



Habitat, Species, Water

Keys to Quality Living and Prosperity in the Okanagan

Okanagan Basin
Water Stewardship
Council

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Okanagan Basin

Covers 21,000 km² in British Columbia and Washington State, with 70% of its drainage in BC.

Stretches from its headwaters near Armstrong, BC, to the Columbia River between the Wells and Chief Joseph Dams.



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Under threat



Warning signs...

- Fast population growth, limited water supplies
- Streams fully allocated, groundwater supplies unknown and unregulated
- Climate change pointing to decreased water supplies
- Large number of species at risk and continued loss of habitat
- Fragmented approach to decision making, governance, and research



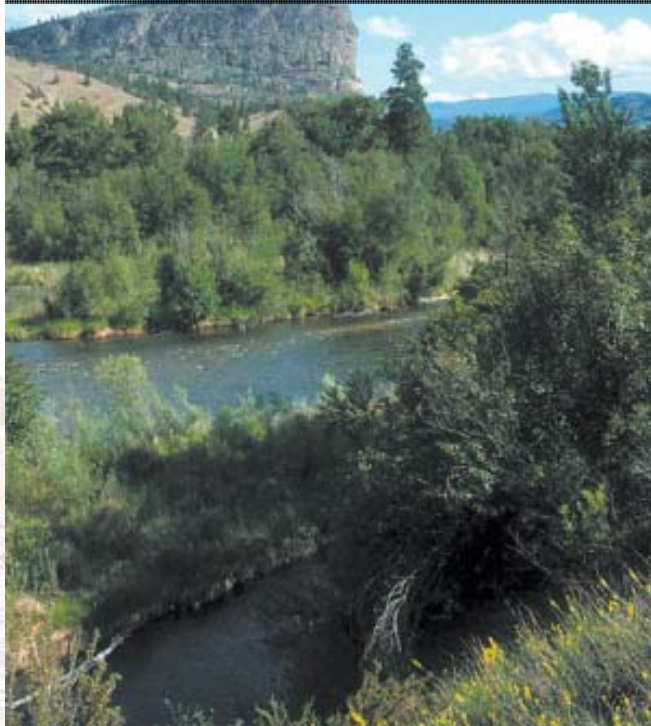
Okanagan questions

- Will water resources in the Okanagan be sufficient in the future to sustain the environment, the economy, and quality of life for communities in the face of population growth and climate change?
- Are residents and those with vested “rights” to water able and prepared to change?
- Is the valley retaining the species and habitats that make it such a wonderful place to live?

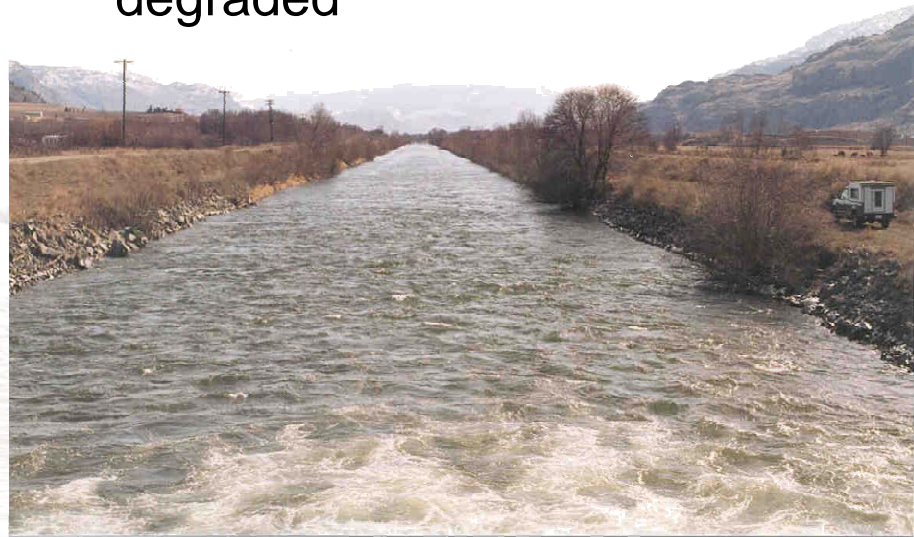


Riparian habitat

Riparian: Fringe or strip of vegetation bordering the shores of streams, wetlands and lakes



