



Planning for Ecosystem Connectivity in the Central Okanagan

Workshop Final Report

Tuesday November 24th 2015, 8:30 am-2:00 pm

Okanagan Regional Library Administrative Centre, Board Room, 2nd Floor

1430 K.L.O. Road, Kelowna



November 2016

Prepared by Tanis Gieselman, MSc.

OCCP Projects Coordinator

Acknowledgements

Many thanks to the Organizing Committee and workshop presenters: Margaret Bakelaar and Gisele Rehe from the Regional District of Central Okanagan (RDCO); Carol Luttmer and the Okanagan Collaborative Conservation Program (OCCP); Dr. Lael Parrott, Katey Kyle, Rachel Field, and Corrie Allen at the Complex Environmental Systems Lab, University of British Columbia – Okanagan; Dr. Rachel Holt, Dr. Tory Stevens, Gregory Kehm and the Washington-BC Transboundary Connectivity Group (TCWG); Alison Peatt of Bearfoot Resources Ltd., and Susan Latimer of SDL Environmental. Thank you also to the many workshop participants who volunteered their time and knowledge to this initiative.

This project was undertaken with financial and in-kind support from:



Contents

- Introduction**.....1
- Background.....1
- Purpose.....1
- Agenda2
- Presenter & Facilitator Biographies3
- Participants5
- Workshop Objectives for Participants5
- Information Distributed To Workshop Participants**6
- Summary of the Presentations6
- Welcome & Introductions.....6
- How Do We Plan for Connectivity?.....7
- Ecosystem Connectivity - Why Does It Matter?7
- The Big Picture- from the U.S. Columbia Basin to the B.C. Interior Plateau.....8
- Narrowing down to a local (regional district) scale8
- Comparison of the regional and transboundary analyses9
- Workshop participant input**..... 11
- Motivations for protecting ecosystem connectivity 12
- Opportunities and gaps identified for the highlighted corridors..... 13
- Core and critical habitat..... 13
- Opportunities and mechanisms for protection..... 13
- Challenges..... 14
- Gaps..... 14
- Barriers..... 15
- Corridor prioritization ranking 15
- Next Steps 16
- Final assessment of the workshop..... 17
- Workshop Summary**..... 17
- Resources** 19

Tables and Figures

Figure 1 Proportion of participants representing various focus groups.

Figure 2 Workshop resource Map 1; the regional connectivity analysis corridors.

Figure 3 Workshop resource Map 5; 5 potential wildlife movement corridors for the RDCO.

Figure 4 Workshop participant motivation for protecting ecosystem connectivity.

Figure 5 Ranking of the identified next steps for Planning for Ecosystem Connectivity.

Figure 6 Participant responses indicating their interest in joining an Action Team.

Figure 7 Ranking of the most interesting aspects of the workshop identified by participants.

Table 1 Corridor prioritization ranking for the modelled corridors.

Appendices

Appendix 1 List of workshop participants

Appendix 2 Slides from workshop presentations

Appendix 3 Workshop resource maps and metadata

Appendix 4 Workshop participant motivation for protecting ecosystem connectivity

Appendix 5 Corridor input from workshop breakout groups

Appendix 6 Final workshop assessment data



Introduction

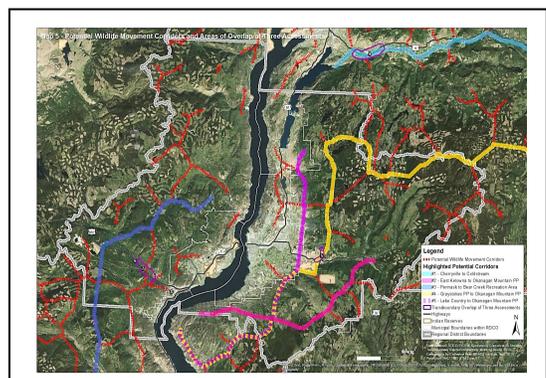
Background

The Okanagan’s natural environment is unique in Canada and it is an important north-south corridor for wildlife movement between the U.S. Columbia Basin and the grasslands of the B.C. Central Interior Plateau. The Regional District of the Central Okanagan (RDCO) is central to this corridor but human settlements, large lakes and transportation networks are barriers to wildlife movement. Protection of habitat corridors and patches are key to maintaining the landscape integrity of the Okanagan, and will help maintain essential ecosystem services such as flood and drought protection, maintaining water quality, natural recreation and tourism opportunities, and economic development.

Several Partners of the Okanagan Collaborative Conservation Program (OCCP) are working to identify terrestrial corridors and important habitat patches to maintain ecosystem connectivity throughout the RDCO, and the larger region from the U.S. Columbia Basin to the B.C. Interior Plateau. The mechanisms for protection are dependent on land use, land tenure, and governing jurisdictions. Future-planning and prioritizing areas for protection in local and regional plans must take into account areas that are ecologically sensitive and important, as well as information about land use and tenure. Mapping and modeling ecosystem connectivity using these data in Geographic Information Systems provides an excellent tool to begin to identify locations for protection. However, models cannot capture all of the complexities at all scales, so consultation with local experts is also necessary.

Purpose

The purpose of this workshop was for participants to work collectively on a connectivity planning exercise for the RDCO, with the goal of identifying locations for potential ecosystem corridors, and developing the first steps of an actionable strategy for implementation. Mapping products developed by the Washington-BC Transboundary Connectivity Group (TCWG) and the Complex Environmental Systems Lab at UBC-Okanagan were shared with participants, and used to support discussions.



The feedback from this workshop was intended to provide insight into gaps and opportunities not identified by the models, help project partners to refine their approaches, and result in tools for Planning for Ecosystem Connectivity that are transferrable outside of the RDCO.

