Towards Serving Visitors and Managing Our Resources
Proceedings of a North American Workshop on Visitor Management in Parks and Protected Areas

February 14-17, 1989
TOWARDS SERVING VISITORS
AND
MANAGING OUR RESOURCES

Proceedings of a North American Workshop
on
Visitor Management: Perspectives of Several Canadian
and United States Park, Protected Area
and Natural Resource Management Agencies
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TOWARDS SERVING VISITORS
AND
MANAGING OUR RESOURCES

Robert Graham and Richard Lawrence
(Editor and Compilers)
ACKNOWLEDGEMENTS

During the winter of 1989, the Tourism Research and Education Centre (TREC) co-sponsored with the Canadian Parks Service a four-day workshop on visitor use and management in U.S. and Canadian park, protected area, and natural resource management agencies. From February 14-17, 1989 representatives from North America’s leading agencies and authorities, advocacy groups, professional interpretation associations and university researchers met in Waterloo to exchange viewpoints, establish an understanding of current initiatives, identify research needs, and develop an ongoing mechanism to track emerging work in visitor management, interpretation, and planning. The papers presented at that meeting, together with the responses and commentaries from nine syndicates, form the sections of this publication.

An important assumption underlying the development of the workshop was that no single discipline has a monopoly on the information needed to develop a better understanding of visitors and management of heritage resources. Considerable effort was made to include a variety of viewpoints, specialities, theoretical orientations, and organizations. The broad range of issues raised and discussed during the week are ones that confront every park and protected-area manager, planner, environmental group, and researcher. We feel the papers offer some excellent statements of how agencies, academics, practitioners, and advocacy groups are currently attempting to work together to improve decision frameworks that integrate concerns about visitors, interpretation and management of our resources. It is also our hope that this publication will stimulate and enhance the exchange and approaches to future work in this area.

We are grateful to a number of individuals and organizations for their help. The contributions of the Canadian Parks Service Visitor Services and Socio-Economic Branches included much more than providing TREC with the funding for the meeting. Representatives of the Parks Service, providing the bridge to U.S. government agencies, created a climate that encourages this type of meeting. Grant Tayler, Scott Meis, Per Nilsen, and Gary Sealey of Parks were active in planning the workshop over a period of approximately two and a half years. George Yeates and Peggy Hewson of Parks provided a review function for the conference agenda and personally participated in the workshop. The U.S. National Park Service; the USDA, U.S. Forest Service; the U.S. Bureau of Land Management; the U.S. Fish and Wildlife Service; and the Land Between the Lakes, Tennessee Valley Authority supported the workshop by acting as advisors to the steering committee, providing comment on draft agendas and sending senior representatives of their staff to the workshop. We gratefully acknowledge the support, encouragement, and participation from these organizations.

The Heritage Resources Centre of the University of Waterloo provided assistance with the arrangements surrounding the conference. Steven Woodley and Pauline O’Neill made valuable contributions to the meeting.
Julie Cassaubon, Sandy Heise, Anne Ross, Per Nilsen, Grant Tayler, Scott Meis, and Jean-Robert Gauthier assisted with the conference and contributed long hours to the review of publication outlines, author follow-up, and proofreading. All of the papers were refereed by two or more of the author's peers, and we thank those who helped us with the process.

The contributors and conference registrants proved to be an exceptionally eager group of people. They were excited about the topic and were willing contributors. Thanks also go to the conference commentators, session chairs, and rapporteurs who contributed to an exceptional meeting.

TREC supports the publication of the papers of the workshop as being consistent with its objectives to encourage open formal and informal discussion of research in tourism. However, inclusion of a paper by an author does not necessarily imply that an agency endorses that paper or other contents of this publication. Nor do the views presented in the papers necessarily represent the views of TREC or its members. Any editorial errors are those of the editors.

Finally, recognition is made of the substantial assistance in word processing and document preparation provided by the Department of Recreation and Leisure Studies staff. Anne Ross co-ordinated the preparation of papers and communication with authors, and kept the proceedings on course through production. Thanks Anne, and Sandy, and Julie.

Robert Graham
Richard Lawrence
April 1990
PREFACE

TOURISM RESEARCH AND EDUCATION CENTRE

The Tourism Research and Education Centre (TREC) is proud to have been a partner in the organization of this North American Conference on Visitor Management in Parks and Protected Areas. Hospitality, the satisfaction of visitors’ needs and expectations, and the protection of the environment on which a healthy tourism industry grows is a major challenge to the managers of parks and protected areas. This conference brought together representatives from numerous governmental agencies in Canada and the United States, non-governmental organizations, and academics. The exchange of information and experiences made the event a truly rewarding experience for all participants. Although the informal interaction and the excitement of personal contact and exchange cannot be reproduced in print, we believe that these proceedings will help to share important insights and opinions with a wider audience.

Robert Graham and Richard Lawrence, as the editors of this volume, have made an important contribution to the literature that guides all of us in our search for the optimal balance between use and preservation of our fragile environment. They and all of us associated with the Conference - hope you gain as much from reading this volume as we did from compiling it.

About TREC

TREC is a consortium of faculty from five Canadian Universities - Guelph, McMaster, Waterloo, Western Ontario, and Wilfrid Laurier - interested in tourism. The goals of TREC are to encourage research and advanced study in tourism and to disseminate research findings to the academic community, industry, and government.
The Canadian Parks Service owes a deep debt of gratitude to the University of Waterloo, its Tourism and Research Education and Heritage Resources Centres for agreeing to sponsor this major conference with our support.

This conference took place at a critical stage in the evolution of our national parks and historic sites management programmes. We needed to see how our developing approach to management of visitor opportunities matched or could be improved by taking into account the latest approaches developed by or for American and Canadian Government Agencies and by leading experts in the parks and recreation field.

The role of resources and leisure research was an important issue which received special attention because the data that today’s manager needs must be relevant, up-to-date, and easily available at a reasonable cost. The whole-hearted contributions of the participants in these areas alone made this a successful conference.

The companion theme of the conference addressed the role of interpretation services in heritage area management. The opportunity to re-examine interpretation’s role through use of strategic direction statements helped us to target upon the major issues facing government agencies whose mandate is to foster public awareness and stimulate public understanding, appreciation and support for the management of their heritage resources.

We are looking forward to the next proposed conference in the United States in 1991 and to continuing our discussions and exchanges with the new acquaintances made during our week together at the University of Waterloo.
foreword

The concept of serving visitors and managing resources raises thorny philosophical and conceptual issues among some park and protected-area agencies and environmental organizations. Managing the resource and regulating visitors have been central concepts in park and reserve tradition and thought for a considerable amount of time.

In organizational terms, protected-area agencies see the world through a series of decision frameworks. These frameworks define assumptions and constructs based on certain types of information - some of which are important and others not as important. The need to be informed about the interaction and interdependence between people and protected areas before making a decision was often viewed as unrealistic - until an issue blocked the agency’s mission.

Today, the image of protected-area planning, resource management, visitor services, interpretation and other standard operating procedures is changing. Knowledge about customary users, indigenous people, visitors, other stakeholders, their behaviour and interdependence with protected areas are being recognized in terms of the pro-active capabilities that social science can bring to clarifying discussions and decisions. However, efforts to integrate social science and resource information in pro-active problem solving, decision building and decision making have been slow to gain agency recognition. Some have described these efforts as slender threads that lack the steel and concrete of science and common sense.

Although it may have been possible in the past to isolate developing an understanding of visitors from resource management, there are now a series of trends that will stimulate this integration. These trends include:

- heightened international and national focus on the environment and the role of protected areas in conserving and preserving options for the future benefit of indigenous peoples, customary users, local residents, visitors, and the general public.

- the need for government to demonstrate that it can manage crises in an era of new and rapidly expanding information about the environment. This will lead to greater involvement by parks and other reserves in communicating what protected areas tell us about the state of our environment and how the flow of benefits from these areas provide a future for all of us.

- an awareness of the public’s desire to move away from formal public participation programs toward a role in which a variety of publics can see themselves as part of the decision-making and decision-building process. Building coalitions of support to increase involvement in protected-area management and planning, and cooperatively and collaboratively generating solutions to protected-area management that are acceptable and supported by affected individuals and groups, are key to long-term ecosystem management.
• agency recognition of the need to improve protected-area and reserve management and decision making by identifying critical natural and social science data needs at the beginning of the planning process, and developing and implementing different approaches to planning that integrate the needs of people and the relationship of those needs to parks, reserves, and other types of protected areas.

• an increasingly diversified client base for protected areas and their programs that is emerging at a time of continued fiscal constraint.

• recognition of the importance of increasing public involvement in environmental stewardship and land-allocation decisions adjacent to a protected area.

Taken together, these trends will tend to encourage protected-area agencies to become more interdisciplinary, develop data bases about people, and begin to adjust internal and external agency relationships with social science. The rate at which this takes place and the precise nature and direction of change are very difficult to predict. Papers presented at this workshop represent a cross section of the responses of North American protected-area agencies, academics, environmental organizations, and professional groups to these trends.

Who are our visitors? What motivates them to visit protected areas? Who are our non-visitors? How does the public begin to value special places? What beliefs do different activity groups have about protected-area agencies and their programs? What benefits do visitors and non-visitors seek from protected areas and reserves? How should agencies respond to the beliefs, knowledge, attitudes and behaviours of different publics? What is the relationship between tourism, regional integration, and ecosystem management? What are the appropriate and efficient levels of service (i.e., trip planning, orientation interpretation, extension/public education park activities) and management and what should be provided by agencies, the private sector, cooperating associations, and partners? Are publics satisfied with levels of provided services? How do protected-area agencies evaluate programs and services? What is the role of marketing in protected-area management?

Do current, suggested decision frameworks - Limits of Acceptable Change, Recreation Opportunity Spectrum, Visitor Activity Management Process, and Visitor Impact Management - have the potential to develop better information about visitors, customary users, and stakeholders?

Can the original partnership that established the linkages between parks planning, management, interpretation and social science be enhanced to increase the understanding, appreciation and enjoyment of visitors, neighbours, and stakeholders who support parks and reserves?

Finally, what is the role of agency tradition, resistance to change, and external political influence in developing and implementing alternative approaches to existing data collection, planning, and management systems?
The four-day workshop at Waterloo was an extremely stimulating event. More than 100 people participated in it and their presentations and discussions generated controversy and excitement. Although there are some areas of agreement, the papers do not represent a consensus. Our inclination when developing the workshop was to coalesce what some of us felt was an already rich diversity of approaches and research used by leaders in this field.

Agencies, groups, researchers, and individuals offered different viewpoints to understanding visitors and protecting heritage resources. The research history of some of the participants has focused on the development and testing of decision frameworks; others have moved and are continuing to move from one theoretical framework to another. Debate occurred at different times throughout the workshop, sometimes with great emotion. Some suggested that the workshop should have attempted to stage more of a debate to highlight differences. Others commented that we should have had more practitioners present and have discussed with theorists the practical relevance of what was currently happening in the field. The commonalities among the participants were equally interesting. Despite epistemological differences, authors and participants agreed on the need to share data, people and resources and to develop cooperative and collaborative mechanisms between the academic community, park professionals, and environmental groups. Equally noteworthy was the general concern with rigour and discipline.

We believe the conference was a success. Evaluations submitted at the end of the meeting were exceptionally positive, with over 90 percent of attendees indicating that the workshop met or exceeded their expectations.

As is evidenced in the papers, the workshop did address issues that are not easily tackled in an open environment. The diversity of values and orientations in the dialogue begun in Waterloo will hopefully be continued in another workshop in two or three years. The exchange begun in this workshop is fundamental to continued research and development in this area.

We have made an effort to capture some of the spirit of the presentations and the issues raised. In the end, of course, each reader will develop his or her own answers, but we feel the papers and syndicates offer some excellent statements of how different agencies and groups are currently moving towards understanding visitors and managing resources.

R.G.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Acknowledgements</th>
<th>...............................................</th>
<th>v</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preface</td>
<td>Tourism, Research and Education Centre.</td>
<td>vii</td>
</tr>
<tr>
<td></td>
<td>Canadian Parks Service</td>
<td>vii</td>
</tr>
<tr>
<td>Foreword</td>
<td></td>
<td>ix</td>
</tr>
</tbody>
</table>

## SESSION I - INITIATIVES

<table>
<thead>
<tr>
<th>The Search for New Approaches that Work</th>
<th>...............................................</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ian D. Rutherford</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Evolution, Direction, and Implications of America's Great Outdoors</th>
<th>...............................................</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elizabeth Estill</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Evolution, Direction, and Implications of The Interpretive Challenge</th>
<th>...............................................</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael D. Watson</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interpretation and Social Science: A Necessary Partnership</th>
<th>...............................................</th>
<th>21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donald R. Field</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Bureau of Land Management's Recreation Initiative</th>
<th>...............................................</th>
<th>37</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recreation 2000: A Strategic Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>William T. Civish and Robert W. Schneider</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vertical Marketing</th>
<th>...............................................</th>
<th>45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peggy Hewson</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The National Parks and Conservation Association Commission on Research and Resource Management in the US National Park System</th>
<th>...............................................</th>
<th>55</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul C. Pritchard</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SESSION II - IMPLICATIONS OF INITIATIVES

Issues in Visitor Management Strategies ........................................... 59
R. J. Payne

SYNDICATE 1: Initiatives ................................................................. 67
Rapporteur: R. J. Payne

SYNDICATE 2: Interface Between Protection of Parks and Protected Areas and Visitor Management ........................................ 71
Rapporteur: Stephen F. McCool

SYNDICATE 3: Social Science Inquiry and Park Visitor Management: Issues and Trends ........................................ 73
Rapporteur: Richard C. Knopf

SYNDICATE 4: Interpretation to Engender Support and Understanding ........................................ 79
Rapporteur: David A. Pugh

SESSION III - RECREATION HABITAT: LINKING THEORY AND APPLICATIONS

Site Attributes - A Key To Managing Wilderness and Dispersed Recreation ........................................ 81
Roger N. Clark and George H. Stankey

Recreation Habitat - An Emerging Concept ........................................ 93
Richard Schreyer

People and Protected Natural Environments: Emerging Research Concerns ........................................ 107
Richard C. Knopf

Recreation Management: A Question of Integration ........................................ 119
Roger N. Clark
SESSION IV - FRAMEWORKS FOR SERVING VISITORS AND MANAGING OUR RESOURCES

The Recreation Opportunity Spectrum: A Framework for Planning, Management, and Research ........................................... 127
Roger N. Clark and George H. Stankey

Recreation Opportunity Spectrum: Basic Concepts and Use in Land Management Planning ................................. 159
B. L. Driver

Limits of Acceptable Change: Evolution and Future ..................... 185
Stephen F. McCool

Limits of Acceptable Change: Some Principles ................................ 195
Stephen F. McCool

The Limits of Acceptable Change (LAC) Planning Process: Potentials and Limitations .............................. 201
Richard C. Knopf

Visitor Impact Management ........................................... 213
Alan R. Graefe

The Visitor Management Process ........................................ 235
G.E. Tayler

The Visitor Activity Management Process and Canadian National Historic Parks and Sites - A New Commitment to the Visitor ........... 249
Robert Ashley

VAMP and Its Application to Camping: The Glacier National Park Example ........................................ 257
R. J. Reynolds

Visitor Management and Canada's National Parks ..................... 271
Robert Graham

The Park Use-Related Data System (PURDS) Concept .................... 297
Sylvanna Grimm and Jay Beaman
Park Use-Related Data Recording: A New Direction .......................... 315
Jay Beaman and Sylvanna Grimm

SESSION V - DECISION FRAMEWORKS: MONITORING, EVALUATION
AND MANAGEMENT ISSUES

Visitor Management Issues: Monitoring and Evaluation ...................... 337
Scott M. Meis

SYNDICATE II - 1
Research Support, Information Collection and Analysis ...................... 349
Donald R. Field

SYNDICATE II - 2
Decision Frameworks and Interpretation ........................................ 355
Rapporteur: David A. Pugh

SYNDICATE II - 3
Practical Application of Decision Frameworks to
Camping ........................................ 357
Rapporteur: Rick Rollins

Camping in Canadian National Parks .............................................. 359
Elizabeth Seale

SESSION VI - VISITORS AND PROTECTED AREAS: TRENDS AND ISSUES

Long-Haul Pleasure Travel Trends and Their Relevance
To Canadian National Parks ....................................................... 365
Stephen L. J. Smith

Tourism Futures and the Resource Management Agency ...................... 375
Joseph T. O'Leary

Trends in Visitor Management: What Marketing is About .................... 389
Wendy Frisby

Marketing: A Management Tool for Public Agencies
The Land Between The Lakes Case Study ...................................... 395
Ann W. Wright
Canada's Changing Environment: Implications of Climatic Change to Resource Managers
Brian Rizzo and Harry Hirvonen

The Politics of Outdoor Recreation
William E. Shands

Issues and Trends: An Environmental Organization's Perspective
Don Huff

SESSION VII - INTERPRETATION: PERSPECTIVES OF PARK, PROTECTED AREA AND NATURAL RESOURCE MANAGEMENT AGENCIES

Interpretation in National Historic Sites -
   The Challenge
   P. Richard Lindo

Issues for Interpretation
   Elizabeth Seale

Issues for Interpretation of Parks, Protected Areas, and Natural Resource Management Areas
   Michael D. Watson

Public Use and Participation on Resource Management Areas: Issues For Interpretation From A Fish And Wildlife Service Perspective
   Nancy A. Marx

Changing Perceptions Through Public Involvement:
   A Bureau of Land Management Perspective
   William T. Civish and Robert W. Schneider

Interpretation and The New National Association of Interpretation
   W.E. Randall

Issues in Interpretation: Interpretation Canada’s Perspective
   Robert Kelp, Michelle Dondo-Tardiff, Robert Ashley and Barbara McKean
SESSION VIII - RESPONDING TO THE ISSUES AND TRENDS

Interpretation: Vision and Action ........................................ 473
Gary Sealey

A Canadian Perspective on Visitor Management .......................... 481
R.J. Payne

APPENDIX I - VISITOR MANAGEMENT WORKSHOP PARTICIPANTS . 491

APPENDIX II - WORKSHOP PROGRAM ................................. 501
SESSION I

INITIATIVES
This is a very special occasion which has been two years in the making. As managers of protected areas, we are being asked to respond to many demands for the conservation of our environment, new and more satisfying recreational and educational opportunities, and the economic benefits of tourism. Each of us with our many years of work and experience has something to contribute in response to these demands.

Our objective in supporting and encouraging this workshop is to bring together the people who have been involved in recreation and interpretation research and management to see where we are and what will lead to improvements in the future.

We need new approaches that will work if we are to address today's issues and the emerging issues of the 1990's. For instance:

Where can we save money? And how can we better justify the financial and human resources we need when governments are trying to lower their debt?

How can we get on with the job of planning, developing and managing public opportunities without those times that see five or more years lag before a facility is on the ground?

What approaches will ensure effective responses to the special needs of the visitors of the 1990's, including special populations such as the disabled? Campers are no longer "campers", they are R.V'ers, vacationers, tenters, and back-packers. Each year seems to add another specialty.

How can we make good and efficient use of the tremendous growth in social and leisure science research, marketing as a management tool and new technologies, to manage and monitor our data bases?

How can we work smartly to manage partnerships with volunteers, other agencies, the private sector and special interest groups such as cooperating associations?
Towards Serving Visitors and Managing Our Resources

I feel parks and other managed areas need better, flexible and efficient management approaches that will deliver the public benefits which are consistent with their mandate. In today's world we need

- a general public pride in parks and managed areas; and
- staff pride, craftsmanship and leadership supported by management;

in order to:

(i) put the visitor's needs and expectations into our plans in economical ways;

(ii) reduce the conflict between the forces that support resource protection and those that support recreation and tourism;

(iii) work more closely with our sister agencies and with the private sector, to establish realistic expectations and opportunities;

(iv) create and reward voluntary activities that are meaningful, genuine and fun.

In the Canadian Parks Service, when work began on development of the management approach for visitor activities, we drew upon the creative initiatives of many people in the social science field, in heritage resource management, interpretation planning and on the then-emerging field of marketing.

Our Canadian Parks Service management approaches have now more than 25 years of developmental work. We need to clarify where we are, to see what works and where we can profit from the experience of others.

There are more than 400 years of experience in this room: policy-makers, planners, managers, researchers and educators. You are invited to participate because the organizers of this workshop feel you have a significant contribution to make.

We are particularly interested in the successes achieved by U.S. Federal Agencies in the development and use of their National Strategies.

In the area of social research, where the Canadian Parks Service is currently developing useful analytical tools, I am interested in the recent monitoring and evaluation systems being adopted by the U.S. National Park Service. Natural and Historic Resource management systems have developed data synthesis and storage and retrieval techniques that respond efficiently to management needs. Staff training time may be saved if the data systems for managing visitor opportunities are...
comparable to the resource data management systems; but is this comparability possible?

**Interpretation programs** are basic to the mandates of most resource managers. To this point, program evaluation has been based upon well-defined planning principles that determined interpretive opportunities, themes and media in an attempt to meet the needs of the 1970's and 1980's. What improvements are required in the management of these activities to address the special public needs of the 1990's and beyond? And how do we incorporate the urgent environmental concerns surrounding our natural and cultural heritage?

I suspect that some of the workshop findings will confirm progress is being made in several areas, by several agencies. For instance, the Canadian Parks Service’s **Visitor Activity Management Process** appears to be responding to at least some of our organization’s overall management requirements. Despite its still incomplete state, I think we are seeing some immediate benefits, such as

- an integrated packaging of services for groups of our visitors;
- a more professional approach to making both long term and short term decisions about services;
- a clearer definition of our relationship to other agencies, cooperative ventures and the private sector;
- a more organized approach to our data management, which is based upon management’s need to know who we serve, what we provide and how well we provide it.

There are holes in the process that need to be filled, to modify it as we learn and develop new skills. I hope a healthy review and discussion of VAMP, VIM, LAC, and ROS here at the University of Waterloo will help us all to learn the relative strengths of each and how they can enhance management strategies.

I have been addressing you, the participants, and this conference as if all our important work happens on the ground, inside the boundaries of our major land assets. Certainly that work is critically important and occupies most of the attention of our managers in the Canadian Parks Service.

Yet the first part of this conference deals with reading the winds of change. Many of us in Canada were fascinated to enjoy from a distance the remarkable public discussion of the **Report of the President’s Commission on Americans Outdoors**.

We have learned what we could from the exciting strategies developed on the U.S. Forest Service **National Recreation Strategy**, the Bureau of Land Management...
Recreation 2000, and the U.S. National Park Service Challenge for Interpretation. We are very eager to learn even more about these strategies.

In the Canadian Parks Service we are also welcoming an impressive initiative of Vertical Marketing.

It is not my intention to anticipate the presentations on these subjects. I have, however, been personally caught by the similarities as well as the contrasts among these strategies. I read support for initiatives on which there is broad policy consensus, such as

- creating staff excellence,
- improving the presentation and management of resources,
- developing more partnerships and linkages,
- responding to visitor’s needs, and
- solidifying the constituency of support.

Yet the challenge for us, as managers, scientists and senior specialists, is to make sure that the things that we do on the ground are consistent with our great goals, loudly proclaimed.

This is why I am here to listen, to learn and to contribute to a lively discussion while looking for new approaches that work.

What improvements can we make to our management of visitor activities? What improvements must we make to the visitor management process so that we are managing for the visitor, with the needs of the resource properly balanced? What are the new management approaches? Are they working? Do they properly support vertical marketing, recreation, and interpretation strategies?

I hope that this workshop will be the launching platform for a network of exchange between Canada and the U.S. and between agencies, researchers and academics. I hope that, during your deliberations, you will look for low-cost ways of extending the exchange, using the new electronic media, personal friendships made at this workshop and professional and academic connections, to ensure that further progress is widely, rapidly and inexpensively shared.

This is a rare opportunity that we have been given, to share knowledge with some of the original experts in parks and other managed lands in North America. It is quickly becoming our turn, as participants, to make it all worthwhile.
THE EVOLUTION, DIRECTION, AND IMPLICATIONS OF AMERICA'S GREAT OUTDOORS

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INTRODUCTION

"America's Great Outdoors", the USDA Forest Service's National Recreation Strategy, is a conceptual framework aimed at finding imaginative ways to take advantage of outdoor recreation opportunities on the National Forests. Its ultimate goal is customer satisfaction with more, high quality recreation services. The strategy directs employees to assess market needs and look for unique opportunities to provide recreation opportunities while protecting sensitive settings and places. It requires that employees build on Forest Service Plans, programs, and past success. It directs the Forest Service to look outside the Federal budget to modernize facilities, design quality recreation opportunities, and provide interpretation and environmental education with public and private sector partners. The Recreation Strategy, which was developed in response to public demand for more recreation opportunities, is a vehicle to integrate land stewardship with customer service to strengthen and round out multiple-use management on the National Forests. Its implementation will require changes with regard to the workforce, research and technology, the resource base, and the public. Decision-making will become more informed and participatory; researchers will be called on for more sophisticated marketing techniques; more energy and resources will be focused on interpretation and education to reduce depreciative behaviour and supply requested information and more partnerships will be developed to get the job done.

I've been asked to speak today about the USDA Forest Service's National Recreation Strategy - "America's Great Outdoors" - its evolution, direction, and implications.

EVOLUTION

I'd like to start by reviewing the evolution of American business - from a production orientation to a marketing orientation - because I see distinct parallels, not only to the evolution of the Forest Service's (USFS) recreation policy, but also to the recent development of recreation strategies by many government land management agencies.

Immediately after WW II, while most of us baby-boomers were rocking in our cradles, our parents created such market demand for goods like cars and housing
that the industries could produce and sell just about anything with such mass production, the public got big black cars and plain, rectangular tract houses. But times changed and so did market needs. After the initial buying frenzy died down, producers began to focus more on sales - they needed to unload their products. So the "Production Orientation" of the late 40's, which minimized sales and marketing costs, gave way, initially, to a "Selling Orientation", which tried to out-sell, out-advertise, and out-promote the competition. The problem here was that products were frequently oversold - they couldn't live up to expectations which resulted in dissatisfied customers. Repeat business, which was vital to many companies dried up. Eventually, successful American businesses learned that the most profitable, though long-term route was to benefit from customer satisfaction. Today's most successful businesses now have adopted the "Marketing Orientation" providing products to meet identified market needs - products that are tailored for customer satisfaction.

Until fairly recently most government recreation providers were somewhat insulated from market demands. We didn’t depend on recreation receipts to stay in business. In the Forest Service, we were trained to provide certain acceptable levels of use, as defined by us, on Forest System lands. Other government entities did pretty much the same - and for awhile that seemed to work; the public was satisfied with the opportunities we offered. But our customers changed, and their needs changed, and after a while they began to expect us to change, too - after all, not only were they our customers, they were also the owners of the lands we managed! And, we discovered that they had considerable clout!

We began hearing from our customers and our potential customers in a systematic way as each Forest began developing its Forest Management Plan.

The message that rang out loud and clear was to increase wilderness, recreation and wildlife opportunities on Forest lands. The President's Commission on Americans Outdoors (PCAO) reinforced that hue and cry when their report was released two years ago. They found that the demand for outdoor recreation was growing faster than the supply and that the trend would likely worsen as funds for new land acquisition became harder to obtain. It also became clear that we were now facing an era in which America's citizens are losing what they had come to consider great American values: an understanding and love for America the Beautiful. For spacious skies, purple mountains, open spaces, forests and fields; for our history and the lessons we've learned from working against, and successfully with, our environment. Clearly, the PCAO determined that there is a need to instil conservation values in today's youth - 80 percent of whom are growing up in concrete environments with television, drugs, rock-n-roll, and sex as major influences.

So, the message came from PCAO that the federal land management agencies should step up their efforts to define and provide both recreational and educational activities on public lands. The Forest Service was identified as one of the most promising of all the existing federal recreation providers in being able to respond
to public needs in innovative and productive ways simply by rounding out its multiple-use management practices. And for good reason!

After all, the Forest Service manages 155 National Forests and Grasslands. They cover 191 million acres or \( \frac{84}{100} \) percent of all lands in the United States. That is a piece of country as big as California, Oregon, and Washington combined - about 300,000 square miles.

The National Forest System (NFS) is as varied as a strip of land 100 miles wide running from New York City to Los Angeles - plus some.

By law, these are multiple-use lands. They are available for a wide range of uses, including

- wilderness and for timber production;
- oil and gas development;
- fish and wildlife, and domestic livestock;
- recreation; and
- watershed values and roads and trails.

In short, multiple-use lands with multiple values for multiple audiences. If you recreate on public lands in the United States, you probably spend a lot of time on the National Forests - even though you may not know it!

USFS lands are in 45 states and territories.

Forty-four percent of outdoor recreation use on Federal lands occurs on the National Forests (National Park Service 20 percent, COE 27 percent).

The USFS has 156 major ski areas under permit all of which are partly or wholly on USFS lands.

In the lower forty-eight, 83% of all designated Wilderness is on the National Forests.

One out of six acres of USFS land is Wilderness, a total of 42.5 million acres in 35 states.

The USFS manages 374 National Recreation Trails, and administer a total of 103,000 miles of trails on the National Forests.

The USFS manages 13 National Recreation Areas, as well as three National monuments, three National Scenic Areas, 183 research natural areas, and, at last count, nearly 500 National Register historic properties.

The USFS administers 10,000 developed recreation sites that can accommodate 400,000 people at one time.
The USFS has hundreds of thousands of historic and prehistoric sites of which over 150,000 have been identified in surveys covering about 10% of all National Forest System lands.

The PCAO served to organize the recreation community. Congress began to hear more from their constituents, our recreation customers, about the job we were doing and how the Forest Service might be able to provide more opportunities, and more diversity of opportunity, on multiple-use lands. We began to hear more, and new, messages from Congress. When the public speaks - its like the E.F. Hutton Ad - Congress listens. And when the Congress speaks, especially since they hold the financial strings, the Forest Service and other land management agencies listen!

The Forest Service Recreation Strategy, "America's Great Outdoors", should not have come as any surprise to any of us - the market, in this case the American people, demanded it! They demanded that recreation values be considered equally with other values/uses of Forest land. As the Forest Service Chief, Dale Robertson, said in his transmittal letter to all employees, "By 1990, I would like the Forest Service to be known as the people who routinely integrate land stewardship with superb customer service to strengthen and round out multiple-use management on the National Forests. Use this Recreation Strategy to get us there." The Recreation Strategy is, then, an effort to strengthen and round out the multiple-use management of the National Forests based on the new Forest Plans. It is also a marketing strategy. It is an organizational philosophy; a market-driven view of the world; an attitude; and a huge opportunity!

Like American business, the Forest Service has recognized that the best long-term way to accomplish its motto, "caring for the land and serving people" is to focus on customer satisfaction to provide the American people with opportunities and experiences they will value from their public lands!

If we are to provide the spectrum of things people value - from commodities to intangibles like wildlife, or recreation experiences - it is critical to know who our various markets are and precisely what they want!

Our job's not easy. As a public agency we have an obligation not only to our present customers and markets but to our grandchildren and generations of markets yet unborn - an obligation to protect the resource base so they, too, will have options for its future. Defining our myriad of market segments and always thinking beyond today isn't easy - but it is essential!

DIRECTION

So how does the Forest Service Recreation Strategy, "America's Great Outdoors", propose we accomplish this?
The National Recreation Strategy is described in the booklet that went out to all Forest Service employees as "A Conceptual Framework aimed at finding creative and imaginative ways to take advantage of outdoor recreation opportunities on the National Forests by working with people ... its ultimate goal is customer satisfaction with more, high quality recreation services".

In a way, the Recreation Strategy reminds me of a story Mark Twain told about a wise man who was asked what could be done about the threat of German submarines. He replied, "just boil the ocean". When asked how to go about boiling the ocean, the man replied, "Look, it's difficult enough for me to come up with a solution. It's up to you to figure out how to get the job done." When the Recreation Strategy came out, I'm sure many of our field staff felt like the Washington Office had taken lessons from Twain's wise man!

The Strategy does not specifically tell our employees what to do or how to do it. It is definitely not a cookbook! What it does do is provide a supportive environment for our employees to better serve our customer/owners.

It directs employees to find out about market needs and look for the unique opportunities that can/should be best provided on National Forest lands.

It demands that we be sensitive to the significance of settings and places on the National Forests and how they affect people's experiences.

It dictates that we carefully match the people and the places so we achieve customer satisfaction while we protect the resource base.

It requires that we build on Forest Plans, other Forest Service programs, and past good works.

It directs us to look for funding sources outside the Federal budget to modernize facilities, design quality recreational opportunities, and provide interpretation and environmental education.

The Recreation Strategy asks us to open up opportunities for developing, recognizing, and fully utilizing our human resource - and suggests that we finally recognize recreation as a legitimate profession.

And perhaps most importantly, it directs each of us to turn our thoughts to success and fulfill the unique opportunities inherent on each of the National Forests. It is a Strategy to empower every part of the Forest Service workforce to do the things that enable them to "protect the land while serving people".
IMPLICATIONS

The goal of the Recreation Strategy is to integrate land stewardship with superb customer service to strengthen and round out multiple-use management on the National Forests. That’s a tall order with serious implications with regard to (1) the workforce, (2) research and technology, (3) the resource itself, and (4) the public.

I don’t think it takes a crystal ball to see that the attitudes, skills, and traditions of the workforce will change. They already are! While there is still some lingering resistance to the notion that customer satisfaction is an important indicator of successful multiple-use management from some quarters, it is being overshadowed by a groundswell of demand for training in areas like marketing, interpretation, hospitality, and visitor management from the troops in the field! The workforce itself is becoming more culturally diverse and the spectrum of skills is broadening. "People skills" are being recognized as critical to the "Forest Service of the future" which will be a dynamic organization, interacting with myriads of partners, publics, and programs. Policies that unnecessarily block creativity will be eliminated or revised resulting in a more innovative workforce with the flexibility to tailor programs to fit with circumstances. Decision-making will become more informed and participatory.

Researchers will be called on to supply information about how to conduct successful market studies as well as to provide all kinds of insights into user preferences, values, and attitudes. It’s already happening! For example:

The Riverside California Research Unit held a meeting about a month ago to generate a prioritized list of potential research topics to pursue. The meeting was attended by 40 managers and researchers and resulted in the Unit being wholly devoted to developing visitor management alternatives for high-use recreation areas.

In addition to the Riverside Unit, the North East Unit at Burlington, Vermont will place emphasis on customer satisfaction research.

The Southeast Station in Athens, Georgia is providing research on user preferences, satisfaction and evaluation of recreation opportunities on National Forests.

The Intermountain Station in Missoula, Montana is looking at factors that influence the success of information/education programs in changing visitor behaviour.

The North Central Station in Chicago is, among other things, looking at urban minorities’ perceptions of National Forest recreation opportunities. The goal is to identify perceptions, determine how these perceptions influence
leisure activity choices, and to develop National Forest strategies for meeting needs.

Those are some pretty ambitious research projects - and they are requiring a new breed of Forest Service researcher. We're seeing more social scientists joining our ranks to help us do a good job of implementing the Recreation Strategy.

Other things on the drawing board to help us better serve the visitor include a national Campground Reservation System. We hope this will result in visitors being able to better plan trips, and the Forest Service being able to better promote light-use recreation areas and regulate (demarket) heavy-use areas. A customer service training program, "People Serving People", is already being implemented in one Region and will be expanded upon to become a national program.

The Recreation Strategy should result in more Americans using and benefiting from their public lands. But that means stewardship and resource protection become even more significant as increased numbers use the National Forests for increasingly diverse activities. The Strategy states "provide interpretation, information, and environmental education as an important part of outdoor recreation. Promote a better understanding of the long-term compatibility of people living in harmony with nature". It goes on to state, "promote an outdoor ethic among all users". That particular aspect of the Strategy is critical to its long-term success!

Clearly one of the most serious challenges we face as an agency, a nation, and even on a global scale, is to sensitize our citizenry to the complex relationship between the actions of individuals and the long-term health and productivity of the environment.

This is an area in which we must do better! We must focus more energy and more resources into environmental education and interpretation. In the short-term customer satisfaction depends on it! In the long-term our very existence depends on it!

Vandalism and other depreciative behaviour which could be modified if we successfully promoted an outdoor ethic among all users, is a massive problem for land management agencies. As a result, it is not uncommon for over half of an area's recreation budget to be consumed for things like litter removal, facility repairs, and law enforcement. Employee burn-out from the frustration of dealing with depreciative behaviour is an additional hidden cost, resulting in reduced productivity, bad attitudes, inhospitable relationships with visitors, and frequent turnover of personnel.

As an Agency, we must step up our efforts to influence behaviour - instill a land ethic - in our users. Failure in this one area could result in a complete backfiring of the Recreation Strategy!
Towards Serving Visitors and Managing Our Resources

We need partners in this endeavour. We need partners to supplement our expertise, our manpower, and our resources. We need to reach out and join up with those who have the rapport and expertise to capture the imagination of urban populations. We need to jointly develop messages and mediums that influence people from diverse cultures and walks of life. We need to link with special interest and professional organizations like the Society of American Archaeology and the Speleological Society to expand our own knowledge, not only of resource management and protection, but also of resource interpretation.

In many respects, changing demographics should make the job easier. For example, there is no doubt that more of the travelling public is interested in having an educational experience stirred in with their recreation. Trends show that there will be greater increases in "cerebral" tourism than in the thrill-seeking variety. In response to market demand we've instituted a national "Windows on the Past Program" to emphasize the cultural resources we manage.

We also kicked off a Scenic Byways Program last week to meet the demands of that huge market segment that is "driving for pleasure". This program, in cooperation with Plymouth Division of Chrysler and the Forest Education Foundation will help promote, interpret, and develop scenic roads.

But in other ways, changing demographics make the job increasingly complex. With nearly 80 percent of our population in urban environments, and with the cultural mix ever changing, traditional partners and traditional programs are inadequate. They're great as far as they go, but huge population segments are being left out ignorant of the opportunities and responsibilities available to them.

We must focus more attention on our Urban National Forests by putting our recreation and interpretive resources where the market demand is heaviest. We must focus more of our research efforts on learning about our visitors. Undoubtedly our messages will have to be modified to be understood, with different languages and different examples that different audiences can relate to.

And finally "America's Great Outdoors" has implications for the public. The Forest Service conducted the most comprehensive citizen participation effort ever attempted by a federal agency in developing plans for managing the National Forests. That is a continuing process and both we, and our publics are getting better at it! The challenge of the Recreation Strategy is to get the American people and their lands together in a way that best meets their growing and ever-changing outdoor recreation needs. That requires new and different thinking on the part of the Forest Service - but it also requires a lot of help from the outdoor recreation community, private sector, state, and local government and the people! It requires that they take a more active role in helping set priorities and get the job done in addition to monitoring our progress. It requires more and more varied partnerships.
Partnerships not only expand limited government resources, they also allow an expanded ownership and pride in public lands.

The Recreation Strategy's emphasis on partnerships has, in many cases, led us through the back door to marketing. It's easy to find partners when there is a target market or a constituency for a product. If the market need is great enough, there will be partners to donate blood, sweat, money, or anything else that might be needed to get the job done! Our job as professionals is to determine which target markets it is appropriate to serve - which projects help implement our jointly developed plans - and help us manage and interpret the special areas which are valued for their uniqueness, scenic beauty, flora, fauna, cultural, and historical significance.

SUMMARY

The Forest Service is serious about bringing recreation to the table as an equal partner with some of the more traditional forest values. To most of us that's wonderful news. But it also requires that we learn new skills: to listen better and more frequently; to become more flexible; to share responsibility; to focus more attention on interpreting and educating.

In the past year we have made great progress with implementing the Recreation Strategy. Our employees have been empowered and they're doing wonderful, innovative things!

We'll be completely successful in plan implementation - not when we've accomplished the routine backlog of trail maintenance or have built yet another campground - but when we take the initiative to eliminate programs because there is no longer a demand for them, or they are no longer ecologically justifiable. We will succeed when we seek out non-traditional uses of existing facilities; when we become accustomed to a constantly changing mix of objectives; when we actively seek out and welcome ideas, comments, and even complaints from our customers and potential customers and creatively use those ideas in developing our action plans.

In short, the Recreation Strategy resulted from public demand for more focus on recreation, wildlife, historic and cultural values on Forest Service lands. It directs employees to seek out new ways of working with the public to provide those values. And it implies that there will be changes in the skills and diversity of the workforce, in the focus of research and technology, in land management practices, and in our relationship with our customers, who by and large, are the owners of the lands we manage.
THE EVOLUTION, DIRECTION, AND IMPLICATIONS OF
THE INTERPRETIVE CHALLENGE

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INTRODUCTION

It is with great pleasure that I address this Visitor Management Perspectives Conference on "The Evolution, Direction, and Implications of The Interpretive Challenge". I have fond memories of two similar West German conferences dealing with Environmental Education and Interpretation, one in National Park Bayerischer Wald in 1980, and a 1987 World Wildlife Fund - West Germany conference in Wilhelmshaven. Likewise, the ideas and issues raised at the Second World Congress Heritage Presentation and Interpretation 1988 last fall at the University of Warwick, Coventry, England, are still fresh in my mind.

I am privileged to have represented the National Park Service (NPS) on several international trips to India and to Sri Lanka, conducting environmental education and interpretation workshops for World Wildlife Fund-India personnel and training workshops for Sri Lankan Department of Wildlife conservation employees.

The opportunity at an international level to experience reacquaintance with past friends and opportunities to make new ones having similar concerns about conservation, about interpretation, and about the people who visit and support our resources and activities, excites me tremendously. It is a sincere honor to be invited to address this conference and to share ideas. I thank the organizers, especially the University of Waterloo and the Canadian Parks Service, for this privilege.

EVOLUTION

The National Park Service Director, William Penn Mott, Jr., began his administration of the National Park System in 1985 with a special emphasis on Interpretation. He and the ten Regional Directors of the Service formulated a far-reaching 12-Point Plan for the NPS. Half of those 12 points have broad implications for programs in Interpretation:

- Stimulate and increase our interpretive and visitor service activities for greater public impact.
• Share effectively with the public our understanding of critical resource issues.

• Increase public understanding of the role and function of the National Park Service.

• Expand the role and involvement of citizens and citizen groups at all levels in the National Park Service.

• Seek a better balance between visitor use and resource management.

• Enhance our ability to meet the diverse uses that the public expects in National Parks.

**DIRECTION**

To emphasize the importance he holds for Interpretation, Director Mott, in the spring of 1987, recreated an old, but abandoned position for Interpretation at the Washington level. This position, Assistant Director for Interpretation, oversees the activities of my Division of Interpretation and of the Harpers Ferry Center, the NPS interpretive design service center that plans and produces interpretive media for all 350+ parks in the National Park System - media such as visitor center exhibits, wayside exhibits, audiovisual productions, and publications. The Division of Interpretation coordinates the personal services side of Interpretation, including visitor services, training of over 2000 permanent seasonal interpreters, volunteer programs, cooperating associations, and special service-wide interpretive themes. For the first time in nearly twenty years, personal and media services in Interpretation are once again under one umbrella in the NPS.

During this first year of my appointment, I have been working closely with the Assistant Director for Interpretation, my ten regional counterparts, and selected field interpreters to capitalize on the momentum for Interpretation generated by Director Mott. A five-year plan for Interpretation in the National Park Service, entitled The Interpretive Challenge, was completed and distributed throughout the National Park System in May of 1988.

We looked hard at the state of Interpretation in the National Park Service. We found that existing and new pressures increase the difficulty of meeting our dual mandate - to preserve the resources of a diverse park system while providing for public enjoyment. We know that Interpretation can be a powerful management partner in helping achieve the National Park Service mission. Yet, if Interpretation - that unique function of NPS operations that interacts among the resource, the visitor, and park management - is to be effective, it must meet the highest standards of the profession.
Field interpreters and superintendents agree on the organizational and programmatic issues of greatest importance in helping to improve Interpretation. The common recurring issues and concerns identified include

- research, planning, and development for interpretive techniques and programs
- the quality of interpretive services and media
- the role of interpretation in park management
- interpreter training and supervision
- interpretive media production and rehabilitation

So, The Interpretive Challenge presents a strategy to address and resolve five areas of concern, or "challenges". These five challenges are

- Professional Excellence
- Evaluation
- Education
- Program Integration
- Media

The first Challenge, Professional Excellence, examines ways to enhance interpretive program management and staffing, provide research and development, and ensure interpretive professionalism.

The second, Evaluation, looks at ways to bring interpretive services throughout the NPS to a consistent level of quality.

The Education Challenge promotes environmental and heritage education, learning opportunities in urban areas, and outreach programs.

Program Integration directs us to find ways to better coordinate and champion special interpretive initiatives, to enhance partnerships with other governmental and private sector groups, and to promote leadership in interpretation at national and international levels.

The fifth challenge, Media, asks us to find ways to upgrade our interpretive media, to evaluate media's effectiveness, and to achieve quality interpretive facilities and media in all parks.
IMPLEMENTATION

A companion document to The Interpretive Challenge called Implementation Strategies was also created. It suggests over a hundred concrete strategies for implementing the components of the five challenges just mentioned. It was reviewed and evaluated by park and regional staffs last fall to test its credibility and realism.

During the last year, the Assistant Director for Interpretation and I have travelled extensively throughout the National Park System to market The Interpretive Challenge. He personally met with all ten of our Regional Directors and discussed the program. I addressed Chiefs of Interpretation meetings in eight of our ten Regions, and participated in numerous training sessions for NPS interpreters, emphasizing the plan and suggesting ways the parks and regional personnel could and should get behind The Interpretive Challenge. Both of us summarized the program at two Regional Directors meetings in 1988.

The response to the program has been largely positive and several of the proposed strategies are already being implemented. Under the Professional Excellence challenge, my office was charged with the job of publishing a technical bulletin for NPS interpreters. We have just printed the third issue of Interpretation, which deals with "Bringing Magic Into Interpretation". The first issue shown here examined interpretive philosophy in the National Park Service since Freeman Tilden first produced Interpreting Our Heritage. The second issue dealt with the interpretation of critical resource issues. The next issue will highlight the NPS Wolf Education Initiative.

Another proposal in the Professional Excellence Challenge is to establish an Interpretation and Visitor Services Institute (IVSI) to analyze information about visitors' needs and activities, convey the implications, and integrate this knowledge into interpretive planning, training, and park operations. Don Field, who will comment after I am finished, has a long relationship with NPS Interpretation, and is heading a study group to make recommendations for the establishment of the IVSI.

Currently, the most exciting implementation of The Interpretive Challenge for me is a new program housed in my Division called the Visitor Services Project (VSP). Under the second challenge, Evaluation, the plan states

Interpretation deals with impact, understanding, and goodwill - impact of programs on visitor values and enjoyment, impact of visitors on resources, impact of interpreters on park management; understanding of visitors, understanding of resources, understanding of the NPS and its goals, and goodwill between people and organizations. The problem is how to measure impact, understanding, and goodwill.
The VSP is a major program underway in the Division of Interpretation to try to answer these kinds of questions. It is a program developed by Dr. Gary Machlis at the University of Idaho, a Cooperating Park Study Unit in the NPS. (A Cooperating Park Study Unit [CPSU] is a university that has entered into agreement with the NPS to carry on research in areas of benefit both to the university and the NPS. A CPSU normally has an NPS employee duty-stationed at the university). The VSP involves three phases of information useful to park managers: (1) knowledge about the kinds of services, activities, and opportunities available to the public; (2) knowledge about visitors - who they are, where they go, what they do; and (3) understanding the relationship between services and visitors - are visitors needs being met in the most efficient way while protecting resources? In October, 1988, I hired two NPS employees and stationed them at the University of Idaho to learn the program and make it fully functional by 1991.

Another major implementation of The Interpretive Challenge falls under Challenge 5, Media. The Harpers Ferry Interpretive Design Center has just completed an inventory of all media facilities across the NPS. For the first time, we know how many visitor centers we have, how many audio-visual theaters we operate, and how many wayside exhibits we maintain. From this inventory, we also have our first accurate assessment of the media backlog for the Service, and what it will cost to bring it to standard.

**SUMMARY**

Observations after this first year of The Interpretive Challenge are as follows:

1. We feel the effort put into the creation of The Interpretive Challenge has produced tangible results in its first year, but we have a long way to go.

2. Our greatest support for the program lies within the Regional Chiefs of Interpretation, who helped create it. Although field interpreters were involved from the outset in its creation, only 8-10 field areas were represented. Field areas view this and any "initiative" from the central office as suspect. Yet, many field areas have taken on parts of The Interpretive Challenge which apply to them directly. This is what we desire.

3. Budgets are tight, and there is little hope for substantial increases. In fact, Interpretation in the NPS as a whole has lost ground in the budget battle (as has Resources Management and Science) by losing fee revenues due to recent Congressional action. Until proper budgetary support is found, many of the recommendations in The Interpretive Challenge cannot be implemented.

4. For the first time, Interpretation has an assessment that can compete with other assessments like the Natural Resources and Cultural Resources
Assessment Plans. In the past, we did not compete well when asked what our deficiencies were, while other parts of management could with their inventories. We now feel much more competitive within our own organization and within the entire budget process.

The Interpretive Challenge is influencing management and policy decisions for Interpretive Operations throughout the Service. Hopefully, it will influence budgetary decisions as well. I look forward to our week together and in discussing this program and all the others as we search for ways to mutually enhance our missions.
INTRODUCTION

It is a new time for professionals who have the responsibility to manage the natural and cultural resources of this country. Parks are changing. We all recognize parks are constantly in a process of biological and sociological change, and that such places are dynamic ecosystems. But the conceptions of parks are also changing, including the role of such places in a world society.

Parks have been viewed as vignettes of American culture. No longer does this description suffice. It is part but not all of the story. Parks are indeed places to preserve and protect America’s natural, cultural and aesthetic resources. That purpose will remain intact if we become true stewards of resource management. Parks are much more. They are reservoirs for genetic plant material for local ecological restoration, for plant and animal materials to re-inhabit local environments. Parks are places for new foods to feed a growing world population and for genetic material used in medicines. These are places that provide aesthetic vistas along river corridors, and the urban fringe. These places are likewise now viewed as components of regional landscapes as part of sustainable resource development and through tourism as a vehicle considered part of social and economic development. If we are to protect and preserve parks we must embrace a broader conception of the role such places play in our society and the world.

And Interpretation must change as well. Interpretation requires a new mission statement to help lead the National Park Service into the 21st Century. Interpretation must enhance, outline and define these broader conceptions of parks. Interpretation must expand its current communication strategies to address new audiences within and outside parks. The division must, likewise, become more


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interdisciplinary, adding new skills not present and develop a human resource data base to guide its activities. To properly address the challenges on the horizon, interpretation must reaffirm its partnership with the social science research community both within and outside the federal establishment.

Interpretation is a profession, not a discipline, deriving its knowledge from a wide variety of sources such as the arts, theatre, poetry, biology, history, communication, etc. At times, proponents of interpretation have confused its identity and purpose with attributes it is not. Interpretation requires the knowledge base about people, human behaviour and socio-biological systems provided by the social sciences such as sociology, economics, psychology, etc. Interpretation has a vast collection of the tools of its trade, libraries of books, natural and cultural specimens and artifacts, slides, pictures, etc. and is constantly evaluating and updating the quality of its resources, but lacks a data base about the customer it serves. Thus far, interpretation has not developed any uniformly adopted or sustained data base to evaluate its activities. While it is true that interpreters in the '70s made some attempt at evaluation, their qualititative criteria were not acceptable to other areas of management. Several quantitative methods were proposed and tried, but were aborted in part because interpretation did not deem the methods appropriate or accept them as instrumental to their duties and responsibilities. Social science can provide evaluation criteria and process. Further, any evaluation methodology employed within interpretation must include the clientele in the evaluation process. Heretofore, interpretation has been inconsistent about the role people (visitors) play in the performance of interpretive duties and responsibilities. Social science provides such requisite knowledge.

Conversely social science cadre often lack credibility within parks and their knowledge base is inadequately maintained in parks. Interpretation can provide that legitimacy and be custodian of "human resource data base". Social science has been slow to recognize interpretation as a dominant leisure activity and the places where interpretation takes place as a leisure setting. Social scientists would benefit from the observational skills and local knowledge of people provided by interpreters in their research programs. The Interpretation Challenge and its companion document Implementation Strategies provide the rationale for collaboration between these two professional activities within the U.S. National Park Service.

PURPOSE OF PAPER

In the early 1970s, interpretation and social science established the foundation for an emerging partnership. The fundamental goal of the partnership was to improve the communication of natural and cultural history to people in parks. The basic premise underlying the goal hinged upon linked communication in whatever form with audience characteristics and those characteristics required a more complete understanding of people and their behaviour in national park settings. The purpose of this paper is to review the rationale for better cooperation between
interpretation and social science and speculate on three major actions interpretation should take to increase its professional capabilities as a division and increase the understanding of people who visit, live around and support parks and increase successful communication with them.

REVISITING THE BASICS

The fundamentals for building an interpretation program is understanding the audience for whom the program is designed. Over the years numerous social scientists have proposed social science research plans for parks (Machlis and Krumpe 1984) monitoring programs (Field, Johnson and Gramann 1982) and targeted visitor surveys to acquire information about visitors (Machlis and Field 1984, McDonough, Field and Gramann 1977). Regardless of the approach to data acquisition all agree that certain pieces of information are essential. First is a measure of age (Bultena and Field 1981). Age remains a proxy for stage in life cycle and significant cultural events influencing values and preferences for recreation experiences. Second is the social group within which the recreation experience takes place (Field and O'Leary 1973, Field and Wagar 1973). The social context influences individual behaviour, expectations and eventually behavioural outcomes (Bultena and Field 1980, Field, Lee and Martinson 1985). As an example, families of different types utilize interpretation services in different ways (Machlis 1975). Similarly bus tours and oldtimers approach interpretation in a different light with different expectations than a 6th grade school group. Third is ethnicity (Machlis, Field and Van Every 1984). Cultural heritage shapes views of the world, leisure life style, conceptions of parks and recreational experiences (Bultena, Field and Renninger 1984). Fourth is sex; this measure provides a dimension of audience composition and coupled with age and group type provide an indicator of "market" to whom one is delivering the message (Koth, Field and Clark 1985). Finally is the leisure setting within which interpretation action occurs. The historic house, the picnic ground, amphitheatre, visitor center, lawn, church, neighbourhood provide context for the event and definition for the recreation experience (Field, Lee and Martinson 1985). These five factors have been incorporated into market segmentation studies and remain central to "audience segmentation" and clientele definition for interpretation.

These clientele measures when combined with the principles of interpretation have provided essential guidance to interpretation program development and delivery (Field, Wagar 1973). As a review these principles are:

1. Visitors are diverse, and a variety of approaches will be required
   1a. Leisure settings provide the social-biological context for interpretation to occur.
2. Visitors anticipate a relaxed, enjoyable and informal atmosphere
3. Interpretive information must be rewarding to visitors
4. Interpretive information must be readily understood
5. Feedback (i.e., communication from visitors to the interpreter) is essential

Over the years, social scientists studying interpretation have separated visitor characteristics from setting criteria to recognize the significance of "human diversity" visiting parks and utilizing interpretive services and importance of the setting as noted previously to influence the social conditions within which interpretation takes place. The remainder of the principles have been modified in kind but essentially remain intact.

Together characteristics of park visitors and principles of interpretation should guide park interpretation's association with the people who visit parks. Yet a paucity of information about people, systematically obtained remains the practice of the day. After 20 years of social science research within the National Park Service, within University departments of parks and recreation, forestry, etc., no park has a sustained visitor profile, documented visitation patterns, or change in visitation over time and the concomitant picture of changing visitor needs, or desires for interpretive services. As we look to the 21st Century, the basics about people and parks once again loom important as interpreters attempt to articulate the social, cultural and biological importance of parks to a global society.

In the remainder of this paper several recommendations are made --- some old, some new. The remarks are offered to challenge interpretation to think futuristic and create a new vision of an established and revered profession.

1. Interpretation should Develop a Human Resource Management Plan

Tasks which have been suggested for the new interpretation need to be addressed in a planned way. The tasks employ a more specific statement of agency relationship to people, and an importance attached to people in agency activities heretofore not stated. A human resource management plan is suggested.

Resource management agencies such as the National Park Service must decide what their responsibilities to their clients are and what the relationship of people to agency goals and objectives ought to be. Within the National Park Service considerable rhetoric prevails about the dual mission of preservation and conservation of natural and cultural resources for future generations and the public enjoyment of these resources, but attention given to natural and cultural resources vis a vis the human resources factor is unequal. Contrary to popular myth, the human resource receives the lesser management attention, so far as studies and accumulation of a body of information are concerned.

The myth arises from the amount of time and money spent on buildings, roads and other facilities, etcetera, purportedly to "serve people" but most often without a clear idea of how these services actually meet human needs in parks. There is in
fact concerted effort being given to both natural and cultural resource management. Policies and guidelines are in force which direct Park Superintendents and their staffs to inventory resources and prepare a plan for conserving those resources and initiating mitigating efforts to eliminate/remove/resolve problems potentially affecting those resources. But there is no human resource management plan. There are few national policies that define the responsibilities of the park superintendent to the client and those that do exist refer mainly to physical health and safety. There are few evaluation standards to assess how management actions interfere or unduly alter human use patterns in parks. There is no policy which integrates natural and cultural management plans with human resource management plans. Until there is a human resource management plan, management functions cannot be evaluated in any meaningful way.

Interpretation is perhaps the dominant human services function of all divisions. Interpretation interacts with the public not as a problem, or an impact, but as people adapting to a variety of park environments. A human resource management activity with an accompanying plan would be a logical responsibility consistent with the other emerging duties. Responsibility for a human resource management plan would provide the quantitative indicators sought by interpretation to document the services they provide to park management and the American public. A human resource management plan might well be the process whereby a new interpretation emerges within that system depends upon the kind of knowledge a new interpretation can provide.

2. As part of a Human Resource Management Plan Interpretation Should Develop, Maintain and Periodically Update "A Human Resource Basic Inventory"

Considerable attention has been given to completing a basic inventory of natural and cultural resources — the objects for which an area is set aside. Yet it is the human species which is the key actor in system change and impacts upon those natural and cultural resources. Careful management requires a basic inventory of human populations in parks, their distribution, concentration, and succession such that change and impact can be assessed. For example, monitoring of visitor use is not only essential for changing interpretive exhibits, talks and walks, but also for assigning maintenance activities and law enforcement patrols. Once completed, a human resource inventory becomes the data base by which a new interpretation monitors the human system over time and generates information for various park functions, concessions and visitor groups alike about people in parks and human adaptation to the system.

3. Interpretation should establish Interpretive Institutes

Interpretation should expand its collaborative relations with the university community. We all recognize the world around us is changing. The world of the Park Service is also changing. There is not a critical mass of social scientists within
the organization to provide the extensive and diverse data base about people and parks nor a satisfactory research and development (R & D) arm to provide Interpretation with the latest in communication technologies or strategies. Further, the complexity of social and biological issues within parks and resource development adjacent to parks calls for greater participation by interdisciplinary teams. It is recommended that Interpretation establish Interpretive Institutes throughout the country and perhaps one institute jointly sponsored with the Canadian Park System.

An Interpretation Institute is envisioned to be an umbrella structure under which a series of "Interpretation Centers of Excellence" operate. The purpose of the Institute is to create new knowledge, provide for professional training, examine new communication technologies, develop new program standards for Interpretation, and to prepare a strategic plan for the future of Interpretation in the National Park Service.

A PROPOSED STRUCTURE

Linking "The Interpretation Institutes" with the existing cooperative park studies unit program (CPSU) initially has many benefits. First, the CPSU program has a 20-year history of operation; the benefits and pitfalls of such a NPS/University partnership are known. Second, the infrastructure, contracting and budgetary mechanisms, are in place. Therefore Interpretation can join an existing operation without having to pay all the administrative costs for program operations.

Interpretation like science requires partners to create and package the knowledge that undergirds National Park Service philosophy and the management of natural and cultural resources comprising the National Park System. The educational establishment has been a constant ally of the Service since its inception. The Cooperative Park Studies Units are in essence a formal agreement (called cooperative agreement) between the Service and a university to conduct various activities in concert. The agreement implies that both institutions, the Service and the university are required to carry out a task. The CPSU concept embraces the functions of research and education/professional training and outreach on a sustained cooperative basis over time. The general agreement is usually for five years with five-year renewals possible.

A general practice of the Service has been to assign scientists and other professionals at a university to conduct research, work with university faculty on joint research projects in parks and facilitate research and professional activities of university colleagues in National Park Service areas. The idea for these programs and stationing an NPS scientist on a university campus is to broaden the base for acquiring scientific information, complementing the existing network of scientists stationed in parks. Universities are in the business of creating new knowledge. The laboratories, libraries, computer facilities, communication facilities and other support
services necessary for conducting scientific inquiry are in place. The Service need not duplicate these facilities.

The same logic would hold for the Interpretation Institute's Centers of Excellence. The CPSU program is a model to be explored.

- Parks served by CPSU benefit from the availability of specialized help from both NPS professionals at the Unit and university faculty --- major disciplines not present in the Service are available on call to assist park interpreters on specific problems.
- Design of new educational materials --- CPSU staff have long history of working with Park staffs producing new programs for specific park visitor clienteles. Two Paths written by Whitman Mission staff and produced by CPSU staff accompanies a movie designed by CPSU for that historic site. CPSU staff have produced park brochures on Roosevelt Elk, the role of fire in the ecosystem and designed many new model slide tape programs, and booklets for public consumption.
- New computer technology, GIS capability, satellite links, radio educational networks offer modern communication technologies to link parks with universities and parks with parks.
- The Visitor Services Program providing visitation statistics for park management was designed at a university-based CPSU program. Data banks for monitoring visitation change is a possible responsibility of these units.
- Workshops, seminars, special NPS symposia occur on a regular basis through CPSU programs.
- Training opportunities are provided by CPSU staff in concert with universities for NPS professionals.

FUTURE DIRECTIONS

Within the Interpretive Centers of Excellence, an orientation to the future is an imperative. The operation of interpretation, topics researched, and orientation of the division in the 21st Century should all be addressed without restriction. A sampling of themes for Interpretive Centers of Excellence follow.

A. Given the recommendations of the NPCA Task Force on Science in National Parks, a Center might assess the environmental educational goal recommended. How might it be achieved in current nps organizational structure? What would be required in terms of personnel and resources to undertake a new natural resource educational outreach initiative? A Center should take a strong look at the current status of environmental education. What is it today and where is it headed? How is it linked to various instructional programs? How might it be adapted/modified for NPS? An assessment is needed to identify the current status and future
directions of environmental education and how such programs might relate to interpretation either as employed in parks or in the community. Also, how might current interpretation programs and effort enhance environmental education efforts within environmental organizations and other governmental organizations?

B. These Centers should develop a plan for regional linkages to interpretation divisions in the various parks and forests (Federal, State and local). How might it be achieved? There should be developed a series of networks in regional locations to facilitate interpreter to interpreter interaction and to provide feedback, guidance, counsel, input into what these Centers might do for a regional system of interpretation. An informal or formal board of directors to guide the Center might be created from this Federal, State, local partnership of professionals.

C. These Centers should learn from the international research and extension programs structurally organized within USDA and the Land Grant System. Taking the Midwest, for example, we have an associate dean for international programs at each of the midwestern university institutions. These programs are vast with excellent budgets. The purpose of many of these programs is to conduct research and technology transfer in agriculture and natural resources in developing nations. The University of Wisconsin is linked with the Midwest University Consortium on International Activities, MUCIA. Programs such as sustainable resource development, park and regional issues, maintenance of genetic plant stocks in preserves in foreign lands are all topics underway in the international programs. Interpretation should look at these resources within the University and assess how such information might be brought into a park and into the National Park System to help us understand the Man and Biosphere program, to help us understand genetic diversity, to help us understand ways to implement sustainable rural development and ways in which a park can work with its neighbours on rural development programs. As part of this international examination, a white paper should be prepared examining the relationship of interpretation with the National Park Service international programs and university international programs. In the international community, park conservation and rural sustainable development are being discussed together as a strategy. Interpretation should consider a similar approach in U.S. Parks.

D. Regional Ecosystems

Conservationists are looking at the natural world with a new vision for the future. Rather than arguing for the preservation of lands and waters in isolation from development, conservationists are proposing interdependent strategies of preservation and use, conservation and sustained development. Given global systems and the importance of
genetic diversity, a strategy for preservation and sustained resource development at a regional systems level merits examination. While ecological restoration, ecosystem models are helpful, the planning process at landscapes or regional systems is underdeveloped, the relationships of parks to adjacent forest lands, urban settlements not well defined. Parks are part of regional resource development and regional systems. Interpretation has an opportunity to assume leadership in collecting, synthesizing and portraying park regional system ideas. Centers of Excellence could be an appropriate forum for the discussion of communication strategies for parks, ecological management and regional resource systems.

E. Another area of activity that should be undertaken by these Centers is a position paper on applied research in land management agencies. Such a paper would help university professors understand how to work with the National Park Service and expectations of park management for resource information. Most university people are basic researchers, not applied researchers. The translation and communication of their basic research is the primary information that the Park Service desires. Interpreters can help facilitate this process of communication between scientists and park practitioners. An applied seminar for university scientists might be appropriate. "Working in Parks: The Applied Tradition" is one potential theme.

F. USDA/Extension Interpretation Partnership
The National Park Service should examine more formal relationships with the U.S. Extension Service. This is an established network of professionals in Washington, D.C., the Land Grant System, and in the majority of counties of the U.S. who have the primary responsibility to transfer research information to local clientele groups on a wide range of natural resource topics. Three things come to mind. First, they have a great deal of experience on the technology transfer process, and the transfer of science into practical publications, programs and activities. Secondly, these extension agents have a tremendous expertise on how to identify clientele groups, do some target marketing with these clientele groups, and developing programs for specific audiences. The Park Service should capture some of this expertise to use with their own clientele groups that live around and about national parks. Thirdly, extension personnel and their university research partners are currently developing a nationwide program on rural development --- rural revitalization. Many of these rural development issues are appropriate to regional locations where national parks are located. Park interpreters should bring these professionals into their network so that the information currently available can guide both park managers and community leaders on social and economic development.
The Forest Service has a strong relationship with Extension in the Midwest and relies upon university-based extension specialists for professional training and program information. Extension specialists within forestry schools around the country, and located in Washington, D.C., serve both State and Federal clients. Why not develop a systematic and systemwide effort to disseminate natural and cultural resource materials based on park preservation, conservation themes through the Extension system? Why not utilize this Extension vehicle for distribution of some of the environmental education/interpretation materials developed by the National Park Service? The National Park Service should develop a plan whereby Extension becomes a partner in their outreach activities. These interpretation Centers of Excellence around the country could be the catalyst to develop information with park interpreters for distribution within the Extension system.