- Up to 80% of South Okanagan and Similkameen terrestrial wildlife species use riparian habitats
- 90% of native riparian habitat in the valley has already been destroyed or severely degraded





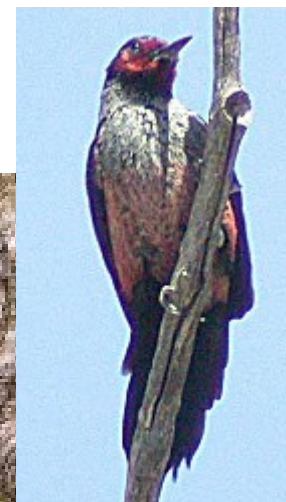
Restoring riparian areas improves water quality, water management, and aesthetic and biodiversity values



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Are Species at Risk recovering?



Seven *Species at Risk* use riparian zones in the South Okanagan and Similkameen valleys

- Yellow-breasted chat
- Lewis's Woodpecker
- Western Screech-Owl
- Western Red Bat
- Tiger Salamander
- Spadefoot Toad
- Gopher Snake

- Chats require dense riparian habitat for nesting
- Conservation or creation of habitat for Chats will protect habitat for other threatened species



...and the Northern Leopard Frog is already extirpated in this area



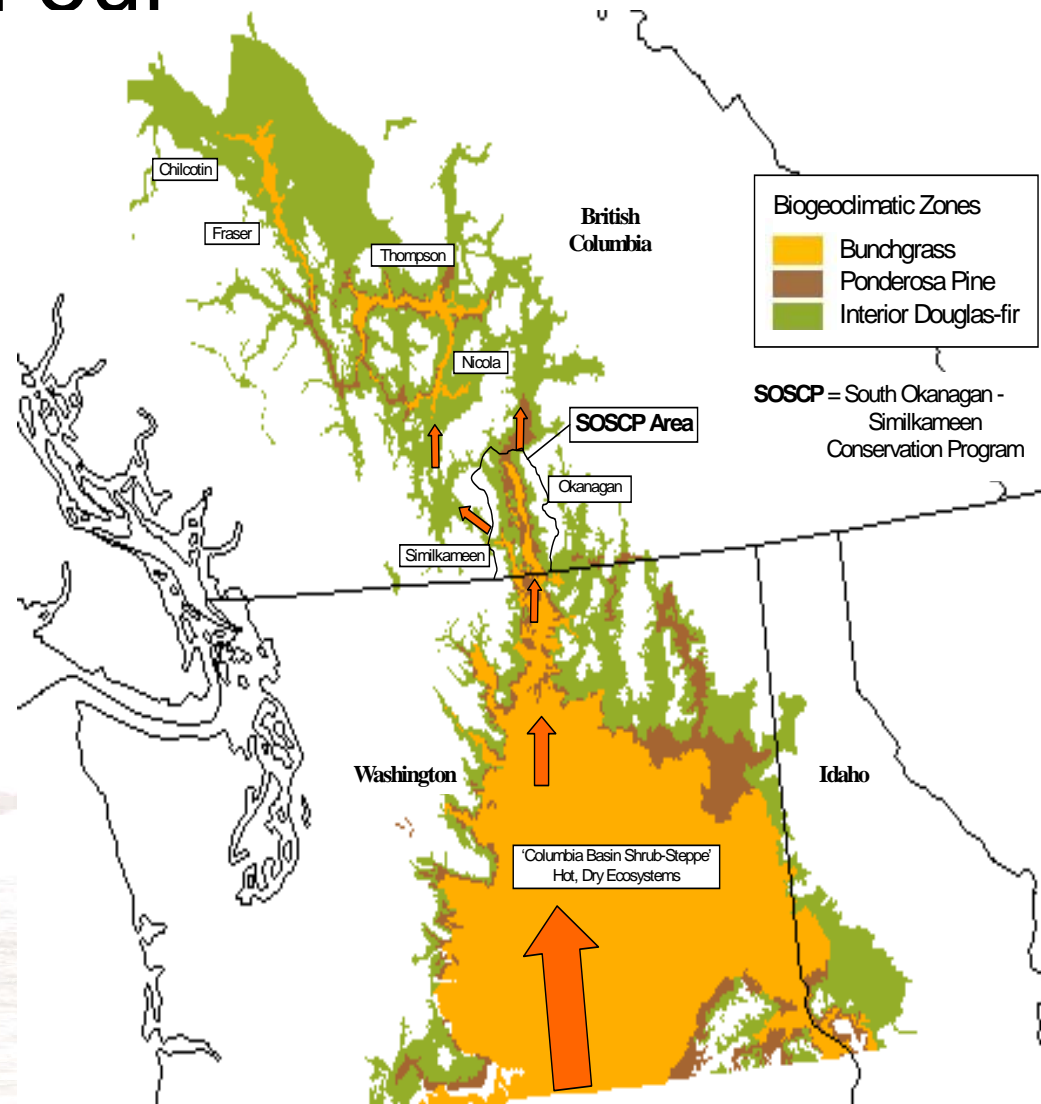
Can we protect habitat?