Agenda

- 8:30 **Registration, Coffee & brioches**
 Poster viewing
- 9:00 **Welcome & Introductions**
 Carol Luttmer, *OCCP Program Coordinator*
 Margaret Bakelaar, *RDCO Environmental/Land Use Planner*
- 9:10 **How do we plan for connectivity?**
 Alison Peatt, *Bearfoot Resources Ltd., co-author of Designing and Implementing Ecosystem Connectivity in the Okanagan (2014)*
- 9:20 **Ecosystem Connectivity - Why does it matter?**
 Dr. Lael Parrott, *Director, Complex Environmental Systems Lab, UBC- Okanagan*
- 9:30 **The Big Picture- from the U.S. Columbia Basin to the B.C. Interior Plateau**
 Dr. Rachel Holt, *Principal, Veridian Ecological Inc., Washington-BC Transboundary Connectivity Group (TCWG) Coordinator*
- 9:45 **Narrowing down to a local (regional district) scale**
 Dr. Lael Parrott, *Director, Complex Environmental Systems Lab, UBC-Okanagan*
- 10:00 **Health Break**
- 10:15 **Breakout Group Session: Identifying & Prioritizing Corridors**
 Participants will review maps and provide input on the location of corridors and help select priority areas for realizing on-the ground restoration and/or protection of corridors.
- 12:15 **Lunch**
- 1:00 **Presentation of Results from Breakout Group Session**
 Group Facilitators
- 1:30 **How do we move Connectivity Planning Forward?**
 Moderated discussion
- 1:55 **Closing Remarks**
 Dr. Tory Stevens, *Protected Areas Ecologist, BC Parks*
- 2:00 **Adjournment**

Presenter & Facilitator Biographies

Carol Luttmner is the Program Coordinator for the OCCP. The OCCP is a partnership of government and non-government organizations that recognize the regions unique biodiversity and are working together to ensure that healthy ecosystems and habitat networks are valued and conserved by decision-makers and citizens as the basis for health, livelihoods, liveable communities and economic development. The OCCP's mandate is to coordinate and facilitate conservation and stewardship in the North and Central Okanagan Regional Districts.

Margaret Bakelaar is an Environmental / Land Use Planner with the RDCO. She is responsible for the development, coordination and implementation of an environmental planning program that provides for improved environmental conservation practices and land management within the RDCO. She supports a collaborative approach to environmental protection and stretching beyond jurisdictional boundaries to plan for ecosystem connectivity.



Alison Peat a Registered Professional Biologist (R.P.Bio) with more than 30 years of experience working in both the private and public sectors. She works with local, provincial and federal governments and conservation programs to develop advice on land use planning consistent with environmental regulations and values. She interacts with various groups including landowners, developers, planners, Qualified Environmental Professionals (QEPs), government representatives, realtors and the public to facilitate efficient and effective environmental planning. Together with Susan Latimer, Alison is an author of the connectivity planning guidance, *Designing and Implementing Connectivity Planning in the Okanagan (2014)*.

Dr. Lael Parrott (PhD, Agricultural and Biosystems Engineering, McGill University) is an Associate Professor in Sustainability at the I.K. Barber School of Arts and Sciences and Director of the Okanagan Institute for Biodiversity, Resilience and Ecosystem Services (BRAES) at The University of British Columbia.

She leads a multidisciplinary research program in modelling and characterising contemporary regional landscapes and ecosystems as complex systems. Practical applications of her research involve environmental management, conservation and monitoring.

Dr. Rachel Holt is principal of the independent consulting company Veridian Ecological, Inc. based in Nelson, BC. Rachel is trained in the science of conservation biology and land management, and accomplished in the art of applying science in the land and resource management context. Rachel is the TCWG Coordinator.

Dr. Tory Stevens has been working with the TCWG since its inception in 2013. Her background is in protected areas management in BC with a focus on climate change adaptation and connectivity. To complement the transboundary flavour of her work, she got her PhD at the University of Washington.

Gregory Kehm is a consulting geographer based in Vancouver, BC. Gregory has extensive experience working with First Nation communities, non-profit organizations and the provincial government on watershed planning, climate change adaptation and mitigation strategies, training and professional mentoring. More information about Gregory Kehm Associates, including examples of previous projects is available at ca.linkedin.com/in/gregorykehm

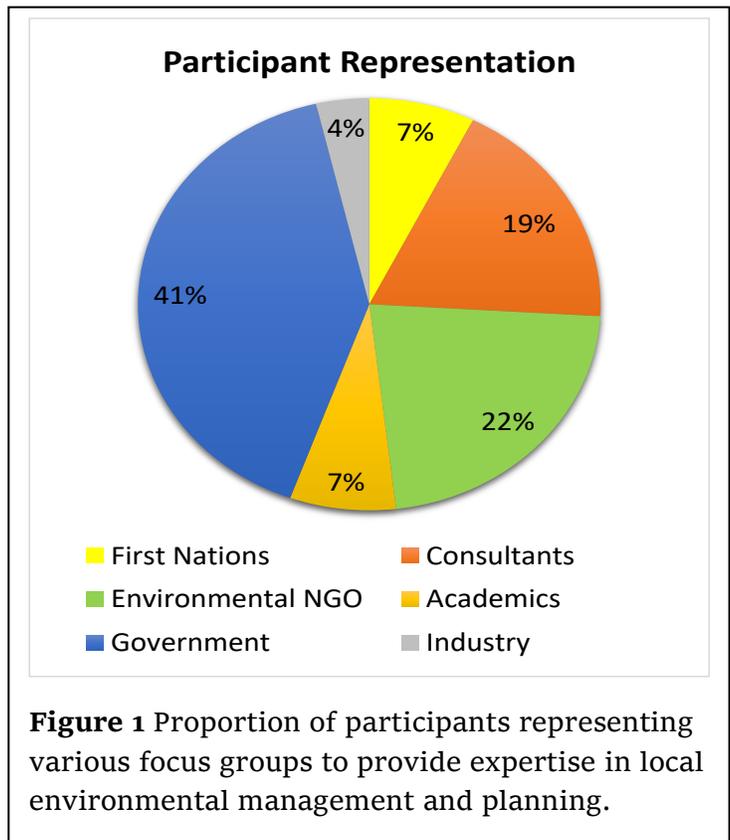


Catherine (Katey) Kyle (MGIS) is a research assistant in Dr. Parrott's Complex Environmental Systems Lab within the Okanagan Institute for Biodiversity, Resilience, and Ecosystem Services (BRAES) at the University of British Columbia Okanagan. Katey is also a PhD Candidate in the Community, Culture, and Global Studies unit of the Irving K. Barber School of Arts and Sciences at UBCO. Her PhD research utilizes Geographic Information Systems to study changes to the historic landscapes of Chinese and Japanese market gardeners who once thrived in the Okanagan valley.



Participants

The workshop participants consisted of members from Provincial and Federal environmental ministries, local First Nations, regional and municipal planners, non-governmental organizations, environmental consultants, and local experts with an interest in Planning for Ecosystem Connectivity (Figure 1). These participants were recruited through personal invitations, the OCCP newsletter, and through our network of Partners and associates. A full list of participants is listed in Appendix 1.



