

## South Okanagan Sustainability Research Centre

### Background:

OUC's strategic research plan identifies the environment as a major research theme. In response to the growing needs and opportunities of the region, the plan recognizes the importance of research in environmental change, especially research that addresses the growing threat of human encroachment and global climate change to the ecosystem of the Okanagan Valley.

Nowhere is this more important or beneficial than in the South Okanagan Similkameen region where the semi-desert climate, geography, and unique geological history provide the baseline for a set of particular environmental issues. The region is home to more than 256 provincial and 45 national species listed at risk, and, with rapidly growing industries in agriculture and tourism, it is currently under intense pressure from human encroachment. Thus the region stands out nationally, not only as an area with unique ecological concerns, but also as a focal point for environmental and ecological research.

The South Okanagan Similkameen Conservation Program (SOSCP) represents one of the largest conservation efforts in Canada. It is a network of local, regional, provincial, national, and international organizations working together to ensure the environmental and economic sustainability of the region. The Conservation Program aims to expand community involvement, promote ecologically sustainable land-use, enhance stewardship on private and public land, and negotiate acquisition of key habitats, focusing on the species at risk found in the area.

Okanagan University College became an official SOSCP partner in December 2001. OUC has since been supporting the conservation efforts of SOSCP through the involvement and research efforts of its faculty. OUC's association with SOSCP has also generated many fruitful collaborations.

To support and expand the research program in the area of conservation biology, wildlife management, and species at risk recovery, a formal contribution agreement between the Minister of the Environment and OUC was established in September 2003. Dr. Howie Richardson, the chair of SOSCP's science team and co-author of the Landscape Recovery Strategy, the guiding document for SOSCP's recovery efforts, is the acting project manager. This agreement has resulted in two appointments: Bryn White, program administrator of the OUC/South Okanagan Similkameen Recovery Planning and Co-ordination for Species at Risk, and Andy Bezener, Great Basin Program Manager for BC with Partners in Flight (PIF). Both work out of OUC's Penticton campus.

The Penticton campus itself is ideally located to interface with governmental agencies and SOSCP partner organizations conducting research in the South Okanagan Similkameen region. Faculty at the Penticton campus are currently working with representatives from SOSCP and the BC Ministry of Water, Land & Air Protection

(WALP) to establish a database of locally relevant documents on the FORREX Natural Resources Information Network (NRIN). The project involves, among other things, the collection, identification, and classification of all documents supplied by the various governmental and private partner organizations. The goal is to preserve invaluable material and provide a comprehensive and freely accessible resource for all information relevant to environmental concerns of the South Okanagan region.

In addition, many of the research projects directly related to the environmental needs of the South Okanagan are being conducted at the Penticton campus. They include: a project to obtain climate proxy data to establish a more detailed climate chronology by means of stratigraphic correlation; a study to identify and monitor changes in sediment transport due to human activities in and around the lakes; a population and dispersal study of the endangered Behr's hairstreak butterfly; a study of the effects of recreational activity on nesting birds; and a social and ecological project to research and document ecological change in the South Okanagan over the past two hundred years, and link those changes to processes of cultural, political, and economic changes. To facilitate these projects, an environmental science research lab is being built at the Penticton centre. The lab, partially funded by the Canada Foundation for Innovation (CFI), will house a sedimentology and applied geomorphology lab, a computer lab, and the mathematical biology research group at Penticton.

The Penticton campus has also provided facilities for conferences, workshops, and various meetings on environmental issues. A workshop on the arts and the South Okanagan environment is planned for later this year. The goal of the workshop is to develop a community of artists, academics, and environmentalists to help strengthen the research effort on environmental issues in the South Okanagan by promoting public awareness of conservation and stewardship issues, and by broadening OUC's participation in conservation activities generally.

OUC's association with local government agencies and industry through SOSCP has not only created several opportunities for undergraduate students to engage in environmental research in the Penticton area, but has also permitted faculty to access external sources of funding to match grants from the Canada Foundation for Innovation (CFI), the British Columbia Knowledge Development Fund (BCKDF), and the Mathematics of Information Technology and Complex Systems (MITACS).

