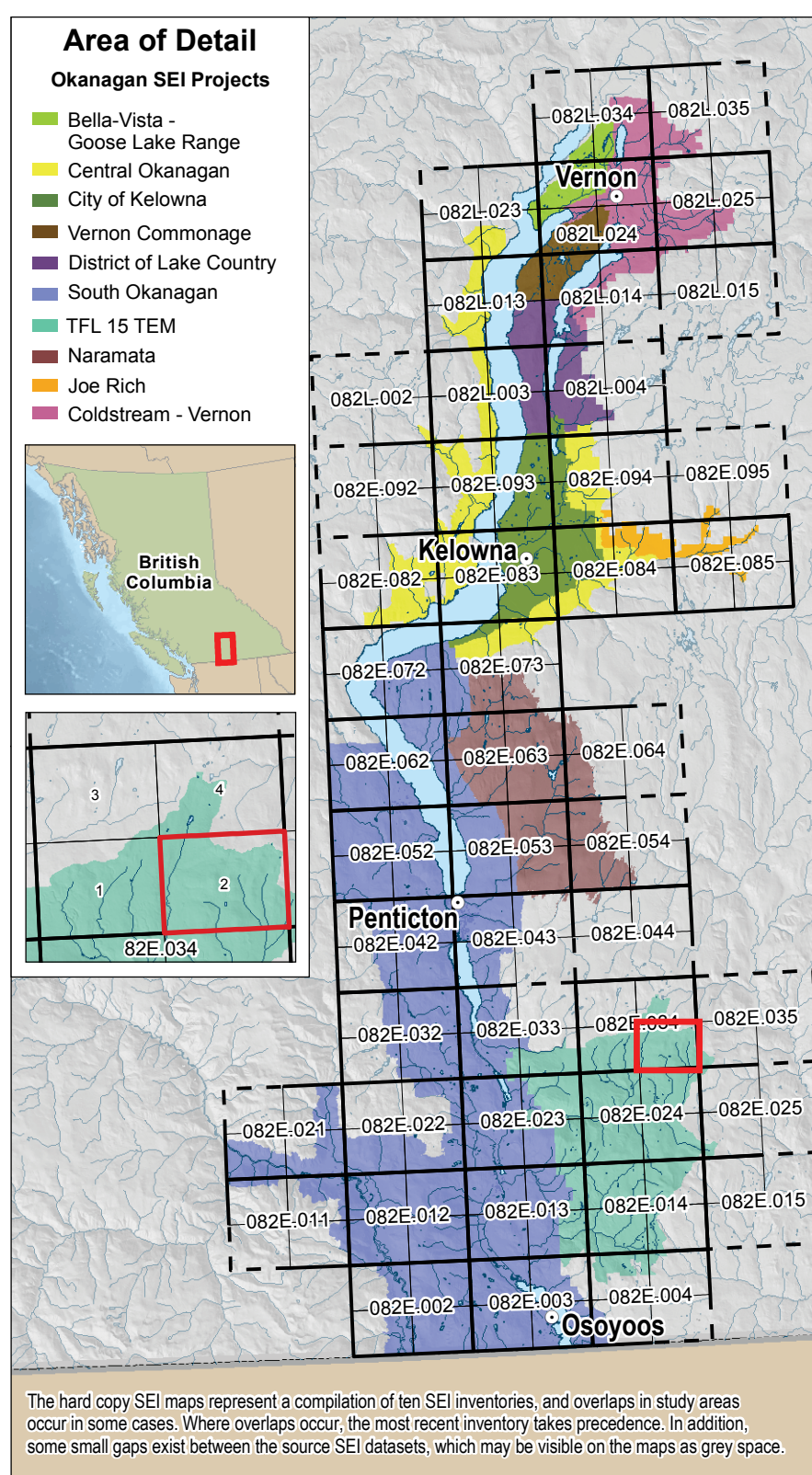
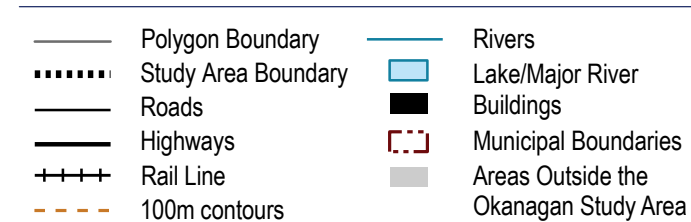


