A Computerized Inventory of Existing Parks and Ecological Reserves in the Okanagan District of BC Parks

For: BC Parks Southern Interior Region

Report prepared by
Dale Donovan

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Introduction**:**

Through the use of a comprehensive database system, this project provides the tools to analyze, compare and review the conservation, recreation and cultural heritage values represented within parks and ecological reserves of the Okanagan District of BC Parks. The results will be used for BC Parks Regional Planning objectives for each protected area. The system created under this project may be used as a model for use by other BC Parks Regions.

Information was gathered on an Ecosection basis, with 5 Ecosections in the unit: Northern Okanagan Basin, Southern Okanogan Basin, Northern Okanagan Highland, Southern Okanogan Highland and Okanagan Ranges. The Okanagan District of BC Parks contains 24 Parks and 11 Ecological Reserves within these ecosections.

Objectives:

The objectives of this project were:

- to assemble data for conservation, recreation and cultural heritage values for each Park and Ecological Reserve in the Northern Okanagan Basin, Southern Okanogan Basin, Northern Okanagan Highland, Southern Okanogan Highland and Okanagan Ranges ecosections of the Okanagan District of BC Parks.
- to provide ratings of the attributes on a provincial scale. PAS Goal 1 criteria were used for analyzing the representation of conservation, recreation and cultural values and Goal 2 criteria for rating special features.
- to create a comprehensive database for analysis, comparison and review using the standardized database format provided by BC Parks, Southern Interior Region. The database is in a form that can be integrated into a single database for computer automated analysis, comparison and review of the natural and cultural values of existing Parks, Recreation Areas, Ecological Reserves.

Project scope:

The Okanagan District includes the following Ecosections. The numbers of parks and ecological reserves found within each ecosection are listed to the right.

Ecosection	**Parks**	**Ecological Reserves**
Northern Okanagan Basin	10	3
Northern Okanagan Highland	6	5
Southern Okanogan Basin	5	3
Southern Okanogan Highland	2	0
Okanagan Ranges	3	0
Total	26	11

Note: Kalamalka Lake and Okanagan Mountain parks are represented twice in these numbers as they occur in both the North Okanagan Basin and North Okanagan Highland ecosections.

The Okanagan District also contains parks within the Southern Thompson Upland, Northern Thompson Upland and Shuswap Highland. Data for these parks and ecological reserves are submitted with this database although the information was collected for the Thompson River District contract.

Methodology:

The first task was to develop a *database template* for each Ecosection represented in the Okanagan District. An Ecosection can be described in terms of some representative **characteristics** that set it apart from all the others. Those characteristics were grouped and divided into four tables:

- General Characteristics
- Vegetation Characteristics
- Wildlife Characteristics
- Recreation and Culture Characteristics

Within each table, a list of **features** was developed that captured as many aspects of the characteristics as were considered important for the present study. For example features included geology, general physiology, biogeoclimatic zones and recreational activities. For each feature a set of **attributes** characteristic of the ecosection was developed, to create the final template.

A **4-point rating system** for the attributes was devised, including notations to indicate whether verification or more research is needed. An attribute that needed extra information or clarification about the rating was identified with an asterisk, and the information included in the Comments feature of the General Characteristics Table.

Parks and Ecological Reserves were entered into the database by Ecosection with the appropriate rating for each attribute. Ratings were based on BC Parks staff knowledge, Conservation Data Centre rankings, other Ministry staff knowledge and the contractor's personal knowledge. If a Park or Ecological Reserve occurred in more than one Ecosection, it was entered under both Ecosections in the database. In order to identify each part of the Park or Ecological Reserve, a number from 1-3 was attached after the name according to the percentage of the Park or Ecological Reserve within that Ecosection.

Special features of each protected area were also noted in the database and included in the Recreation Characteristics table.

For the complete template, refer to the attached Database Explanatory Notes for each Ecosection in Appendix 1.

The Tables:
Attributes were assembled from a number of sources. For the Northern Okanagan Highland Ecosection, the Kamloops Regional Protected Areas Team (RPAT) report by Bufo Incorporated (1993) could be used as a base from which to build the General, Vegetation and Wildlife tables. For other ecosections, attributes had to be assembled from scratch using biogeoclimatic maps, geology maps, surficial geology maps (if available), wildlife information in field guides and personal knowledge.

To assemble the recreation and cultural characteristics table, the Kamloops RPAT reports by Levers (1993) and Commonwealth Historic Resource Management Limited (1993?) could be used as a base.