### **Purpose:**

In a region undergoing rapid population growth while sheltering a high percentage of endangered species, environmental change is likely to have serious consequences for wildlife and species habitat. There is an obvious and urgent need to develop and implement sustainable management practices. This will require not only a greater understanding of the nature and rate of environmental change as it relates to climate variations and human impact, but also extensive cooperation among researchers, government agencies, first nations, local decision makers, and the community.

Together, they can work to:

- develop community awareness of the need for sustainable practices
- introduce programs that strengthen the natural environment, economy, and community
- promote training, public education, and research on the subject of sustainability

The purpose of the proposed sustainability research centre is to facilitate such cooperation, and to promote, facilitate, and support interdisciplinary research in sustainable development and environmental protection focused on the South Okanagan ecosystems. The centre will build on the successful cooperation between OUC and the various SOSCP partners to ensure that UBC Okanagan becomes a key player in the future development of ecologically sustainable practices relevant to the South Okanagan region. The goal is to preserve, and indeed strengthen, our links with regional, provincial, national, and international conservation organizations in the transition from OUC to UBC Okanagan.

The centre will adopt SOSCP's vision: "a healthy environment that sustains the diversity of indigenous plants and animals while enriching people's lives." To achieve its objectives of clean air and water, habitat and species protection, and improved environmental decision-making, the centre will adopt the following strategies:

- provide a forum for the exchange of ideas regarding sustainable development in the South Okanagan with an emphasis on knowledge transfer to support and influence decisions makers
- develop and support stewardship tools, including management practices, ecologically sustainable land-use, and community strategic development plans
- optimize public outreach and expand community involvement
- facilitate ongoing research and promote new interdisciplinary research within UBC-Okanagan that will contribute to the overall mission of the Centre
- establish research networks by developing partnerships with organizations and other institutions actively involved in environmental research related to local concerns;
- attract, and provide adequate tools for, graduate students in the environmental sciences program
- create opportunities for graduate and post doctoral research on issues of sustainable development in the South Okanagan

### **Benefits:**

There is a long history of conservation activity to preserve *Canada's Desert Country* in the South Okanagan. But, in order to protect this national treasure of biodiversity, these efforts must be expanded so that decision makers have access to the knowledge, expertise and resources required to implement sustainable development. The goal of the proposed sustainability research centre is twofold: to promote research on sustainability issues, and to provide a centralized structure for university, the private sector, government, and the

## UNIVERSITY CIRCLES

---

public as they work together to protect and restore the environmental health of the South Okanagan and develop sustainable ecosystems and communities.

Ideally, the centre should be located in the Penticton area to benefit from its proximity to both the subject of research interest and to the key players in the region. The centre will act as a focal point for local activities related to environmental protection and sustainable development, raising the institution's profile in the Okanagan. Such a facility would provide faculty and students at UBC Okanagan a natural laboratory in which to gather and analyze information on the South Okanagan ecosystems, survey its biological diversity, and monitor changes due to climate variations and human impact. UBC Okanagan's participation in this initiative would not only facilitate collaborations with the 33 SOSCP partners, including the Faculty of Agriculture at UBC, but also create opportunities for interdisciplinary research for both students and faculty within UBC Okanagan. Finally, it would create new opportunities to acquire funding for research purposes, enhance our ability to attract top researchers, and provide a unique set of learning experience for our undergraduate and graduate students.

### **University Circle Members:**

Sylvie Desjardins, Howie Richardson, Kathleen Jagger, Sharon Mansiere, Andy Bezener, Bryn White, Nancy Holmes, Anne Cossentine, and John Wagner

### **Partners:**

Rob Hawes - South Okanagan Similkameen Conservation Program (SOSCP)  
Don Fast - Environment Canada  
Drew Carmichael - BC Ministry of Water, Land and Air Protection

### **Potential Partners:**

Regional District Okanagan Similkameen  
Osoyoos Indian Band  
Minister of Sustainable Resource Management  
Faculty of Agriculture, UBC Vancouver  
Parks Canada