G. Telecommunication Network

The National Park Service should examine new technologies for communication of natural and cultural history to visitors and development of educational programs for park staffs on site. This system has been developed in a number of states and provides immediate instructional access to a variety of programs regardless of origin of the program. The telecommunication network in the state of Wisconsin, for example, is being developed in every county and will have access to the entire midwest consortium of universities. There is no reason why the Service could not tap into that system to provide information for network (a transmitter of information), and also examine the system as an opportunity to develop a comparable system for a group of parks so that they might become a receiver of information on topics of interest. Telecommunication networks provide a great opportunity to build and expand our clientele contacts and would facilitate the director's goal of expanding public contacts, developing better relations with our local publics and a very good system to provide information for Park Service families on topics ranging from personal and financial planning, to self-instructional courses for college credit. The Centers of Excellence should prepare a plan for incorporating telecommunication capabilities into basic park and interpretive operations.

H. Tourism

USDA Extension Service has developed a number of agents responsible for assessing tourism opportunities within regions of the country. The Midwest established Recreation Resources Centers to assess tourism development opportunities. Included within their work agenda is maintaining a data base on various market segments. The National Park Service should develop links with these Centers to obtain up-to-date
clientele information visiting a given geographical region, clientele use patterns within a given state where a National Park Service park or monument is located. USFS utilizes this information in Forest System planning. Most states have tourism marketing and planning groups who generate information on tourists to the State. The Centers could collaborate such information and disseminate to parks.

I. Exploring New Knowledge
The Centers should spend some time on examining new technological development in communication for national park interpretation. A think tank of professionals could prepare periodic position papers on new ways to communicate natural and cultural history and also develop position papers on the skill development required by personnel to adopt these new technologies into their operating programs. Further, these centers should be expected to develop information packets on new knowledge for park management. New work on restoration ecology provides a process for reestablishing native vegetation where lost. Interpreters might be sent to the University of Wisconsin to become knowledgeable about restoration ecology and then help develop curriculum materials for use in NPS training. The National Park Service must expend additional human resources for gaining the rapid transfer of new knowledge into park operations.

J. Interpretation Cadre/Think Tank
A position paper might be prepared by one of the Centers of Excellence in combination with the Washington office staff on a sabbatical program for interpreters as part of the personnel development activities noted in the interpretive challenges. This could be combined with the Albright Award. Interpreters on detail for short periods of time are great morale builders and excellent vehicles for knowledge acquisition and transfer to NPS operators. A position paper developed around this concept would be a useful tool as interpreters assess their professional needs for the next century to operate park programs. All Centers of Excellence should develop a training opportunity for interpretive specialists. In addition, placing interpreters on a university campus to learn new skills, they can likewise prepare special reports for their region's interpretive programs. They can, in other words, learn and contribute to knowledge at the same time.

K. On Employee Development
As noted in Interpretive Challenges, one of the goals for interpretation is to provide alternative career development options for interpreters. Throughout this paper, employee development has been noted. The range of opportunities is endless, the form in which employee development occurs wide ranging. A second question is what is the role of
interpretation in employee development issues? Previously in a paper called "Thoughts on a New Interpretation," a suggestion was made that interpretation might be the division around which a wide range of information is collected on employee career development issues, park organizational issues for the future for all NPS employees in a park (Field and Machlis 1985). Interpretation could be a model for other divisions to employ career development programs.

L. Research Initiatives in Interpretation: An Unfinished Agenda

1. There should be a panel study of selected clientele groups to determine their use of parks and needs for interpretive media and printed materials. Interpretation must learn to target its communication efforts. For example, the aircraft touring groups are a large visitor population in the West, particularly Grand Canyon. What do we know about these groups? What kind of information is provided to these tour groups in explaining the natural and cultural resources of parks? Bus tour groups are another dominant clientele group that utilize national parks. Interpreters must do a better job of understanding the style in which these people travel, the time frame of their visits, and develop interpretive material to be part of that travel schedule? Panel studies of other clientele groups that target markets in the specific region in which a park is located should be undertaken as a regular part of interpretive operations.

2. Survey of Interpretive Skills and Personnel
   We need a mini-study of the cadre of interpreters present in the National Park Service today. Who are they? Where are they located? What are their career goals? What is their training? What kinds of employee development program activities do they think is necessary? This would build on the University of Washington study conducted in 1972 and 1979 and provide a baseline of information for interpretation to use as it attempts to evaluate its program development activities over the next five to ten years.

3. Research on New Product Development and Technology Transfer
   Here we would want to take an opportunity to do some research on a particular technology transfer, maybe telecommunication is one such arena. Do some market testing in some sample parks to see how it works, assess its value, write it up, and disseminate it throughout the interpretive division. The point should be made here that I am approaching the consortium idea as basically new ideas and thrusts for interpretation. Certainly here we need to examine new ideas and content and media for the use of interpretation.
4. The NPS should undertake joint research with the U.S. Forest Service on a number of projects. One would be urban forestry. The Forest Service has an extensive network of people in contrast to the National Park Service focusing upon metropolitan ecosystems or urban ecosystems and urban forests, fragmented forests within the city and attempting to develop information and understanding of the people who utilize and live around those forests. The NPS could use such information to build environmental education program material for urban National Park Service residents and visitors.

SUMMARY

In this paper an attempt has been made to address the partnership of interpretation and social science and outline opportunities for the future. Clearly an unfinished agenda remains which even if addressed only in part will strengthen the role of interpretation within National Park Service operations and provide better understanding of the clientele the organization serves. This conference for which the paper was prepared likewise has provided a positive forum to outline future conditions facing park and forest management in the United States and Canada. The interagency and interdisciplinary collaboration provides promise for a comprehensive program of research on people and resource issues among federal agencies leading to joint program developments in interpretation and environment education. As the agencies attempt to address global climate change, genetic diversity, sustainable resource development, ecosystem restoration and management, interagency cooperation will be required.

LITERATURE CITED


INTRODUCTION

The Public Lands managed by the Bureau of Land Management (BLM) hold a unique place in the delivery of outdoor recreation opportunities to the American people. Largely unrecognized by the majority of the public is the fact that there are 271 million acres of BLM managed Public Land in the eleven western states and Alaska - a land area as large as the combined acreage of the National Park and National Forest Systems. From hunting and fishing to off-highway vehicle (OHV) activities, landsailing to whitewater rafting, back-country exploring to long-term camping, the Public Lands offer a range of outdoor recreation opportunities that rival any other federal or state-operated system. The Bureau's role in providing outdoor recreation can be traced to the nature and diversity of resources found on the Public Lands and to a management philosophy which focuses on personal responsibility, self determination, and a minimum of restrictions.

During much of the 1970s and throughout the 1980s, the Bureau of Land Management was confronted with a number of major land-use issues which demanded special management attention. While the resolution of these issues had considerable short-term impacts on BLM's capabilities to accomplish its broad multiple-use mission, the effect of having to resolve them on a priority basis diverted attention away from other critical issues, resulting in important long-term consequences as well. Examples of these high priority issues include the Natural Resources Defence Council lawsuit concerning the Bureau's livestock grazing program, the energy crisis of the late 1970s and early 1980s, the proposed BLM/USFS interchange, the Rocky Mountain Oil and Gas Association lawsuit on interim wilderness management, and the completion of legally mandated wilderness inventories and studies.

During this same period, the BLM was experiencing the effects of another widespread land use activity: the impact of over twenty years of steady increases in recreational use on the Public Lands. Concern was voiced by Bureau management and staff that not only were important natural resources critical to the delivery of outdoor recreation being impacted by recreation activity and other land-use
Towards Serving Visitors and Managing Our Resources

programs, but the public's image of BLM as a multiple-use agency was eroding. Looking into the future, BLM managers were increasingly alarmed as they saw little relief. This concern was best articulated in recreation studies carried out as part of the President's Commission on American Outdoors (and others) which indicated that important economic and demographic factors influencing recreation demand in the U.S. were changing. The nation's population was shifting to the urban centers of the West and South. A greater number of Americans were at or near retirement age. Average family incomes were increasing and the share of disposable personal income spent on recreation was also higher. The commission identified additional factors: new technological developments in outdoor equipment; changing social values focusing on health, fitness, environmental awareness, and family togetherness; and reduced leisure time and mobility. All had a significant effect on future recreation demand. With 40 percent of the Public Lands managed by BLM being within an overnight drive of the 16 major population centers of the West, it was clear that BLM was directly in the path of increased pressure for outdoor recreation. If BLM was to successfully meet the challenge, a major redirection in management priorities was necessary.

A second concern affecting the future of outdoor recreation on the Public Lands was a significant downturn in the economic picture of much of the West. In the Rocky Mountain states, communities which once depended on the production of energy resources from the Public Lands were facing severe hardships as a result of depressed world-wide energy prices. In the Pacific Northwest, nation-wide declines in home building resulted in a general slowdown in the timber industry. In both regions, communities began to look for alternative sources of income to sustain their economies. Many turned to outdoor recreation. They found that recreation did not require large investments of tax dollars and/or public services to be successful and potential economic returns to local economies were considerable. Because of the large acreage of BLM-administered lands in the West, BLM managers determined that the agency could (and should) facilitate states and local communities in meeting their economic recovery objectives.

Together, both the need to focus on the challenge of managing outdoor recreation and the desire to assist in the economic recovery of the West moved BLM to reassess its mission as a multiple-use management agency. Early in 1987, after much discussion, the leadership of the Bureau of Land Management made the critical decision to develop a comprehensive long-range policy to guide the management of outdoor recreation on the Public Lands. Early in 1988, the Director of the Bureau of Land Management formally approved the agency's recreation initiative: RECREATION 2000: A STRATEGIC PLAN. The purpose of the plan, as stated in the Director's message to all Bureau employees, was to "... provide a clear statement of BLM recreation management policies and goals" and to make recreation "...an equal partner within the family of multiple-use management". With his adoption of the plan, the Director laid the essential groundwork for the management of the Public Lands for the 1990s and beyond.
RECREATION 2000: A STRATEGIC PLAN

With this background in mind, I would now like to go into RECREATION 2000 and discuss with you some of the key points of the strategic plan. Later, we will take a look at where BLM intends to focus its implementation efforts.

Recreation Policy

From the very inception of RECREATION 2000: A STRATEGIC PLAN, BLM decision-makers felt there was a need to clearly define the agency's role in the delivery of outdoor recreation. How should BLM distinguish itself from other recreation providers? What kinds of recreation experiences will the Bureau emphasize? For many in the agency, the most commonly held belief was that the BLM provides recreation opportunities that are characterized by wide-open spaces reminiscent of the Old West. BLM policy should continue to concentrate on a course of action that insures the public has an opportunity to escape from crowds and be unhindered by intensive recreation management constraints.

At the same time, others in BLM recognized something that the public had already discovered. The outstanding character of recreation opportunities found at some locations on the Public Lands made them extremely popular. BLM must provide a level of management which meets the demands placed upon these areas to ensure their outstanding natural resources are protected. At the same time, BLM must serve the needs of the growing number of people who expect to use these areas. In some cases, such as in the Imperial Sand Dunes in southern California or the Parker Strip along the lower Colorado River, these intensively used areas often satisfy public recreation demands that cannot otherwise be met on lands managed by other federal agencies or provided by the private sector. For BLM to be successful in establishing its long-range recreation policy, it was imperative that the agency's "dual role" not only be kept in mind, but fully recognized by all those involved in the making of policy. It is important to remember that recreation use is the RESULT OF INDIVIDUAL CHOICE and it WILL CONTINUE TO OCCUR WHETHER OR NOT WE MANAGE IT.

After many months of discussion, agreement was reached on the recreation policy BLM was to pursue for the remainder of this century. RECREATION 2000: A STRATEGIC PLAN identifies the agency's overall policy regarding the management of outdoor recreation as

The BLM will ensure the continued availability of Public Land for a diversity of resource-dependent outdoor recreation opportunities while maintaining its commitment to managing the Public Lands as a national resource in harmony with balanced multiple-use.
Towards Serving Visitors and Managing Our Resources

While there appears to be a lot of what some may call "fluff" in this policy, there are some important points on which I would like to elaborate. The first of these points is diversity.

BLM will provide and maintain a wide diversity of recreation opportunities on the Public Lands. Not only will we continue to make the Public Lands themselves open and available, we will also continue to accommodate the widest possible variety of recreation activities. Of course, we fully recognize that not all recreation activities are compatible with each other, nor is all recreation use consistent with our other resource programs. However, as a "system" of public lands, we feel that our strength is in our diversity.

The second of these key points is resource dependency. The BLM will provide recreation opportunities that are resource dependent. That is, recreation opportunities will be provided when they are tied to or dependent on the presence of land and water resources on the Public Lands. While BLM is not in the business of creating opportunities such as swimming pools or golf courses, recreation facilities including campgrounds and launch facilities will be developed when they are essential to provide for the enjoyment and protection of the resources on the Public Lands.

The final element of BLM's recreation policy I want to discuss is balanced multiple-use. The Bureau of Land Management is charged by the Federal Land Policy and Management Act to manage the Public Lands according to the principals of multiple-use and sustained yield; that is, a combination of uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources. These resources include range, mineral and energy development, fish and wildlife habitat, wilderness, cultural and historical values, timber, and outdoor recreation. Recreation cannot, and should not, be our sole focus. However, recreation is what brings more people to the Public Lands than any other use. Through our outdoor recreation program, we feel we can showcase multiple-use management to millions and help diversify the economic make-up of many areas of the West. It is the BLM's contention that recreation use is compatible with multiple-use management. More importantly, RECREATION IS A CRITICAL COMPONENT OF MULTIPLE-USE.

In addition to these three key policy elements, RECREATION 2000 defines other specific policies designed to guide Bureau managers in carrying out the agency's recreation management objectives. These include policies concerning resource monitoring and protection, visitor services, partnerships, maintenance, construction, planning, use limits and allocation, special recreation permits, fees for the use of the Public Lands, land ownership and access adjustments, tourism, and professional development.
Challenges for the Future

Moving from policy to strategy, RECREATION 2000 also identifies a number of challenges BLM faces which must be overcome if the agency is to begin to make a significant difference in the way the Public Lands are managed for outdoor recreation. Because the public has an inaccurate perception of the Bureau of Land Management and the role the agency plays in providing recreation opportunities, our first challenge is to improve public service by placing a greater emphasis on our recreation management program and those programs which support outdoor recreation. BLM has a tremendous opportunity to improve its image, not only with constituents and traditional users, but with the millions of Americans who come to the Public Lands each year for outdoor recreation. The visitor is not only influenced by the recreation opportunities the Public Lands provide, but how the agency performs its larger multiple-use mission. The perceptions and sense of ownership the visitor takes home is easy to form. However, if BLM is not up to the challenge, these perceptions may be difficult to erase. As the television ad says, "You never have a second chance to make a first impression". In the business of managing outdoor recreation, this axiom is all too true.

RECREATION 2000 identifies additional program challenges. For BLM to be successful, we must do the following:

1. **Provide better information and interpretation service.** To meet this challenge, BLM must maintain a visible on-the-ground presence, improve public knowledge and awareness, assist visitors and offer them a safe place to recreate, meet identified resource protection goals, and direct users to recreation opportunities where we are prepared to manage use. This final aspect must be done both in the field and before the visitor leaves home.

2. **Assure resource protection and monitoring programs are initiated and carried out.** To accomplish this we must emphasize our on-the-ground presence, implement and/or complete high-priority activity plans in congressionally designated areas such as Wild and Scenic Rivers, National Trails, National Recreation Areas, and BLM Special Management Areas. We will also have to implement protective measures such as patrol, improved use supervision for permit compliance and fee collection, and improve our permit-issuance capability to manage and protect sensitive recreation values by allocating visitor use.

3. **Improve public access and identify opportunities to enhance the management of Public Lands by adjusting land ownership patterns.** As a result of over 200 years of land disposals, BLM must now seek to improve public access to those remaining public lands. To accomplish this task, agency direction will focus on exchanges and cooperative public/private efforts. When and where appropriate, we must be able to take advantage of acquisition opportunities utilizing the Land and Water Conservation Fund.
4. Maximize effective use of partnerships and volunteers when it enhances our ability to manage recreation opportunities. To meet this challenge, BLM will work to develop and culture cooperative relationships with other federal agencies, state and local government, recreation organizations, interested individuals, and the private sector. Our emphasis will be on improving recreation opportunities to the public, providing greater recognition of the Public Lands, and making use of challenge cost-share opportunities to leverage available funding and manpower. In terms of volunteers, nearly 40 percent of all volunteer time donated to BLM is in outdoor recreation. In 1988, over 190 work-years, worth $3.3 million, were donated. We must expand our efforts and look for new and different ways to involve the public in the management of outdoor recreation.

5. Improve and/or develop a better relationship with the tourism industry. Not only must BLM promote recreation opportunities on the Public Lands, we must also aid local tourism interests to stimulate economic growth where it occurs. Tourism is the number one employer in 7 of the 11 Public Land states and is the fastest growing industry in the United States in terms of number of new jobs. Because tourism (recreation) is more "recession" proof than our traditional industries, it represents new dollars in the local and state-wide economies. The public will continue to travel even when the general economy is in decline.

6. Improve and maintain developed recreational facilities. We must take a hard look at which facilities are needed and which are no longer necessary to meet program objectives. A concerted effort is required to bring developed facilities up to standard to meet health and safety objectives and to avoid continued degradation and loss of significant federal recreation investments. Facility construction might assess public need in view of trends, conditions, and costs of operation.

7. Manage a permit/concession program that assures resources are allocated in an equitable manner and yet are protected from over-use. It is imperative that we continue to operate a concessions program that provides a fair economic return to both the public and the private sector.

Implementation - The Ultimate Challenge

Within the last few weeks, the Bureau completed the development of an implementation plan for RECREATION 2000. Priorities are directed at viable actions that have immediate impact. Based upon comments from the field and the direction given by the leadership of the Bureau, emphasis will be directed at actions which 1) establish a comprehensive Budget/Marketing Strategy; 2) improve service to our visitors; 3) maintain existing recreation facilities, and; 4) improve our capability to protect essential recreation and other natural resources. To the extent that they support the above priorities, actions which enhance Partnership and
Volunteer efforts and improve Land Ownership and Access Adjustment need will also be given priority consideration.

Summary

The Public Lands managed by the Bureau of Land Management occupy an important place in the delivery of outdoor recreation to the public. With over 57 million visits occurring in 1988, the BLM is a major provider of outdoor recreation, especially in the West. However, even with this apparent popularity, the Public Lands are still not well known. RECREATION 2000 provides a historical look at BLM’s role managing Public Lands. The plan also highlights where BLM intends to concentrate its efforts in agency programs related to recreation. RECREATION 2000 focuses on clarifying the agency’s long-range recreation policy by establishing program direction and laying down a workable framework on which to build a viable implementation strategy. The plan represents a revitalized approach to managing the outdoor recreation resource as one of the principal multiple-uses of the Public Lands - an approach which will enable BLM to effectively meet the public demand for outdoor recreation. Through RECREATION 2000, the Bureau of Land Management hopes to create a better public awareness and understanding regarding the importance of outdoor recreation resources and the role the Public Lands play in providing for the needs of the American public.
VERTICAL MARKETING

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INTRODUCTION

Organizational change is not easy at the best of times. And it is certainly less easy when the myths and traditions of an agency may seem by some to be up for grabs; lines of authority and priority setting are being altered; there is heavy competition for staff and funding; and organizational goals and objectives may not be clearly articulated, at least not in operational terms.

I am not one who likes to spend long periods of time refining definitions of marketing. There are countless others who have done so and whose wise counsel I accept. Suffice it to say that I simply think of all this as a way of having the public help us identify program problems and solutions and keeping them utmost in our minds during program delivery. It might, nonetheless, be helpful for you if I outlined the key program management issues that gave rise to the formal adoption of marketing by the Canadian Parks Service, and the evolution which has taken place since that time towards the identification of key marketing objectives and strategies for the organization.

BACKGROUND

The Canadian Parks Service’s national marketing function was created in 1986, with development and formal approval of the function’s mandate in the spring of 1987. This followed several years of observation, both inside and outside the program, of the need to integrate a marketing orientation into program planning and operations. It also followed the emergence of Park Service Planning; the 1985 Parks Centennial, and the 1985 National Superintendents’ Conference, at which the adoption of marketing was recommended as a strategic and communications planning tool.

More specifically, it was hoped that marketing would contribute towards achievement of the program’s mission by pursuing

- improved client service
- new markets - both visitation and constituency building
- enhanced public awareness and support for national identity
- support for tourism growth and economic development, and
- effective use of capital and operating resources
Towards Serving Visitors and Managing Our Resources

These are important program goals, to be sure. But there are even bigger arenas in which our program, and probably your own, are today being called on to play a part.

In Canada, environmental issues have taken on a particularly high priority in the public's mind and on the federal political agenda. Even beyond our country, the United Nations' endorsement of the Bruntland report on sustainable development, "Our Common Future", has brought into sharp international focus the need for economic development and sound environmental management to go hand in hand. Visitors, tourists, the tourism sector, is where we, and you, can lend a helping hand towards achieving such lofty goals.

Increasingly, we see an array of once unlikely partners - politicians, environmentalists, tourism operators, peace activists, educators, and the travelling public - looking to tourism to achieve understanding and appreciation through increased awareness. Canada's esteemed former ambassador to the United Nations, Stephen Lewis, said the following on this subject at the recent Global Conference on Tourism: A Vital Force for Peace:

"Tourism, if conducted thoughtfully and sensitively, need not create additional pressures on the planet. ...There is no inconsistency in combining the incentives of business with social responsibility and enlightenment."

What we are striving for, then, is to conduct our business with a view towards enlightened environmental soundness - managing stewardship and access in a way which encourages shared experience while protecting the resource.

Okay, then, how do we seem to be doing? Well, despite large-scale capital and operating expenditures and new park acquisitions over the past twenty years, overall visitation to the parks has generally declined since 1980. Research has also shown that although the Canadian public is generally aware of the Parks program, national recognition of the extent of the parks system, and of specific parks other than Banff, is much lower than expected or desirable. Further, there are suggestions we are thought of more as a series of campgrounds across the nation than recognized for the majesty of the resources we protect.

These are only broad indicators, but the question for us is what is behind them and what are the implications for the program now and for the future.

THE IMPORTANCE OF CUSTOMER SERVICE

It is important for us to know whether the people who visit our parks feel well served, or could be better served. Visitor satisfaction is very important to our marketing effort. Further, given the importance of work-of-mouth endorsement,
our visitors play a very central role in crafting our corporate image and carrying our message to those they come in contact with.

We also need to know why people aren’t coming to the parks. Is it something about them? Is it something about us? Is it something we can address or not, and how? But let’s look first at customer service.

Customers, in our case visitors, who receive superior service often think more highly of the product they have purchased. Conversely, those who receive poor or indifferent service don’t come back. This is as important for agencies like ours as for any in the private sector.

I was recently at a seminar where the following results of research by Technical Assistance Research Programs (TARP), of Washington, D.C. were presented:

**Reasons Why Customers Quit**

- 1% - die
- 3% - move away
- 5% - influenced by friends
- 9% - competitive reason
- 14% - product dissatisfaction
- 68% - quit because of an attitude of indifference on the part of an employee (poor service)

And that’s not all. The research estimated that 26 out of 27 unhappy customers don’t complain, they simply don’t come back. Put another way, one complaint represents 27 unhappy people. Of those who complain, 91% don’t come back because their complaints are poorly handled.

TARP also estimated that unhappy customers tell at least 10 other people. Happy customers tell 5 other people. The potential opportunity cost of making a customer unhappy, then, is 16 lost customers:

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Clearly, customer relations and the employees who have a direct service relationship with our, or your, visitors are central to program success. Some companies emphasize this by drawing their organization charts as inverted pyramids with customers and front-line contact employees at the top, followed by supervisors, middle managers and finally, at the bottom, senior executives.
An organization chart like this implies that each level of management supports the next, and everyone supports the customer.

CAN A SERVICE AND MARKETING ORIENTATION APPLY TO GOVERNMENT AGENCIES?

I recently read the following:

"If there's anything a public servant hates to do, it's something for the public ... most of them see themselves as in positions of bureaucratic influence over the public rather than at the disposal of the public."

We fail to realize that public sector customers can quit. They can stop supporting us. And if we are not seen to be playing an important role on behalf of the public, our place on government agendas is not secure, nor is funding, nor is staffing, nor is further resource acquisition. The public can exercise its will by seeking de-regulation and alternative privatized services, resisting taxes, mounting pressure groups, lodging complaints, and ceasing to think we are worth an investment of their time.

CAN A SERVICE AND MARKETING ORIENTATION APPLY TO NATURAL RESOURCE PROTECTION AGENCIES?

The Canadian Parks Service, like other natural resource agencies, continues to struggle with the perception that keeping an eye on the public pulse, for marketing purposes, may be in conflict with resource protection. There is a tendency among some to view the program mission as protecting natural resources from, rather than for, people. Program tradition is product-bound. Its notions about carrying capacity and the components of a "quality park experience" are highly subjective and self-prescribed. And, even still, we are inclined to decide ourselves what the public needs rather than ask the public for guidance.

This is not to say that we are in a hopeless state. Rather, what I see is a program struggling to find ways to strike a better balance in its responsibilities for resource stewardship and public enjoyment. The notion of "wise use" is gaining favour in natural resource agencies as a way of describing this better balance. It is a concept I agree with. It captures the importance of resource protection and the need to ensure our marketing initiatives are conducted responsibly and in such a way as to not damage or destroy the very product we wish people to celebrate.

I think it is fair to say that for most human beings things which happen outside our personal experience don't really mean very much to us. It's the actual seeing and doing, and the personal closeness of the experience, that create lasting value and empathy. What I'm leading to, of course, is constituency building and the important contribution visitor interaction with the resources we protect makes
towards achieving support for the mandate of our organizations. Effective management of this interaction should be what drives our program plans and delivery. And program planning and delivery directed at achieving this management goal should be the basis for funding allocation.

At present, however, the link between planning and operations is often tenuous. We fall back on the argument that a plan represents what should be done if new money becomes available. Whether we are directing our existing budgets towards the most effective operational choices is often not squarely addressed. A lot of effort is put into plans that are never implemented, and a lot of actions are funded on the basis of program tradition rather than public needs.

**INTERNAL MARKETING OF MARKETING**

The threshold issue for marketing, as for any other function, is "value added". Does Marketing have skills, ideas, information and approaches people can use in their daily jobs? And can it develop a program strategy that makes sense, is doable, and that management, employees, and other stakeholders, can relate to and be enthusiastic about?

That is a tall order, especially since in our case, and perhaps in your own, we had no marketing data on which to establish even who our existing clientele was, let alone identify their needs and assessment of program service, the scope of potential markets, and opportunities for joint ventures. As a result, we have been putting a lot of effort into practical market research, as the basis for strategy development and to demonstrate to the program the benefit and application of market analysis.

In the interim, however, while waiting for the research results to come in, there has been no denying the pressures for immediate deliverables. How we dealt with this was to take advantage of a few key opportunities that presented themselves for pilot projects. In their absence of a full-blown market strategy, I am not suggesting that just any pilot project will do. The projects you select should be those best related to your gut feel for program areas that either need most attention or have the best chance of succeeding. In our case, they related to market assessment and planning and to promotion.

We undertook some marketing orientation workshops, bringing together different functions from Head and Regional offices. And a short-term National Market Plan was prepared which assessed the program’s marketing tasks to be done over an 18 month period to respond to immediate pressures and lay the foundation for longer term strategy.

We have also made headway in turning a difficult corner for the Canadian Parks Service, from a national marketing perspective. The program is beginning to think
of itself as a program rather than as a series of individual and unrelated parks, sites and regions. It is now recognized that cross-promotion within the system is a worthwhile activity, for the purpose of corporate image building, constituency building and marketing.

GETTING MARKETING READY

An old proverb says: "If we don't know where we're going we're likely to end up where we're headed." Thus, the importance of strategy based on identifying, first, where we are; second, where we want to be; third, how we intend to get there; and fourth, how to know whether we have arrived.

Many parks, and park systems, cannot yet answer even the first of these. The development of a client profile or marketing data base has in most instances been an area of historic neglect. It was never thought to be very important to decisions made about how the parks were run. However, this component of your marketing effort is absolutely essential to the ability to develop a sound strategy, win support, and achieve any measure of long-term success.

In the Canadian Parks Service, one of our first steps was to try to establish our market position - in terms of both existing clientele and potential markets. We had virtually no national market information to begin with. What we had was a sprinkling of public opinion polls and non-uniform surveys from a series of individual parks and, to get "The Big Picture", a few general questions in the Canadian Travel Survey and Canadian Tourism Attitude and Motivation Study. The information was suggestive but not strong enough to provide a solid rationale for directing national program objectives, efforts and expenditures.

Customized market research was required to help identify public perceptions and needs, and to prescribe what actions should be taken in program and service delivery, facility development and promotion. We also needed benchmarks against which to set objectives, develop strategies and measure progress. We will need to continue to put a sizeable effort into visitor feedback, market research, program monitoring and evaluation over the coming years. We will also need to develop program policies, and review and approval criteria, where these are required to support the marketing effort.

INTEGRATING MARKETING WITH OTHER AGENCY FUNCTIONS

Our organization will be striving to produce a comprehensive market plan encompassing not just promotion strategies and tactics but also research, product, service and programming-related strategies and tactics developed and negotiated with those parts of the organization responsible for their delivery. Our research is revealing challenges for many parts of the Parks Program, and each will be called on to respond.
In addition to the broad array of practical, action-directed market research, monitoring and evaluation activities I have already mentioned, we will require the help of planners in taking market data and visitor feedback into consideration when formulating proposals for park development and operation; customer relations will need to become a key and accountable responsibility for front line staff; interpretation programs will need to be pre-tested to ensure they communicate effectively and succeed in helping visitors more directly experience what the parks have to offer; regional integration staff will need to encourage the development of required support services and amenities in communities near the parks; regional offices will need to undertake regional market planning and programming designed to bring together the parks in each region towards common goals; new efforts will be put into trip planning, general information and promotional materials for the public; and so on.

Many, many people will need to contribute. To do so most effectively, they may need to learn new skills.

STAFF TRAINING

I recently read a book you may find interesting. It is called The VIP Strategy: Leadership Skills for Exceptional Performance by McNeil and Clemmer. I hope the authors will forgive me if I quote liberally from their work. But their treatment of "knowing isn't doing" is, in my view, quite well done and is germane to the matter of staff training.

McNeil and Clemmer suggest that most training efforts fall into three categories: inspiration, knowledge or skill development. Their work has found that:

- Getting people excited about change or a new approach isn't likely to have a lasting effect on their behaviour.
- Knowledge-oriented approaches are often confused with skill building. Knowledge-centred approaches are content driven. Skill development is primarily concerned with process.
- Inspiration, knowledge, and skill development are all needed to sustain a long-term change or improvement.
- Improving skills often increases knowledge and inspires the participant through increased confidence on the job.
- The majority of people cannot, on their own, bridge the gap between inspiration and knowledge, on the one hand, and actual skill improvement on the other, and
Towards Serving Visitors and Managing Our Resources

Academic prowess and leadership ability are not necessarily connected. Many management professors who understand theories cannot implement or practice them.

Poet John Keats was probably not thinking of training when he wrote:

"Nothing ever becomes real until it is experienced" but his thoughts support the view that training based on behaviour-modification is seen to have the greatest and most lasting impact. We, and you, will want to expose agency staff to an array of new marketing skills and techniques they may need in their jobs. To be most effective, this training should provide opportunities for hands-on, how-to-do learning. Marketing responsibilities can be confidently delegated once management and employees ensure the requisite skills are in place.

PROBLEMS AND OPPORTUNITIES FOR MARKETING IN A DECENTRALIZED ORGANIZATION

I have already mentioned that a major issue for our program is fostering its identity as a program rather than individual entities each doing its own thing. The challenge is increased because our program includes not only natural parks, but also historic sites and heritage canals.

We can capitalize on this diversity by offering a wide variety of park experiences. Each park is selected to represent some different aspect of Canadian natural or cultural heritage, an element of the program mandate the public is largely not aware of.

Setting aside outreach activities, actual program delivery happens at the parks. However, there are corporate issues which extend beyond individual parks or regions and for which headquarters must be responsible. These include national and international issues, corporate image, policy, standards, program strategies and the like.

The pressures on government for responsible financial management also heighten the need for a strategic, rational and cohesive program effort. In its absence, and in the absence of an active and demonstrable contribution to the public good, there is no protection against staff and budget reductions.

NEED FOR A MARKETING BUDGET

I’ve listed many things I would like to see happen in an ideal world. However, funding is a clear and fundamental necessity. The speed at which marketing takes hold will depend to a very great extent on the funds and person-years made available for marketing activities, for two reasons:
Without money a program can only talk and plan. Talking and planning are not enough to make an organization a marketing organization. An agency also has to act.

The way a program allocates funding reflects its priorities. Quite simply, money is spent on things management wants done. It is ultimately the allocation of resources that sends the signals.

How can a marketing budget be established, especially given the diversity of tasks to be done and the broad array of program functions required to help out?

I should forewarn you that our organization is still wrestling with this, so these are simply my own current thoughts on the matter as opposed to pearls of wisdom borne of experience with the perfect solution.

A variety of ad hoc marketing projects could be funded at the national, regional and park level.

Separate program budgets could be earmarked for resource conservation, marketing and product management.

Funds could be earmarked for the National Market Strategy and specific projects funded from that allocation.

Funding criteria for different program functions could be established in accordance with marketing objectives, and projects funded accordingly.

There are probably other ways as well.

CONCLUSIONS

Adopting a marketing orientation is an enormous task for natural resource protection agencies. Many fail. There are those who want to talk about it, but not do it. There are others that want to do it, but don't quite know how. There are others who get so tangled in process, there is no money or energy left over for delivery. And there are others who simply think "This, too, shall pass."

If your organisation is serious about marketing, you must find out what your public image is, whether your visitors are happy with the service they receive, and whether there are other clients your program could serve if you did something a little differently. Your program plans and delivery should be based on this information and on continuous monitoring and evaluation to determine what is working well and what needs to be corrected. You will require a comprehensive program effort from senior management to front-line staff.
I wish you well. You have embarked on a major challenge with the prospect of major rewards.
INTRODUCTION

It is a privilege for me to be here in Waterloo, Canada, and with such an important assemblage of park professionals.

My responsibility is to discuss the conclusions of an important commission which is at this very minute finalizing their recommendations. I will focus my comments on three topics:

First, why we initiated this study of research and resource management policy;

Second, what were some of its preliminary conclusions, given that the project is still being completed; and

Third, what my reactions were to some of the material in this report.

BACKGROUND

To understand why my association commissioned this study, it is important to understand the political environment in which the parks are competing. In 1975, three cents out of every federal dollar was spent on "the environment." This included parks, forests, environmental protection and other similar programs. By 1985, this had fallen to one cent.

And this declining federal support will continue at an accelerating rate in the future under present law. These environmental programs are part of that small (less than 10%) portion of the federal budget that falls under discretionary items. Soon, the Gramm Rudman Hollings deficit reduction program will begin requiring a further reduction, possibly 7%, out of the federal budget. It cannot come from the 90% devoted to fixed payments for social security, for debt service or for military expenses. It must come from the discretionary programs area.

In addition to the decline of the federal budget, and possibly as a consequence of it, there is a serious re-examination by our nation of the centrist mindset of the past 20 years. During this period, we have passed most environmental legislation
in Washington and have included both "carrots and sticks," rewards and penalties. But without the carrots, there is little threat of the stick.

President Reagan also showed us that despite the quality of the laws, if administered by people opposed to their intent, the laws mean little. Therefore, many are looking to the states and localities to implant laws that protect important resources like New York's Environmental Quality Bond Act. This "bring-it-home" mindset may be the major force in the environmental movement in the future. Coincidently, while the federal bank account is overdrawn, many of the states have surplus cash, states like Kansas and Wisconsin and Maryland that just a few years ago were suffering from high unemployment and insufficient funds.

The National Parks and Conservation Association [NPCA] was founded seventy years ago to help build the dream of the national parks and assure their protection. To carry out the US National Park Service's dual mandate of seeking designation and assuring protection, we have had to continually change our tactics and our tools. I have had the privilege of serving as president since 1980.

In 1981, NPCA brought together a group of respected park leaders to seek agreement on the needs of the parks. The National Park System Plan was finally completed in 1988, the first time that an outside association has prepared a plan for a federal agency.

One observation made in the plan was that the commitment to research had declined in the National Parks Service (NPS). We found that science was considered much more important by any manner of measurement in other federal conservation agencies, be it evident by numbers of scientists, by acreage or simply by identified need. I once described park science as the "runt" of the service in a magazine editorial.

Concurrently, William Penn Mott was appointed Director of the Park Service. Mr. Mott was a trustee of my Association during the preparation of the plan and spoke eloquently about the need for interpretation and management based upon scientific assessment. He carried with him into this important position a resolve born from this planning effort and his extensive personal experience.

Unfortunately, the members of the Secretary of Interior's staff opposed any assessment of research and resource management. Mr. Mott then asked if NPCA would raise the money and carry out the study in cooperation with the NPS.

On March 19, the study will be presented at the North American Wildlife Conference, the same event at which Starker Leopold presented his famous report. Our commission was chosen by Mr. Mott and me from the nation's most respected natural, historical and cultural authorities. We gave them complete independence from control either by the Association or by the Service. They met with park
scientists, managers and others including representatives of the Canadian Parks Service. A series of meetings was held around the country over a period of approximately a year.

There are many recommendations in the report, more than I could present to you in the limited time I have. Nor should I, since what I have is a preliminary report.

THE REPORT AND SOME OF ITS PRELIMINARY CONCLUSIONS

The preliminary report has four areas of focus: Education, Ecosystem Management, Research and Professionalization.

The most important, and the most controversial conclusion made in the preliminary report is that the NPS research and resource management program will only survive if the service adopts an education program to take its message outside of park boundaries. This recommendation is more than a commitment to interpretation: - It is a call for an advocacy of the meaning of the parks and their value to contemporary life. This "new outward vision" is based upon the assumption that "the primary goal for the system should be the truthful telling of the cultural and natural histories of our land and people."

The commission further recommends that the Leopold concept of ecosystem management be adopted for each unit, and that this include human elements of the ecosystem.

The commission agreed with the National Parks and Conservation Association's recommendation that Congress should give research a legislated mandate. Furthermore, the commission recommends that a percentage of the NPS budget be devoted to research.

The report also discusses how they prepared their report.

COMMENTARY

My initial assessment of the report is that it is not an amendment to the Leopold report, but rather an important expression of the frustration with park service management, i.e., the lack of a commitment to base management on research and the lack of a commitment to going outside park boundaries to sell the message of the parks.

I am sure that this report will be met with the same criticism that every report receives, that it is "a professional lecture", "self-serving," "unspecific", and "not related to political realities."
But there are meaningful questions that this report challenges us to consider.

First, who is in charge of the park? And how should they make management decisions? If managers aren't using research, how can they assure the nation that they are in fact protecting the resources in their charge?

Second, what is the principal responsibility of the service? To protect the resources that represent our nation's patrimony, to educate the public about that patrimony, or to "market" it?

And is it really possible in a time of declining budgets and limited personnel, of "doing more with less," to assume that more scientists will be hired by the service? Or should the service find the talent it needs largely in the universities, the private sector and the other agencies?

No doubt, this report will be one that generates a hard look at this question of the role of research in the service.

But what we must do is not lose sight of the basic objective of the parks. I would submit that objective is to protect what makes us unique as a nation in our cultural and natural heritage. Whatever serves this objective I believe should be harnessed to achieve this.

If I may paraphrase a great British statesman, "We have no eternal friends or perpetual allies. What are eternal and perpetual to us are our goals and our ideals."

What the parks represent, and therefore those who manage them, are the goals and the ideals of the nation. There can be no greater responsibility for us to assure our children that we have protected those goals and ideals.
SESSION II

IMPLICATIONS OF INITIATIVES
ISSUES IN VISITOR MANAGEMENT STRATEGIES

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INTRODUCTION

One cannot help but be struck by the coincidence in timing and tone of the visitor management initiatives outlined at these meetings. Their timing suggests possible concurrence among rather disparate agencies having broadly-defined heritage mandates concerning the most effective and efficient way to deliver programs and services during a time when society's expectations of government and its agencies for financial restraint and public accountability have become entrenched. These changing social circumstances constitute a highly-charged and changeable environment, a "turbulent field" to use the term coined by Emery and Trist (1971, 248), within which agencies must be prepared to operate. These changeable circumstances demand that organizations be adaptable; knowing when and how to adapt requires a window on the world.

In each of the initiatives discussed at these meetings, the importance of understanding the various publics which find in heritage opportunities both value and rewarding experience is acknowledged. Indeed, that importance provides one impetus around which the initiatives themselves are organized. In this sense, each initiative could be seen to be a positive step in improving heritage area management to make it more responsive to its various constituencies.

At the same time, the general public in both countries, and specific groups in particular, continue to demand that government agencies and, particularly, heritage management agencies improve their performances in environmental protection. In this sense, each initiative could be seen to represent an increasing commitment to a form of planning and management which integrates visitor and environmental concerns in a much more comprehensive fashion.

Most significant, perhaps, is the backdrop of fiscal restraint which strongly affects each agency's operations. Although the reasons for that restraint may differ from agency to agency and between the countries, there is no doubt about the similar nature of the responses. The calls to do more with less, to sharpen the focus on visitors, to evaluate the effectiveness and efficiency of programs all point to the turbulent nature of the operational environments within which these agencies must now adapt and function.

These similar circumstances and responses yield a group of issues which pertain, in a general way, to each of the agencies. These issues can be placed into three
categories: agency functioning, external relations and external perceptions. Each category sets the issues in appropriate domains of agency-environment interaction.

AGENCY FUNCTIONING

There are three interrelated internal issues which are raised by the initiatives. Although each of these are commonplace issues in any organization responding to change, they are manageable. They do require, however, that staff and budgetary resources be applied in order for management efforts be successful.

The first issue, the requirement for staff training and professional development, is an obvious, yet crucial, matter for each agency. Operational change of the sort discussed in the initiatives presented here requires new knowledge and skills in an organization. When anticipated changes is envisaged, the resulting needs for staff training and development can extend to many organizational levels.

The issue of staff training and development is important enough on its own but, in these initiatives, it is complicated by an additional issue, that the perceived legitimacy of the knowledge, through which people, their preferences and their experiences can be understood, does not have the same degree of credibility in the scientific community as natural or physical science (Shannon, 1987). When it is acknowledged that heritage agencies have been staffed primarily by individuals possessing natural and physical science backgrounds, the credibility problem facing social science becomes a definite barrier. The perception that social science information is "soft" and, therefore, unreliable compared to natural science information is difficult to overcome.

Together, these two issues contribute, in a direct way, to a third, namely that of implementation. If these initiatives are to be implemented by the organizations which have put them forward, both staff development or training and the barrier facing the acceptance of social scientists and social science information as legitimate must be overcome. In agencies such as the U.S. Forest Service which have something of a tradition of social science research, implementation will be easier than in agencies such as the Canadian Parks Service in which functions having a social science basis have traditionally been accorded lower status than those based on natural science. Similarly, an agency such as the Bureau of Land Management, with a tradition of resource regulation and disposal rather than one more in tune with the marketing orientation behind these initiatives, may well encounter a good deal of internal resistance to such new and different ideas. The significance of the internal texture of an organization, its administrative culture, has been well documented elsewhere (e.g. Meidinger, 1987; Payne and Graham, 1988); it poses a formidable barrier.

The issue of implementation goes well beyond the perceived legitimacy of social science or the problems of staff development, however. The organizational
structures of the agencies are also significant factors which will influence implementation. The encouragement to U.S. Forest Service personnel to experiment with the initiative and not feel that they are constrained by a particular method is something of an exception to the norm in organizations. That norm is best seen in the Canadian Parks Service's Visitor Activity Management Process (VAMP) which is broken into steps with accompanying levels of approvals (Canadian Parks Service, 1988). The higher degree of bureaucracy evident in the Canadian Parks Service initiative has two effects: first, if implementation occurs, implementation should yield the same product in each national park; second, the attempt to implement the initiative becomes fraught with uncertainty and requires constant monitoring. On the other hand, the lower bureaucratic dimension in the U.S. Forest Service affords National Forest planners and managers the opportunity to utilize their knowledge and skill. While problems and confusion may still occur, interesting products will emerge from those National Forests possessing innovative staff. One is left to wonder whether the sort of bureaucratic structure which one finds in the Canadian Parks Service is compatible with demands for innovative thinking.

EXTERNAL RELATIONS

It is clear that the initiatives presented here take the matter of external relations, especially those with actual or prospective visitors, quite seriously. Certainly any visitor-orientated initiative must contain the requirement to develop awareness and understanding of visitors by maintaining contact with them in some way. However, external relations become an issue for these agencies, in contrast to an expressed orientation, when they address partnerships to the extent they have in these initiatives. Partnerships, unless one chooses to take a rather cynical interpretation, go well beyond merely keeping in touch with changes in the market interested in heritage opportunities and services; they indicate the opening of internal operations and decision-making to scrutiny and involvement by significant individuals or groups (termed "stakeholders"), by other agencies and perhaps by the general public. The movement to develop partnerships might be seen as an opportunity to improve accountability or to reach out to groups such as native peoples which have somewhat more complicated relationships with heritage areas than do regular visitors. However, partnerships also present formidable issues for heritage agencies.

There are several groups of organizations or individuals which may be interested in developing partnerships. The nature of the partnership relationship in each case will depend upon which of these groups are involved. Consequently, the nature of the issue likely to be encountered by agencies seeking partnerships will vary in a corresponding manner.

Partnerships with Government Agencies

Partnerships, with agencies having similar mandates in the heritage management field, are mentioned often in these initiatives with great approval. Certainly, it must
be recognized that partnerships of this nature may serve to eliminate unnecessary program and service duplication and, thereby, allow managers to "do more with less". If this were all that partnerships involved, it would be reasonable to expect to find many illustrative examples. However, such is not the case; in fact, finding examples of functioning partnerships of this sort is a difficult task.

The difficulties associated with such inter-agency partnerships stem from two related issues: mandate and potential loss of power. Any agency's mandate is a combination of specific legislation and much-less-specific traditional practice. These two dimensions define agency domain and guide its actions within that domain.

Of these two issues, that of mandate is the most obvious to an outside observer. Specific pieces of legislation enable an agency to manage or regulate heritage opportunities and other program areas. When agencies have similar mandates, partnerships may be relatively easy to achieve. When the mandates of agencies are dissimilar, that is, the agencies lack common program concerns, partnerships are likely to be much more difficult to achieve.

When one looks at the agencies represented at this workshop, one may expect that the similarities in mandate among them would promote partnerships of the sort described in glowing terms in the initiatives. However, the fact that the idea of partnerships is being promoted as something innovative is testimony to the fact that, in the past, such partnerships have been rare.

One must look to the issue of potential loss of power to find a much more difficult barrier to partnerships. Let us put aside (but not ignore) the sorts of mistrust which exist among units within an agency to focus only upon inter-agency affairs. The organizational difficulties associated with this workshop give ample evidence to the nature of this barrier: the task, namely, to discuss visitor management initiatives, was straight-forward, the mandates of the agencies were similar, interest had been expressed from several quarters in the workshop. Yet co-operation was surprisingly difficult to achieve. At stake for these agencies was prestige, leadership and perhaps even budgetary allocations. All of these elements contribute to agency power. To be perceived by representatives of other agencies to be weak in any of these respects would constitute a loss of face and, therefore, of power. When partnerships threaten power, either real (in the case of budgets) or perceived, they are likely to be viewed with suspicion.

**Partnerships with Clients**

Clients of heritage agencies are visitors or potential visitors who are interested in appreciating natural and cultural heritage. As individuals, clients are too diverse in their interest, socio-economic and demographic characteristics to talk of partnership arrangements. When the visitor management initiatives refer to partnerships with clients, it is client groups which are meant. However, it is not
clear that the convenient groupings of people by socio-economic or socio-demographic variables so common in marketing constitute groups which might be termed "partners" in any meaningful way. These sorts of groupings are arbitrary in the sense that the people who are grouped have not, themselves, freely chosen to be so grouped. The VAMP initiative, developed by the Canadian Parks Service, focuses on visitor activities and, in doing so, identifies people who, through involvement in an activity, can be grouped in a manner meaningful to those same people. By using VAMP, it would seem to be possible to discuss partnerships with client groups on firmer ground.

However, it must be acknowledged that, even visitor activity groups are not without problems which may require a serious questioning of the practicality of partnerships with clients. Some activities (and some activity groups) are quite specific; consider backcountry telemark skiing, for example. Others such as swimming are far more general. While the former activity group may well be specific enough to be considered a client partner, especially in a particular national park, the same cannot be said of swimmers. The group is simply too diffuse.

The notion that partnerships might be formed with clients or client groups must be viewed with considerable scepticism. The idea seems to be more a way of speaking, perhaps marketing jargon, than an effective way to manage external relations.

**Partnerships with Stakeholders**

"Stakeholders" are those persons or groups who have demonstrable and continuing interests in a heritage area or heritage program. Such interests are often economic (e.g. an outfitting company operating in a national forest) but may also include interests of a more non-utilitarian and overtly political kind (e.g. an organization such as the Canadian Parks and Wilderness Society making representations against expansion of a downhill skiing operation in Banff National Park). Such interests may also be recreational, a possibility which raises the question are specific visitor activity groups being seen as stakeholders rather than mere clients.

It is evident that each of the initiatives considers partnerships with stakeholders to be important and stakeholders themselves to be valuable constituencies. However, one gets the impression that the initiatives tend to more highly value stakeholders with economic interests. If this perception is reality, these visitor-management strategies represent little more than a shift of focus from one sort of economic exploitation to another. There can be no doubt that economic interests deserve to be termed stakeholders by these agencies; however, other interests place equally valid claims on heritage areas and these claims require the same degree of consideration as those of an economic nature. Lurking behind the excitement over this sort of partnership lies the crucial question of defining what is a stakeholder.
The possibility of partnership arrangements with stakeholders raises another question, that of the nature of the partnership. The initiatives are vague about this question, here apparently addressing partnerships in facility development, there arrangements in policy matters. To a degree, this question is a reflection of the sort of stakeholder with which a partnership might be considered: different stakeholders will require different partnership agreements. Thus, an agreement with natives people concerning their involvement in the planning, management and operations of a national park will differ from an agreement with a whitewater rafting company offering commercial trips in a national forest. From another point of view, however, the uncertainty reflects the enthusiasm of the agencies which, like other enthusiasms, has not yet been considered very carefully.

When an agency considers a partnership with a stakeholder, it may encounter the same difficulties met when considering a partnership with other government agencies. The potential loss of power risked by inviting a stakeholder, especially one with political interests, to act as an equal may be strongly resisted at all levels.

Partnerships with stakeholders represent another interesting approach to visitor management. At issue, however, are the needs to define more precisely which groups would be deserving of the label "stakeholder" and to specify more clearly the nature of partnership arrangements.

**EXTERNAL PERCEPTIONS**

The external relations of an organization are not uni-directional. Not only must an agency interact with other actors in its external operative environment, people in that agency must also realize that those other actors are evaluating their agency's interactions and forming opinions about its performance. While a concern with external relations may facilitate the development and expansion of constituencies, members of those constituencies are active participants. An important issue with respect to these visitor-management initiatives is the interpretation which will be made of the agency operating changes by their constituencies. This issue seems more significant to the two national parks agencies since they have more specific mandates and constituencies than do the other organizations represented at this workshop.

The issue here is a relatively simple one to set out: are these initiatives in visitor management intended to make heritage area planning, management and operations more comprehensive and professional or are they merely to attract more visitors and, therefore, more revenue?

There is evidence in each initiative to suggest that the intent is more revenue. Each initiative comments on the importance of "doing more with less", on the serious constraints placed on budgets by governments and on the importance of building up groups of visitors who understand and value heritage areas and the role of the
agency in managing them. Some commentators at this workshop have also pointed out this tendency. Richard Schreyer, for example, earlier in this workshop referred to the "commodity fixation" which he felt may be guiding the introduction and implementation of these visitor-management strategies. This perception, valid or not, will make the task of forging strong external relations that much more difficult with groups having a protectionist or preservationist mandate.

On the other hand, representatives from the heritage agencies themselves have been careful to emphasize the continuing commitment of their organizations to mission statements which stress heritage protection. On the face of it, these reassurances should serve to reduce fears that parks and protected areas will become tourism areas first and heritage areas last. However, one does not have to be a hardened environmental activist to document cases where economic interests have overwhelmed the non-economic in heritage area decision-making in Canada and the United States.

If the intent of the visitor-management strategies is to improve agency response to the traditional problem of reconciling use and protection, then support, and even enthusiasm, can be expected from interested constituencies. Certainly the role of parks and protected areas in generating economic benefits for surrounding regions has been well-documented in both countries. The role of parks and protected areas in sustainable development is now being explored.

Improved agency effectiveness in facilitating use and in ensuring protection can be achieved through better management of visitors and their activities. The agencies represented at this workshop must ensure that the perception of these visitor-management initiatives held by their constituencies is positive.

CONCLUSIONS

The visitor-management strategies presented at this workshop raise a number of significant issues which will have to be addressed by the sponsoring agencies. Of these, those which can be described as related to internal functioning are the most commonplace. These issues, the staff training requirements, the barriers to be overcome concerning the acceptance of social science and social scientists and the implementation of the strategies, would be expected in any large organization making operational changes.

The most complicated issues to be encountered are outside the agencies themselves. In their concern to adapt to changes in their operational environments, the agencies have attempted through the visitor-management strategies to interact more vigorously with relevant groups and interests. Partnerships, with other government organizations, stakeholders and even clients, are to be important vehicles of this adaptive response. However, partnerships bring also some serious questions which agencies will have to answer before partnerships will deliver their apparent
potential benefits. Defining the terms and conditions of a partnership will be a major task in itself. Identifying partners also looms as a significant question, one which goes well beyond the technical and into the political realm.

An increased concern for external relations will put these agencies under greater scrutiny by organized groups and the public than ever before. If these strategies are to help the agencies to improve planning, management and operations efforts, the perceptions of these initiatives held by interested parties in the external environment must be positive.

The issues associated with increased contact and interaction with the external environment rather than those associated with agency internal functioning will test the commitment of these agencies to these promising initiatives.

LITERATURE CITED


SYNDICATE 1:

INITIATIVES

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The syndicate on "Initiatives" adopted a discussion format suggested by chairman, Gary Sealey. That format was composed of the following elements: similarities and differences among the initiatives; aspects of the initiatives requiring priority attention; suggested courses of action for the represented agencies; and general concerns about the initiatives.

SIMILARITIES

The group identified many similarities among the initiatives. Some of these lend themselves to being grouped together.

It was generally agreed that the initiatives represent responses to perceived needs to change the manner in which these agencies go about their business. These requirements for change stem from changes in users - their numbers, their desires and their expectations - as well as from restrictions imposed on operating, maintenance and capital budgets by governments. Associated with this general need to change is the realization that, if budgets are to be justified and if visitors are to have their expectations satisfied, visitor management, including the provision of services, must become more professional.

The needs to change and to become more professional spawn several other aspects which are very similar from initiative to initiative. There is an expressed concern that the skills possessed by existing staff may be inadequate to support the initiatives. Professional development, training, and defined career ladders will be required to augment staff capabilities. At the same time, new directions to better understand visitors require both new sources of practical information and a research agenda through which to collect it.

In spite of these various acknowledged requirements for change, all the initiatives maintain that the agencies' mandates remain valid and that they should continue to guide policy development and operations.

1Initiatives are defined as the action of taking a first step or move characterized by new ideas and methods. (Collins Dictionary, 1985)

2The ideas expressed do not necessarily represent those of the Canadian Parks Service.
The syndicate also identified confusions which were shared by the initiatives. Most of these confusions involve terminology, the most glaring of which concerns the term "partnership". The notion of partnerships with stakeholders, client groups or market segments is a recurring theme across the initiatives, yet there is little clear expression of what the term partnership might mean in operational terms. It (partnership) is commonly equated with volunteerism, consultation and even power-sharing in decisions. The syndicate members felt that a more precise definition of the partnership idea (as well as other terms used as imprecisely) was needed.

Some debate also existed among the members of the syndicate around the idea that the agencies ought to exchange information and research results. This confusion reflected concerns over the apparently different mandates of the agencies, but also the hope that there existed common priorities amongst the agencies concerning information needs.

DIFFERENCES

Members of the syndicate agreed that few differences exist among the initiatives. Three were identified. The initiatives differ according to the degree of public involvement in their preparation. Secondly, the Bureau of Land Management's Recreation 2000 and the National Park Service's The Interpretive Challenge were both seen to be more internally oriented while the Canadian Parks Service's marketing initiative and the U.S. Forest Service's America's Great Outdoors exhibited a more external orientation.

In addition, the syndicate determined that the initiatives differ according to how success might be measured. In part, this difference is a reflection of each agency's respective mandate concerning heritage management. However, another important dimension of this difference is the result of each agency's public image.

PRIORITIES

The members of the syndicate found it difficult to identify a great range of priorities which would be important to all the agencies. After a good deal of discussion, two issues/concerns were determined that might be common: (1) knowledge about public support for agency programs, and (2) knowledge about visitation trends. Both of these resulted in recommended courses of action.

COURSES OF ACTION

Members of the syndicate wished to have it noted that agencies must carefully evaluate their strategic positioning with respect to social and environmental issues deemed important by Canadians and Americans. The concern here is that, in taking improved steps to communicate with visitors to heritage areas, the agencies may neglect to deliver messages which those visitors feel are important, or in ways which
may not communicate as effectively as they could, which the public feel ought to be delivered by public heritage agencies.

The syndicate suggested that the agencies needed a regularly-scheduled forum such as this workshop to enable them to share information, to identify priorities in research and to discuss mutual problems in visitor management.

A third suggested course of action stemming from this syndicate concerns the need for agencies to share program successes with agency staff, other (involved) agencies and stakeholders. Such a sharing would help to ensure "ownership" and, therefore, better delivery of programs.

It was suggested that agencies need to study carefully visitation statistics and trends in order to determine causes for decreases or increases. Furthermore, agencies need to understand Americans and Canadians better in order to gauge support for programs. Both of these directives seem quite obvious; that they were made and endorsed by the syndicate is a reflection of the distance yet to be travelled in understanding park and protected area visitation.
The two objectives identified for this group were used as starting points to examine the issues and opportunities raised in the first session which dealt with new heritage area management initiatives.

The group agreed that understanding national and park-specific mandates was essential to developing appropriate visitor management strategies. For example, understanding the relative importance of "protecting the resource" as noted in policy compared to the "provision for public use and enjoyment" gives managers a clear vision of priorities.

More specifically, the group felt that decisions on the type of experience to be provided needed to be made before implementing techniques to manage visitors. While there was some discussion on whether managers provide opportunities or whether they create experiences, all expressed the need for specific objectives in this area. The group was concerned that information programs were needed to help visitors form appropriate expectations of the opportunities offered.

Some discussion was given to the influence of social change on heritage resources. It was agreed that these changes pose significant challenges for managers, but that the role of heritage resources in a new cultural era has not been defined. However, social change, accompanied by reported declines in backcountry visitation, suggests the importance of an assertive marketing program - one that is recognized as an essential component of planning.

The group made four specific comments:

1) There is a need to increase public awareness of the roles of heritage resources, including recreation opportunities and such functions as science, watershed protection, gene pools, and spiritual values. Programs to increase public awareness were viewed as essential, not optional, and should take place off-site as well as within the area.

2) Promotion of parks, as part of a marketing effort, was viewed as an acceptable thing to do. However, the group felt that prior to the promotion effort, research (on both resources and people) should be
completed and a management system to handle increased visitor load should be in place.

3) Partnerships in heritage resource management should be developed where it is appropriate to do so. The roles of the various stakeholders in management, however, may vary significantly. Some stakeholders may serve as volunteers for various projects, while others may assist in monitoring, providing input to decision-making, or as a partner in joint decision-building, or serving a watch-dog function.

4) The group felt that research is essential to an effective management regime. Given the complexity of managing heritage resources, the role of long-term natural processes and the dynamics of the market for heritage resources, it was recommended that research should be conducted and funded on a long-term basis. One-shot case studies may be useful in developing solutions to individual problems.
Social science programs within park and recreation agencies have produced much during the past two decades, in spite of the paucity of staffing and resources. Visitor preference analyses have created new perspective on the diversity of demand for, and benefits received from, recreation use. Research-based planning and management methodologies such as the Recreation Opportunity Spectrum (ROS) model, the Limits of Acceptable Change (LAC) process, Visitor Impact Management (VIM), and the Visitor Activity Management Process (VAMP) tool, have operationalized procedures for defining appropriate uses for scarce resources. Breakthroughs in interpretation and communication concepts have translated into enhanced quality of visitor experiences. And, new marketing initiatives are producing escalated flows of benefits from recreation resources.

But accompanying these successes are chronic concerns about forces generated within agencies that act to impede greater productivity from agency-based research. These forces are:

1. **Low budgetary support.** Social science activities traditionally have been grossly underfunded relative to their mandate. Underfunding has affected not only research programming, but the ability to staff technology transfer efforts. In the U.S. National Park Service, for example, there exists only 2 social scientists per 10,000 staff people.

2. **Emphasis on turn-around.** Agency-driven research needs to be responsive to agency-driven problems, which often require urgent solutions. Data is collected and analyzed quickly, but not necessarily exhaustively. Research moves from problem to problem, without the luxury of follow-ups, integration and closure.

3. **Hidden information.** The urgent, problem-driven character of agency-based research tends to generate data bases that become filed in obscure, intractable places. A preponderance of rich data sets exist that have become unintentionally hidden from the scientific community. Many data collection efforts do not result in publication, making it impossible for potentially interested scientists to become aware of opportunities for exploration. The Parks Canada organization, for
example, maintains one of the most intensive data collection functions yet publishes very little of its activity.

4. **Few integrative fronts of inquiry.** Agencies tend to house social scientists in contexts that lead them to operate on islands of inquiry distanced by disciplinary orientation, agency membership, and management issues addressed. Lines of communication among scientists are weak, and there exist few institutional incentives for strengthening them.

5. **Low organizational ties.** Generally, research programs in recreation resource management agencies are not strongly integrated to organizational functions. Rather than being housed with management functions as an integral member of the problem-solving team, social scientists tend to be housed in separate administrative lines. Indeed, they typically operate out of locales physically distinct from the management functions they serve. Opportunities for building research delivery systems of maximum relevance are diminished.

6. **Not training the consumers.** Little effort has been made to equip managers with research capacities, even though they are the ultimate contenders with resource management problems and are clearly capable of conducting research that would yield insight into their resolution. The functions of research and management have become so dichotomized that managers do not even see their potential as hypothesis testers, information gatherers and interpreters of relationships.

7. **Inappropriate reward systems.** Agency reward structures often are misaligned with the task at hand. While the ultimate quest is to resolve resource management problems, often the reward structure for agency-based social scientists is framed in terms of the number of publications produced. Scientists and technicians particularly adept at technology transfer of scientific principles to field applications find themselves in systems that may not affirm their skills.

**OVERCOMING THE IMPEDIMENTS**

While the above forces tend to be inherent to agency-based visitor management research, social scientists bear responsibility for initiating action to overcome them. Specific responses to each of the above forces might be:

1. **Establish external relations.** The constraint of inadequate budgetary support can be partially overruled by forming research partnerships with other agencies and the private sector. For example, the tourism industry (airlines, tour operators, hotels) has sophisticated market research apparatus that carries great potential for recreation visitor management-problem-solving. It also has interest in examining the same or similar questions about demand, perception, image, and information transfer that park resource managers need to examine. In addition to avoiding budget constraints through partnership formation, social scientists...
need to confront them directly through better documentation on the social and
economic impacts of agency-based research. In a sense, they need to conduct
research on their own activities. They need to discover better measures of the
contributions of their activity to the mission of the agency.

2. **Build higher-order perspective.** While it is important to be responsive to the
need for quick turn-around in research inquiry, it is also important to develop
research designs encompassing issues that hold implication for more than the
resource under investigation. The proclivity for limited scope case studies needs
to be balanced with a need for collecting broad scale, baseline data on recreation
meaning, attitudes and quality. There should be greater impetus toward
developing standardized instrumentation that would allow for the simultaneous
goals of guide turn-around and broader scale perspective.

3. **Exchange data actively.** Scientists should become more active in data exchange,
or in otherwise promoting the availability of data sets for which they are
responsible. There should be efforts to promote the understanding of data as a
shared resource, a pool of information on which to base the long-desired higher-
order perspective.

4. **Encourage interdisciplinary research.** Scientists need to direct energies against
institutional forces toward the fragmentation of research inquiry. The complexity
of human-recreation resource transactions needs to be articulated in ways that
would guarantee the assembling of research teams where skills of multiple
disciplines are represented.

5. **Include managers in research.** Given that research programs are generally not
integrated into management functions, it is important that researchers involve
managers in the earliest phases of research design. A team approach to problem
definition, data collection and analysis, and research application will largely
overcome the distancing effects imposed by the administrative distinction of
research from management.

6. **Teach managers to be researchers.** By providing fundamental instruction in the
scientific method to managers, researchers can expand the resources available
for data-based problem-solving. Indeed, many research needs involving problems
of limited scope could be fielded by a manager with modest training in research
methods. By investing a portion of the scientist’s time into instruction, greater
levels of research production could be accomplished.

7. **Develop support for technicians.** Research is a complex form of inquiry, and
there are appropriate roles for both pure scientists and technology transfer
specialists. Scientists must press for the development of legitimate career ladders
for technicians engaged in technology transfer. By dividing the roles and
institutionally affirming each aspect of research production, a greater array of products would emerge.

