

Okanagan Ecoregional Assessment

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Prepared by
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The Nature Conservancy of Washington
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EXECUTIVE SUMMARY

Ecoregional assessments provide a regional scale, biodiversity-based context for implementing conservation efforts. The intent of the assessments is to create a shared vision for agencies and other organizations at the provincial or state, regional, and local levels to form partnerships and ensure efficient allocation of conservation resources. The assessments identify a portfolio of sites for conservation action with a goal of protecting representative biodiversity and ecologically significant populations. These assessments are the result of rigorous scientific analyses, which incorporate expert review, and are the most comprehensive and current efforts to set conservation priorities at an ecoregional scale. Biodiversity conservation in an ecoregion will attain its fullest potential if all conservation organizations coordinate their strategies to protect and restore biodiversity according to the priorities identified in this process.

The Okanagan Ecoregional Assessment resulted in the selection of 430 conservation targets, including 220 terrestrial species targets, 48 freshwater species targets, 66 rare plant community types and 96 system targets. These system targets are the major ecological systems that make up the terrestrial and freshwater environments.

Conservation goals were set for each target. They defined the abundance and spatial distribution needed to adequately conserve each target in an ecoregion and provided an estimate of how much effort will be needed to sustain the targets well into the future. A suitability index was used to determine the areas of the ecoregion that had the highest likelihood of successful conservation. The suitability index incorporated five biological and non-biological factors: converted land (agriculture, urban, mining); level of protection (GAP status); urban proximity; road density; and fire condition. The conservation goals and the suitability index were used to develop a portfolio of priority conservation areas (PCAs) that represent characteristic landscape settings which support all of the ecoregion's biodiversity.

The terrestrial portfolio (Map 22) includes 137 PCAs with an area of 3,093,000 ha (7,642,969 ac), which represents 32% of the total area of the ecoregion. The freshwater portfolio, including 135 PCAs, (Map 24) extends beyond the ecoregion boundary to capture whole watersheds. The portion of the portfolio falling within the ecoregion boundary, 113 PCAs, totals 3,301,359 ha (8,157,835 ac) and represents 34% of the ecoregion. The area of overlap between the terrestrial and freshwater portfolios represents 14% of the ecoregion (Map 26). These portfolios include the last places where many of the ecoregion's most imperiled species occur, and the last, large expanses of relatively intact natural habitat. The sites included in these portfolios are regarded as having the highest likelihood of successful conservation according to the suitability factors used in the assessment. While integration of the Okanagan's terrestrial and freshwater portfolios was not achieved, future iterations of this assessment will strive to produce a fully integrated portfolio.

Threats to biodiversity in the ecoregion were determined based on a literature review and on assessment team members' experience and on-the-ground knowledge of the ecoregion, and interviews with experts who were knowledgeable about the area. The major threats to biodiversity in the Okanagan Ecoregion include:

- urban growth
- agricultural practices
- water management
- invasive species, pests, and pathogens
- roads
- transportation and utility corridors

- forest practices
- altered fire regimes
- climate change
- point/non-point source pollution
- recreational development and use

Approximately 23% of the terrestrial portfolio is currently in designated protected areas (Table 6.2, Map 23). In order to conserve the entire terrestrial portfolio, conservation strategies over the remaining portion of the portfolio, or 25% of the ecoregion, would need to be applied. Approximately 14% of the freshwater portfolio within the ecoregion is currently in designated protected areas (Table 6.4, Map 25). In order to conserve the entire freshwater portfolio within the ecoregion, conservation strategies over 30% of the ecoregion would need to be applied. These areas are not mutually exclusive.

This assessment resulted in a series of products that will be useful to those involved in biodiversity conservation in the Okanagan Ecoregion. These products can be used alone, in conjunction with one another, or with other information to enhance communication about on-the-ground conservation of biodiversity values in the ecoregion. The main products developed were

- terrestrial and freshwater ecological system classifications
- terrestrial and freshwater conservation portfolios showing the most important and suitable areas for conservation of ecoregional terrestrial and freshwater biodiversity, respectively. A summary of known target occurrences, land cover, land use, etc., is provided for each PCA along with an illustration of relative priority based on biodiversity value and suitability for conservation.
- irreplaceability maps showing the relative conservation value of all places in the ecoregion
- utility maps showing the relative conservation value and suitability for conservation of all places in the ecoregion
- overlaid terrestrial and freshwater portfolios showing the area of overlap between the two portfolios
- three scenarios for biodiversity conservation representing different levels of risk

Conservation projects within portfolio sites and high value assessment units (AUs) should receive special consideration. The conservation portfolios and irreplaceability and utility maps are useful for a full range of biodiversity conservation strategies; therefore, we encourage government agencies, non governmental conservation organizations and other conservation practitioners to consider these products in their work. To date, the Washington Department of Fish and Wildlife has committed to using the conservation utility maps in developing their State Comprehensive Wildlife Conservation Strategy (SCWCS) along with other governmental and non-governmental organizations. The Nature Conservancy uses portfolio sites to focus all of their on-the-ground conservation and policy work. Similar ecoregional assessments are being prepared for other ecoregions in support of Washington's and Oregon's SCWCS. In British Columbia, provincial government agencies will use the assessment to inform their decision-making. The Nature Conservancy of Canada will use the assessment products to develop a conservation program in the ecoregion. The ultimate vision of the ecoregional assessment process is to facilitate the thoughtful coordination of current and future conservation efforts by the growing number of federal, state, local, private and non-governmental organizations engaged in this field.