

USER PERCEPTIONS OF THE BOW RIVER: A RESOURCE FOR DEVELOPING A
WATERSHED PROTECTION/INTERPRETATION SYSTEM IN ALBERTA

by

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Introduction

With the disappearance of several Alberta rivers in their natural state, there has been a growing social awareness of the need to protect river corridors to ensure the preservation and interpretation of this unique and natural heritage. The Alberta River Protection Study, formulated in 1979 at the University of Lethbridge, has largely been created in response to the need to protect and manage significant riparian environments and recreational pursuits along rivers. The principal purpose of the River Protection Study "is to achieve protection for rivers by developing a systems planning approach for identifying candidate rivers worthy of protection"(1). A few of the program's objectives are:

1. To establish criteria for the identification of specific watersheds, rivers, and river segments that meet provincial standards of adequacy for protection.
2. To formulate required administrative and management responsibilities for each category of protected river.

As part of a broad resource inventory program to identify and classify Alberta's watersheds for varying degrees of protection/management, a pilot Visitor Employed Photography study in measuring user (canoeist, rafter) perceptions of the Bow River in northwest Calgary (Figure 1) was conducted during the months of June and September, 1981. The study was also of benefit in providing valuable perceptual information (ie. a cognitive map) for interpretive programming purposes for the City of Calgary Parks/Recreation department or other agencies who may be interested in utilizing this data. Cherem and Traweek (2) underscore the value of implementing such user or visitor-oriented research for river recreation classification/management when they state; "Perceptual Excitement Profiles (PEPS) produced from VEP studies could be used as another type of base map to aid recreation planning. The generation of a PEP for a particular river can help in establishing and isolating priorities not only for development but also for maintenance of that recreation resource. A knowledge of what the public perceives as positive and negative could greatly improve the planning process by allowing more complete evaluation of all the impacts of a proposed action."

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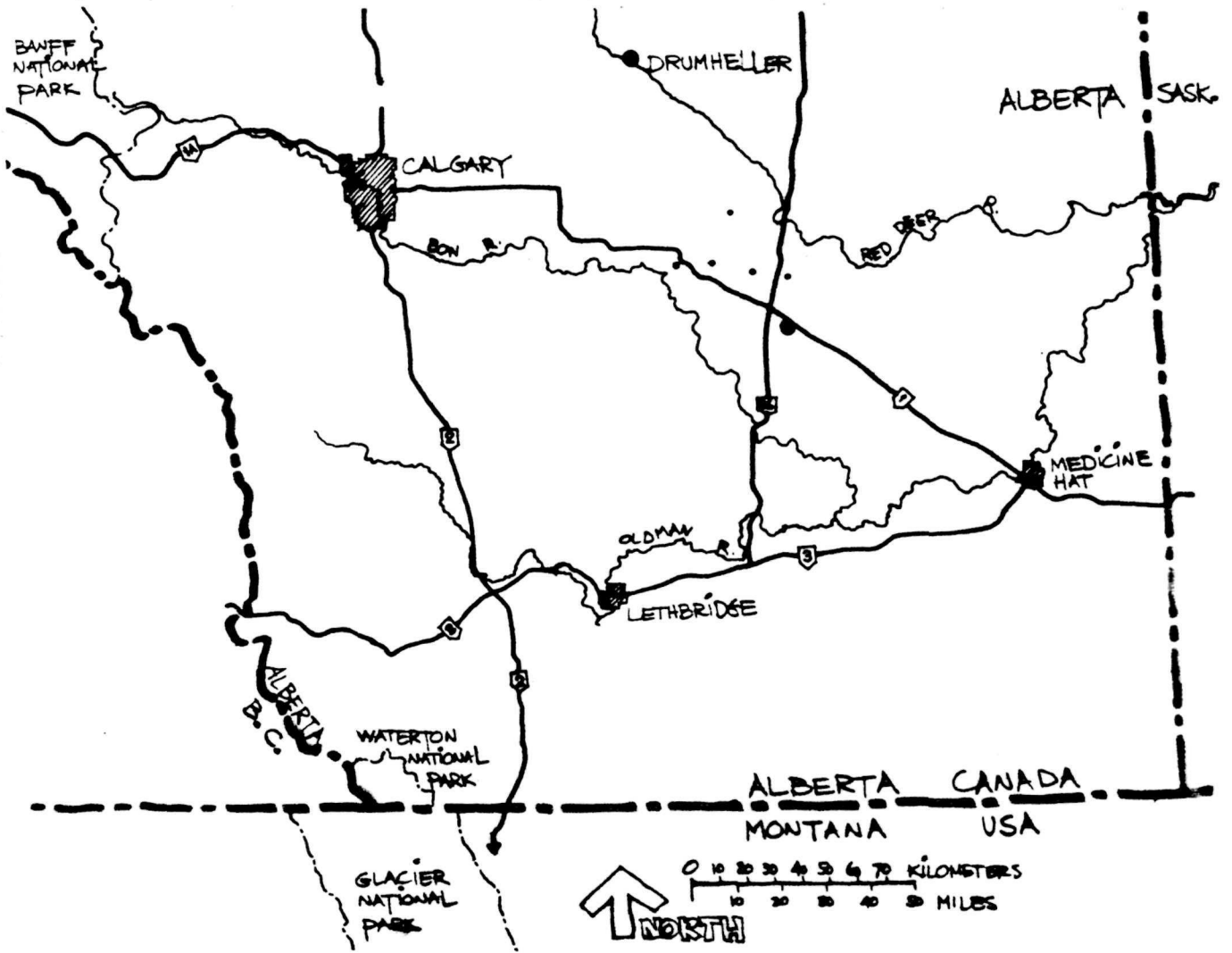