Workshop Objectives for Participants

1. Learn about ecosystem connectivity planning tools.
2. Identify important potential ecosystem corridors in the Central Okanagan for further work.
3. Collect participant knowledge about why the selected corridors should be prioritized for protection and/or restoration.
4. Propose an actionable strategy for on-the ground implementation of restoration/protection of the selected corridors.

Information Distributed To Workshop Participants

Summary of the Presentations

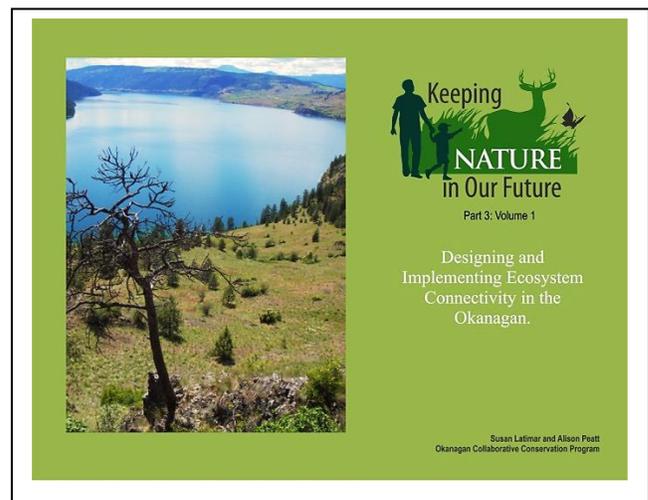
The slides displayed in the workshop presentations can be found in Appendix 2. The following is a brief summary of the presentations.

Welcome & Introductions

Carol Luttmer, *OCCP Program Coordinator*,
Margaret Bakelaar, *RDCO Environmental/Land Use Planner*

The presenters began by acknowledging that the workshop took place in the unceded traditional territory of the Syilx First Nation. They also acknowledged the variety of workshop participants representing First Nations, federal and provincial ministries, local and regional governments, academics, environmental non-government organizations, and environmental consultants. The presenters introduced the South Okanagan-Similkameen Conservation Program (SOSCP), the OCCP, the TCWG, and the UBCO working groups, and briefly overviewed the history of the project, and the role of each group.

The facilitators introduced *A Biodiversity Conservation Strategy for the Okanagan Region* (SOSCP & OCCP, 2014)¹, which assessed the current status of natural ecosystems in the Okanagan and resulted in four maps that could be used as “decision tools” to guide conservation actions. These maps include (1) Conservation Rankings, (2) Relative Biodiversity (3) Habitat Connectivity, and (4) Land Management Classes, and were the basis for the on-going mapping work by the UBCO research group. The OCCP also supported the development of guidance for *Designing and Implementing Ecosystem Connectivity in the Okanagan* (2014)².



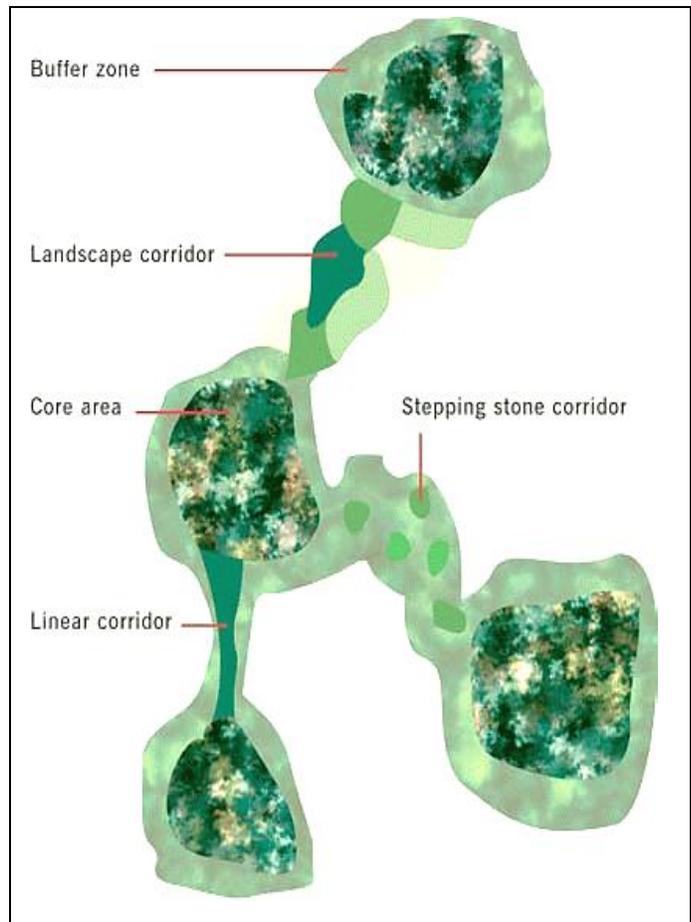
¹ Okanagan Collaborative Conservation Program (OCCP) and South Okanagan Similkameen Conservation Program (SOSCP). 2014. Keeping Nature in Our Future: A Biodiversity Conservation Strategy for the Okanagan Region. 95 pp. <http://a100.gov.bc.ca/pub/acat/public/viewReport.do?reportId=42389>

² Susan Latimer and Alison Peatt. 2014. Designing and Implementing Ecosystem Connectivity in the Okanagan. OCCP Report, 68 pp. <http://a100.gov.bc.ca/pub/acat/public/viewReport.do?reportId=42389>

The presenters indicated that the information to be presented at the workshop includes the entire Okanagan/Kettle region, but the participant input for this workshop should focus on the central Okanagan. The vision for the workshop was to work on local action to reach regional goals of protecting the Okanagan corridor from Washington to the BC interior plateau. Local government planning is site specific, making planning for Ecosystem Connectivity across many sites and jurisdictions difficult. The objective for the day was to work on proposing an actionable strategy for on-the-ground implementation of restoration/protection of selected corridors in the RDCO.

How Do We Plan for Connectivity? Alison Peatt, *Bearfoot Resources Ltd.*

Alison provided an introduction to the concepts of connectivity, why it is important, and how to plan for it. She summarized key parts of the *Designing and Implementing Ecosystem Connectivity in the Okanagan (2014)*², introduced resources and key terms, and identified things to think about when trying to locate quality patches of core habitat, and ways of keeping connections. Emphasis was placed on the need to consider spatial and temporal scales (i.e., impacts of climate change), and the strategy of thinking globally, while acting locally.



Ecosystem Connectivity - Why Does It Matter?

