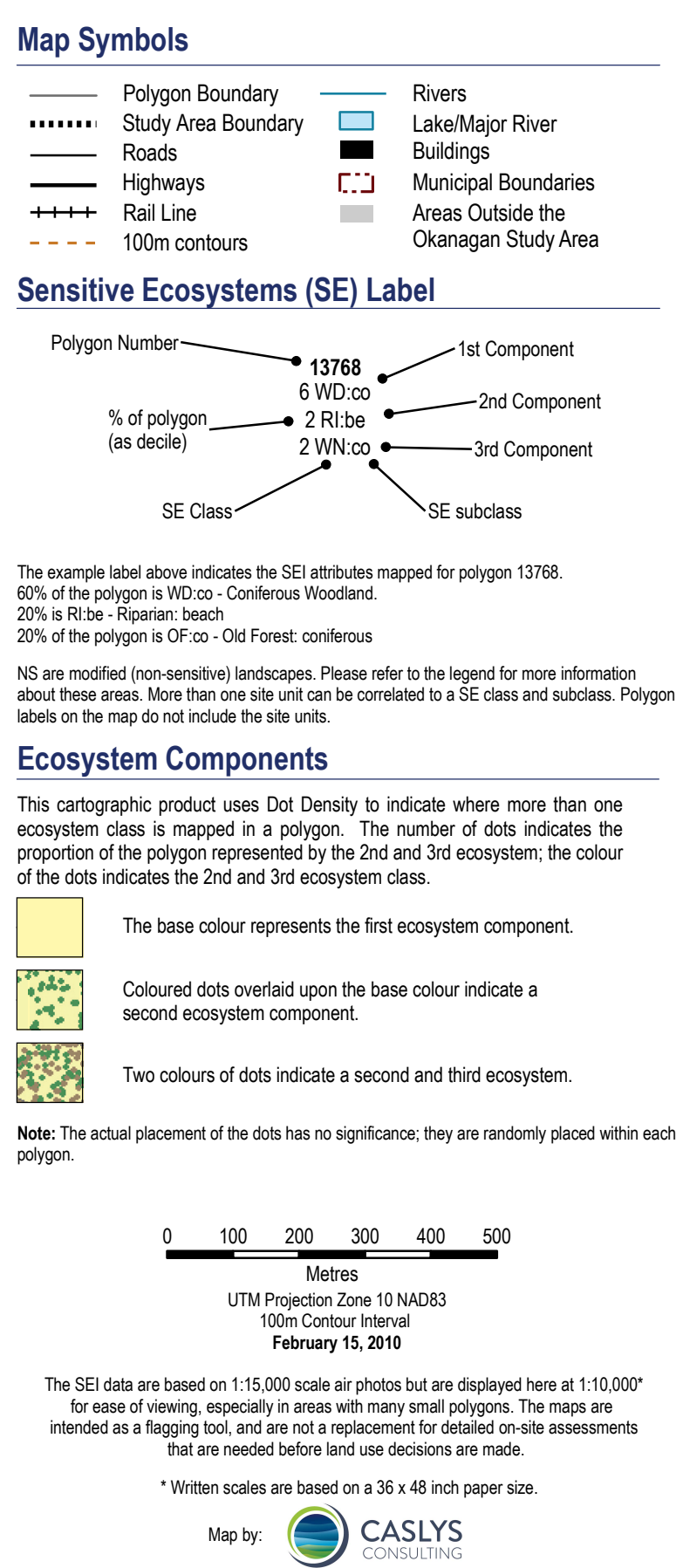


Other Important Ecosystems



WHAT IS A SENSITIVE ECOSYSTEM?

For the purpose of this study, an ecosystem is considered to be vulnerable to the landscape with relatively uniform dominant vegetation.

Sensitive Ecosystems are ecosystems that are ecologically sensitive and/or at risk in the landscape.

Rationale

The Okanagan Valley region covers one of the most rapidly growing population centres in Canada. Human development pressure is escalating due to a variety of intense pressure due to urban and rural settlement growth as well as extensive agricultural expansion, and has experienced significant changes over the past century. The Ministry of Environment is responsible for the protection of the Okanagan's biodiversity, and the management of its land resources, water and fine-scale view. Very high ecological values, combined with the development pressures from agriculture, industry, recreation and tourism have resulted in a regional land-use decision making throughout the Okanagan Valley.

National and municipal governments of the Okanagan Valley and conservation organizations, assisted by Environment Canada's Canadian Wildlife Service and the Ministry of Environment, have completed rigorous studies to determine the Okanagan's ecological sensitivity. This information will be used to develop a Sensitive Ecosystem mapping project which will identify areas of the province remaining sensitive ecosystems in the Okanagan Valley. The OSE is intended to provide a baseline map of the Okanagan Valley's current ecological sensitivity based on land cover, land use, riparian habitat, wetlands, and other factors such as local governments, landowners, developers, and other stakeholders involved in planning, conservation, and restoring sensitive ecosystems. The OSE provides a baseline map of the Okanagan Valley's current ecological sensitivity. The Okanagan continues to cause fragmentation, degradation, loss of ecosystem services, and loss of biodiversity.

An ecosystem, for the purposes of this initiative, is a portion of the landscape with relatively uniform dominant vegetation and soils. Sensitive ecosystems are those that are ecologically fragile and/or at risk. Criteria for ecological sensitivity include the presence of rare or unique species, plants, animals, and communities; hydrological changes; sensitivity to the introduction and spread of invasive plants; and sensitivity to recreational activity and other human disturbances. The OSE is developed through a collaborative effort between the Ministry of Environment, the B.C. Conservation Data Centre (CDC), a member program of the International Natural Heritage Network, the CDC staff of Ecological Sciences, and the province's status for species and ecological corridors. The OSE is a tool to help identify and protect a particular ecosystem, and assess the impact of a risk ecological community.