Figure 1. Location of User Perception Study in Alberta.

It is intended that the data from this study will be integrated with physical and cultural resource information on base maps for the same stretch of the Bow River. Such mapping in concert with other resource information will lead to a balanced and meaningful classification and management framework for this river. The hypothesis for this research study is that user perceptions on the Bow River can be directly recorded and measured, and these perceptions can be effectively utilized for river classification, management, and interpretation.

The Problem

The problem to be addressed in this research project is to measure user perceptions of the features of the Bow River. More specifically, the following areas are investigated:

1. What features of a river do users perceive as attractive and positive?
2. How do these positively perceived features of the Bow River relate to the experiential and demographic characteristics of river users?

Perception Study Objectives

The first objective of this project will be to isolate and identify positive universal photographs for a selected stretch of the Bow River. A second objective is to identify the positive PEN's and the PEP for the selected stretch of river. The final objective is to isolate and identify any demographic or experiential differences or similarities related to the positive public perception of the selected stretch of the Bow River (3).

METHODOLOGY

Research Area and River Selection

The river stretch selected for this study was conducted in cooperation with staff of the Alberta River Protection Study, Mr. Herb Benthin, President of the Bow Waters Canoe Club in Calgary, and taking into consideration the requirements for implementing Visitor Employed Photography on river environments. As with Traweek's (3) VEP research on the Huron River, "any river to be used for this study had to meet three basic criteria:

1. It had to be relatively well traveled by the public;
2. It had to be sufficiently narrow to allow users to easily view both banks simultaneously, and;
3. It had to be within a geographical range convenient to the scope of research funding."

After the river was selected, and the general region defined, the specific stretch of river for this study was established. In view of the relatively low population base in proximity to many Alberta rivers, the first criteria appeared to represent the most important variable for selection of a suitable river stretch. It was decided that the stretch from Bearspaw Dam to the Trans Canada bridge (Figure 2), a distance of 7 miles, was felt to be the best area for implementation of this user perception study. This river segment is perhaps the most popular user/stretch on the entire Bow River. This stretch remains a popular area for a wide variety of river users and represents one of the most "natural" environments present along the Bow River today.

PRE-MAIN STUDY CONSIDERATIONS

Pre-Testing

Taking into consideration that this study was considered to be a partial replication of the VEP methodology used on the Huron River in Michigan, and taking into account the limited financial, time, and manpower resources of this pilot study, a pre-test was not conducted on the Bow River. Rather, most of the modifications made by Traweek to VEP procedures for the Huron River study were taken into consideration by the author. The author also made a few reconnaissance trips to the departure and take-out points in addition to canoeing the stretch prior to the main study. As a result, the implementation of the VEP methodology during the main study proceeded very smoothly with no complications.

Equipment

Only one type of simple instamatic camera was used; the Kodak Instamatic X-15F. A total of 12 cameras were employed in the study. Kodacolor II (126 cartridge) 12 exposure color print film was used which was comparable to black & white film at discount prices. Tally sheets and post-trip questionnaires (positive condition) were similar in format to Traweek's study except for the addition of question #10, which asked users how they would classify the Bow River based upon provided definitions and their own perceptions along the study stretch. Only 1 camera was stolen during the entire study period.

Main Study

The main study was implemented during June 26-28, and September 5-7, 1981. The study periods were randomly selected using weekend sets of three days each. Every morning at 9:00 a.m. the author was stationed at the departure point at Bearspaw Dam, and the research assistant at the camera pickup point next to the Trans Canada bridge. The sampling procedure, based upon earlier reconnaissance trips and input from Bow Waters Canoe Club staff consisted of disseminating equipment to all users (except groups) who canoed/rafted from Bearspaw Dam to at least the Trans Canada bridge during the hours of 9:00 a.m.-6:00 p.m. each day. Every user (except fishermen, etc.)