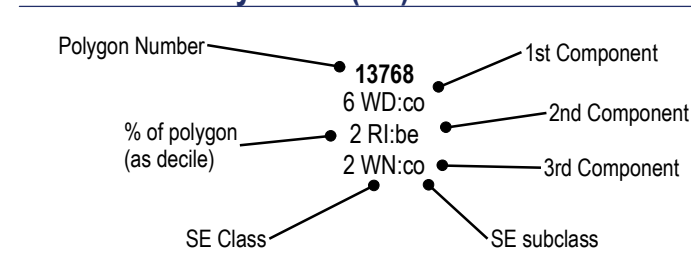
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Map Symbols



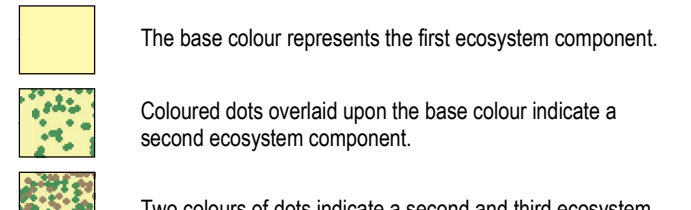
Sensitive Ecosystems (SE) Label



The example label above indicates the SE label information for polygon 13788. 65% of the polygon is 1023 - Coniferous Woodland. 35% of the polygon is 1023 - Old Forest. The label is not modified (non-sensitive) landscape. Please refer to the legend for more information about how the label is modified. The label is not modified (non-sensitive) landscape. Please refer to the legend for more information about how the label is modified. The label is not modified (non-sensitive) landscape. Please refer to the legend for more information about how the label is modified.

Ecosystem Components

This cartographic product uses Dot Density to indicate where more than one ecosystem class is mapped in a polygon. The number of dots indicates the proportion of the polygon represented by the 2nd and 3rd ecosystem. The colour of the dots indicates the 2nd and 3rd ecosystem class.



Note: The actual placement of the dots has no significance; they are randomly placed within each polygon. The base colour represents the first ecosystem component. Coloured dots overlaid upon the base colour indicate a second ecosystem component. Two colours of dots indicate a second and third ecosystem.

The SEI data are based on 1:10,000 scale air photos that are displayed here at a 1:10,000 scale. The use of aerial photography in areas with more varied topography. The map is intended as a planning tool, and is not a replacement for detailed on-the-ground assessments. The map is intended as a planning tool, and is not a replacement for detailed on-the-ground assessments. The map is intended as a planning tool, and is not a replacement for detailed on-the-ground assessments.

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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 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 of British Columbia, and development pressure is escalating. The area is under intense pressure due to urban and rural human settlement as well as extensive agricultural development, and has experienced significant changes to ecosystem structure and function through the spread of invasive alien species and fire exclusion. Very high ecological values, combined with the development pressure on the landscape, underscore the need for careful, conservation-based 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 and the B.C. Ministry of Environment, have completed regional and local Sensitive Ecosystems Inventory mapping projects as a means to identify the remaining sensitive ecosystems in the Okanagan Valley. The SEI is intended to provide a tool that uses scientific information and mapping to encourage local governments, landowners, developers, and other citizens to become involved in protecting, conserving, and restoring sensitive ecosystems. Conservation of these ecosystems is increasingly important as rapid 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 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 shallow soils, susceptibility to soil erosion, sensitivity to hydrological changes, sensitivity to the introduction and spread of invasive plants, and sensitivity to recreational activity and other human disturbances. Within the province, at-risk status for species and ecological communities is determined by the B.C. Conservation Data Centre (CDC), a member program of the international NatureServe network. The CDC list of Ecological Communities can help to determine if a particular ecosystem is representative of an at-risk ecological community.