A NEW IMPETUS FOR RESEARCH

Even while the deeply-rooted challenges to agency-based recreation research remain, there are signs that a new groundswell of institutional support for social science activity is emerging. This support seems to be driven by forces that are driving agencies to be more responsive to the complexity of human resource management. These forces are:

1. **The drive toward accountability.** Agencies are, largely for the first time in history, being pressed for the production of clear performance measures. They are being asked to specify what they produce, and how cost-efficiently they are producing it. One of the key dimensions to the issue is how efficiently staff are being utilized in the production process. It is becoming clear that matters of accountability involve not only defining the products, but examining the process. Both of these domains involve aspects of human impact and performance on which social scientists can offer insight.

2. **Changing employee-agency relations.** The character of employee commitment to the workplace is changing, and agency administrators are voicing new levels of concern. General morale of public employees has been waning, dual income families have resulted in resistance to mobility, increasing diversification of the workforce has resulted in more diverse expectations, and employees are exhibiting less institutional allegiance. Social scientists are beginning to be perceived as allies in the quest to comprehend and contend with the increasing complexity of staffing issues.

3. **Pressures from constituencies.** The client base for recreation resources has been both increasing and diversifying over the past decade. Some of the new constituencies, particularly those of traditionally under-represented ethnic minority groups, are actively pressing for research on human needs related to recreation resource management. At the same time, more traditional arenas such as biology have not enjoyed escalating constituent support. There is a clear shift in attention from the physical to the social sciences.

CONCLUSION

Social scientists within recreation resource management agencies have historically been faced with institutional impediments to their productivity. These impediments are likely to continue long into the future. However, there is evidence that social scientists are beginning to gain stature as problem-solvers within these agencies. There is increasing recognition of the complexity of human forces and resources - both internal and external to the agency.
Agency administrators have always quested to deal with complexity by simplifying it, rather than embracing it in an attempt to comprehend it. They are beginning to recognize that simplicity is not reality - not when one considers the multi-cultural, multi-interest employees and publics with whom they are working. They are beginning to recognize that there are important roles for social scientists in helping to monitor, comprehend and operate within an ever-diversifying human environmental context. There seems to be no doubt that social science missions will emerge as a salient force in future administrative structures of recreation resource management agencies.
The re-examination by our syndicate of the intent, role and direction of interpretation led to the realization that interpretation is and will be what we decide it to be.

Dr. Field, in his earlier presentation, pointed out that a major portion of current middle and upper level USNPS managers will reach retirement within the next five years. As decision-makers, they determined and still determine where interpretation fitted. With their retirement and replacement, however, comes a new perspective. The views represented by the managers (as well as the interpreters, researchers, etc.) of the 1990’s and beyond will be of a new and different era, representing a time of environmental awakening in the 1960’s and 1970’s.

The offspring of this awakening, the new resource and program managers, come to their profession as much because of a moral interest and obligation as from scientific interests or resource training. That moral obligation to resources and to the public will define more the future “intent, role and direction” of interpretation than any other factor in the past or present. The intent, role and direction of interpretation will be what we define it to be.

An assessment of local, national and international issues reveals that there are, in fact, no purely local, national or international issues. As individual moral and professional obligations manifest themselves, our global perspective will strengthen and expand. From our local, individual stance, we will increasingly address issues of a broader range than in the past. The challenge will not be whether our presentation will be national or international, but how we will present those broader issues in a local resource/park context and how we will deliver our messages on an appropriate scale (with the force of a pin prick or a sledge hammer?).

No longer will the future resource and program manager allow interpretation to be a tool. By definition, a tool is limited to the job it was designed for and to the skill of the user. The obligations of environmental and professional morality will demand that interpretation be an integral part of management - a partner rather than an accessory.
SESSION III

RECREATION HABITAT:
LINKING THEORY AND APPLICATIONS
SITE ATTRIBUTES -
A KEY TO MANAGING WILDERNESS AND DISPERSED RECREATION

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THE PROBLEM

Knowing the importance forest visitors attach to particular features of recreational settings (called "site attributes") is the foundation of effective recreation management. Without information about these attributes, land managers cannot maintain or enhance desirable qualities, nor can they prevent or mitigate damage to recreational values as a result of other forest uses, such as timber management. There is a need for a better understanding of what attributes users require in recreation settings and how adverse impacts on these attributes can be avoided and positive effects enhanced.

It is generally accepted that recreational opportunity settings consist of three components: the physical-biological setting includes those qualities provided by nature, such as vegetation, topography, and water; the social setting includes those qualities associated with people, such as the type and amount of use in an area; the managerial setting includes those conditions provided by management, such as rules and regulations, developmental activities, roads and recreational facilities (Clark and Stankey 1979). Collectively, these three components provide the conditions that give places recreational significance.

The above description provides the overall concept of recreational settings but does not identify the needed level of detail about the components and their effect on an area or a site's role in providing recreational opportunities. If, for example, resource extraction is an important part of management, what are the roles of different resource management activities, conducted in different fashions and at different times and scales, on various kinds of wilderness and nonwilderness recreation? This level of detail is necessary for good recreation planning and for evaluating how changes brought about by development will affect recreation.


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SITE ATTRIBUTES: WHAT ARE THEY?

Attributes are the characteristics or qualities of a site; for example, trees, water, wildlife, facilities, easy access, solitude, flat ground, and protection. Attributes can be either positive or negative depending on one's point of view: natural vs. modified areas, or few vs. many people. User preferences identify what is acceptable and to whom.

Setting attributes can be defined at three general levels:

1. **Location attributes** - This category includes the spatial characteristics of a site relative to the origin of the recreationist. It includes such specific measures as distance and time from home and measures the difficulty of access due to terrain and other physical-biological barriers.

2. **Macrosite attributes** - This category includes characteristics that describe the surroundings in which a recreation site is found. It includes broad descriptions of the physical, biological, and social surroundings, scenic conditions, and the type, level, and scale of modifications in the landscape. The Recreation Opportunity Spectrum (ROS) (Brown and others 1978; Clark and Stankey 1979; Driver and Brown 1978) as well as the Visual Management System (USDA Forest Service 1977) are most often applied at this level.

3. **Microsite attributes** - This category involves site-specific features including most of the elements discussed earlier under the physical, social and managerial subsettings. These features give sites recreational significance in terms of the experiences provided and affect the nature of activities that are possible. They also help to identify which management actions are most likely to affect recreation use in either positive or negative ways.

A wide range of variables underlie this three-tiered attribute framework. Some variables are found in more than one category depending on the level of specificity at which they are measured. For example, broad scenic classifications might be a satisfactory level of measurement at the macrolevel; more detailed measures of scenic quality, such as the view from a campsite, might be required at the site level or microlevel.

Defining attributes contributes to an understanding of the qualities of a location that influence usage and user satisfaction. In addition to the spatial classification described above, attributes also can be classified in terms of how they operate in the recreational choice process; they may be categorized as requisite or supplementary and as facilitating or constraining.
Requisite attributes are those necessary or essential for a certain activity; for example, flat ground is necessary for camping or water is necessary for boating. Supplementary attributes are not required for an activity, but may influence people's choices; for example, scenic beauty is not necessary to engage in most activities, but it is desirable for most people.

Some qualities act as facilitators or attractors: their presence allows or attracts use and increases satisfaction. Other qualities act as constrainers or detractors: they make sites difficult to use or undesirable and unlikely to meet visitors' desires. The following listing shows examples of both types.

<table>
<thead>
<tr>
<th>Facilitators/ attractors</th>
<th>Constrainers/ detractors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenery</td>
<td>Litter</td>
</tr>
<tr>
<td>Activity opportunities</td>
<td>Resource damage</td>
</tr>
<tr>
<td>(crabbing, fishing, etc.)</td>
<td>Noise</td>
</tr>
<tr>
<td>Sheltered anchorage</td>
<td>Shoals</td>
</tr>
<tr>
<td>Flat spot to camp</td>
<td>Unprotected waters</td>
</tr>
<tr>
<td>Accessible beach</td>
<td>Steep ground</td>
</tr>
</tbody>
</table>

Thus, it is possible to organize recreation setting attributes into a variety of categories. Each provides an alternative concept of the function and purpose of attributes and how they are used in the recreationist's decision making process. These different conceptions of attributes are complementary to one another; they are not necessarily mutually exclusive.

**WHY IS A KNOWLEDGE OF SITE ATTRIBUTES IMPORTANT?**

Attributes constitute the features that define an area or site as a recreational resource. Knowing what these attributes are, their relative importance to recreationists participating in different activities or seeking different experiences, and the sensitivity of the attributes to change is essential input to integrated resource management. Alterations in settings induced by nonrecreational resource uses can change greatly the type of recreational opportunities available. Conversely, maintaining the essential attributes of a particular recreational opportunity setting might represent a significant constraint on other uses. For example, a management objective to maintain semiprimitive or primitive recreation opportunities would limit the nature and extent of timber harvest activities appropriate in the area. Understanding these interdependencies is essential to the integration of different resource allocations and to minimizing conflict (Clark and others 1985).

Many factors are involved in the complex decision making process that recreationists undergo in considering where to go and what to do (Stankey and McCool 1985). Some of these factors are not subject to management influence (for
example, the weather) or are not even related to the nature of the place or the activity (Are family or friends available with whom to recreate?). The condition of the attributes, such as those described above, is a factor, however, in the choices that many people make. Management can either directly influence these conditions or can provide recreationists with information regarding them.

Failure to accurately determine which attributes truly affect recreation choices may lead to designation or development of areas unlikely to be used. For example, Lime (1971) found that some campgrounds in Minnesota that were located and designed according to engineering standards failed to attract users; these sites were not defined as attractive by recreationists. Such mismatches can be costly in terms of agency budgets as well as in user satisfactions.

Attributes provide a basis for identifying compatibilities and conflicts with other resources uses. Because they describe setting conditions, they reveal how different uses of a setting, such as log storage and recreation use in bays and coves, produce compatibilities or conflict. Whether the situation is one where the effects of the resource use is an attractor or detractor (or has a neutral effect) depends on user preferences.

Presently, there is no systematic and objective method for identifying attributes that constitute or help define important recreation sites. We are generally unable to predict, in advance of use, what determines key recreation sites. In areas managed for timber production, for example, recreation sites and uses compatible with timber management activities are most often a result of timber management, rather than an intentional objective (Clark and others 1984). Consequently, in most cases, we do not know what may have been missed in recreation opportunities had recreation objectives been considered prior to the design and layout of roads and timber harvesting boundaries.

**USE OF SITE ATTRIBUTE INFORMATION**

Information about recreation site attributes can be used in all phases of ROS planning as described by Stankey and others (1984). Phase I involves a description of "what is", and such basic inventories depend on identification of the features and qualities to be inventoried. Phase II involves an identification of "what can be", a capability assessment, and provides managers with the range of suitable alternatives they might consider. Attribute data would be essential input to this analysis. In Phase III, selection of a preferred recreation alternative occurs. Attribute data are necessary to help formulate this alternative. In Phase IV, the preferred recreation alternative is incorporated into an integrated resource management program. Depending on other resource values and demands, the preferred recreation alternative might be wholly retained or modified substantially. Finally, in Phase V, the consequences and implications of the adopted integrated management alternative are appraised through a monitoring and evaluation program. This phase allows
managers to determine the relationship between intended and actual consequences and to adjust, as necessary, the management actions needed to achieve their objectives.

A knowledge of key sites and attributes - their importance and location - aids evaluation of the magnitude and importance of potential effects of timber management activity at both macrolevels and microlevels. This involves several steps:

1. Step one is to identify actual and potential recreation sites. Onsite inventories and secondary sources such as topographical maps, nautical charts (in marine areas), and vertical and oblique low-altitude colour photos are used. Criteria for selection of probable sites are developed (for example, accessibility by water for different types of boats).

2. Step two is a description of the likely impacts associated with the planned timber harvesting activity on the sites defined in step one. Measures of both the intensity and extent of the effects can be developed (Clark and others 1985). Effects include visual and sound changes in the area. A model of sound spread developed earlier (Harrison and others 1989) appears to have applicability here as do computer techniques for visual management. Impacts on sites can also be compared to other information about recreation opportunities such as visual quality and activity opportunities including fishing, hunting, and berry picking.

3. In step three, the anticipated impacts are evaluated for their consequences. A typology of impacts ranging from complete loss of the site, to no impact, to positive effects can be utilized in this process. Evaluation requires managers to examine effects in light of considerations such as: Which recreation experiences will be improved and which will be diminished? Will new and needed opportunities be created in the area? Will users be displaced? Do real choices exist for displaced visitors? What is the relative availability and accessibility of opportunity settings that will be adversely affected? What are the cumulative effects of the changes both in and out of wilderness on a regional/subregional basis? Will the effects lead to changes that exceed those judged as appropriate and acceptable in areas where limits of acceptable change have been identified? (Stankey and others 1985) (for example, will construction of logging roads or logging camps adjacent to wilderness lead to increased use within the area?). Answers to these and similar questions provide recreation managers with input to interdisciplinary teams evaluating proposed timber management plans.

4. The final step involves identifying strategies that enhance positive effects or prevent or mitigate potential adverse effects. In particular, strategies
involving alternatives in timing, spacing, and design of cutting units, roads, log dumps, and so forth appear useful in contending with negative effects. In other cases, providing information to users (both area residents and tourists) about the nature of the impacts likely to be encountered will help shape realistic expectations and temper dissatisfaction. Or, alternative opportunities can be identified as a means of compensating users for the loss of favoured sites. Public involvement will be necessary to determine the appropriateness of the alternatives suggested by managers.

SOUTHEAST ALASKA: A CASE EXAMPLE

The relationship between dispersed recreation use and timber management activity in southeast Alaska provides an ideal situation for studying many of the above issues. Southeast Alaska is an extensive area of natural or partially altered land. It contains outstanding opportunities for primitive and semiprimitive recreation opportunities both within and outside of designated wilderness, primarily along the thousands of miles of coastline.

Because of the planned changes in southeast Alaska from timber management and other resource management activities, there is a need to identify the nature and location of effects on recreation opportunities, to define the consequences of these impacts, and to help prescribe steps to prevent or mitigate negative effects while enhancing positive effects. There is a fundamental need to identify the location of key or critical recreation sites that presently support or have the potential to support a variety of recreational uses. This is not an easy task. The region is a marine archipelago with over 26,000 miles of tidal shoreline. Roads are generally nonexistent between communities, so boats and planes are the main means of travel outside towns (Clark and Lucas 1978). Because of the marine orientation in the region, most important recreation opportunities are close to the marine fringe. And, many of the attributes that determine desirable recreation settings along the protected shorelines are also desirable for activities associated with timber harvesting, such as log storage and transportation (Faris and Vaughan 1985).

An on-the-ground inventory of potential recreation sites would be a formidable, costly task. However, knowing the extent and location of such sites, particularly those that represent "critical recreation habitat" for regional communities, is important for specifying impacts, for identifying alternative opportunities and possible substitutes, and for developing appropriate management and mitigation strategies when important opportunities will be affected.

Information on the identification of attributes and their importance comes from manager's judgments and from research about user choices, preferences, needs, and expectations. A survey of Alaska residents in 1979-80, the Alaska Public Survey (APS) (Clark and others 1982), revealed the following attributes of favourite sites: remoteness; beaches (and other land characteristics); good boat access and moorage;
good saltwater fishing; good beachcombing, hiking, and walking; wildlife and birds; undisturbed natural areas; places to get away from others; and scenery.

Based on these user-defined qualities and on field study of some sites residents identified on maps, other attributes can be determined as essential (require attributes) for use of certain settings. For example, the need for access to the coastline and protection from winds and waves had led to the identification of the following requisite attributes in coastal areas:

- **Landslope** - allows easy upland activities (steep ground does not).
- **Tidal area** - smaller areas facilitate access to beach and uplands.
- **Bathoslope** - submarine slopes and characteristics affect anchoring ability.
- **Shoal** - offshore rocks and reef impede boat access to the shore.
- **Exposure** - protection from winds and waves is a fundamental need.

Many other attributes potentially enhance or limit access to and use of the coastal margin. These include forest cover (provides privacy and protection), currents, beach type, and distance from home.

A key feature of the attributes identified above is that they are objective indicators and can be identified and measured from information commonly available in forest management offices. This provides a less expensive and less time consuming alternative than field inventory. By measuring the presence and variation in these attributes on maps and aerial photos, the location of potential key recreation sites can be determined. A probable estimate can be developed of the proportion of the region’s 26,000 miles of tidal shoreline that represents a usable opportunity for dispersed recreation along coastal areas.

Onsite verification of these indicators will provide a measure of the reliability of estimates derived from maps and aerial photos. It will also refine the measures of access and suitability for recreation use. Onsite inventories also yield measures of actual site usage. How well do the estimates based on state-of-the-art knowledge represent actual user choices and preferences?

The attributes described above were measured and mapped in a pilot test along more than 80 miles of shoreline. Application of the attributes leads to the elimination of most (approximately 80 percent) of the coastline as potential "critical sites" (those with all the necessary requisite attributes for boat access and upland camping). A caution is in order here. The "surviving coastline" (the remaining 20 percent) represents potential sites based on the rationale described earlier; those sites are effective or usable for offshore access, they may or may not actually be used. This is a situational similar to the coincidence (or lack of it) between wildlife habitat and the actual occurrence of animal populations - they may or may not be found in areas of good habitat. In addition, the "eliminated coastline" may have important recreation or scenic values for some types of activities and some users.
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Even in the worst case, where access by boat is impossible, the scenic value alone may be important for either onshore or offshore visitors to the area. However, identifying and mapping key site attributes helps to sort out the complex interactions among diverse recreation activities and potential recreation settings.

Each of the surviving sites should be considered as particularly important (or key or critical) in that they provide protection and generally unrestricted access from offshore to the uplands with some degree of flat terrain. In essence, these sites illustrate the concept of "effective recreation opportunities"; opportunities that are usable either because of their location vis a vis communities or because of physical conditions at the sites. The surviving sites in the pilot study are effective in terms of physical conditions; further application of the attributes approach in a larger area and analysis is necessary to determine the role of surviving sites in providing options for residents of nearby communities. Additional information about locational, macroarea, and microarea characteristics will help determine the significance of each of the potential sites identified.

A major advantage of the approach described is that standards for each of the attributes can be adjusted as appropriate. For example, if it is felt that too step a bathoslope, or too small (or large) a tidal area were being considered, that could be adjusted and the section of coastline reevaluated. In this way more or less coastline would survive. Of course, such a change in standards would have to be based on a rationale consistent with user preferences and choices.

Although the preliminary focus of this study has been on the coastal margin, the concepts can be applied to recreational opportunities in upland areas. For example, while bathoslope and tidal area are potential impediments for boat access, they are largely irrelevant for upland access; flat ground and a nice beach may be desirable in either case. Other attributes beyond those described earlier must be determined for upland environments. The data resulting from the process described above then can be used to evaluate the importance of sites whether in upland or coastal areas.

CONCLUSIONS

Our research indicates that enhancing opportunities for recreation, or mitigating the effects of timber management on recreation both within and outside of wilderness, is certainly possible. Outside of areas classified as wilderness, the situation is not necessarily an either-or proposition, but more one of how to harvest while protecting key recreation values, if in fact, recreation is a use for which managers need to provide diverse opportunities. The results from this research will lead to a process to help identify where critical areas are so that they can be considered as part of ongoing planning and management. The results also will help define what features of timber management activity are particularly important to recreationists.
The results of this research and their use in management may help to depolarize the debate about whether to log or not to log in certain areas. Studies in the Pacific Northwest demonstrate that there are important recreation values in multiple-use forests, and studies in Alaska suggest that the same might be true in some places and for some users. As indicated in a recent publication about recreation in multiple-use forests in Oregon and Washington (Clark and others 1984), "the observations and findings from this research should not be construed as an excuse to log previously unlogged areas. Rather, the results of our work indicate that when a decision is made to harvest timber for commodity values, it may also be possible to provide some quality recreation opportunities in such areas. There may also be situations, however, where silvicultural alternatives should be considered expressly for recreation, rather than production of commodities. Management objectives guide such decisions."

To make such an approach work requires that critical recreation sites be identified and their attributes measured in advance of any on-the-ground activity. In this regard, recreation is little different from fish and wildlife management; knowledge of critical habitat is fundamental in each case. With such information, it will be possible to test alternative timing, spacing, and design options for their ability to protect key recreation opportunities in areas intensively managed for timber production.

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INTRODUCTION

The term "habitat" implies an organism's relationship to its environment. This is an interesting way to describe recreation, because it has the potential to change our perspective about outdoor recreation management and planning. Traditionally, lands used for recreational purposes have been managed for a variety of uses, such as National Forests in the U.S., or have been managed primarily for ecological preservation, such as national parks. The primary criteria for decision-making in these areas has often focused on biological considerations, and decision-makers have generally been trained in the natural sciences.

In other words, the focus of resource management in areas used for outdoor recreation and other amenity values has been and continues to be primarily on the natural setting. The concept of habitat also focuses on the setting, but it goes one step further: it incorporates the presence of the human organism into the setting. The implication is that environments are viewed as natural places that are viewed in terms of human patterns of use.

This need not be construed as entirely anthropocentric. Rather, it is a better way of trying to understand how humans relate to the natural environments with which they interact. The work habitat implies a living space. Living space implies something to be sustained in order to maintain a viable existence. In this sense, habitat means more than something "used" by humans. It represents our attempt to find a living accommodation with the world in which we exist.

There is little in the literature that talks about the concept of habitat per se. Perhaps the primary proponent of the concept is Roger Clark of the USDA Forest Service. He has suggested many analogies between human use of environments and ecological principles. The main question is how to most effectively organize and understand human behaviour in natural environments. Environmental psychology is the discipline that focuses on human/environment interactions, and there is a very wide-ranging literature that addresses this topic. My task here is to focus on a more narrow component of that topic, the relationship of people to "living spaces" they use for recreation.

Any analogy has limits in that it is not a direct relationship. We use concepts from other areas of study because they can help us organize our thinking about a certain topic. The concept of habitat is helpful because it unites natural settings
with human interaction. However, humans do not use recreational settings in a
direct relation to the ways animals utilize habitats in that they are not usually the
actual living places of the visitors (though second homes, retirement properties and
caravan trailer living are serving to change this as well). In relation to the analogy,
people do have predictable patterns of behaviour, essential needs, and perceptions
that need to be accounted for. They also engage in many behaviours in recreation
settings that do characterize the ecological concept of habitat, such as seeking food
and shelter, establishment of security, defense of territory, and yes, procreation.

The purpose of this paper is to attempt to organize some of the basic concepts
of human/environment interactions that may be most useful in helping to understand
the concept of habitat. The paper will be organized around the meaning that people
attach to recreation settings, their valuing of and attachment to such places, the
nature of the experience they have, and the influence of these factors on their
behaviour.

HABITAT MEANING

Function

One of the major themes of recreation research in the last twenty years has been
the function that visitation to a given environment serves for an individual. A person
is presumed to have certain needs that are satisfied by participation in recreation
(Driver, 1976). Various recreation environments will provide opportunities for
different types of behaviour to occur. Thus, different needs are related to different
behaviour patterns in different environments (Driver, 1977). This variation in
behaviour simply represents the notion that environments represent different
"habitats". However, people with different needs may use the same environment,
but engage in different behaviours to fulfill those needs. In this sense, the same
physical setting may represent a number of habitats.

We may walk into a natural setting because we have the desire to experience
nature, and that is a desired outcome. People will vary in the amount of facilities
necessary to provide the desired level of comfort and the opportunity to engage in
a certain activity. The recognition of the different types of opportunities sought has
resulted in the development of planning systems keyed toward diversity of
preference, such as the Recreation Opportunity Spectrum (ROS) (Driver and Brown

This literature has primarily followed the lines of expectancy theory (Lawler
1973), where the decision to engage in a given behaviour in a certain setting is
based on the expectation that specific benefits will occur. Initial studies in this area
started with identification of the expectations of various recreationists in different
settings, such as the Boundary Waters Canoe Area (Peterson 1974) and Dinosaur
National Monument (Roggenbuck 1975). It evolved into much more complex analyses of relationships between varying types of users and their expectations (Haas 1979, Manfredo 1979, Virden 1986). The ultimate purpose of this line of inquiry has been to document systematic relationships between different patterns of behaviour in different settings in terms of the functions they serve for individuals. In this sense, the link between behaviour and setting is virtually synonymous with the notion of "habitat".

**Affective Meaning**

Anything that humans do is likely to serve some function. However, some benefits may be more indirect. These may have to do with our emotional attachments to environments, and the ways in which such attachments provide value to our existence (Schreyer et al. 1981). Williams and Haggard (1989) suggest that recreation habitats can contribute to our self-esteem, self-definition and self-affirmation. These are different aspects of the complex notion of how we view ourselves. As leisure settings are generally associated with freedom of choice for the individual, such habitats allow us to engage in activities that can provide opportunities to express these aspects of who we perceive ourselves to be, and who we would like to become (Kelly 1987).

Affective response to things we perceive is an important part of our sense of understanding. In fact, Zajonc (1980) has suggested that affect may precede cognition. In other words, we may develop feelings about a place we encounter even before we have perceived it and interpreted it in our mind. Ulrich (1983) suggests that our initial affective response to a setting will affect our ultimate perception of it. This will subsequently influence our behaviour in that setting.

If we feel emotionally positive about a place, that will influence our experience far differently than if we had negative emotions. For instance, Lee (1972) describes the frightened response of inner city youths to a grove of redwoods, because of their unfamiliarity with such a habitat. This is a place that many assume would have a profound positive influence on people, yet it is the frame of reference brought to the place that may determine its interpretation. Thus, habitat also encompasses the domain of feeling, as well as action. In a recent paper, Williams and Roggenbuck (1989) suggest that emotional attachment to places is distinct from direct functional and symbolic means of relating to an environment.

The symbolic function is an important means of deriving value in environments. Places do not have to be "used" physically in order for value to be derived for the individual. Our habitat sometimes goes beyond our immediate experience. Williams et al. (1988) suggest different types of identification people may develop with places. One has to do with the link of the self to one's culture. Banff National Park is a widely shared symbol of Canadian culture, even though many citizens have not
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actually visited the park. L'Arc de Triomphe is a strong symbol for French culture. These places are part of a person's "cultural habitat", independent of visitation.

A second type of identification they suggest is the connection of individuals with the environment in which they live. We share a biological heritage that people increasingly recognize. Not all persons are naturalists, but there is considerable interest in our relationship to the other organisms on the planet. Some of this is pragmatically related to our personal health, such as the concern about holes in the ozone layer and the greenhouse effect. However, there is also a concern about our impacts on other living things, as illustrated by the media coverage of the recent oil spill in Alaska.

Another type of identification is the relationship of human beings to the broader nature of existence. People seek to define the meaning of their place in the cosmos. Some of this may be done in formal religions, others in New Age beliefs, and still others in personal philosophies (McDonald and Schreyer 1989). Such a level of analysis might seem far removed from recreation habitats, yet nature is often seen as a significant venue for the expression of these relationships. Consider the proliferation of Christian youth camps and communal ceremonies such as "long dances" held on public lands. There is also the well-recognized use of natural environments as part of the religious value systems of Native Americans. In this sense, natural habitats are indeed spiritual habitats.

Another domain of affective definition of environments is aesthetic response. People value places they visit because the setting is aesthetically pleasing. This is no great revelation. Beyond the symbolic value of a Yosemite National Park in terms of one's identification with one's culture, there is the attraction of the scenery. People develop vacation plans around places they want "to see". Many recreational habitats are seen as attractive places to visit, not to mention places where people may choose to live. Much research has been carried out on the attempt to define what about environments is in fact aesthetically pleasing to people (Williams 1986). The subject is a large and very complex one that transcends the scope of this paper.

VALUING/ATTACHMENT

Components of Valuing

Habitats may provide an array of differing functions and points of association for people. These associations may be valued more or less by individuals. Thus, there is the question of the strength of association and its worth to the individual. Many of these values have been represented in economic terms (Peterson and Brown 1986), such as travel cost or willingness to pay. There are also alternative ways of valuing environments (Driver and Peterson 1986).
Other representations of valuing may be assessed through attitudes or measurements of feeling, as well as in the behaviour of people visiting certain areas. For instance, Brown and Ross (1982) showed that persons in different setting types differed in the intensity of their motives for participation. However, Knopf et al. (1985) questioned whether the significance of difference across similar environments such as rivers was sufficiently large to assume people were viewing these places in different ways.

This also needs to be related to the previously mentioned issue about what exactly about the environment is being valued. The place could be valued for its direct function, or it could be valued for symbolic or more indirect meanings. There is also the question of scale. What habitat is the person relating to? We have a way of drawing political boundaries around specific recreation areas, but the values that attract us to those areas often go beyond those boundaries. Thus, we could be attracted to a specific park, the ecosystem that the park represents, or the region in which the park is located. In the latter case, regional identity would likely merge with elements of social and cultural identification.

How specific is the area of attachment? What defines the bounds of that attachment? These may appear to be academic questions, but if the purpose of this line of inquiry is to provide input to the planning of recreational opportunities or the preservation of natural spaces, then the nature and extent of valuing and identification become very important. Questions such as the substitutability of places also become sources of concern. If one place has the same attributes as another, will it be just as good for the individual? Rational choice models would assume that such trade-offs are made (Peterson et al. 1985).

While the initial approach to this question would be to assume that such a trade-off would be the case, we also recognize that our own personal attachments to places involve more than a simple breakdown of attributes. Shelby (1988) showed that willingness to substitute among salmon fishermen in New Zealand involved a complex and varied combination of factors, which varied depending on the setting.

**Relationship to Place**

According to Williams and Roggenbuck (1989), "The willingness to substitute is likely to be strongly influenced by the attachment a visitor may have to a specific resource or class of resources such as wilderness, national parks, or historic sites. The relationship participants have to the resource, that is the extent to which their identity is tied to it, needs to be understood before responses to changing environmental conditions can be predicted."

This attachment may be expressed as a "relationship to place" (Tuan 1974, 1977), which means that a part of the person’s personal identity is linked to the place itself.
This was described above as an aspect of the psychological dynamics of perceptions of environments. To the extent that a person may identify with a specific place, that place will likely hold more value for the individual. This also means that even though functional aspects of the environment may be duplicated elsewhere, the sense of identity is tied to a specific place (Williams and Roggenbuck 1989).

Just as a house is not a home, a park may be more than an ecosystem to people who visit it. The whole notion of "belonging" represents this subjective attachment to recreational habitats (Williams et al. 1988). It is noteworthy that the U.S. Forest Service has launched a major recreation initiative called the "National Recreation Strategy" that emphasizes concepts such as "special places" and "ownership" (USDA Forest Service 1988). The implication is that such places are more than public lands, they are also places that people identify with, live in close association with, and value for their being there.

HABITAT EXPERIENCES

One way of examining the relationship that people have with recreation habitats is to understand what goes on in the mind while the person is visiting such places. The link of experience to habitat is a transactional process (Altman and Rogoff 1988). The only way we know environments is through our personal interpretation. Thus, it is literally impossible to separate environment and experience (Williams 1986).

How to structure human experience in relation to the environment becomes a challenging question. For instance, it could be treated as straight "information processing", in which the data from the environment is interpreted rationally as a collection of pieces of information that are organized and stored in human consciousness (Schreyer and Beaulieu 1986). This raises the question of what aspects of the environment are being attended to in relation to what aspects of the desired experience.

Williams (1989) suggests that people tend to specialize on various elements of the environment depending on their desired experience. This may represent a focus on the setting itself, on the setting as a place to carry out a desired activity, or a place to share a social experience with others. Each aspect will likely result in different patterns of behaviour (Schreyer et al. 1985), and will result in different patterns of recreational habitat use.

Different dimensions of experience may result from varying uses of a recreational habitat. The intensity of the experience may vary. Strong experiences of recreation participation have been described in terms of Maslow's classical "peak experiences" (1954) and Csikszentmihalyi's "flow experiences" (1975). Again, there is the question
of which elements of a recreational habitat are attended to when such experiences occur.

Different modes of attention are possible. For instance, it is possible to be very focused on specific aspects of the setting, or have a more general overview of the place (Jacob and Schreyer 1980, Tuan 1977). In perceptual terms, there is also the notion of the level of arousal, which relates to the amount of stimulation provided by the environment. This may range from the amount of information processed (Berlyne 1964) to the physiological arousal provided by thrill-related activities (Zuckerman 1974, 1976).

There is also the notion of the temporal flow of experience while one moves through a recreational habitat. Different feelings and emotions may be related to the timing of the recreation experience. The classic statement of this is Clawson and Knetsch's "five-step" model of recreation experiences. However, there has been little in the way of systematic research on this topic. One study in this area is Hammitt's research on recreation as a "multi-phase" experience (1980).

BEHAVIOUR IN HABITATS

Choice of a Habitat

Habitat implies human use of a setting. The uses people make of recreation settings will vary depending on factors which influenced their initial choice of that place for recreation. There may be a considerable range in variation in the uses people make of a national park, a reservoir or an urban playground.

One of the factors that will influence what people do is the image they have of the place. Images that people possess of an environment, regardless of whether they have experienced it before or not, will affect their behaviour and perceptions in the environment (Knopf 1983). Such images often have little to do with objective reality (Hunt 1975). Rather, they are subject to shaping through marketing or through cultural myths and values (Schreyer and Roggenbuck 1980).

The factors that influence the choice of a given habitat for recreation are many and complex. A proceedings of a conference on recreation choice behaviour edited by Stankey and McCool (1985) covers the wide range of this topic. Beyond information is the issue of availability. People must be able to have access to an opportunity in order to use it. From a pragmatic perspective people will tend to participate in recreation habitats that are accessible to them, and this will relate to recreation preference. Naturally, people in Colorado will be more likely to prefer downhill skiing than residents of Florida.
However, this also has policy implications for providers of recreation opportunities. Decisions inevitably must be made about the appropriateness of varying recreational opportunities. Can hang-gliders use wilderness as a recreation habitat? Can ORV recreationists use national parks? Such questions will determine how habitats are ultimately defined.

**Patterns of Behaviour**

One of the basic notions of a habitat is that people will tend to follow a predictable pattern of behaviour attuned to their use of the setting. The interaction between person and setting is for a reason, and the individual will likely use the same setting in similar ways across time (Schreyer et al. 1985). There is an entire body of study in environmental psychology called "behavioural ecology" that addresses the patterns of people's behaviour in various settings (Williams 1986).

An ongoing question is the extent to which the environment influences the behaviour and experience of the individual. The premise of such planning systems as the Recreation Opportunity Spectrum is that different environments will provide opportunities for different types of recreational experiences, and that people will select these settings accordingly. The presumption is that attributes in the environment can be inventoried, and that these can be used to classify such places. The link between specific attributes and behaviour patterns requires better definition. Obviously, people need bodies of water in order for them to go swimming. But people are also very resourceful, and may be able to create their own experiences in a variety of settings.

**OVERVIEW**

When we attempt to understand the nature of human use of the recreation environment, the notion of habitat is a potentially vast topic that could include all the areas of inquiry studied under the domain of environmental psychology. A challenge is to identify those elements that are most useful to our understanding of the management and planning of recreation environments. We can use words such as "environmental style", "standing pattern of behaviour", or "scripts" to represent regular patterns of human behaviour in natural environments. What is essential is the capacity to define these terms in ways that will provide meaning and direction.

**Level of organization becomes important in this regard.** At what level is this understanding most useful? The notion of ecological settings is at the individual and social group level of perspective (Barker 1968). Machlis and Field (1984) take the perspective of thinking about recreation habitats as human ecosystems, and point out the importance of identifying the many interrelated components that go into such environments, including the management and private sector parts.
The levels of organization are potentially infinite. However, it is also possible to recognize the limits of understanding. Human beings in environments can be analyzed, observed and interpreted. There is a growing respect for the fact that the workings of forces such as individual human volition may result in ultimately unpredictable flows of social behaviour. This has been recognized in the physical and biological sciences as the principle of "chaos" (Gleick 1987). Predictability and understanding are useful. They are resources that are especially valuable to persons charged with the responsibility of making decisions about services to provide to the public. However, the quest for understanding must be tempered with the recognition that human nature is fundamentally incapable of determinism.

There are many specific research issues that are valuable to pursue to increase our understanding of human use of recreational habitats. What predicts what people will do in a recreation setting and what does it mean to them? What makes a difference in the nature of recreation environments that will affect people's choices to visit them, and the benefits they derive from them? What level of organization is most useful, particularly in terms of the ways people define their own recreation habitats?

This paper has also touched on some broader issues related to this topic that go beyond recreational use of environments. There is a growing recognition that people value recreation places as important components of their lives. These people may be uninformed about appropriate behaviours, but they do have an appreciation of the places they are in. There is a tendency to treat visitors to natural settings in an adversarial manner, to focus on the negative aspects of their behaviour. However, the relationship to recreationists must ultimately be transactional, it must be a two-way communication of those who provide these services, and those who seek to benefit from them.

This perspective encompasses the recognition that people have affective feelings that go beyond the functional value of recreation habitats. They view such environments as "places" in which they invest personal identity. It suggests a more holistic appreciation of the existence of these places that encompasses a reverence for the community of life and the sharing of that community. This, perhaps, is the most significant implication of the use of the word "habitat".

LITERATURE CITED


Towards Serving Visitors and Managing Our Resources


PEOPLE AND PROTECTED NATURAL ENVIRONMENTS: EMERGING RESEARCH CONCERNS

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INTRODUCTION

It was well over two decades ago that the outdoor recreation discipline first embarked upon its journey deep into science - to gain that ultimate revelation about people, about their needs, and about the classification of outdoor environments to meet those needs.

The early outdoor recreation researchers perceived themselves as outposts on conceptual frontiers. They pontificated about what they felt the character of recreation meaning was all about. They peddled dreams to all who would listen that someday soon there would be a process for identifying the need/gratification potential of different outdoor locales (e.g. Knopf, Driver, and Bassett, 1973).

There was a chemistry, a vision, a sense of gelling in those early days of outdoor recreation research. There was a quest to quickly understand the human psyche, and how the outdoor environment services it. There was a common cause: to unveil the ultimate classification of outdoor recreation resources.

The early researchers raised their banner high. And, as the banner unfurled, one could see the words: "TOWARD UNDERSTANDING". And they carried that banner listlessly as they trudged through the quagmires of 10,000 motivational surveys (Driver, 1976). But the banner became tattered and torn as they moved into the battlegrounds of environmental psychology where there seemed to be divided camps and clear lines of confrontation (Williams and Schreyer, 1982). Yes, there is a link between environment and experience, proclaimed one academic battalion (Wohlwill, 1976). No, there is no link between environment and experience, proclaimed the opposing forces (Lowenthal and Prince, 1976).

The troubled outdoor recreation researchers retreated quickly into the sanctity of their own field, only to find themselves marching through desolate, forsaken valleys that criss-crossed and partitioned the various waves of outdoor recreation inquiry (Knopf, 1983).

From the bottoms of these vast lifeless wastelands, they would look up with befuddlement to the distant mounds of knowledge - "sociologists" hill, "leisure psychologists" pinnacle, "geographers" mesa, and "foresters retreaded as social psychologists" mountain. The miles between these mounds of knowledge seemed
immense; the wastelands between them were so foreboding that no telephone lines could be strung.

And, way off in the distance was "resource managers" rise - and, somewhere else not even within viewing distance was "outdoor recreationists" hollow. The distances between everything of importance in the outdoor recreation field seemed insurmountable (Knopf, 1987).

And that characterizes where the field of outdoor recreation research is today. Where is that ultimate understanding of people's needs and the classification of outdoor locales to serve them? It is slipping through our fingers.

There are rumblings going on in this field. There is some discontent (e.g. Williams and Knopf, 1985). There is an emerging, uneasy feeling that the field might be losing its grip on things once held true. It is beginning to shudder because it feels like it is losing its wisdom. There is the feeling that it is failing to reach the convergence for which it has long aspired.

However, in reality, these are signs that the field is moving to a more mature state. It is beginning to self-question. Its scientists are beginning to be not threatened by debate and disagreement, but invigorated by it. They are starting to subject basic precepts to greater scrutiny. They are beginning to move toward the production of more verified perspective.

But in the meantime, what are the current struggles all about? They have to do with the way in which the potential power of scientific revelation is being constrained by the limited perspectives of those conducting outdoor recreation research. As each new revelation is produced, people are now beginning to wonder: does it truly represent the reality of the world - or does it represent the realities of the particular collection of investigators that created it? Does each new piece of data, or new inference, or new planning methodology, truly reflect reality? Or, might it only be a reflection of the will of its creator?

The concern about the limited perspectives of outdoor recreation researchers and the contaminating effects of these perspectives, is beginning to focus around two fronts.

First, there is concern that strong disciplinary biases are operating in the production of scientific inference in the outdoor recreation field, and that these biases are expressing themselves in troublesome ways in recreation resource planning tools and management approaches.

Second, there is concern that outdoor recreation researchers as a genre do not carry the broad perspective of a multi-cultural, multi-interest American society, and therefore are creating products misaligned with the interests of that society.
These two concerns strike at the heart of what the outdoor recreation field needs to address if it is to make progress in the quest to develop a classification scheme for people and resources that can be used as a foundation for outdoor recreation planning.

THE OPERATION OF DISCIPLINARY BIAS

One of the most uncontested revelations of science is that living organisms are products of their environments. This is a revelation that the outdoor recreation research community had learned long ago. It has drawn upon that revelation in virtually everything it has studied - whether it be people, plants or wildlife.

Yet it has been slow to come to grips with the reality that researchers - just like the organisms they study - are simply products of their own experience. And, it has been slow to come to grips with the fact that the limited experience they all carry can act to restrict their vision. Too often, groups of outdoor recreation researchers have been placed in positions of delineating problems, making inferences and making applications to planning and management - without being subjected to the critical analysis of scientists with other perspectives. They have not been forced to defend their own perspectives against those of scientists with alternate experiential histories. They have not been forced to hold their concepts accountable against the scrutiny of scientists from other disciplinary heritages. It is difficult to find evidence of a true multidisciplinary effort as the field proceeds to develop people and resource classification schemes for outdoor recreation planning.

Consider, for example, the problem of outdoor recreation opportunity assessment. Perhaps the most fundamental question associated with this problem is: "How does one discriminate among outdoor locales differing in production of a recreation experience?" Alternately put, the question might read: "What are the primary environmental dimensions along which locales can be arrayed in terms of capturing functional variation in the production of experience?"

There are infinite dimensions around which resources might be distinguished (Ward and Russell, 1981), but the one captivating the attention of the outdoor recreation field has been the urban-primitive dimension (Williams and Knopf, 1985). It has not only captivated our attention, but has been centered squarely in the middle of one of the most widely adopted outdoor recreation planning methodologies (Brown, Driver and McConnel, 1976; Clark and Stankey, 1979).

The attention that this dimension has received raises numerous questions. Given that there are an infinite number of possible dimensions, how is it that the fixation has been on this particular one? Is it indeed the best dimension along which to array resources in terms of differential experience production? Are there possible disciplinary forces at work? Are there alternate points of view?
Advocates of the primitive-urban dimension can point to evidence in environmental psychology, which suggests that the dimension consistently emerges as a central discriminating variable in photo-judgment studies (Zube, 1976). However, the way in which inferences have been drawn from such research has been subjected to strong criticism (Williams and Knopf, 1985).

Yet, the primitive-urban dimension carries strong intuitive appeal for those of us trained in forestry and who ponder a lot in their personal lives about the city-natural environment distinction.

There is strong intuitive appeal to the possibility that humans in general, just like we foresters, care a great deal about whether they are recreating in a truly primitive area, a semi-private area, a rural area or an urban area.

But is this a valid representation of reality, or is it simply a reflection of our opinion as a collection of researchers reared in a forestry perspective? The real question is whether the recreating public uses the primitive-urban distinction as their primary criterion for differentiating among locales offering a different form of experience.

What if outdoor recreation researchers turned the problem of classifying outdoor recreation locales over to the discipline of sociology? Would we realistically expect that such strong visibility would be given to the primitive-urban dimension?

From sociology, a discipline that dwells upon classifying the character of social transactions, we would expect that the answer would be no. In fact, Cheek and Burch (1976) used the sociological perspective to develop a classification of recreation locales based upon differentiating functions such as integration, bonding, solidarity building, fantasy, exchange and custodial maintenance. The concept of a primitive-urban distinction did not even seem to be built into their vocabulary. And, a review of the health, physical education and recreation literature reveals yet another repertoire of dimensions not normally entertained by investigators with forestry heritage - for example: active-passive, control-noncontrol, association-disassociation, participant-spectator and patterned-random (Berger and Schreyer, 1986). There, we find recreation resource classification schemes based upon the abilities of locales to relate to different types of personalities (Knopf, 1983).

It is becoming clear to students of the recreation opportunity assessment problem that the surfacing candidates for discriminating variables are inextricably tied to disciplinary perspective. The dimensions that have emerged, the classification systems that have unfolded, and the planning methodologies that have been built reflect the disciplinary heritage of those that created them.

This is not to suggest that the environmental dimensions currently enjoying popularity are not worthy of attention. But the field is beginning to recognize that
there exist a number of dimensions worthy of consideration, and that inquiry has not been organized to generate the possible array of candidates. And, it is beginning to recognize that it has not amassed a multidisciplinary effort to identify from all the possible candidates those that are most salient in discriminating among classes of recreation opportunity.

Concern about the tainting effects of disciplinary bias is surfacing in virtually all aspects of scientific work in recreation planning and management, whether it be in the creation of methodologies for assessing recreation quality, defining recreation satisfaction, or inferring what causes a peak experience in the wilderness.

What constitutes recreation quality? What evokes satisfaction? What causes someone to be transformed in the wilderness? Is it the natural setting? Is it the effect of a changed social setting? Is it a better place for the expression of one's personality? Is it greater perceived freedom? What precisely is it? The answers we are now getting depends upon the investigator we ask, and the discipline he or she represents (Knopf, 1983).

As a field, we need to place all the fundamental concepts of planning and management on center stage - quality, satisfaction, peak experience, demand, supply, environment, land classification, people classification - and then engage in critique, discussion and debate on what each concept is from all disciplinary perspectives.

Our field is now finally moving in that direction. It has not been done so in the past.

REFLECTING MULTI-CULTURAL INTERESTS

We now turn to a second area of concern that has been brewing in the field of outdoor recreation - that researchers simply are not a representative sample of a multi-cultural, multi-interest American society. The contention is that outdoor recreation researchers have a skewed view of the human condition and human needs. The contention is that they are out of touch.

The national recreation strategy for the U.S.D.A. Forest Service (1988) specifies that the ultimate goal of recreation management is "customer satisfaction". Our professional challenge, the strategy informs us, is to manage wisely our outdoor resources for the production of customer satisfaction.

That challenge is clear. But beyond that, nothing is clear.

Wise management in terms of what? Customer satisfaction for whom? To which customers do we allocate our scarce resources? What kind of satisfactions do we provide?
J. Douglas Wellman points to an ominous future for the field of outdoor recreation in his book *Wildland Recreation Policy*: "Wildland recreation managers are in the hot seat, and the future prognosis is for more conflict as expansion of the recreation estate slows, recreation participation rises, and the variety of recreation tastes increases (1987:1)." Wellman's prognosis haunts us with many perplexing questions. When the crunch comes, whose satisfaction levels will we maximize? Does the research community really have the ethnic representation, the cultural sensitivity, and the commitment to honestly ponder upon and probe the character of the human condition across all segments of society? Indeed, are people in the policy-making community giving researchers the mandate to become sensitive to these issues? The needs are many, and so are the perspectives (Dustin and Knopf, in press). Are we seeing them all? Are we hearing them all?

Deep inside, one voice tells us: "We are public servants! Is not our quest in that regard to serve the citizenry's expanding tasks for recreation - to serve all the tasks of all the people, no matter what they want?"

"No!" says a conflicting voice. "It is our duty to elevate those tastes, to encourage what those of us in the scientific community deem to be more productive forms of human behaviour, from the standpoint of a social consciousness, or a collective benefit to society, or what is good for the environment. After all, it is we scientists who have studied the phenomenon of leisure expression. We know what is better for people than the people themselves do. Isn't it our duty, as informed professionals, to become active interventionists - to encourage certain kinds of recreation behaviour and discourage others?"

"We are stewards of limited resources," says yet another voice. "As those stewards, aren't we supposed to pay attention basically only to those who express an interest in outdoor recreation? Those are the people who care. Those are the people to whom scarce resources should be allocated, given that they cannot go to everyone."

"What?" presses another voice. "It is our duty to seek out those who are disenfranchised, to seek out those who are not participating, and to find out why. In the United States alone, $1.5 billion is spent annually producing outdoor recreation opportunities (Cordell and Hendee, 1982). It is our duty to ensure that the benefits are washing evenly across all segments of society."

"Wait one moment," says yet another voice. "Are we really only public servants? Is customer satisfaction our only quest? Are we not stewards of something else, other than people? Have we lost sight of the fact that we are stewards of all the ecosystem? Do not all living things have rights - including the plants and animals we displace from our parking lots?"
As the debate within us goes on, we are confronted with the realization that it hasn't taken time to comprehend the full ramifications of its goal to produce "customer satisfaction". While in a frenzied pursuit to produce "satisfaction", our field of outdoor recreation research has not yet come to grips with what the full range of issues might be. It has not turned its attention to squarely address the concept of equity in outdoor recreation resource allocation: the question of who should get what satisfactions, and why.

The following research question needs to be posed: Are certain classes of potential recreationists being systematically biased against as we go about the business of producing outdoor recreation services? It is clear that the outdoor recreation research community is not addressing this fundamental question as a central part of its mission (Schreyer and Knopf, 1984). And, it is clear that the policy-making community is not driving researchers to do so (Schultz, McAvoy and Dustin, 1988). But it is also clear that there are concerns about whether the outdoor recreation research community even carries a broad enough perspective to sufficiently address the question (Knopf, Allison, Robertson and Leatherberry, 1988).

There are at least three major dimensions to the problem of addressing equity issues in outdoor recreation (Dustin and Knopf, in press). Yet historically none of these dimensions has been the target of systematic research.

First, there is the who gets what question. Given that all behaviours cannot be accommodated within our outdoor recreation areas, how does one determine which behaviours will be - and which ones will not be? Who has the right to the satisfying experiences they seek, and why? How are priorities established?

Second, there is the latent demand question. Here, it becomes irrelevant what behaviours are being expressed within a given locale, and what satisfactions are emerging from it. The more important questions are: what behaviours could be expressed? What satisfactions could emerge? What experiences could be generated, if only policy-makers as stewards of that locale would reconfigure the opportunity structure?

Third, there is the question of who should determine appropriate use. This is perhaps the most fundamental of all equity questions. Who should decide what groups will have rights to satisfying experiences from public lands, given that these lands belong to everyone, but cannot serve everyone? And, given that nobody will be able to agree on the answer, what is the most equitable way to proceed? We need to bring life to the researchable question of who has the "right" to participate in the "rights" decision. There are many possible candidates. There is the outdoor recreationist, exercising his or her property rights. There are those that don't use the outdoors now, but would if things would be different. There are underrepresented ethnic groups. There are public land managers, with their own perspectives on what is good for people and the land. There are future generations. And, there is the
natural environment itself. What rights do each of these groups possess to participate in the "rights" decision?

The concern now being expressed is that the outdoor recreation research community does not carry, at present, the far-reaching perspective to adequately address such equity issues. It has been effective in addressing equity-related issues surrounding the discriminating effects of different mechanisms for rationing access to a resource (Stankey and Baden, 1977). And, it has been effective in demonstrating how construction of backcountry facilities can work to discriminate against recreationists oriented to primitive experiences (Schreyer & Knopf, 1984). But when it comes to the question of understanding needs of underrepresented or non-traditional populations, the suggestion is that we are not doing a good job. And, there is question whether we even carry the sensitivity that would allow us to do a good job.

What of the poor? What of ethnic minorities? What of disabled populations? What of the elderly? What of women? What of the people who are not coming to our outdoor recreation locales because the current menus contained in our classes or outdoor recreation opportunity offer nothing of interest to them?

These issues are now beginning to surface at the higher levels of outdoor recreation policy. In the U.S.D.A. Forest Service's (1988) national recreation strategy, for example, the goal of strengthening service to underrepresented groups is one of six dimensions defining the concept of "creating customer satisfaction".

But, is the outdoor recreation research community responding? Is there a developing empirical base? Are there clearly defined fronts of research? The answer to these question appears to be no.

Critical reviews of the state of outdoor recreation research point to the paucity of attention devoted at national research symposiums to the problem of underrepresentation. They probe the outdoor recreation literature and happen upon only two scientific articles on outdoor recreation meaning related to concerns of ethnic minorities (Knopf, Allison, Robertson and Leatherberry, 1988). They echo the 1968 voice of the Reverend Ralph Abernathy who was speaking on behalf of the Poor Peoples' Campaign to then U.S. Secretary of Interior Stewart Udall:

There is a lot of talk in this country about playgrounds, camping sites. If you are rich, if you have got wheels, if you aren't trapped by shanties or slums, maybe all of that talk means something to you. But to the poor people of America, you might as well be talking about trips to the moon.

When it comes to the problem of identifying latent demand - and indeed stimulating latent demand - the concern is that we in the outdoor recreation research
community have been doing a poor job. And when it comes to the problem of *unleashing human potential*, the concern is that we have been doing a poor job (Schultz, McAvoy and Dustin, 1988). That, we are being told, is because we have been carrying limited perspective.

**THE NEXT FRONTIER OF RESEARCH**

The trust of this paper has been to crystallize some of the concerns that have been emerging about the state of research on people and protected natural environments.

These concerns have to do with the limited perspective that the outdoor recreation research community carries. They are exciting concerns. They are pointing the way to a higher order of wisdom and insight. They are pointing to a clearer, more encompassing conception of recreation need. They are pointing to the role outdoor recreation researchers must necessarily play as members of a human service profession.

The concerns about limited disciplinary focus and the failure to forcefully address equity issues are related, for they both have to do with the limited perspectives that outdoor recreation scientists carry. They both have to do with the need to break boundaries that impound and restrict the scientific mind. Indeed, beyond these boundaries lies the next frontier of outdoor recreation research. The matters surrounding disciplinary issues and equity issues represent the next uncharted territory of outdoor recreation research. They represent the next round of complexity to unravel. And, as we invade the territory, we will discover that there are no other issues so fundamentally relevant to what defines us as a human service profession.

**LITERATURE CITED**


Whether intended or not, almost all forest management activities affect recreation opportunities. These effects are not necessarily negative and depend largely on recreationists' preferences and expectations. However, effective multi-resource management demands an understanding of the interactions among recreation and other uses of forested lands such as timber harvesting. Appropriate questions include: What kind of visitors go to specific areas? What activities do they engage in? When? What characteristics do they require or prefer at recreation sites? What are the positive and negative effects on and of recreation in areas with other resource uses? How important are these effects to recreationists? What management tools might be used or developed to mitigate adverse effects and enhance positive effects associated with interactions between recreation and resource uses?

The overriding question is not whether recreation should be integrated with other resource uses, but where, when and how such integration can be achieved.

Unfortunately, there are few specific guidelines and little detailed information to facilitate such integration and few tested approaches for managing potentially incompatible uses at specific locations. There are, however, several concepts that can be used to address some of the questions listed above.

The Recreation Opportunity Spectrum (ROS) helps identify ways to provide recreational opportunities ranging from primitive to intensely developed (Clark and Stankey 1979. Brown et al. 1978). It recognizes the potential compatibility between recreation and other resource uses for part of the recreational spectrum. In some areas, for example, timber harvesting may preclude most remote and natural recreation opportunities, but it does open areas to people who do not mind evidence of such activity, such as roads and timber cuts. In other areas, opportunities for primitive and semi-primitive recreation may be possible in or near areas designated for logging or other resource uses if the scale of the project and how it is executed over time and space are modified to protect recreation values.

The Limits of Acceptable Change approach attempts to determine acceptable levels of impact on various resources (Stankey et al. 1985). The LAC helps specify

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physical and social conditions that must be maintained to protect recreational and other resource values. Although applied initially in a wilderness setting, the approach is applicable across the recreational spectrum and should prove useful when attempting to determine how much roading, harvesting and other activities may be acceptable in different recreational settings.

Many of the concepts from the wildlife habitat literature (Thomas 1979) seem to apply to recreation. Several of these might be considered when managing for recreation habitats. Understanding these concepts could help silviculturists evaluate the potential effects of alternative prescriptions for recreational opportunities.

- People have "home ranges." Resident populations tend to centre recreation in the community; other users are migratory (tourists) and frequent sites well beyond their home ranges. The size of the home range is influenced by the relative availability of recreational opportunities desired by the population, competition among users for these opportunities and mode of travel. It is important to think in terms of specific populations, rather than some vague, ill-defined public, when considering silvicultural options for recreation.

- People use definable "travel corridors." Access in general is constrained by travel routes (roads and trails) and by physical-biological conditions, such as steep slopes, dense vegetation and bodies of water. Knowledge of present and potential travel corridors should help predict the effects of silvicultural practices on recreational use patterns.

- People are "territorial." They form strong attachments to favourite and often-visited places and usually do not wish to see them changed. It is extremely important to identify the location of such sites before any on-the-ground management.

- "Hiding cover" is particularly important at campsites. People want privacy and quiet, and they try to separate themselves from other parties and from evidence of other resource uses. This seems to be as true for people in moderately developed areas as it is for people who prefer wilderness. Such isolation can be provided with appropriate screening and/or by maintaining adequate distances between recreation sites and other types of forest uses. When managing roadsides for visual attractiveness, managers should be careful to avoid destroying hiding cover at nearby campsites.

- "Critical habitat" might be defined as attributes considered necessary for some types of recreation use. For example, suitable anchorages and an absence of offshore rocks and shoals are required in marine areas where recreationists need access to the shoreline for upland activities.
• "Edges" seem to influence recreational use. For example, sites near natural or artificial openings and riparian and coastal areas all appear to be used more frequently than other locations.

• People like "diversity" in the sites they visit and the activities they engage in.

• Site "preferences" may differ from actual "requirements." Requirements are elements essential to recreation; preferences add quality to a recreational experience.

• Habitats are "dynamic," and both natural changes and human-caused disturbances influence the nature of recreational settings. Indeed, the type and location of recreation activities can change with physical alterations. Such change can be managed both spatially and temporally to achieve desired goals.

• "Adaptation" occurs as recreation habitats are changed. Users can stay in such areas and alter their expectations or move on (thus becoming "displaced") if the changes exceed their accepted limits. Although either outcome may be appropriate, the potential consequences of both should be evaluated to avoid destruction of irreplaceable opportunities.

The nature and extent of change acceptable to recreationists may vary. People seem to have different expectations for "macro" versus "micro" sites, and the microsite seems more susceptible to adverse change; that is, management activities acceptable in the general area (such as evidence of logging or roads) may be considered intolerable at a campsite.

The recreation resource is unusual because it represents the combination of all physical and biological resources and their management. Past management focused primarily on recreation apart from all other resources. Expanding recreational opportunities for the future and addressing potential conflicts require an improved understanding of the complex system of which recreation is a part.

There are three basic challenges when attempting to provide quality recreation habitat: protecting sites, enhancing sites, and creating new sites. Each requires information about existing and potential sites and recreationists' patterns, demands, preferences and needs. Such management also demands close cooperation between silviculturists and other specialists, who should consider the role of site, stand and tree in current and future recreation.

There is generally a range of silvicultural options in any given area: silviculture for recreation, with no timber consideration; silviculture for recreation, with timber as a byproduct; silviculture for both recreation and timber; silviculture for timber,
with recreation as a byproduct, and silviculture for timber, with no consideration for recreation. Most past management falls into the latter two categories.

It is certainly possible to enhance many types of recreational opportunities in areas where resource development is planned. For example, designing and locating roads and timber harvesting specifically for recreational uses - turnouts for parking, access to desirable vistas, openings for views or camping - and managing understory vegetation to either increase or reduce screening would be appropriate in some places, for some activities and for some people.

If the management goal in an area is to protect existing sites and minimize interparty conflicts, the following actions might be appropriate. Design any new roads to isolate recreation sites, thus maintaining hiding cover; close old roads that interfere with recreation requirements. If possible, maintain traditional access to existing sites. Manage the overstory to leave “islands” of trees at existing sites or buffer strips between sites, roads or cutting units. Manage understory vegetation to enhance screening at the edges of sites for hiding cover (in some cases, it may be necessary to leave unwanted or “unsightly” vegetation in order to protect other values such as fisheries or historic sites). Limit logging to minimize intrusions on area users. All of these prescriptions imply that a through inventory has been done to locate and describe existing sites.

A different series of actions could be used if the goal is to increase the number of sites:

Conduct an inventory to identify areas that could provide quality recreational opportunities.

Locate and design the necessary roads or trails to provide access to attractions such as water, vistas, flat areas for campsites, etc.

Maintain a range of road types (of various standards and designs) and areas without roads as dictated by user demand.

Manage the overstory to provide islands or openings at target sites.

Manipulate understory vegetation to encourage desirable species (for screening, berries, etc.).

Use logging operations to create flat areas and/or barriers if they are in short supply.

In either example, alternative road locations should be studied and designed well in advance of actual decisions. Access is a key determinant of use patterns, which are hard to change once they are established. While some road locations may provide
diverse recreational opportunities while protecting other resources (such as fisheries), others may harm one or both resources.

Silviculture’s potential to enhance recreation should not be used as an excuse to log. However, once a decision has been made to harvest timber in an area, it might well be possible to use silviculture to provide recreational opportunities. In other cases, it might be more appropriate to develop silvicultural prescriptions expressly for recreation (Clark et al. 1984).

Managers cannot always wait for answers to questions such as those posed earlier in this article. However, they can use a number of methods to minimize conflict and maximize compatibilities by: doing complete inventories of existing and potential recreational opportunities; making explicit any assumptions and objectives involving recreation; seeking information from recreationists to test these assumptions and objectives involving recreation; documenting and sharing experiences about what does and does not work, and developing scenarios to protect, enhance and create recreational opportunities.

Some resource professionals and managers can be provincial, so it is important to think beyond narrow areas of responsibility. Recreationists, like deer, tend to ignore artificial boundaries.

Understanding of when and how recreation can be integrated with other resource users requires identification of potential conflict and compatibility early in a planning process; only then can managers develop any short- and long-term objectives for a particular area. Forest stand conditions change through time and may provide different benefits for different people at different times. Some users may inadvertently be disenfranchised unless managers recognize what a forest is providing, when, how and for whom.

Integrated management objectives are essential because many if not most resource changes that affect recreation are outside the control of recreation managers. Specific objectives are particularly necessary. Recreation specialists should also work closely with other specialists to identify such opportunities early in the planning process.

Silviculturists cannot do the job alone. Many specialists must collaborate to identify the range of possibilities in resource-use integration and to achieve desired goals. There are no specific answers or "cookbooks." Judgments will be required, and it is hard to get it "right" no matter how hard one tries. The key is to make sure that both potential benefits and tradeoffs are made explicit before any action is taken, thus encouraging the best possible compromise.

The bottom line is that almost everything forest managers do, whether planned or not, will affect recreation opportunities. Members of the public react to this
reality as they anticipate or discover undesirable changes in areas they value. Professionals must be sensitive to how what they do affects people and their recreation "habitats." Failure to do so could easily lead to polarization and lost of manager credibility.

**LITERATURE CITED**


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SESSION IV

FRAMEWORKS FOR SERVING VISITORS
AND MANAGING OUR RESOURCES
INTRODUCTION

Today, many agencies at federal, state, and local levels are responding to the burgeoning demand for outdoor recreation. In addition, many private firms offer facilities and services for recreation, such as campgrounds, computerized reservation systems, and equipment rentals. With this expansion in the demand for recreational services has come a number of complex policy issues. What range and mix of opportunities should be provided and what are the roles of the various suppliers? Who can most effectively and efficiently serve public needs at national, regional, and local levels?

In this paper we describe a framework for outdoor recreation managers and policymakers who must answer questions concerning both the allocation and management of opportunities for recreation. This framework rests on the concept of the Recreation Opportunity Spectrum (ROS). It is distinguished by varying conditions, ranging from modern and developed to primitive and undeveloped, or as Nash (1973) succinctly phrased it, "from the paved to the primeval." We will review the background of the opportunity spectrum concept and how it has been used in the past; describe six manageable factors or setting attributes that influence the opportunities for recreation; and describe uses of the spectrum concept for identifying and measuring the consequences of alternative allocations of and management actions on opportunities for outdoor recreation.

THE RECREATION OPPORTUNITY SPECTRUM

In this paper we focus on the setting in which recreation occurs. When considering opportunities for outdoor recreation, people must make choices about activities in which to engage, settings in which to recreate, and kinds of recreation experiences to seek. We believe that, by describing the factors that influence or define the range of possible settings and by communicating this information to recreationists, they will be able to choose the experiences they desire.

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We define a recreation opportunity setting as the combination of physical, biological, social, and managerial conditions that give value to a place. Thus, an opportunity includes qualities provided by nature (vegetation, landscape, topography, scenery), qualities associated with recreational use (levels and types of use), and conditions provided by management (developments, roads, regulations). By combining variations of these qualities and conditions, management can provide a variety of opportunities for recreationists.

Recreation opportunity settings imply a choice for recreationists; people must be aware of the opportunities, and the opportunities must be comprised of conditions desired by recreationists. Thus, opportunities are a function of user preference and a product of management actions designed to provide desired settings and to make people aware of their existence.

We recognize that the recreational value of an opportunity is a function of the perceived ability of that opportunity to provide certain activities and experiences. Our definition focuses on the social, physical, and managerial attributes of settings, not on the psychological values that may be derived. The link between the setting and experiences or "psychological outcomes" (Driver and Brown 1978) is an issue to which we will turn shortly.

The basic concept underlying ROS is not new. Many authors have remarked that a range or continuum of opportunities is needed to efficiently serve diverse public tastes for recreation. Wagar (1966) called for campgrounds ranging from highly developed sites suitable for modern self-contained campers to remote locations accessible only to backpackers. Similar continua have been suggested for hunting (Potter et al. 1973), wildland areas (Marshall 1933, Lloyd and Fischer 1972, Helburn 1977, Driver and Brown 1978), and parks (Field 1976, McCool and Elmer 1975). All these continua are characterized by a range of conditions from modern to primitive.

The spectrum concept is also reflected in a variety of land management descriptions. A basic recommendation of the Outdoor Recreation Resources Review Commission (1962) was for classification of recreational resources along "a spectrum from areas suitable for high-density use to sparsely used extensive primitive areas."

