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APPLYING ECOLOGICAL INFORMATION TO
NATIONAL PARKS RESOURCE MANAGEMENT PROBLEMS

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Applying Ecological Information to National Parks Resource Management Problems

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Ecological information is of limited value unless it is properly applied by the land manager or user. It appears to be axiomatic that the user of the information has the main responsibility for the application of ecological information. After all, he asked for it.

However, the personnel responsible for collecting data, processing data, and storing data share some of the responsibility for its application. The data collectors must ensure completeness and pertinency of data, and legibility of formats. This responsibility needs to emphasize input into two main areas, namely:

- I) Training land managers in how to use ecological data.
- II) The need for research to provide interpretations from basic resource data.

I. Training land managers to use ecological data:

There are few people in Canada that are sufficiently well versed in all resource components of a comprehensive data bank to be able to maximize its use. Consequently most users need some assistance, or training, in how to use the data in order to:

- 1) Reduce problems of data comprehension.
- 2) Recognize the data limitations.
- 3) Appreciate the data potential.

The user expertise, outlined above, must apply to geology, landforms, soils, vegetation, wildlife, aquatic resources, watershed values, and human use of park land.

So in order to insure application of the ecological data by land managers they must know not only how to ask the question, but they must also have knowledge about resource relationships and their interpretations for park uses - hence the need for research to develop the interpretation file in the data bank.

II. The need for research to provide interpretations from basic resource data:

It is relatively easy to list items that affect specific land uses. Ian Corns just showed us a list of 12 criteria that were used in the Banff-Jasper pilot project to select campground. In the Waterton Soils Report, we listed items affecting land use and rated the degree of soil limitations.

The list of items affecting use was not necessarily complete in either example, and the degree of limitation often had arbitrary boundaries based on limited knowledge. The problem of refining the nature and degree of land use limitation is compounded as soon as one considers integrated ecological inventories, especially where combinations of limitations occur.

The need for research to provide interpretations from basic resource data is a real one that will intensify rather than disappear. Such research will be achieved if researchers and resource users continue with a united effort towards solution of the problems.

The following slides illustrate some of the research deficiencies in interpretation of these resource components for managing the park's land:

1. Landforms
2. Soils
3. Vegetation

4. Wildlife
5. Water
6. Human use

III. Summary:

The application of ecological information to National Park resource management problems can be assured by the following actions:

- 1) Training of wardens to recognize what ecological data the inventory provides, along with its limitations and potentials.
- 2) Provision of access to resource people via workshops, training sessions, and consultative meetings.
- 3) Development of guidelines for an environmental observation methodology so that wardens can monitor and update their ecological inventory data.
- 4) Development and use of environmental scalars to evaluate attributes of the land being studied, thus enabling the user to determine what to manage and how.