Dr. Lael Parrott, *Director, Complex Environmental Systems Lab, UBC- Okanagan*

Lael provided further context for why connectivity in the Okanagan is important. It is home to a uniquely large diversity of life, but subject to high rates of habitat fragmentation. Many factors limit the movement of these species through the valley, including topography, and land use. The Okanagan is in a particularly sensitive area as many populations that live in our region are at the northern extent of the species range, which makes this a key area for species moving north

in response to climate change. She outlined other major reasons for maintaining and planning for ecosystem connectivity in the Okanagan:

- Supporting biodiversity and ecosystem services (such as water filtration, air purification, waste recycling, pollination, recreation, aesthetic beauty) which are essential to our own health and well-being.
- Connected ecosystems are more resilient and will be better able to adapt to increasing climate variability.
- Loss of habitat, and fragmentation of existing habitats, is the single most important cause of biodiversity decline.
- The Okanagan is the northern extent of the American Great Basin Desert.
- Restoration of habitats is exceedingly costly.

The Big Picture- from the U.S. Columbia Basin to the B.C. Interior Plateau

Dr. Rachel Holt, *Principal, Veridian Ecological Inc., TCWG Coordinator*

Rachel provided an overview of the broader scale mapping of connectivity done by the TCWG. The team's goal was to find areas of high value, as well as opportunities for action, barriers, and risks. Their focus was with low elevation movement through the shrub-steppe grassland and montane grasslands. Rachel overviewed the mapping analyses that were carried out by the team. She presented examples of their models for resistance for movement across the landscape, and locations of core habitat. She also discussed how these models were used to determine areas of priority for maintaining linkages from three perspectives (shrub-steppe species, montane species, and general landscape integrity), and where these three priority areas overlap. She also discussed the limitations of these modelled maps without field testing, and the implications of climate change to these models.

Narrowing down to a local (regional district) scale

Dr. Lael Parrott, *Director, Complex Environmental Systems Lab, UBC- Okanagan*

Lael outlined the vision for an ecologically functional and resilient Okanagan, and her team's approach to mapping ecosystem connectivity. Her team's work is based on the Biodiversity Conservation Analyses coordinated by the OCCP³ and SOSCP⁴. She summarized the data that was included into the decision support tools of the

³ Caslys Consulting Ltd. 2013. A Biodiversity Conservation Analysis for the North and Central Okanagan Region. OCCP Report, 71 pp.

<http://a100.gov.bc.ca/pub/acat/public/viewReport.do?reportId=42389>

⁴ Caslys Consulting Ltd. 2011. Keeping Nature in Our Future Volume 1: Biodiversity Conservation Analysis and Mapping for the South Okanagan Similkameen Region. SOSCP Report, 59 pp.

<http://a100.gov.bc.ca/pub/acat/public/viewReport.do?reportId=42389>

analysis, and the modeling tool called “Circuitscape” that was used to find the most likely movement corridors for a theoretical generic animal. She showed where these corridors overlapped with the TCWG priority areas (Figure 2), and identified five highly rated corridors for the workshop participants to focus discussions upon (Figure 3): (1) Cherryville to Coldstream; (2) East Kelowna to Okanagan Mountain Provincial Park (PP); (3) Pennask to Bear Creek Recreation Area; (4) Graystokes PP to Okanagan Mountain PP; (5) Lake Country to Okanagan Mountain PP.

She also introduced the maps available for reference in the workshop participant package (see Appendix 3), which show the top rated priority areas from the two group’s models overlaid on various other mapped data:

Map 1 - Regional Perspective

Map 2a - BCS Habitat Connectivity and Highlighted Wildlife Movement Corridors

Map 2b - BCS Relative Biodiversity and Highlighted Wildlife Movement Corridors

Map 3 - Resource Land Uses – Public Lands

Map 3a - Range Tenure

Map 4 - Private Land Use – RDCO Regional Growth Strategy

Map 5 - Potential Wildlife Corridors and Areas of Overlap of Three Assessments

Map 6 - Environment Map

Workshop participants were also provided with a copy of *A Biodiversity Strategy for the Okanagan Region Summary* (2014)⁵, a list of resources, and a feedback form. Lael concluded the presentations by reinforcing that the workshop is the first step in the planning process for ecosystem connectivity in the central Okanagan, and in other regions.

Comparison of the regional and transboundary analyses

Many of the details about the two types of connectivity analysis were not covered in the presentations during the workshop, but were provided to the workshop participants in their agenda packages (see Appendix 3). There is significant overlap and consistency between the results of the two analyses, particularly concerning locations of large-scale corridors traversing the entire landscape. Thus, despite using different methodology and different land cover datasets, these two independent studies are largely in agreement regarding where the conservation of regional scale corridors should be prioritized in the Okanagan to facilitate wildlife movement. Any differences between the results arise because:

⁵ Okanagan Collaborative Conservation Program (OCCP) and South Okanagan Similkameen Conservation Program (SOSCP). 2014. *A Biodiversity Conservation Strategy for the Okanagan Region Summary*. 12 pp. <http://a100.gov.bc.ca/pub/acat/public/viewReport.do?reportId=42389>

1. The transboundary analysis extends beyond the political boundaries of the three Okanagan regional districts;
2. The transboundary analysis places emphasis on the low elevation valley bottoms, whereas the regional analysis identifies corridors throughout the entire area of the three regional districts;
3. The transboundary analysis searches for corridors connecting identified “habitat concentration areas” whereas the regional analysis allows corridors to emerge based on landscape characteristics, without pre-defining origin and destination points.