Ecological Significance

The Okanagan Valley is characterized by a complex landscape of rugged steep, rocky terrain and gently sloping terraces. These formations result from glacial lakes and the movement of materials by melting on during the retreat of the last glaciers. The complex terrain, combined with a moderate semi-arid climate, supports diverse ecosystems and organisms. Open ponderosa pine forests, grasslands, shrubs and talus slopes, and a diversity of riparian and wetland ecosystems often 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 relatively unimpacted ecological and biological diversity within British Columbia and the rest of Canada. It is home to many at-risk species and ecological communities, including some ecosystems unique to Canada. Broadleaf woodlands, antelope-brush steppe, sagebrush steppe, wetlands and old forest ecosystems, once well-represented in the Okanagan Valley, have become rare. Historical ecosystem mapping (1980s) to preserve protection of Species at Risk and their important habitats on private lands is primarily achieved through careful land use planning and municipal bylaws.

Healthy, functioning ecosystems play an important role in adapting to and mitigating the impacts of climate change. Climate change adaptations such as reducing stressors, improving ecosystem condition, and landscape connectivity contribute to ecosystem resilience and adaptive capacity in the future. The ecosystems mapped in this project are ecologically significant because of their rarity and fragility and also for the important ecosystem services they provide, such as climate regulation, water filtration, productive soil, carbon sequestration, nutrient cycling, pollination, wildlife habitat and more. Sensitive ecosystems must be considered in the context of the overall landscape, which includes other factors that also contribute to ecosystem services. The services and benefits SEIs provide and the wildlife species they support are critically important to the quality of life in the Okanagan. With so few at-risk and fragile ecosystems remaining, it is essential that each site be carefully considered and all land use options be fully evaluated prior to initiating any changes in these areas.

Data Limitations

The SEI information is intended to be a local and regional decision-making tool. The SEI mapping does not replace the need for on-site assessments in areas where land use changes are proposed. The accuracy of polygon boundaries is limited by the scale (1:10,000) of the project and the quality of the aerial photography on which the sites are delineated (i.e., changes may have taken place since the photos were taken). It is recommended that digital data not be enlarged significantly beyond the scale of the photos, as this may result in unacceptable distortion and faulty registration with other datasets. The ability to use specific distances (e.g., invasive plants) is limited when interpreting air photos, and field sampling is needed to supplement the interpretation. It can also be difficult to delineate small sensitive ecosystems. In many cases these ecosystems are captured as a small component of a larger polygon that is dominated by another ecosystem. It is important to remember that a polygon may contain a complex, or mosaic, of ecosystems, and sensitive ecosystems may only occupy a portion of that polygon.

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Study Area

The Okanagan Valley project is comprised of a number of individual SEI projects: Bella Vista - Goose Lake Range, Central Okanagan City of Kelowna, Vernon Community, District of Lake Country, Joe Rich, TFL 15, Nanaimo, Coldstream - Vernon, and the South Okanagan. For more information about these projects and the methods used, please refer to the References section on this map. The purpose of the SEI Okanagan Valley project is to combine all of the various SEI projects that have been completed in the Okanagan Valley from Vernon to Osoyoos, and to consider and present them as a whole in mapped form to aid in land use planning and to encourage landscape-level conservation planning at multiple scales, including regional and basin-wide. The project deliverables include 100 SEI maps at a 1:10,000 scale on a Terrain Resource Information Management (TRIM) base, and a series of reports. The individual project reports detail the methods used, study results, descriptions of the ecosystems, and conservation tools for management (see References section).

Acknowledgements

Project partners include: B.C. Ministry of Environment, Environment Canada (Canadian Wildlife Service), the Allan Brooks Nature Centre, Regional District of Okanagan Similkameen, Regional District of Central Okanagan, City of Kelowna, City of Vernon, District of Lake Country, and the Regional District of South Okanagan. Financial or in-kind support for the projects was provided by: The B.C. Ministry of Environment (B.C. Conservation Data Centre), Environment Canada (Canadian Wildlife Service), the Allan Brooks Nature Centre, Regional District of Okanagan Similkameen, Regional District of Central Okanagan, City of Kelowna, City of Vernon, District of Lake Country, and the Regional District of South Okanagan.

