

Okanagan Land and Water Information System

sustainable planning for the Okanagan environment
connecting environmental data sources in the Okanagan



Communication and Technical Information Sharing
Osoyoos Lake Water Science Forum

Stephen Boulton, Environment Canada



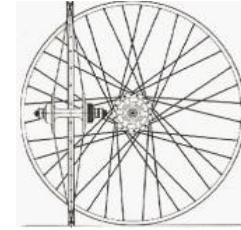
Environment
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spOke
"Everything is Connected"

spOKe ?



- ➔ sustainable planning for the Okanagan environment
“hub and spoke concept model”
- ➔ The project is intended to provide access to the results of monitoring and research in the Okanagan Valley in a form that is understandable and able to be incorporated into local decision-making
- ➔ A one-stop-shop internet portal for Okanagan environmental information

spOKe portal – delivery issues



- Increasing demand for data and information
- Single source of comprehensive information a myth
- Clearinghouse/warehouse model no longer relevant
- Linking distributed info through web services is key

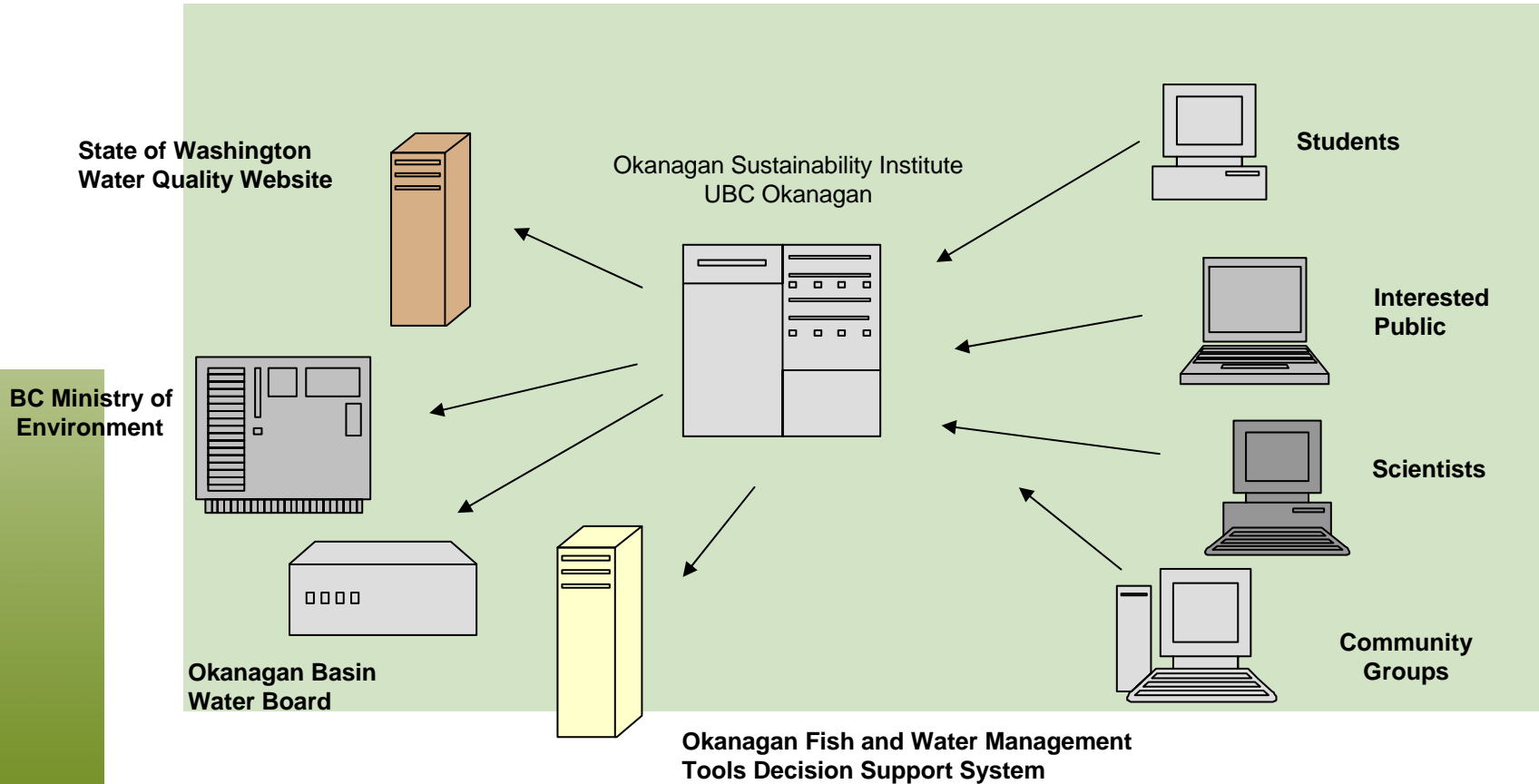
THE SOLUTION?

