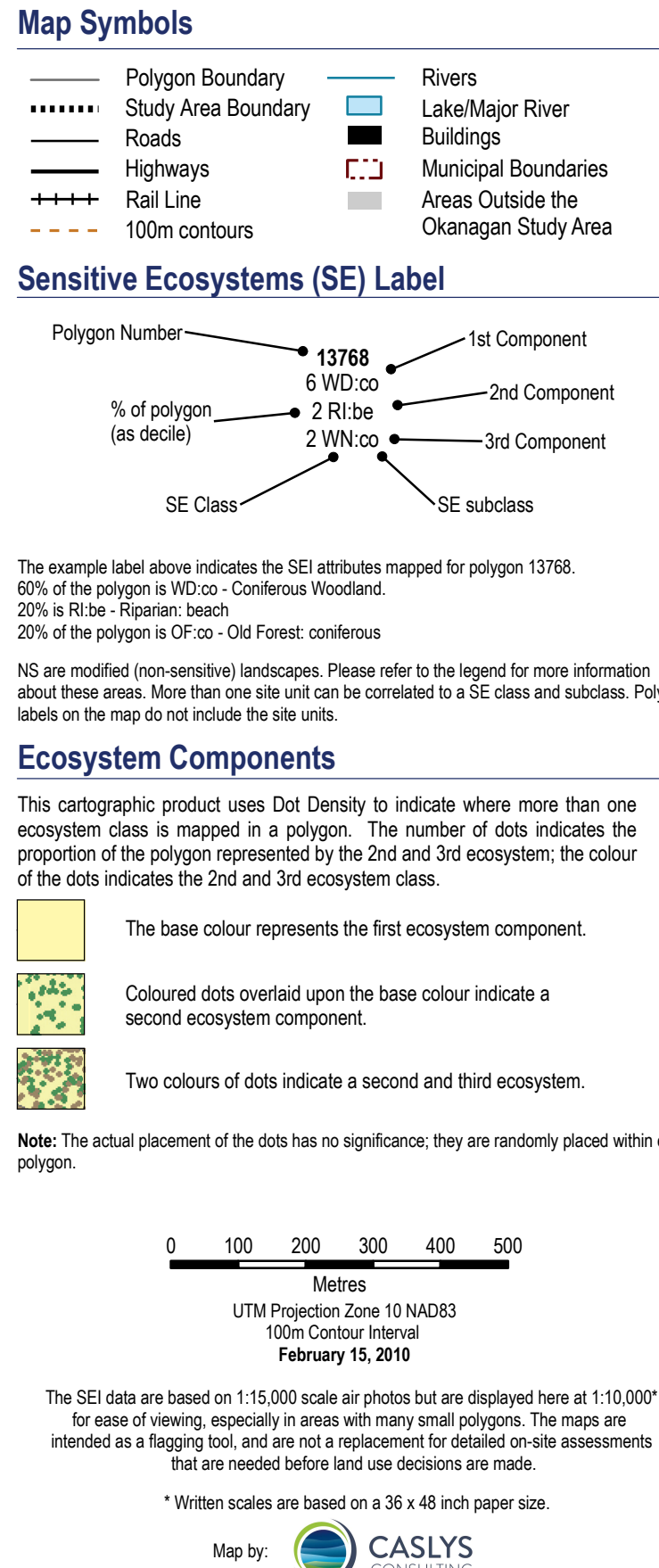




Alpine (AP):



WHAT IS A SENSITIVE ECOSYSTEM?

For the purpose of this study, an ecosystem is considered to be a portion of the landscape with relatively uniform development.

Sensitive ecosystems are ecosystems that are ecologically sensitive and/or at risk of being lost.

Rationale

The Okanagan Valley region covers one of the most rapidly growing portions of the Pacific Northwest, and development pressure is escalating. The area is under intense pressure from urban and rural human settlement as well as from agriculture, and has experienced significant increases in the number of ecosystems stressed and/or destroyed. The region's ecosystems are under threat from ecosystem structure and function through the spread of invasive alien species and fire extinction. Very high ecological values, combined with the development pressures, have resulted in the loss of many ecosystems. The following are the regional land use decision making throughout the Okanagan Valley.

Regional and municipal governments of the Okanagan Valley and conservation organizations, assisted by Environment Canada's Canadian Wildlife Service, have been working together to develop a Sensitive Ecosystems Inventory. Sensitive Ecosystems Inventory mapping projects as a means to identify where remaining sensitive ecosystems in the Okanagan Valley. The SEI is intended to provide a baseline for land use planning and to help guide decisions by local governments, landowners, developers, and other citizens to help protect, conserve, and restore sensitive ecosystems. The development of these ecosystems is increasingly important to the population growth in the Okanagan continues to cause fragmentation, degradation, and loss of sensitive ecosystems.

An ecosystem, for the purpose of this inventory, is a portion of the landscape that has a high biodiversity and ecological value. Sensitive ecosystems are those that are ecologically fragile and/or at risk. Criteria for ecological sensitive ecosystems include: the presence of shallow soils; susceptibility to erosion; vulnerability to hydrological changes; presence of rare or endangered species of invertebrates; and sensitivity to recreational activity and human disturbance. Within the Okanagan Valley, the following are the most sensitive ecosystems determined by the B.C. Conservation Data Centre (CDC), a member program of the International NatureServe network. The CDC list of Ecologically Sensitive Ecosystems (ESEs) is a particular ecosystem or representative of an at-risk ecological community.