To implement terms of the National Forest Management Act (NFMA) (U.S. Laws, Statutes, etc. 1976a), the USDA Forest Service published draft regulations that note, "a broad spectrum of dispersed and developed recreation opportunities ... will be provided." Through provision of this spectrum, land management planners will best be able to offer the diversity deemed so important by NFMA. To develop operational guidelines for the implementation of the ROS, the USDA Forest Service
has established a task force of managers and researchers. This group will be responsible for development of procedures to apply the opportunity spectrum concept on the ground. The Bureau of Land Management, U.S. Department of the Interior, is similarly involved in developing such guidelines.

The tabulation below further illustrates the spectrum concept as used in legislation, in land management planning procedures, and in user-oriented classifications of recreational opportunities, such as river running and mountain climbing. These examples are evidence of growing recognition by both managers and recreationists of the importance of diversity in settings for recreational opportunities.

**Federal legislation:**

<table>
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<tr>
<th>Act</th>
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<tr>
<td>Wild and Scenic Rivers Act (1976c)</td>
<td>Recognizes three classes of rivers varying in level of modification, development, and permitted activities</td>
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<tr>
<td>National Trails Act (1976b)</td>
<td>Recognizes three classes of trails varying in purpose, permitted uses, and adjacent development</td>
</tr>
<tr>
<td>National Forest Management Act (1976a)</td>
<td>Calls for providing a broad spectrum of dispersed and developed recreational opportunities</td>
</tr>
</tbody>
</table>

**Federal agency planning:**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>USDA Forest Service</td>
<td>Recognizes five recreation experience levels, ranging from those offering challenge, solitude, and demanding high skills to those involving extensive facilities and few skills</td>
</tr>
</tbody>
</table>

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2 Members of the task force include Thomas Hoots (Task Force Leader, Washington Office), John Asterford (San Bernardino National Forest), Wendell Beardsley (Northern Region, USDA Forest Service), Perry Brown (Colorado State University), Leon Buist (University of Nevada), Roger Clark (Pacific Northwest Forest and Range Experiment Station, USDA Forest Service), Charles McConnell (Rocky Mountain Region, USDA Forest Service), Gary Morrison (Mount Baker-Snoqualmie National Forest), Doug Smith (Southwestern Region, USDA Forest Service), George Stankey (Intermountain Forest and Range Experiment Station, USDA Forest Service), Lance Tyler (Arapaho-Roosevelt National Forest), Donald Warman (Pacific Northwest Region, USDA Forest Service), Bev Driver (Rocky Mountain Forest and Range Experiment Station, USDA Forest Service).
Heritage Conservation and Recreation Services (formerly Bureau of Outdoor Recreation) Recognizes six types of outdoor recreation settings ranging from class I (high density recreation areas) to class VI (historic and cultural sites)

Opportunity for recreation:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>River running</td>
<td>International scale of river difficulty recognizes six classes of conditions, ranging from class I (moving water with a few ripples and small waves, and no obstructions) to class VI (nearly impossible, very dangerous)</td>
</tr>
<tr>
<td>Mountain climbing</td>
<td>International Decimal System describes climbing skills ranging from class 1.0 (hiking) to class 5.0 to 5.11 (increasingly difficult piton-protected climbing)</td>
</tr>
</tbody>
</table>

DIVERSITY AND QUALITY IN OUTDOOR RECREATION

The basic assumption underlying the ROS is that quality in outdoor recreation is best assured through provision of a diverse set of opportunities. A wide range of tastes and preferences for recreational opportunities exists among the public and, as Wagar (1966) points out, "Quality seems to be a highly personalized matter." Providing a wide range of settings varying in level of development, access, and so forth insures that the broadest segment of the public will find quality recreational experiences, both now and in the future.

The importance of supplying diverse opportunities for camping has been illustrated by Wagar (1966). As he indicates, even a few different kinds of camping facilities greatly increase the probability of meeting more people's desires. If any generalization can be made from the body of knowledge about recreationists, it is that people vary enormously in what they desire from their recreational pursuits. This generalization is true, even for specific categories of recreationists; not all campers, hikers, or wilderness users are alike. Building management programs around average tastes can greatly miss the mark, because often such averages are statistical phenomena that do not adequately account for the wide variation in tastes (Shafer 1969).

Diversity represents an important characteristic of any recreation system. Managing opportunities for recreation to promote a diversity of experiences is crucial.
for social equity (Watt 1972). Failing to provide diversity of opportunity invites charges of favouritism, elitism, and discrimination. Further, diversity insures the flexibility necessary to mitigate changes or disturbances in the recreation system stemming from such factors as social change (changing age structure of U.S. population) or technological change (outdoor recreation vehicles, etc.).

But diversity is only a means to an end. Quality recreation, producing desired satisfactions and benefits for participants, is the objective and concern of both managers and recreationists. But what is quality? From an individual perspective, it is fairly easy to describe a quality recreational experience. For one person, it might be an extended backpacking trip in a very primitive area. For another, it might mean a camping trip in a motor home along a lightly used logging road. For yet another, a quality recreational experience may be camping in a 500-unit intensively developed campground where it is easy to visit with other people. Furthermore, the same person may find all these experiences enjoyable and of high quality at one time or another. Recreation is indeed a phenomenon in which quality is in the eye of the beholder.

The existence of different conceptions of quality does not mean that it is a meaningless concept; the provision of opportunities for quality outdoor recreation is a legitimate goal of recreation management. Quality is a relevant notion along the entire spectrum. Quality, then, is not judged by the presence or absence of some factor (facilities, naturalness, or other visitors), but as the extent to which a given setting satisfies the desires of a particular recreationist. The recreation opportunity spectrum helps clarify the quality issue by providing a framework that calls for the systematic provision of diverse settings for recreation.

**THE LINK BETWEEN RECREATIONAL OPPORTUNITIES AND EXPERIENCES**

Development of opportunities for recreation is not an end in itself. By providing different kinds of recreational settings and accommodating different types and styles of recreational use, managers can best give people the opportunity for various kinds of experiences.

Driver and Brown (1978) proposed a hierarchical framework that specifies four distinct levels of recreational demands: (1) for activities, (2) for certain situational attributes (settings), (3) for specific psychological outcomes - experiences and satisfactions and (4) for benefits. Our focus is primarily on level 2, the situational attributes that comprise a recreational opportunity. We concur with these authors that level 2 demands do not exist in and of themselves, but for the satisfactions and benefits derived at levels 3 and 4. Figure 1 shows the link between these levels of demand and the opportunities provided by managers.

Some gains have been made in the ability to define links between activities and outcomes (Driver and Tocher 1970, Brown et al. 1977, Potter et al. 1973). And it is...
clearly possible to facilitate the achievement of certain experiences by the way situational attributes are manipulated. Furthermore, by altering the setting, the same activity can be participated in a variety of styles, thereby producing different satisfactions. As Knopp (1972) indicates, characteristics of a place will influence whether or not a given individual will recreate there, because the place is closely tied to the function of specific activities. As our knowledge of the linkage among settings, activities, experiences, and satisfactions improves, our ability to fine-tune the supply sector to most efficiently meet demands of visitors will grow.

Opportunities for recreation ought to differ in terms of producing distinctive experiences or "psychological outcomes" (Driver and Brown 1978). Work by a number of investigators increasingly improves the ability to do this (Lime 1971, Clark et al. 1971, Knopf et al. 1973, LaPage and Ragain 1984, Brown et al. 1977). Application of the opportunity spectrum framework outlined in the following pages, however, is not contingent on understanding the link between experiences (a psychological outcome) and opportunity settings. Simply put, the ROS can be used by managers to provide specific information to potential visitors about what a place is like, not about experiences they will derive.

The individual's choice of opportunity (or their expressed preference) provides feedback on the degree to which the opportunities might fulfill the desired outcomes. The specific experiences derived are a function of the individual's past experience, expectations, present state of mind, and so forth, not a function of an explicit management decision to produce a given outcome or set of outcomes.

ROS offers a framework within which to explicitly vary situational attributes (access, density, etc.) to produce different recreation opportunity settings. From these opportunity settings, recreationists participating in different kinds and styles of activities derive different satisfactions and experiences and, ultimately, benefits. Our intent here is to systematically and explicitly describe a framework that permits managers to provide diversity in the range of opportunity settings available to individuals.

DEFINING OPPORTUNITY FACTORS

Four criteria were used to select factors that define the opportunity spectrum:

1. The factor is observable and measurable,
2. The factor is directly under management control,
3. The factor is related to recreationists' preferences and affects their decisions about areas to use, and
4. The factor is characterized by a range of conditions.
Figure 1

Link between recreationists' desires and the opportunities provided by managers.

Users with diverse motives, seeking a variety of recreational experiences consistent with their preferences, use opportunities provided by managers that lead to visitor-days spent in a variety of activities (in many styles); they obtain various satisfactions and experiences, leading ultimately to benefits to individuals and society.

Managers use visitor information, research, and experience to develop programs consistent with laws and policies; they have a variety of tools which they use to change or maintain features of the physical and social environment, which, combined appropriately, result in a spectrum of diverse opportunities in a variety of areas, leading ultimately to benefits to individuals and society.
When these criteria were applied to existing conceptions of the ROS, previous research on recreationists' preferences, management experience, and state-of-the-art judgment, six factors emerged:

1. Access,
2. Other nonrecreational resource uses,
3. Onsite management,
4. Social interaction,
5. Acceptability of visitor impacts, and
6. Acceptable level of regimentation.

Each factor is described below. Natural features (topography, scenery, water, wildlife, etc.), which are important across the spectrum are discussed in a later section.

In this paper we describe the end points of the opportunity spectrum as modern to primitive. Other authors have used urban, developed, wild, natural, remote, etc. The labels are really unimportant and reflect authors' preferences rather than any conceptual difference between what we are proposing here and what is described in papers by others.

Opportunity Setting Factors

1. Access

Several elements can be used to describe access. Managers can control the ease of access by the types of access (e.g., roads, trails, cross-country travel) and by the means of conveyance allowed (e.g., cars, all-terrain vehicles, horses, feet). Both access elements can vary across the spectrum from easy to difficult. Design and management standards are important in defining the range of access systems. For example, roads and trails can be designed as high standard systems, requiring intensive maintenance, to low standard roads and trails needing little or no maintenance. In many cases, the topography and type of vegetation will help define the conveyances that can be used. Thus, managers are able to use a combination of natural features, design and maintenance standards, and regulations for determining and enforcing ease of access.

Research indicates that recreationists' preferences for alternative types of access cut across the range of access conditions. For example, among wilderness users, there is a spectrum of preferences for trails ranging from highly developed to no trails at all (Stankey 1973, Lucas 1973). Although users of forest lands with roads are there because they prefer a more primitive recreational setting than is typically found in
developed campgrounds, they, too, vary in their preferences for paved or unpaved roads.\textsuperscript{3}

2. Nonrecreational resource uses

This factor considers the extent to which nonrecreational resource uses (grazing, mining, logging) are compatible with various opportunities for outdoor recreation. Other uses can severely conflict with opportunities for primitive experiences. For example, Stankey (1973) found that grazing in the Bridger Wilderness in Wyoming was the most serious source of conflict reported by visitors. In other cases, a variety of resource management activities that might even contribute to visitor enjoyment can be found in conjunction with outdoor recreation. For example, recreationists in semi-primitive areas with roads often find grazing and logging acceptable (see footnote 3). But these users do express concern about large clearcuts, so the scale at which the activity is conducted, as well as the activity itself, influences perceived compatibility. Planners and managers must consider the lasting effects of a resource activity (mines, clearcuts), as well as short-term effects (logging trucks, noise from a mine) to determine the impacts on the recreational opportunity.

3. Onsite management

The onsite management factor includes site modifications, such as facilities, exotic species of vegetation, vegetation management, landscaping, traffic barriers, etc. The appropriateness of site management should be considered in light of four elements:

a. Extent of the modification. Is it limited to a few isolated locations or distributed throughout the area?

b. Apparentness of the modification. Has the use of native materials helped blend the modification into the natural setting or do artificial materials make the modification readily apparent?

c. Complexity of the modification. A bridge could be a simple log footpath or a complicated engineering effort.

d. Facilities. Facilities can be largely for convenience and enjoyment or safety of users, or only for protection of the resources. In some areas, no facilities whatsoever are appropriate; in others, all possible conveniences would be appropriate. Toilet facilities can range from heated buildings with flush toilets and showers, to pit toilets, or, in some settings, to no toilet facilities at all.

\textsuperscript{3}Clark, Roger N., Russell W. Koch, Mack L. Hogans, and Harriet H. Christensen. Dispersed recreationists along forest roads in three areas of the Pacific Northwest: Their recreation patterns, opinions, and attitudes. Unpublished data on file at Pacific Northwest Forest and Range Experiment Station, Seattle, Washington.
4. Social interaction

The appropriate amount of social interaction is an important characteristic of different recreational opportunities. Generally, in more primitive settings, low levels of interaction are appropriate and expected. In more modern settings, interaction can rise to very high levels. The level of use beyond which crowding occurs, then, is not absolute but varies by expectations of visitors and the extent to which interaction levels are perceived as appropriate. Insufficient levels of interaction in some modern settings can be just as unacceptable to some people as excessive levels in primitive settings (Heberlein 1977).

Both natural variations (topography and vegetation patterns) or management actions (access) can greatly influence the actual level of contact among people. Consequently, standard measures of density (number of people or parties per unit area) are inappropriate because they fail to consider the potential for contact between people. The number of people in an area, how they are distributed in space and time, and the probability of interaction between parties are important elements in determining the appropriate social carrying capacities at different points along the opportunity spectrum. Although the recreation opportunity spectrum will not give a specific number for the carrying capacity of a specific opportunity type, the basic concepts underlying the framework help in resolving the carrying capacity issue. Managers and planners must apply these concepts on an area-by-area basis.

Appropriate levels of interaction vary along the spectrum; they can also vary for the same physical setting defined as a different kind of recreational opportunity. For example, for travellers on the Rogue River in Oregon who defined the area as wilderness, appropriate daily levels of contact averaged 2.6; for those who perceived the river as a semiwilderness setting, 4.4; and for those who defined the river as an undeveloped recreation area, 7.0.4

In addition to the level of interaction, managers must also give attention to the type of use appropriate for each setting. Generally speaking, there is greater diversity of activities possible in modern settings than in primitive. Such factors as access may account for some of this difference; for example, in the most primitive setting, travel is by foot, but farther along the spectrum, travel by horses, outdoor recreational vehicles, and automobiles becomes appropriate. In the most modern setting, all types of groups and activities might be acceptable.

It is necessary to consider the acceptable diversity of use because interaction alone is not a sufficient measure of an area’s social carrying capacity; the types of use found at a particular setting may be more important in defining capacity than the amount of use. Lucas (1964) found that canoeists in the Boundary Water Canoe

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4Presentation made by Dr. Bo Shelby, Oregon State University, Corvallis, at the Rural Sociology Society Annual Meeting in San Francisco in 1978.
Area thought that up to five encounters per day with other canoeists was acceptable, but even one contact with a motorboat was not acceptable. There are probably many reasons why this variable pattern of acceptability occurs (perceived inappropriateness of use, experience, or values), but the central implication for management is that a greater diversity of uses can be accommodated in modern settings than in primitive.

5. Acceptability of visitor impacts

Human use of resources inevitably results in impacts, and recreation is no exception. These impacts might be on resources (trampling of vegetation or polluting of water) or on other people (noise, depreciative behaviours, inappropriate activities). Any use creates some impact; thus, the relevant question for managers is not "how can impacts be prevented" but "what level of impact is consistent with the type of opportunity being supplied."

The acceptable level of impacts on recreation is a concern to both users and managers. Managers must be concerned about maintaining opportunities for quality recreation, as well as protecting other resource values. Research indicates that managers’ perception of what constitutes impacts may be very different (generally more conservative) from users’ perceptions (Clark et al. 1971, Bultena and Hendee 1972, Downing and Clark 1979, Lucas 1970). When users’ perceptions are considered, acceptable impacts take on a range of conditions across the ROS.

Two concepts are useful in resolving how much impact is appropriate. In assessing environmental impacts, one should consider both magnitude and importance. The magnitude of impacts is based on an objective assessment - there should be no substantive disagreement on the magnitude of the impact. The importance of environmental impacts is based on a value judgment which can result, however, in considerable disagreement between managers and recreationists, depending on expectations, knowledge, and points of view of each group. It is the professional’s responsibility to insure that objective measurement procedures are used to determine the magnitude of environmental impacts resulting from recreational use. It is also a professional responsibility to provide accurate assessments of the kinds of impacts stemming from recreational use, their implications for the environment and solutions to their management. But the importance of impacts must be considered in light of the desired opportunity and subsequent impacts on people’s experiences. As noted above, total prevention of impacts is impossible, short of complete prohibition of recreational use.

Thus, damage or a level of impact necessitating correction by management occurs only when the impact exceeds the magnitude defined in area management plans as appropriate for an opportunity level. The level of impact defined as damage in an

See Clark and Stankey (1979) for discussion of the acceptability of recreation impacts, noise in particular.
area managed for modern opportunities will be quite different from that in the same area managed for primitive opportunities. Definitions of impact as "damage", then, depend on the type of opportunity or context in which they occur, rather than on any absolute measure. Generally, recreationists' tolerances for impacts (ecological, social, or managerial) are greater among modern styles of recreation than among primitive styles in both degree and prevalence.

6. Acceptable regimentation

The nature, extent, and level of control over recreational use is an important factor characterizing different opportunities. A continuum of controls can be described, ranging from subtle techniques - such as site design and providing visitors with information to fairly heavy-handed measures that are authoritarian and perhaps accompanied by legal sanctions (Lime 1976). Specific techniques for regimenting recreationists' activities include regulations, rules, site design, and laws.

Modern opportunities are generally characterized as more highly organized and regulated than are primitive types. But the "principle of minimum regimentation" should apply across the spectrum; we should regiment only as much as necessary to protect the qualities of the opportunity in question (Stankey and Baden 1977).

Ideally, the most primitive opportunities should have few regimenting influences. With the reality of increasing pressures from use of primitive settings, regimentation may be necessary to protect the integrity of the opportunity and to insure its use into the future. This is particularly true where management objectives call for the preservation of naturalness. Thus, management actions that might otherwise be appropriate for protecting an area (facilities, onsite management) would not be satisfactory if they themselves would alter natural integrity. Control of visitation would be necessary, and such measures have been instituted in several Wilderness Areas and in National Park back country (Stankey 1979, Fazio and Gilbert 1974).

POSSIBLE COMBINATIONS OF FACTORS

In Figure 2, each factor is displayed graphically. The range of conditions that a factor can have (for example, from very easy to very difficult access), represents relative rather than absolute limits of what is acceptable and appropriate along the ROS. Certainly, when the framework is applied, specific criteria must be developed. Our objective, however, is to focus on the process by which the ROS factors can be managed to achieve desired objectives in a conceptual fashion. After the reader understands the approach, then more specific values for each factor can be estimated. Readers are encouraged to review Driver and Brown (1978) and Brown et al. (1978) for examples of proposed criteria developed for recreation inventory purposes. Information for selecting management objectives is found in Brown (1977).
A recreation opportunity setting is the result of a specific combination of the six factors in a particular location. Alternative combinations of the factors (and other natural features discussed later) create different opportunity settings that give recreationists many options from which to choose. Considerations about appropriate criteria for any one of the factors are largely judgmental; there are seldom absolute standards.

There are no obvious points at which boundaries for the different opportunities can be established. For purely illustrative reasons, we use four generic opportunity types in the discussion below. But any number of categories could be substituted across the top of Figure 2. For example, modern-urban, semi-rural, rural, semi-primitive motorized, semi-primitive nonmotorized, and primitive as used by Driver and Brown (1978). The key is that the type of setting is determined by the combination of factors, rather than the name or number of categories.

Existing knowledge about visitors' preferences, managers' judgments, and public involvement can help guide development of appropriate opportunity setting categories. By packaging recreational settings in terms of the six factors we have described, we can begin to explicitly develop a range of opportunities to better meet public desires.

In this discussion, we assume that all the factors have coequal weight; they all influence recreational behaviour in the same way. In reality, we are sure that this is not the case. For some people, type of access might be the most important influence. For others, it might be the type of facilities, or the nature of previous visitor impacts, etc. When choices of recreation in general, are considered however, such individual differences may balance out. Further research will be required to determine under what conditions this assumption is appropriate.

An approach for combining the factors is shown in Figure 2. All the conditions represented by the six factors are arrayed along the modern to primitive opportunity continuum. For any generic type of opportunity - modern, semi-modern, etc. - a band of acceptable combinations can be described in area management plans through the use of objectives and standards.

In Figure 2, for example, we show a band of acceptable combinations for the semi-modern types of opportunities. This band simply means that any of the conditions within the range indicated for the six factors are acceptable in an area managed as semi-modern. Anything outside the band would be unacceptable. We will talk more about conditions outside the band of acceptability in the section, "Inconsistencies".

It should be clear that, although we describe only four generic opportunity types here, each represents many possible combinations of the six factors. It is important that we provide diversity, not only between opportunity types but also within
individual types. For example, semi-modern opportunity settings might include sites where access, facilities, and so forth are relatively highly developed; other settings might have developed facilities but be accessible only by foot or bicycle; still others might feature a rustic setting reached by gravel roads, but with extensive site modification to minimize impacts on the resources. The point is, designation of an opportunity as "semi-modern", "primitive", etc., does not imply a single standard of development for areas within that category. Variations in settings within and among opportunity types within a band of acceptability further increases the range of options for recreationists pursuing different types and styles of activities.

**OTHER FEATURES OF SETTINGS**

We have mentioned several times that a recreation opportunity setting is composed of other natural features in addition to the six factors. Landform types, vegetation, scenery, water, wildlife, etc., are all important elements of recreation environments; they influence where people go and the kinds of activities possible. Considerable work has gone into developing procedures for measuring and managing visual resources (USDA Forest Service 1974). Planners and managers should also consider these features when determining for which types of opportunity to manage an area.

But it is important to recognize that there is no intrinsic quality of these other natural features that suggests the appropriate type of recreation opportunity setting. Any of the opportunity types are as possible and appropriate in mountainous areas as they are in desert settings. Indeed, greatest diversity would be assured if the full spectrum of opportunity types (modern to primitive) could be found across the range of environmental settings (Figure 3).

And it is the combination of these environmental settings and opportunity types that determines the range of allowable recreational activities in a specific area. The nature of participation in recreational activities depends on the place in which it occurs (Cheek et al. 1976). Thus, natural features (terrain, rivers, lakes) will influence the activities that are possible; for example, you cannot waterski without a relatively large body of water. The type of opportunity for which the area is managed, however, will help determine the appropriateness and styles of activities. It is inappropriate to expect to be able to waterski in primitive areas, even if there is a large body of water and one could get a powerboat there. Conversely, it would be inappropriate for a backpacker to find a low level of social interaction in a highly developed, modern campground.

**INCONSISTENCIES**

One important issue that must be considered when specific opportunity settings are being developed is the avoidance of inconsistencies. An inconsistency occurs
Figure 2

Factors defining outdoor recreation opportunity settings.

### Management factors

<table>
<thead>
<tr>
<th>1. Access</th>
<th>Range of opportunity setting classes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Difficulty</td>
<td>Modern</td>
</tr>
<tr>
<td></td>
<td>very easy</td>
</tr>
<tr>
<td>b. Access system</td>
<td>Freeway</td>
</tr>
<tr>
<td>(1) roads</td>
<td>Highway</td>
</tr>
<tr>
<td>(2) trails</td>
<td>Bike path</td>
</tr>
<tr>
<td>c. Means of conveyance</td>
<td>Motorized</td>
</tr>
<tr>
<td></td>
<td>Trailway</td>
</tr>
<tr>
<td></td>
<td>Trail</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Nonrecreational resource uses</th>
<th>Modern</th>
<th>Semimodern</th>
<th>Semiprimitive</th>
<th>Primitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onsite management (modification)</td>
<td>Modern</td>
<td>Semimodern</td>
<td>Semiprimitive</td>
<td>Primitive</td>
</tr>
<tr>
<td>a. Extent</td>
<td>Modern</td>
<td>Semimodern</td>
<td>Semiprimitive</td>
<td>Primitive</td>
</tr>
<tr>
<td>b. Apparentness</td>
<td>Modern</td>
<td>Semimodern</td>
<td>Semiprimitive</td>
<td>Primitive</td>
</tr>
<tr>
<td>c. Complexity</td>
<td>Modern</td>
<td>Semimodern</td>
<td>Semiprimitive</td>
<td>Primitive</td>
</tr>
<tr>
<td>d. Facilities</td>
<td>Modern</td>
<td>Semimodern</td>
<td>Semiprimitive</td>
<td>Primitive</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Social interaction</th>
<th>Modern</th>
<th>Semimodern</th>
<th>Semiprimitive</th>
<th>Primitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptability of visitor impacts</td>
<td>Modern</td>
<td>Semimodern</td>
<td>Semiprimitive</td>
<td>Primitive</td>
</tr>
<tr>
<td>a. Degree of impact</td>
<td>Modern</td>
<td>Semimodern</td>
<td>Semiprimitive</td>
<td>Primitive</td>
</tr>
<tr>
<td>b. Prevalence of impacts</td>
<td>Modern</td>
<td>Semimodern</td>
<td>Semiprimitive</td>
<td>Primitive</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. Acceptable regitation</th>
<th>Modern</th>
<th>Semimodern</th>
<th>Semiprimitive</th>
<th>Primitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptable combinations for semimodern opportunities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
when the status of a factor (or factors) exceeds the parameters specified in the area management plan; for example, Brown et al. (1978) propose a series of standards for selected criteria that define appropriate conditions for different opportunity types. Although their criteria differ somewhat from ours, their process is identical. By specifying standards for the range of appropriate conditions for a given type of opportunity, managers have a rational basis for determining inconsistencies. Formulation of appropriate standards combines information from research, public input, administrative policies, legislative guidelines, and managers' judgments. Examples of standards would include such things as standards for constructing highways and trails, frequency and type of user interaction, types and amounts of facilities, and other specific onsite management actions.

In some cases, laws or policies provide guidelines for what is appropriate (no mechanized access is permitted in Wilderness Areas). More commonly, managers must rely on other guidelines. Studies of recreationists' preferences or other measures of appropriateness can help identify the factors that users define as consistently related. In other cases, managers will be able to use the ROS framework to identify potential undesirable consequences that would follow from an inconsistent combination of factors. For example, when access roads along the southern edge of the Boundary Waters Canoe Area were paved and straightened, levels of use rose rapidly (much as they did at Lake Kachess). Following this change in the access factor, pressures developed for increased facilities and other measures to control use - developments generally inconsistent with primitive type opportunity and so recognized by land managers, recreationists, and the Wilderness Act.

The opportunity spectrum does not offer a prescribed formula for providing outdoor recreation opportunities. It does provide a systematic framework for looking at the actual distribution of opportunities and a logical procedure for assessing possible management action. To demonstrate how one might use the framework to test for consistency, we present the following example:

For illustrative purposes, we have shown within the band of acceptability the relative range of conditions one might describe as a "semi-modern" opportunity (fig. 2). Such an opportunity could be characterized in general by relatively well-developed access roads, extensive development of facilities for both resource protection and visitor convenience, relatively high densities of users and social interaction, etc. Thus, the opportunity setting has all six factors approximately equal in their position along a modern to primitive continuum; i.e., there is a "consistency" among the various factors within the band of acceptability.

But what if one or more factors is outside the band of acceptability? In Figure 4 the overall pattern suggests that the area has potential as a supplier of a primitive type opportunity; however, access to the area is well developed along paved roads (in the "modern" category). Thus, an apparent inconsistency exists. If an objective
of the opportunity spectrum concept is to minimize the effects of inconsistencies, a series of questions concerning the apparent inconsistency can be asked.

**How did the inconsistency occur?** A variety of causes could be responsible for the inconsistency. It might result from an earlier management action (e.g., roadbuilding for timber harvest), for which the effects on recreational use were never identified or anticipated. Had these effects been recognized, the road might not have been built, the type of construction or the road's location might have been changed, or perhaps the road would have been closed after the timber was removed.

Or, the impacts on recreation of an earlier action might have been identified and considered but judged to be unavoidable. Such a situation might develop where the anticipated benefits seem to outweigh costs (the benefit of a timber harvest exceeding the costs incurred by changing the nature of the recreational opportunity). Perhaps different administrative jurisdictions were involved, one controlling the management action, the other the recreational opportunity. Even though the latter jurisdiction had fully identified anticipated impacts, it did not control the management action and was thus unable to influence the other organization's decision.

Finally, the inconsistency could be the result of a purposeful course of action. The apparently inconsistent factor might, in fact, be more in line with the kind of opportunity most needed in the area. For example, there might be plans to convert the generally primitive opportunity in Figure 4 to a semi-modern opportunity where relatively easy access is desirable. This conversion could be based on an assessment that the relative availability of primitive opportunities in the region is high, whereas the supply of semi-modern opportunities is low. Or it might be that an apparent inconsistency is required to achieve certain objectives; it may be desirable to provide a primitive setting with some form of modern access to allow easy entry for the handicapped or to provide cabins for protection in primitive areas with dangerous bears.

**What are the implications of the inconsistency?** Consistency as we describe it above is an ideal concept. In reality, one or more factors may be inconsistent with the others. It is not the inconsistency *per se* that should be of concern; rather, the consequences of the inconsistencies constitute the problem, particularly when they are not anticipated or recognized.

In the early 1900's the Lake Kachess campground was a primitive setting. Access was difficult and use was light. But over the ensuing three-quarters of a century, a number of changes altered Lake Kachess. Improved access made it possible for greater numbers of people to reach the area. Management concerns with overuse (both resource impacts and crowding) led to development of various facilities (tent pads, vault toilets, parking areas) and other onsite modifications. Each action at
Figure 3

Appropriate combinations of opportunity types and environmental settings.

<table>
<thead>
<tr>
<th>Environmental settings</th>
<th>Opportunity types:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Modern</td>
</tr>
<tr>
<td>Mountains</td>
<td></td>
</tr>
<tr>
<td>Rivers</td>
<td></td>
</tr>
<tr>
<td>Lakes</td>
<td></td>
</tr>
<tr>
<td>Deserts</td>
<td></td>
</tr>
<tr>
<td>Etc.</td>
<td></td>
</tr>
</tbody>
</table>

All possible combinations are appropriate.

Figure 4

An example of an inconsistency.

<table>
<thead>
<tr>
<th>Management factors:</th>
<th>Recreation opportunity types (X = existing condition for the management factors):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Modern</td>
</tr>
<tr>
<td>1. Access</td>
<td></td>
</tr>
<tr>
<td>2. Nonrecreational resource uses</td>
<td></td>
</tr>
<tr>
<td>3. Onsite management</td>
<td></td>
</tr>
<tr>
<td>4. Social interaction</td>
<td></td>
</tr>
<tr>
<td>5. Acceptable impacts</td>
<td></td>
</tr>
<tr>
<td>6. Regimentation</td>
<td></td>
</tr>
</tbody>
</table>
Lake Kachess changed the nature of the opportunity the area provided. Yet visitors still filled the campground. Clearly there was no optimum environment for recreation at the lake; nor is it possible to say that current conditions are either better or worse than they once were. But they certainly are different.

Our purpose in describing the evolution of events at Lake Kachess is not to cite it as an unnatural situation nor to suggest that one particular set of conditions was better than another. Rather, it is to illustrate the consequences stemming from the lack of precise management objectives and an explicit monitoring and evaluation process. As problems arise and management responds to them in an effort to correct or offset impacts, inconsistencies may result and a chain reaction of secondary changes can occur, ultimately altering the entire nature of the original opportunity. The principal implication of the Lake Kachess example is that the process of change was largely inadvertent and that most of the changes were the result of reactions to problems rather than a deliberate and conscious effort to alter the kind of opportunity the area provided.

Serious problems can develop from inadvertent changes. As the nature of a setting is altered, inconsistencies may occur, resulting in subsequent changes in use. The "new" campground attracts a different type of user, camping in a different style and seeking different kinds of experiences. As the new type of use becomes increasingly established, original users move to other locations more to their liking; that is, where the combination of all opportunity factors (including access, use density, and facilities) still resembles the kind of opportunity formerly enjoyed. This process of "invasion and succession" (Clark et al. 1971) can drastically change the nature of the available opportunities, the clientele served, and their recreational experiences. Particularly where the process is unnoticed, opportunities can be lost and clientele disfranchised.

Given inconsistencies such as those that occurred at Lake Kachess, managers must answer the question, What are the implications associated with the factors for both themselves and the users? Part of the answer to this question rests on how far out of line the factor apparently is. It is obvious that a factor only moderately out of line (e.g., density and regimentation in Figure 4) has less significant implications than one substantially inconsistent with the remaining factors (e.g., access). Managers must make judgments about the importance of these inconsistencies.

Implications for managers might involve questions, such as: Will the inconsistency accelerate change in other factors that will, in turn, lead to further undesired changes in the kind of opportunity provided (such as at Lake Kachess)? for example, will the highly developed access shown in Figure 4 lead to higher levels of resource impact because of increased use at the site and necessitate development of more facilities or further regulation of use? And, if these outcomes appear likely, are they desirable or undesirable?
It is important to remember that we are looking at recreation as a system, with an interdependence among the various elements of that system. Thus, a change or modification in one element may affect (perhaps slowly or very quickly) the other parts of the system. Remoteness from humans and their impacts, for example, is a major consideration in primitive settings. But the level of remoteness can be affected by changes in several management factors - access, social interaction, and nonrecreational resource uses. Changes in any one factor may lead to an inconsistency resulting in a negative impact on other factors. Consequently, remoteness in an area managed for primitive values may be reduced below acceptable limits.

The basic problem of an inconsistency is that it introduces the potential for triggering a chain of events that might alter the entire nature of the intended opportunity. When such a situation develops, rapid changes in the distribution and use of opportunities can occur.

What should be done about inconsistencies? When inconsistencies occur, managers have three basic responses available. First, a "no action" response can be adopted. This might be the case if no significant effects are anticipated, at least within the foreseeable future. Or jurisdictional problems between agencies or functional problems within an agency may mean the inconsistency cannot be directly controlled by recreation managers; for example, planned changes in the access to an area by one government agency might affect adjacent recreation lands managed by another agency. Offsetting the problems brought about by these changes might involve such measures as site modifications, development of facilities, and regimental controls - actions whose costs outweigh any benefit they might have.

A second response is to restore the inconsistency to a status in line with the parameters specified for it. Closures of certain types of roads, elimination of facilities, or other onsite modifications might be instituted to restore consistency.

Finally, managers can respond to an inconsistency by altering the remaining factors to bring them into line with the original inconsistent one. This could occur where changing conditions of demand call for an opportunity not presently provided. Response to a situation where well-developed access is inconsistent with a primitive type opportunity might involve altering the remaining factors to make the area semimodern. Such a change would have its justification outlined in the area management plan.

USING THE RECREATION OPPORTUNITY SPECTRUM

At the broadest level, the ROS offers a way of thinking about opportunities for recreation, of considering recreation as something more than activities or areas. But beyond this, the opportunity spectrum has specific application for at least four major concerns: (1) allocating and planning recreational resources, (2) inventorizing
recreational resources, (3) estimating the consequences of management decisions on recreational opportunities, and (4) matching experiences recreationists desire with available opportunities.

**Allocating and Planning Recreational Resources**

The ROS is a helpful concept for determining the types of recreational opportunities that should be provided. And after a basic decision has been made about the opportunity desirable in an area, the ROS provides guidance about appropriate planning approaches - standards by which each factor should be managed.

Three concepts related to the ROS are useful in making such decision: (1) the relative availability of different opportunities, (2) their reproducibility, and (3) their spatial distribution.

Relative availability, although not directly manageable by any one recreation supplier, is a fundamental consideration affecting decisions about the opportunities that should be provided. The concept addresses the issue of supply as well as the appropriate role of the recreation supplier. Adequacy of supply is a function of, among other things, the spatial distribution of opportunities, and it may be appropriate to estimate relative availability within a regional framework that extends beyond agency boundaries. When one type of opportunity is in abundant supply, it may be necessary for an agency to provide alternative opportunities even though these are not normally a responsibility of the agency. For example, the USDA Forest Service recreation program emphasizes the provision of opportunities for dispersed recreation. In an area like southeast Alaska, however, where such opportunities are abundant and the USDA Forest Service manages most of the land, the agency might find it necessary to also provide modern and semi-modern opportunities in the interests of offering diversity (Clark and Lucas 1978).

Reproducibility and reversibility are also fundamental considerations. They address the question of the extent to which an opportunity can be technologically reproduced, as well as the ability of management to reverse the outcome of decisions. Opportunities at the modern (developed) end of the spectrum are generally more reproducible (capable of creation through use of technology, infusion of capital, etc.) than those at the primitive end. There is a test of reasonableness here, because it is at least possible to reproduce any opportunity, given sufficient time and money. The spectrum is characterized by asymmetry in the reversibility of management actions because changes from modern to primitive can be more easily reversed than changes in the other direction. The obvious implication here is that decisions transforming an area from a primitive condition to something more developed needs to be carefully weighed because of the relative inability to reverse that decision.
In planning and managing large areas for recreational purposes, managers must consider the spatial distribution of opportunities. Sharply dissimilar opportunities generally should be kept apart so that conflicts are minimized (Hart 1966, Gould 1961, Stankey 1974, Clawson 1975). For example, opportunities featuring high standard road systems and highly developed campgrounds should not be constructed adjacent to primitive opportunities. Keeping dissimilar opportunities apart also reduces the likelihood that impacts from one opportunity will "spill over" onto an adjacent opportunity (e.g., noise from an area catering to outdoor recreational vehicle users reaching an adjacent area managed for primitive opportunities). Some recent planning efforts have attempted to incorporate this concept; the recently dedicated Alpine Lakes Wilderness in Washington's Cascade Range will be bordered by a management area featuring primarily semiprimitive recreational opportunities.

Unfortunately, planners and managers often do not have the necessary flexibility to organize opportunities according to this ideal spatial arrangement. They are constrained by previous management decisions, other resource uses, established recreational use, or a variety of other factors that complicate the job. But even within these limitations, mapping recreational opportunities - existing and proposed - can help identify potential conflicts.

**Inventory of Recreational Opportunities**

The ROS provides a useful framework for the review and evaluation of inventory data (for a good review of various recreation inventory systems, see Brown et al. 1978). Because the ROS focuses on specific situational attributes (access, facilities, etc.) that comprise recreation opportunity settings, managers easily can relate inventory data to the spectrum. From this, the relative availability of different settings can be determined. Moreover, because of the focus on situational attributes, managers will be able to tell how they could change the relative availability of different settings. For example, if semi-modern settings were in short supply, the inventory could indicate areas where such settings could be most easily created.

Inventories should encompass at least regional levels and transcend administrative boundaries. Ideally, the goal should be to insure that recreation opportunity suppliers - public and private - collectively provide a range of diverse opportunities. This clearly calls for interorganizational coordination in inventory of planning for recreational opportunities.

A comprehensive inventory conducted at a regional scale and involving all public and private suppliers would provide several critical pieces of information: (1) a profile of existing and potential opportunities; (2) a catalog of administrative responsibilities (i.e., who has which opportunities); and (3) an indication of the spatial relationships between various opportunities for recreation (thereby suggesting the potential for conflicts or complementary relationships). Additionally, when such inventory data are combined with studies of recreation demand and preference, it
may be possible to determine gaps in the distribution of opportunities that ought to be filled. Conversely, such information could reveal which opportunities are in excess supply.

Inventory data compiled over a regional setting is critical data in the formulation of appropriate roles for the various suppliers. Seldom will any one supplier be capable of meeting the entire range of recreation opportunity demands. Data about existing and potential opportunities, who manages them, and their location would be important input to decisions about who is best equipped to fulfill which roles. The USDA Forest Service recently completed an analysis of its appropriate role in the provision of opportunities for outdoor recreation (USDA Forest Service 1977). This study is based on assessment of the kinds of opportunities the agency has under its jurisdiction, as well as on such things as expertise, legislative direction, and so forth.

**Identifying the Consequences of Management Actions**

Because the recreation opportunity spectrum focuses on specific features of the physical, social, and managerial setting, it facilitates analysis of how proposed management actions will alter the nature of a specific opportunity.

For example, the decision to develop an area for timber harvest has the obvious consequence of changing the level and obtrusiveness of nonrecreational resource uses. But logging also often alters the amount and type of access into an area. This improved access, in turn, can lead to higher use and greater demand for facilities. Many of these changes can be anticipated outcomes and evaluating whether or not they are appropriate or desirable.

Such an approach means that explicit recognition of changes affecting the opportunity spectrum is assured. By providing a framework in which the consequences of different decisions can be considered in relation to how they affect opportunities for recreation and their use, many undesirable problems related to functional decision-making (about logging, road development, etc.) can be anticipated and possibly avoided.

The key to using the ROS effectively is the area’s management plan. Only with clearly specified management objectives is it possible to say whether the consequences of an action are acceptable and appropriate or not. Management without such objectives can only be reactive.

**Matching Desired Experiences With Available Opportunities**

Matching the experiences visitor seek with opportunity settings best suited to providing those experiences is one of the major challenges to the outdoor recreation manager. We often assume this requires direct management actions, whereby
managers know who wants what and direct recreationists accordingly. But without good information about the various types of experiences recreationists seek, this is a hopeless task. To further complicate matters, there is no simple link between experiences sought, recreational activities, and opportunity settings.

One approach that does not rely on a prior knowledge of desired experiences is to upgrade the flow of information to people about the nature and location of existing opportunity settings. At present, recreationists’ lack of knowledge about existing opportunities is sometimes as great a deterrent to participation as is the actual unavailability of opportunities.

If the recreationists are given information about the various opportunities, they can then choose the most appropriate locations for their particular types and styles of activity. For example, recreationists’ interests in driving for pleasure (a type of activity) might range from looking at fall leaf colours along a modern paved highway to four-wheel driving off roads.

Several examples of efforts to improve information to users can be cited. On the Suislaw National Forest in Oregon, managers have described five types of camping experiences available, ranging from remote wilderness to highly developed settings. They have not only identified what is available on National Forest lands but also included opportunities provided by other agencies, such as highly developed campgrounds in State parks. After selecting experiences desired, visitors can examine a listing of available campgrounds in the area, categorized by the type of opportunity provided. This approach also gives managers a chance to measure demand for the various opportunities and, if necessary, to make adjustments in their supply (relative availability) to more accurately reflect the actual demand. Using this approach effectively requires, at a minimum, that managers have a complete and regularly updated inventory of various opportunities in their areas (including those supplied by other agencies).

This approach assumes that people do know, in general, the characteristics of the recreation opportunity setting they prefer or dislike. Thus, management ought to strive to provide recreationists with information about such things as the level of interparty contact, access, or facilities they may find at any given site. Through a trial-and-error process, recreationists can find what suits them best.

Managers can also use predictable, seasonal changes at specific locations to provide diverse opportunities for recreationists. For example, many campgrounds have been developed to provide modern experiences during the summer season of peak use (June through August). These campgrounds are often in spectacular locations that have year-round appeal. Frequently, however, they are closed from August to June (and even on weekdays during the summer season, in some instances). Such closures concentrate use into a relatively short season and eliminate the potential for off-season use.
Natural processes can also alter the opportunities available even in open areas - snowfall may preclude access by conventional, wheeled vehicles, thereby converting a modern opportunity to a more primitive one for part of the year. Such changes, whether by management or natural processes, affect one or more of the opportunity factors and thereby change the opportunity available. Utilizing these seasonal changes, management can provide variety at individual sites, thereby extending use throughout the year, gaining greater use of expensive recreational developments, and broadening the range of options from which visitors can choose.

We believe that the key to matching the experiences users desire with available opportunities is to let users make their own choices based on reliable information about the opportunities available. Such information, aimed at creating realistic expectations, should be about the nature of the opportunities, where they are, and how conditions might change throughout the year.

CONCLUSIONS

The recreation opportunity spectrum provides a framework for integrating recreational opportunities and non-recreational activities. The central notion of the spectrum is to offer recreationists alternative settings in which they can derive a variety of experiences. Because the management factors that give recreational value to a site are interdependent, management must strive to maintain consistency among those factors so that unplanned or undesired changes in the opportunities do not occur.

In this paper we focused primarily on existing social conditions and technology. But, technology and socioeconomic changes often produce impacts beyond the ability of managers to fully anticipate or control. For example, few people anticipated the enormous growth in outdoor recreational vehicles that has occurred in the past decade. Similarly, the consequences of scarce energy resources were not foreseen until the scarcity was already a fact (Shafer et al. 1974). The impact of the changing age structure of the U.S. population has yet to be fully recognized (Marcin and Lime 1977). Such changes can produce dramatic shifts in the type and intensity of demand for opportunities for outdoor recreation. Although the future can be only imperfectly predicted, the ROS does provide a framework for accommodating these shifting demands, as well as estimating the kinds of impacts associated with these changes.

If a full range of opportunity settings is provided, changes in demand can be more easily accommodated because the kinds of features an activity requires are more likely to be available. Although the supply to meet the increased demand might be insufficient, nonetheless some areas with the necessary features should be available. Management of the full opportunity spectrum should permit accommodation of these changes with minimum disruption. Providing opportunities for quality recreational experiences means providing sufficient opportunities across the spectrum. Diversity is the key to meeting this challenge.
There may be an insufficient supply of the opportunities needed to meet changing demands, however, and managers may wish to consider increasing the supply. Such an increase will probably take place at the expense of some other opportunity setting. The outdoor recreation opportunity spectrum provides a framework for identifying some of the consequences (social impacts) of such a decision. By identifying which specific opportunity factors will be altered and how, we gain knowledge regarding the changing distribution of opportunities, which clientele groups may be affected, the relative availability of alternative settings to meet these people's needs, and the extent to which a proposed alteration may result in a loss of settings formerly available. To allow such an assessment of change requires the routine collection of sufficient baseline information to document the types and amounts of recreational use occurring. Only after the change has been documented can managers rationally determine the most appropriate course of action.

**RESEARCH NEEDS**

The ROS framework described in this paper is based on state-of-the-art judgments. As such, the relationships we describe are tentative and need further verification; however, we believe that the framework offers a useful approach founded in management reality as well as research on visitors' attitudes and actual behaviour. New information from research will aid full development of the outdoor recreation opportunity spectrum. This research should take several directions.

First, further investigations of the relationship between activities, settings, and experiences are needed. Specific efforts to define the psychological outcomes associated with different activity-setting combinations would help reveal how management can better help visitors achieve a diversity of experiences (e.g., see Brown et al. (1977) for an example of this in hunting). Such data would also be useful in defining boundaries between the generic opportunity classes.

Second, how are people's taste for recreational settings and activities shaped by the available supply? Are preferences merely a reflection of opportunity? If not, how can latent demand be identified to better fill out the opportunity spectrum?

Third, to what extent does substitutability exist among the various experiences recreationists seek? Are experiences uniquely linked to certain settings or activities? If not, what is the nature of the interchangeability (Field 1976, Hendee and Burdge 1974, Christensen and Yoesting 1979)? How do differences in style account for differences in the satisfactions received (e.g., what differences, if any, exist between hunting big game, upland-birds, or waterfowl in terms of the satisfactions participants seek)?

Fourth, and related to the earlier concerns with estimating demand, we need a better understanding of how tastes in recreation evolve over time. Are there orderly
and predictable evolutions in tastes along the spectrum of settings? If so, how do persons at different stages in this evolution differ in terms of the experiences, activities, and settings they seek (Bryan 1977, 1979)? Does early exposure to modern opportunities lead to a demand for increasingly more primitive styles - do people learn as they recreate and seek more demanding settings and activities to refine their skills (Davidson et al. 1966)?

Finally, there is a need for research on the analysis of policy on such questions as: What are the appropriate roles for the various suppliers to adopt? What role should the private sector undertake and how might this vary across the country? What incentives might promote private development?

ACKNOWLEDGMENT

We acknowledge the help of many managerial and research colleagues who provided critical reviews of earlier versions of this paper in the past several years.

LITERATURE CITED


RECREATION OPPORTUNITY SPECTRUM:
BASIC CONCEPTS AND USE IN LAND MANAGEMENT PLANNING

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INTRODUCTION

The United States is blessed with a vast, rich supply of natural resources, and compared with many other countries, it has a relatively low population density. As our Nation’s population has grown, we have enjoyed greater material wealth, but our natural resources have become less plentiful. Demands for timber production, water development, hiking, camping, and hunting opportunities have increased rapidly. In addition, new demands have emerged to use mountain bicycles and to mine energy minerals such as uranium. Consequently, the competition for our dwindling resources has intensified.

Because of these increasing demands, public land managers no longer have the margin for error they once had. Consequently, costs to society of inappropriate resource management decisions have grown dramatically.

Public land managers now try to minimize these costs by being more efficient and effective in their efforts. They are devoting increasing time to land management planning. That planning requires objective data of many different types. These data needs include: understanding of public concerns about resource uses; inventory information describing the types, amount, and quality of the resource-related goods and services that can be provided; accurate estimates of the current and future demands for goods and services; economic and other measures of the values of these goods and services; measures of the adverse environmental and social impacts of providing a particular type of good or service; and how one type of resource use impacts another.

To make things even more complex, this wealth of information is needed for each of the alternative uses considered for a particular planning area. Data are needed for timber, range, water, mineral, and the many so-called amenity uses, including scenic, wildlife, fishery, wilderness, air, visibility, and a variety of outdoor recreation resources. Not only is information required on each of these possible

1This paper is based on the content of a videotape prepared by Colorado State University and B. L. Driver, USDA Forest Service, Rocky Mountain Experiment Station, Fort Collins, Colorado. Videotape available from: Instructional Services, Colorado State University, Fort Collins, Colorado.
uses of the resource base, but planning techniques are also needed to assure that all of these resource uses are integrated into the planning process.

In the past it was difficult, if not impossible, to integrate all of this information into a comprehensive land management plan. For example, until the Recreation Opportunity Spectrum, or ROS, was developed, no system existed which adequately integrated outdoor recreation values into multiple-use land management planning. Now, however, the ROS system provides the land manager with a useful framework for thinking about recreation resources and their values during all stages of planning and management. Instead of being a set of hard, fixed rules and requirements, the ROS is a conceptual scaffold on which the planner can build.

This paper presents the basic concepts of the ROS framework. Each section explains how the ROS system can help integrate recreation into land management planning.2

The first section describes how the ROS system provides a more useful definition of the goods and services - or "outputs" - provided by the management of public outdoor recreation resources. That definition helps mesh recreation demand with supply ... and then integrate both into planning.

The second section explains how the ROS framework helps assure that a diversity of recreation opportunity will be offered and maintained. That module also explains why the ROS system does not address all types of recreation opportunities but limits itself to those which can be provided along a resource-based Urban to Primitive spectrum.

The third section describes the six ROS classes and the essential characteristics of the settings which make up each class. It also describes how different recreation settings provide different types of recreation opportunities.

The fourth section gives an overview of how the ROS framework is used to help establish management directions. It focuses on how the system is used to develop recreation-related management prescriptions, guidelines and standards.

The fifth, and last section, reviews briefly how the ROS framework can be used to guide management and to monitor implementation of the outdoor recreation component of the plan.

Each of the five sections were developed to stand on their own, so there is a small amount of repetition among the sections.

2 The reader should also consult: the USDA Forest Service's ROS User Guide (1989); and/or the videotapes "Recreation Opportunity Spectrum: Basic Concepts and Use in Land Management Planning" and "An Introduction to the Recreation Opportunity Spectrum".
Most of the examples given in the paper are taken from USDA Forest Service applications of the ROS system. That agency has applied the system nationwide in national forest land and resource management planning. The basic concepts and principles presented in this paper should be applicable to all users of the ROS system.

I. RECREATION MANAGEMENT AS A PRODUCTION PROCESS AND THE ROS DEFINITION OF RECREATION OUTPUTS

The ROS framework is an improved system for integrating recreation values into land management planning because it provides a better means for meshing recreation supply with demand. It also considers systematically the trade-offs with, and impacts of, alternative uses such as timber production.

To accomplish these purposes, the ROS system was built on a definition of recreation goods and services, or "outputs," which were directly linked to the natural resources used to produce them. In this way the ROS framework views recreation resource management as a production process. The objective of that production process is to deliver the recreation goods and services that are demanded. Under multiple-use management that process must be sensitive to demands to produce other types of goods and services that can be supplied.

Within the recreation production process, inputs are scheduled by managers to produce outputs, or goods and services. Both the production and use of these outputs result in desirable and undesirable consequences or impacts. The types, magnitudes, and values of these impacts are assessed to help decide whether or not particular types of output should be produced.

Let's now look at the basic components of the recreation production process from first a supply and then from a demand perspective. In that way, it is easier to understand how the ROS system helps integrate these two basic components of recreation planning and management.

Supply is concerned with what can be provided. From that perspective, inputs to the recreation production process are land or natural resources, labor or efforts of managers, capital or public investments and technology or useful knowledge. The outputs are of two types. One type can be defined as sustaining the basic capacity of the resource to produce goods and services over time. This type of output guarantees sustained yield management so the future productivity of the resource will be maintained or even enhanced. This type of output represents an input to later production of recreation goods and services.

The second type of outputs are the recreation goods and services that are produced for use. There are two classes of these outputs. One class is represented by management actions taken to preserve different fauna, flora or cultural historic
sites in perpetuity. These outputs are largely services and are used indirectly and primarily by off-site vicarious or appreciative users. To most users, the service is simply the knowledge that the resources are being preserved.

The second class of output produced for use are the recreation opportunities provided. Those opportunities might or might not occur in preserved areas. For example, opportunities to hike or fish can be provided both inside and outside designated wilderness areas. The ROS system is concerned primarily, but not exclusively, with this second class of outputs - with the recreation opportunities provided for on-site use.

Opportunities for on-site use differ by type, amount, and quality. The type differentiates one opportunity for use from another. For example, the opportunity to hike in a primitive setting is a different output than the opportunity to fish in such a setting or to hike in a more developed natural area. The amount or quantity of outputs produced is defined as the design capacity of the area being managed, whether highly developed sites or backcountry areas with little development. Design capacity is the number of opportunities for use that are provided by management. The quality of the outputs produced for on-site use is defined in terms of the overall attractiveness and appeal of the total setting in which the opportunity exists.

The outputs produced for on-site use might or might not be used. If they are not used, management has created excess design capacity or supply. Both the production and the use of the outputs create positive and negative impacts. The positive impacts are made up of all the resulting beneficial or improved conditions of individuals or society. Negative impacts reflect the losses. Both types of impacts need to be assessed using both monetary and nonmonetary measures.

Once information on the supply of recreational opportunities is identified, the ROS framework integrates the demand - or what is desired - component of the recreation production process component in several ways. The most basic example is the way a recreation opportunity is defined by the ROS framework. Contrasted with outputs of timber or mineral resource management - where the outputs are things or commodities - the recreation outputs are defined as opportunities for particular types of use of the resource. More specifically, and related directly to demand, the ROS framework defines a recreation opportunity in terms of three dimensions of user demand. First, there is demand for activity opportunity such as picnicking, hiking or cross country skiing. Second, there is a demand for what the ROS system recognizes as setting opportunities, because users select activities within desired settings. These settings can differ in terms of remoteness, facility development, services provided, the level of user density or the type of rules and regulations that exist. The third dimension of recreation demand reflects the users' preferences for experience opportunities. Users select certain activities within preferred settings in order to realize desired and expected experiences. Being remote from the sights and sounds of humans, exploring the out-of-doors, being self-
reliant, not needing to be self-reliant, competing in sports events, and experiencing a relatively unmodified natural environment are just a few examples. The manager helps produce and provide the opportunity to realize these experiences. The actual experiences are produced by the users.

Using these three dimensions of demand, the ROS defines a recreation opportunity as the opportunity to engage in a desired activity within a preferred setting to realized desire and expected experiences. With this definition, it is easier to add the demand component to the recreation production process.

User demands for specific types of recreation opportunities are inputs which need to be considered along with the supply-side inputs of land, labor, capital, and technology. Demand inputs help determine what types of recreation opportunities, or outputs, should be supplied. That demand, as limited by constraints on the user, determine the use of the outputs supplied. Demands also determine most of the positive impacts, because most of the benefits are realized by the users. User demands, particularly economic demands, are of fundamental importance in determining the dollar values assigned to the recreation goods and services, or opportunities produced. These economic values, or the users' willingness to pay for particular opportunities, vary by type and quality of the recreation opportunities provided. The value of these opportunities are measured by actual fees and entrance prices and through the use of surrogate value-estimating techniques, such as the travel-cost and contingent-valuation methods.

In summary, the ROS framework considers recreation goods and services to be outputs of the recreation production process. More significantly, recreation outputs are defined in terms of user demands for opportunities, and supply inventories are made using the same definition to determine the type, amount, and quality of these opportunities. In this way recreation demand is better integrated with supply. In addition, estimates of the economic worth of recreation outputs are improved because the ROS framework provides a better identification of recreation goods and services. Finally, recreation resources and values can be more fully integrated into land management planning, because the ROS framework allows a more precise evaluation of the desirable and undesirable impacts of alternative land and resource uses. It does so because the ROS definition of a recreation opportunity has permitted development of recreation resource inventory criteria that can be used to relate recreation opportunity potential of an area to the characteristics of the setting of that area. In this way, the positive and negative impacts of logging roads or of mineral and water developments on recreation settings can be documented more systematically than in the past.

II. THE ROS CONCEPT OF RECREATION DIVERSITY

Leisure behavior is a complex subpart of human behavior and is still not well understood. It is clear, however, that people engage in a wide variety of recreation
activities in a diversity of settings. Thus, resource managers must provide different types of recreation opportunities for different types of recreationists.

The ROS framework adopts the viewpoint that recreation resource managers produce recreation opportunities and that recreationists use these opportunities to produce recreation experiences and benefits for themselves. Within ROS, a recreation opportunity has three components: an activity, a setting, and an experiential component. Using these components, a recreation opportunity is defined as the opportunity to participate in a desired recreation activity within a preferred type of setting to realize desired and expected experiences.

The ROS system is based on the notion that a spectrum of recreation resources is managed to provide different types of activity and setting opportunities so a diversity of experiences can be realized. This basic idea can be expressed in functional notation as \( E_{ROS} = f_\tau (A_{ROS}, S_{ROS}) \), which means that the experience opportunities that can be predictably provided along the Recreation Opportunity Spectrum are dependent on the recreation activity and setting opportunities that exist along that spectrum.

The subscripts "ROS" and "p" were added to this functional notation to help clarify two significant sources of confusion about the ROS system. "ROS" was added to emphasize that the ROS system does not consider all types of recreation experiences, activities and settings. It considers only those experiences that are highly dependent on the particular combinations of activity and setting opportunities that the ROS system has identified as existing at different points along the spectrum. For example, realizing family togetherness, getting exercise, enjoying nature, temporary escapes of many types, and associating with friends are some of the experiences that are widely desired by different types of recreationists. Each experience can be realized from a variety of activities and settings. Since they can occur in each of the six ROS classes, the ROS is not useful in identifying the settings and activities required to realize these experiences.

Other experiences, such as seeking isolation, enjoying a relatively undeveloped natural area, being remote and highly dependent on one's outdoor skills, and participating in group-competitive sports on developed playgrounds are dependent on particular types of activities and settings. It is these latter types of recreation experiences that the ROS system addresses. The USDA Forest Service's ROS User Guide specifies what these experiences and their associated activities and settings are.

The subscript "p" was added to the functional notation to emphasize that the ROS-related experience opportunities are only partially dependent on particular combinations of activities and settings identified along the spectrum. The ROS recognizes that variables other than recreation activities and settings will affect the types of experiences that the recreationists will produce for themselves. These
variables include the size of the user group, past experience levels of the users, the users' personality, type of thinking, skills and peer-social norms and pressures.

In summary, on the functional notation, management under the ROS framework does not attempt to preserve options, or to provide, for all desired recreation experiences. Instead, the ROS addresses only those Urban to Primitive spectrum-dependent recreation opportunities. From this perspective, it can be seen that the ROS is really an opportunity spectrum, and not the ONLY spectrum along which recreation opportunities can be arrayed. But that ROS is currently the most relevant and useful system available for helping agencies such as the USDA Forest Service and Bureau of Land Management meet their recreation-related responsibilities.

While the ROS system is primarily resource-based and differentiates recreation opportunities mostly in terms of differences in the physical settings along the spectrum, it actually considers three types of settings - the physical, social and managerial. The characteristics of each setting will influence the type and the diversity of recreation opportunities that can be provided. To help assure that maximum diversity of recreation opportunity will be identified along the spectrum, the ROS system's inventory criteria and their associated standards were developed to consider each of these types of settings. It is necessary that users of the ROS system have a good understanding of the characteristics of each type of setting for each of the six ROS classes. The third section of this paper describes those characteristics.

To increase understanding about the ROS framework, three additional points will be briefly made about the ROS concept of recreation diversity. First, there has been a misinterpretation that the ROS is one dimensional, with this sole dimension indicating levels of development. Although the ROS system has never attempted to consider all dimensions of recreation diversity, it is not one dimensional. Instead, it covers several important dimensions of recreation opportunity choice, including: level of development of the opportunity setting; remoteness of the opportunity from the sights and sounds of human activity; user density; degree of managerial control; ease of access; and types of services offered. Although several of these dimensions are related, each are distinct and can independently affect recreation choice and management actions.

Second, the system was developed to guide recreation inventories and management of large land areas such as national forests. As such, the ROS is macro, or regional, system that establishes only general guidelines for site- and project-level planning and management. Such a system cannot possibly address all dimensions of recreation diversity. However, the system does not constrain the recreation planner from providing for most, if not all, of the other dimensions of recreation diversity through site- and project-level planning.
Third, and in conclusion, the criticism has been raised that the ROS system is biased toward the primitive end of the spectrum. The system itself has no such bias. If use of the ROS results in a bias, the system is being used improperly.

The ROS helps to objectively inventory those types of recreation opportunities that can be, or are being, provided. It also provides guidelines for implementing the recreation component of the approved plan. The ROS says nothing about what types of opportunities should or should not be provided. Furthermore, the system does not endorse one type of recreation opportunity as contributing more to human welfare than another. The ROS describes opportunities that exist; it does not prescribe or limit opportunities. All it does is identify and provide options for those types of recreation opportunities that are demanded and can be supplied along the spectrum.

III. CHARACTERISTICS OF ROS SETTINGS

The first and second sections of this paper emphasized that the ROS is concerned with providing options for users to realize a variety of recreation opportunities along a resource-based spectrum. Those two sections pointed out that the ROS definition of a recreation opportunity integrates three components of recreation demand: demands for activity opportunities, for setting opportunities, and for experience opportunities. Different types of activity and experience opportunities can be provided in the different types of ROS settings. The settings are the focus of recreation resource planning and management. For example, different settings are inventoried during the supply analyses, and different settings are managed to provide various recreation opportunities.

For managerial convenience and uniformity, the ROS framework identifies six general classes of recreation settings that can be divided into sub-classes as needed. They have been labeled Urban, Rural, Roaded Natural, Semi-primitive Motorized, Semi-primitive Nonmotorized, and Primitive. These names were selected to describe the dominant physical, social, and managerial characteristics of the settings of each ROS class. An understanding of these setting characteristics is necessary for effective use of the ROS System. It is also important to understand that contiguous classes have similar settings and that discrete boundaries cannot be set for classes designated along any spectrum.

Urban ROS class settings are characterized by high levels of human activity and by concentrated development, including developments for recreation opportunities. In urban settings levels of recreation use vary and can be extremely high or dense. There are a preponderance of signs and other indications of regulations on the users' behavior. The landscape is dominated by human structures, and green-space is only sporadically dominant.

In the Rural class settings, the sights and sounds of human activity are readily evident, though less pronounced and less concentrated than in the Urban class.
Levels of use vary, but do not reach those concentrations of the Urban class except at specialized and developed sites. While the characteristic landscape is often dominated by human-caused geometric patterns, there is also a dominant sense of open, green-space.

The principles adopted by the ROS system to assess the visual attractiveness of the Urban and Rural settings dictate that human-caused visual patterns will dominate the landscape in these two settings. However, this should not be interpreted to mean that these areas are visually unattractive. On the contrary, there are many examples of beautiful cities, quaint villages and the pastoral beauty of farm and ranch lands.

The Roaded Natural class is characterized by predominantly natural-appearing settings, with moderate sights and sounds of human activities and structures. The overall perception is one of naturalness. Evidence of human activity varies from area to area and includes improved highways, railroads, developed campgrounds, small resorts and ski areas, livestock grazing, timber harvesting operations, watershed restoration activities, and water diversion structures. Roads and motorized equipment and vehicles are common in this setting. Density of use is moderate except at specific developed sites, and regulations on user behaviors are generally less evident than in the Urban or Rural classes.

In some regions of the United States, a distinct subclass of setting features exists within the Roaded Natural class. For that reason, two subclasses have been inventoried and managed in those regions. This distinction between subclasses occurs where human developments are locally dominant or co-dominant with a natural-appearing landscape, much like the rural setting. However, the recreation opportunities provided are significantly different from the Rural setting. For example, although numerous, highly improved roads might exist in this subclass, there is a sense of remoteness because of the distances from major travelways. In addition, the density of recreation use is often low compared to the Rural class. In addition, users have the opportunity for exploration and to use both on-road recreation vehicles and ORV’s. Camping is not confined to developed campsites, so users have considerable autonomy in choosing sites and using equipment.

Both the Semi-primitive Motorized and Nonmotorized classes are characterized by predominantly natural or natural-appearing landscapes. The size of these areas give a strong feeling of remoteness from the more heavily used and developed areas. Within these settings, there are ample opportunities to practice wildland skills and to achieve feelings of self-reliance.

The most significant difference between the semi-primitive motorized and nonmotorized settings is the presence or absence of motorized vehicles.
In the nonmotorized settings, the presence of roads is tolerated, provided: they are closed to public use; they are used infrequently for resource protection and management; and the road standards and locations are visually appropriate for the physical setting. In many cases, old roads are acceptable as nonmotorized travelways so long as they do not reflect misuse or poor stewardship of the land. These roads would have motorized use in the semiprimitive motorized class, especially by ORV’s.