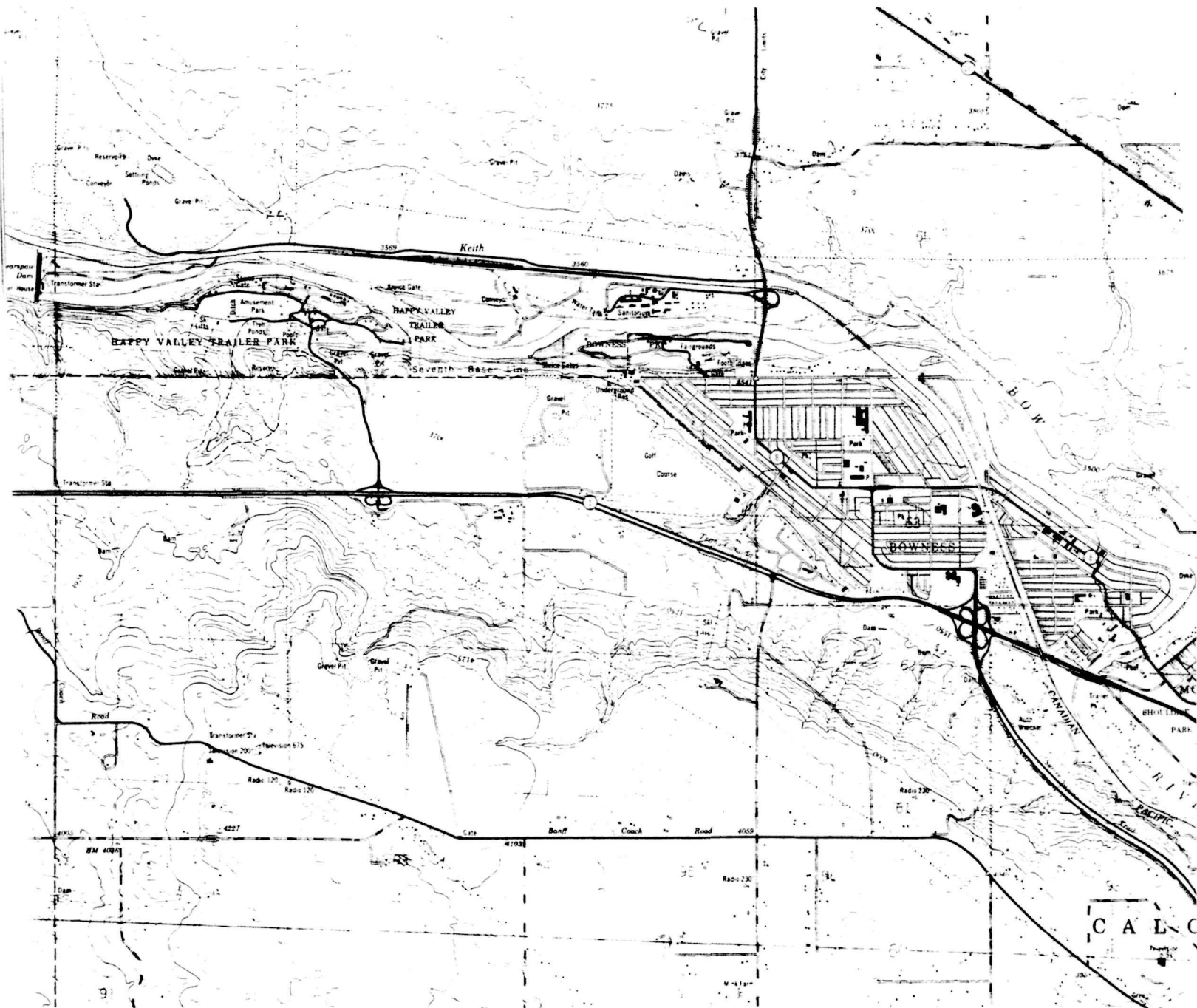


Figure 2. User Perception Study Stretch on Bow River, Calgary, Alberta.

who "fit" the above criteria was approached by the author, and given the same basic instructions, "Photograph anything that you find appealing or enhances your river experience as you travel down to the Trans Canada bridge". This verbal set of instructions closely approximates the mental set provided canoeists in the positive condition in Traweek's research. User traffic on the river was predictably heavy on weekends, and very light during summer weekdays.

