5: Regional Information Packages](#) provides information that is specific to the eight B.C. Ministry of Forests, Lands and Natural Resource Operations regions.

[Appendix A: Summary of Legislation](#) is a summary of legislation applicable to land development.

[Appendix B: Bio-inventory Terms of Reference](#) provides a systematic methodology for urban and rural site inventory.

[Appendix C: Benefits of Environmental Protection](#) describes some of the many benefits of environmental protection for local governments, developers, and communities.

[Appendix D: Sources for Environmental Mapping and Inventory](#) identifies some of the available online sources for mapping and inventory information.

[Appendix E: Checklists](#) help to ensure that local governments and developers consider all environmental implications during community planning and site development.

[Appendix F: Protection and Conservation Tools](#) provides information on tools that local governments and developers can use to protect natural areas.

[Appendix G: Fact Sheets](#) includes a series of fact sheets on various aspects of urban and rural land development and guidelines related to several specific species.

The different sections have been colour-coded for ease of navigation, and a Quick Reference Guide is provided in this Preface.

This document has been extensively hyperlinked to provide easy access to the many information sources referred to in the text. These weblinks and references to other documents are provided in the [Bibliography](#).

The Province has made an effort to minimize the use of technical terms; however, definitions are provided in the [Glossary](#).