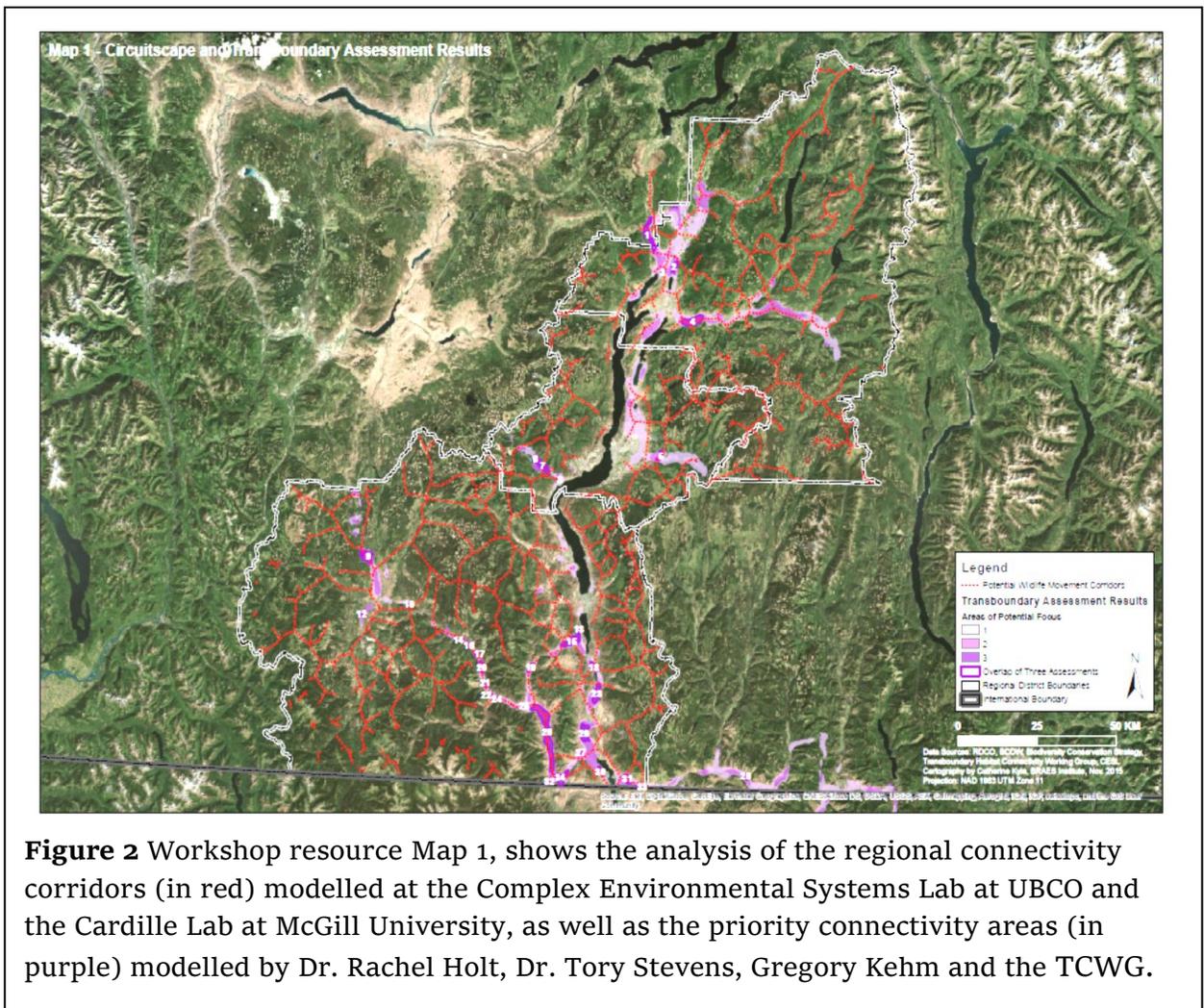


Figure 2 Workshop resource Map 1, shows the analysis of the regional connectivity corridors (in red) modelled at the Complex Environmental Systems Lab at UBCO and the Cardille Lab at McGill University, as well as the priority connectivity areas (in purple) modelled by Dr. Rachel Holt, Dr. Tory Stevens, Gregory Kehm and the TCWG.

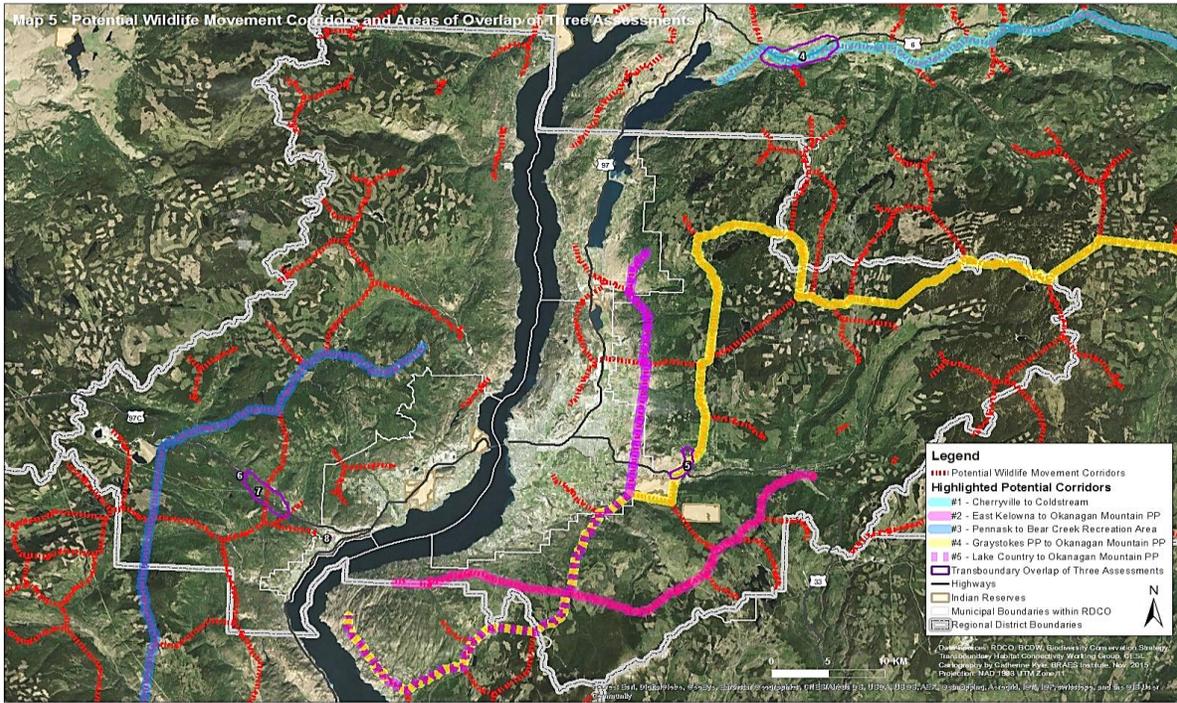


Figure 3 This map highlights 5 potential wildlife movement corridors for the RDCO and immediately adjacent areas: (1, light blue) Cherryville to Coldstream; (2, pink) East Kelowna to Okanagan Mountain Provincial Park (PP); (3, dark blue) Pennask to Bear Creek Recreation Area; (4, yellow) Graystokes PP to Okanagan Mountain PP; (5, purple) Lake Country to Okanagan Mountain PP. The 5 potential corridors are overlaid on the regional connectivity analysis corridors (in red) modelled at UBCO and McGill, and the priority connectivity areas (in purple) mapped by the TCWG. Similar paper maps were used to show other data and collect feedback from the workshop participants during the workshop (see Appendix 3).