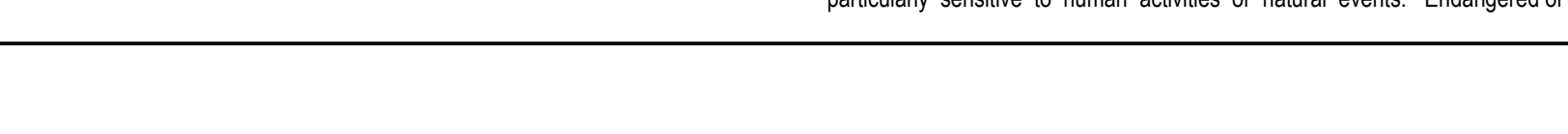
References

Information and access to full reports and map products for the Okanagan Valley SEI projects are available at: www.env.gov.bc.ca/ecosyst/Type/SEI/SEIProjects/SEIProjects.htm or the project area name as a keyword). The B.C. Ministry of Environment, Environment Canada (Canadian Wildlife Service), the Allan Brooks Nature Centre, Regional District of Okanagan Similkameen, Regional District of Central Okanagan, City of Kelowna, City of Vernon, District of Lake Country, and the Regional District of South Okanagan. Financial or in-kind support for the projects was provided by: The B.C. Ministry of Environment (B.C. Conservation Data Centre), Environment Canada (Canadian Wildlife Service), the Allan Brooks Nature Centre, Regional District of Okanagan Similkameen, Regional District of Central Okanagan, City of Kelowna, City of Vernon, District of Lake Country, and the Regional District of South Okanagan.

Species at Risk

The large variety of ecosystems in the Okanagan Valley provide for diverse habitat needs of many wildlife and plant species, including a remarkable number of at-risk plant and animal species. Many of these species have very restricted ranges, and some occur nowhere else in B.C. or Canada. A high proportion of these species considered at-risk, either provincially or federally, rely on the habitat values found only in the at-risk and sensitive ecosystems of the valley. The large variety of ecosystems in the Okanagan Valley provide for diverse habitat needs of many wildlife and plant species, including a remarkable number of at-risk plant and animal species. Many of these species have very restricted ranges, and some occur nowhere else in B.C. or Canada. A high proportion of these species considered at-risk, either provincially or federally, rely on the habitat values found only in the at-risk and sensitive ecosystems of the valley.

Map Symbols



TFL 15, Bujahel, D. and S. Robertson. 1999. *Ecosystem Mapping of Weyhehauer Canada Ltd. Free Farm License 15*. Prepared for Weyhehauer Canada Ltd., Okanagan Falls, in partnership with FRBC and Ministry of Forests, Kamloops, BC. 120,000 maps.

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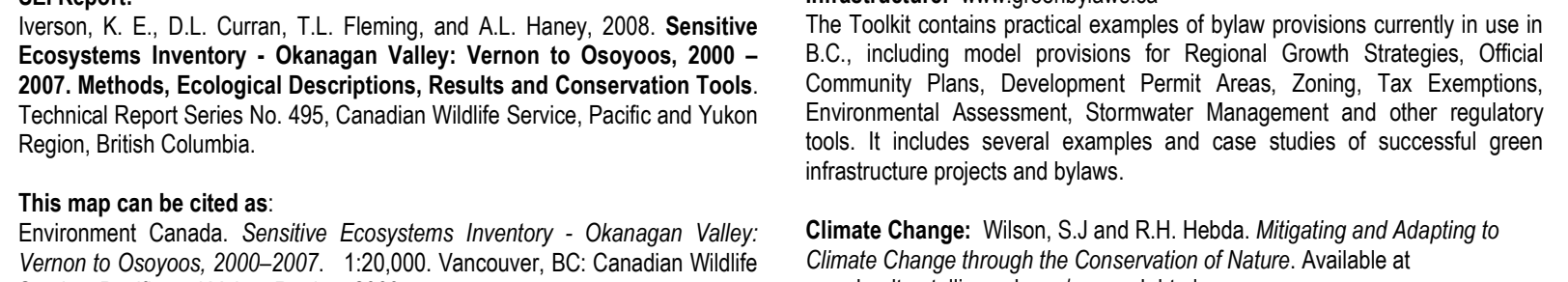
References