Ecological Significance

The Okanagan Valley is characterized by a complex landscape of rugged terrain, rocky ridges and sharp rising steepness. These formations result from erosion of volcanic ash and lava flows, and are some of the oldest geological features in the last glaciers. The complex terrain, combined with a moderated semi-arid climate, creates a diverse range of habitats. The Okanagan Valley is home to many rare and unique plant and animal species. Open grasslands, forests, grasslands, dells and talus slopes, and a diversity of riparian and wetland ecosystems often occur in close proximity to one another. The wetlands and riparian systems are particularly important for wildlife and fish.

The Valley is a region of nearly unparalleled ecological and biological diversity within British Columbia and the rest of Canada. It is home to many rare and unique plant and animal species. Open grasslands, forests, grasslands, dells and talus slopes, and a diversity of riparian and wetland ecosystems often occur in close proximity to one another. The wetlands and riparian systems are particularly important for wildlife and fish.

[illegible][illegible]

Alpine (AP):

Alpine ecosystems are high-elevation alpine and parkland ecosystems including **hebeosecosystems** dominated by forbs or graminoid vegetation (AP-G), **parkland forests** where trees occur in distinct clumps (AP-F), and **shrub ecosystems** dominated by dwarf shrubs such as heather (AP-S). Alpine ecosystems are found at higher elevations in the Swiss Okanagan (TF, 15) where there is significant snow cover for large parts of the year. Alpine ecosystems are sensitive to disturbance, as the shallow soils and cold temperatures slow vegetation recovery.

Alpine Ecosystems provide the following services:

- Erosion control
- Fresh water
- Climate regulation
- Nutrient cycling and maintenance of productive soils

Alpine Ecosystems provide the following services:

- Pollination
- Food production
- Soil formation

Some species associated with Alpine Ecosystems are:

- American Bader
- Peregrine Falcon
- Wolverine

American Bader
Tasleideri ius alpicornu
(Bader, 1999)
Photo by Peta Gerald W. Lynch

Wolverine
Gibb's skin mount
(Warner, Special Concern)
Photo by Peta Gerald W. Lynch

Seasonally Flooded Agricultural Fields (FS):

Seasonally Flooded Agricultural Fields ecosystems are cultivated fields that flood annually, providing important irrigation and wintering habitat for birds. They provide important habitat for amphibians, waterfowl and other bird species, small mammals, and many types of predators. They are located along low-lying areas or former floodplains that have been isolated by channelization of creeks and rivers. In some cases, these areas could be restored to Wetland or Riparian ecosystems if natural flood regimes and vegetation are re-established.

Seasonally Flooded Agricultural Fields ecosystems provide the following services:

- Flood control
- Drought recovery
- Storm protection
- Drainage and natural irrigation
- Fresh water

Some species associated with Seasonally Flooded Agricultural Fields are:

- Great Basin Sparrowbird
- Long-billed Curlew
- Peregrine Falcon
- American Bader
- Great Basin Gophersnake
- Western Rattlesnake

Great Basin Sparrowbird
Great Basin Sparrowbird
(Kendall, Threatened)
Photo by Jay Mills
©Gardens.com

Peregrine Falcon
Peregrine falcon in flight
(Bader, Special Concern)
Photo by Peta Gerald W. Lynch

Mature Forest (MF):

Mature Forest ecosystems are dominated by mature trees, including **broadleaf** (MF-B) forests, **coniferous** (MF-C) forests, and **mixed** (MF-M) deciduous and coniferous forests; however it excludes mature riparian forests, and mature coniferous and broadleaf woodlands. Mature Forests are an important buffer to sensitive ecosystems. They provide some of the same values associated with Forest ecosystems and can also be important recruitment sites for Old Forests. Mature Forest ecosystems have many important structural attributes, including some remaining large, old trees.

Mature Forest Ecosystems provide the following services:

- Climate regulation
- Carbon storage
- Air quality
- Erosion control
- Sediment retention
- Nutrient cycling and maintenance of productive soils

Some species associated with Mature Forest Ecosystems are:

- Lyle's Mariposa Lily
- Western Screech Owl
- Wolverine
- Williamson's Sapsucker
- Olive-backed Flycatcher
- Shrew Pilot
- Western Rattlesnake

Olive-backed Owl
Olive-backed owl
(Bader, Special Concern)
Photo by Peta Gerald W. Lynch

Williamson's Sapsucker
Williamson's Sapsucker
(Bader, Endangered)
Photo by Jay Mills

Non-sensitive Landscapes (NS): (Areas not mapped as sensitive or other important ecosystems are depicted in white)

Non-sensitive Landscapes are modified areas not occupied by sensitive ecosystems, and include urban areas, disturbed rural landscapes, and young forests. Urban areas have human-influenced features or disturbances that are dominant across the landscape. Disturbed rural areas can be interspersed with rural, farmland or native vegetation, or cultivated crops. Young forests are conifer-dominated stands with an age between 0 and 50 years. Non-sensitive landscapes are shown in white in the areas that are not designated by a sensitive ecosystem. In addition, many sensitive ecosystems are mapped as NS (not mapped) on the map polygons since they occur or are found in a modified landscape interspersed with the sensitive ecosystem(s). In which the sensitive ecosystems are too small to map individually. These modified areas are described as NS (not mapped) on the map polygons.