The Primitive settings are just that! Characterized by essentially unmodified natural environments, their size and configuration assure remoteness from the sights and sounds of human activity. The use of motorized vehicles and equipment is not permitted except in extreme emergencies, such as saving someone’s life or protecting the resource.

In the Primitive class, the user is forced to be self-reliant and expects low levels of user density.

Because of past human activities, some U.S. states do not have areas that can provide true primitive experiences. When this situation exists, the semiprimitive nonmotorized areas become more important and often take on a higher relative value.

In the semiprimitive and primitive settings, the use of the visual management system plays a critical role in assessing and maintaining conditions which support the naturalness of the area. For example, it may not be enough to forbid motorized use in the nonmotorized ROS classes. The character of any roads or other structures, such as buildings, bridges, or fences, must also be in harmony with the natural landscape.

Within each of these six general classes, the ROS system identifies three interrelated sub-settings. They are the physical, the social, and the managerial settings. Each influence the type, quality, and amount of recreation opportunities that can be provided. Identification of these sub-settings facilitated developing more specific inventory criteria for the ROS. It also improved the system’s ability to assess the impacts of alternative resource uses and to provide specific direction for management units within the area being planned. For these reasons, users of the ROS system must understand the general characteristics of each of these subsettings.

The physical setting is best defined by an area’s degree of remoteness from the sights and sounds of humans, by its size, and by the amount of environmental change caused by human activity.

Remoteness is a perceived condition of being isolated from human activities and developments. While most often measured in terms of distance, other factors such as topography, vegetative screening, or extremely difficulty travel conditions can also create "remote" setting conditions.
The relative size of an area not only influences the users' perceptions of the vastness of the physical setting, but also combines with the sense of distance, or difficulty of travel, to enhance the feeling of remoteness. In addition, the size of trees, rock formations, bodies of water, or open space add to the feeling of vastness and of relative remoteness.

The apparent naturalness of an area is highly influenced by the evidence of human developments. If the landscape is obviously altered by road, railroads, reservoirs, power lines, pipe lines, or even by highly visual vegetative manipulations such as clearcuttings, the area will not be perceived as being predominately natural. Even if the total acres of modified land is relatively small, "out of scale" modifications can have a negative impact. On the other hand, evidence of activities that have been kept in harmony and scale with the natural landscape are often deemed acceptable.

The features of the physical setting are relatively fixed and thus costly to change. Any changes will be relatively irreversible and have a long-lasting effect on the types of opportunities provided. The recreation-related features of the social and managerial settings are more easily changed or altered.

**SOCIAL SETTINGS**

The interactions between user groups within an opportunity setting play an important role in determining the types of experiences that can be realized, and whether or not a "satisfactory" recreation experience is achieved. If users continually encounter large numbers of people or see evidences of heavy use, an area will not be perceived as remote or as isolated as when such evidence is seldom encountered.

Not all social interactions can or should be influenced by land managers, but the likelihood of acceptable social interactions can be enhanced if the manager is aware of certain criteria for evaluating the social setting.

Two significant elements of the social setting are density of use, and the conduct of other users. These two elements of social interaction lead to most conflicts between user groups and land managers.

The density of use refers to the number of people or groups encountered relative to the space available.

Most user groups within a given physical setting seem to have a good sense of what density of use is appropriate for that setting. When the capacity of that physical setting is exceeded ... particularly if it is repeatedly exceeded ... a perception of social congestion occurs, and the quality of the recreation experience begins to decline in the minds of the users. For this reason, guidelines are assigned to particular ROS classes and developed sites that define the user carrying capacity, or
Towards Serving Visitors and Managing Our Resources

the persons at one time - POAT capacity - of an area. These guidelines help assure that appropriate densities of use are maintained.

Within the social setting, the number and conduct of users may affect the recreation experiences that can be realized. The conduct or behavior of individuals can be positive or negative. Positive behavior includes maintaining a clean campsite and being considerate of the desires and preferences of other users, especially regarding noise, dogs on leashes, and disturbances at night. Negative behavior includes lack of consideration for other users as well as for the physical setting. Much of this behavior cannot be inventoried using the ROS framework. However, the ROS system does provide guidelines for writing management directions that will help assure that the users’ conduct will be compatible with the types of opportunities that are planned.

MANAGERIAL SETTINGS

The interactions between user groups and the land manager play an important role in providing satisfactory recreation experiences. While not all elements of the social setting are within the control of the land manager, all managerial elements are, or should be.

These elements include: the degree to which users’ actions are regulated; the visible evidence of such regimentation; the type and appropriateness of services and facilities provided by the land manager, and the types of maintenance operations performed.

The degree of regulation of the users’ actions is determined by constraints the user experiences when making decisions such as selecting a camp site or mode of travel, or when attempting to practice certain skills such as hang gliding.

The visible evidence of regulation reflects the "style" with which the manager imposes constraints on the user. In settings where the density of use is high, the rules and regulations are usually obvious as signs or bulletin boards, or even via uniformed forest officers. In more remote areas, the rules and regulations are often provided to the user group "off-site" in the form of permits or maps, trailhead signs, and so on. Here, the user is relatively free to make many specific choices on-site, as long as they fall within the general rules and instructions. However, there are exceptions to these general cases. In some instances, a high degree of localized regulation might occur in a primitive area to limit use, confine use to particular areas away from trails or shorelines, or to protect wildlife by requiring that all dogs be on a leash. Users might have to obtain a special permit to use such areas, and they might be checked for compliance while using the area. Such regulations might not exist in a less remote location.
Within the managerial setting, the provision of services, facilities, and maintenance operations, must be compatible with the physical and social setting. For example, the degree and type of security from other users, and from natural hazards, varies from ROS class to ROS class. In addition, the appropriateness of particular maintenance operations, such as the use of power or hand saws to clear trails, differ between some settings.

By understanding the essential elements of the physical, social, and managerial settings, the user of the ROS system can apply the ROS inventory criteria to classify lands into different recreation opportunity classes and develop management guidelines and standards to guide management direction during plan implementation. With that understanding, the planner or manager will also be better able to adapt the general guidelines of the ROS system to local conditions, including subdividing any of the six classes or modifying the inventory criteria when conditions warrant such modification.

IV. ESTABLISHING MANAGEMENT DIRECTIONS

Use of the ROS framework in land management planning helps direct recreation management in four major ways. The ROS helps: guide recreation demand analyses; facilitate recreation supply inventories; incorporate recreation values into the planning alternatives; and develop guidelines and standards for the recreation-related management directions recommended by the plan. Each will be considered in this section. Particular attention will be given to establishing the recreation management directions recommended by the plan.

Planning and management of publicly administered natural resources is directed primarily toward supplying what is demanded. These demands - including public issues, concerns, needs and professional judgements - are the driving forces behind planning and management. They can provide meaningful direction only if the demanded goods and services, or outputs, are defined clearly.

The ROS has provided an improved definition of recreation outputs, as explained in the first section of this paper. It did this by relating demands for recreation activities, settings and experiences.

Although the ROS definition of recreation outputs could be used more widely, many useful applications have been made in recreation demand studies and in identification of recreation-related public issues. For example, the public can easily understand the ROS concept of a recreation opportunity and the six general classes of opportunity on the ROS.

By defining recreation outputs better, and by establishing a useful terminology for assessing recreation demand, the ROS helps develop recreation management direction early in the planning process.
The second way the ROS system helps establish recreation management directions for the plan is by guiding supply inventories of the recreation opportunities that can be provided. Section 3 discussed how the ROS system’s inventory criteria are useful in identifying potential and actual recreation opportunities. This supply information, provided by the ROS about the planning area’s capability, is needed to establish the planning alternatives and the recreation management directions.

Generally, alternative ways of meeting planning objectives are evaluated as a part of the planning process. To generate feasible alternatives, the planner must evaluate the suitabilities of different land units to provide different mixes of multiple-use outputs. Agencies such as the USDA Forest Service and USDI Bureau of Land Management use the concept of management prescriptions, or management opportunities, to make these evaluations. Applied to subunits of the planning areas that have different resource characteristics, management prescriptions are the building blocks for formulating planning alternatives.

Each prescription describes a set of compatible multiple-use management practices that will produce a particular mix of resource outputs. For example, one management prescription for a particular type of land might allow grazing of domestic livestock and provision of primitive recreation opportunities, but permit only minimal water development structures and also place strict controls on timber harvesting and mineral development by restricting clearcutting and strip mining. Another prescription for the same type of land might also permit grazing, but provide for roaded-natural recreation opportunities, allowing for clearcutting and strip mining.

Under conditions of multiple-use management, no one management prescription can be written to resolve all of the issues or meet all of the planning objectives. Some objectives might emphasize amenity outputs, while others might emphasize commodities. Some objectives can be met on some types of land units and some on others. A variety of management prescriptions must be developed and applied to the different land units within the planning area to reasonably meet planning objectives. In the Forest Service, these land units are called "analysis areas" during the planning process, and the forest is divided into different types of areas.

It is important that recreation management practices be included in a sufficient number of prescriptions to adequately represent the recreation-related planning objectives. Failure to do this will guarantee that recreation will not be integrated into the plan. Because the ROS has provided concepts and terminology that have made it easier to incorporate recreation into management prescriptions, that system helps assure that recreation will be considered adequately in each alternative.

Frequently, if not usually, the management prescriptions developed for the recommended alternative will become the management directions for the plan once that alternative is approved as modified. By guiding development of recreation
management prescriptions, the ROS plays a significant role in development of recreation management directions in the approved plan.

After the ROS framework has been used to help guide recreation demand and supply analyses and to incorporate recreation values into the planning alternatives, it plays still another, or a fourth, significant role in directing recreation management. This is by shaping the standards and guidelines for the recreation management directions in the plan. Those management directions are used to guide plan implementation.

Management directions are usually expressed as sets of general directions for the entire planning area such as a National Forest or a Bureau of Land Management resource area. They are also expressed as sets of more detailed directions for analysis or management areas having particular characteristics.

Discussion of management directions during the rest of this section will be based on the plan for the Arapaho and Roosevelt National Forests in Colorado. In that way, specific examples can be given of how the ROS has been used to help develop recreation-related management directions. It is emphasized that the examples given might apply only to the Arapaho and Roosevelt Forests.

Forest-wide directions are applicable to the entire forest. They are more general than the directions applied to specific management areas within the forest. And the management directions applied to area-specific implementation programs provide still more detail.

The forest-wide directions respond to the issues, concerns, legal requirement, opportunities, and planning objectives that are forest-wide in scope. Each direction is influenced by the capabilities and suitabilities of an entire forest to respond to those directions. For example, one forest-wide direction for the Arapaho and Roosevelt National Forests states that across these two forests, diverse types of dispersed recreation opportunities shall be provided as identified by the ROS.

While directions for the management areas are sometimes called management prescriptions, we will call them management area directions to avoid confusion. Management area directions respond to the issues, concerns, opportunities, and management objectives that are related to particular management areas and their associated suitabilities and capabilities.

To understand how forest-wide and management area directions are developed and applied, one must appreciate that public issues, management concerns, and opportunities led to those directions, and that these same factors influence the location where a specific management area direction will be applied on the ground.
A better understanding of these relationships can be seen in recreation-related management area directions that were developed for the Arapaho and Roosevelt National Forests.

Two Ranger Districts on the Roosevelt National Forest, differ in size and distribution of lands that had been classified by a recreation supply inventory into various ROS classes. The Redfeather District is relatively large. Much of the land is undeveloped and on the primitive end of the ROS. In contrast, the Boulder Ranger District is relatively small and highly developed, with most of its land classified as roaded natural and rural. Because of limited supply and close proximity to the Denver urban area, there was strong public concern for, and intensive visitor participation in, non-motorized recreation activities on the Boulder District. Much more land was available on the Redfeather District for this type of opportunity, so it was not a public issue there, but limited opportunities for motorized access was an issue on that district.

Because of demands on the Boulder District, a management prescription was developed during the planning process that, while providing multiple-use outputs, would also emphasize the physical, social, and managerial setting characteristics that support or enhance semiprimitive nonmotorized recreation opportunities. During the generation and evaluation of the planning alternatives, this prescription was applied to feasible areas on the Boulder District in an effort to help meet those local needs. This prescription was carried through the planning process and remained in the approved plan as the management direction for one of the land areas.

Other ROS-related management area directions also evolved during the planning process to become management area directions in the approved plan. One, for example, emphasizes semiprimitive motorized opportunities, and another emphasizes Rural and Roaded Natural recreation.

Another area covers both sides of the Continental Divide. Although the two parts of this area differ in their attractiveness, access and level of use, semiprimitive nonmotorized recreation is being emphasized in each. The semiprimitive motorized opportunities area near Mammoth Reservoir has many low standard roads which were used years ago to access small mines in that area. These roads help that area meet demands for semiprimitive motorized opportunities. The Rural and Road Natural area near Mt. Pisgah receives heavy day use, has a fragmented public-private land ownership pattern and is easily accessible, which facilitates its management for Rural and Roaded opportunities.

Other types of management areas, such as those related to wildlife habitat and wilderness were developed. The management directions for these areas do not emphasize recreation. Nevertheless, each of these areas is managed to provide multiple outputs, so the directions do include guidelines for providing particular
types of recreation opportunity even through recreation is not the dominant emphasis.

Semiprimitive nonmotorized, semiprimitive motorized and rural and roaded natural management area directions provide specific recreation management directions for these land areas. These directions are guided by ROS concepts as indicated by the emphasis on semiprimitive nonmotorized recreation, on semiprimitive motorized, and on rural and roaded-natural opportunities.

Let's take a close look at semiprimitive nonmotorized management area direction. Our purpose will be to demonstrate how ROS concepts helped guide development of the guidelines and standards that are being used to guide implementation of this area's management direction. Those guidelines and standards help assure that characteristics of the physical, social and managerial settings will be maintained or enhanced to emphasize semiprimitive nonmotorized recreation opportunities.

To maintain appropriate physical setting characteristics of the multiple-use management areas in which semiprimitive nonmotorized recreation is emphasized, the standards and guidelines for that direction deal mostly with visual resources, silvicultural practices and wildlife habitat. For example, although it was necessary to preserve natural-appearing landscapes in this semiprimitive nonmotorized setting, it was also necessary to utilize these management units as producers of multiple outputs, including timber. To meet both of these needs, additional standards and guidelines were developed to help assure that all resource treatments in these areas would be compatible with the ROS setting criteria for the semiprimitive nonmotorized class. These guidelines required that the Forest Service's visual resource management system's visual quality objective of partial retention not be exceeded. This means that any developments or modifications, such as the consequence of timber harvesting practices, may be seen but will not be noticeable to the casual observer. The standards and guidelines also required that all travel routes in these management areas be considered at Sensitivity Level 1, so users of those travel ways can expect them to be in harmony with the natural setting.

Silvicultural treatments allowed in the semiprimitive nonmotorized management areas permit clearcutting of aspen, with emphasis on regeneration for visual enhancement. Limited clearcutting is permitted in other vegetative types, but selection and shelterwood harvesting practices are recommended, because they are considered to be visually less obtrusive.

Other physical setting controls occur in this management area direction as well. Evidence of modification and use by other visitors, for example, is controlled by the standard that the condition of soils and vegetation in undeveloped campsites must meet Frissell Class 3 or better. Here, the ground vegetation can be lost, but there
will be little soil erosion and exposure of tree roots. Humus and litter will be present.

Now let's consider how the semiprimitive nonmotorized management area direction provides standards and guidelines to maintain a social setting that meets ROS criteria for semiprimitive nonmotorized opportunities. Most of the standards and guidelines apply to forest-wide directions which establish levels and types of use that are consistent with the different ROS class settings as described in Section 3.

In the forest-wide directions, guidelines are given for the people at any one time - or PAOT - capacities for different ROS classes. These are best guesses that are intended to help assure that levels of use are consistent with ROS criteria for the social settings of the different classes. These forest-wide directions apply to all management areas. In addition, the standards and guidelines for management area direction in this area permit local, low standard roads to be constructed for non-recreation resource needs. They require, however, that motorized use be "restricted or prohibited", so that nonmotorized recreation can be emphasized.

The area capacity concept is also tied to other resource activities by consideration of vegetative cover and density.

In the forest-wide direction, user capacity for different ROS classes is shown to vary with vegetative type, size class, age class and type of species. Thus, the effects of timber and other vegetative management practices on user density are considered. And they are considered over time.

As stands of some species, such as ponderosa pine, reach maturity in Colorado, the ability of the area to visually screen or hide visitors is reduced. On the other hand, a clearcut of lodgepole pine will reduce screening and an area's PAOT capacity for up to 20 years. These types of impacts are defined generally in the forest-wide directions of the Arapaho and Roosevelt plan. When developing directions to maintain or enhance appropriate social settings of particular areas, the impacts must be considered for each management area direction separately.

In many cases, the management setting criteria and the social setting criteria for a particular ROS class are met by the same standard or guideline. In this management area, the standard "prohibit or restrict motorized use" applies to the equipment that can be used by both the visitor and by the manager. Motorized equipment can be used to harvest timber in some semiprimitive nonmotorized zones. However, discretion must be employed to assure that these areas will still provide semiprimitive nonmotorized opportunities. Other provisions of management area direction for this area also clearly deal with management, such as provide "foot and horse trails" or "manage campsites to meet a Frissell class 3 condition."
In many forest plans, managerial requirements such as law enforcement, visitor information services, and regulations are not included in the forest-wide or management area directions. They are either picked up as a part of specific programs for particular management units that usually cover parts of several management areas, or they are implemented by the local field manager. Flexibility at that level of management is frequently needed to use different management practices to preserve the character of the ROS settings being managed. As an example, regulations needed in a wilderness area might not be needed in a roaded natural area.

Flexibility is also needed in implementing the management area directions that are given in the plan. The parts of one of these management areas on the east and west sides of the Continental Divide require different management. On the east side near Rodgers Pass, there are many attractive, high elevation lakes that are readily accessible. That semiprimitive nonmotorized area receives much use and, therefore, requires regulations to protect the physical settings that are not required in this area to the west, near the James Peak area. This need for flexibility is consistent with the point emphasized in the introduction: the ROS framework is not a set of hard, fixed rules and requirements, but instead a conceptual scaffold on which the planner and manager can build as conditions warrant.

In summary, the concepts and terminology of the ROS help establish recreation management direction early in the multiple-resource management planning process during issue identification and other appraisals of recreation demand. Those concepts are also used to make the recreation inventories or supply analyses. The ROS framework is also used to incorporate recreation values into management prescriptions and to generate planning alternatives. It is used too in establishing guidelines and standards for the management directions that guide implementation of the recreation component of the approved plan. Thus, use of the ROS in land management planning weaves a web of thought that pervasively directs recreation management.

V. USING THE ROS IN PLAN IMPLEMENTATION

Implementing a multiple-use plan involves active management of the recreation resources. Two basic tasks are involved in this process. The first is to determine whether the type, amount and quality of recreation opportunities called for in the plan are actually being provided. The second task is to identify, justify, and document any revisions that need to be made in the plan.

To accomplish these two tasks, the recreation specialist must refer to the recreation-related management directions and their associated standards and guidelines in the plan. These directions, standards, and guidelines define the actions that must be taken to provide the different types of recreation opportunities planned for specific management areas. They assure that planned ROS settings will be
created or maintained. These guidelines and standards, along with the ROS inventory criteria for different ROS class settings, serve as indices for determining whether actual management departs from planned actions.

If the type, amount, or quality of the recreation opportunities provided are not the same as those called for in the plan, an inconsistency exists. The basic responsibility of the recreation specialist during plan implementation is to help prevent any inconsistencies from occurring.

Inconsistencies are of two types, actual and potential. Actual inconsistencies are realized departures from planned actions. They indicate that the physical, social or managerial settings are not being managed to provide the ROS types of opportunity planned. Assume that the Bureau of Land Management’s Steens Mountain area in eastern Oregon is being managed to provide the 15,000 acres of Roaded Natural, 62,500 acres of Semiprimitive Motorized, and 28,000 acres of Semiprimitive Nonmotorized opportunities. Assume further that unplanned mining operations are permitted in two of the canyons of that area. In this example, an inconsistency would exist that would reduce the Semiprimitive Nonmotorized acreage by 10,000 to 18,000 acres and increase the Semiprimitive Motorized acreage by 10,000 to 72,500 acres. Alternatively, this same hypothetical change could occur by allowing use levels on 10,000 acres to exceed those allowed for the Semiprimitive Nonmotorized class by the ROS social setting criteria and standards. Actual inconsistencies can also be caused by conditions not under managerial control, such as a wild fire or insect infestation.

Actual inconsistencies can be handled in one of three ways. First, they can be ignored, which is poor management. Second, an actual inconsistency can be corrected if the departure from the recreation standards and guidelines does not cause irreversible changes in recreation opportunities. Levels of recreation use might be excessive in a management area and exceed the densities permitted by the plan’s standards and guidelines. In this case, actions can be taken to bring use levels within the standards and guidelines of the ROS social setting criteria. Third, if an actual inconsistency cannot be corrected because it causes irreversible change, then the plan itself can be changed.

Monitoring the implementation of the plan should concentrate on preventing irreversible inconsistencies. If changes in the planned actions are desired and justified, they should be documented and supported before they are made. Any revisions in the plan will mean that different types of recreation opportunities will be provided than originally planned. When such revisions are made, the plan’s recreation management directions and their standards and guidelines should also be changed accordingly.
Potential inconsistencies can be prevented because a departure from planned actions has not taken place. If the decision is made not to prevent potential inconsistencies, then the plan should be revised before they occur.

One way to determine consistency between planned and actual recreation opportunities is to use an ROS Analysis Checklist. The checklist identifies the recreation characteristics of each management area, such as the type of ROS opportunities being provided, and its visual attractiveness rating. It also provides a method for documenting the impacts of proposed projects on the recreation opportunities being provided. The checklist can help trace any cumulative effects of management actions on the recreation opportunities available. This is an important part of monitoring, because some actions cause inconsistencies only when their impacts are considered simultaneously with other actions, or when the impacts are evaluated over time.

In summary, the ROS framework directly and indirectly guides implementation of the recreation component of the multiple-use plan. The criteria and standards provided by the ROS system for defining characteristics of the physical, social, and managerial settings of each ROS class directly provide indices against which planned versus actual opportunities can be evaluated. The ROS also helps develop the recreation management directions and their associated standards and guidelines, as explained in Section IV. Thus, the system also indirectly directs plan implementation through these management directions, standards, and guidelines.

RECREATION OPPORTUNITY SPECTRUM RELATED LITERATURE


INTRODUCTION

Effectively resolving the issues and problems of visitor use is a major challenge to recreation managers. No longer can the task of managing recreation use impacts be approached in the relatively simplistic ways of the past. An increasingly diverse demand for recreation opportunities overlaid by new and competing resource uses require managers to approach issues with a level of sophistication never before expected.

The changing needs of North American society for outdoor recreation provides additional impetus for more suitable approaches to decision-making. Such problems as the USDA Forest Services' National Recreation Strategies, the Bureau of Land Management's Recreation 2000, and the President's Commission on America's is going to accomplish these new and somewhat different tasks, especially in dispersed recreation settings. In this paper, I wish to explore briefly the historical evolution of one relatively new management framework, the Limits of Acceptable Change planning system, the issues associated with its implementation, and where it is apparently headed in the near future.

The rapid increases in recreational use of national parks and national forests in the 1950's and 1960's posed new and significant problems to managers, many of who had training in the biological sciences and were practising range and wildlife managers. It was natural then to view the "hordes" of visitors and the impacts associated with their presence as a function of "too many people". Often, problems were defined as not enough facility capacity; indeed, the National Park Service program Mission 66 had as one of its principal objectives increasing the capacity of the national park system. During this period, the Wilderness Act was passed in the United States. An objective of the Wilderness Act was to provide "outstanding opportunities for solitude" - which immediately implied a need to manage numbers of visitors.

EVOLUTION

Given the context of the times, it would have been unlikely that a paradigm other than recreational carrying capacity (RCC) would have been proposed. RCC was developed from biological models used to determine appropriate levels of animal use of forage resources (Wagar, 1964). The biological model called for the maximum
number of animals that could be sustained indefinitely on a specific range or pasture. In some situations, the capacity determination was complicated by limitations of forage or habitat on winter range.

RCC was usually defined as the maximum number of people who could use a resource without damaging the social or biological conditions stated in the area’s objectives. As it was originally articulated by such researchers as Lime, Lucas, Stankey and Wagar, RCC was designed as a method of conceptualizing problems - a way of thinking. However, other researchers and managers frequently attempted to operationalize RCC as a use limit policy, thus confusing RCC as a concept for examining problems with use limits as methods to restrict access. While a significant literature developed around different ways to allocate and ration use, there was little examination of the necessary conditions to implement a use-limit policy.

Such conditions, listed in Table 1, all too frequently went unrecognized and were rarely found at any recreation area, particularly those outside of the American west. And, many RCC’s (use limits) simply reflected a level of use that occurred in a selected base period, and were not developed from systematic examination of desire resource and social conditions. Finally, the consequences of specific allocation and rationing techniques were poorly understood. Thus, attempts to implement use-limit policies (which were usually termed RCC's) could be characterized as frustrating, controversial and costly. Incidentally, whether such policies have been successfully protected recreation resources and opportunities has never been the subject of a comprehensive performance audit.

Interestingly, there was never any question by early recreation researchers or managers that it was appropriate to uncritically apply a biological concept to a broader and intrinsically more complex social issue. And, there were no attempts in the 1960's and 1970's to re-examine the biological literature to determine how research in this area was changing traditional wildlife and range definitions of carrying capacity. It was not until 1974 that significant criticism of RCC and its interpretation as a use limit appeared (Wagar, 1974).

Numerous attempts to establish RCC’s for wilderness and wild river areas in the United States during the 1970’s met with notable failures. Brown, McCool, and Manfredo (1987) note that “for some people the focus on carrying capacity to be focused on generating use limits and then assuming that regulation of use would solve problems of impact.” While limits on recreational use were established, RCC’s were not. Without going into a detailed analysis, the reasons for failure were numerous and included

(1) the assumption that human needs and desires were as simple to address as the forage requirements of cattle and wildlife;
(2) the failure to specifically identify objectives for area management as implied in the definition of RCC;

Table 1. Conditions necessary for successful implementation of a recreational use-limit policy

1. Agreement on type of recreation opportunity to be provided.
2. Recreation opportunity is density dependent.
3. Agency controls access to area (usually through land ownership).
4. Clear and specific relationship between use levels and resource/social conditions.
5. Visitation level is more important than visitor behaviour in determining impacts.
6. Agreement on the objective of the rationing system to implement the use limit.
7. The agency has the resources to administer the use limit.
8. Agreement on acceptable level of impact.
9. Agreement that the use is either the maximum or the optimum number of people.

Table 2. Steps of the Limits of Acceptable Change Wilderness Planning System

1. Identify issues and concerns.
2. Develop and describe wilderness recreation opportunity classes.
3. Identify indicators of wilderness resource and social conditions.
4. Inventory resource and social conditions.
5. Develop standards which define limits of acceptable change.
6. Identify alternative opportunity class allocations.
7. Identify management actions for each alternative.
8. Evaluate alternatives and select one to implement.

9. Implement actions and monitor conditions.

(3) the geographical complexity of recreation areas overlaid upon complex patterns of human use;

(4) the focus on numbers of users as the management problem rather than conditions or attributes;

(5) the failure to understand that behaviour, more than numbers, influences levels of impact;

(6) the results - often that use limits that have been implemented introduce new types of problems;

(7) the apparent emphasis in RCC on action rather than understanding problems;

(8) a tendency for the question of carrying capacity to confuse what can be done with the value judgment of what should be done.

This is not to say that RCC was a total failure. RCC as a management and research paradigm resulted in two notable successes. First, it forced recreation managers to recognize the complexity of their task and made the need for specific and explicit objectives obvious. Beginning with Wagar's classical statement (1964), nearly every technical discussion about RCC described the need for explicit objectives in determining the types of conditions desirable at a recreation area. Second, the issue of RCC in designated wilderness and dispersed backcountry areas spawned an incredible amount of research concerning the density-crowding solitude-satisfaction linkage. We are now beginning to more completely understand this linkage and the implications for management as a result of this research effort.

During the 1970's and 1980's, it became evident that RCC simply was not generating technically effective and politically viable solutions to recreation management problems. The emphasis on numbers led to use limit policies which in turn inevitably resulted in controversial allocation decisions that managers were ill-equipped to confront. Increasingly, people began to speak in terms of "acceptability" of conditions, and recognized that impacts from recreation use were inevitable if manageable (Frissell and Stankey 1972; Lime and Stankey 1971; Merriam and others 1970). In wilderness settings, controlling the amount and type of change from natural conditions resulting from human activity was identified as the goal of RCC based management. At the same time, others began formalizing the concept of a spectrum of recreation opportunities, and recognized that both resource
and social conditions in different areas would likely vary (Brown, Driver and McConnell 1979).

In the 1980's, it became clear that variances in human behaviour were probably as influential in causing impacts in backcountry as the actual numbers of visitors (Cole, 1987). Findings published by Merriam (and others, 1973) and later confirmed by other researchers found that much of the bio-physical impact caused by recreational use occurred with relatively little use. These findings completely contradicted the basis upon which RCC was implemented (as a use limit policy), thus rendering the concept all but useless in assisting managers in resolving problems.

Out of this evolution in both research and management experience came the search for more comprehensive and systematic decision-making and decision-building frameworks. In the United States and Canada several such frameworks were proposed, almost simultaneously. While the specifics of each varied, they all included common components such as specific objectives, indicators, standards and monitoring. All required increasing the level of explicitness in decision-making on the part of the manager, and thus reducing the amount of unchecked subjectivity in management.

LIMITS OF ACCEPTABLE CHANGE

The Limits of Acceptable Change (LAC) planning system was one of those processes (Stankey and others, 1985). Simply defined, LAC is a process for determining what resource or social conditions are acceptable, and then prescribing a set of management actions to achieve those conditions. The LAC planning system is comprised of nine steps (Table 2). While some of the individual elements of LAC had been applied in early 1980's in several wildernesses, the first complete application came in the Bob Marshall Wilderness Complex - BMWC (Ashor, McCool and Stokes 1986; Stankey, McCool and Stokes 1984).

As originally developed, LAC was articulated as a rational-comprehensive or synoptic planning process adapted specifically to wilderness. In many respects, it does not differ from any of a number of problem-solving decision making processes one may find in the literature of planning or decision science. However, in its initial application in the BMWC it was combined with the theory of transactive planning in order to produce a plan that would have a higher probability of implementation than past traditional efforts of wilderness management planning, which were largely based on the synoptic model (Ashor, McCool and Stokes 1986; Stokes 1988).

Transactive planning is a process whereby citizens work in small groups to solve problems of importance to them (Friedman, 1973). In transactive planning, the planner not only has the traditional role of a technician, but assumes the new role of facilitator. Transactive planning is built upon the model that dialogue is needed
for mutual learning (among different affected interests) which in turn leads to societal guidance and action. Unlike traditional synoptic planning systems, transactive planning explicitly deals with political realities during the planning process rather than following it. Transactive planning was developed in response to failures in traditional synoptic planning processes. These failures were primarily in the area of public acceptability and implementation. Interpersonal relationships that develop during the planning lead to more effective communication of different interest group's positions, greater willingness to view conflict as mixed-motive rather than zero-sum, and consequently opportunity to negotiate about issues.

There are two types of issues confronting the future of the LAC system. One issue concerns the lack of understanding of the capabilities of the LAC process. A second issue deals with poor or improper execution of the process.

The first issue includes several specific types of questions. For example, some have said that the process of identifying opportunity classes results in an inevitable degradation of wilderness conditions and values. While this could possibly happen with improper execution of the process, this criticism comes from lack of understanding of the process, its objectives, and how it has been applied. A similar type of criticism is aimed at the concept of opportunity classes in wilderness. It has been claimed that a series of opportunity classes for designated wilderness is inappropriate because there is not explicit Congressional authorization for zoning. As a practical matter, de facto classes or zones do exist and without specific class definitions, there will always be a tendency for conditions acceptable in some areas to be found acceptable in others within the same wilderness (Haas and others 1987). Identifying opportunity classes is also a way of preserving areas with wilderness that have pristine conditions (McCool and others in press).

The second issue concerns improper execution, and the types of problems generally come under three categories: (1) using individual steps of the system - principally the inventory or monitoring steps; (2) devoting inadequate resources for and understanding of the monitoring step; (3) perceiving the system as too complex for recreation management.

THE FUTURE

Where is LAC headed?

I see three new uses occurring in applications of the LAC process. First, LAC was originally developed to provide a framework for managing recreational use of wilderness. There is interest in using LAC to manage other uses of wilderness. This particular direction brings up one of the most difficult problems I have seen with application of LAC. Some managers would like to develop indicators that directly measure the "health" of an ecosystem. Indicators previously developed in the LAC process have been directed at measuring human influences on it. This issue is not
only a conceptually difficult one (what is a healthy ecosystem?) but it is one methodologically challenging also (how do you measure "ecosystem health"?).

A second direction is to apply LAC outside of wilderness to both recreational and non-recreational uses. There is no structural reason why this cannot be done. However, at this time we have little experience in determining to what uses LAC can be sensibly applied.

Finally, we are beginning to see LAC used as a framework not only for management but research as well (Lucas and Stankey, 1985). LAC provides a way of structuring applied research questions that enhances the potential effectiveness of the research. For example, an excellent research need is identification of indicators and standards. If we view indicators as attributes of recreational settings, we can ask what attributes are salient (Stankey and McCool, 1984) to the experience, and how acceptable the different conditions of those attributes may be? Another issue deals with the validity of different standards in different zones (Martin, McCool and Lucas, in press).

While LAC should not be perceived as a panacea for recreation management problems, it does provide managers with the capability to provide more defensible decisions. Its foundation in the RCC literature combined with a transactive planning style does provide managers with a framework through which these problems can be more completely understood and more effectively resolved.

**LITERATURE CITED**


PRINCIPLE 2: Diversity in Resource and Social Conditions in Dispersed Recreation Areas is Inevitable, and May be Desirable

It is unlikely that within any relatively large dispersed recreation area, resource or social conditions will be uniform over the entire area. Often, such areas are differentiated according to topography or vegetation. Use is frequently unevenly distributed. Some places may reveal evidence of past human activity while others are relatively pristine. This diversity must be recognized in development of objectives and application of management techniques. For example, a rule prohibiting camping within 200 feet of a lake may be acceptable in some places, but in others it may, for all practical purposes, result in a complete prohibition on camping (because of topography), or in campers ignoring the rule.

Diversity in conditions is often desirable. As Clark and Stankey (1979) noted, preserving diversity is a key to ensuring quality. For example, in areas of wilderness may be more pristine than peripheral zones. By explicitly recognizing this de facto zoning, managers maintain opportunities for solitude in the interior. Explicit recognition of areas with different conditions and objectives is an excellent method of managing change and protecting further degradation in conditions from unintentionally occurring.

PRINCIPLE 3: Management is Directed at Influencing Human-Induced Change

While most dispersed recreation occurs in areas dominated by natural processes, LAC emphasizes managing human-induced changes. Frequently, human-induced change is what we find most disturbing, and results in conditions that are not appropriate or acceptable to visitors. Thus, management attempts to modify the types of changes resulting from human behaviour. However, natural processes do influence management in two ways: (1) as a goal of management (maintenance of natural processes); and (2) as an influence on what techniques may be used or how they are implemented.

PRINCIPLE 4: Impacts on Resource and Social Conditions Are Inevitable Consequences of Human Use

A variety of research has shown that relatively small amounts of recreational use can lead to disproportionately large bio-physical impacts (Cole, 1987). Since many recreation areas currently record relatively high levels of use, reducing use to eliminate impact is unlikely to be effective. Thus, our concern is not so much with preventing impact, but more with determining how much impact is acceptable and managing to ensure that this limit is not exceeded.
LIMITS OF ACCEPTABLE CHANGE: SOME PRINCIPLES

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INTRODUCTION

The Limits of Acceptable Change (LAC) planning system has become a popular decision-making framework for managers of wilderness and dispersed recreation settings (Stankey and others 1985; Stankey, McCool and Stokes, 1984). Rather than focus on establishing carrying capacities and limiting use in these settings, LAC involves identifying desired social and resource conditions. Once this has been completed, management is oriented toward maintaining or restoring those conditions. Limiting use is viewed as only one of a number of possible management techniques.

Proper application of LAC requires understanding a variety of concepts and principles that deal with both social and natural ecology. These include such factors as visitor expectations, behaviour, impacts of recreational behaviour, and the relationships among these variables. Understanding these allows managers to adapt the LAC process to individual situations and contexts, and to apply it more effectively and professionally. In this paper, I wish to briefly outline the concepts and principles fundamental to professional understanding and application of LAC.

PRINCIPLE 1: Appropriate Management Depends Upon Objectives

A clear and consistent theme expressed throughout the literature of dispersed and wilderness recreation management has been the need for explicitly stated objectives (Brown, McCool and Manfredo, 1987). Without objectives, it is difficult to determine the product of recreation management. Objectives are needed to identify the appropriateness of various management techniques. And, the lack of specific objectives make difficult the task of determining how successful the intended management regime has been.

Writing good objectives is one of the major obstacles to effective management. Schomaker (1984) suggests that useful objectives have five characteristics. Good objectives are specific, output-oriented, time-bounded, attainable and quantifiable. The importance of these types of objectives to effective management cannot be underestimated: they clearly communicate to affected groups (including other offices of the agency) intentions, meanings, and direction; they reduce the communication problems characteristic of vaguely written objectives.
PRINCIPLE 5: Many Variables Affect the Use/Impact Relationship

An implicit premise of use limit policies is that there is a clear, precise and invariant relationship between recreational use and impacts on social and biophysical attributes. Often, however, individual behaviour influences the amount of bio-physical or social change. For example, by carrying a small stove, backpackers can eliminate impacts on firewood in wilderness areas. Using tents and equipment that have softer, more natural colours, backpackers can help to reduce the visibility of their camp, thus helping to enhance feelings of solitude.

Likewise, impacts on bio-physical components may vary depending upon the nature of those components. For example, moist soils with high concentrations of organic matter show trampling effects sooner than well drained sandy soils. Cryptogamic soils of the Southwest are extremely sensitive to use. Grasses tend to be more resistant to use than forbs.

Thus, many variables affect the use/impact relationship. The implication of this is that management must be sensitive to these subtleties and must clearly establish linkages between cause and effect before implementing management action. And, given the diversity of situations, use limit policies may only be rarely effective.

PRINCIPLE 6: Many Management Problems Are Not Use Density Dependent

Management problems that relate to the number of people using an area tend to be those that have relatively simple technological solutions, such as sewage, water supply and parking. Even for some of these, the intensity of the problem may not be linearly related to use level, and often may not be very precise. The lack of a precise linear relationship between use and bio-physical impact implies that management problems are not density dependent.

Similar conclusions can be made with respect to social conditions. For many visitors to dispersed backcountry areas, solitude is not a significant or salient motivation (Stankey and McCool, 1984). Thus, controlling use levels to optimize opportunities for solitude is inappropriate.

If anything, then, the relationship between use and impact is complex, curvilinear and incredibly variable (Cole, 1987).

PRINCIPLE 7: Limiting Use is Only One of Many Management Options

One of the problems with the recreational carrying capacity approach (as managers have attempted to apply it) is its almost total focus on limiting use (McCool and others in press). In many situations, it seems as if the use limit is imposed as an end in itself. However, a use limit is only one of a number of management techniques available to address human-induced change. A use limit
policy is among the most intrusive actions that can be implemented - one that contradicts some of the very values of recreation itself. And, managers may want to view a limit on use as a policy of last resort - something to try when all else has failed. Use limits have historically carried with them a host of additional problems, such as choosing and implementing appropriate allocation and rationing techniques. These techniques have been among the most controversial actions recreation managers in the United States have ever taken to deal with social and bio-physical impacts (McCool and Ashor, 1984).

PRINCIPLE 8: Monitoring is Essential to Professional Management

Monitoring, in an informal sense, has historically been part of the manager’s task. In fact, the etiology of the term “ranger” indicates that monitoring was the initial purpose for park rangers. Monitoring performs two major functions in the LAC process: (1) it allows managers to maintain a record of resource and social conditions in wilderness and dispersed recreation settings over time; and (2) it helps determine the effectiveness of management actions employed to address problems.


Many decisions in recreation management are simply those of a technical nature - such as the number of toilets in a campground, the location of a trail, or the design of a visitor center. However, many others reflect judgments about values - such as the objectives for an area, spacing between campsites, paving campground roads, or the type of facilities found on a site. One could even argue that such technical decisions as trail construction standards also reflect value judgments. Trail width, for example, may influence the visitor’s perception of remoteness. In LAC, the decision-making process separates the two types of decisions. For example, identification of indicators is influenced by the issues confronting an area. Development of standards reflects the value systems of those involved in the management planning process.

In the way in which RCC has been applied in the past, the use limit, as an end in itself, confused the decisions about technical aspects and value systems (Wagar, 1964).

PRINCIPLE 10: Consensus Among Affected Groups about Proposed Actions is Needed for Successful Implementation of Wilderness Management Plans

As a general rule, wilderness and dispersed recreation management occurs in politicized settings. In these settings, the legal power to plan and manage is differentiated from the political power to implement. Individual interest groups may have veto power over implementation of proposed actions. Thus, a consensus is needed for the public agency to implement.
The lesson from this is that planning must take place in an open environment where the various publics are intimately involved in the planning process. This level of involvement in no way removes the authority of the agency to make decisions, but will result in a sharing of some responsibilities. In addition, deeper public involvement allows additional expertise, held by the public, to be incorporated into the planning process as it is needed.

LITERATURE CITED


INTRODUCTION

A major goal of outdoor recreation management has been to maintain environmental quality in the face of increasing recreation use. While increased use inevitably induces change, it does not follow that all forms of change are undesirable (Schreyer and Knopf, 1984). The challenge has been to distinguish between aspects of change that are acceptable and those that hold negative implications for the production of a quality outdoor recreation experience.

To assist managers in meeting this challenge, the Limits of Acceptable Change (LAC) management process was developed (Stankey, Cole, Lucas, Petersen, and Frissell, 1985). The LAC is intended to guide managers through a logical process of determining objectives, identifying indicators of change, formulating standards, monitoring conditions, and targeting management actions to maintain conditions within desired standards. In short, it provides a framework for determining acceptable and appropriate resource and social conditions in recreation and wilderness settings.

This paper reviews potential strengths and weaknesses of the LAC process. In total, twenty possible strengths and one potential weakness are identified. The disproportionate balance between possible strengths and weaknesses speaks, in part, to the power of LAC as a management tool. However, the one weakness - when not addressed - has the potential for jeopardizing whatever power LAC might hold as a model for creating quality experiences in outdoor recreation areas. Thus, while LAC should be used with enthusiasm in confronting management challenges, there is an important caveat to its use.

STRENGTHS OF LAC

Twenty possible strengths of the Limits of Acceptable Change management process are listed below. While the list is not intended to be exhaustive, it does capture the major themes that have been advanced by proponents of its use.

Arresting Environmental Decline

Many policy analysts have decried the increasing domestication of outdoor recreation and wilderness areas that has come about by attempts to accommodate
increasing recreation use. At one level, there is fear that unchecked development in the backcountry is threatening the very existence of natural environments (Dustin and McAvoy, 1982). At another level, there is fear that this development is eroding the rights of recreationists that require natural environments the most (Schreyer and Knopf, 1984).

LAC frames itself around the question: "How much is too much?" By doing so, it forces policy-makers to address the question of how environmental context affects experience. And, it forces them to address the likelihood that environmental change will impact differentially upon recreationists with different needs. Therefore, for those who are concerned about the general decline of opportunities for recreation in relatively unmodified natural environments, LAC becomes a vehicle for effecting change.

Another Step Forward

The Limits of Acceptable Change process is a logical next step in what will be a continual evolution of recreation management methodologies emerging from the research community. It is an extension and improvement of a continuing effort to improve outdoor recreation and wilderness management through definition of more explicit, measurable objectives (Stankey, Cole, Lucas, Petersen and Frissell 1985).

The earliest days of outdoor recreation management were plagued by preoccupation with accommodating visitors, at the expense of understanding the kinds of experiences that were produced (Knopf, 1983). The research community talked of the need to understand the concept of recreation quality (Clark, Hendee and Campbell, 1971), the concept of diversity (Hendee, 1974), and the concept of limits to the sustainable production of experience (Lime and Stankey, 1971). With these concepts, managers began to shift attention to the need to define "appropriate management" for backcountry settings - rather than focusing strictly on accommodating use pressures. But while the concepts made intuitive sense, there was no real framework for translating them from abstract notions to on-the-ground management strategies. LAC has emerged to fill the void. It helps a manager move through a logical process of setting objectives that embrace the concepts of quality, diversity and sustainable production of experience, and then gearing management to meet those objectives.

Maintains Historical Context

In making this step forward, the Limits of Acceptable Change process builds upon existing management machinery - it doesn't replace it. In particular, it fully embraces and allows for an expansion of Recreation Opportunity Spectrum (ROS) concepts (Clark and Stankey 1979) rather than abandoning them. In its entirety, LAC reflects the historical context of natural resource decision-making and therefore easily fits within the comfort zones of managers.
The Limits of Acceptable Change process is designed to yield answers. This is a very comforting feature to managers who continually are confronted with a world that holds much complexity and few apparent answers. LAC provides a purposeful, logical roadmap for negotiating through the complexity of factors affecting visitor response to the environment. It shakes the rebulosity and confusion from such complicated questions as "What are we all about?" and "Where are we going to go?" by leading a manager through a sequence of nine clear steps to find the answer (McCool, this volume).

It is a how-to manual, providing support documentation ripe with easy-to-follow examples and models (Stankey, Cole, Lucas, Petersen and Frissell, 1985). It gives direction, and guarantees results. It generates outcomes that people in the field can buy into.

Increases Complexity

While it is true that LAC decreases complexity, it can also be lauded for its capacity to introduce people to it. That is, the process carries extraordinary capacity to expand appreciation for the complexity of forces affecting user experience.

It suggests that experience is defined by more than forces within the physical environment - that the social and managerial context is important too. It makes clear that a myriad of influences are at work in determining the content of an experience. And, it forces the disclosure of what these influences might be. Furthermore, it forces a prioritization of these influences in terms of their relative importance in affecting recreation experience. Inevitably, the process forces construction of a more complex, and more accurate, model of what is affecting the recreation experience.

A Humble Methodology

The LAC process is not a proud, boisterous, rigid, inflexible, dogmatic piece of machinery. Rather, it is designed to play a role of a humble facilitator. Put another way, it was not designed to be a dictator that tells resource managers what to do. Rather, it was designed to act as a coach that makes helpful suggestions as managers provide input.

The LAC process sweeps the manager into helping define the problem at hand, and leads him or her down a problem-solving pathway that emphasizes flexibility, creativity and independent solutions. The focus is on developing problem-solving capacities, not on dictating action.
Production of Vision

It is impossible to move through the LAC process without defining a vision for the resource. A vision for the resource - specified in terms of clear, well articulated production goals - is what resource managers often lack (Schomaker, 1985).

The process insists that numerous vision-related questions be addressed. What are the goals of the agency? What are the legal mandates? What is the character of demand? What is the character of the resource? How might the resource best service demand? Indeed, what is it that we want to produce on this resource base? How do we define it? How do we measure it? How do we know when we are successful?

The beauty of LAC is that it forces managers of a resource to unambiguously define what that resource is all about.

A Never-ending Process

The LAC process builds sensitivity to the fact that management is a dynamic, never-ending process of goal definition, environmental scanning, monitoring and goal re-definition. In fact, its conceptual framework (Stankey, Cole, Lucas, Petersen and Frissell, 1985, p.3) emphasizes a circular, rather than linear, planning process. That is, the last step in the process (implementing action and monitoring) is not a terminal step; it is rather a necessary prelude to the first step (identifying area concerns and issues). Thus, LAC makes the statement then planning for a resource never ends. It says that, as resource managers, we are never finished with the task of keeping a fix on who we are, and what we are all about.

A Larger Context

Through Step 1 (identifying area concerns and issues), LAC forces what otherwise would be a local decision into a larger context. It accounts for the fact that recreation user opinion is but one input into management decision-making (Brown, 1977).

This larger, or systems, perspective serves several purposes (Driver and Tocher, 1974). First, it provides a means for placing decisions in the context of legal dictates, political influences and agency policy. Second, it provides a framework for thinking in terms of a regional perspective to promote complimentarity and avoid duplication with opportunities offered elsewhere. And third, it points to the need to identify unique assets of the resource or unique opportunities associated with a resource, and the need to build a system that will protect or affirm this uniqueness. These larger perspectives help ensure that the opportunities provided by any particular resource will fit within the larger array of opportunities that define outdoor recreation supply.
Pushing Toward Optimality

In confronting the issue of desired resource and social conditions, the LAC process forces an articulation not only of what are the existing conditions, but what should be the existing conditions. And, there are times when the desired conditions may no longer exist due to the deterioration of environmental quality or lack of available services.

The LAC process enables managers not to be locked in to what is, or be a victim of what has already happened. Rather, it yields a vision for overruling the forces toward status quo, and for imagining what might be possible in moving toward the production of optimal recreation experiences.

Consideration of Alternatives

As with all effective planning tools, the LAC process forces the explicit identification and consideration of alternatives. And, it clearly insists that alternatives are to be evaluated not only in terms of monetary costs, but in terms of social, resource and administrative costs. The quest is to offer a diverse range of possible scenarios for public review and consideration.

It Forces Action

The LAC process forces a specification of the differences, if any, that exist between existing conditions and the desired standards for those conditions. This, then, identifies areas where problems exist and what management actions are required to treat them. The process does not allow for indecision or the postponement of decision-making until all available data is collected. It prompts forward movement through the selection of an alternative and an agenda of management actions - even if subject to modification over time.

Explicit, Measurable Objectives

Perhaps the finest feature of the LAC process is that it encourages creation of explicit, measurable resource management objectives. The process does not allow for the generation of boilerplate, non-trackable objectives that were characteristic of resource management plans of the past (Schomaker, 1985). Under the LAC process, broad platitudes such as "promote visitor satisfaction" or "protect visitor quality" are replaced by specific, action-directed statements such as "Achieve two encounters or less per day for at least 90 percent of visitor tallies during the month of July on Wildhorse Trail."

Most recreation management plans are derelict in their duty to produce specific, unambiguous, time-bound objectives that direct action. The LAC process does not allow for this shortcoming.
Towards Serving Visitors and Managing Our Resources

Emphasis Upon Monitoring

Through its emphasis upon developing and using monitoring systems, the LAC process ensures results. The monitoring systems embraced by LAC not only identifies how well management actions are working, but identifies trends in conditions that require new actions. Thus, there is a mechanism for continual management correction in the event that desired conditions are not being achieved. And, since part of the monitoring system is targeted toward sensing demand, it allows for a definition of desired conditions that is dynamically linked, if appropriate, to evolving demand.

Provides Performance Measures

With provisions for specific, unambiguous directives for management - and constant monitoring of accomplishments - the LAC process enables the production of measures of managerial performance. Such measures have been sorely lacking in outdoor recreation management (Schomaker, 1985).

Traditional global directives such as "increase visitor satisfaction" or "protect resource quality" have allowed for no measure of managerial success or failure. It would be difficult, if not impossible, for a manager to assess how well he or she is doing in the production of visitor satisfaction or resource quality. The LAC process, however, generates targeted outcomes that are measurable and time-bound, and therefore ensures that the outcomes of management can be documented.

Recognition of Diversity

The LAC process explicitly recognizes that preferences for recreation on public lands are diverse. It provides for the definition of recreation opportunity classes, involving the application of recreation zoning concepts. It forces a definition of what diversity exists, and provides a means for deciding how to allocate resources in response to it.

Promoting Relevant Research

The LAC process defines clear linkages between the activities of research and the functions of resource management. It defines an agenda of managerially relevant research centered on the following questions: What do people notice in their environment? How do these things affect their experience? What do people want in their environment? Unlike many research questions that managers dismiss as irrelevant to their immediate needs, these become rather straightforward questions with straightforward answers. They provide a rallying point for research, and a relevance point within the world of research for resource managers. In other words, research is given a place to "plug in." Managers know what kinds of questions to ask, and researchers know what kinds of answers to deliver.
A Teaching Tool

The LAC process is a powerful teaching tool. It is a vehicle for conveying and integrating the rich array of recreation management concepts and principles now available to the management community. It is one of the finer mechanisms for technology transfer in existence.

For example, the LAC process manual developed by Stankey, Cole, Lucas, Petersen and Frissell (1985) incorporates at least the following concepts: principle of minimum regulation; zoning to meet preference diversity; carrying capacity; definition of appropriate use; concept of non-degradation; opportunity costs; the need to be clear in vision; need for accountability; concept of managing for change; public involvement. As an integrative model for assisting managers in defining appropriate recreation use, the LAC process becomes a mechanism for framing together all the disparate management concepts that have developed over the past two decades (Manning, 1986).

Spurs Public Involvement

As a planning tool, the LAC process does more than allow for citizen reaction to an ongoing managerial decision-making apparatus. Rather, it draws upon the citizenry as the foundation upon which the apparatus is built. It is built upon the precept that a substantial, important body of expertise exists within the citizenry (Stankey, Cole, Lucas, Petersen and Frissell, 1985). The LAC process - unlike many planning methodologies - embraces the public, its intellect, its discerning powers, and its right to be involved.

Destiny Toward Success

Perhaps the most important of all LAC process strengths is that its anchoring in continued public participation virtually guarantees successful planning outcomes. The ownership felt by the citizenry will ensure that the results of the process will work.

A POSSIBLE WEAKNESS

It is difficult to make the case that inherent weaknesses exist in the conceptual framework underlying the LAC process. Indeed, it is a conceptual process that embraces time-tested principles of planning. It is a process that is intended to facilitate, rather than direct, policy formation. At this level, one is hard pressed to find inadequacies.

However, it seems that the LAC framework has the potential for feeding a certain kind of negative disposition that abounds in outdoor recreation resource management. And, that disposition has to do with an attitude that the primary goal
of resource management is to arrest the deterioration of environmental quality - and that we have to stop people from causing the deterioration from happening. While this may be technically correct, it is incomplete. The focus becomes fixated on the environment, and people become construed as objects that impede quality environmental management, as objects that litter, form crowds, create noise, carry greed, poke around in the ground, trample vegetation, disrupt public hearings, and indeed make all the environmental indicators slide. People, under this disposition, become seen as pests in the grand goal of resource management, and the quest of management is to stop people from messing things up (Knopf, 1988). The LAC process carries clear potential for feeding this disposition.

To be sure, problems such as litter, crowds, noise, air and water pollution, vegetation damage, erosion and destruction of scenic vistas are major problems in resource management. They need to be recognized and combatted. However, are problems of this genre the only kind of problems we face in resource management? Is there not another major problem we face in resource management - the problem of not knowing how to best unleash human potential? Isn’t there the problem of ensuring that recreationists gain life-enriching, perhaps even life-changing experiences, that their minds have never known? Are we forcefully positioning these problems to center stage in our planning processes and in our research agendas?

The LAC process is built to force consideration of the question: How much environmental deterioration is too much? It does not, with equal diligence, force consideration of the question: How does one unleash life potential? And since it does not, it carries the dangerous proclivity for reinforcing the disposition that people are a problem rather than an opportunity in recreation resource management.

One would not be surprised, for example, to find the following introduction to a management plan flowing from the LAC process:

Increasing use of our outdoor recreation resource has forced managers to deal more actively with the problem of deteriorating resources. This plan summarizes a step-by-step approach taken to stop the impacts of recreationists on the resources, and management actions necessary to ameliorate the problems.

One would be less likely to find something of the following genre:

Increasing use of our outdoor recreation resource has presented even greater opportunities for building peak experiences into people’s lives. This plan summarizes a step-by-step approach taken to identify new opportunities for serving our guests. In addition, the plan also identifies new sources of potential clientele for our resource - thereby addressing the question of latent demand and expanding our service watershed considerably.
The potential caveat of the LAC process is not that it ignores the question of human growth and development. One only has to understand the intent of Step 1 (Identifying area concerns and issues) to affirm that. Rather, the caveat is that the process can be abused or misapplied by managers who are not sensitized to the richness of issues embraced by Step 1 (Identifying area concerns and issues), but who clearly are disposed to the imperativeness of Step 5 (Specifying standards for resource and social conditions). Under this scenario, Step 1 is quickly bypassed to allow for fixation on Step 5.

If the support documentation for the LAC process has a fault, the treatment of Step 1 (Identifying area concerns and issues) is neither as rich nor focused as the treatment of Step 5 (Specifying standards for resource and social questions). And, if the support documentation for the outdoor recreation field, in general, has a fault, it is that the treatment of the concept "how to help people" is neither as rich nor focused as treatment of the concept "how to protect environmental quality". It behooves the field to generate better balance in its treatment of concepts, so that support documentation for the LAC process can drive the quest for "unlimited human potential" as well as it does the quest for "limited environmental change".

CONCLUSION

This review of possible strengths and weaknesses of the LAC planning process leads to the conclusion that it is a powerful tool for defining resource management objectives and delivery systems to accomplish them. The twenty strengths identified seem to overshadow one possible weakness. And, the weakness does not necessarily reside in the process itself but in the dispositions of those who might employ it.

The review, however, seems to have accomplished more than affirm the LAC process as a valuable recreation planning tool. It has raised the question of what we, as members of the recreation profession, are in business for (Schultz, McAvoy and Dustin, 1988). It seems clear that we are in the business of protecting environmental quality, as the words behind the acronym LAC - Limits of Acceptable Change - suggest. But it also seems clear that we are in the business of promoting human growth and development. Yet it is rare to find such words as building blocks for acronyms in the outdoor recreation field.

Our quest, it seems, is to continue to develop manuals, processes and workshops with titles such as: "Limits of Acceptable Change". We would be derelict in our duties if we did not.

But our quest must also be, it seems, to develop manuals, processes and workshops with titles such as: "There are no limits to what we can do for human growth and development". We will be derelict in our duties if we do not.
LITERATURE CITED


INTRODUCTION

The burgeoning recreational use of natural areas during the past 20 to 30 years was accompanied by a comparable growth in research and writing related to recreation resource management. Visitor Impact Management, like the other planning frameworks examined in this document, grew out of this body of knowledge and experience. The Visitor Impact Management (VIM) framework is the result of a study initiated by the National Parks and Conservation Association (NPCA) with the following two objectives:

1. To review and synthesize the existing literature dealing with recreational carrying capacity and visitor impacts;

2. To apply the resulting understanding to the development of a methodology or framework for the management of visitor impacts that is applicable across the variety of units with the U.S. National Park system.

Project results were developed through an in depth review of relevant literature, coupled with field visits to selected National Park sites. The complete results of this work are reported in two documents published by the National Parks and Conservation Association (Kuss et al., 1990; and Graefe et al., 1990). This paper summarizes the key components of Visitor Impact Management, with emphasis on describing the VIM process and its potential application.

Besides the overall project objectives mentioned above, there were several additional goals underlying the development of the VIM framework. First, it was important to provide a variety of types of information and tools to assist planners and managers with the difficult task of controlling or reducing undesirable visitor impacts. Another goal of the study was to suggest approaches to management that build upon current scientific understanding of the nature and causes of visitor impacts and that do not repeat the problems of past management programs. Finally, it was necessary to consider both impacts to the natural environment and impacts to the quality of the recreation experience, and to develop a consistent process for dealing with both of these prevalent types of recreational impacts.
THE SCIENTIFIC BASIS FOR VISITOR IMPACT MANAGEMENT

Our review of the scientific literature related to carrying capacity and visitor impacts identified five major sets of considerations that are critical to understanding the nature of recreation impacts and that should be incorporated within any program aimed at managing visitor impacts:

1. **Impact Interrelationships.** There is no single, predictable response of natural environments or individual behaviour to recreational use. Instead, an interrelated set of impact indicators can be identified. Some forms of impact are more direct or obvious than others, but any impact indicator or combination of indicators could become the basis for a management strategy.

2. **Use-Impact Relationships.** The various impact indicators are related to the amount of recreation use a given area receives, although the strength and nature of the relationships vary widely for different types of impacts. Most impacts do not exhibit a direct linear relationship with visitor density. Use-impact relationships vary for different measures of visitor use and are influenced by a variety of situational factors.

3. **Varying Tolerance to Impacts.** One of the most important factors affecting use-impact relationships is the inherent variation in tolerance among environments and user groups. All areas do not respond in the same way to encounters with visitors. Some species may benefit at the expense of others who are negatively impacted or displaced. The same holds true for various recreational user groups. Some groups may enjoy high user densities while others find such use levels unacceptable.

4. **Activity-Specific Influences.** Some types of recreational activity create impacts faster or to a greater degree than other types of activity. The extent of impact resulting from a given activity can vary according to such factors as type of transportation or equipment used and visitor characteristics such as party size and behaviour.

5. **Site-Specific Influences.** The impacts of recreation are influenced by a variety of site-specific and seasonal variables. That is, given a basic tolerance level to a particular type of recreation, the outcome of recreational use may still depend greatly on the time and place of the human activity.

These five issues represent important management considerations regardless of the type of impact problem one is dealing with. That is, these considerations apply whether one is focusing on ecological, physical, or social impacts. For example,
Figure 1
Ecological Impacts of Recreation

- Intrusion into Habitat by Recreational Activity
  - Disturbance
  - Alteration of Habitat
  - Mortality
    - Adaptation
    - Migration or Displacement
    - Reproduction Levels
      - Population Change
      - Species Composition

Adapted From
Wall and Wright (1977:42)

Social Impacts of Increasing Recreational Use

- Recreational Use
  - Contacts Between Users
  - Resource Impacts
    - Perceived Crowding
    - Dissatisfaction
    - Perceived Resource Impacts
    - Conflicts Between Users
      - Visitor Displacement
      - Experiential Change
Figure 1 illustrates the impact interrelationships discussed in the first principle for both ecological and social impacts of increasing recreational use. Understanding these basic points about visitor impacts represents a first step towards effective visitor impact management.

THE VISITOR IMPACT MANAGEMENT PROCESS

As noted above, recreational impacts to both the environment and the quality of the recreation experience are complex and are influenced by a number of factors besides use levels. Visitor Impact Management represents a planning framework that incorporates these principles within a process aimed at reducing or controlling the impacts that threaten the quality of outdoor recreation areas and opportunities.

The VIM process is built upon the recognition, now widely accepted in the literature, that effective management involves both scientific and judgmental considerations (Shelby and Heberlein, 1986; and Stankey et al., 1985). Effective management is also more than carrying capacities and use limits. While use quotas represent one potential strategy for reducing the impacts of visitors, it is important to remember the lessons from previous studies that found only weak or indirect relationships between impacts and overall use levels (Graefe et al., 1984; and Kuss and Graefe 1985). In such instances, establishing capacities and limits may do little to reduce the impact problems they were intended to solve, whereas other potential management strategies may be quite effective in reducing the impact conditions.

The VIM framework includes an eight-step sequential process for assessing and managing visitor impacts (Figure 2). The steps in this process, however, essentially are designed to facilitate dealing with three basic issues that are inherent to impact management: (1) the identification of problem conditions (or unacceptable visitor impacts); (2) the determination of potential causal factors affecting the occurrence and severity of the unacceptable impacts; and (3) the selection of potential management strategies for ameliorating the unacceptable impacts.

The first five steps in the process are devoted to the important, yet often slighted, task of problem identification. While this may appear to be a simple matter, it has often proved to be a stumbling block to effective resource management and related investigations. Consequently, this first basic issue was separated into several steps to isolate the various decisions that must be made in assessing existing conditions.

Step 1: The Preassessment Data Base Review. The first step in the process involves compiling and reviewing pertinent existing information. The amount of relevant material may vary from situation to situation, but there will always be some background information that can be used to establish an initial perspective on the problem. Policy documents and plans may include useful baseline information on area resources and visitors as well as management guidance and constraints. The real objective of Step 1 is to identify and summarize what is already known about
the situation so that existing information can be put to its best use as the process continues.

During the preassessment database review, it will be necessary to delineate the physical area to be included throughout the visitor impact management process. For localized impact problems, this physical area may be small and have obvious boundaries. For larger scale applications, visitor management areas could be patterned after management zones already in place. It may be desirable to define visitor management sub-units within existing management zones. Visitor use features such as a backcountry trail may serve as the basis for defining a visitor management area. In other instances, resource characteristics such as endangered species habitat may provide the basis for defining the management area. What is most important is to identify an area that is workable from a management standpoint and that encompasses the zone of influence over the impact situation under consideration.

Step 2: Review of Management Objectives. The second step in the process is to review the management objectives pertinent to the situation at hand. The importance of clear and specific management objectives has become a dominant theme in the literature on recreational carrying capacity. To be effective, management objectives need to define the type of experience to be provided in terms of appropriate ecological and social conditions (Stankey, 1980).

The definition of the type of conditions to be provided in a given area in essence requires a decision selecting one type of experience over competing experiences requiring different types of conditions. While resource managers may be reluctant to make such decisions explicitly, it is important to recognize that this judgment is inherent to the resource management task and will occur by default if it is not made deliberately. Avoidance of this decision essentially allows those activities that can preempt other opportunities to determine the recreational character of the area (Schreyer, 1976).

Step 3: Selection of Key Indicators. The third step in the process involves identifying measurable indicators for the pertinent management objectives. Once objectives have described the type of environmental conditions and visitor experience to be provided, this step serves to identify how the specified conditions and experience will be measured. The specific decision required here is the selection of the most important variables to serve as indicators of the desired conditions.

It is important to recognize that there is no single indicator or set of indicators that is appropriate for all situations. The choice of indicators depends upon the particular type of impact under consideration and the specific characteristics of the site. Several criteria can be used, however, to evaluate the potential usefulness of alternative indicators. The most useful indicators include those that are directly observable, relatively easy to measure, directly related to the objectives for the area, sensitive to changing use conditions, and amenable to management.
**BASIC APPROACH**—Systematic process for identification of impact problems, their causes, and effective management strategies for reduction of visitor impacts.

**CONDITIONS FOR USE**—Integrated with other planning frameworks or as management tool for localized impact problems.

**STEPS IN PROCESS**

1. **Preassessment Data Base Review**
   - Review of legislative and policy direction, previous research and area data base.
   - **Product:** Summary of existing situation

2. **Review of Management Objectives**
   - Review existing objectives for consistency with legislative mandate and policy direction. Specify visitor experience and resource management objectives.
   - **Product:** Clear statement of specific area objectives
     - e.g., maintain natural vegetation in riparian zones.