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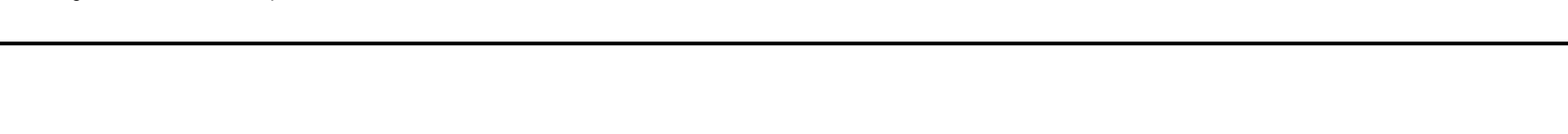
Map Symbols



Species at Risk

The large variety of ecosystems in the Okanagan Valley provide for diverse habitat needs of many wildlife and plant species, including a remarkable number of at-risk plant and animal species. Many of these species have very restricted ranges, and some occur nowhere else in B.C. or Canada. A high proportion of these species considered at-risk, either provincially or federally, rely on the habitat values found only in the at-risk and sensitive ecosystems of the valley. The large variety of ecosystems in the Okanagan Valley provide for diverse habitat needs of many wildlife and plant species, including a remarkable number of at-risk plant and animal species. Many of these species have very restricted ranges, and some occur nowhere else in B.C. or Canada. A high proportion of these species considered at-risk, either provincially or federally, rely on the habitat values found only in the at-risk and sensitive ecosystems of the valley.

Map Symbols



Sensitive Ecosystems Legend

Sensitive ecosystems are fragile and/or rare, or are ecologically important because of the diversity of species they support and the ecosystem services they provide. Some at-risk wildlife and plant species are associated with Sensitive Ecosystems, and are listed below. Species at Risk are those species which are considered Endangered, Threatened or of Special Concern. Please note that the map of the species listed in this map can be found in other sensitive ecosystems as well as non-sensitive ecosystems found throughout the Okanagan Valley. This map series does not include the actual mapping of species locations. For information on species location mapping see the B.C. Conservation Data Centre reference below.

Antelope-brush Steppe (AS):

Antelope-brush communities are dryland ecosystems characterized by abundant shrub dominated by antelope-brush. These communities occur in the southern portion of the Okanagan Valley, on sandy soils in the warm, dry valley bottoms. They commonly occur on sites that are very amenable to development - primarily for vineyards and housing. Overuse by domestic livestock and the introduction and spread of invasive plants threaten this ecosystem. Antelope-brush ecosystems are recognized as one of the four most endangered ecosystems in Canada. Antelope-brush Steppe ecosystems are dominated by antelope-brush and bunchgrasses. Antelope-brush steppe dominated by antelope-brush and invasive alien plants (AS-ai).

Antelope Brush Steppe Ecosystems provide the following services:

- Carbon storage
- Nutrient cycling and maintenance of productive soils
- Sediment retention
- Pollination
- Pest regulation
- Food production

Some species associated with Antelope-brush Steppe Ecosystems are:

- Great Basin Sapsucker
- Night Snake
- Belted Gopher Snake
- Roadrunner
- Peregrine Falcon
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail

Sagebrush Steppe (SS):

Sagebrush Steppe ecosystems are dryland ecosystems characterized by abundant big sagebrush. These communities occur on similar sites to grassland ecosystems, where conditions are too warm and dry for trees to establish. This ecosystem is mostly found in the southern reaches of the study area, where they are dominated by bunchgrasses with scattered forbs and a soil crust dominated by mosses and lichens. These ecosystems commonly occur on sites that are amenable to urban or agricultural development, where livestock trampling and invasive plants threaten remaining Sagebrush Steppe ecosystems. Sagebrush Steppe are generally steppe ecosystems dominated by big sagebrush and bunchgrasses (SS-b), steep, shallow soil sagebrush steppe (SS-sh), and disturbed sagebrush steppe dominated by big sagebrush and invasive alien plants (SS-ai).