Ecological Significance

The Okanagan Valley is characterized by a complex landscape of rugged slopes, rocky terrain and steeply sloping terraces. These formations result from glacial erosion and the movement of materials by melting ice during the retreat of the last glacial period. The rugged terrain and steep slopes provide a variety of habitats, supports diverse ecosystems and organisms. Open ponderosa pine forests, grasslands, shrub and tall-shrub, and a diversity of riparian and wetland ecosystems occur in close proximity to one another. The wetland and riparian ecosystems are a focal point in the landscape for many species.

The Valley is a region of nearly unparalleled ecological and biological diversity.

[illegible][illegible][illegible][illegible]


Alpine (AP):



Alpine ecosystems are high-elevation alpine clumps (AP *pl.*) and shrub ecosystems dominated by snow cover for large parts of the year. Alpine ecosystems provide the following:

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

Seasonally Flooded Agricultural Fields (FS):




Seasonally Flooded Agricultural Fields ecosystems are waterlogged and often host species, small mammals. In some cases, these areas could be restored to natural ecosystems.

Seasonally Flooded Agricultural Fields provide the following:

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

Mature Forest (MF):



Mature Forest ecosystems are dominated by mature temperate forests, and mature coniferous forests. Mature Forest ecosystems provide the following:

Mature Forest Ecosystems provide the following:

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

Non-sensitive Landscapes (NS): (Areas not at risk)

Non-sensitive Landscapes are modified areas or disturbances that are dominant across the landscape with an average between 0 and 50% polygons close to urban or disturbed areas.

<p>parkland ecosystems including herbaceous ecosystems dominated by forbs and grasses. They are often created or maintained by human activities and may have fewer shrubs such as heather (AP soil). Alpine ecosystems are found at high altitudes. Alpine ecosystems are sensitive to disturbances, as the shallow soils and cold temperatures</p>		
<p>Wolves:</p> <ul style="list-style-type: none"> • Pollination • Predator • Food production • Soil formation 	<p>Some species also</p> <ul style="list-style-type: none"> • American Badger • Peregrine falcon • Wolverine 	
<h2>Other Important Ecosystems</h2>		
<p>ecosystems are cultivated fields that food annually, providing important migration and wintering grounds for birds, and many types of predators. They are located along low-lying areas or formed by the erosion of riparian ecosystems's natural flood regimes and vegetation are not</p>		
<p>Wetlands provide the following services:</p> <ul style="list-style-type: none"> • Carbon storage • Maintenance of productive soils • Pollination • Pest regulation • Food production 	<p>Some species also</p> <ul style="list-style-type: none"> • Great Basin Sagehen • Long-billed Curlew • Peregrine Falcon • American Badger • Great Basin Gopher • Western Rattlesnake 	
<p>ure types, including broadleaf (MF-bd) forests, coniferous (MF-co) forests, and grassland (MF-gr) forests. Mature forests are an important buffer to sensitive ecosystems and play a role in Old Forests. Mature forest ecosystems have many important structures</p>		
<p>Key services for:</p> <ul style="list-style-type: none"> • Flood control • Pest regulation • Pollination control • Food production 	<p>Some species also</p> <ul style="list-style-type: none"> • Lyall's Marmot Lake • Wolverine • Williamson's Sapsucker • Olive-sided Flycatcher • Snowy Plover • Western Rattlesnake 	
<p>occupied by sensitive ecosystems, and important urban areas. Disturbed rural landscapes. Disturbed rural lands can be interspersed with farmland and rural landscapes. Non-sensitive landscapes are shown in white in the areas that are not designed to have a mixed landscape interspersed with the sensitive landscape.</p>		

dominant vegetation (AP10), **parkland forests** where trees occur in distinct elevations in the South Changan (FPL 15) where there are significant low vegetation recovery.

with Alpine Ecosystems are:

- **Australian Banded**
Tasmanian banded shearwater
(Photo by Penny Gaudin W/ Lynx)
- **Wattlebird**
Calyptorhynchus banksii
(Banded Shearwater)
(Photo by Penny Gaudin W/ Lynx)

with Seasonally Flooded Agricultural Fields are:

- **Great Banded Shearwater**
Zonotrichia querula
(Laysan Shearwater)
(Photo by John Nalls -
Laysan Island)
- **Peripatetic Falcon**
Falco peregrinus anatum
(Belted Sparrow)
(Photo by Fred Linn)

with Mature Forest Ecosystems are:

- **Western Screech Owl**
- **Fulmarized Owl**

with Mature Forest Ecosystems are:

- **Fulmarized Owl**
Bubo virginianus
(Photo by Penny Gaudin W/ Lynx)
- **Wilson's Snipe**
Scolopax bairdii
(Belted Kingfisher)
(Photo by David Hilde)

depicted in (AP10)

grass, and young forests. Urban areas have human-influenced features vegetation, or cultivated crops. Young forests are conifer-dominated by a sensitive ecosystem. In addition, many sensitive ecosystem are sensitive ecosystems are too small to map individually. These modified

A vertical strip of six images showing various animals: a sloth, a monkey, a frog, a toucan, a owl, and a woodpecker.

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 natural 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 range, farmland and native vegetation, or cultivated crops. Young forests are conifer-dominated stands with an age range between 0 and 80 years. Non-sensitive landscapes are shown in white in the areas that are not designated by a sensitive ecosystem. In addition, many sensitive ecosystem polygons close to urban or disturbed areas may have a modified landscape interspersed with the sensitive ecosystem(s), in which the sensitive ecosystems are too small to map individually. These modified