3. **Selection of Key Impact Indicators**
   - Identify measurable social and ecological variables. Select for examination those most pertinent to area management objectives.
   - **Product:** List of indicators and units of measurement.
     - e.g., loss of vegetation/ % of ground cover

4. **Selection of Standards for Key Impact Indicators**
   - Restatement of management objectives in terms of desired conditions for selected impact indicators.
   - **Product:** Quantitative statements of desired conditions
     - e.g., no more than 30% vegetation loss at specified site

5. **Comparison of Standards and Existing Conditions**
   - Field assessment of social and ecological impact indicators.
   - **Product:** Determination of consistency or discrepancy with selected standards

6. **Identify Probable Causes of Impacts**
   - Examine use patterns and other potential factors affecting occurrence and severity of unacceptable impacts.
   - **Product:** Description of causal factors for management attention.

7. **Identify Management Strategies**
   - Examine full range of direct and indirect management strategies dealing with probable causes of visitor impacts.
   - **Product:** Matrix of alternative management strategies

8. **Implementation**
Step 4: Selection of Standards for Key Impact Indicators. This step adds one further layer of specificity to the VIM process through the selection of standards for the previously selected impact indicators. This step, in essence, calls for a restatement of management objectives in quantitative terms. Standards differ from management objectives by specifying appropriate levels or acceptable limits for the impact indicators designated in Step 3. The standards selected become the basis against which the existing situation is evaluated. Thus, this step serves the important function of describing the environmental conditions and type of experience to be provided in units of measurement which are compatible with available measures of the conditions that currently exist.

Step 5: Comparison of Standards and Existing Conditions. After the first four steps in the process have clarified the conditions one is trying to achieve in a given area, the existing situation can be compared to this desired state of affairs. Step 5 requires some assessment of current conditions for those impact indicators that were selected in Step 3. This assessment does not necessarily require elaborate or costly studies. What is necessary, however, is a level of observation and measurement that provides for a reasonable comparison of existing conditions and their corresponding standards.

If there is no discrepancy between current measures of key impact indicators and their corresponding standards, there is no need for direct management intervention. In this instance, the area is currently providing the environmental conditions and type of experience that have been defined as appropriate for the area (i.e. there is no problem). Monitoring of the selected indicators should be conducted, however, to detect changes that may develop in the future. This monitoring should include both the impact indicators that are most susceptible to change and the use patterns that may lead to changes in the status of these impact indicators.

If measures for certain indicators do not meet the standards for the area, a problem situation is documented. It is then appropriate to move on to the identification of probable causes of the unacceptable impacts.

Step 6: Identification of Probable Causes of Impacts. Because of the many potential factors that may contribute to impact conditions, the challenge of Step 6 is to isolate the most significant cause(s) of the problem. This task can be approached by examining the relationships between visitor use patterns and the impact indicators that have exceeded their respective standards. In examining potential causal factors, it is important to consider all of the specific aspects of visitor use that may influence the situation, including the type of use, length of stay, size of groups, time of use, concentration of use, frequency of high use periods, overall amount of use, and behaviour of visitors. It is also important to remember that use-impact relationships may be mediated by site characteristics and consequently may vary for different times and places. Completion of this step may
require some additional studies focusing on the relationships between key impact indicators and visitor use patterns.

**Step 7: Identification of Management Strategies.** With some understanding of how the amount, type, and distribution of people using a given area affect the pertinent impact indicators, it is possible to identify a range of alternative management strategies. Just as many aspects of use may contribute to the problem, many management alternatives are available for dealing with the problem. It is important at this phase to focus on the probable causes of the visitor impacts rather than on the impact conditions themselves. It is also important to recognize that one may never have a complete understanding of the causes underlying certain visitor impacts, nor can one predict exactly how a given management action will affect a problem situation.

Management techniques aimed at reducing a particular impact problem may adversely affect other aspects of the situation or may introduce other problems for managers. For this reason, a matrix approach for evaluation of alternative management strategies is recommended (Figure 3). This matrix approach provides a vehicle for evaluating a range of management alternatives against a set of selection criteria. The suggested criteria cover a variety of issues related to the implementation of any management program. A given management option may seem quite desirable according to some of the criteria but less attractive from the perspective of other criteria. A strategy with high odds of producing the desired outcome may be impractical due to the difficulty or cost of implementation, or it may be inadvisable if it causes as many problems in terms of visitor acceptance or other indicators as it solves for the original problem condition. There are generally no single right or wrong answers for dealing with visitor impacts. It seems most reasonable to strive for a balance among criteria when selecting a particular management strategy.

**Step 8: Implementation.** The selected management strategies should be implemented as soon as the necessary resources are available. Because the nature and causes of visitor impacts are highly variable, management programs designed to deal with these impacts should be flexible and quick to respond to changing conditions.

The task of managing visitor impacts is not over when a management program has been implemented. Monitoring of key impact indicators and use patterns is critically important to determine whether the management actions are producing the desired outcomes without creating other undesirable side effects. Future monitoring is needed regardless of the outcome of any particular step in the process. Thus, the process is a continuous framework for the evaluation and management of visitor impacts that builds a data base as it responds to conditions at various points in time.
APPLICAIONS OF VISITOR IMPACT MANAGEMENT

The Visitor Impact Management framework has been pilot tested in several U.S. National Parks and has also served as the basis for several studies in other areas. The following paragraphs will summarize some of the key results of several applications that have been conducted to date. A more detailed description of each of the case studies mentioned is provided in the VIM handbook (Graefe et al., 1990).

The Icewater Spring Case Study

Icewater Spring Shelter is one of 18 trail shelters within Great Smoky Mountains National Park. Because of its location and attractiveness to both day users and overnight visitors, it is the most heavily used backcountry shelter within the park. Overnight use of the shelter is limited by bunk space to 12 people per night and is regulated through a reservation/permit system operated by the park. Park management has expressed concern about deteriorating resource quality, sanitation and the quality of the visitor experience at the site. Yet existing park information systems, including annual backcountry campsite impact assessment records, have not been used to evaluate the conditions at Icewater Spring. In essence, Icewater Spring represents an overnight backcountry destination with perceived impact "problems" in spite of an existing numerical capacity limitation and a relatively complete information base. Consequently, this site provides an opportunity to test the applicability of the VIM framework: (1) as a means of documenting whether or not a problem condition exists; (2) as a vehicle to guide the use of existing information; and (3) as a framework for the evaluation and management of localized visitor impacts.

Problem Identification. Completion of the first five steps in the VIM process revealed that some impact indicators were at acceptable levels while others did not meet the standards prescribed for the area. The preassessment data base review provided background statistics on the area's use patterns for the past five years and identified some pertinent policies that could influence management decisions for the area. For example, existing interagency agreements required that through-hikers on the Appalachian Trail have access to the shelter, thereby removing the option of closing the site. The review of management objectives revealed several applicable objectives from the backcountry management plan: (1) to minimize the impacts of use on park resources and the quality of the visitor experience; (2) to prevent human and horse waste, garbage, and trash from reaching obtrusive levels; (3) to prevent fecal contamination of water resources; and (4) to protect the health and safety of backcountry users. While these were not the specific types of management objectives called for earlier, they are typical of the objectives found in existing park plans. From these objectives, it was possible to select a list of key impact indicators. These indicators included several variables that were part of the park's backcountry impact evaluation records (overall site impact, vegetation damage, and human waste).
<table>
<thead>
<tr>
<th>Direct Strategies</th>
<th>Indirect Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restricting Activities</td>
<td>Management Strategy</td>
</tr>
<tr>
<td>Rationing Use</td>
<td>Consistency with Management Objectives</td>
</tr>
<tr>
<td>Zoning</td>
<td>Difficulty of Achieving Desired Outcome</td>
</tr>
<tr>
<td>Enforcement</td>
<td>Effects on Visitor Freedom</td>
</tr>
<tr>
<td>Economic Constraints</td>
<td>Effects on Other Impact Indicators</td>
</tr>
<tr>
<td>Information Dispersal</td>
<td>Probability of Achieving Desired Outcome</td>
</tr>
<tr>
<td>Physical Alterations</td>
<td></td>
</tr>
<tr>
<td>Coa~</td>
<td></td>
</tr>
</tbody>
</table>

Figure 3

Matrix for Evaluation of Alternative Management Strategies
as well as some variables for which there was no existing database (amount of trash and number of pest complaints). While there were no specific standards for the selected indicators, an approximation of standards could be made from the information available. Quantitative standards for the overall impact score and the human waste and vegetation damage indicators were derived through discussions with park personnel regarding the interpretation of scores from the campsite impact assessment records. For the remaining two indicators, no quantitative standards were available but qualitative standards were apparent from relevant management objectives (e.g. trash should be unobtrusive). Comparing the backcountry impact records for the past five years with the corresponding standards showed that the overall site impact and vegetation damage were within acceptable levels, while the amount of human waste was not consistent with the standards. Field observations for the other two indicators (trash and pest complaints) showed that conditions for these indicators had reached unacceptable levels. Thus, the process documented that a problem existed at Icewater Spring in terms of unacceptable levels of human waste and trash, along with complaints from visitors about the presence of the types of pests (skunks, rats, etc.) that are associated with these conditions.

Identification of Causal Factors. With unacceptable impacts identified, the next step involved searching for the most important probable causes of these specific impact conditions. This is one point in the process where further research would be helpful to demonstrate the relationships between impact indicators and a full range of potential causal factors. For purposes of the case study, an interim evaluation of probable causes, using the best available data coupled with informed opinion and knowledge of the local area, revealed that all of the significant impact indicators are not affected in the same way by all potential causal factors. Human waste, for example, may be more directly attributable to the total number of users of the area while trash and pest incidents are likely to be more strongly related to inappropriate visitor behaviour.

Review of Management Alternatives. In light of the many factors that may be contributing to the unacceptable impact conditions, it is important to consider a wide range of strategies and to allow for the possibility of using multiple management options. The process of completing a matrix in which various potential management strategies are evaluated against a set of criteria can help to identify the advantages, disadvantages and trade-offs between alternatives (Figure 4). The management actions included in this matrix represent a broad spectrum of direct and indirect strategies. The evaluation criteria listed reflect some of the issues that may affect the implementation and effectiveness of each strategy. Entries for each of the cells within the matrix are best estimates based on all of the information collected previously.

Results shown in Figure 4 suggest that there is no panacea for reducing visitor impacts at Icewater Spring, and there are trade-offs between the alternatives. Some strategies that are perhaps most likely to eliminate problem conditions (e.g.
Towards S

to

permanent or temporary closure) may be unacceptable from the standpoint of visitor resistance or inconsistency with management objectives. Facility-oriented solutions like pit toilets will address one aspect of the situation but have no effect on other impact indicators. Clearly, a range of reasonable options are available to the manager. Various strategies may be phased in as money and manpower resources allow. Whatever strategies are selected, it will be important to continue monitoring of the site and the probable causal factors to determine whether or not the management activities are bringing conditions back to the standards for the area.

Conclusions. This case study demonstrated the application of the VIM process as a site-specific management tool. It followed a series of logical steps, using the best available data, to document the nature and extent of visitor impacts at the site. The results included documentation of unacceptable conditions as well as a means of evaluating the appropriateness and trade-offs between a range of management alternatives.

The case study also identified where further information may be useful to support management decisions. If park managers are uncomfortable with the level of subjectivity in available impact measures, they may pursue more precise or quantitative measures. Similarly, managers may invest more effort in writing specific management objectives and translating them into quantitative standards. Such additional efforts are not necessary, however, to achieve useful outcomes from the VIM process. This case study illustrated that the various steps within the process can be implemented using varying levels of existing data and quantification. The case thus supports one of the major premises of the VIM framework, namely that the use of a systematic, logical process that incorporates the best available information and scientific understanding will lead to informed and defensible management decisions.

The Logan Pass/Hidden Lake Trail Case Study

Logan Pass is a heavily used, highly developed destination on the Going-to-the-Sun Highway in Glacier National Park. The fragile alpine environment there has received considerable visitor impacts throughout the history of recreational use of the area. Many of these impacts have been corrected through intensive site development and rehabilitation. Yet impacts remain on some sections of the recreation complex.

Logan Pass is the highest elevation point (6,646 feet) on the 48-mile Going-to-the-Sun travel corridor and is situated approximately halfway between the west and east boundaries of the park. The area is supported by an interpretive centre and is operated as a day use only facility. Logan Pass is a primary destination for many visitors, who are attracted to the area to view alpine flora, wildlife, the snowpack which persists into the short summer season, and the spectacular high mountain terrain that surrounds the pass.
Figure 4
Matrix for Evaluation of Management Alternatives at Icewater Spring Shelter

<table>
<thead>
<tr>
<th>Criteria For Evaluation</th>
<th>Pit or Compost Toilet</th>
<th>Increased Maintenance Patrons</th>
<th>Minimum Impact Education</th>
<th>Recommend Alternate Sites</th>
<th>Reduce Capacity</th>
<th>Temporary Closure</th>
<th>Permanent Closure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistency with Management Objectives</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>high</td>
<td>moderate to high</td>
<td>moderate</td>
<td>low</td>
</tr>
<tr>
<td>Cost of Implementation</td>
<td>moderate</td>
<td>high</td>
<td>low</td>
<td>low</td>
<td>low</td>
<td>moderate</td>
<td>high</td>
</tr>
<tr>
<td>Factors Limiting Application</td>
<td>Maintenance; soil suitability; vandalism</td>
<td>available personnel</td>
<td>receptivity of visitors</td>
<td>number of visitors seeking advice</td>
<td>communication and enforcement</td>
<td>communication and enforcement</td>
<td>communication and enforcement</td>
</tr>
<tr>
<td>Potential Visitor Resistance</td>
<td>low</td>
<td>low</td>
<td>low</td>
<td>low</td>
<td>moderate</td>
<td>moderate to high</td>
<td>high</td>
</tr>
<tr>
<td>Potential Effectiveness for Controlling (a) Human Waste</td>
<td>high</td>
<td>low</td>
<td>moderate</td>
<td>low to moderate</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>(b) Trash/Litter</td>
<td>low</td>
<td>high</td>
<td>moderate</td>
<td>low to moderate</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>(c) Pest Incidents</td>
<td>low</td>
<td>high</td>
<td>moderate</td>
<td>low to moderate</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
</tr>
</tbody>
</table>
The dominant type of experience available at Logan Pass involves a 1.5 mile walk up a gradually sloping trail to a wooden platform overlooking Hidden Lake. The majority of this route was covered with a boardwalk in 1973 and the overlook itself was installed in 1984. Beyond the overlook, there is a 1.5 mile trail segment leading to the shore of Hidden Lake. This trail gradually narrows and receives light use, since most visitors travel no further than the overlook.

The objective of this case study was to evaluate the existing conditions and identify management alternatives for identifiable components of the Logan Pass/Hidden Lake visitor complex. This case differs from the previous one in two important respects. First, it tests the applicability of the VIM framework as a means of assessing impacts in a developed recreation area. Second, this case involves a larger area that essentially requires the delineation of several distinct management units within the recreation complex.

**Identification of Visitor Impact Management Areas.** As noted earlier, an important component of the preassessment data base review involves defining the physical area to be examined in the VIM process. In the case of a large scale visitor complex like the Logan Pass area, it was necessary to identify sub-units that correspond to distinct types of visitor experiences. One such sub-unit encompassed the entire trail segment leading to and including the Hidden Lake Overlook. This entire area shows a high degree of facility development and is used heavily. In essence, this area provides the type of experience typically associated with developed areas in National Parks.

The trail segment beyond the wooden overlook includes two distinct experiential environments. These include a limited transition zone that extends about 500 feet beyond the overlook, and the remainder of the 1.5 mile trail to Hidden Lake. The trail condition beyond the transition zone reflects limited use as indicated by a trail width of 12 to 18 inches. For purposes of this case study, the VIM process was examined within the context of three separate areas, which were labelled the developed area, the transition area and the wilderness threshold.

**Problem Identification.** Preliminary data gathered through discussions with park staff and pertinent park documents indicated that the major concerns at Logan Pass included the following: (1) high visitor densities and their impact on the park experience; (2) visitor-wildlife interactions; (3) effects of the boardwalk on use levels at the overlook; (4) protection of the alpine flora, species diversity, and shallow soils; (5) deteriorating trail conditions in the area just beyond the overlook; (6) use of the unimproved section of the trail and trail degradation; and (7) the possible effects of trail improvements on future use of the trail to Hidden Lake. Management direction for this area indicates that it will continue to be a major destination due to its central location and the unique opportunity it provides for motorized visitors to experience the alpine environment at close range.
Based on the objectives for the area, a broad variety of indicators were selected to represent the concerns with both the environment and the quality of the visitor experience. Separate standards were proposed for the three distinct management areas (developed, transition, and wilderness threshold). For the indicators of trail width, width of the vegetation impact zone, and number of contacts between visitors, the suggested standards varied greatly across the three management areas. These differences in standards reflect the changing character of the visitor experience at the various sections of the trail. For other indicators, such as social trails, there was no change in standards across zones. Because of the fragile environment, social trails are unacceptable in the entire area and the standards specify no social trails for all three management areas.

Field inspections of existing conditions suggested that previous facility development (i.e. the boardwalk, the overlook deck and restraining chain along selected portions of the trail) had, to a great extent, reduced site impacts in the developed area to an acceptable level. Similarly, the condition of the trail to the lakeshore within the wilderness threshold zone was generally consistent with the standards for this area. The transition zone between the developed and wilderness threshold areas appeared to exhibit the greatest discrepancies from the standards for this area. Trail widening and rutting were evident, particularly at wet trail sections, and some wood planks had been placed across these areas as a temporary measure. Several people were observed venturing off the trail in this zone to get better positions for photographing wildlife and Hidden Lake. Because of the concentration of unacceptable impacts within this area, the remainder of the case study focused on management of impacts within the transition zone.

Identification of Causal Factors. An initial examination of potential causes of unacceptable impacts was made from field observations and interviews with park staff. Results indicated that various factors affected different impact indicators in different ways. The sheer number of visitors probably contributes to all or most of the types of impact in the area, while particular types of behaviour have more indicator-specific or localized consequences. For example, wildflower photography tends to draw people to areas adjacent to the trail (increasing the width of the impacted area), while photography of wildlife and general scenery are more likely to contribute to social trail development as visitors follow similar patterns to reach prime photo points. Water and snow cover may also contribute to trail widening and social trails as visitors design their own routes in response to changing site conditions. Absence of rest areas or benches may cause some visitors to venture off the trail to reach attractive natural stopping points. Likewise, visitors feeding wildlife may contribute to social trail development and congestion along the trail.

Review of Management Alternatives. Based on the various types of unacceptable impacts and their likely causes, a number of management alternatives could be identified (Figure 5). As in the previous case, some alternatives may offer good potential for controlling undesirable impacts, but may be undesirable because of
trade-offs with other objectives or potential visitor resistance. For example, removing the existing double-board planking at the onset of the transition zone may improve aesthetics but will involve trail construction and maintenance costs and will have little effect on some of the causal factors. Constructing a barrier wall along the trail may be more effective at keeping people on the trail but will introduce an aesthetic trade-off and may not be consistent with the character of the transition zone. Less intensive approaches, such as changing the termination point of guided walks or providing updated trail brochures, may be tried at relatively low costs and may offer good potential.

Since this case study was initiated, the National Park Service has continued evaluating this area and has implemented some management actions. The alternatives implemented include a combination of physical strategies and informational approaches. Physical strategies used include removing the board planking and restoring the trail to natural surface materials, coupled with construction of a curb high border along the trail to contain the gravel and delineate the trail boundary. Informational approaches pursued to date include updating the trail brochure, with increased emphasis on minimum impact practices, and installation of several new signs with information about the fragility of the ecosystem.

Conclusions. This case study deviates from most applications of VIM and other related planning frameworks (such as LAC) by demonstrating the applicability of the process to frontcountry areas. The concepts of indicators, standards, causal factors, and the overall systematic process can work as well in developed areas as they do in the more customary backcountry or wilderness applications.

In this case study, the area under consideration was divided into three distinct management units representing different experiences provided by the respective areas. This delineation of the area is similar to the zoning inherent in the Recreation Opportunity Spectrum and the definition of opportunity classes in the Limits of Acceptable Change system. This represents an example of integrating the VIM process with concepts drawn from related planning frameworks to address the particular circumstances under consideration. Finally, this case study demonstrates the importance of evaluating the probable causes of visitor impacts. The strategies implemented were selected because they were believed to address the most important causes of the unacceptable visitor impacts.

The Buck Island Reef Case Study

Buck Island is a small island located several miles from the town of Christiansted on St. Croix in the U.S. Virgin Islands. While the island was historically used for residential and agricultural purposes, it is currently uninhabited and relatively undeveloped. Set aside as a National Monument in 1961, the island serves day visitors who travel by boat to enjoy the coral reefs that surround the island as well as the beautiful beaches and hiking trail on the island. The National Park Service
Figure 5
Matrix for Evaluation of Alternative Management Strategies at Hidden Lake Overlook

<table>
<thead>
<tr>
<th>Criteria For Evaluation</th>
<th>Permanently Close Trail Beyond Overlook</th>
<th>Remove Planing—Restore Trail to Natural Surface (transition zone standards)</th>
<th>Construct Rock Barrier Wall on Either Side of Trail</th>
<th>Install Boardwalk 500 feet beyond Overlook Tapering to Existing Trail Width</th>
<th>Terminate Guided Walks at the Moraine Rather Than the Overlook</th>
<th>Update trail Brochures with Minimum Impact Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistency with Management Objectives</td>
<td>low</td>
<td>high</td>
<td>moderate</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>Cost of Implementation</td>
<td>low</td>
<td>moderate</td>
<td>moderate</td>
<td>moderate to high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>Potential Tradeoffs or Problems Created</td>
<td>Eliminates access to Hidden Lake</td>
<td>Increased trail maintenance</td>
<td>Aesthetic tradeoff; maintenance requirement</td>
<td>Potential loss of &quot;transition zone&quot; experience</td>
<td>Participants may miss best views of lake</td>
<td>None Apparent</td>
</tr>
<tr>
<td>Potential Visitor Resistance</td>
<td>high</td>
<td>low</td>
<td>moderate</td>
<td>low</td>
<td>moderate</td>
<td>low</td>
</tr>
<tr>
<td>Potential Effectiveness for Reducing: (a) Width of Vegetative Impact zone</td>
<td>high</td>
<td>moderate</td>
<td>high</td>
<td>high</td>
<td>moderate</td>
<td>moderate</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) Number of Social Trails</td>
<td>high</td>
<td>low</td>
<td>high</td>
<td>moderate</td>
<td>moderate</td>
</tr>
<tr>
<td></td>
<td>(c) Number of Contacts Between Visitors</td>
<td>high</td>
<td>low</td>
<td>low to moderate</td>
<td>moderate</td>
<td>moderate</td>
</tr>
</tbody>
</table>
provides several picnic areas, restrooms, and changing areas, but the main attraction at the island is an underwater snorkeling trail.

Most visitors to the island gain access by charter boats operating out of Christiansted under concessionaire permits granted by the National Park Service. All boats visiting the reef must tie up at one of eleven moorings maintained near the start of the underwater trail. The typical visit to the island begins with a trip directly to the reef for an hour-and-a-half or more of snorkeling, followed by a stop at the beach for lunch, swimming and hiking or island exploring.

This case study focused on measuring the quality of the visitor experience under existing conditions at Buck Island Reef. Park management expressed the view that current conditions were generally acceptable, but they were worried about future impacts resulting from growing numbers of tourists visiting the area. The main objective of the study then was to document current conditions in order to provide a baseline against which future changes could be compared.

This case study differs from the others in several respects. First, it focused on the visitor experience and the social impacts that can threaten the quality of that experience. Secondly, it involved a study area in which the current conditions were not felt to be a problem. Thus it involved using VIM in a preventive capacity rather than as a tool for management of existing problems. Finally, it involved a more intensive data collection strategy and thus can help illustrate how new studies can be conducted to support management decision making.

Documenting Existing Conditions. A visitor survey was conducted to measure selected indicators of quality in the visitor experience at Buck Island Reef. The indicators measured were selected on the basis of the literature as well as the areas of greatest concern to park management. Specifically, these indicators included several measures of visitors' satisfaction with their experience, the number of boats moored at the underwater trail and the number of snorkelers seen in the water, the influence of other visitors on the experience (a measure of crowding), and whether or not the visitor had to wait to obtain a mooring at the underwater trail.

The visitor survey was conducted in the field in cooperation with the charter boat operators offering trips to the island. Visitors during the peak use season were asked to complete brief self-administered questionnaires on the boats during the return trip from Buck Island to St. Croix. The questionnaires were distributed to passengers and collected by the boat captains and/or crews, and were subsequently collected from the captains by NPS personnel. The chief advantage of this procedure was that it provided an inexpensive and efficient way to survey the perceptions of many visitors. A disadvantage of the method is that it does not provide as much control of the sampling process as might be desired under ideal circumstances. For the purposes of this case study, this procedure was considered an acceptable way to collect the data needed from the visitors.
Questionnaires were completed by about 1,500 Buck Island Reef visitors. Results confirmed management’s original viewpoint that the existing conditions at the underwater trail were not a problem. Most visitors reported high levels of satisfaction with their trips (an average of 8.9 on a scale of 1 to 10). Only a small minority of the respondents reported encountering the situation where all eleven moorings at the trail were being used (three percent had to wait for a place to tie up). The average number of boats seen at the trail was 4.7. The number of other snorkelers seen at the trail was 4.7. The number of other snorkelers seen while snorkeling the underwater trail ranged from zero to one hundred, and averaged about twenty. More than a third of the sampled visitors reported seeing ten or fewer snorkelers, while more than two-thirds reported seeing twenty or fewer. Relative to perceived crowding, the majority (55%) of the visitors sampled reported that the other visitors they encountered at Buck Island has no effect on their overall experience. Those who did report an influence of encounters with others were more likely to indicate that the encounters increased, rather than reduced, their enjoyment.

Further analysis revealed some differences in perceptions across selected segments of Buck Island visitors. For example, visitors on full-day trips were more satisfied than those on half-day trips, and those on smaller boats reported higher satisfaction levels than those using the larger boats. Snorkelers with more experience were more likely to report that encounters with others reduced their enjoyment. On the other hand, there were only very slight differences in the experience indicators when compared across the different days of the week.

Analysis of the relationships between indicators showed that overall satisfaction was significantly related to the number of snorkelers seen by visitors, although this relationship was not very strong (the correlation between these variable was -.14). This finding suggests that future satisfaction levels could decline if use levels increase due to the expanding tourism in the area.

Conclusions. The objective of this case study was to establish baseline measures of the visitor experience at Buck Island Reef National Monument. Since the process did not result in the identification of problem conditions, there was no need to continue to the identification and review of management alternatives. In this case the process ends with documentation of existing conditions and the need for future monitoring.

Results confirmed management’s opinion that current conditions were generally desirable, but more importantly, they provide a basis for evaluating changes that may occur in the future. Responses to the visitor surveys could be used as a basis for selecting standards for the visitor experience at Buck Island Reef. For example, if management wishes to maintain visitor satisfaction at its current level, it might select a standard of about 8.5 on the 10-point satisfaction scale. A problem would then be identified if average visitor satisfaction drops below this level at some point in the future.
COMPARISON OF MANAGEMENT FRAMEWORKS

Visitor Impact Management shares many characteristics with the other management frameworks reviewed within this document. One can understand VIM more fully by carefully examining both its commonalities with and differences from the other frameworks.

Of the four planning processes considered, the Recreation Opportunity Spectrum (ROS) and the Visitor Activity Management Process (VAMP) are comprehensive planning and management frameworks developed for application within the U.S. National Forests and Canadian National Parks, respectively. These processes focus on identifying the range and mix of recreational opportunities to be provided in a given park or forest. They provide a means for integrating many diverse aspects of visitor management.

The other two frameworks, the Limits of Acceptable Change (LAC) and Visitor Impact Management, appear to have a narrower focus. They are concerned primarily with the impacts of recreation, including the impacts on both the environment and the quality of the visitor experience. While such impacts are also relevant within the ROS and VAMP frameworks, they are not the primary concern within these processes.

Visitor Impact Management and the Limits of Acceptable Change are really very similar processes that differ from each other primarily in the degree of emphasis placed on various considerations. For example, VIM includes an explicit step aimed at identifying the probable causes of impact conditions, while LAC places greater emphasis on defining opportunity classes and developing alternative class allocations. Both processes, however, were developed as alternatives to the carrying capacity concept. Both frameworks rely on the use of indicators and standards as a means to define unacceptable impacts. And both VIM and LAC emphasize consideration of a broad range of management alternatives and require future monitoring.

Visitor Impact Management differs from the LAC framework in terms of its background and the way in which it has been applied to date. While LAC was developed by Forest Service researchers for application within the National Forests, VIM was the initiative of a non-profit conservation organization (the NPCA). Thus, unlike the other three frameworks, VIM is not a formal process mandated for use by any particular resource management agency. It is merely a tool, among other planning and management tools, available for use by any agency that finds it useful. In fact, elements of VIM can be integrated with other planning frameworks such as ROS, LAC, and VAMP.

Applications of VIM to date have tended to focus on the management of relatively localized impact problems, in contrast to the emphasis within LAC on large scale wilderness planning applications. In addition, the initial tests of the VIM
framework involved the types of impact problems typically found within U.S. National Parks, although subsequent applications have involved recreation areas under different jurisdictions, and the process itself is not linked to the formal planning processes of the Park Service or any other agency.

**SUMMARY**

Visitor Impact Management is a planning framework for controlling or reducing undesirable impacts of recreational use. It was derived from the literature on recreational carrying capacity and can be viewed as an alternative to the original carrying capacity concept. One of the key features of the VIM framework is its scientific basis. VIM incorporates several principles derived from research on the nature and causes of recreation impacts. Another key element of VIM is its systematic process for assessing visitor impacts. This process involves a problem solving approach, but it does not assume that a problem exists. In fact, the first five steps in the process are devoted to problem identification, or the determination of whether or not existing conditions are acceptable. The remainder of the process isolates additional key decision points encountered while examining visitor impact situations, including identification of causal factors and a broad range of management alternatives.

**REFERENCES**


THE EVOLUTION OF VAMP

The origins of VAMP are rooted in the planning and development of Interpretation Services in national parks during the 1960's and 1970's. Interpretation planners and managers during this period were concerned about providing meaningful experiences to visitors in appropriate settings through selected media.

Three problems weakened these efforts.

1. What is a meaningful experience?
2. What does the visitor really need?
3. How do we justify proposed interpretation services?

There were many plans that were only partially implemented, or approved in principle and never implemented, simply because the three above concerns were not addressed to management's satisfaction.

Interpretation Services was not alone. Similar questions were being asked about management planning and the management of resources.

By the late 1970's considerable pressure was exerted to formalize the management planning process. An approved process for park management planning was developed and implemented in tandem with a natural resources management process. The missing piece was the decision framework for managing visitor opportunities.

The missing piece was needed because:

1. There was no basic, overall approach to the selection and management of visitor opportunities in a decentralized organization with many functions responsible for planning, development, and delivery;
2. Services and facilities were being developed individually instead of as an integrated package of services geared to visitors;

3. We could not measure the effectiveness of our services in meeting public needs and expectations;

4. Our basic data was incomplete and only partially organized.

The basic concept to address visitor opportunities was developed and approved in 1981, with the direction to continue development and testing within existing resources and priorities. Test projects which focused upon the development and delivery of services were initiated in three of our regions. Several management planning initiatives were also monitored to assess how the concept would be applied during management planning.

We sought advice and assistance from many people, agencies and the research community. In Canada we exchanged views and information with Tourism Canada, the provincial park systems (especially in Ontario and Alberta), and with universities, including the University of Waterloo, Acadia and the University of Ottawa.

The conclusions of this work were summarized in a manual and approval to implement was given in 1985.

The most important decision in the early 1980's was to build the process by concentrating upon visitor activities instead of opportunities and experiences. The rationale was that, within our organization, there was little support for decisions based upon very soft opportunity or experience. Managers could relate to "what people do" or visitor activities. However, the grand scheme was to ensure that the decisions would eventually be made upon an opportunity/experience base.

**THE BASIC PROCESS**

The basic thought process is outlined in Figure 1. Its application to management of visitor programmes follows the traditional approach to planning used by most resource management agencies (Figure 2). The manual takes this process and applies it to the five stages of the park management process: park establishment, new park management planning, established park planning, and facility development and operation.

The 1985 manual presents a framework and says a lot about what needs to be done, but does not say very much about how.

A major emphasis throughout each stage of the process is to start by gaining an understanding of who comes to the park, why they come, what they do when they are there, and what their needs are.
FIGURE 1

THE BASIC VAMP CONCEPT

NATIONAL PARK MANDATE AND OBJECTIVES

NATURAL RESOURCE FEATURES AND VALUES

PARK OPPORTUNITIES (BENEFITS/EXPERIENCES)

VISITOR ACTIVITIES

SERVICES

FACILITIES

OPERATIONS

PUBLIC NEEDS EXPECTATIONS
Towards Serving Visitors and Managing Our Resources

FIGURE 2

GENERIC REPRESENTATION OF VAMP

DATA BASE

REGIONAL SITUATION
relationship of park and the region re:
activities
services
facilities
in the region

EXISTING PARK SITUATION
activities
services
facilities
market/use

PARK ACTIVITY SETTING OPPORTUNITY
activity
setting needs
market
service needs

APPROPRIATE VISITOR ACTIVITIES
activity
setting needs
market
service needs

VISITOR ACTIVITY OBJECTIVES

TERMS OF REFERENCE

VISITOR ISSUE IDENTIFICATION
Factors:
- resource opportunities and limitations
- visitor activity mix
- market
- services needed
- regional role

VISITOR ISSUES
e.g.
- (in)appropriate activities
- lack of visitors
- too many services
- missing data
- unused resource
- theme missing
- resource use impact

VISITOR ISSUES ANALYSIS
Factors:
- activity/service policy
- park objectives
- impact on resources/visitors
- target market selection
- regional socio-economic impact etc.

VISITOR ACTIVITY/SERVICE OPTIONS
e.g. changes to type quantity and/or quality of:
- visitor activities
- activity settings/areas
- services
- regional roles/support

OPTIONS ANALYSIS
Factors:
- policy
- priorities
- restraint
- S and PYs

RECOMMENDATION AND APPROVAL OF ACTIVITY/SERVICE/FACILITY PLAN

IMPLEMENTATION

MANAGEMENT DIRECTION

National Parks Act
National Parks Policy
Parks Canada Strategic and Operational Plans
Parks Canada Management Directives
Existing Agreements
Regional Service Role
Etc.
The task is to determine the current situation when comparing the park's expectations to the visitor's, and then to assess the actual activity or offer in terms of services, their use and visitor satisfaction.

At the management planning level, the issues relate to the purpose and role of the park, the type and location of appropriate visitor activities, the market for the activities, and the relationship of the park to its surrounding regions.

At the service planning level the issues focus upon the immediate future in terms of targeted markets and activities, the services needed, and how the services can be delivered.

APPLICATION TO MANAGEMENT OF NATIONAL PARKS

As noted earlier, there are five opportunities to begin to implement the process in management (see Figure 3). Since our most pressing need was to see where we are at the park delivery level and to improve current services to current visitors, we concentrated upon park service planning and in 1987 produced a handbook, appropriately titled "Getting Started: A Guide to Park Service Planning", developed a training package geared to park management teams, and launched the park service planning programme.

The Service Planning Process is outlined in Figure 4. A description of the seven steps to Service Planning is illustrated in Figure 5.

The approach is "hands on" by park staff, assisted by regional and headquarters staff. The first test plans were produced here in Ontario's national parks in 1987 and 1988. There are now 18 plans in various stages of production. We expect to have some completed plans, based on the handbook, available in the spring of 1989.

Here are some specific thoughts about the application of the process to park service planning.

1. We were accused in 1985 of creating a process that demanded a lot of new information. In fact, our early tests were research hungry. However, our practical experience showed that a lot of data was already available in existing studies, our own statistics, the knowledge of participants, and the collective knowledge of park staff. The first step was to organize this data in a cumulative way to determine what we know, what we don't know, and what we need to know. Using this approach and tying our data needs to agreed upon issues has helped us to refocus our visitor studies in order to start filling the gaps.

2. The use of a process for the first time has to allow for overkill. A facilitator is needed to move staff along through the various stages.
Figure 3
VISITOR ACTIVITY INPUT IN THE PARK PLANNING PROCESS
FIGURE 4
PARK SERVICE PLANNING PROCESS

Terms of Reference

Data Base Development
Visitor/market expectations
Park's expectations
Service offer
Use of service offer
Satisfaction

Management Direction

Management Plan
Directives
Superintendent

SITUATION ANALYSIS

STRENGTHS, WEAKNESSES, OPPORTUNITIES

Change Implemented

Issues Referred

SERVICE PLAN ISSUES

OBJECTIVES

SERVICE STRATEGY

ACTION PLANS

SERVICE PLAN

Implement, monitor and evaluate
FIGURE 5

STEPS OF SERVICE PLANNING

Park Service Planning is a logical thought process which has seven basic steps.

1. PRODUCE A TERMS OF REFERENCE
First you must decide and describe what you are going to do and how, who is going to do the work and when.

2. DEVELOP THE DATA BASE AND COMPLETE A SITUATION ANALYSIS
Through development of a data base, you should learn enough about the situation to compare what is provided (the current offer); with what should be provided (based on the needs and expectations of visitors and park mandate); to identify strengths, weaknesses and opportunities.

3. ORGANIZE, IDENTIFY AND PRIORITIZE THE OPPORTUNITIES AND ISSUES
Strengths, weaknesses and opportunities should be rolled up into opportunities and issues, then further organized, identified and prioritized by service category requirements.

4. ESTABLISH SERVICE OBJECTIVES
Objectives are one of the most important parts of any plan. You will need to organize existing objectives and develop measurable Service Objectives related to the broad program. To prepare for the next step, you will also need to set specific objectives for change.

5. DEVELOP A SERVICE STRATEGY AND PLAN
At this stage you develop a service strategy that includes a current and future offer, and plans of action for changes. It then needs to be rolled up into an overall strategy so management can see what it looks like.

6. WRITE THE SERVICE PLAN AND OBTAIN APPROVALS
Getting the whole thing down on paper involves integrating some of the earlier products of the service planning process. Review and approvals are an integral part of this step.

7. IMPLEMENT, MONITOR, EVALUATE AND UPDATE PLAN
Otherwise they will be overcome by detail. The greatest benefits, however, are team-building, decision building, a strengthening of the common understanding that grows among park staff, and an increased willingness to work together to provide quality visitor service.

3. The absence of consistent direction at the management planning level is an issue. The need for a clear vision or mission is brought out as specific issues that need to be addressed during the next management plan review. Our first plans only deal with existing opportunities and existing visitor activity groups.

Here are a few more detailed comments about the use of the handbook.

SEGMENTATION

In the Service Planning Handbook is an introductory discussion about the importance of visitor/market segmentation in order to base the analysis upon known visitor needs, expectations, and patterns of use. The original premise of the process, based upon where we were in terms of development within the organization, was to base the segmentation more upon "what people do" as opposed to "why people come" or "what they need". The reason for this was to begin by focusing upon the service/activity/market relationship at the park level. The eventual objective is to move toward opportunity/experience definition as we develop the criteria, the approach, and the needed information.

Most national parks now producing park service plans have developed visitor segments or Visitor Activity Groups (VAG's)\(^1\) that are half way between categories of activities and experience-related visitor segments. However, each VAG is based upon known information and criteria that are significant in terms of setting, activity mix, skill levels, and basic services. In the handbook we have not provided parks with a pre-determined formula for segmentation. Our hope for the future is that national and regional marketing initiatives, combined with our experience in park service planning, will provide us with relevant criteria that should be used to determine visitor segments.

PROFILING

Once you have decided "who comes to your park and for what reasons", the next step is to put yourself and your management team in the visitor's shoes so that you can begin to find out more specifically what you know and what you don't know about their needs, expectations, and activities. Because we do not have the luxury

\(^1\)Visitor Activity Groups for Kootenay National Park, for example, include pleasure drivers, swimmers (hot pool), heritage appreciation visitors, front country campers, and wilderness adventurers.
of primary research at a park-by-park level, the team creates the first profiles of data, noting the sources and validity of the information. In some cases, parks have been able to use a contract to gather, synthesize and organize known data for the park management team. In others, the team has used existing information, synthesized it and noted the data gaps which may need to be filled at a later stage.

The outline of a profile described in the handbook is shown in Figure 6. The profile calls for a definition which is based upon the criteria used to create the segment, followed by an elaboration of significant characteristics, the likely benefits that the group may be seeking and then their needs and expectations in terms of their trip pattern to the park. There is a need to capture trend data and concerns that managers are likely to identify at this stage.

We encourage staff to begin by producing thumbnail sketches since they will be adding new data as they move through the planning cycle.

THE PARK'S EXPECTATIONS

In our organization, management expectations come in many forms, from many sources - policies, directives, priorities, agreements, management plans, and so on. The park teams have found this diversity to be one of the most frustrating parts of the exercise. Our park management plans are not very strong in providing direction for establishing visitor opportunities, the role of the park in its socio-economic region, or the range of activities that are appropriate, etc. Despite this, the team may end up with several hundred direction-type statements. The key individual at this point is the park superintendent, who must help the team to sort out what is significant. The team's task is to sort out the direction to see what applies to the Visitor Activity Groups and to the categories of services.

Equally important is the confirmation and siting of the park's heritage values, themes, etc., which can be pulled from our interpretation plans of the 1970's. These are park expectations.

In addition, there are assessments of resource fragility or use impact that have to be noted and mapped. The limitations of the setting are major resource management concerns and they are addressed through our Natural Resource Management Process.

CURRENT OFFER

The major problem in organizing this information is to line up our service offer with the Visitor Activity Groups and the categories of services. In most instances we have descriptions of the purpose of a facility, but we may not know whether the service offered is for one, two, or more groups. The matching of current offer to VAG's is creating some surprises such as the absence of interpretation services for some key visitors.
The second major concern is the identification of services that are important to each VAG but are offered by others (stakeholders) such as enroute information, visitor reception and orientation, and special services (e.g. accommodation, food, gasoline, etc.). They are all important components of the VAG’s trip service package and are necessary to a satisfactory experience.

**USE OF OFFER**

We have a lot of statistics pertaining to park entry, use of campgrounds, trails, interpretation services, etc. Since we want to be able to match the use of offer to park management expectations and to visitor needs and expectations, we need to reorganize the data that we have to tease out the extent of usage by each VAG according to service. Since we are creating our first versions of these plans, the teams have been able to identify relative use at a gross level. Once again, however, if the data are not reliable, their weaknesses are noted before considering any further change.

It is difficult to obtain data about the use of services provided by other agencies, the private sector, cooperative arrangements, etc. But just identifying who they are as well as their relationships to visitors is a major step. In the longer term this information should be gathered and used in a broader regional marketing strategy.

**SATISFACTION**

At this point in development we are asking parks to pull together all of the existing indicators, such as letters of congratulation or complaint, visitor comments relayed to staff, recent park visitor surveys, regional studies, national visitor activity profiles, and so on. As we improve our monitoring and evaluation system, including market assessments, we will be better able to respond.

Even with the skeletal information that we have, management teams have been able to identify some of the strengths of our offer and where there are indications of dissatisfaction with specific services.

**ANALYSIS AND DETERMINING PRIORITIES**

An analysis of the relationship between visitor needs and expectations, our expectations, the role of third parties and the availability and use of the opportunities provided can lead to a great list of needed improvements or actions. Some can be handled immediately, while others require new actions needing policy, planning or financial resources. The key is to build on the identified strengths of the services, the opportunities that are there and the objectives and priorities that have already been set.
FIGURE 6
VISITOR ACTIVITY GROUP PROFILE

Visitor Activity Group: (title)

Definition:

Activity Description: (setting, timing, skills and equipment required)

Market Characteristics: (origin, age, education, party size and type)

Benefits and Experience Sought: (setting, motivation, style of visit)

Activity and Service Requirements (from a visitor's point of view)

Awareness/Extension:
- awareness of existence and benefits of park or site

Pretrip:
- motivation for and information to plan trip

Enroute:
- orientation information

Reception:
- welcoming, orientation to site, information

Park Activities:
1. - heritage presentation
   - recreational/educational opportunities
2. - access/transportation
   - accommodation/sustenance
   - sanitation
   - administration/management
   - resource protection/public safety
3. - reinforcement

Departure:
- departure information
- evaluation

Trends:

Concerns: - from a user/activity perspective
           - from a management perspective

Management Action to Date:
Two things happen at this stage. The first is that the team sees the complete service needs for each VAG and the current status of the service offer. They see how interpretation meshes with visitor reception, public safety, accommodation, and the rest of the recreational service package. There is also an agreement about the nature of the experiences to be provided and the basic service that each VAG should have.

The second is the return to reality and the realization that the park can only achieve a few of the major changes that have been identified.

But the team collectively determines what the service objectives will be and what corrective actions can be undertaken now using existing resources and through changes in scheduling or shifts in service. The bigger weaknesses and opportunities need to be prioritized with the park superintendent to see what should be addressed during management plan review or through the rest of the park service planning programme.

**OPTIONS/STRATEGIES/IMPLEMENTATION**

The rest of the plan programme follows the usual plan development, review, approval, and format. Even though we are in a period of severe restraint, and we urge that plans be realistic in terms of a five-year programme, the options phase provides management with flexibility in terms of strategy and implementation.

**MANAGEMENT PLANNING**

Remember that park service planning is only one cycle in our overall management process and that it can be used to assist in management plan review. But the thought process based on the model also needs to be applied during the park management planning programme. The concerns for creation of visitor opportunities are very basic: in terms of the park’s heritage values, its purpose and objectives (mandate), and the expectations and needs of existing/new visitors, we must determine what are the opportunities the park presents for visitors to experience their heritage through a range of appropriate activities and while asking "Where in the park?" and "Under what conditions?"

We are now using the park service planning cycle as a way of preparing for management plan review and update. The issues relating to "What opportunities through what activities?", "What role for the park in its region?", "Where in the park?", and "Under what conditions?" are easily identified and are leading to more conceptual long-term plans.
THE VISITOR ACTIVITY MANAGEMENT PROCESS AND CANADIAN NATIONAL HISTORIC PARKS AND SITES - A NEW COMMITMENT TO THE VISITOR

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INTRODUCTION

This paper explains how National Historic Parks and Sites has become involved in implementing a Visitor Activity Management Process. It also attempts to describe what is now being done and what is being planned for VAMP implementation in National Historic Parks and Sites (N.H.P.& S.) and briefly relates some issues facing the adoption of VAMP and Service Planning to National Historic Parks.

While sharing some direction from the National Parks Act, N.H.P.& S. is governed by a different mix of legislation than National Parks. Other important legislation provides us with a particular master called the Historic Sites and Monuments Board of Canada (H.S.M.B.), an entity somewhat at arm's length from the government and entrusted with the task of recommending the commemoration of nationally significant cultural resources. The H.S.M.B., in turn, has an effect on the way planning is carried out and priorities are set in the historic parks and sites program. We manage some 80 plus National Historic Parks, nine Historic Canals, and hundreds of placqued sites.

But at the level of the park management process, other specialities like mine in interpretation and visitor services, and especially of parks operations, a lot of crossover occurs between the skills, experience, expertise and interests of National Parks and N.H.P.& S.

Park Management Planning processes, and especially interpretation, visitor services and media planning, have frequently shared the same methodologies and even the same formats throughout our agency. Hence, almost from the beginning, regional support specialists and field operators of N.H.P.& S. have shared in the testing and development of Park Service Planning, an application of the Visitor Activity Management Process (VAMP).

With its integration of all services provided in support of the visitor, VAMP made immediate sense to the managers of historic parks. Since interpretation was quite often the lead service provided to visitors at most medium- and small-sized historic parks, interpretation planning done at these sites tended to integrate all services to visitors anyway. That is, the interpretive experience was not seen as
isolated from the parking, arrival and refreshment services, washrooms, and so on required by visitors enjoying the interpretive program.

The philosophy of VAMP also made a lot of sense. Its basis in market sensitivity, and especially in theories of marketing in a non-profit, service agency, struck a responsive chord right away, at least with those of us who had been struggling to achieve a balance between the mandate of our agency and what we knew from hard experience visitors needed.

In 1980, Howard and Crompton offered the following definition of a concept they called "Societal Marketing":

"The justification for an agency's existence is the satisfaction of the client's wants and the preservation of the long-term interests of the community."

It can be argued that the preservation of gene pools has a value above and beyond the needs of humans, but the preservation of significant cultural resources has absolutely no meaning outside the frame of society. Our mandate to study, conserve and/or restore nationally significant resources is our commitment to the long term interests of the community. But we also have a responsibility to respond to the needs of our immediate users.

In terms of its impact on historical resources and the protection of those resources, marketing theory, with its insistence on satisfying the customers (both visitors and society as a whole) and not numbers through the door, seemed a wise philosophy for us to pursue.

Once my colleagues and I began to understand what VAMP and service planning was all about, we realized it could hold the solutions to a number of problems in planning heritage resource programs that we have faced for a decade in this agency ... problems such as: how to simplify the planning process, how to prepare for evaluation, how to integrate all services to visitors, how to input directly to financial and other management approval systems, and how to ensure approval of plans by senior management. Last, but not least, it taught us the visitor's true place in all this.

This made us aware of our obligation to get the needs and subsequent servicing of the visitor back in balance with our protection activities. It involved altering our mindset.

For most of our history we have been resource-driven in our planning and management of parks, especially in N.H.P. & S. Many millions of dollars have been

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spent on researching and devising ways to protect resources in the best way possible. We are internationally recognized experts in underwater archaeology, furniture conservation techniques, engineering history, and many other areas. Virtually nothing has been spent, however, on learning about and understanding our visitors and their needs.

In marketing terms, for most of our history we have been "product oriented". We protected our nationally significant resources and made some assumptions about what visitors would need at the parks; at best, we built washrooms, visitor centres and exhibits, put some people in uniform with muskets, and then sat back and waited for people to come and enjoy.

This worked to a certain extent when we were the only game in town. But society has developed very competitive attractions, like cable TV, VCR's, fast-food outlets, urban and farm family vacations, cheap airfare to Europe, and Club Meds. And now that provincial, municipal and even private operators are starting to take us on at our own game with costumed events, craft and cultural festivals, historic villages and historic theme parks, we could be in trouble.

There was also a time when we made the assumption that parks could be all things to all people, so that even when we did start advertising our product, we may have created some expectations that were impossible to fulfill - because we had a protection mandate that precluded unlimited development of our parks and sites, because we had little money, and because we had no idea who we were aiming at, or what their real needs were. We had moved into a "selling" orientation, but still had no marketing perspective.

The greatest danger in the whole scenario, however, was not that numbers through the door would decline - actually, we kept them up with some hardsell - but that visitor satisfaction would decline. We would get greater numbers of visitors coming through our doors and leaving with a ho-hum attitude. Mildly satisfied visitors do not write their Members of Parliament when we have to start closing sites and reducing services because of cutbacks. In fact, continuing cutbacks are a sign of a pretty well entrenched ho-hum attitude among the public towards our program.

We had to begin learning to understand who and where our most valuable markets are, and how to ensure their satisfaction.

CHALLENGES IN ADAPTING VAMP AND SERVICE PLANNING TO N.H.P.& S.

Adaption of the Visitor Activity Management Process to National Historic Parks and Sites should not pose a big challenge, although there are some minor issues to work out.
The implementation of VAMP and an understanding of its significance is somewhat more advanced in National Parks than it is in N.H.P.& S., at a national level. At an operational level, several of the regional offices, which have responsibility for all parts of the Canadian Parks Service program in their region of the country, have already produced implementation strategies for applying service planning to all parks, natural and cultural.

All regions and a number of National Historic Parks at the field level have also been involved in the testing and polishing of the process through service planning. Many have changed interpretive and visitor services job descriptions to reflect the Visitor Activity Management approach in name and in practice. This work has been monitored at a national level for several years. This year we have moved to a new level of commitment to VAMP which can be described by the three words: testing, liaising and training.

We're working cooperatively with the Visitor Activities Branch of National Parks and with a multi-level team developing courses and training staff to do service planning. Two major courses were held last year. Teams and individuals from sites across the country such as Fort Langley, Fort Rodd Hill, Motherwell Homestead, Fort Walsh, the Trent-Severn Waterway and the Halifax Citadel attended, along with a number of regional and headquarters specialists.

We are also participating in several historic park-based pilot projects in service planning, and reviewing products from others. The two main pilots are Fort Malden service planning in Ontario Region and Alexander Graham Bell National Historic Park service and management planning in Atlantic Region. Core and support teams for the pilot projects and other review are being drawn from the field sites, the regional offices, and from headquarters of N.H.P.& S. Staff from the Interpretation Branch have already participated on review teams, and we will also draw participants from other branches in headquarters.

What are we learning? The results are very preliminary and I should point out that the planning projects we have observed so far have been for small to medium-sized historic parks. We realize that the big parks could teach us more and different lessons.

- We are discovering that the segmentation of markets (the visitor activity groups) is remarkably similar for historic parks of these sizes. That finding alone will soon require a discussion paper.
- Opportunity assessment for historic parks is relatively easy. There are a limited number of activities available for visitors, or expected by visitors, to these sites. Other activities are quite clearly and understandably discouraged by the park purpose and mandate.
• Most of these parks seem to be doing a great job of interacting with their stakeholders and local constituents, and making effective use of partnerships and various cooperative ventures; or there exists great potential and opportunity to move into these activities.

• Generally, service planning has been easy to apply to historic parks because of the discrete nature of the resources, the ready availability of data on all facets of use and offer, and because of the reasons given above.

• Resource conservation specialists seem to be comfortable with the process and, having been involved in the planning, seem assured that resource protection is well addressed. What we are not happy about is that they are not able to point to a consistent, comprehensive cultural resource management process to quickly give planners information about limits and impacts.

• We are also learning that management plans are not doing what they could for us right now. Service planning should be given direction on regional marketing strategies and other aspects of policy. Management planning could easily take up this role.

I am also beginning to believe that VAMP could be a powerful tool in the implementation of our Systems Plan. A Preliminary Visitor Activity Evaluation would facilitate decisions about the type and scope of park acquisitions.

Through the pilot projects and review teams, we have been able to review, study, discuss and offer general strategies and proposals for adapting VAMP to National Historic Parks and Sites.

In headquarters, we are in the process of setting up a Visitor Activities Section to provide functional guidance to N.H.P.& S. through research and the development of tools, the development and monitoring of standards and guidelines, and training. Actually, we have created positions with five main areas of responsibility: research and development of tools; training and program development; communications; education/outreach; and partnerships and joint ventures. These positions reflect the priorities we perceive in moulding a more client-responsive organization.

There are some issues facing the implementation of VAMP in N.H.P.& S. None of these issues constitutes a serious problem. Adaptation of the service planning process to our needs is quite straightforward.

There is a bit of a challenge in market segmentation for N.H.P.& S. We are beginning to suspect that, in comparison to National Parks visitors, even at the outset we may need to delve a little deeper to discover the types of benefits people
Towards Serving Visitors and Managing Our Resources

are seeking at historic parks and sites, including what motivates them and what the style of their visit means. We will have to direct our research efforts to gaining this understanding.

In an overall way, this understanding is being expanded by national marketing studies but there is still an important role for in-depth study of visitor motivation and the benefits sought. Some of this research may consist of bringing together a growing body of literature which already exists on these subjects. I think there is also a need for specific studies at our own sites, something which has not been done to date.

There are a few other technical hurdles. We are going to have to think a bit more about how to maintain market perspective in the development of storylines and programming, and how to teach this to planners and programmers. There is a research element implicit in these tasks, and an implication for the development of new training courses and training materials.

We face a challenge in finding the staffing resources to do service plans. Most of our small to medium-sized historic parks do not have the staff, or the staff skills, to handle any kind of serious planning. At the regional office level we have, at best, only 12 planners country-wide, but we have an emerging national strategy which suggests that our eighty-odd sites need to be planned in the next five years.

But the biggest issues, shared by National Parks and National Historic Parks and Sites, all relate to further development of VAMP.

Although it has become a cliché to say marketing requires a total commitment of everyone in an organization, it has become patently obvious to me that anything less will not work, and may turn into a disaster.

Sectors of the agency traditionally involved with research and preservation activity need to understand our responsibility to respond to clients, the ones who come to our sites and even those who do not, and that we now have a planning process which helps us balance visitor needs against our mandated objectives. Initially, there tends to be an unreasonable anxiety that market sensitivity means we have to start compromising our preservation standards. Quite the opposite is true: using preservation standards as a given, we can now seek ways to meet visitor needs ourselves, find others to meet those needs, or fully explain why we cannot meet them.

And speaking about planning, we want to avoid, at all costs, the impression that there are a plethora of different and divergent park planning processes, or, if you prefer, different and divergent decision-making processes in our agency. Park superintendents and senior management will not support us. Systems planning, management planning, service planning and natural and cultural resource
conservation planning are all parts of one clearly defined, overall park planning process. In particular, service planning must follow from management planning, and be tied to management planning and management plan review schedules.

For the last two to three years, development of VAMP has been pursued through the development of the service planning process. This process is now working very well and a new edition of our planning handbook is making the rounds. There remains the task of fully integrating VAMP with the rest of the park planning process and with marketing activities throughout the agency.

National Parks and National Historic Parks have faced common problems as bureaucracies trying to make decisions and impart direction. At the site level at least, we have always shared a common understanding of the importance of visitors and their basic needs. Visitor services at both types of parks are determined by the needs of our public. The interpretive techniques and skills we employ are similar for the same reasons.

We must balance sometimes seemingly contradictory objectives for preservation and use. Now we at C.P.S. have a new formal tool for incorporating marketing principles into our planning. Market sensitivity, sensitivity to the satisfaction of our visitors, while ensuring significant resources will be around for future generations, applies as surely to the management of a modest historic house on a quiet urban street, as it does to the management of a majestic mountain park.
INTRODUCTION

This paper discusses a specific application of the Visitor Activity Management Process in Glacier National Park, British Columbia.

The planning team is currently in the final stages of preparing a Service Plan for the park. The purpose of this paper is to provide the workshop with an example of how our planning team has approached the implementation of VAMP. I have chosen to focus my comments on the activity known as frontcountry camping to illustrate how the Visitor Activity Management Process was applied in Glacier.

BACKGROUND

Glacier is a 1400 sq. km. park in the Columbia Mountains of southeastern British Columbia. The park is a rugged and primitive wilderness of glaciers, icefields, 3000-metre peaks and valley rainforests. This wilderness is bisected by the Trans-Canada Highway and a thin corridor of frontcountry facilities associated with it.

There are three frontcountry campgrounds along the highway corridor, with a total of almost 400 campsites. The park’s campgrounds are known for their rustic character, reflecting Glacier’s image as a wilderness area. The campgrounds are semi-serviced, offering campsites, washroom buildings, running water, kitchen shelters and firewood supplies, but no r.v. hook-ups or showers.

Illecillewaet and Loop Brook campgrounds are located in Rogers Pass, at the heart of the park. Illecillewaet is a 52-site campground and the most popular of the three, with an average occupancy of 82%. Loop Brook, with 20 campsites, also averages between 75 and 85%. Both of these campgrounds rank highly with our visitors, primarily because of their settings in scenic subalpine valleys, and because of the high quality recreational opportunities associated with them (hiking, mountaineering, and backpacking). Use of Illecillewaet and Loop Brook has been increasingly slightly for three years, after a four year decline.

The largest campground in the park is Mountain Creek, with 306 campsites. It is located in a wide valley, about 20 km. from Rogers Pass. This campground has not averaged more than 15% occupancy in the past eight years and use is continuing to decline slowly.
PROFILE OF GLACIER’S CAMPERS

Camping is considered one of the most important services offered in Glacier. Camping is more than just low-cost accommodation for most of our visitors. It is an integral part of the national park experience. For this reason, we’ve spent a considerable amount of time over the past few years studying our campers. We’ve found that frontcountry campers using Glacier are seeking a relatively gentle and comfortable introduction to the rugged wilderness of the park. Although this is certainly a generalization, it does fit the profile of most of our frontcountry campers.

our campers originate primarily in southern Alberta and British Columbia, with substantial numbers from the U.S., Ontario, Manitoba, Saskatchewan, and West Germany.

our campers are primarily young adults, young families and senior citizens, and we’ve received considerable interest from disabled visitor groups.

roughly 65% of our campers are travelling by recreational vehicle and 35% are tenting.

Expectation and satisfaction surveys done in the park revealed that, of the visitors using our campgrounds, a very high percentage were extremely satisfied with their camping experience.

(1) At Illecillewaet and Loop Brook, campers were most satisfied with
- the scenery and setting
- the recreational opportunities nearby
- the layout of their individual campsites
- the personal reception/information services
- the personal interpretation services

They were least satisfied with
- the mix of r.v. users and tenters
- the lack of amenities (showers, dry firewood, etc.)

(2) At Mountain Creek, campers were most satisfied with
- the layout of their individual campsites
- the personal reception/information services
- the separation of r.v. users and tenters

They were least satisfied with
- the lack of nearby recreational opportunities
- the background noise of the nearby transportation route
- the lack of interpretation services
- the lack of amenities (showers, dry firewood, etc.)
By definition, of course, these surveys only gave us information on visitors who actually use our campgrounds. Right now, we do not have information on people who have stopped using our campgrounds, or people who have never used them.

Our surveys and observations also revealed that communication of park messages to this group is critical, as

- many have little time to spend in the park
- many have little awareness of our services and opportunities
- many have limited high mountain outdoor skills
- many of our resource management and visitor management concerns are generated by this group

STRENGTHS, WEAKNESSES, AND OPPORTUNITIES

The draft Park Management Plan for Glacier identified two major campground issues to be resolved in detail in the park service plan:

- the package of opportunities and services offered at Illecillewaet should be fine-tuned and upgraded
- the problem of chronic underuse of Mountain Creek should be resolved

Our Service Plan, by comparing what visitors need to what they currently receive, highlighted the strengths and weaknesses in our existing program, and a number of opportunities to provide new services. These strengths, weaknesses, and opportunities fell into four major categories: recreation, communications, support services, and services for the disabled.

Recreation

Strengths
- small size & rustic character (Ill., Loop)
- physical layout of campground (Ill., Loop, Mtn.)
- scenery in and around campground (Ill., Loop)
- accessibility to recreational opportunities (Ill., Loop)
- separation of r.v. users and tenters (Mtn.)

Weaknesses/
Opportunities
- mix of r.v. users and tenters (Ill., Loop)
- lack of nearby recreational opportunities (Mtn.)
Communications

Strengths - personal reception/info services (Ill., Loop, Mtn.)
- personal interpretation services (Ill.)
- camping trip planning services (Ill., Loop, Mtn.)
- visitor comment services (Ill., Loop, Mtn.)

Weaknesses/Opportunities - poor highway directional signage (Ill., Loop Mtn.)
- personal reception/info. only 8 hrs/day (Ill., Loop, Mtn.)
- personal registration only 8 hrs/day (Ill., Loop, Mtn.)
- no 24-hr information/interpretation exhibits (Ill., Loop, Mtn.)
- no off-season reception/information/interpretation services (Ill., Loop, Mtn.)
- no personal interpretation services (Loop, Mtn.)
- no self-guiding interpretative trails (Ill., Loop, Mtn.)
- no information exhibits at nearby trailheads (Ill.)
- no campground reservation services (Ill., Loop, Mtn.)

Support Services

Strengths - washrooms (Ill., Loop, Mtn.)
- kitchen shelters (Ill., Loop)
- water supplies (Ill., Loop, Mtn.)
- public safety services (Ill., Loop, Mtn.)
- garbage collection/cleaning services (Ill., Loop, Mtn.)

Weaknesses/Opportunities - firewood distribution and quality (Ill., Loop, Mtn.)
- lack of kitchen shelters (Mtn.)
- unsafe access from highway (Ill., Loop, Mtn.)
- unorganized trailhead/campground parking (Ill.)
- opportunity to develop showers ((Ill., Loop, Mtn.)
- lack of trailer sani-station (Ill.)

Services for the Disabled

Weaknesses/Opportunities - no special services are provided (Ill., Loop, Mtn.)

STRATEGIES FOR THE FUTURE

Our inventory of the existing situation, examination of visitor needs and analysis of strengths, weaknesses and opportunities summarized the current status of the
campgrounds. The next stages of the plan would define the future of the campgrounds and how that future could be achieved.

The first step was to set the objective for campgrounds, which was not necessarily to bring more visitors through the turnstiles, but to serve our camping clientele better.

**BASIC LEVELS OF SERVICE**

Based on known visitor needs and our objective, we established the basic level of service that we will provide in our campgrounds. These basic levels of service also act as performance indicators, measuring our success at serving our camping clientele.

The basic level of service that we established for Illecillewaet included the following:

- 52 campsites will be open and maintained, personal and non-personal communication services will be provided, and support services will be open and maintained from June 10 to Sept. 15

- 6 campsites, 1 washroom, 1 kitchen shelter and all communication services will be upgraded to disabled accessible standards

The basic level of service that we established for Loop Brook included the following:

- 20 campsites will be open and maintained, personal and non-personal communication services will be provided, and support services will be open and maintained from June 30 to Sept. 8

The basic level of service that we established for Mountain Creek included the following:

- 100 campsites will be open and maintained, personal and non-personal communication services will be provided, and support services will be open and maintained from June 30 to Sept. 8

**ACTION PLANS**

With our objective in mind of better serving the camper, and having set these basic levels of service, we developed a series of action plans to help us reach these goals.
Towards Serving Visitors and Managing Our Resources

First, we made a conscious effort to build on the existing strengths of the campgrounds:

- retain the rustic character of the campgrounds
- do not expand the campgrounds
- retain the site layout of the campgrounds
- retain the recreational opportunities near Ill. and Loop
- retain the personal reception/information/interpretation services
- retain the washrooms, kitchen shelters, and water supplies

Second, we prepared a list of proposed actions to improve the services offered to visitors:

- close and rehabilitate 200 campsites at Mountain Creek
- separate the tent and r.v. sites at Illecillewaet and Loop
- develop hiking opportunities at Mountain Creek
- improve campground identification signage along the highway
- develop outdoor orientation/information/interpretation exhibits at each campground
- develop self-guiding interpretive trails at Illecillewaet and Mountain Creek
- develop an off-hours/off-season self-registration system
- develop a trailhead information kiosk at Illecillewaet
- investigate the potential for development of reservation services
- investigate the potential for development of showers
- improve firewood quality and distribution system
- develop kitchen shelters at Mountain Creek
- develop trailhead/campground parking at Illecillewaet
- convert the campsites and support services at Illecillewaet to provide a package of services for the disabled

We are currently in the process of prioritizing this list of projects and initiating the Environmental Assessment and Review Process for the plan.