Sagebrush Steppe Ecosystems provide the following services:

- Carbon storage
- Nutrient cycling and maintenance of productive soils
- Sediment retention
- Pollination
- Pest regulation
- Food production

Some species associated with Sagebrush Steppe Ecosystems are:

- Great Basin Sapsucker
- Night Snake
- Belted Gopher Snake
- Roadrunner
- Peregrine Falcon
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail

Grasslands (GR):

Grassland ecosystems occupy areas that are generally too hot and dry for forests to establish, and are dominated by bunchgrasses (grassland, GR-gr), steep slope grasslands (GR-sl), step, shallow grasslands (GR-sh), and disturbed grasslands dominated by invasive alien plants (GR-ai or GR-ai). Large areas of grasslands have been lost to agricultural and urban development and degraded by invasive alien plants. Most of the remaining grasslands have become wild and are considered to be Disturbed Grasslands through partial invasion by narrow weeds. Given the very limited extent of remaining grasslands, these are important sites for grassland restoration, soil conservation, and maintenance of many other grassland values, including habitat for many at-risk and endangered species.

Grassland Ecosystems provide the following services:

- Carbon storage
- Nutrient cycling and maintenance of productive soils
- Sediment retention
- Pollination
- Pest regulation
- Food production

Some species associated with Grassland Ecosystems are:

- Great Basin Sapsucker
- Night Snake
- Belted Gopher Snake
- Roadrunner
- Peregrine Falcon
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail

Sparsely Vegetated (SV):

Sparsely Vegetated ecosystems are sites where rock or talus (angular rock fragments) limits vegetation establishment; vegetation cover is discontinuous and interspersed with bedrock or blocks of rock. Sparsely vegetated ecosystems are subdivided into four sub-categories: shrub, talus, cliff, and rock outcrop ecosystems. Cliff (SV-cl), grassy or un-vegetated Rock Outcrop (SV-ro), Shrubby Rock Outcrop (SV-sh), and Talus Slope (SV-t). Many of these ecosystems are at risk, and their coarse or shallow soils make them sensitive to disturbance and soil erosion.

Sparsely Vegetated Ecosystems provide the following services:

- Carbon storage
- Nutrient cycling and maintenance of productive soils
- Sediment retention
- Pollination
- Pest regulation
- Food production

Some species associated with Sparsely Vegetated Ecosystems are:

- Great Basin Sapsucker
- Night Snake
- Belted Gopher Snake
- Roadrunner
- Peregrine Falcon
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail

Old Forest (OF):

Old Forest Ecosystems are dominated by large, old trees, usually greater than 150 years of age. Most of these forests have been lost to selective logging of larger trees, in-growth of dense trees resulting from the exclusion, and development. Only small remnants of these forests remain today. These old forests continue to provide important ecosystem services, including climate regulation, soil stability, moisture retention and the old trees in them provide important habitat for many species including many woodpeckers, owls, and male deer. Old Forest ecosystems include old Coniferous Woodlands (OF-co) and old Broadleaf Woodlands (OF-bl). Old forest types are included in the Riparian category.

Old Forest Ecosystems provide the following services:

- Carbon storage
- Nutrient cycling and maintenance of productive soils
- Sediment retention
- Pollination
- Pest regulation
- Food production

Some species associated with Old Forest Ecosystems are:

- Great Basin Sapsucker
- Night Snake
- Belted Gopher Snake
- Roadrunner
- Peregrine Falcon
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail

Broadleaf Woodlands (BW):

Broadleaf Woodland ecosystems are often dominated by trembling aspen which occur in depressions and moist areas (Aspen Copse, BW-ac) in grassland areas, and aspen steppe (BW-as) slopes, however it excludes old forests. Broadleaf Woodlands are susceptible to changes in the water table. They are unusual in a dry landscape and their moist soils are sensitive to disturbance. Old Broadleaf Woodlands are included in the Old Forest category.

Broadleaf Woodland Ecosystems provide the following services:

- Carbon storage
- Nutrient cycling and maintenance of productive soils
- Sediment retention
- Pollination
- Pest regulation
- Food production

Some species associated with Broadleaf Woodland Ecosystems are:

- Great Basin Sapsucker
- Night Snake
- Belted Gopher Snake
- Roadrunner
- Peregrine Falcon
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail

Coniferous Woodlands (WD):

Coniferous Woodlands are open stands of Douglas-fir or ponderosa pine (WD-co) on shallow soils, with grassy understoreys; old Coniferous Woodlands are part of the Old Forest category. They most commonly occur in the drier climates of the Okanagan Valley, on sites with limited moisture, on rocky knolls and on warm south-facing slopes. Numerous sites have been lost to development and altered by the growth of trees associated with the exclusion, weed encroachment, and other human disturbances.