A surprising 100% of the users who were contacted by the author agreed to take a camera and clipboard during their river experience. This compares favorably with Cherem's (4) earlier trail VEP study where the participation rate was 85%. When users approached the end of the study stretch, the research assistant warmly welcomed each party, retrieved the camera, and handed out a copy of the post trip questionnaire. The post trip reaction by users toward the study was very favorable. They generally felt the study was interesting, increased their awareness and observation of the Bow River, and enhanced the quality of their overall river experience.

Preliminary Study Results*

The Visitor Employed Photography technique provided perceptual information through photographs as well as demographic and experiential data through the post trip questionnaire. A general profile of the users sampled in the study was identified on the basis of their responses to various items on the questionnaire. Due to financial limitations governing the data collection process, a total of 65 users were sampled in this pilot study.

A very high majority of users completed their trips in the afternoon (90.77%), canoed/rafted the Bow on weekends (74%), owned their own canoe or raft (82%), and canoed or rafted this particular stretch only once in the previous year (63%). With respect to previous camera experience, 48% stated they had used a camera "once in a while", 13% used a camera "very rarely", and 39% stated they used a camera "very often". Well over half of the users sampled (64%) were males, and 59% of all users were between 18-35 years of age, with 26% under 18, and 15% over 35.

Surprisingly, the education level of users was not as high as previously expected. However, this finding is undoubtedly affected by the relatively low user population sampled in this pilot study. Over 47% of users sampled had at least 1 year of University training, with 27% completing a Bachelor's degree, 6% completing a Masters, and 3% completing a Doctorate. Approximately 20% had completed High School, with 33% completing less than 12 years of formal education. Interestingly as well, is the fact that 61% of users rated or perceived the Bow River as a Recreation River, 29% viewed it as a Natural River, and 10% placed it in the Other category.

*This section will only provide a very limited amount of study results due to the completion of the data collection process earlier this month. For more information, readers are referred to review the final report dated November, 1981, which can be obtained by writing the author.

In summary, the people sampled in this project were young, of varying education level, outdoor recreation oriented users who occasionally canoed or rafted the Bow River, and possessed an average or better than average knowledge of cameras and their use. Users (positive condition only) appeared to travel the river in a relaxed and enjoyable manner, (based upon verbal and written comments), with a mean average of 90 minutes to travel the stretch. This generally supports the findings of previous VEP research in that users in the positive condition take more time to observe and enjoy the river environment than those who are asked to photograph "negative" features. Concomittant with the previous finding is the fact that users in the study took a mean average of 10 photographs. As Traweek (3) states, "this suggests that there was a good deal of diversity of positive stimuli on the river". This is further supported by numerous comments on the tally sheets which indicated that many users desired more than the 12 exposures provided each party.

Two Type of Photographs Emerge

The 65 sets of photographs taken in this study provided a total of 682 individual photographs, or a mean average of 10 photographs/set. While analyzing all the sets of photograph and their corresponding tally sheets, it immediately became evident that every photograph could be classified as either a "universal photograph", or a "thematic photograph". The universal photographs "represent consensus of specific scenes which were photographed frequently (10% or more of all visitors passing that spot)", Cherem and Driver (5). The thematic photographs "included photographs taken at a variety of different locations along the river, but which correspond to various generic subject matter themes such as animals, trees, rapids, and the like", Traweek (3). The existance of these two major photograph types is consistent and supportive of the results of all previous VEP studies, Cherem, (5,6), Cherem and Driver (4), and Traweek (3). A representation of some of the universal and thematic photographs (and photograph strengths) that emerged from the VEP study on the Bow River is shown in Figure 3.

Application of VEP Results to River Protection/Interpretation

The application of the results from this Visitor Employed Photography study on the Bow River are wide ranging and significant. At this point in time, there are at least two major areas of application which will be addressed here.

Application to River Protection Study Program

As mentioned earlier, the primary purpose of this pilot user perception study is to serve as a valuable and integral inventory tool for evaluating the resources of the Bow River, which will lead to its classification and management framework from a systems point of view. Figure 4 illustrates the phasement of this psychological resource information within the River Protection Study's planning process.