Of course, the real measure of success will be implementation rather than just completion of the plan. That is the challenge that the park faces over the next five years.
APPENDIX: AN APPLICATION OF THE VISITOR ACTIVITY MANAGEMENT PROCESS IN SERVICE PLANNING

ILLECILLEWAET CAMPGROUND ANALYSIS
GLACIER NATIONAL PARK
(Excerpt from Glacier National Park Draft Service Plan)

A. SITUATIONAL ANALYSIS

EXISTING SITUATION

camping facilities an services
- 52 campsites (tent pads, parking stalls, picnic tables, firepits)
- 2 washroom buildings (flush toilets, cold running water)
- 2 kitchen shelters (picnic tables, fireplaces)
- 2 pit privies
- 1 central wood supply
- 2 central garbage bins
- 2 water supply points

information/interpretation facilities and services
- 2 campground information exhibits
- personal reception/information services
  (8 hours/day, campground reception attendant)
- personal interpretation services
  (5 guided hikes/week, park interpreter)

associated recreational facilities and opportunities
- 9 backcountry trails radiate from the campground
  (day-hiking, backpacking, mountaineering)
  (trails range from 1 km to 6 km in length)
- fishing, bicycling, picnicking, nature appreciation can be found in and around
  the campground

season of operation
- summer camping (June 10 to Sept 30)
- hiking, climbing, backpacking (June 15 to Oct 15)
- winter camping (Oct 31 to May 15)
- skiing (Oct 31 to May 15)

character of campground
- a rustic, semi-serviced campground, located one km from the Trans Canada
  Highway in a subalpine valley enclosed by 3,000 m peaks, glaciers, icefields,
  and avalanche paths
- 75% of sites usually occupied by frontcountry campers (both overnight and long term), and r.v. users
- 25% of sites are usually occupied by backcountry users, such as hikers and climbers using the campground as a base camp

levels of use
- Illecillewaet averages 82% occupancy during July and August and 50% occupancy during June and September
- average length of stay is 1.5 nights
- average number of party nights is 4,300 per year

levels of satisfaction
- a camper satisfaction survey during the 1987/88 and 1988/89 summer seasons revealed very high levels of satisfaction with the Illecillewaet camping experience
- visitors are most satisfied with the scenery, recreational opportunities, individual campsites, and personal reception services, and least satisfied with the mix of camping types and the lack of showers and hot water

VISITOR PROFILE

Frontcountry campers in Glacier National Park are generally seeking a relatively gentle and comfortable introduction to the rugged wilderness of the Columbia Mountains. Because Illecillewaet is a rustic campground, it appeals to the camper who is seeking more of a primitive experience than a fully serviced commercial campground would offer.

PROFILE HIGHLIGHTS

total size of group - 12,900 visitors

origins - primarily from southern Alberta and southern British Columbia, with substantial numbers from Ontario, Manitoba, the U.S., and Germany

age - young adults, young families, and senior citizens

composition of group - 60% families, 40% individuals and couples

travel characteristics - 10% destination, 90% en route to other locations

use trends - heaviest use on weekends in June, July, August
- medium heavy use on weekdays in July, and August
- light use on weekdays in June and throughout Sept
important characteristics

- visitors in this group often have limitations in terms of time to spend in the park, awareness of services, or skill levels

- as many resource or visitor management issues are generated in this group, it is important to communicate management messages efficiently and effectively to them

- a very large contingent of this group requires special services
  - senior citizens
  - disabled visitors
  - visitors with languages other than English or French

VISITOR NEEDS

pre-trip

- advance knowledge of the location of park, park opportunities, facilities and services, fees, restrictions, regulations, and skill and equipment requirements

en-route

- accurate highway directional signage
- campground vacancy reports

arrival

- a friendly reception
- a broad orientation to park and campground
- current information on park and campground
- detailed information on other opportunities, facilities, and services

during activity

- orientation/information
  - activity schedules
  - directional signage
  - an explanation of regulations
  - fee information

- recreation
  - campsite (level, private, well-drained, with good views)
  - support services
    - wood
- water
- washrooms
- parking
- kitchen shelters
- showers
- sani-dumping station
- associated recreational opportunities
  - trails
  - playgrounds
  - rivers
- safety services
  - first aid station
  - campground patrols
  - natural hazard information

- education
  - presentation of themes and messages
    (guided hikes, campground talks, roving interpreters, publications, self-guided trails, exhibits, films)

- departure
  - feedback opportunities
    - comment forms
    - surveys
    - registers

STRENGTHS, WEAKNESSES AND OPPORTUNITIES

Strengths

- small size and rustic nature of the campground
- physical layout of the campground and individual campsites
- scenery in and surrounding the campground (mountains, glaciers, rivers, forests)
- accessibility to recreational opportunities (hiking, climbing, nature appreciation)
- personal reception and information services
- level, well drained and private campsites
- support services (first aid, campground patrols)
- interpretation services (guided hikes, publications)
- camping trip planning services
- vacancy reporting system
- feedback opportunities (comment forms, surveys)
weaknesses

- poor highway directional signage
- no 24-hour registration services (self-reg.)
- no 24-hour reception, orientation, information services (info exhibits)
- no base of operations for campground personal service staff
- no off-season services
- no separation of tenters and r.v. users
- lack of soft tent pads
- poor firewood distribution
- poor firewood quality
- poor coordination of visitor use and facility cleaning schedule
- lack of trailhead parking
- lack of trailhead information services

opportunities

- campground reservation services
- campground registration/information centre
- showers, electricity, hot water, light in washrooms
- sani-station
- playground
- campground talks
- roving interpreters
- self-guiding trails
- exhibits
- services for disabled visitors

b. strategies for the future

basic level of service

- 52 campsites and all campground support services will be open and maintained from Jun 10 to Sept 30

- 52 campsites will be open for unserviced shoulder season camping from Sept 30 to Oct 31

- 52 campsites will be open for unserviced winter season camping from Oct 31 to May 15

- personal reception, registration, orientation and information services will be available in English, French and German, 12 hours per day from June 10 to Sept 30
- Personal interpretation services will be provided in English and French once a day from June 10 to Sept 30.

- Non-personal reception, orientation, information and interpretation services will be available 24 hours a day from June 10 to Oct 31.

- Self-registration services will be available 12 hours per day from June 10 to Sept 30.

- Facility identification signage, camping trip planning services, reservation services and feedback services will be available year-round.

- Associated recreational and educational facilities will be open and maintained as weather permits.

- Illecillewaet will be designated as accessible to the disabled:
  - 8.5% of campsites
  - 1 trail
  - 1 washroom
  - 1 kitchen shelter
  - All communication services

**OVERALL ACTION PLAN**

- Build on the campground's strengths
- Do not expand the campground
- Retain the rustic character
- Retain the layout of the campground and campsites
- Retain the nearby recreational opportunities
- Retain the personal reception, information and interpretation services
- Retain the associated public communication services
- Retain the washrooms and kitchen shelters
- Retain the public safety services

**Action Plan for Recreational Services**

- Reorganize the campground to separate tenters and r.v. users
- Upgrade and improve tent pads
- Upgrade Meeting of the Waters Trail near the campground
- Develop practice rock climbing area near the campground
- Develop children's adventure playground

**Action Plans for Communications Services**

- Develop a campground orientation/information centre
- develop an outdoor orientation/information/interpretation exhibit at centre
- develop a 24-hour self-registration system at centre
- develop a reservation system for the campground
- develop self-guiding interpretive media for Meeting of the Waters Trail
- upgrade highway signage
- develop an orientation/information exhibit at the major trailhead
- develop a venue for campground interpretive talks
- highlight the campground in targeted promotional packages
  - families
  - senior citizens
  - disabled visitors
  - non-destination visitors
  - off-season visitors

**Action Plans for Support Services**

- improve parking for campground, info-centre and trailhead
- improve firewood quality and distribution system
- investigate the potential for installing showers
- investigate the potential for adding electricity, heat and light to washrooms
- develop sani-station for campground
- coordinate campground cleaning schedule with visitor use periods
- coordinate campground services season with periods of visitor demand

**Action Plans for Services for the Disabled**

- convert six campsites to accessible standards
- upgrade Meeting of the Waters Trail to accessible standards
- design new Meeting of the Waters interpretation media to accessible standards
- convert one washroom and one kitchen shelter to accessible standards
- design info-centre and firewood distribution system to standards
- designate Illecillewaet Area as disabled-accessible
Campground Locations •
INTRODUCTION

The Parliament of Canada gave the Canadian Parks Service the mandate to protect for all time those places which are significant examples of the nation's natural and cultural heritage and to enhance public appreciation and understanding of this heritage in ways which leave it unimpaired for future generations. Currently 34 national parks and park reserves represent approximately 54% of Canada's terrestrial diversity, of which more than half of the total area lies north of 60 (Table 1).

The National Marine Parks program, which has existed since 1986, currently represents about 7% of the nation's marine heritage through one national marine park and one national marine park reserve (Fathom Five in Ontario and South Moresby National Marine Park Reserve in British Columbia).

During the environmental movement of the sixties, many industrialized nations, including Canada, established Departments of the Environment in response to public opinion about pollution. Unfortunately, these departments were often restricted in their approach to problems. Politicians felt that by targeting "green issues" governments would be perceived by the public as being effective in protecting the environment. Although this targeting increased the "profile of the environment" as a social and political issue, it often led to situations in which social, economic and environmental concerns were not fully integrated. As a consequence, unresolved problems began to emerge for agencies whose policy optic and program implementation related to the environment was restricted to "green environmental concerns."

This paper traces the extent to which a concern about people and the environment has penetrated the "mind" of the Canadian Parks Service by offering an external perspective on Environment Canada's Visitor Activity Management Process (VAMP) (Parks Canada, 1985). The fact that Parks is in the process of developing an evolving decision building framework that will contribute to a more integrated approach to management of protected areas represents an awakening of interest in the interconnectedness of social and environmental concerns in Canadian national protected area programs.
<table>
<thead>
<tr>
<th>National Park/Reserve (R)</th>
<th>Year Established</th>
<th>Park Area Sq. Kilometres</th>
<th>Sq. Miles</th>
</tr>
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<tr>
<td>1) Banff, Alberta</td>
<td>1885</td>
<td>6,640.8</td>
<td>2,564.0</td>
</tr>
<tr>
<td>2) Glacier, British Columbia</td>
<td>1886</td>
<td>1,349.6</td>
<td>521.0</td>
</tr>
<tr>
<td>3) Yoho, British Columbia</td>
<td>1886</td>
<td>1,313.1</td>
<td>507.0</td>
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<td>4) Waterton Lakes, Alberta</td>
<td>1895</td>
<td>525.8</td>
<td>203.0</td>
</tr>
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<td>5) Jasper, Alberta</td>
<td>1907</td>
<td>10,878.0</td>
<td>4,200.0</td>
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<tr>
<td>6) Elk Island, Alberta</td>
<td>1913</td>
<td>194.3</td>
<td>75.0</td>
</tr>
<tr>
<td>7) Mount Revelstoke, B.C.</td>
<td>1914</td>
<td>262.6</td>
<td>101.4</td>
</tr>
<tr>
<td>8) St. Lawrence Islands, Ont.</td>
<td>1914</td>
<td>0.8</td>
<td>0.3</td>
</tr>
<tr>
<td>9) Point Pelee, Ontario</td>
<td>1918</td>
<td>15.5</td>
<td>6.0</td>
</tr>
<tr>
<td>10) Kootenay, British Columbia</td>
<td>1920</td>
<td>1,406.4</td>
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<td>11) Wood Buffalo, Alta., N.W.T.</td>
<td>1922</td>
<td>44,807.0</td>
<td>17,300.0</td>
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<td>12) Prince Albert, Saskatchewan</td>
<td>1927</td>
<td>3,874.6</td>
<td>1,496.0</td>
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<td>13) Riding Mountain, Manitoba</td>
<td>1929</td>
<td>2,975.9</td>
<td>1,149.0</td>
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<td>14) Georgian Bay Islands, Ont.</td>
<td>1929</td>
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<td>5.5</td>
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<td>15) Cape Breton Highlands, N.S.</td>
<td>1936</td>
<td>950.5</td>
<td>367.0</td>
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<td>16) Prince Edward Island, P.E.I.</td>
<td>1937</td>
<td>25.9</td>
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<td>17) Fundy, New Brunswick</td>
<td>1948</td>
<td>205.9</td>
<td>79.5</td>
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<td>18) Terra Nova, Newfoundland</td>
<td>1957</td>
<td>396.5</td>
<td>153.0</td>
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<tr>
<td>19) Pacific Rim, B.C. (land &amp; water)</td>
<td>1970/1987**</td>
<td>499.6*</td>
<td>192.8*</td>
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<td>20) Gros Morne, Newfoundland</td>
<td>1973</td>
<td>1,942.5*</td>
<td>750.0*</td>
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<td>21) Kejimkujik, Nova Scotia</td>
<td>1974</td>
<td>381.5</td>
<td>147.3</td>
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<td>22) Forillon, Quebec</td>
<td>1974</td>
<td>240.4</td>
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<td>1976</td>
<td>22,015.0</td>
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<td>1976</td>
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<td>25) Auyuittuq, N.W.T. (R)</td>
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<td>26) La Mauricie, Quebec</td>
<td>1977</td>
<td>543.9</td>
<td>210.0</td>
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<tr>
<td>27) Pukaskwa, Ontario</td>
<td>1978</td>
<td>1,877.8*</td>
<td>725.0*</td>
</tr>
<tr>
<td>28) Kouchibougouac, New Brunswick</td>
<td>1979</td>
<td>238.8</td>
<td>92.2</td>
</tr>
<tr>
<td>29) Grasslands, Saskatchewan</td>
<td>1981/1988*</td>
<td>906.5*</td>
<td>350.0*</td>
</tr>
<tr>
<td>30) Ellesmere Island (R)</td>
<td>1982</td>
<td>39,500.0</td>
<td>15,251.0</td>
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<td>31) Mingan Archipelago, Quebec (R)</td>
<td>1984</td>
<td>150.7</td>
<td>58.2</td>
</tr>
<tr>
<td>32) Northern Yukon, Yukon</td>
<td>1984</td>
<td>10,168.4</td>
<td>3,926.0</td>
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<tr>
<td>33) Bruce Peninsula (land &amp; water)</td>
<td>1987</td>
<td>262.5*</td>
<td>97.5*</td>
</tr>
<tr>
<td>34) Fathom Five Marine Park</td>
<td>1987</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>35) South Moresby (R) (land only)</td>
<td>1988</td>
<td>1,470.4*</td>
<td>567.7*</td>
</tr>
</tbody>
</table>

** TOTALS **  
182,272.1  
70,375.3

---

- Lands not yet scheduled under the National Parks Act.
- Dates of initial and revised federal-provincial agreements.

BACKGROUND

Policies which have shaped the development of Parks and which guide the agency's current emphasis on preservation in terrestrial parks, conservation in marine parks and appropriate use in both types of parks, have evolved over the last century as national needs became recognized. Parks' genealogy and transition from multiple use to an approach where preservation and conservation of resources are the primary concern and essential rationale for the service can be traced to the establishment of a federal reserve adjacent to the Banff Hot Springs in 1885.

During the first 25 years of the Parks Service's evolution, there was a national need for areas that could "...produce maximum dollar return to the country from resource exploitation and tourist travel ..." (Turner and Rees, 1973:32). However, J.B. Harkin, the first Commissioner of National Parks (1911-1936), felt that future success of the fledgling parks' program required a mandate that included both preservation and visitor use. Harkin remarked that without an awareness and appropriate use of parks, it would be impossible for the agency to generate sufficient political support and funds to expand the system (Nelson, 1982:47). Several different pieces of legislation and Orders-in-Council were used between 1886 and 1930 to establish 14 other parks, but it was not until the passage of the National Parks Act (1930) that there was an official public announcement of the agency's dual mandate of preservation and use.

Some of Parks' responsibilities have been described in the National Parks Act and its revisions, (Canada, 1930, 1970 amended 1974), Bill C-30, (Canada, 1988), and parks' policy. Some have been added by Orders-in-Council, some are the results of international agreements, treaties and understandings, and some have come about as solutions to problems. In some cases (e.g. the Parks Canada Policy of 1979 and the National Marine Parks Policy of 1986) policies have been explicitly stated, in other cases they have arisen through serendipity.

Over the past 20 years, there have been numerous requests and proposals by the Auditor General of Canada, internal functional reviews of the agency, field managers (in particular Interpretation Services) and environmental non-governmental organizations to better define park visitor experiences, settings for these experiences and approaches to communicate Parks' critical role as flagship of the nation's effort to preserve and conserve our heritage. Balancing the tension between the resource and the user during the late nineteenth century and into the late 60's was accomplished in the Canadian Parks Service by focusing research, planning and management efforts on the resource base. This included conducting an inventory of the biotic, abiotic and cultural attributes of an area to identify the "capability and capacity" for the resource. This inventory was then used to designate areas within a park or historic site for preservation and use. Plans developed in this era were concerned almost exclusively with the resource, infrastructure and location of facilities in the park.
As Canada moved into the post-war and the environmental decades, it became increasingly apparent that the linear, comprehensive, rational planning model used by Parks increased dissatisfaction among a wide range of publics. Park proposals in eastern Canada were turned down by provinces. Customary users (Dasmann, 1974) and stakeholders (Lerner, 1986) repeatedly asked that they be able to review agency information, studies and decisions in plans before decisions were made. Expropriation, regional integration, and social and economic impact were identified by the Auditor General and LaForest and Roy (1981) as areas within parks planning and management that were neither fully explained to the public nor effectively integrated in decision processes.

While social/political factors were informally recognized by Parks Canada as one of the most important criteria in establishing a park, these factors were generally felt not to be an integral component of park planning and management.

The comprehensive rational planning model (Figure 1) used to develop these plans, seemed increasingly unable to provide management with an understanding of how the agency should define the relationship between social and biophysical systems and to analyze the effects of alternative park management and planning scenarios.

More important, interdependence, cooperation, mutual learning and trust, four of the most important criteria for continued preservation and conservation of protected areas were not explicitly acknowledged as part of building a vision for a park. Interdependence occurs in situations involving regulatory communities (agencies) and regulated communities (public and private customary users and stakeholders) where both an agency and different groups are linked functionally and have the opportunity to reward and punish each other's behaviours (Axelrod, 1984).

According to Axelrod, both regulators and regulated will usually work toward a cooperative style of planning and management provided the cooperation increases meaningful exchanges between the involved actors.

An example of interdependence and mutual learning that occurred in the 1960's and 1970's was the perceived lack of public involvement in the development of Parks' plans, culminating in the public outcry related to the Village Lake Louise proposal in 1972. Confusion about how the public was to be involved in developing plans for parks, and the appearance of some plans that seemed to contain decisions about direction related to preservation and use, created turbulent situations and what some groups saw as unpredictable changes in future parks management.

In 1978, after a decade of difficulties during public hearings on park planning, Parks Canada released guidelines on public participation in management planning (Olson, 1976; Hoole, 1976 and Gougeon, 1985). These guidelines operationalized one of the earlier-noted foundations of continued preservation or conservation of an area: interdependence - shared understandings of acceptable behaviour of the
Figure 1

regulator and the regulated. Public consultation (Parks Canada, 1979) was formalized by including a statement on public involvement in Parks' strategic activities in the Parks Canada Policy (Parks Canada, 1980).

To encourage the development of both public and agency understanding of the management of natural and cultural resources at a site, Parks developed a problem solving process - Natural Resource Management Process (Parks Canada, 1978) - but the companion piece related to formalizing an understanding of the interdependence between people and the resource - the Visitor Activity Management Process - did not receive formal attention for almost a decade. Thus, identifying an agency approach to identify visitor needs/expectations, select appropriate visitor opportunities, communicate with the public, manage rather than regulate visitor settings and meet diverse needs of the public within a series of zones or settings within and external to the park, continued to be considered within a planning system whose major input was site-specific natural and cultural resource information.

It is only recently within the Canadian Parks Service that data related to the care of biological and cultural resources have begun to be combined with information about the dimensions and nature of human use, to build preservation and use decisions within systems and management plans.

Part of the driving force behind the emerging role of social science in Parks planning and management occurred in 1973 with the establishment of the Federal Environmental Assessment and Review Process and several reviews of Parks Canada's activities by the Auditor General of Canada. These reviews noted that Parks Canada was not required to take into account the full range of implications of their decisions related to system and management planning. Full range of implications included the need to implement environmental, social and economic assessment and impact reviews in all planning and management activities.

Another report of the Auditor General and the Lambert Commission (Canada, 1979), targeted inefficient allocation of resources, lack of evaluation and the need for better financial management as keys to controlling government expenditures. Indirect reinforcement of the aforementioned recommendations had surfaced three years earlier in 1976 when Cabinet and Treasury Board introduced a Policy and Expenditure Management System (PEMS) (Canada, 1976). PEMS required government departments to thoroughly assess and regularly evaluate resourcing requirements related to policy and program changes.

In response to these initiatives and other concerns, the 1979 National Parks Policy and the 1986 National Marine Parks Policy included sections directing the agency to review potential impacts of unit plans and development proposals; to enhance the Parks Service's ability to apply a broad range of social science research methods, techniques and information in support of planning and management.
functions; and to develop a sensitivity to park-related regional socio-economic concerns.

This was followed in 1983 by a management directive within Parks (Socio-Economic Analysis in Management Plans, Parks Canada, 1983) that formally identified the general roles and responsibilities of the socio-economic function in park selection, establishment, planning and management.

During the same period, a Canadian Federal-Provincial Task Force on Interpretation (Federal Provincial Parks Conference, 1975) concluded that parks and heritage agencies could more effectively present both interpretation and public education programs to target audiences. The report called for interpreters to use communication theory and marketing approaches to convey resource management issues and guidelines.

In addition, there was pressure by government to reduce spending on program and person year expenditures related to the environment. Some politicians noted that Canada's parks and heritage areas were "our best kept secret" while others asked if current program expenditures could be directed more effectively.

The need for a "decision building framework" that would better integrate a "human face" in heritage area management and planning was first noted publicly by Parks Canada in 1975 at a federal-provincial parks conference. After listening to the final report of the Federal-Provincial Task Force on Interpretation, Steve Kuhn, then the Director General of National Parks, provided attendees with a vision of Parks planning and management that began to depart from traditional approaches of the past. Central to that vision was the need to make better decisions regarding visitors. This direction from a senior manager was followed up during the next six years by internal functional reviews and task forces, a senior management perspective (the Brooks Report, 1980), approximately 120 demonstration projects in three of Parks' five regions, undergraduate and graduate theses research, numerous communications and reviews of US public land agency planning and management frameworks, and conversations with representatives from Canadian and American universities and heritage agency scientists and administrators.

Development of a model that was approved by Parks' Program Management Committee in 1981, led to publication of two draft documents. The Management Process for Visitor Activities [VAMP] released in 1985 describes a conceptual or thought process that helps define the range of data needed at each stage of systems and management planning and why the data are required (Parks Canada, 1985 and Figure 2). The role of management direction, decision points and management products were defined to illustrate the relationship with management planning. VAMP was also conceived to encourage decision building and increased involvement of individuals from a variety of branches and levels within the Canadian Parks Service.
Figure 2

**GENERIC REPRESENTATION OF VAMP**

**DATA BASE**

**REGIONAL SITUATION**
relationship of park and the region re:
- activities
- services
- facilities
in the region

**EXISTING PARK SITUATION**
- activities
- services
- facilities
- market/use

**PARK ACTIVITY SETTING OPPORTUNITY**
- activity
- setting needs
- market
- service needs

**APPROPRIATE VISITOR ACTIVITIES**
- activity
- setting needs
- market
- service needs

**VISITOR ACTIVITY OBJECTIVES**

**TERMS OF REFERENCE**

**VISITOR ISSUE IDENTIFICATION**
Factors:
- resource opportunities and limitations
- visitor activity mix
- market
- services needed
- regional role

**VISITOR ISSUES**
- e.g.
  - (in)appropriate activities
  - lack of visitors
  - too many services
  - missing data
  - unused resource
  - theme missing
  - resource use impact

**VISITOR ISSUES ANALYSIS**
Factors:
- activity/service policy
- park objectives
- impact on resources/visitors
- target market selection
- regional socio-economic impact
- etc.

**VISITOR ACTIVITY/SERVICE OPTIONS**
- e.g. changes to type quantity and/or quality of:
  - visitor activities
  - activity settings/areas
  - services
  - regional role/support

**OPTIONS ANALYSIS**
Factors:
- policy
- priorities
- restraint
- $ and FYs

**RECOMMENDATION AND APPROVAL OF ACTIVITY/SERVICE/EQUIPMENT PLAN**

**IMPLEMENTATION**

**MANAGEMENT DIRECTION**
- National Parks Act
- National Parks Policy
- Parks Canada Strategic and Operational Plans
- Parks Canada Management Directives
- Existing Agreements
- Regional Service Role
- Etc.

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The VAMP Process
Regional and national orientation and training followed in conjunction with applications of the model and process during management planning throughout 1985-87. Evaluation of the initial integration of VAMP during management planning in 1986 and 1987 revealed that it would be more appropriate to concentrate on the development of service plans (an integration of interpretation, visitor services and public safety) in implementing VAMP at this time. In 1986, Parks released a "hands-on guideline" to service planning entitled Getting Started. After workshops, review and applications two successive revisions were developed (Canadian Parks Service, 1988). National and regional orientation and training followed. The last national training course is planned for 1989, however several regional courses will continue over the next few years.

VAMP and its use in system, management and service planning recognizes and formalizes the need and importance of social science information and natural and cultural data for assessing any action in protected areas. As a framework it represents a way of thinking - a thought process about protected areas and the relationship between diversity of their visitors; concessionaires; inholders; adjacent landowners; communities and the Parks Service.

The question is not so much who or what was in command of this increasing need for a flexible pro-active conceptual framework that integrated social science data and data about the natural and cultural environment into a protected area planning and management framework (see also Tayler, this volume). What is important is that the "Visitor Activity Management Process" emerged and was gradually developed, field tested and implemented primarily from within the organization. VAMP represents a penetration of the mind of the Canadian Parks Service that has begun to expand Parks awareness of the limitations of sole reliance on a "greening approach to environmental management" towards an approach that integrates social, economic and environmental issues in its planning and management activities.

THE VISITOR ACTIVITY MANAGEMENT PROCESS

The Visitor Activity Management Process or VAMP is a pro-active, flexible, conceptual framework that contributes to decision building related to the planning, development and operation of park-related services and facilities (Figure 3). It includes an assessment of regional integration of a park or heritage site, systematic identification of visitors, evaluation of visitor market potential, and identification of interpretive and educational opportunities for the public to understand, safely enjoy and appreciate heritage. The framework was developed to contribute to all five park management contexts: park establishment; new park management planning; established park planning and plan review; facility development and operation (Figure 3). The framework or thought process uses both natural and social science information to build decisions about access and use of a protected area. Finally, the
VAMP framework incorporates a format for evaluating the effectiveness in meeting public needs.

VAMP is not a cookbook or recipe. The process uses an iterative approach that requires information from resource inventories, user studies (beginning with a review of existing formal and informal data), the knowledge of park-based interpreters and visitor services personnel, and support from social scientists within and external to the agency. It is not a data-driven model, but is a problem and issue-driven model that asks planners and managers to set objectives, be explicit about assumptions, acknowledge data gaps, be realistic in terms of what can be changed through downscaling and reinvestment, and think beyond the boundaries of the park or site.

Within the Canadian Parks Service, a park, historic site or historic canal is generally acknowledged as a place of special meaning for visitors. People come to the area and engage in a range of recreational and leisure activities which may lead to a better understanding, and appreciation of the area's heritage. A manager of a park or historic site can relate to developing an understanding of visitor activities, because many of their management issues seem to be related to people. Thus, Parks initially developed the concept of VAMP around "what people do in a park" - activities - an approach that most managers felt comfortable with. Although many of the ideas in VAMP are related to some of the concepts in ROS (i.e. the planner and manager's need to understand relationships between settings, experiences and activities), it was felt that VAMP would receive support within the agency if it initially concentrated on what the agency knew about its various publics and then on developing an understanding of visitors' needs and expectations related to activities, services and facilities - all of which are not the responsibility of Parks. Infusion of additional social science information into decision making was not to be represented by a "data hungry process." However, the long-term goal is to have planners and managers think of natural or historic areas not just as spaces - natural ecosystems - but as places that are important heritage opportunities/experiences for visitors. In other words, VAMP's definition of the ecology of a protected area includes natural and cultural resources as well as people.

As noted earlier, the Visitor Activity Management Process initially relies on social and natural science information collected during systems and management planning of a park and on data collected by other agencies, organizations and institutions with an interest in the regional context of the park. This formal knowledge, along with the informal knowledge within the agency, visitors, and customary users is used to respond to questions about who comes to a site, what is bringing people there as well as keeping them away, and what, when and how services and facilities should be provided (Parks Canada, 1985; Payne, Graham and Nilsen, 1986; Nilsen, 1987; Graham, Payne and Nilsen, 1988 and Environment Canada, Canadian Parks Service, 1988).
However, what is understood through formal knowledge about Canadian protected area visitors, other than attendance, is currently very limited. Knowledge of where they go, what they do, the relationship between services offered, visitors' use of services and visitor satisfaction is somewhat tentative.

This is not to say that the Socio-Economic Branch of Parks has not developed and implemented sophisticated research and models since the Canadian Outdoor Recreation Demand Studies (CORDS). Requirements from Treasury Board and Management Board of Cabinet for social science information during systems planning and park establishment have been met and several models (e.g. Local Economic Impact and the Life Cycle Costing models) and data management systems (e.g. PURDS - see Beaman and Grimm, this volume) are being developed, field tested and starting to be used to support management planning and investment decisions (deLang and Horne, 1988). There is an excellent source of experience, capability and knowledge within the agency, but until Parks suggested the VAMP model and a process to guide visitor research during park planning and management studies, most managers felt that the applicability gap was too large for social science research to provide guidance during planning and management activities.

VAMP can also be viewed initially as an applied research framework - a way of thinking - that will gradually increase the professionalization in the Canadian Parks Service's approach to visitor management and eventually lead to implementation of information systems that combine both natural and social science data in developing additions to the system and building management plans.

Figure 3 illustrates the Canadian Parks Service's current management process. Planning is depicted in the centre as a spine, with two supporting management processes: one provides the planner/manager with information about natural resources or natural science data from resource management studies and plans, while the other provides analysis and information to identify and determine social and economic factors related to the identification, selection, planning and management of Canadian Parks Service historic and natural areas.

The concept of management in both VAMP and the natural resource management process refers to managing the tension between the resource and the user. Thus VAMP is not a process to justify random development at a site; rather it is a framework, an aid both to understanding visitor behaviour and, where necessary to modifying it. The process when applied has not perpetuated the status quo or risked capital and person year investment.

The Visitor Activity Management Process directs the planner and manager to begin by considering the implications of including an understanding of people in protected-area planning and management.
PARK MANAGEMENT PROCESS

Natural and Cultural Resource Management Processes Input

- Preliminary Resource Evaluation

Resource Management Studies and Plans

PARK PLANNING PROCESS

- PARK SYSTEM PLAN

PARK MANAGEMENT PLAN

- SUB-ACTIVITY/AREA PLANS

- FACILITY/SITE PLANS

PARK OPERATIONS
- Maintenance
- Service Offer
- Functional Review - monitoring/evaluation

Visitor Activity Management Process (VAMP) Input

- Preliminary Visitor Activity Evaluation

Visitor Activity Concept

- Visitor Activity Concept

PARK SERVICE PLAN

- Media/Design and Development Plans

VAMP DATA BASE

Figure 3


Adapted from: Payne, Graham and Nilsen, 1986.
The questions that guide the process include: (1) Who are the parks current and potential visitors? (2) What is the current situation re: use of an area [who comes, what do they do, and how does this information relate to visitor needs, expectations and demands for that site and its related capabilities?] (3) What should Parks be offering at a site and how should that level of service be adjusted in terms of existing policy and current and projected use? (4) Are visitors satisfied with their use of a site?

During systems planning it is especially important to identify expectations and needs of those currently using an area and those who will be attracted to the new park. This information should then be combined with the preliminary identification of the proposed site's heritage values, purpose and objectives as the presence or absence of this data may affect later funding and planning decisions. A brief description of potential opportunities the proposed site presents (for visitors to experience their heritage and possible range of activities, location conditions and size of visitor markets, and socio-economic impacts of the proposed heritage area) should also be included during the systems planning process. To date this is the least developed portion of VAMP.

Decisions about the provision of public opportunities made through management planning or plan review relate to the purpose and role of the park, type and location of appropriate activities, the existing and future market for these activities, and the relationship of what the park is offering to what is offered within the region.

During service planning, the planner and manager are directed to focus attention on what will happen in the park's immediate short-term future. This is accomplished by translating the conceptual direction of the Park Management Plan into a detailed offer of services to the public - a service plan. Considerable effort during service planning is dedicated to identifying the need for research related to refinement and adjustments to the visitor activity concept of the existing park management plan. What are the targeted markets or visitor activity groups? What are their needs/expectations for park-related activities and services? What basic levels of service should Parks provide? What types of delivery and support of these activities should Parks provide or should the agency encourage participation by partners, cooperating associations or the private sector? Service plans also include a section that describes direction with respect to multi-year operational funding for the park. This linkage is one of the important keys to implementing all plan decisions.

Strategic issues related to management planning identified during the development of the service plan are referenced for subsequent management plan review.

At present, application of the thought process in VAMP has been limited in systems and management planning. The development of service plans within the agency (see Tayler and Ashley, this volume) and a National VAMP Implementation
Towards Serving Visitors and Managing Our Resources

Strategy (see Sealey, this volume) are encouraging signs that visitor management is beginning to emerge as an important and distinct contributor to protected-area planning and to the establishment of management guidelines for parks and sites within Parks’ jurisdiction. Service plans and park operations projects developed to date have illustrated that VAMP is capable of suggesting trade-offs between recreational opportunities and environmental and public needs (see Reynolds, this volume and deLang and Horne, 1988). Linkages to project planning depend on a clear definition of the relationship between the service plan and the multi-year operational plan (MYOP) for the park or site being described in the service plan document.

The Visitor Activity Management Process is still in an evolutionary stage of its development and there are numerous issues yet to be resolved, but there is an evolving experience and series of products that represent an important contribution to park and protected-area management. It is too early to suggest an emerging paradigm, but it is possible to suggest some of the issues related to VAMP which Parks must resolve in the next five years. I have selected seven to offer a brief commentary.

Visitor Management and Heritage Areas: Does it Make A Difference?

Today and in the future there will be more rapid change than ever before. Parks, like other human services, must come to grips with these changes. Most often in the past when improvements in protected-area management were needed, requirements for more research on the flora and fauna were highlighted. Less often did we recognize that what was also needed was to understand more about the human-resource interactions. The Visitor Activity Management Process offers Parks a creative window of opportunity to make a difference in developing alternatives to manage the tension between the resource and the user. Managers will have to be shown that the process can contribute to efficient and effective practices that benefit the park or site, the visitor, stakeholder, and customary user. To answer this question, Parks will have to continue to circulate, review and monitor park service plans and encourage staff and researchers to think of visitor management and planning, not as an end point, but as a continuing thought process. Discussions related to VAMP should continue to be focused on alternative approaches, refinements and paradigm development.

VAMP, in its current applications, has already demonstrated a potential to aid in our understanding of protected-area planning and management as much as - and in most cases more than - traditional approaches. Its built-in, ongoing evaluation process can serve as a source of suggestions, additions and revisions to VAMP, management planning, and the natural resource management process.

Supporting use of VAMP within all five management contexts of the Parks Service is an important beginning. Remembering that it is a flexible conceptual
frame for building creative decisions related to: use of settings; communication; constituency building; understanding interdependence; and issues of equity and monitoring, requires the Canadian Parks Service to recognize that protected-area planning and management today means the agency must move beyond regulating use and educating the visitor. To accomplish this Parks will have to both increase the caps on current visitor related planning research in combination with joint research initiatives with universities, cooperating associations and other partners.

**VAMP as a Decision Building Framework in an Era and Environment of Uncertainty**

The Parks Service is charged with the responsibility of planning their sites "in perpetuity." However, the degree of uncertainty increases dramatically when one begins to look beyond a short time frame of two to three years. In fact, uncertainty is a feature of most ecological systems, furthermore, the act of management alters relationships within these systems (Walters and Hilborn, 1978). Most of our research about natural ecosystems has given us only a partial observation of system functions and most of these studies have not included the socio-economic dynamics that are inherent in park-related resource management.

Because our present understanding of natural systems is very limited, it is difficult to explain completely how an ecological system functions. This was further complicated by the fact that computer capacity to access and use large data sets to model and identify persistent cues or indicators was often only available on a few centrally located mainframes. However, the personal computer and fourth generation computer languages does make it easier for park professionals to build a data base, monitor the information, identify social and bio-indicators and acquire a quick in-house turn around time for research at the regional office and park level (see Beaman and Grimm, this volume).

Developing long-term site-specific information and analyzing historic experience is one of the strengths of VAMP. Unique analytic tools to substantiate and monitor proposed in-park or regional development and the level of funding for program initiatives are being developed by the Evaluation and Analysis Division of the Socio-Economic Branch of Parks and, where expertise and equipment exist, are starting to be used at the park level (see Grimm and Beaman, this volume and deLang and Horne, 1988).

VAMP is a framework that can help planners and managers select social science research methods and techniques to substantiate decisions related to the appropriate mix of opportunities, activities, services and facilities at a site. The framework quickly identifies strengths and weaknesses in the data and suggests initial approaches to data collection that long-range planning requires. More important, the framework institutionalizes development of a very rich data base that over time will enhance decision building under uncertainty.
Demonstrating visitor demand, providing reliable estimates of peak use, analyzing target markets and their needs and abilities, as well as reviewing life-cycle costs of a project are all currently possible within the VAMP framework. Thus VAMP, when fully implemented within the Canadian Parks Service should aid in developing a broader consensus about what the major uncertainties are and how managers may best try to build management decisions about the area.

What remains to be seen is the extent of implementation of the process and financial and person year commitment to VAMP.

**Opportunity Assessment**

When the VAMP model was developed, it was acknowledged that opportunity assessment was one of the important components of the framework. Some described it as a black box. Others felt that because opportunity assessment was not clearly defined and operationalized, VAMP would do nothing more than reinforce the status quo. A few expressed the opinion that the framework had no capability to review future potentials for a park.

Experience at Revelstoke-Glacier, Fundy, Terra Nova and Kootenay (see Reynolds, this volume and deLang and Horne, 1988 and 1989 and Environment Canada Parks, 1989) would tend to contradict this belief. In all three cases, VAMP was able to identify the need to downscale infrastructure and investment in one camping opportunity and level of service and shift investment to where better experiences could be offered, and future needs could best be met. VAMP identified enhanced current and future packages of opportunities in the front country and the region surrounding the parks.

In addition to the experience gained at Revelstoke-Glacier, there was another important spinoff. To those involved in the project, there was an understanding about its direction and product that made sense. To an objective outsider, there still seemed to be the need to look again at opportunity assessment. However, the decision building process encouraged by VAMP developed increased communication within the planning group, shared resourcing and a better response to managing the tension between the resource and the user than anything that had previously been attempted.

Many of us who worked on the evolution of VAMP were aware of the visitor management research related to ROS (see Clark, this volume), VIM (see Graefe, this volume) and LAC (see McCool, this volume) and some of the content of the presentations on recreation habitat (see Schreyer, Knopf and Clark, this volume). LAC, VIM and ROS offer possibilities to define and operationalize opportunity assessment within VAMP. The identification of a range of indicators from experience with all four of the models as well as suggestions for improved future applications of VAMP, ROS, LAC and VIM, may be accomplished through a future
workshop or a cooperative demonstration project utilizing all four management frameworks.

**VAMP and Marketing**

In the early development of the VAMP model, many recognized that marketing tools and techniques could strengthen the understanding of current and future client groups and help build appropriate bridges to recreation and tourism programs.

However, there is a need to distinguish between service and product marketing and also between marketing and the broader efforts of social science in protected area related research. While marketing may involve some potential overlap with the broader focus of visitor management research, it is important to note that there is a difference between marketing research, as such and the mandated and applied efforts by park social scientists. Marketing research cannot replace social science initiatives prescribed by Parks policy, Treasury Board guidelines and social, economic and environmental assessment and review process requirements. For example special events and festivals related to parks require good evaluation and impact related research in order to understand both the short term and long term benefits and costs related to this strategy of constituency building.

From opinion in the literature, comments among heritage agencies and environmental groups it is possible to state that all of us are divided on whether a product or service orientation to marketing is appropriate for protected area agencies. A product orientation connotes selling, profit, revenue generation, socio and demographic and geographic segmentation - an attempt to make heritage areas appeal to everyone. Service marketing places its emphasis on visitors and their experiences. Some of the exchanges in this perspective are intangible (e.g. the conversation between a visitor and interpreter at a visitor’s reception centre) while others are more concrete. In the VAMP model, services are reviewed, discussed with the public and approved in conjunction with direction in policy. In the product context services are directed by profits, revenue potential and put through.

Some of the literature has argued that the product approach ignores two important elements - process and people - and that theory in the field of not for profit marketing and protected areas is currently evolving to a bottom up approach using real data to guide conceptual development (Gummesson, 1987). The top down force fitted approach that relies only on existing theoretical formulations may lead to: loss of constituents; erosion of community based development opportunities; lack of interest in participation on advisory committees and increased tension within the agency between those who are attempting to preserve or conserve the resource and those charged with managing visitors.

Emerging research in Europe, where some sectors of the economy have moved to a service orientation, are beginning to evolve approaches and concepts that are
much better than the North American experience with its emphasis on television and large consumer oriented markets. Parks and heritage agencies should carefully monitor the European literature and particularly its approach to conceptual development, implementation and evaluation (Gronroos and Gummesson, 1985).

VAMP itself is a process that was developed to be integrated with existing decision processes within the Canadian Parks Service. People segmented into activity groups are one of the focuses of VAMP. With input from the new marketing initiative in Parks, the VAMP framework can become more efficient and effective in decisions related to access and use of protected areas. There is, however, a need to use social science theory to monitor, evaluate and guide marketing initiatives within protected area agencies.

**VAMP as a Problem and Issue Driven Model**

In giving its approval to VAMP, senior management within Parks directed that the process should not be data driven; rather, it should be problem and issue driven. This does not mean that information cannot be and should not be collected to develop a data base, but that it should encourage the planner and management to begin by identifying what already exists, and how data can be effectively and efficiently utilized from other national studies, regional studies and agencies (an example of this is The Canada-US Foreign Tourism, Attitudes and Motivation Studies; see Smith and O’Leary, this volume).

The VAMP framework as an organizational thought process also has the potential to help standardize social science data collection, beginning with park selection and extending through to management planning and monitoring of day-to-day management of the park. Careful assessment of existing qualitative and quantitative data and formal and informal knowledge enables managers and planners to identify data gaps and provide specific direction for subsequent research and planning.

Although secondary analysis of existing research is one of the strengths of VAMP, as it maximizes investment in existing research and moves everyone away from single-shot, ad hoc studies of the past, it has yet to be implemented regularly in VAMP applications.

**VAMP and Experiential and Informal Knowledge**

VAMP encourages the recording and use of experiential and informal knowledge of park staff, stakeholders, and customary users in developing a situation analysis of current and potential sites and visitors. As an example, if the Canadian Parks Service hopes to maintain and develop trusting relationships with native peoples and local populations, the identification and development of two-way communication networks is essential to the long-term success of a protected area. This cannot be
established with current public participation programs, which tend to define more clearly the image of Parks planning as an upward aggregation of responsibility and authority, increasingly removed from the resource, users and affected communities (see Shands, this volume).

VAMP, if used appropriately to profile stakeholders and customary users and document their informal knowledge during area identification and management planning, offers the agency a unique opportunity to exchange data and preferences about a site before potential areas are designated or zoned. Trust, communication channels and cooperation may be enhanced by this step through VAMP. For example, the St. Lawrence Islands stakeholder profiling, developed during service planning, identified several opportunities for the park to work with regional organizations and agencies in developing partnerships, education programs, and an increased general awareness of the park as a unique heritage resource within the region.

VAMP's Linkages to Interpretation and Environmental Education

Recent research presented at the International Congress of Comparative Psychology (1988) in Australia indicated that there is not one public to whom conservation messages should be directed, but many different publics. There seemed to be some consensus on some urban beliefs and attitudes, but they are extremely different from the pattern identified among those who typically reside in rural areas.

Most of our current interpretive planning begins with the decision to designate a park, equivalent reserve, or protected area. The agency then decides on themes and messages related to the site's or area's natural and/or cultural phenomena with limited or minimal awareness of local and visitor behaviours, beliefs, knowledge, attitudes, misconceptions and expectations. Direction is set and investments are made in visitor centres, exhibits and messages that may not relate to the various publics attracted. This lack of formative visitor evaluation research also limits further evaluation and audience analysis research.

Tilden reminded us to "provoke, reveal and relate", but not to think that if everyone has the same information as the agency does, that people will make the same decisions the agency does and act just as wisely.

It is somewhat disquieting to see interpretive programs developing the "right information" to produce the "correct" information and set of beliefs for everybody, with limited or very little information about audiences' knowledge and beliefs. VAMP's recommended pro-active approach to profiling visitor activity groups, suggesting target messages and to evaluating during systems planning and before the development and design of interpretive messages and programs, offers much hope for more effective interpretation and environmental education programs provided.
Towards Serving Visitors and Managing Our Resources

system and management planners, managers and site superintendents are committed
to implementing the process.

Some Concluding Thoughts

(i) The integration of informal and formal knowledge

To encourage acceptance of VAMP and facilitate its use within the agency, the
process has drawn heavily on existing knowledge within the agency. However,
customary users and stakeholders have had only extremely limited input to date in
this process. Reluctance, lack of resources and commitment to this aspect of VAMP
could jeopardize implementation of new parks and protected areas' or existing sites' long term sustainability. Successful conservation/preservation of areas depends on maintaining both the psychic and environmental habitats of indigenous and non-
indigenous customary users. Documenting how indigenous people and customary
users manage and perceive their relationship to a site's natural and cultural
environment in time and space fosters mutual respect for both informal knowledge
and agency formal knowledge. By creating a type of reciprocal awareness it may be possible to better articulate problems and develop combined strategies to mitigate and avoid major conflicts.

Pilot projects and research that identify the potential combined contribution of informal knowledge and formal knowledge to park planning and management should be implemented.

(ii) VAMP implementation to date could benefit from more comparative work between sites within the Canadian Parks Service and across other country's protected areas.

I think it will be necessary for all four of the decision frameworks discussed at this workshop to expand their horizons by looking at similarities and differences in their approaches. Attendance at protected areas has gradually risen throughout North America and abroad, and the travel and tourism people have stated that eco-
tourism is one of the fastest growing markets within their industry.

Protected areas have the potential to offer exceedingly rich and varied experiences, but that experience is tied to continued quality of the resource. Carrying capacity has not provided us with an answer, but the decision frameworks highlighted in this workshop have the potential to build better access and use decisions.

However, this potential will only be realized if there is an effort to share and support each others' research initiatives, data, and analyses.
In a political era where cost effectiveness and efficiency will continue to dominate the headlines, managers will need to recognize that data is a common resource that needs to be shared and analyzed by other agencies, groups, and institutions. To some managers this is a frightening possibility, but the need to embrace the concept of pooled expertise, information and personnel will become immediately apparent within the next few years. The VAMP framework has a potential contribution to make in this area.

(iii) Development of a new type of protected area planner/manager

Walter Lusigi of IUCN has suggested in a recent paper (1986:4) that a need exists for developing a new type of protected area planner and manager. All of the decision frameworks use information from traditional disciplines like forestry, ecology, geology, history, and social sciences. However, what educational institutions are currently graduating as a potential planner or manager is one who is educated about the resource at their feet with limited understanding of social science and man-land relationships (see also Graham and Payne, 1987).

The new protected-area planner and manager will need to be a person whose broad education places equal emphasis on both the natural and social sciences. As Lusigi has stated, "...it is doubtful if this new type of manager can come out of existing institutions, although many could claim to be doing exactly what is required."

These are only three of the areas needing further development. There are many others, some of which include developing measures of benefits; determining how to lump and split each park's resources, opportunities and activities; determining how to evaluate satisfaction; and finding out how to develop instruments which would consistently build information systems across a parks system while developing meaningful criteria for segmenting park visitors.

The task of managing protected areas in perpetuity is formidable. Nevertheless it is one that heritage agencies have been given the mandate to undertake. In implementing the concept of heritage protection politicians, bureaucrats, scientists, the private sector and environmental non-governmental groups all have important roles to play. The agency challenge is to continue to develop effective mechanisms for involving these groups, their resources and knowledge in support of protected area management. All four of the decision frameworks highlighted at this workshop offer considerable opportunity in this area, if heritage agencies are willing to implement them.

CONCLUSION

The thrust of this paper at the outset was that both social and natural science information are necessary requirements in heritage area-planning and management and that both have a future, and that both, in a real sense, are now interlinked and
necessary to each other. This conclusion leads us to hope that Canada's national protected-area agency has begun to grapple with the need for better integration of social, economic and environmental issues in decision building.

VAMP, like the other decision frameworks discussed at this workshop, is capable of contributing to the mandates of protected area-agencies. Decision frameworks, when implemented, help to 1) identify and define emerging protected-area opportunities and issues, 2) review and assess the consequence of previous approaches to protected-area management, 3) anticipate the consequences of present trends, 4) recommend guidelines and offer suggestions for appropriate programs and measures to prevent and ameliorate undesirable results, 5) encourage sharing of person years and resources, 6) and recast the science and scholarship of protected area management to reflect the importance of transdisciplinary efforts.

The question is how to go forward from here; the answer, I believe, must include further application, comparison and evaluation and development of decision frameworks. Yes, there are issues that have yet to be resolved and the frameworks are being applied and developed. But VAMP has provided Canadian protected-area planners and managers with a pro-active thought process that has the potential to develop better information about customary users, stakeholders, visitors, and non-visitors.

Who are our visitor activity groups? What motivates them to visit protected areas? What beliefs do they have about the agency and its programs? What benefits do they seek from Parks? How should the agency respond to their expressed behaviours, beliefs, knowledge and attitudes? What are the appropriate efficient and effective levels of service, communication and management that should be provided by Parks, the private sector and co-operating associations/partners?

When Canadian park and protected area planners and managers were initially exposed to these questions and the VAMP thought process they reacted with a full spectrum of emotions, ranging from approval and concurrence to disapproval and rejection. This diversity of values and orientations made possible the strength of dialogue that developed within Parks around VAMP. People involved (managers, planners, architects, engineers and social scientists) in VAMP-related projects have begun to assist each other to identify internal and external resources and internalized assumptions that had framed their approaches to protected area management. Some demonstration projects were co-funded by different branches. In these demonstration projects continuous critical analysis of assumptions, commonsense knowledge and management beliefs and behaviours were encouraged. What emerged was a framework that built decisions rather than one that made decisions.

Despite some of the concerns and unanswered questions, VAMP like the other decision frameworks represents an important contribution to pro-actively managing the tension between the resource and the user.
LITERATURE CITED


Towards Serving Visitors and Managing Our Resources


INTRODUCTION

The purpose of this paper is twofold. First, it provides an overview of the objectives of the Park Use-Related Data System (PURDS) and illustrates the benefits to the Canadian Parks Service (CPS). Second, general thrusts which must be addressed for PURDS to be optimally functional are outlined to set the PURDS concept into context.

PARK USE-RELATED DATA SYSTEM (PURDS)

PURDS is a system, the objective of which is to facilitate the collection and analysis of information on visitor use. PURDS encompasses a number of Socio-Economic Branch (SEB) thrusts such as the Economic Models (e.g., Local Economic Impact, Visitor Expenditure Model), the Forecast System, the Attendance System, a Questionnaire Support System, the PURDS Data Model, and the Reporting system. PURDS will eventually be an integrated computerized system providing a simple, logical and concise means by which statistical data (primarily socio-economic) collected by the CPS can be recorded, processed, stored, reported from, or linked to other function data. In fact, it is hoped that PURDS will eventually be an integrated subsystem of a CPS database system.

In freeing itself from its reliance on the manual processing of data, firstly to the use of mainframe and then to micros and DOTS (Departmental Office Technology System), the CPS requires a system such as PURDS. Some of the reasons for this need are summarized below:

1. to make the most effective use of staff;
2. to handle the volume of data that can be captured as part of doing business and that can be used to better meet program objectives;
3. to have a consistent program-wide vocabulary for socio-economic data; and
4. to take advantage of a variety of savings offered by data automation.
By implementing a computerized data system based on a formal data structure or data model, a number of advantages of data automation become apparent. An obvious one is the capability of streamlining data recording. Also, automated processing methods at Field, Region and Headquarters means having increased accessibility to data. Using a standard vocabulary, such as that implicit in the data model, facilitates the transfer and related comparative use of information. A goal is to be able to enter data once as part of operations (i.e. 1-data-capture), such as obtaining various types of information from one process (e.g. pushing cash register buttons). "Gaining" by what we do anyway is the essence of 1-data-capture. We will get more data than we do now, and with less overhead. We will know exactly what is recorded, and since they are in EDP (Electronic Data Processing) form, reap the consequent advantages, including an improved quality of collected data. Furthermore, there will be expanded use of data by various parts of the organization with better managed data; increased effectiveness in operations can follow.

In view of the above, PURDS will meet CPS requirements by

1. providing Field, Region and Headquarters with a flexible system to record, store, process and retrieve park use-related data;

2. allowing data to be accessed quickly and in a cost-effective manner to generate regular and tailored reports or to create data sets for special analysis;

3. reducing the cost of collecting, editing, verifying and storing data;

4. establishing national standard definitions for socio-economic data collected, and standard statements that can be used in specifying the purposes for collecting data;

5. providing a system which will track the receipt of data that are supposed to be collected. The system will provide information on whom data are being collected for and why; and a way of flagging the data that are "suspect". Furthermore, the system will provide for the automatic creation of totals or other calculations (e.g. daily or estimated user hours) and the appropriate storing of these;

6. creating an automatic system to feed and move data between databases at over 100 "major" CPS locations, to enable data collection and reporting to be carried out reliably and cost effectively without using substantial person-year resources; and
7. responding to a variety of users, functions, projects and task forces. Some of these include

a) accommodating the Visitor Activity Management Process (VAMP) and other planning processes' conceptual frameworks and data;
b) serving marketing functions;
c) accommodating fee task force data;
d) accommodating economic model data;
e) linking with Automated Financial Management System (AFMAS) information and facilitating related data capture;
f) linking to the Asset Management Information System (AMIS) to exchange use information affecting asset/facility recapitalization, maintenance or functionality;
g) being compatible with DOTS; and
h) meeting Management Information Framework (MIF) requirements.

III. GENERAL THRUSTS OF PURDS

A. INTRODUCTION

1. Background To PURDS

The following summarizes past, present and future directions taken by the Socio-Economic Branch in the area of data identification and collection.

1967-76: Data were initially collected in an ad hoc fashion by the CPS. Systematic methodology began to evolve for collection, analysis and storage of data. Systematic data collection of a sort began with the park visitor surveys of 1971-73; daily data collection began in 1971 and eventually a statistical reference was first produced for the data from that year.

1976-80: With new requirements for information on parks, a systematic approach to data classification was introduced. Data systems developed independently of each other between 1976 and 1980. The four separate "systems" which developed were a daily data system, an attendance system, an "inter data" system, and a canal data system. For each of the four systems, the purpose was to keep data organized and thus facilitate access to the data.

1979-87: As time went on, it was recognized that the four systems cited above were actually part of a larger data system. In order to integrate data storage and facilitate data analysis, a move began to
integrate the four systems into one and to standardize units of count. The result was the ARC/PARK/SITE database (APSDB).

During this APSDB "era", a variety of attempts were made to better define data, identify prime users of data, and to incorporate themes and objectives into data. However, a lack of EDP technology at the field level and problems with implementation and descriptions of data resulted in each attempt being dropped.

1987-1991: The initiative to describe data more fully in the previous generation was revived because changes in EDP technology facilitated the process. A new Entity Relation Attribute (ERA) database definition was developed whereby elements involved in park use were first identified; a system was developed based on this information - PURDS.

The PURDS system was devised not just to integrate socio-economic data but to further integrate seemingly separate data sets of other functions. As well, there was a concern with types of socio-economic data not previously covered. One consideration was the incorporation of relevant information outside of the park itself (e.g. facilities, services, etc.).

The Park Use Related Data System (PURDS) was begun with the objective of having a usable database structure which is cross-functional and appropriate to different levels of management groups within the organization for regional integration of facilities and services outside the park or offered by the private sector. The PURDS database deals with facility/assets, services, market/visitor types, activities, organizational/functional units, and geographic locations. It also makes provision for recording themes/objectives, documentation, projects, and natural resources. Also, PURDS was developed to address problems with units of count. In PURDS, counting must address what is counted (i.e. maximum number, unit cost), the subject (i.e. persons, vehicles), the action of the subject (i.e. entering the VRC, mooring, paying for a campsite), and a time-frame (i.e. during the operating season, during one week). These new units of count are referred to as Data Variables.

1991 on: This generation will undoubtedly involve further integration of PURDS with the Departmental Office Technology System (DOTS) as well as make use of future available technology.
AN OVERVIEW PERSPECTIVE ON PURDS

INPUTS AND REQUIREMENTS
- computer hardware for access to PURDS
- user friendly computer software relevant to PURDS
- some training for key users
- a user hotline

PURDS COMPONENTS
1. Special data sets
   - origin
   - interpretation
   - language use
   - fee information
   - ecozones
   - visitor services activities
   - attendance
   - Esso travel guide

2. Data model

3. Data entry screens

4. Report/Data System
   - generic reports
   - user specific reports

5. Transaction transmission Protocols
   - automated exchange between systems

6. Questionnaire Automation
   - standard design
   - automated questionnaire

7. Automated Elosk
   - Reservation/Registration System
   - questionnaire and security capabilities

8. External Automated Collection Devices
   - electronic output traffic and people counters
   - hand-held computers for questionnaire and other types of data recording
   - low-cost automated self-registration forms
   - radio tracking devices

9. Economic Models
   - Local Economic Impact Model
   - Provincial Economic Impact Model
   - National Economic Impact Model
   - Capital Project Economic Impact Model
   - Life-Cycle Cost Model
   - Visitor Expenditure Model

10. Forecast System

11. Attendance System
    - system in support of new attendance definitions

BENEFITS
- streamlined data recording and processing
- standard data variable syntax and a controlled vocabulary
- increased accessibility to data
- consistent and correct aggregates, transformation of data and 1-data-capture
- facilitates data transfer between parks, regions and headquarters
- increased effectiveness

The Park Use-Related Data System (PURDS) Concept

Figure 1
2. PURDS Today

SEB faces a number of interesting challenges in operationalizing PURDS. The "Big Picture" is presented in Figure 1. It has a number of elements including initial inputs to PURDS and user requirements; actual thrusts of the PURDS system; and, eventual benefits to be derived from use of the system. These three elements of what may be termed the "Big Picture" are discussed in greater detail in the following section.

B. INPUTS AND REQUIREMENTS

Four general categories of inputs and requirements are necessary to operationalize PURDS. These include computer hardware required to access PURDS, associated computer software, a properly identified and defined data structure, and training for key users along with a telephone "hotline" to provide assistance.

1. Hardware

There are three general levels of hardware technology required for PURDS. Each has a different level of computing power to meet different needs within the CPS.

The lowest level of hardware consists of traffic counters or handheld devices used to collect various data. These devices function on their own, but must offload their data periodically to a computer.

Computing equipment in a kiosk or visitor reception center makes up the second level of hardware. These computers have some capability programmed into them which allows them to communicate with each other. "Kiosk computers" are used primarily for registrations, reservations, and data entry.

Park level computers are the third level of hardware in PURDS. These computers maintain the park's main database and have statistical analysis capabilities. They would normally be located centrally in a park, be in a district, region or HQ; and be part of or be connected to the DOTS system.

2. Software

Today's fast-paced technological advances necessitate that an organization using EDP devices keep pace. SEB is striving to make maximum use of today's technological advances by using state-of-the-
art software. The operating system which is being used to implement PURDS is called QNX. Some corporations already using QNX include Bell Canada, CBC, Honeywell, NASA, and VISA International Inc.

In brief, QNX is a multi-user, multi-tasking, real-time networking operating system developed for the IBM PC, AT, 386 and compatible microcomputers. This simply means that several users can simultaneously carry out several tasks each on one computer which has a number of terminals linked to it. For example, a kiosk attendant may be registering a camper and printing a report at the same time that another attendant is sending a message to the park office and offloading information to the main park database. Increased efficiency results as more work is accomplished in a shorter time.

In view of its capabilities, QNX is affordable when compared to other operating systems and comes in a well-developed network system. Purchase of costly equipment is not necessary since QNX is flexible enough to make use of low speed telephone lines or radio modems for transmission purposes. The QNX operating system complements the hierarchial hardware configuration previously referred to.

SEB has used ZIM as the "state-of-the-art" computer language for programming PURDS. A number of reasons led to its selection. ZIM is a fully integrated fourth generation (i.e. highly developed) application development system which combines the functions of database manager, programming language, query language, data dictionary, report writer, and forms facility. ZIM features mainframe power, speed and flexibility usable on microcomputers. Computer programs used for SEB functions are now being written in ZIM. For the next development period of the data system, there is full intention to use DOTS and manage data using ORACLE.

The use of QNX and ZIM provides the CPS with a powerful software package, resulting in performance previously non-existent on PC's. ZIM also complements the database structure being developed by SEB since it supports model development directly using ERA data models.

3. Data Structure

The PURDS data model creates a structure for a computerized database which responds to overlapping information requirements of CPS by allowing for more clearly descriptive units for data which are recorded. The model serves to organize the CPS socio-economic database in the same way that a filing cabinet is organized in some
meaningful way into file groupings, usually on the basis of a system that is suited to users' needs. The "files" in the data model are called Entity Sets. Data Variables, previously discussed, are used to identify data collected.

It should be noted that the way in which information in the database is presented to the user (i.e. user interface) on a computer screen is designed to be very "friendly". It is not necessary to have any knowledge of computers or computer terms to be able to use the data model.

4. Training and Hotline

As different thrusts of PURDS evolve, training will be provided for key users involved. For example, as kiosks become automated, hands-on training will be provided by Headquarters for supervisors and attendants, and training requirements will be met for as long as it takes to develop the thrust. Different thrusts will require different types and degrees of training.

Follow-up user support will be provided through an on-going telephone help "hot-line" to assist users with hardware, software, or any other problems. Regions will eventually develop their own "hotline" and training programs as the initiative develops.

User manuals will be created as each thrust is developed; and made available to users when implementation of a thrust begins.

C. GENERAL THRUSTS

General thrusts which need to be addressed for PURDS to be optimally functional are summarized below. The discussion focuses on 1) what the particular thrust is about; 2) what stage of development the thrust is at; and 3) generally, what remains to be accomplished.

1. Special Data Sets

A number of databases used by SEB to produce reports need to be integrated into PURDS. The data sets in question include Origin, Language Use, Attendance, Ecozones, Interpretation, Visitor Service Activities, Esso Travel Guide and Fee Information.

Integrating the data sets involves establishing data variables and profiles for each data set. Profiles are what data are reported
for. They allow for easy identification of something being referred to, or of what data are being collected for by linking activities, services and facilities together. These specifications provide context for the data variables, which are used to define precisely which data are recorded. Data variable definitions incorporate "what to record" such as the total number or unit cost; the "subject" such as persons or vehicles; the "action of the subject", for example, present at the beginning of an interpretation event or completing a guided walk; and the "reference period" such as an operating season or one week. This specification or definition of data enables the person taking an observation to know exactly what to record. It enables management to have information which can be clearly interpreted for decision-making purposes, and helps ensure that other levels of the organization using the data have a precise indication of what the data are.

Once the data variables and profiles are defined, users must agree on these definitions. The standardized vocabulary, while still flexible (i.e. new data variables can always be created), adds to the logical and concise nature of the PURDS system.

2. PURDS Data Model

The PURDS data model has created a structure for a computerized database which is cross-functional and appropriate to different levels of management groups within the organization. The introduction of this data model to practical application does not imply that parks will be required to start a complicated identifying project - a host of new facilities, services or activities on which data are to be collected. In general terms, the user interface of the PURDS data model consists of computer screens in a simple format which is easy to understand and follow. Screens prompt the user in a step-by-step fashion to access, enter or change information. Performing operations on the computer once or twice should be sufficient to enable users to use this model without dependence on manuals. In addition, practical assistance, in the form of people who will assist in introducing users to this model, will be provided.

A number of "functional areas" need to be worked on for inclusion to the data model database. This is so that all areas of data collection within the CPS (e.g. AFMAS, MIF, VAMP) are incorporated into the database. Some of these are discussed below.
a) VAMP

Integrating VAMP into the PURDS data model is, in part, a matter of adding activity related data to an entity set within the data model. This information is used in the creation of reports. When activity data are collected, the related data variables provide information relevant to a given activity, such as the facility is used and its geographic location.

b) Regional Integration

As with VAMP, including regional integration involves adding data to an entity set within the data model. In this case, it could be data from facilities and services adjoining the park, or data from non-park facilities and services within the park. The creation of profiles, in turn, provides additional information to the user, such as the types of activities or market/visitor types affected.

c) Marketing

Again, integrating marketing information into the data model involves incorporating market-visitor type data into the appropriate entity sets.

3. User-Friendly Data Entry

Data entry involves input of data to PURDS by a system user. User friendly data entry screens are being designed to simplify and standardize the data entry process.