Coniferous Woodland Ecosystems provide the following services:

- Carbon storage
- Nutrient cycling and maintenance of productive soils
- Sediment retention
- Pollination
- Pest regulation
- Food production

Some species associated with Coniferous Woodland Ecosystems are:

- Great Basin Sapsucker
- Night Snake
- Belted Gopher Snake
- Roadrunner
- Peregrine Falcon
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail

Riparian (RI):

Riparian ecosystems are streamside and lakeside ecosystems or sites with significant seepage; includes ecosystems on floodplains and benches along creeks and rivers (bench, RI-b), shrub-dominated floodplains (AP-f), and shrub ecosystems dominated by dwarf shrubs such as willow (AP-w). Alpine ecosystems are found at higher elevations in the South Okanagan (TFL 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.

Riparian Ecosystems provide the following services:

- Carbon storage
- Nutrient cycling and maintenance of productive soils
- Sediment retention
- Pollination
- Pest regulation
- Food production

Some species associated with Riparian Ecosystems are:

- Great Basin Sapsucker
- Night Snake
- Belted Gopher Snake
- Roadrunner
- Peregrine Falcon
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail

Wetlands (WN):

Wetland ecosystems occur on sites where the water table is at, near, or above the soil surface for a sufficient period of time to influence soil and vegetation development; includes marshes (WN-m), swamps (WN-s), wet meadows (WN-wm) or vineyards, fens (WN-f), and shallow open water (WN-a). Wetlands are extremely important because of their natural rarity in this area and the critically important ecosystem services they provide. Many Wetlands have been lost to development. It is estimated that 85% of the original wetland habitat in the Southern Okanagan has disappeared.

Wetland Ecosystems provide the following services:

- Carbon storage
- Nutrient cycling and maintenance of productive soils
- Sediment retention
- Pollination
- Pest regulation
- Food production

Some species associated with Wetland Ecosystems are:

- Great Basin Sapsucker
- Night Snake
- Belted Gopher Snake
- Roadrunner
- Peregrine Falcon
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail

Alpine (AP):

Alpine ecosystems are high-elevation alpine and parkland ecosystems including herbaceous ecosystems 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 willow (AP-w). Alpine ecosystems are found at higher elevations in the South Okanagan (TFL 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:

- Carbon storage
- Nutrient cycling and maintenance of productive soils
- Sediment retention
- Pollination
- Pest regulation
- Food production

Some species associated with Alpine Ecosystems are:

- Great Basin Sapsucker
- Night Snake
- Belted Gopher Snake
- Roadrunner
- Peregrine Falcon
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail

Seasonally Flooded Agricultural Fields (FS):

Seasonally Flooded Agricultural Fields ecosystems are cultivated fields that flood annually, providing important migration and wintering habitat for birds. They provide important habitat for amphibians, waterfowl and other bird species, small mammals, and many types of producers. 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:

- Carbon storage
- Nutrient cycling and maintenance of productive soils
- Sediment retention
- Pollination
- Pest regulation
- Food production

Some species associated with Seasonally Flooded Agricultural Fields are:

- Great Basin Sapsucker
- Night Snake
- Belted Gopher Snake
- Roadrunner
- Peregrine Falcon
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail

Mature Forest (MF):

Mature Forest ecosystems are dominated by mature trees, including broadleaf (MF-bl) forests, coniferous (MF-co) 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 Old 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:

- Carbon storage
- Nutrient cycling and maintenance of productive soils
- Sediment retention
- Pollination
- Pest regulation
- Food production

Some species associated with Mature Forest Ecosystems are:

- Great Basin Sapsucker
- Night Snake
- Belted Gopher Snake
- Roadrunner
- Peregrine Falcon
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail
- Great Basin Gophersnake
- Spiny Tailed Squirrel
- Common Nighthawk
- Nuttall's Cottontail

Non-sensitive Landscapes (NS):

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 forest, farmland and native grasslands. Young forests are coniferous-dominated stands with an age range between 1 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 also used to map individually. These modified areas are depicted as NS (non-sensitive) on the map.