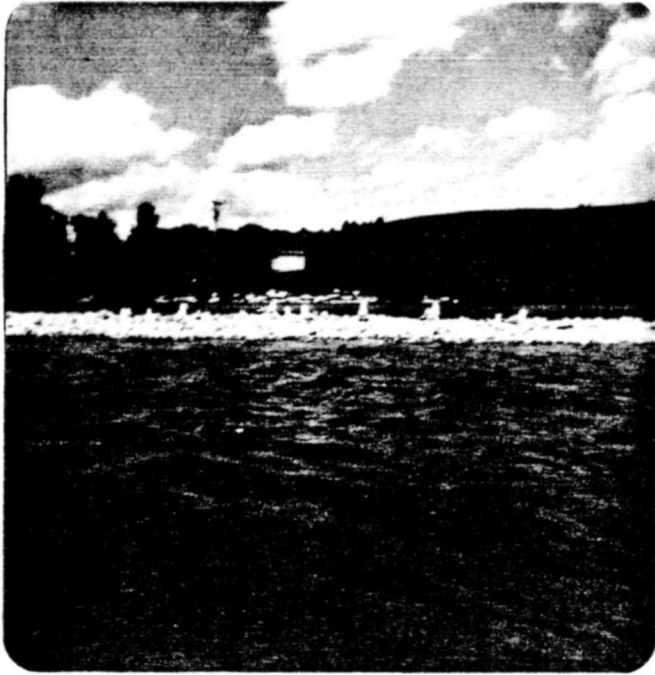


U1 Train Bridge - 24%

U2 Old Machinery - 13%



U3 Park & Houses - 20%



T1 Gulls - 44%

T2 Fireweed - 18%



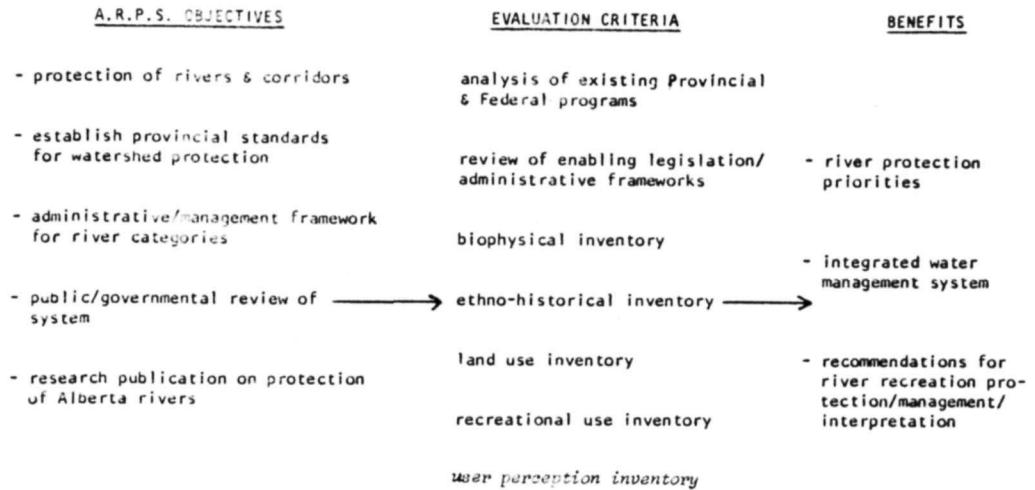


Figure 4: Placement of user perception inventory within Alberta River Protection Study planning process.

The data for this VEP study will be analyzed, prioritized, and integrated with other resource information which will lead to the development of the benefits indicated in the above planning process. As well, Figure 5 illustrates the specific planning process for evaluating the Bow River.



Figure 5: River Protection Study planning process for the Bow River

Based upon a preliminary review of all the resource information gathered for the entire Bow River to-date, the river is tentatively viewed as being classified an Urban River. The management framework for the Bow River has not been determined until the results of this VEP study are completed, and consideration given to its application within this planning framework. Nevertheless, the application of this user generated perceptual information within the broad context of this River Protection Study program

is extremely significant! Perhaps, for the first time in conducting VEP studies, the results generated from such research will have practical and direct relevance to the proper classification and management of river resources from a physical and user point of view ... a framework which is sensitive to both ecological resources, and the perception of these resources and others from a human perspective. It is anticipated that this pilot VEP study will pave the way toward implementing additional VEP research on other Alberta river basins in the near future.

Application to River Interpretive Programming

When this pilot study was created, it was the River Protection Study's and author's contention that this data would also be very useful for interpretive planning. The author has contacted the City of Calgary Parks/Recreation Department to determine their interest in possibly using this data for interpretor guided activities. Fortunately, the Calgary Parks/Recreation Department is very interested and responsive to the value and importance this information represents for facilitating the sound interpretive planning of naturalist-led canoe tours on the Bow River! As well, the integration of this data with other resource information may lead to identifying specific Natural and Recreation Rivers which may be developed for interpretation through such agencies as Parks Canada or a provincial department. The implementation and application of such user oriented research programs such as the Bow River VEP study, will hopefully lead to the meaningful protection, management, and interpretation of Alberta's watersheds in the years to come.

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