The contractor visited the Okanagan District office to review management plans for smaller parks and the background documents to the management plans for larger parks. A thank you is extended to James Hopkins of the Okanagan District office who assisted the contractor in gathering the relevant information and for answering questions about individual protected areas.

Reference to the major sources of information is made under the title of each feature in the template, and further sources are listed in a bibliography.

It is useful here to explain some of the attributes in more detail:

- **General Characteristics Table:**

Distinctive Features: those features of an Ecosection that best describe it; includes attributes from conservation, recreation and cultural heritage values.
Geology: this information was kept as general as possible. It was collected using Geological Survey of Canada maps and information.
General Physiology and Landforms: this feature includes attributes resulting from erosion that are not described in Roemer, H. 1994, but considered characteristic of the Ecosection.
Climate Characteristics: summarized from Lloyd, et al., 1990.
Comments: includes notes on features in a particular Park or Ecological Reserve that need further explanation; information about the protected area that did not fit under other categories; etc.

- **Vegetation Characteristics Table:**

Old Growth, Diversity of Plant Associations, Diversity of Successional Stages: were described in terms that will be understood by BC Parks staff. Where specific plants are mentioned, only the most familiar are included. More detail can be found in Lloyd et al, 1990. Information about Successional Stages was largely unavailable to estimated by the contractor.
Plants of Special Interest: this includes two sections. The first names are those plants that are characteristic of the Ecosection; the remainder of the list are plants ranked S3 (Provincially Rare or Uncommon) on the Conservation Data Centre Lists.
Special Plant Habitats: this includes two sections. The first names are those habitats that are characteristic of the Ecosection; the remainder of the list are ranked S1

(Provincially critically imperiled because of extreme rarity), S2 (Provincially imperiled because of rarity) or S3 (Provincially rare or uncommon) on the Conservation Data Centre Lists.

- **Wildlife Characteristics Table:**

Bird and Mammal species: in order to keep the list of attributes manageable, only a few of the characteristic species were included.
Fish: from information provided by Brian Chan, Senior Fisheries Biologist, Fish & Wildlife Branch, Kamloops.
Insects: little information is available about distribution of insects in the province
Wildlife of Special Interest: includes two sections. The first names are those species that are characteristic of the Ecosection; the remainder of the list are ranked S3 (Provincially Rare or Uncommon) on the Conservation Data Centre Lists.

- **Recreation and Cultural Heritage Table:**

PAs Special Features: includes regionally significant features as well as provincially and nationally significant features.

Problems Encountered:

1. There was a lack of detailed information about most of the protected areas in terms of wildlife, vegetation, surficial geology etc. There was also insufficient time to do the more detailed research necessary to complete the wildlife, vegetation and general characteristics section. A "best guess" based on field guide information was often all that was available. Attributes that include a best guess rating were noted with a "?" after the rating. In future, anecdotal information could be gathered from naturalist groups, interested individuals, geology reports, etc. to complete the table.

2. The contract took much longer to complete than was anticipated. This was partially due to the fact that this was a new process and the form that the ecosection template and database was to take was evolving even as the contract was underway. It would take less time for future projects based on this design.

3. An attempt was made to make the information within the Okanagan District database consistent with that of the Thompson River District. However, as there were 2 contractors designing abbreviations for the table at the same time all mistakes were not caught. The two databases are therefore, not exactly consistent.

4. A letter (A, B, C, or D) was assigned fo**r the broad recreation goals of BC Parks. These were assigned by the contractor and should be checked by BC Park staff.**

5. A small scale map was used to classify the soils for each protected area. Each soil should be checked against larger scale soil surveys, as available.

6. As mentioned previously, the special features of each protected area includes regionally significant features as well as provincially and nationally significant features. They, therefore, do not strictly meet the Goal 2 criteria. Regionally significant features could be removed in a final draft of the database if BC Parks so desires.

7. It was very difficult to determine the representative wildlife for each ecosystem template. In order to make the list manageable, an attempt was made to select wildlife species that were common in the ecosection but not too ubiquitous. I do not feel I was always successful in this goal.

Solutions:

The completion of the database is an ongoing process. There will be mistakes in the data. These will be corrected with time and as information becomes available. If regularly maintained, the database can become a very useful tool for both District staff and Regional planners.

Appendix 1: ECOSECTION TEMPLATES FOR THE DATABASE