A practical on-line information system integrating data, information, tools, and expertise from distributed sources that support common user needs

spOKe is **not** a data warehouse or repository

Distributed Network

for sharing information



Project Objectives

- ➔ Establishment of a project team representing multi-agency collaborators in support of information sharing.
- ➔ Development and continuance of a web portal that will allow access to consolidated watershed-scale monitoring and research results.
- ➔ Partnership with the Okanagan Sustainability Institute

SpOKe
... everything is connected

Partners

Okanagan Sustainability Institute

UBC Okanagan

SFU Water Network

Centre for Sustainable Watersheds

Okanagan Nation Alliance

Okanagan Basin Water Board

BC Ministry of Environment

Natural Resources Canada

GeoConnections *(funding)*

Environment Canada *(coordination)*

Information sharing

in the Okanagan

City of Vernon, District of Lake Country, Interior Health, Regional District of North Okanagan, District of Coldstream, City of Kelowna, Regional District of South Okanagan, City of Penticton, District of Summerland, Regional District of Central Okanagan, Regional District of Okanagan-Similkameen, Wesbank First Nations Lands Office, Spallumcheen Indian Band, Spalts'in First Nation, En'Owkin Centre, First Nations Land Trust, Okanagan Indian Band, Westbank First Nation, BC Ag Council, BC Ministry of Agriculture and Lands, BC Ministry of Forests and Range, MOE (NOGWCA), The Land Conservancy of BC, Nature Conservancy Canada, North Okanagan Parks and Natural Area Trust, Ducks Unlimited, South Okanagan-Similkameen Conservation Program, BC Lake Stewardship Society, Grasslands Conservation Council, Science Opportunities for Kids Society, FORREX, Water Sustainability APBC, South Okanagan Similkameen Conservation Program, Okanagan Partnership, Allen Brooks Nature Centre, BC Environmental Farm Plan Program, Partners in Flight, Fisheries and Oceans Canada, Summerland Agricultural Research Centre, Agriculture and Agri-Food Canada, Geological Survey of Canada, Environmental Farm Plan Program, Okanagan College, UBC Vancouver, Fortis BC, Ophiuchus Consulting, Summit Environmental Consultants, ESSA Technologies, Agricultural Research Center, Dobson Engineering LANARC, Agricultural Land Commission, Artemis Wildlife Consultants, Iverson and MacKenzie Consulting Ltd., Eco-Matters Consulting, Skyline Consulting

Vision *for spOKe*



- To see the portal as a one-stop-shop to discover land, water, wildlife, and climate data for the Okanagan
- To encourage principles of sharing, distributing, and using data, information, reports and maps
- To build on the key principles of accountability, delivery and management information at the SOURCE
- To support decision makers with local-level information
- To build long-term capacity and to ensure that local data is kept current and up-to-date on spOKe

spoke *“Everything is Connected”*

Challenges

Identify data/information holdings

Identify data availability

Identify data/information needs for decision-makers

Manage and share the data/information from these distributed sources

Provide a portal for access to the data/information and the ability to customize the information for specific needs

Project Plan

➔ Okanagan Land and Water Information Portal Workshop December, 2006

User Needs/Capacity Assessment Surveys
Technical Capacity Survey
Decision Maker Survey
Data and Information Priorities Working Sheet

➔ Interactive Demonstration and Technical Workshop March, 2007

Usability Survey
spOke usability survey for non-technical users
spOke usability survey for technical users