White Lake
basin



Can we maintain our desert corridor?



South Okanagan Similkameen Conservation Program

- Habitat restoration (riparian and ponderosa pine)
- Land acquisition
- Weed management
- Research on mammals, migratory birds, reptiles and amphibians



Local governments, First Nations, and land owners are important players in protecting sensitive habitat



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Engaging First Nations



- Many First Nation reserves contain remnants of species at risk habitat
- Fairness and equity is important in application of species protection tools



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Farming practices



**National agri-
environmental
standards**



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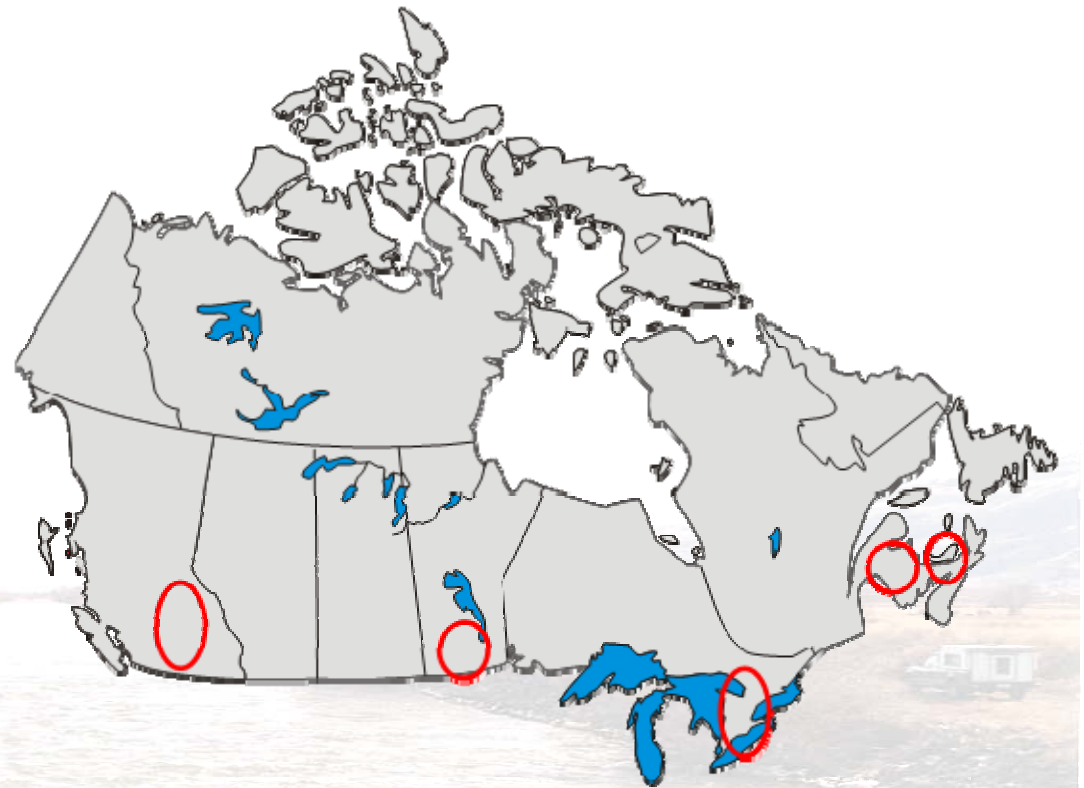
National Agri-Environmental Standards Initiative (NAESI)