Workshop participant input

After an introduction to corridor planning in the Okanagan, recent corridor and ecosystem modeling data were presented to the workshop participants by researchers from UBCO and TCWG. The 27 workshop participants were then divided into five groups, each chaired by members of the Organizing Committee, and asked to provide input. The workshop participants were asked to provide input in five ways:



1. Identify their motivations for preserving ecosystem connectivity using a list of anticipated motivations.
2. Identify the core and critical habitat, opportunities, mechanisms for protection, challenges, gaps, and barriers for the highlighted corridors.
3. Rank the corridors in order of their priority level for action.
4. Identify the next steps for planning for connectivity in the Central Okanagan or in other areas.
5. Provide a final assessment of the workshop.

Maps and survey charts (see Appendices 3-5 for raw data) were offered at each group’s table to organize and record input. However, since input followed the course of conversation at each table, the groups were quite variable in how they provided input. All of the groups left blank portions on the response charts, but there was input in multiple formats from each group.

Motivations for protecting ecosystem connectivity

A list of anticipated motivations was presented to each group along with the question “Why is protecting ecosystem connectivity important to you?” Participants were asked to indicate motivations that they felt were most important, and check marks next to each motivation type were tallied across all groups to rank the motivations in order of importance (see Appendix 4). A summary plot of the data (Figure 4) shows that workshop participants value ecosystem connectivity mostly for resilience and capacity, future planning, and

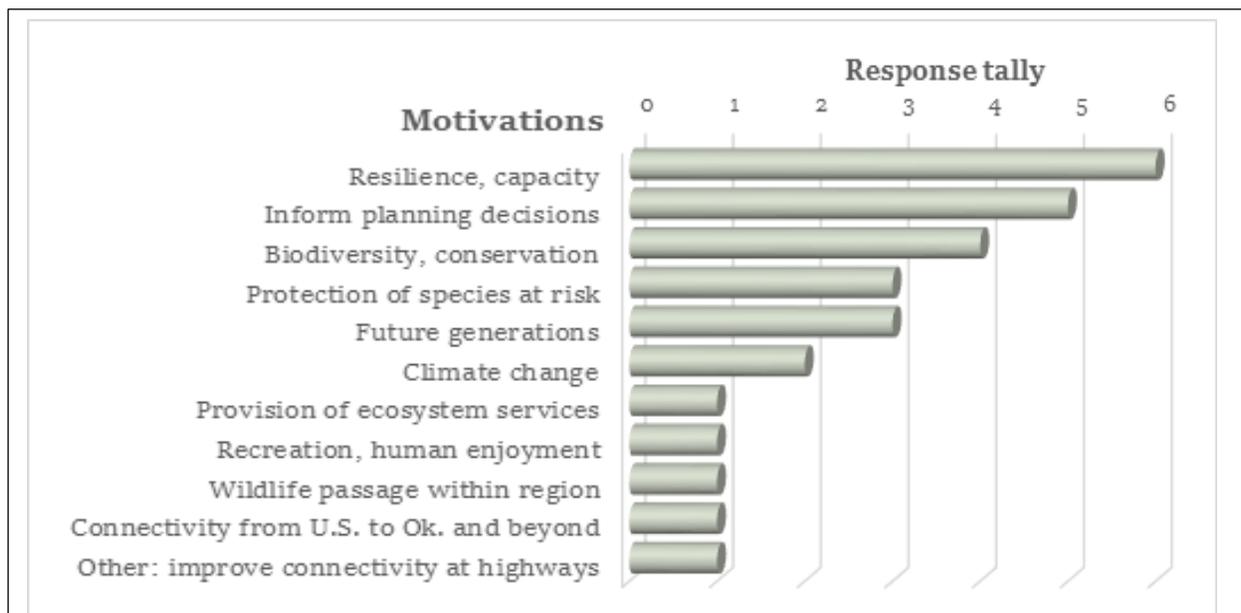


Figure 4 A ranking of the workshop participant’s most reported motivations for protecting ecosystem connectivity.

protection of biodiversity and species at risk rather than just as a means for wildlife to travel through the region.

Opportunities and gaps identified for the highlighted corridors

Participants recorded their input regarding core and critical habitat, opportunities, mechanisms for protection, challenges, gaps, and barriers on the maps and charts during the breakout sessions. Participants also identified additional datasets to incorporate into further considerations for identifying the locations of corridors. These notes were transcribed, and the information and map notes are summarized in Appendix 5. Note that some of these points were mentioned several times, across groups, but only some of that repetition is captured in the summary. In particular, participants repeatedly mentioned the importance of low elevation connections, maintaining connections to the water, and building on existing protected riparian areas.

Core and critical habitat

Participants expressed that key areas of critical habitat to consider in planning include wildlife access to water, low elevation habitat protection, species-specific habitat requirements (i.e., rugged terrain for sheep, spadefoot, etc.), east-west as well as north-south connections (i.e., summer and winter ranges), trails between large parks, and lakeshore protection. While species-specific habitat requirements were noted as important, participants also suggested using broad-ranging or “umbrella” species to represent the requirements for conserving many species, or complex ecosystem services. Please see Appendix 5 for specific comments and location-based information that was noted during the breakout groups.

Opportunities and mechanisms for protection

Participants identified many areas of opportunity to consider in planning ecosystem connectivity corridors, and suggested creating a map to visualize the opportunities available. Many expressed that planning should capitalize on existing networks like parks and recreational trails, utility right of ways, forest service roads, and riparian, lakeshore, and old growth management areas. Implementing and enhancing existing legislation, such as policy that protects Species At Risk and riparian areas, was also seen to be a broad-scale tool to help with corridor planning and protection. Participants also saw a great opportunity to combine connectivity corridors with forest fire interface zones around residential areas, and cattle grazing. Participants suggested opportunities for collaborations to enhance corridors along culturally important lands, farms, and golf courses. Please see Appendix 5 for more details and specific, location-based information.

Challenges

There are many challenges to consider in planning ecosystem connectivity corridors that participants acknowledged during the workshop. Some were concerned with the economics of land values, because land uses on private property that are compatible with corridors (e.g., some forms of agriculture, ranching, woodlots) are faced with great economic incentives to sell the land for development. Some questioned whether there would be a cost to industries by making a corridor mandatory, and whether a taxation incentive policy would be possible.