Project Online Tools

Pathways Phoenix
Content Management
System

Web application designed to enable management of geospatial information provided via open geospatial standards and technologies

Key Features include

- Secure login into a group “workspace”
- Document upload and sharing between workspace users
- Map layers upload (Shapefile, Raster, WMS, GML, Mapinfo, KML)
- Create maps and scenarios from map layers and share out to general public or through web services
- Integration with Google Earth
- Create announcements, contact lists, discussion groups, calendar events, polls, surveys, blogs and then syndicate them out to different websites

Project Online Tools



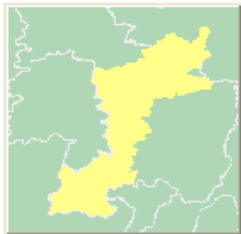
Building on “Know your Watershed” application to provide public access to distributed data/information from all sources, retained at the source, and searched, disseminated, and used via this one-stop internet portal

<http://www.environmentandresources.ca/>

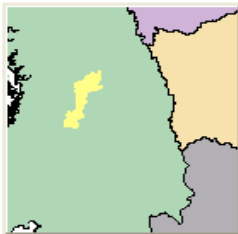
Okanagan

* Click thumbnail image to get larger map

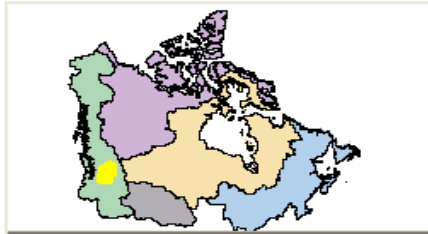
Local



Regional



Ocean Drainage watershed



Information about this watershed. Click heading to open / close items: [Open / Close all](#)

[Places in this watershed \(12\)](#)

[Citizen-based groups involved in this watershed \(3\)](#)

[Government websites / reports concerning this watershed \(8\)](#)

[Other websites / reports concerning this watershed \(1\)](#)

[Indian Reserves in this watershed \(13\)](#)

Key features include

- Watershed approach to sustainable water resources
- CGDI metadata and OGD standards



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November Release

ABOUT SPOKE

spOke (**s**ustainable **p**lanning for the **O**kanagan **e**nvironment) is an information portal that facilitates sharing and access to watershed-scale land and water information and knowledge. It acts as a catalogue for data, interpreted information, tools and services in order to facilitate the interconnection of land/water data from distributed sources for the Okanagan. The key goal is to improve access to information from the many stakeholders in the expectation that it will lead to a greater understanding of the complex land/water issues we are facing, and support effective decision making. [More...](#)

			
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Featured Projects

Groundwater Quality DL 3197 Osoyoos

Groundwater Quantity and Quality from Well on Lot 2 of Blomme/Johansen Subdivision DL 3197, Northwest of Osoyoos, BC (Oct 1997) 1997 report on groundwater quantity and quality for pr ...

[MORE >](#)

Groundwater Qual DL 3474 Naramata

Groundwater Quantity and Quality for Blackwell Stores Wells 2-81 and 1-81 on DL 3474 SDYD Southeast of Naramata (Jun 1996) 1996 report on groundwater supply evaluation for Blackwell Stores ...

[MORE >](#)

Groundwater Qual DL 2460S SW of Kaleden

Groundwater Quantity and Quality From Well on Lot of Proposed Kilback Subdivision DL 2460S Southwest of Kaleden (Sep 1996) 1996 report on evaluation of groundwater quantity and quali ...

Groundwater Quality Osoyoos (Dec 1986)

Groundwater Quality Monitoring and Assessment Program: Assessment of Water Quality and Problem Areas. Osoyoos (Dec 1986) Summary of 1985 and 1986 field investigations to determine ext ...

IN THE SPOTLIGHT

Okanagan Basin Water Board

Clean water is the most precious natural asset in the Okanagan ? essential to the beauty of our landscapes, our healthy economy and the well-being of our citizens. The Okanagan Basin Water Board (O ... [More](#)

NEWS & EVENTS

100 turn out for creek clean up

Click [here](#) for more info.

Irrigation Industry Association of British Columbia (IIABC) Annual Convention

Click [here](#) for more info.