- Goal: to establish national environmental performance standards for:
 - Water (nutrients, sediments, pathogens, pesticides and environmental flows)
 - Air (odour and ammonia as a precursor to smog)
 - Biodiversity
- Standards are not regulatory instruments but are science-based benchmarks to guide farm practices in achieving desired environmental outcomes



NAESI Research

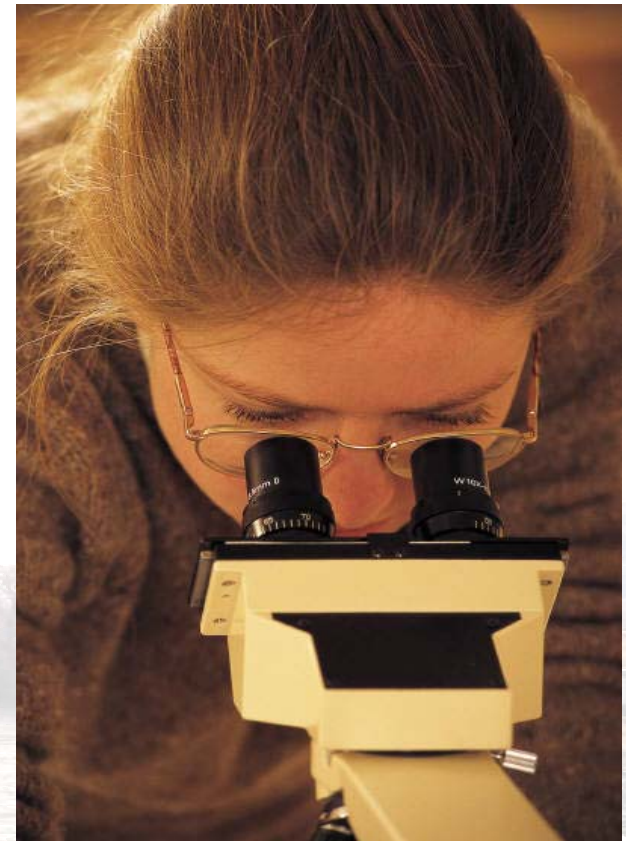
- Monthly samples at sites across Canada, including Okanagan
 - Nutrients, aquatic plants, benthic invertebrates
- Developing prototype standards for agricultural lands



Are we learning?

EC's Science Investments

- Climate impacts and adaptation
- Water quantity and quality monitoring and research
- Air quality monitoring and research
- Species and habitat research



Okanagan Science Priorities

(Science Managers' Workshop – April 14-15, 2005)

- Consolidated messages
- Integrated land use modelling
- Climate variability and change
- Hydrologic cycle and water quality
- Ecological integrity of main-stem lakes
- Air Quality



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The Future

- Planning and decision making
- Wildlife conservation
- Water conservation



The Future

Much to do:

- Balancing future water supply and demand
- Ensuring long-term water (and air) quality
- Maintaining and enhancing ecosystem services
- Integrating wildlife and water issues
- Protecting and restoring habitat
- **Remembering why we like this place,** and protecting those attributes