Low elevation is more of a challenge to protect, as it is mostly private land. Participants noted that Lake Country to Okanagan Mountain Provincial Park has the most development pressure, and indicated that noise and light pollution considerations should be made when planning corridors. High elevation areas were also said to have a lot of constraints on the land base, such as heavy logging and pine beetle. One participant also mentioned that there might be a regulation that would prevent having 200 - 500 m wide corridors on Crown Land. Participants also acknowledged the need for planning with a view to the long-term maintenance and management of the corridor network (i.e., parks, trails) so habitats and connections remain resilient over time. This is particularly important as climate change impacts species range shifts.

Gaps

Workshop participants identified several gaps to consider in planning ecosystem connectivity corridors. For example, some questioned what the goal of the corridors would be: for particular focal species, to target areas of high development pressure, to conserve ecosystem services, or to capitalize on the easiest opportunities? Different corridors may need to be addressed for different priorities. Others wondered whether the modelled corridors will serve their intended purpose, and whether the focus should be on taking action to protect ecosystems instead of doing more research.

They also expressed the need to share this information to policy makers and landowners, especially regarding private land, to help them build on policies already in place. There were a number of existing policy protection areas and additional mapping that were identified to be considered in future corridor discussions (see Additional data to incorporate in Appendix 5), including Old Growth Management Areas (OMGAs), Ungulate Winter Ranges (UWRs), and Forestry Land and Resource Management Plan (LRMP). Incorporating existing management tools into corridor mapping initiatives would be helpful for visualizing the existing ecosystem connectivity network.

Many participants mentioned that they would need finer scale maps in order to fully comment about the locations of corridors on the ground. They identified the need to have a selection of ecosystems at both low and higher elevation represented in the corridor network. There was particular concern about the loss of low elevation winter range on private lands and previously existing connections down to the lake on the west side (e.g., around Peachland ungulate winter range, Pennask to Bear Creek Restoration Area, Fintry to Douglas Lake).

Barriers

The barriers that were identified to consider in planning for ecosystem connectivity corridors were all physical barriers, particularly highway and road crossings, fences, steep terrain, and the edge of development. Even though utility right of ways were mentioned as an opportunity to build upon, they were also identified as possible barriers to some species. Solutions to these barriers were discussed and participants felt that highway crossings may need to be tailored to target species. Orchards and vineyards build fences to keep wildlife from eating their produce. It was suggested that planting corridors/hedgerows of native shrubs to direct wildlife away from orchards could provide alternative browse and a physical barrier to protect orchards, as well as promoting wild pollinator habitat.

Corridor prioritization ranking

The workshop participants were asked to prioritize corridors (both those highlighted in the models, and others suggested by the participants) in order of importance. Corridor prioritization ranking (Table 1) was completed by three out of five groups. Some individuals and groups preferred not to rank the corridors, as they felt that a broader network of corridors was needed, and that actions should

Table 1 Corridor prioritization ranking (1 = primary priority, 2 = secondary priority...) of the modelled corridors by each workshop breakout group. Corridors marked “Other” were suggested by participants of the workshop. Corridor #1 in Coldstream was outside of the RDCO focus area, and was not included in the prioritization.

Suggested corridors	Group				
	1	2	3	4	5
#5 - Lake Country to Ok. Mtn. Provincial Park	2		1		
#2 - East Kelowna to Ok. Mtn. Provincial Park			2		
#4 - Greystokes Provincial Park to Ok. Mtn. Provincial Park	3	1	3		
#3 - Pennask to Bear Creek Restoration Area			4		
Other: High priority ungulate winter range location (Peachland)	1				
Other: Okanagan Lake – Shorts Creek East-West LRMP corridor			5		

improve overall permeability, building on any opportunity rather than focusing specifically on a single corridor. However, Table 1 shows that if efforts needed to be focussed on one corridor, the modelled corridors #5 Lake Country to Okanagan Mountain Provincial Park and #2 East Kelowna to Okanagan Mountain Provincial Park were ranked as key corridors to prioritize.

Next Steps

Workshop participants were asked during a final survey what they saw as being the next step to planning for connectivity in Central Okanagan, and in other areas. The participants identified a number of next steps (Figure 5), but the most frequently mentioned included suggestions to establish an Action Team to begin to implement connectivity planning, address challenges for specific corridors, coordinate and share information on actions between the participants and decision-makers, implement corridor protection policy into OCPs and bylaws, and focus on areas of high importance and the biology and ecology in corridor planning. The OCCP and SOSCP, are prepared to coordinate an Action Team, which will work to identify how to implement corridors and incorporate them into future planning to enhance ecosystem connectivity through private land, crown land, park land, nature trusts, and across highways.