APEGBC Stormwater Management Analysis Seminar - Castlegar

Click [here](#) for more info.

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<http://www.essa.com>



PROJECTS

- [Okanagan Fish-Water Management Tool](#)

EMPLOYEES

- [Clint Alexander](#)

IN THE SPOTLIGHT

GeoConnections

GeoConnections description here ... [More](#)

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- PROJECTS
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- REPORTS
- DIRECTORY
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IN THE SPOTLIGHT

BC Lake Stewardship Society

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MAPS

Parks and Fireharzard

test map

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spoke :: Maps - Windows Internet Explorer

Parks and Fireharzard

Placenames

- Valley
- Unincorporated area
- Town
- + River
- Other
- ▲ Mountain
- Military area
- Low vegetation
- Lake
- × Falls
- District municipality
- Conservation area
- City
- Indian Reserve
- ★ Cape
- ★ Bay

Roads

- / Unkrown

Boundary

- / Unkrown

Abstract

Layers

[SEARCH SPOKE](#)



Getting Involved

- ➔ Deciding what project, maps, data, reports you would like see other people use in the Okanagan region
- ➔ Deciding on how you want to participate:
 - contribute by just adding metadata and organizational contact info
 - contribute by adding access to my data, maps, web services and links to my information
 - contribute by using Pathways Phoenix to manage my data, maps, reports and other information

Work Plan *data and information*

Populate the portal with data and information

Formalize the process - Steering Committee

Legacy – long term commitment by partners

Communication Plan



Project Plan

- ➔ Portal Release “Kick-Off”- Tuesday, November 13th
Workshop at UBC Okanagan, Kelowna
- ➔ Register at <http://spoke.pyr.ec.gc.ca>

Agenda

9:30 -10:00	Participant sign in meet and greet
10:00 -10:15	Acknowledgements and Welcome
10:15 -10:30	Update on spOke
10:30 -11:45	Portal Demonstration and Showcase
11:45 -12:15	Lunch Provided
12:15 -1:00	Portal Question and Answer period
1:00 -1:45	Project Sustainability and Steering Committee
1:45 -2:00	Workshop wrap-up

All Welcome

Project Information Portal



About spOke

spOke (sustainable planning for the Okanagan environment) is an information portal that facilitates sharing and access to watershed-scale land and water information and knowledge. It acts as a catalogue for data, interpreted information, tools and services in order to facilitate the interconnection of land/water data from distributed sources for the Okanagan. The key goal is to improve access to information from the many stakeholders in the expectation that it will lead to a greater understanding of the complex land/water issues we are facing, and support effective decision making.



The Okanagan River Basin is under pressure to accommodate the fastest growing population among Canada's 23 major watersheds. Water supplies and infrastructure are strained to capacity, threatening more frequent and severe water shortages; climate trends indicate current water supply is likely to decline; and landscape disturbances, including expanding viticulture, forestry and real estate development are fragmenting already highly endangered ecosystems.

Providing access to consolidated science-based information to support better decision making has been identified by community leaders in the Okanagan as a top priority needed to support development in a sustainable way. spOke is a pilot project that builds upon existing efforts in order to yield measurable benefits from the integration and access of land and water information.

spOke allows sharing of the results of research and monitoring taking place in the Okanagan Basin, while ensuring the quality of the information being shared. Contributors adhere to the same standards and principles in their data and information storage, cataloguing, and access methods to ensure measurable and comparable data is accessible by all. The scientific authority of the information is well documented, and the data and information rests at the source, meaning that the information is stored and managed only once, but is accessible by everyone through the spOke portal. This approach effectively reduces duplication and ensures the most current information is available. This environmental information model easily allows for continual contribution of information and ease of access for decision-making application development.

Click [here](#) for project information

spOke Principles:

- Sharing - to promote and facilitate data and information sharing across distributed sources.
- Discovery - to enable data discovery by using metadata and geospatial standards in an open, interoperable architecture.
- Access - to provide direct access to integrated data and information where desirable.
- Use - to demonstrate the use of science-based tools for analysis, reporting, and decision support.

Workshop registration

http://spoke.pyr.ec.gc.ca

*Thank you to the Organizing
Committee*



Questions?



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