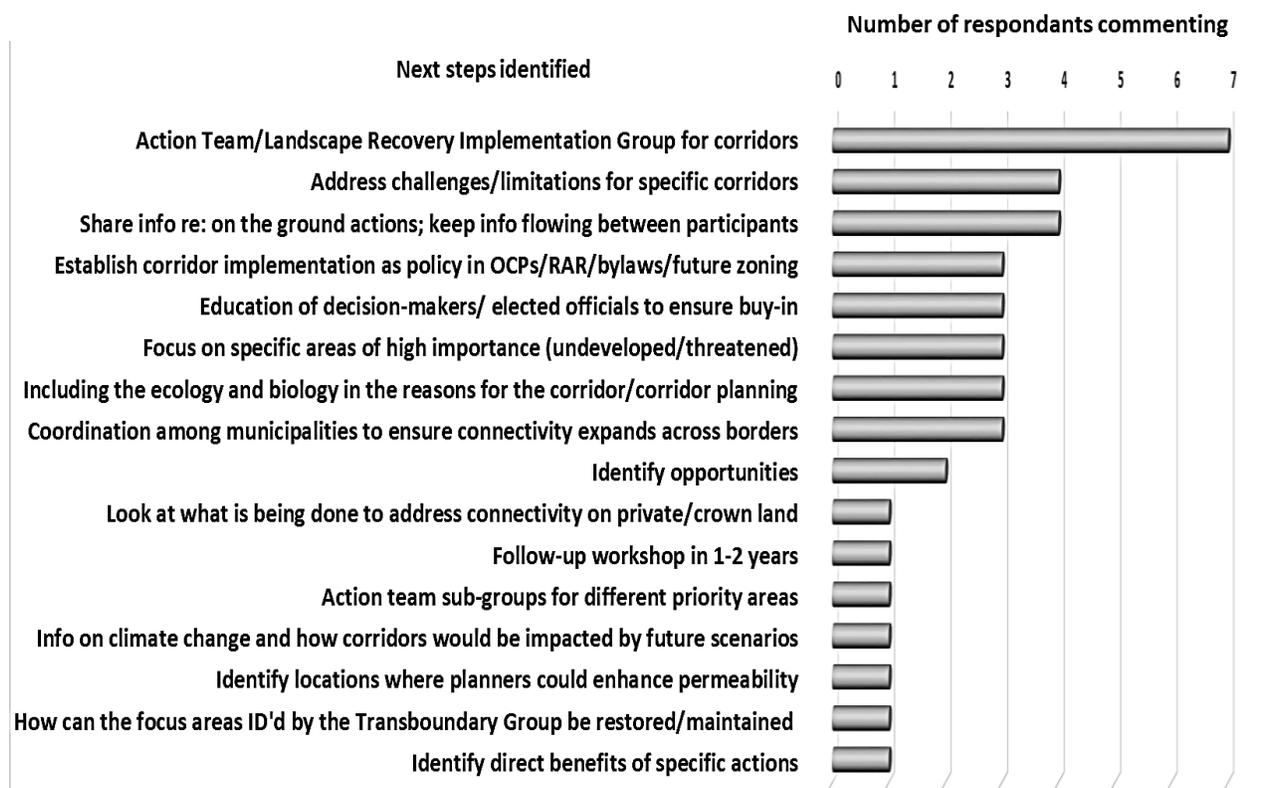


Figure 5 A summary ranking of the next steps for Planning for Ecosystem Connectivity that were identified by the Workshop participants.

Final assessment of the workshop

The final feedback forms revealed that the participants (21 forms were completed out of a total of 27 participants) felt that overall the workshop was positive and well organized, it met participant expectations, and would be useful in their work (Appendix 6). Participants also provided comments for improving future workshops (Appendix 6), and showed great interest in joining an Action Team to work towards implementing connectivity (Figure 6). Participants reported that they valued the discussion with the large variety of stakeholders, the presentations about the mapping and projects, learning about the corridor locations, and identifying opportunities (Figure 7).

Workshop Summary

Workshop participants learned about the current status of planning for ecosystem connectivity in RDCO and throughout the Okanagan region. They provided a wealth of valuable input that can be used to inform an Action Team, and refine the modelled corridors for implementation. Participants supported the creation of an Action Team to work on the next steps toward implementing connectivity corridors, and the majority of participants are interested in being a part of the Action Team. The next steps for the Action Team include addressing challenges for specific corridors, coordinating and sharing information on actions among the participants and with decision-makers, and implementing corridor protection policy through OCPs, bylaws, and other mechanisms, while focusing on areas of high biological and ecological importance in corridor planning.

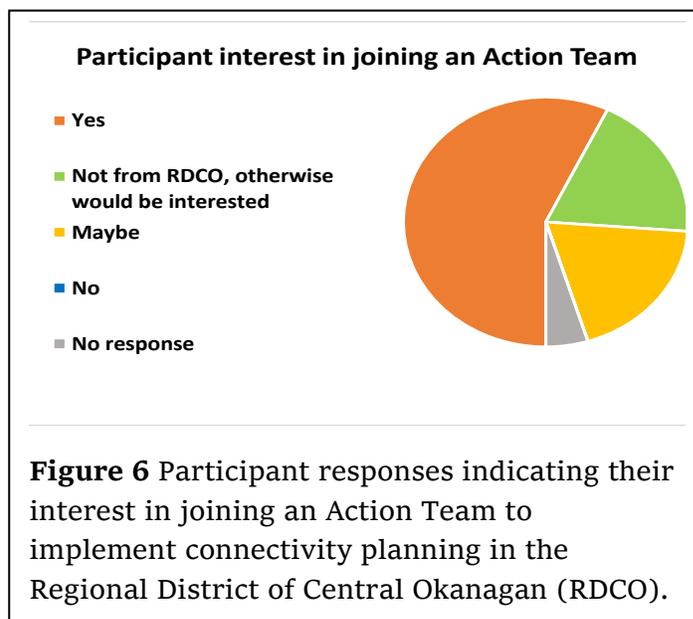




Figure 7 A summary rank of the topics or aspects of the workshop that the Workshop participant reported to be the most interesting.

Resources

Designing and Implementing Ecosystem Connectivity in the Okanagan (Latimer & Peat, 2014)

Designing and Implementing Ecosystem Connectivity in the Okanagan provides guidance to help decision makers and citizens implement ecosystem connectivity that benefits wildlife and human communities. <http://a100.gov.bc.ca/pub/acat/public/viewReport.do?reportId=42389>

A Biodiversity Conservation Strategy (BCS) for the Okanagan Region (SOSCP & OCCP, 2014)

A Biodiversity Conservation Strategy for the Okanagan Region (SOSCP & OCCP, 2014) provides a “big-picture” view of the status of regional biodiversity in the three Okanagan/Similkameen Regional Districts and outlines a vision, goals, strategic directions and recommended actions to keep nature in our future. The current status of nature was assessed and resulted in four maps that can be used as “decision tools” to guide conservation actions. These maps include (1) Conservation Rankings, (2) Relative Biodiversity (3) Habitat Connectivity, and (4) Land Management Classes. The pdf and shapefile versions of these maps are available here: <http://a100.gov.bc.ca/pub/acat/public/viewReport.do?reportId=42389>

An interactive map of environmental data layers, including BCS mapping, is available in the **Okanagan Habitat Atlas** through the Community Mapping Network: <http://cmnmaps.ca/OKANAGAN/>

Corridors Connecting Habitats in the Okanagan Valley UBCO Complex Ecosystems Lab

The objective of this work was to identify a terrestrial network of patches and corridors whose conservation or restoration may contribute to maintaining habitat connectivity for a broad range of species in the Okanagan Valley. This work builds on analyses done for the *Biodiversity Strategy for the Okanagan Region* (OCCP & SOSCP, 2014).

<http://complexity.ok.ubc.ca/2014/12/01/corridors-connecting-habitats-in-the-okanagan-valley/>

Basin Wide Mapping Products

WA-BC Transboundary Connectivity Working Group

The Transboundary Connectivity Working Group has developed GIS data sets for landscape integrity, montane/generalists and shrub steppe/grassland species habitat connectivity in the Okanagan/Kettle region. Maps and data are freely available from the DataBasin group portal created to share project results. Feel free to ask Gregory Kehm (gregory.kehm@gmail.com) if you have any questions about accessing this site, data or other project outcomes.

<http://databasin.org/datasets/76167bdd8ea94adaac3d140c8a453143>