As a number of different types of data entry screens are required, menus are being developed to provide users with easy access to their appropriate screens. Special purpose entry screens also have to be devised for those occasions on which data collected may not conform to developed data entry screens in use.

Different "levels" of data entry also have to be devised, depending on the user. For example, data entry could occur with or without access to the primary database. A kiosk attendant may only be required to input entrance data while park office staff may need to access previous and current data to generate a report.
4. Report/Data Request System

This system permits users to produce "generic" reports or user-requested reports using PURDS data. The software for these generic reports can be pre-programmed and thus reports are very easy to generate. Codes can be fed from established formats so that a presentable, labelled product is generated from the user's request. Examples of "generic" reports include campground use breakdowns by park or by capacity and provincial breakdowns of attendance data.

When one makes a report request, one is also implicitly making a data request. Data sets are combined (e.g. party size and length of stay) to produce generic reports. However, the system acknowledges that not all reports that are desirable can be available in generic form. Although a generic request allows a report to be specialized (e.g. data for a specific region only, or for given dates), in some cases a user may require a report that does not meet the generic layout. Thus, the capability of writing datasets is also necessary. It is desirable that individuals who have programs, that they use repeatedly on data that they generate eventually have these reports directly created as reports by the system.

5. Transaction Transmission Protocols

A common database or structure is desirable within the CPS to facilitate data transfer or exchange between functions. This will involve: a) an automated PURDS - MIF data transfer system, and b) an automated exchange between systems (e.g. kiosk to PURDS or to AFMAS) etc.

Pending development of a CPS integrated database, PURDS has identified a data transmission protocol that will facilitate the movement of information from one element in PURDS to another. It is possible to have different types of kiosk EDP devices produce a great variety of output data. Such data can be read and recognized by a special routine when data are transferred from one device to another. This would reduce the large number of programs that need to be documented and the large volumes of code that have to be stored. A simple, well-documented program can be used for transfer. If PURDS developments are to be absorbed into a larger CPS network, the job is then facilitated.
6. Questionnaire Automation

A number of issues involving questionnaire automation need to be addressed to keep data recording streamlined and thus increase overall effectiveness.

a) Questionnaire Support

In view of a national questionnaire system, variable (i.e. questions) and value (i.e. responses) labels have to be monitored in order to ensure maximum comparability of questions while keeping flexibility.

b) Standing Design Supply of Approach

A core set of questions for inclusion in park questionnaires and standard assistance with questionnaire development should be provided by Headquarters to assist in increasing comparability between questionnaires administered across the park system.

c) Automated Questionnaire

Automated questionnaire formats should be devised to facilitate data collection and ensure quality data in locations where it is feasible. An automated questionnaire might consist of an electronic touch-board type of device with an overlaid questionnaire. As responses are made, the kiosk attendant touches the appropriate selection with a want. One-data-capture would occur as the data recorded via the electronic touch-board could be fed directly into the computer.

A questionnaire database system has been designed as a means of maintaining information about applications, questionnaires, questions, and responses. The user can also classify any of the above by any number of arbitrary, user-defined classification schemas. The system provides the ability to report based on classification schema and values.

An interface is currently being created between the questionnaire system and a SPSS-SAS conversion program which will enable questionnaire analysis to occur using SAS, rather than SPSS.
7. Automated Kiosk

An automated kiosk refers to a kiosk at which a variety of automatic functions are supported by EDP equipment in the kiosk. A kiosk will only be referred to as automatic if the important functions to be carried out on a regular basis by that kiosk are automatic.

Five broad functions may be served by a kiosk. These include:

a) Regular kiosk functions (e.g. selling permits, sending messages to park office etc.);

b) Data Entry (e.g. number of vehicles, gender of entrants, province of origin, etc.);

c) Questionnaire (i.e. stand alone or as a supplement to data collected by the kiosk - e.g. registration);

d) Reservations (i.e. for campsites);

e) Security System.

8. External Automated Collection Devices

There are a variety of EDP devices which can be used for recording use-related data, some of which are computers or can be hooked up to a computer. Examples of external EDP devices are traffic counters, trail counters, and hand-held counters.

Small specialized computers can actually prompt with questionnaire questions and verify responses entered. Such devices may also be used to store inventory or "observational" data on numbers of people, their characteristics, or their activities. However, such devices need to be readily reprogrammable or have the capability to store several programs at a time to meet the CPS's varying needs. A device may be linked to a computer via cables, phone plugs, radio signals or other means of transmission or may "stand alone" and store data that are offloaded at appropriate times. Certainly, the ability to take a small computer almost anywhere and enter data to be offloaded into a database later will meet needs that can't be met when five meters of cable bind you to a computer. However, a PC computer may give much more flexibility in what one does. The relative cost of freedom and flexibility is a key issue. Thus, some of the devices must be
Towards Serving Visitors and Managing Our Resources

pocket-sized and transportable to record data from location to location within the park.

9. Economic Models

SEB has developed several micro-computer-based economic models which are being used by regional socio-economic units and other CPS functional units. These models are used on a regular basis. They are used, for example, to defend the program, to provide economic impact information in support of capital project proposals, to examine new park initiatives, and to aid in the selection of design options when planning capital projects. To date, the models which are operational include:

a) the Capital Project Economic Impact Model;
b) the Local Economic Impact Model;
c) the Provincial Economic Impact Model;
d) the National Economic Impact Model; and
e) the Life-Cycle Cost Model.

From the point of view of PURDS, rather than the development of analysis tools, the problem is having the models use PURDS data and also output certain results to PURDS. The implications involve

- coordinating visitor types described in the economic models with those in PURDS;
- defining what estimated park visitor type outputs are to be stored and accessed through PURDS rather than through the models;
- defining expenditure information being used as input to the models in such a way that it, too, can be accessible through PURDS; and
- coordinating questions and responses used in the Questionnaire Support System to obtain appropriate data for the expenditure categories used in the model.

A priority in early 1988 was to revise the EDP interface with AFMAS, to make these data available to PURDS and to the Economic Models that depend on park/site expenditure data.
The Parle Use-Related Data System (PURDS) Concept

10. Forecast System

The forecast system was usable with APSDB (Area/Park/Site Database) data and is to be used with PURDS data to provide various estimates of future use of a park, site, or facility. In order to function within the PURDS system, the forecast system needs to be set up so that it operates off of the PURDS database. To be operational, APSDB data must be moved to PURDS; as well, report programs or special user programs that access forecast parameters must be prepared in such a way that they meet user requests.

One further matter is that PURDS will have a provision to keep forecast as well as observational information for the same time. It is the data variable definition that allows one or several forecasts to exist in conjunction with an actual observation. This provision still needs to be worked out.

11. Attendance System

Although there is a continuous record of reported attendance for most parks and sites extending back many years, SEB has developed updated definitions of attendance. An administrative bulletin on attendance statistics as well as an attendance conversion action plan have been prepared.

The process of integrating the attendance system into PURDS involves examining the updated definitions and then identifying relevant data variables and profiles. Once accord on the data variables and profiles is achieved among users, the input routine to the data model can be finalized and documentation, guidance and direction can be provided.

12. Future PURDS Technologies

A SAS-ORACLE interface needs to be developed but this work is only being undertaken slowly for use in the early 1990's.

D. BENEFITS

As various thrusts of PURDS become operational, numerous benefits for the CPS will be derived. Those described below are streamlined data recording and processing; increased accessibility to data; a standardized vocabulary; consistent and correct aggregates; transformation of data; and 1-data-capture. These benefits will lead
to an improved quality of the data which are collected, expanded use of the data by various parts of the organization, and increased effectiveness.

1. Streamlined Data Recording and Processing Methods

As information requirements for the CPS have increased in the 1970's and 1980's, so has the need to collect more and more systematic or "regular-use" data by event, by hour, by day, or by month. Park use-related data (needed by the CPS) which were collected up to the mid-1980's were largely recorded manually at the park level, with the result that the data collection process was tedious and time-consuming. In addition to time spent in recording data, considerable human resources have been required to summarize (i.e. daily, weekly, monthly, etc.), store and process data at Field level. Time lags which occurred as the data moved through the organization for manipulation and transformation to reports meant that the information, once available, was frequently too dated to meet field or even regional needs.

A significant advantage of a computerized system that starts at Field is the elimination of the repeated recording and processing of the same information. The computerized data model described allows for data which are collected to be entered directly into a computer system. The computer will process the data and produce daily, weekly or monthly totals as required by users. The model is designed so that other data which require calculation by, for example, a formula, would be recognized and the calculations carried out automatically.

2. Increased Accessibility To Data

A further advantage of PURDS is increased accessibility to data in a cost-effective and timely manner. Computerized transformation of data will enable various types of information analyses and reports to be produced as required by different levels of the CPS. The necessity of sending manual records to Headquarters for processing and transmission back to Region and Field would be eliminated. Field would have the capability to process its data without depending on other levels of the organization. Increased flexibility would also exist for Field to produce and maintain reports or analyses which offer certain types of data at a level of detail unique to its operational
requirements. Data could be transferred by computer to Regina or Headquarters for the preparation of analyses appropriate to their information requirements.

3. A Standardized Vocabulary

A significant problem of using data and reports in the past has been a basic one of identifying exactly what data were reported on and what was being reported (i.e. what the data meant). Traditionally, lists of "People/Contact/Assets" or PCA’s which included, for example, golf courses, gates or beaches, were reported on. Lists of "Units of Count" which included, for example, persons, contacts and attendance-visits, were reported. Unfortunately, such reporting does not generally enable users to be precise about what data are being recorded. It was therefore difficult for those using the data collected to obtain a clear interpretation of (and thus use) the data.

Knowing what data mean is significant to management. The PURDS data model is a vehicle for introducing a standard syntax and vocabulary in relation to socio-economic data. The data model is both open-ended to incorporate various users’ needs, and definitive to ensure that data and still reporting objects are identified using a fairly rigid syntax and a controlled vocabulary.

4. Aggregates, Transformation of Data and "1-Data-Capture"

The computerized PURDS data model facilitates immediate entry of data into a computer. For example, instead of recording check marks for entering visitors, a kiosk attendant can hit a key on a computer to create data. The computer can be instructed to read each hit of that key as a visitor entering and to produce calculations for aggregates relating to all visitors who have entered (e.g. hourly or monthly). Data are therefore required to be "captured" only once by the computer to enable processing; hence the term "1-data-capture".

One type of computation is transforming one category of data into other categories with 1-data-capture. For example, recording revenue intake is entering data. From properly categorized dollar values and relations defined in the PURDS data model, a computerized system can create statistics on, for example, visitor use of facilities. Thus revenue data can be transformed into use statistics.
Examples of aggregates which can be obtained through 1-data-capture at an automated kiosk include operational capacity in sites offered and daily utilization. In addition to offering various types of data aggregation and transformation, a computerized system considerably reduces the potential for clerical error common when manual calculations are used.

5. Increased Effectiveness

The computerized PURDS model results in considerable savings in human resources and a more effective allocation of staff time by replacing routine work performed by people with a machine that does it quickly, accurately, and cheaply. With a standardized vocabulary and explicit statements of what data are to be recorded for, when and how, the quality of data collected can be improved and the transfer of information is facilitated. At the same time, the potential for data use by various levels of the organization including Field, Region and management planning groups is substantially increased, both because data is accessible and because we can afford to process it using computers.

V. CONCLUSION

The PURDS initiative is providing a basis for the collection, definition, storage and computation on various types of data with a minimum of resources. However, this effort to introduce national compatibility in recording virtually any park use-related data is largely based on acceptance of PURDS in the parks. Pilot tests of various PURDS applications are demonstrating that these applications can meet user needs without requiring extensive training or financial resources.
I. INTRODUCTION

The purpose of this paper is to introduce a new method of describing data so as to cause its sound definition, to facilitate methodologically sound automation, and to open the way to more effective use of data.

II. BACKGROUND

A. PAST AND PRESENT DATA RECORDED

Historically, there have been limitations associated with park use-related data collection methods of the Canadian Parks Service (CPS). For example, it has been necessary to process data manually, consuming significant amounts of staff time in the field. With over a hundred locations where personnel collect data on over 3,000 offerings to the public, there has been a lack of a standard vocabulary in data collection so that information reporting and sharing has not been facilitated. These factors pointed to the need for an improved method of data recording.

Another limitation resulted from the "traditional" units of count used by the CPS. These units date back to the late 1960's. The first units of count were people, groups and vehicles. By the mid 1970's, campground use was recorded in person-nights and in party-nights. For a typical campground, it was reasonably clear what was being counted. However, some campgrounds record site-nights sold which is not always the same as the number of parties camping! By the late 1970's, other units of count such as contacts for interpretation, boats, lock movements and bridge swings for canal statistics were being reported. By the mid 1980's, 21 different units of count were being used. Another 15 or so were implicit in data processing routines and were identified in work to allow user access to the mainframe data. Examples of the units of count recorded at parks, sites or canals (in 1986) are shown

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1This paper was originally prepared for the 1989 Northeastern Recreation Research Symposium, and a version of it appears in the Proceedings as published by USDA, NE Forest Research Station (General Technical Report NE-132).
Towards Serving Visitors and Managing Our Resources

in Table 1.

TABLE 1. UNITS OF COUNT RECORDED AT PARKS OR CANALS IN 1986

<table>
<thead>
<tr>
<th>Category</th>
<th>Units of Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>persons</td>
<td>occurrences-occasion</td>
</tr>
<tr>
<td>vehicles</td>
<td>person round trips</td>
</tr>
<tr>
<td>groups</td>
<td>person-days</td>
</tr>
<tr>
<td>person-nights</td>
<td>group days</td>
</tr>
<tr>
<td>party-nights</td>
<td>party-days</td>
</tr>
<tr>
<td>attend-visits</td>
<td>T-off groups</td>
</tr>
<tr>
<td>contacts</td>
<td>requests</td>
</tr>
<tr>
<td>boats</td>
<td>number of days</td>
</tr>
<tr>
<td>lock movements</td>
<td>number of days over 90% bridge capacity</td>
</tr>
<tr>
<td>bridge swings</td>
<td>largest count for a period</td>
</tr>
<tr>
<td>water lockages</td>
<td>current capacity (annual)</td>
</tr>
<tr>
<td>sailboats</td>
<td>quasi capacity (based on a percentile in some unit that was counted)</td>
</tr>
</tbody>
</table>

B. PROBLEMS ASSOCIATED WITH UNITS OF COUNT

As information requirements for the CPS became increasingly important in budget and project approval, more systematic and credible data by event, by hour, by day, and by month were needed. Conservatively, interpretation and visitor services staff at the more than 100 national parks, historic sites and canals record thousands of use statistics per day over a period of several months. Over 250 locations such as gates and campgrounds record one to ten (or more) statistics which are used to report daily or other statistics to field, region or headquarters. Many locations record hourly and event data for five or more months of the year while many report a variety of statistics for 12 months of the year.

As the number of units of count increased, certain problems became more and more obvious. First, the units of count being used were not descriptive enough. For example, visitor reception centres (VRC's) record "people per day". Depending on the park, or the VRC within a park, these data can refer to people entering, people talked to by staff, people viewing an exhibit, or simply people seen in the VRC. Those collecting the data have, on occasion, not been given enough information on what to record to really be sure what they were supposed to record.

Uncertainty about what was recorded creates a problem for those who use data. Users have too often been unsure as to exactly what data really were reported, and unsure as to what exactly was reported on. That is, they are unsure as to what the data mean. This problem becomes worse as field
data are "rolled up" for regional use, and these in turn are "rolled up" for headquarters use. By the time some data reach headquarters, they have lost much of their meaning and a fruit cocktail of units of count remains!

Another matter is that some units of count that have been used are not very relevant for effective management. Units of counts that field have been asked to collect have not, in some cases, included units of count that a park superintendent wanted to use. Thus, a park is placed in the position of having to collect data for region and/or headquarters, while not having the time or resources to collect data which the managers of a park may feel are important to the park. For example, recording the total number of people who use a golf course or gate by day is not of much use for management, who may find more relevant T-off for the front nine by hour or gate entries requiring permits to be sold. Data closely related to the T-off statistic can even be captured by an automated cash register if seasonal pass-holders' use of a facility is recorded as a "zero cash" fee entry.

A third factor in relation to use data is that parks (and even regions and headquarters) did not have easy access to the information they passed on to be processed. Much time was spent by parks gathering, recording and organizing data and by others publishing data. Parks, however, often could not use data published for their own purposes. Often, region or headquarters did not publish the table or statistic needed for operational planning or capital planning, though many statistics that were not needed were published or, at least, available in printouts "in case" they were needed. Accessing data to prepare special tables too often has been too costly both in person power and dollars, or too slow for there to be any reason to proceed with the undertaking. Furthermore, too often parks have not had time to use or even keep in usable shape the original data they have recorded.

Data problems have thus led to the development of a system which supports the needs of the CPS and uses the limited resources the Canadian Parks Service can allot in the 1990's.

III. A METHOD TO DEAL WITH THE DATA DEFINITION PROBLEM

The preceding has not highlighted the "two sides" of data: 1) what to record, and 2) what data are recorded for. This dichotomy is discussed in this section. One should remember that historically, problems with data at headquarters and regions occurred because one did not know exactly, in some cases, what was counted, for what it was counted, how it was counted, or for what purpose.
A. THE USE OF DIMENSIONAL ANALYSIS TO CLARIFY DATA

The reader may remember from his or her physical sciences background the term dimensional analysis. When one learned about velocity, one had dimensions of feet or metres per second. One then learned that acceleration was in feet or metres per second square. Whether in chemistry or physics, dimensional analysis is a very powerful tool in examining the results of an equation to see if what is being done makes sense. The examination may only be at the level of determining whether energy conversion units are being used correctly, or it may be more fundamental, checking to see if a formula is remembered correctly.

What dimensional analysis really refers to is seeing that one does not combine things which, in terms of their "dimension", should not be combined and that if things are being multiplied together the units "cancel" in such a way that the answer has the appropriate units. One does not readily accept the logic of adding 3 feet to 1 metre and getting 4 metres or 4 feet. Unfortunately, in the social sciences, "combining" numbers without considering what they actually measure (in fact, not knowing what they measure), is almost a way of life.

Consider, for example, the situation where a parks and recreation organization monitors the use of a beach or pool by recording the number of users each hour. Frequently, such use would be recorded with a unit or dimension of "people". What does the organization call such figures when they total them by day? Or when daily figures are totalled by month? Unfortunately, sometimes the answer is simply expressed as "people". However, unless the pool or beach area is emptied every hour and only "new people" are allowed in, the unit of people is a questionable designation for the total. If the pool or beach area is cleared every hour and people are allowed back in, without raising a question as to whether the same people come back in or not, one can record "entries/hour" and for the day can total "entries". These "entries/hour" or "entries/day" are valid but are still readily subject to misinterpretation. For a pool that is cleared every hour or for a park where 75% of entries are reentries (same day), the situation is different from that in which only 10% are reentries. This, for example, has an effect on permit sales and on responses to short surveys which are mainly done upon first entry.

Whether a pool or park theatre is cleared or not, one management issue is the amount of "service" provided. "Entries by hour" may reflect the number of cash register staff required to process people (or may not, on 75% reentry as cited above), but will generally not reflect well how much a pool or park theatre is used. For example, if one counts once an hour, and gets the average number of people in the pool for that hour, pool use of
consumption is reasonably reflected by reporting hourly use in "person hours".
"Person hours" is a unit that can be totalled, and hourly figures can be
recorded in "person hours per hour". A daily total in "person hours per day"
can then be obtained, and has a clear meaning. Hourly figures of staff hours
required and visitor hours of service give a profile of "effectiveness", if "person
hours" of service to users per hour is divided by "staff hours" required for the
same hour.

The reader may find it interesting to think about the fact that in most
statistical packages, numbers can be added with impunity without considering
what units they are in. When one establishes an entity-relationship model for
a database as described below, and starts to deal with the matter of creating
totals, it is readily recognized that a report can show totals for data with the
same impunity as with a statistical package. However, report totals do not
generally exist as data in a database. Technically, they exist as machine
readable numbers in a "report". If the totals are to be kept, a conscious
decision must be made about whether to keep them in an entity set (i.e.
table) with non-total information, or to keep them in some other entity set
(i.e. table) reserved for numbers that, for example, have the same dimensions
as the totals. Regardless, the "report" numbers and "updates" with codes that
indicate where to store these numbers in a database must be entered.

Actually, a variety of alternatives for keeping totals separate from the
numbers they come from exists in EDP (Electronic Data Processing) systems.
These alternatives exist both within statistical packages like SAS (Statistical
Analysis System) and in terms of the way in which one can handle these
elements in preparing one's database. When using the "PROC MEAN"
command in SAS, totals of data are placed in a separate dataset from the one
from which the totals were formed. One must make a conscious decision to
combine datasets. If this is to be done, the units of a total need not be
confused with the units of a number that had been totalled. When using a
"PROC SUMMARY" command in SAS, tables are created in a very general
way where univariate, bivariate and trivariate data (which can be, for
example, totals or maximums), are uniquely recognized. What a number "is"
is explicitly identified by variables that indicate what multi-variate
combination has been totalled or otherwise "manipulated". What is done may
not be "theoretically" appropriate or valid, but at least results are flagged.

One can thus see that traditional statistical packages such as SAS do
support the recognition and tracking of the "dimensions" of numbers as certain
processing occurs. Misuse of information sometimes, possibly most often,
arises because people fail to realize that there is a problem. Functions that
allow one to take the maximum of maximum values or the minimum of
maximum values are available in computer statistical and other programming
languages. However, these are not widely used outside a relatively small
circle of professionals trained in operations research or business practices, where min-max or maxi-min principles for looking at procedures, processes, or loading are appropriately used. Use of these is covered as an integral part of quantitative training. Training in statistical or social science methods reduces problems such as, for example, people taking the maximum number of people present during a day and computing total maximum attendance during a month by adding maximum values. However, people still add or average means, modes, maximums and other numbers with no appropriate consideration of how, or if, this should be done. It obviously can be and is done.

The ability to treat maximums, minimums, dollars, total, days, hours, picnic tables occupied and a variety of other matters as dimensions in parks and recreation data is one item that this paper addresses.

B. THE ERA MODEL: AN APPROACH FOR UNDERSTANDING DATA

A model provides a description or analogy to help visualize the organization of a concept or idea. A data model (Figure 1) describes a possible way that data could be organized. From another point of view, a data model for a real system presents one way that the user can visualize data to be organized for the purposes of using the data. So in a real-life situation, a data model provides the basis to develop an application and to use it once it is developed. The data model developed allows consideration of factors such as one’s ability to solve specific problems, produce reports, or answer queries. The efficiency of the final application from a user point of view, and the user skill level required to use the system, can thus be influenced.

The type of data model used to organize the Canadian Parks Service socio-economic database is an Entity-Relationship-Attribute (ERA) model (Chen, 1981: 19-28). Just as a filing system can be explained in terms of cabinets, drawers, folders, dividers and a card system, the ERA model can be explained in terms of similar critical elements. Its basic building blocks are entity sets, relationships, and attributes (Figure 1). Entity sets refer to groups of "things" (e.g. employees, parks, campgrounds, and projects). Each entity set contains entities or records of information about, for example, the facility/assets or geographic location, and these are defined by attributes or variables. Attributes are characteristics of the entity set items. Examples of attributes for an entity set called "park employees" may include the employees’ identification numbers, their job titles and salaries.

In ERA models, relationships exist between entity sets and can exist between items in an entity set. Relationships between entity sets indicate how the entity sets are connected or related. Relationships between items in an entity set are used to define hierarchical ("parent-child") relations. For
example, in an "activity" entity set, the item "canoeing" may be further distinguished as "whitewater canoeing" or "flatwater canoeing". This is called a reflexive relation (Zanthe, 1984).

Figure 1 below shows how part of the PURDS database is pictured in an ERA model. One sees how a user may visualize parts of the database set up in terms of entity sets, attributes, and relationships. In this example, the relationship "work in" describes which employees worked in which parks and when.

FIGURE 1 - DIAGRAM OF A SIMPLE ERA MODEL

C. THE PURDS DATA MODEL: A BRIEF LOOK

Figure 2 illustrates, by means of a Venn diagram, how different functions or groups within the organization potentially share information. Overlapping information requirements can be met by a park-use information database addressing the interests of various decision-making and/or controlling groups within the organization. An ERA model facilitates structuring data so that the interests of these various groups are integrated.

Figure 3 provides a simplified graphic presentation of the ERA model used by the Socio-Economic Branch for the Park Use Related System (PURDS) (Beaman, Grimm, 1989). The various entity sets shown in this figure are "open-ended" and new information can be added to each entity set as necessary. Data from different functions in these entity sets can be used by other functions in the organization when creating profiles and data variables. How data, for example, on facility/asset gets into a PURDS data model entity set or is updated is not a conceptual issue, but rather a design and implementation issue. Still, the information stored in the entity sets identified makes it clear that it might be desirable and relatively easy to share data between functions.
In this data model, Profiles and Data Variables are the "key" entity sets, at least for the Socio-Economic function. They are only discussed briefly here with a focus on data variables, but the reader may refer to the document entitled "A Socio-Economic Data Model - Concept Paper" for detail.

The Profile entity set combines information about the organizational infrastructure of the CPS. Profiles generally show what is being done and where by combining information on visitor activities, park services, park facilities and assets, geographic location, etc., as shown in Figure 3.

Data Variables specify what data are recorded. They were developed to overcome problems identified over a 15-year period during which "units of count" were used. Data variables have also been developed to provide a responsive and flexible way of meeting needs of field, region, or headquarters to record virtually anything, often much more effectively than in the past.

Figure 4 displays the way in which the types of information which combine to create a data variable are presented on a computer screen. It is the structure of the Data Variable within the PURDS data model which enables sets of standard data descriptions to be used. By referring to Figure 3, one can see that Data Variables, like Profiles, are created by combining information from a number of entity sets which are discussed in greater detail below. Because of this combination and the fact that the data sets combined are "open-ended", an endless list of Data Variables can be generated. However, Data Variables used across the organization can easily be standardized, while permitting those parks collecting "anomalous" data also to incorporate their data into the data model.

Finally, a great deal of information that is not part of Profiles or Data Variables but which is relevant to decision-making and management planning processes, is also shown in Figure 3. Management relies on a variety of information such as the themes and objectives of services, past decisions taken with respect to supporting activities as defined in documents, projects, etc. The choice has been to classify all these latter types of information as Support Information in the data model.
Figure 2

VENN DIAGRAM

- Park Management Planning
- Visitor Activity Management Process
- Asset Maintenance Information System
- Management Information Framework
- Natural Resources Planning Process
- Fee Impact Study
- Project Initiation Planning System
- Marketing
- Work Planning
- Regional Integration
- Overall Shared Information
- 2-, 3-, and 4-way areas of potential sharing
Figure 3

PURDS DATA MODEL

- **Market/Visit/Visitor/Trip Type**
  - **Activity/Experience/Oportunity**
  - **Service**
  - **Facility/Asset**
  - **Geographic Location**
  - **Organizational/Functional Unit**

- **PROFILE (e.g.)**
  - Park Orientation
  - Interpretation programs
  - Outdoor theatre
  - Broad Cove
  - Cape Breton Highlands NP

- **Purpose/Themes/Objectives**
  - Documents
  - Projects
  - Natural Resources

- **Activity**
  - Profile
  - Data variable
date etc.

**Key**
- Entity = 
- Relationship = 
- Attribute = /
IV. THE DATA VARIABLE CONCEPT: FORMATION OF A NEW DATA RECORDING CONCEPT

A. THE CASE FOR DATA VARIABLES

As stated earlier, this paper primarily deals with one critical aspect of having better data. As implied, a form of dimensional analysis as used in the physical sciences is needed for better data to be recorded by the CPS, and for better social science data collection and analysis in general. This is to correct the problems inherent in ambiguous data recording. As discussed below, Data Variables offer a means of clearly specifying what data are recorded. "Data Variable" is just a term adopted for the specification of data presented here.

The creation of Data Variables is not intended to be a "make work" project. The underlying goal of defining Data Variables is to force those requesting data and those collecting data to specify exactly what it is that they want or are recording, and to decide whether this data is really necessary and what they really want to collect. In many instances, certain data are being collected simply because they have traditionally been collected. It is hoped that the use of this new system of data recording will help to reduce the amount of data recorded to that which is essential to good management.

B. CRITERIA FOR DEFINING DATA VARIABLES

Data Variables must be defined using the attributes introduced previously (Figures 3 and 4). A value for each data variable attribute must be identified without exception. This is to ensure that the definitions are standardized and that attributes important to one individual are not omitted by another in the name of expediency. The presence of all attributes of a Data Variable also ensures that cross-references between Data Variables can be made using any given attribute.

Data Variables are made up of four main attributes: "What to Record" (a qualifier), the "Subject of Report", and the "Action of the Subject" and Timeframe". Examples of Data Variables include:

- Total number of persons entering VRC per day;
- Maximum number of picnic tables occupied between 11 a.m. and 1 p.m. monthly;
- Name of superintendent from September 1985 (until another is specified).

In addition, the type of data, its class and recording time frame, its status, its parent and general categories must also be specified.
### Example of a Data Variable Screen

<table>
<thead>
<tr>
<th>VARIABLE NUMBER:</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE:</td>
<td>(A)LPHA (N)UMERIC</td>
</tr>
<tr>
<td>WHAT TO RECORD:</td>
<td>1 OBSERVED NUMBER OF</td>
</tr>
<tr>
<td>SUBJECT OF REPORT:</td>
<td>4 PICNIC TABLES</td>
</tr>
<tr>
<td>ACTION OF SUBJECT:</td>
<td>9 OCCUPIED</td>
</tr>
<tr>
<td>CLASS:</td>
<td>P</td>
</tr>
<tr>
<td>TIME-FRAME:</td>
<td>3 AT AN OBSERVATION TIME BETWEEN 1130 AND 1300</td>
</tr>
<tr>
<td>STATUS:</td>
<td>A (H)ISTORIC (S)YNONYM (A)LLOWED</td>
</tr>
</tbody>
</table>

**PARENT:**

**GENERAL CATEGORY 1:** INSTANT COUNTS

**GENERAL CATEGORY 2:**

**GENERAL CATEGORY 3:**

F1-SEARCH F2-ADD F3-MODIFY F4-DEL F5-COMMENT F9-RETURN F10-HELP

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**NOTE:** The area marked between the dashed lines is the actual screen seen on the computer. Input sections such as class, status and general categories are discussed below.
The following headings provide some detail on individual attributes of Data Variables. These are described in the order in which they appear on the computer screen shown in Figure 4.

1. **VARIABLE NUMBER**

   The variable number provides a code for the Data Variable which is unique. This ensures integrity of the Data Variable database over time because the codes used here are not dependent on codes used in other databases. The variable numbers or codes are simply sequential numbers that begin at number 1.

2. **TYPE**

   Data include both number information, called numeric data, and alphabet or text information which are referred to as alphameric data. Numeric data are numbers and include what are normally thought of as counts in relation to some unit such as people, vehicles, and presentations. Alphameric data relate to text or descriptive information such as staff persons providing services, what the weather conditions are, or any other "work" information which is not captured in numbers.

3. **WHAT TO RECORD**

   This qualifier is used to provide a description of the data collected on a particular subject. Examples of this qualifier include the total number, average number, observed number, maximum number, fee in dollars, and unit cost. It is the first component of the Data Variable.

4. **SUBJECT**

   The second component is the "subject". This refers to the item or subject being counted or recorded. Examples of subjects include persons, vehicles, garbage bags, boats, sites, and dollars.

5. **ACTION OF THE SUBJECT**

   This component describes, as the title suggests, the action that the above subject "was engaged in" resulting in the data being collected. Examples include entering, present at the end of an interpretation program, completing a guided walk, mooring, paying for a campsite, or being chief of visitor services.
6. **CLASS AND RECORDING TIMEFRAME**

For Data Variables, one must also specify a class and recording time frame in relation to data collection. These specify the time recording "framework" against which the data must be recorded. There were five classes in use as of November 1988. Plans to include questionnaire data, computation formulae and parameters of forecast equations may mean using up to eight classes in the near future.

**Elaboration on Class and Recording Timeframe**

**Event data** is one class of Data Variables. This refers to data which are collected on an occasion or event which repeats, has a duration and has a theme. This is data collected in relation to an event such as an interpretive program. The related time frame, in this case, is the date and time the event is held or offered. Some examples of Event Data are:

- Average number of persons present at the end of service presentation as recorded for date/time;
- Name of the staff person conducting a guided walk as recorded for data/time.

**Non-patterned data** are data which apply to extended periods of time but which change periodically. These data are recorded infrequently or irregularly, and are not related to a specific event. Generally, these data are recorded only when they change. As with Event Data, the recording time frame for Non-Patterned Data is the date and time the data are recorded. Some examples of Non-Patterned Data are:

- Cost of setting up an exhibit as recorded for date/time;
- Name of the individual who is superintendent of a park as recorded for date/time.

**Patterned data** are recorded on the basis of a specific time pattern. In this case, the recording time frame identifies each time period during which an observation is to be taken on a given date. Examples of Patterned Data are:

- Estimated number of parking spaces occupied as recorded at some random time between 10:00 and 11:00 hrs.;
- Statement of weather conditions as recorded at some random time between 11:00 and 13:00 hrs.

**Sequential Data** are recorded in a sequence such as every 15 minutes, every hour, and every day. The recording time frame defines the time sequence in
which observations are to be taken. Examples of Sequential Data are:

- Total number of persons entering turnstile of a pool as recorded hourly;
- General comments of visitors on adequacy of a service provided as recorded by a Visitor Services staff person for her/his shift.

Periodic Data were first introduced in the summer of 1988. These are a special type of Sequential Data. Periodic Data refer to data which are sequential (e.g. a day, week, or year), but are repetitive subsequent time periods. For example, the percentage of traffic that is considered as visitor vehicles may be specified for spring, peak season, fall, and winter. The four values specified are four periods which repeat yearly and for which one may use the same proportions from year to year because each remains relatively constant, once defined. Similarly, monthly data can be considered as periodic data from year to year if they repeat from year to year. There are many possible combinations which are useful to managers. Hourly periodic data can reflect varying workload or traffic during the day. In this case, often the data would be for weekdays, Fridays, etc. In any case, the need for periodic data has been identified and the concept is being refined further.

7. STATUS

Status designates whether an entity set is current, filed in archives, or identified by a different name somewhere else in the database. A current entity set is referred to as "Allowed" and can be updated (i.e. added to, modified, etc.). An entity set file in archives is referred to as "Historic" and cannot be updated. It is there only for reference purposes. "Synonym" is used to describe an entity set which is also described elsewhere from a different perspective and enables the two entity sets to be recognized as one.

8. PARENT

The term "parent" refers to a type of relationship found among items within an entity set. For example, a "parent" activity such as camping could be subdivided into more specific "child" activities such as tent camping, trailer camping, or RV camping. These superior/subordinate relationships are referred to as reflective and they enable meaningful classification of items within an entity set.

9. GENERAL CATEGORIES

Each entity set has three General Categories which provide further descriptive information on entities and also enable combinations of items with a common theme. For example, a general category for activities might be
"VAMP Classification" under which activities would be classified as either land-based, water-based, or land-and water-based.

V. DISCUSSION

Due to the problems related to data recording initially discussed, it was necessary to develop a new data recording system. The Data Variable concept is flexible enough to accommodate a wide range of units of count including some which may have previously been considered "anomalies" because they were very park-specific. Regardless, "standard" data variables which can be used across the park system can be defined using Data Variables.

This new way of thinking provides more precise data but there are cases when Data Variable definitions will be over 100 characters in length. This clarifies the logic in setting up the computer screen as seen in Figure 4.

Having long Data Variable names is a problem when individuals have to "recall" Data Variable numbers or descriptions precisely on a regular basis. However, automation (i.e. via computers) and a common database of shared definitions and definition components facilitates the use of Data Variables. This does not imply that the rigorous structure of Data Variables will make it in the popular press. Depending on the context, for example, "visits" in conversation or press will still be referred to as "visits". The important factor is that somewhere in the database this term will be defined according to the Data Variable structure and can be accessed quickly from a computer terminal when detail or clarification is necessary. Of course, given the amount of information contained in each Data Variable, this task would not be feasible if handled manually.

On another matter, the job of creating Data Variables for a park may appear tedious at first glance. However, once the majority of these are established nationally, only a few Data Variables may need to be added in parks in subsequent years. Also, headquarters, by working with some parks, will assist in the development of "standard" Data Variables for all parks as well as assist field in the development of park-specific Data Variables.

VI. CONCLUSIONS

The Data Variable concept does not stand alone. It is a part of a larger data model. This Data Model creates a structure for a computerized database which is cross-functional and appropriate to different levels or management groups within the Canadian Parks Service. A paper entitled "A Socio-Economic Data Model: A Concept Paper on an Entity-Relationship-Attribute Model for Environment Canada/Parks", discusses the Data Model
in greater detail. As previously noted, the Data Model can be viewed as a computerized filing cabinet for park-use data. The Data Variables simply describe the information contained therein. It is a way to ensure that everyone can access a particular reference in the filing system. The model also provides references to other filing systems.

A number of advantages inherent in the use of Data Variables have already been alluded to. As referred to previously, the meaning of data collected may be clear to the person who actually recorded the observations, but others may have difficulty interpreting the data. Knowing what data really are is significant to management. Introducing a standard Data Variable syntax and vocabulary in relation to socio-economic data is facilitated within the context of the Data Model.

The Data Model and Data Variables are both open-ended enough to incorporate various user needs, and definitive enough to ensure that data and reporting objects are identified using a fairly rigid syntax and a controlled vocabulary. Transfer of information is supported through a standardized vocabulary which can be readily shared by field, regions, and headquarters. This increases the potential for use of data in the various management planning processes.

Consistent and correct aggregates of data are the result of understanding what data mean. Data Variables with appropriate "dimensions" (i.e. descriptions) can be identified as usable for sums, maximums, or other mathematical operations. In this context, Data Variables with slightly different definitions may also be "combined", but at least the analyst will know if "apples and oranges" are being compared or "added". Using Data Variables seeks to eliminate guess work or assumptions made with regards to what data actually are.

With a standardized vocabulary and explicit statements of what data are to be recorded for, when and how, the quality of data collected can be improved and the transfer of information is facilitated. At the same time, the potential for data use by various levels of the organization including field, region, headquarters and management planning groups is substantially increased.

Throughout this paper, the need for a new way of identifying data to be or being collected within the organization has been the issue. Many of the previous limitations and difficulties associated with data collection and analysis methods can become a thing of the past with the use of Data Variables. More effective and efficient use of data is the goal.
APPENDIX: COLLECTION OF ASSORTED WORKING PAPERS ON PURDS

I. DATA MANAGEMENT

1. An Integrated Data Management Approach
2. Integrated Format/Variable Description Management
3. Broad classes of Data Collection
4. Data Planning for Parks and Recreation Management
5. PURDS Data Structure: A User Perspective and a Machine based Perspective
6. Interface Concept Definition
7. A Relational Picture of Client Product/Service and Application: Another Way to Look at the PURDS Interface

II. MODELS

1. The General Principle of Defining Models
2. General Formulation of the Visitor Expenditure Model Set Theory Concepts

III. DEFINITIONS

1. Visit, Users, Markets: 3 Corners of a Triangle Relevant to Park Use Analysis
2. Area Visit Types, Trip Proration, and a Visitor Expenditure Model - A Framework tied to the Canadian Parks Service
3. Visitor Type vs Visit Type: A Critical Distinction to Make
4. Practical Examples of What Recording Data Variables and Identifying Profiles is about and Why it Benefits the Park Level

IV. EQUIPMENT

1. PURDS Equipment and DOTS Equipment: Is there a Difference?
2. Costing Consideration in the Use of AT's versus XT's
3. National Hardware Requirements of PURDS
4. Standard EDP Hardware and Software

V. DATA INPUT AND REPORTING

1. SAS Multi-Purpose Data Input and Report Generation Utility
2. Generalization Data Entry Program for Small Hand-held and readily Transportable Computers
3. AFMAS, Financial Line Objects and Efficient Data Capture of Fee and other Management Information
4. Standing Offer Work Requirement for PURDS Data Entry Upgrading

VI. AUTOMATED KIOSKS

1. Kiosk Justification
2. Overview of Parks (DOE) Registration System
3. Campsite Reservations or Kiosk/Systems/Data Automation

VII. CASH REGISTERS

1. Cash Registers and Computers for Data Collection in Kiosks

VIII. SURVEYS

2. Park Visitor Survey Savings in Relation to the Use of the Automated Kiosk
3. Reasons Why Surveys are not Carried out
4. The Anatomy of Survey and Related Questionnaires

IX. ATTENDANCE

1. Who has and needs Access to what Components of the Attendance System

X. CASE STUDIES

1. Prince Albert National Park
2. Yoho National Park

3. St. Lawrence Islands National Park

4. The Horse and Other Reservation/Registration Systems at Jasper National Park: Items in Relation to Automation

XI. MARKETING

1. Use of Automated Kiosk in Support

2. Marketing Justification of the Automated Kiosk

XII. POLICY

1. Statistics and Policy

LITERATURE CITED


SESSION V

DECISION FRAMEWORKS:
MONITORING, EVALUATION AND MANAGEMENT ISSUES
INTRODUCTION

Preceding presentations and discussion groups, have taken a number of perspectives in looking at the questions of managing and researching the benefits and services provided for the visitors of protected areas in North America. The present focus involves examining some of the current organizational issues arising out of the development and use of visitor management decision frameworks such as VAMP, VIM, ROS and LAC.

My perspective is somewhat different than those taken in the other discussions. I speak from the point of view of a research manager responsible for the full range of social science research activities carried out within the Canadian Parks Service (CPS). This requires ensuring that necessary and appropriate social and economic information are provided to managers and other information user groups both inside and outside the resource protection agency.

Elsewhere, Jay Beaman, the Director of the Socio-Economic function of the Canadian Parks Service and myself (Beaman and Meis, 1987) have analyzed this particular perspective and concluded that the successful execution of this role involves two main activities: 1) research planning and delivery and 2) research coupling. A continuing concern in the conduct of both these activities is how to improve research to make it more efficient and more effective in informing management decisions. This concern for applied efficiency and effectiveness of the research function is what differentiates the perspective of this presentation from the others in this workshop.

One of the promises inherent in the development of VAMP and the other frameworks is that they provide the prerequisites to develop more sophisticated research techniques. One such improvement is performance monitoring. It promises to be both more effective and more efficient in informing management decisions about service to the visitor than other approaches currently in general use (Brown, Driver and Stankey, 1976).
THE CURRENT SITUATION IN VISITOR RESEARCH

Looking back over the past 20 years of social science research relating to resource management agencies it is possible to discern considerable progress. Twenty years ago there was little or no legislative foundation for socio-economic analysis of resource management issues. Today, as a result of changes in legislation in both Canada and the U.S. such as the US National Environmental Policy Act (NEPA) of 1969, the US Forest Land Renewable Resources Planning Act of 1974 (RPA), the US National Forest Management Act of 1976 (NFMA), and Bill C-30, the new Canadian National Parks Act of 1988, there is now a strong legislative basis for resource management agencies to consider social and economic factors in their planning and management processes based on the best available scientifically collected visitor information and other social and economic data.

Secondly, 20 years ago there was relatively little social science information being collected about visitors, public concerns, general markets, or social and economic impacts and efficiencies. Today there is a relatively large volume of data being collected.

This, in my opinion brings us to where we stand today. There is a lot more research underway and substantial amounts of data are being collected. But, much of it, is still relatively inefficient and ineffective. Some of the most obvious reasons include the following:

- much of the agency work being conducted still consists of base line descriptive inventories or inventory updates of visitor volumes and characteristics;
- both basic and applied research are still using largely non-standardized sample designs and inconsistent collection protocols in terms of format, content, definitions, and response structures (Haliburton, 1984; and Beaman and Grimm, 1988);
- collected data are not yet consistently documented, integrated or stored in common databases;
- most research is still based on primary data collection studies with relatively little secondary analysis;
- the unit costs for individual research studies are still relatively high;
- much of the research is not comparable through time or across locations (Beaman and Grimm, 1988);
- very little of the data collected is based on research designs involving either replications in time or continuous monitoring;
- most of the information being collected is linked to park development decisions rather than decisions about park operations;

- and finally, much of the additional non-volumetric data collected consist of baseline descriptive inventories or updates of visitor characteristics or behaviours rather than evaluative assessments of either managerial or visitor objectives.

These problems seriously limit the possible productivity of social researchers and managers working within resource protection agencies.

POTENTIAL IMPROVEMENTS ARISING FROM VAMP, ROS, VIM AND LAC

The past 20 years has also seen the development of interdisciplinary planning and management processes such as those being discussed at this workshop. Fricke (1985) and Kauffman (1960) before him, have called these frameworks "preformed decisions making structures." In this workshop they have been referred to as decision frameworks.

The promise of decision frameworks such as the Visitors Activity Management Process (VAMP) or the Recreation Opportunity Spectrum (ROS) is that they offer the necessary pre-conditions for resolving many of the research management problems noted above. Basic to this idea is the extent to which decision-making and information requirements within the frameworks become highly structured.

The development of frameworks such as these lead to the development and formalization of agreements about what data are required, and how information is to be used in making decisions about visitor management (Fricke, 1985). This standardization of understanding about research requirements and appropriate responses provides a necessary condition to standardize information categories and routine procedures of data collection and analysis. These developments, in turn, will produce more efficient and more effective information collection and analysis techniques.

VAMP, in particular, focuses on the policy supported visitor activity and its linkages with the serviced setting. By varying the combination of physical, biological and managerial conditions, managers can offer the public opportunities for different types and styles of recreation activities. By establishing standard policy significant activities, with associated standard criteria and conditions for different service and facility settings, VAMP enables decision-makers to set specific visitor goals and objectives. (Parks Canada, 1985; Environment Canada, Parks, 1989 and Graham, Payne and Nilsen, 1988). This then provides a basis from which to monitor and evaluate changes in both supply and demand as well as their effectiveness in satisfying both visitor and management motivations and objectives in specific park situations.
PERFORMANCE MONITORING AND EVALUATION

Performance monitoring is a specific type of descriptive market research. In a parks context it involves the systematic repetition of the process of acquiring information on park visitors. Such visitor information could include their goals, expectations and perceptions of the park visit. In addition, performance monitoring also involves the measurement of such phenomena and systematic collection of such data for the purpose of evaluating the attainment of area management objectives and client service objectives. The three key elements of this definition are the notions of measurement of specific visitor phenomena, systematic collection of information, and evaluative assessment of the information collected. Systematic collection means that the data are collected according to a predefined and replicable process. Evaluative assessment means analysing the relative states on these variables, against the goals and expectations of the agency in question.

Also included within the scope of such monitoring activity, is repetitive data collection and analysis. This repetition in the collection and analysis of such data is needed to detect and predict changes in visitor volumes, characteristics or states. This, in turn provides, the basis for determining appropriate managerial responses.

Defining performance monitoring this way combines two existing forms of market research already present to some degree within resource management agencies: visitor monitoring, and performance evaluation. Both are currently practised separately by many protection agencies. However, relatively little systematic work has combined the two types of information. This is an interesting anomaly. Especially, since almost all of the decision frameworks discussed at this workshop include some mention of a monitoring evaluation component similar to that seen in the park service planning process of VAMP shown in Figure 1.

All the resource management agencies have some form of visitor monitoring in place. The Canadian Parks Service, for example, has had the APS Data System in its various evolutions for the past 20 years (Beaman, 1988). The most recent evolution is the experimental fourth generation system called PURDS (Public Use Related Data System) (Beaman, 1988 - see Beaman and Grimm, and Grimm and Beaman, this volume). Similarly, the US National Parks Service for many years has had its visitor statistics system (USNPS, 1988). The US Forest Service has had the Recreation Inventory and Monitoring System (RIMS) (Mischon, 1979).

One weakness of all of these current systems is that they only provide volumetric measures of selected aspects of the public use of the programs and services of each protection agency (i.e. site attendance measures, and consumption measures for specific facilities). Approximately ten years ago, the socio-economic research management team of the CPS recognized the need to redress this weakness. It began developing measures of agency performance in satisfying agency and visitor service objectives and expectations (Meis, 1983). Also identified was the need to
Visitor Management Issues: Monitoring and Evaluation

Figure 1

PARK SERVICE PLANNING PROCESS

Terms of Reference

Data Base Development
Visitor/market expectations
Park's expectations
Service offer
Use of service offer
Satisfaction

Change
Referred
Implemented

STRENGTHS,
WEAKNESSES,
OPPORTUNITIES

SITUATION
ANALYSIS

STRENGTHS,
WEAKNESSES,
OPPORTUNITIES

SERVICE PLAN ISSUE

OBJECTIVES

SERVICE STRATEGY

ACTION PLANS

SERVICE PLAN

Implement, monitor and evaluate

(Environment Canada, Parks, 1989)
move from ad hoc research designs to more standardized research models and more standardized data collection and analysis procedures as one essential step for more efficient research management. As a result, over the course of the ensuing years, the Canadian Parks Service has carried out a number of pilot projects exploring methodological and technology developments in both areas.

Elsewhere, on the workshop program we are displaying some of the resulting fourth generation monitoring systems under experimental development at selected locations within the Service (see Beaman and Grimm, and Grimm and Beaman, this volume). The systems displayed particularly demonstrate the emerging capacity of the agency to systematically collect and manipulate large volumes of monitoring data pertaining to discrete facilities and services. Other experimental work, carried out as part of the developmental studies for VAMP at Kejimkujik National Park illustrate the immediate managerial benefits from performance measurements assessments.

KEJIMKUJIK NATIONAL PARK: AN EXPERIMENT IN APPLYING PERFORMANCE EVALUATION TO OPERATIONAL DECISIONS

In the summer of 1982 a visitor study was carried out at Kejimkujik National Park. The study consisted of a two-part survey, an entry mini-survey administered by park staff and a detailed mail-back follow-up survey administered by park staff and students of Acadia University. The study sample involved a multi-stage sample of about 1,300 visiting parties with a 60% response rate. The resulting final "in-tab" sample consisted of approximately 800 summer visitors. Data were collected on several aspects of the visitor’s park encounter relating to the then still experimental visitor activity management framework. These included five major subject areas:

1. Image of the park;
2. Expectations of the park;
3. Activities engaged in during the visit;
4. Decision process of the trip;
5. Evaluation of park experience, park facilities, and park services (Robertson and Wright, 1983).

The fifth information category is the point of interest in this discussion. It proved to be most useful in aiding immediate operational decisions regarding service to the public.

Table 1 shows the aggregate ratings of facilities and services used by park visitors. More specifically, this table shows for each of 18 major facilities and services, the overall rating in terms of the percentage saying that each individual service item was better than expected. Also shown in Table 1 are the equivalent ratings of 5 major park visitor activity segments.
### Table 1

**RATING OF FACILITIES USED BY ACTIVITY SEGMENTS**

(% saying facility better)

<table>
<thead>
<tr>
<th>Activity Segment</th>
<th>Total %</th>
<th>Main park campers %</th>
<th>Pic-nickers %</th>
<th>Back country campers %</th>
<th>Day canoers/hikers %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trails</td>
<td>39</td>
<td>38</td>
<td>47</td>
<td>36</td>
<td>37</td>
</tr>
<tr>
<td>Visitor reception area</td>
<td>33</td>
<td>32</td>
<td>32</td>
<td>31</td>
<td>21</td>
</tr>
<tr>
<td>Beaches</td>
<td>27</td>
<td>25</td>
<td>36</td>
<td>22</td>
<td>32</td>
</tr>
<tr>
<td>Main park campground</td>
<td>29</td>
<td>28</td>
<td>41</td>
<td>28</td>
<td>26</td>
</tr>
<tr>
<td>Shower building</td>
<td>54</td>
<td>35</td>
<td>50</td>
<td>52</td>
<td>54</td>
</tr>
<tr>
<td>Canteen</td>
<td>15</td>
<td>14</td>
<td>14</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>Picnic sites</td>
<td>26</td>
<td>25</td>
<td>33</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td>Exhibit centre</td>
<td>24</td>
<td>19</td>
<td>39</td>
<td>37</td>
<td>13</td>
</tr>
<tr>
<td>Outdoor theatre</td>
<td>31</td>
<td>32</td>
<td>19</td>
<td>23</td>
<td>27</td>
</tr>
<tr>
<td>Playgrounds</td>
<td>28</td>
<td>27</td>
<td>28</td>
<td>35</td>
<td>28</td>
</tr>
<tr>
<td>Guided walks</td>
<td>45</td>
<td>42</td>
<td>70</td>
<td>35</td>
<td>28</td>
</tr>
<tr>
<td>Boat landing</td>
<td>18</td>
<td>15</td>
<td>44</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td>Boat/canoe rentals</td>
<td>24</td>
<td>19</td>
<td>41</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>Children’s program</td>
<td>33</td>
<td>32</td>
<td>25</td>
<td>64</td>
<td>0</td>
</tr>
<tr>
<td>Backcountry campsites</td>
<td>46</td>
<td>40</td>
<td>50</td>
<td>50</td>
<td>20</td>
</tr>
<tr>
<td>Guided paddles</td>
<td>46</td>
<td>43</td>
<td>100</td>
<td>36</td>
<td>73</td>
</tr>
<tr>
<td>Group camp area</td>
<td>50</td>
<td>33</td>
<td>55</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>Bilingual services</td>
<td>41</td>
<td>41</td>
<td>55</td>
<td>33</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: Market Facts, 1984
Table 2

RATING OF FACILITIES USED BY MAIN PARK CAMPER

<table>
<thead>
<tr>
<th>ACTIVITY SEGMENT</th>
<th>% used facility</th>
<th>% used facility</th>
<th>Better</th>
<th>Same</th>
<th>Worse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>424</td>
<td>424</td>
<td>38</td>
<td>60</td>
<td>*</td>
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<tr>
<td>Trails</td>
<td>89</td>
<td>38</td>
<td>60</td>
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</tr>
<tr>
<td>Visitor reception area</td>
<td>84</td>
<td>32</td>
<td>67</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Beaches</td>
<td>87</td>
<td>25</td>
<td>71</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Main park campground</td>
<td>96</td>
<td>28</td>
<td>71</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Shower building</td>
<td>89</td>
<td>35</td>
<td>61</td>
<td>4</td>
<td></td>
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<tr>
<td>Canteen</td>
<td>75</td>
<td>14</td>
<td>76</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Picnic sites</td>
<td>61</td>
<td>25</td>
<td>74</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Exhibit centre</td>
<td>65</td>
<td>19</td>
<td>75</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Outdoor theatre</td>
<td>75</td>
<td>32</td>
<td>64</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Playgrounds</td>
<td>63</td>
<td>27</td>
<td>70</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Guided walks</td>
<td>48</td>
<td>42</td>
<td>57</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Boat landing</td>
<td>36</td>
<td>15</td>
<td>82</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Boat/canoe rentals</td>
<td>39</td>
<td>19</td>
<td>70</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Children's program</td>
<td>28</td>
<td>32</td>
<td>62</td>
<td>5</td>
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<tr>
<td>Backcountry campsites</td>
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<tr>
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</tr>
<tr>
<td>Group camp area</td>
<td>10</td>
<td>33</td>
<td>63</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Bilingual services</td>
<td>7</td>
<td>41</td>
<td>55</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Source: Market Facts, 1984
Three obvious findings emerged from this table: (1) some people, such as picnickers, are relatively easy to satisfy; (2) others, such as main park campers, are much harder to satisfy and thus much more expensive to serve (3) some particular facilities and services, such as the canteen, are relatively poorly rated by all visitor activity groups.

Table 2 shows another more in-depth examination of the same evaluative ratings for the "main park camper" activity segment. These data indicate that for this visitor segment, the canteen and the boat and canoe rentals services particularly received high negative ratings compared with other facilities and services offered by the park.

These results proved to be immediately actionable. For the park's superintendent, they confirmed previously unsubstantiated personal concerns about the need to improve the canteen and the boat and canoe rental services of the park's operations. From these results he concluded that the services in question were the weakest points in the park's service portfolio.

In summary, this performance evaluation research proved to be immediately effective in aiding operational decisions and stimulating immediate improvement in park services provided to the public. As such, it illustrates the potential utility of routinely collected performance evaluation results.

CONCLUSION

The organizational environment of social and economic research in resource management agencies has changed substantially for the better over the past twenty years. Mandates to obtain socio-economic information as an aid to management decision making about service to the visitor and protection of natural resources have become imbedded in the enacting legislation in each of the major North American resource protection agencies. This change coupled with the development of standardized decision framework such as the Visitor Activity Management Process facilitates the search for more efficient and effective research approaches. To date, research combining monitoring and evaluation has received little general treatment. Recent work by the Canadian Parks Service in the connection with the development of VAMP and the development of fourth generation visitor information systems is beginning to provide parks management with the data needed to rationally, routinely and efficiently evaluate program performance with respect to service to the visitor. The data from one pilot project conducted at Kejimkujik National Park in 1982 illustrate the potential utility of performance monitoring information systems to operational visitor management decisions.

LITERATURE CITED

Towards Serving Visitors and Managing Our Resources


INTRODUCTION

The participants in this syndicate felt it essential that U.S. and Canadian protected area and natural resource management agencies promote more co-operative research efforts with universities, the private sector, environmental organizations, citizens groups and other interested groups and individuals. Policy should: promote efficiency in use of agency and co-operator's resources (person years and dollars); establish a process that ensures agencies and co-operators consult one another; encourage and facilitate exchanges of information and personnel to facilitate co-project direction. The process developed from policy should be based on a management philosophy that includes a high degree of coordination, cooperation, recognition and legitimacy of each others interests, with the ultimate aim of gaining more knowledge on social and biological systems comprising parks collectively, than would be possible as individual agencies, institutions and groups.

Information collection and management was interpreted to mean the generation and exchange of both natural resource and social science planning and management information. There is a large disparity among agencies in terms of their capabilities to assemble this information, yet to manage resources, better information, better integration, better exchange and better networks must be established. Information collected incrementally will be partial and it is unrealistic to think government can provide essential information or address all the issues immediately and alone. It is equally unrealistic to expect dramatic increases in budget allocations.

Development of an infrastructure to tap the "great grey literature" and enable the networking of data bases to occur so that information can be easily shared among agencies should be investigated. CRIS, NTIS, USNPS (Denver Service Centre) may represent effective starting points to facilitate the documentation of the status of the shadow literature. A co-ordinating mechanism and group would be most helpful in identifying common concerns and how these can be addressed in a co-operative fashion.

Dr. Donald R. Field is Associate Dean in the College of Agricultural and Life Sciences, Director of the School of Natural Resources and Professor of Rural Sociology at the University of Wisconsin-Madison.
Interagency formal think tanks of appropriate scholars and management personnel should be commissioned to synthesize existing information. Currently no central library exists to provide perspective on existing data bases or literature. Rediscovery of existing facts about visitor use, visitor use patterns, visitor conflicts, etc. is the operating style for all agencies.

One of the important questions to be addressed in suggesting a more co-operative approach to research, information collection and analysis is how to develop and publish good case studies for the manager and planner. A joint co-operative Canada-US project to produce case study information and general principles related to ROS, VIM, LAC and VAMP would be helpful in identifying gaps in current natural and social science research processes and the decision frameworks. Workshops like this one offer a unique opportunity for some to share information, however, there is also a need to interact and comment on both theory and practice with a broader audience. Information contained in case studies and inventories is of value to a wide audience. Are there a number of strengths and weaknesses to approaches for research, data collection and analysis that can be implemented differently or more effectively or more efficiently? Can options and opportunities for additional analysis of data bases by a wide range of co-operators be developed through some first-step initiatives? Can this first workshop act as a continuing forum for information exchange? Given that this was the first opportunity for U.S. and Canadian agencies interested in visitors and protected areas to exchange information in a considerable length of time, it is clear that there is a strong interest among agencies, universities, environmental groups and organizations to continue the dialogue but care must be given to define the scope and objectives for additional meetings.

The syndicate provided some insight into the experience of others and the approaches developed to encourage data analysis. Several agencies have used data as a vehicle to encourage secondary analysis of existing information. Government agencies are in an excellent position to continue these efforts. However, mechanisms will have to be developed to encourage interested institutions and groups to become involved in co-operative research projects. From the agency's perspective it will be necessary to encourage managers to think of data as a "collective resource" that is available to a wide variety of interest groups and academics.

Symbiotic relationships between agencies and co-operators could function to assist individual agency and institutional or group projects. Developing a framework to: share research design processes; piggyback questions; jointly monitor field work and share costs could facilitate both agency and co-operator goals. Collecting data may be an inappropriate use of agency professional staff time. Co-operators can be trained and are often capable of collecting and analyzing data. This approach to project implementation could facilitate review and revision of agency research and decision frameworks and accommodate other interest groups' willingness to contribute to conservation and preservation. In this way agency and individual
projects would be facilitated. These relationships can also encourage promotion of conservation and greater understanding of the protected area and its immediate adjacent region and further interdisciplinary research and resource management practices.

Environmental and social concerns are increasingly becoming the focus of protected area planning and management decisions. Stakeholders, customary users, clients, the public and scientists can contribute to, or be an integral component of protected area planning and management research. The practical limitation to this process is the role of the scientist as an "intermittent visitor" and not as an integral component of the planning team. Presence of external contributing scientists in a project will tend to increase the technical competence of planning teams, planning activities and the overall knowledge of the public. Traditionally social science interests have been the last group involved in protected area planning and management. Stakeholders affected by the decision to not include social scientists include the agency itself, general public and industries. Practical limitations to considering external scientists as contributors to planning and decision framework related research include: lack of policy direction, lack of time, timing, level of funding, and political factors. There is a need for a mechanism for implementation of guidelines related to involvement of social scientists in protected area planning, management and research.

The decision frameworks discussed at this workshop, ROS, VIM, LAC and VAMP have been applied in a wide variety of settings and locations (i.e., some of the frameworks have been applied in urban settings like shopping centres and others have focused primarily on wilderness settings in parks and designated wilderness areas). Because many of the agencies represented in this workshop are primarily responsible for wildland or wilderness management, a considerable number of visitor-use projects have focused on wilderness and wildland issues. In many cases 90% of all protected area use occurs in corridors or areas adjacent to the protected area or within a service zone located in the protected area. Unfortunately our knowledge of day users or pass-through visitors is very limited. In some cases research related to frontcountry visitor use exists as paper records stored in filing cabinets; in other cases it has been published while other data are stored on computer systems. The general feeling expressed was that studies related to visitor use have to move beyond the "wilderness carrying capacity concept." Perhaps there could be an active file of studies to which interested scientists and agencies could contribute data and project reports. Some expressed the opinion that agency funding and personnel resources available to them for "intensively used area research" is minimal. Research in this area is primarily reactive since most agencies do not have a knowledge base in place to be proactive. A priority is to acquire additional resources for research and co-operation in studying intensive use area visitor groups, especially with respect to issues related to compatible and dominant use.
Mechanisms to share data with regional groups and agencies (e.g., state and provincial governments, regional agencies [e.g., Puget Sound Government Council or Greater Vancouver Regional District]), industry research (e.g., AGR research), census and polling information were all identified as ongoing data sources. Funding and formation of "data analysis teams" is generally a problem, but is needed to capitalize on existing information for benefit of resource management.

The potential role of regional resource centres and university consortiums in contributing to protected area and natural resource agency research, analysis, planning, monitoring implementation and information on a variety of resource and visitor use issues was noted. Relationship of protected areas to sustainable development, regional integration, and customary users were noted as areas of research of interest to protected areas, environmental organizations and universities. In some cases the principle limiting factors to use of interested academic institutions and groups are timing, research requirements and lack of resources.

The use of social science to develop a series of indicators that could be used in the four decision frameworks was discussed. Are there common measures in each of the frameworks? Is it possible to suggest standard measures for general studies (e.g., Canadian Parks Studies in early 1970's and U.S. study of visitors in 1971).

Stakeholders, customary users, clients and interest groups are increasingly becoming concerned about how they can contribute or obtain access to protected area agency planning/allocation processes. What are the current approaches to limiting use? Are there sufficient rationale from an ecological perspective to limit use? Why are agencies setting limits to use? What is the impact of limiting use? Is a regional perspective and use of a protected area as a component of a development zone a better approach to planning than thinking of protected areas as islands? Public consultation or public involvement and co-operative management - where are protected areas headed? Are approaches such as sustainable development and conservation strategies used by protected area agencies? What mechanisms of conflict resolution are being implemented by protected area and natural resource management agencies? What are the actual and practical limitations to considering mechanisms for conflict resolution in the attending agencies? What are the relationships between policy, law, and science in a protected area agency?

Although the formal goals and objectives of protected area agencies are preservation, conservation and then public appreciation and enjoyment, there is a need for understanding of leisure pursuits and recreation experiences as an aspect of park management. The context for the information is the evolving decision frameworks. Broad scale information has been acquired through the Statewide Comprehensive Outdoor Recreation Planning and the President's Commission on Americans Outdoors, however, in Canada there is no equivalent. What is the role of multi-agencies in the development of data? Is it possible to use a variety of
bibliography and abstract services to inform planners and managers? Is there a need for a jointly published Canada-U.S. newsletter that focuses on visitors and protected areas research?

Achieving consensus at this stage of the dialogue was extremely difficult. Comments in this syndicate represent a very large and, some might note, intimidating challenge. Perhaps the most exciting aspect of the exchange was the appreciation by participants of the potential of social science to contribute proactively to protected area and natural resource management agency programs. The challenge is to create first-step initiatives that could be implemented quickly and produce some results. The workshop and the syndicates have created recommendations which if implemented will ensure greater appreciation of the role of social science in park management and resource policy.
In our discussion of this syndicate issue, six basic questions were developed:

1. Do the decision frameworks address interpretation and if so, how?
2. What time is needed, according to the frameworks, to plan, design, implement and evaluate interpretation?
3. What are some recommendations to improve timing?
4. What are the strengths of the frameworks in assuring the efficiency and effectiveness of interpretation?
5. How should frameworks be improved so that they might be better applied to interpretation?
6. What joint (USNPS, USFS, etc./CPS) work would enhance interpretation?

In addressing these questions as they apply to the four frameworks - Limits of Acceptable Change (LAC), Recreation Opportunity Spectrum (ROS), Visitor Impact Management (VIM), and Visitor Activity Management Process (VAMP) - the following characteristics were identified:

- LAC and VIM are mostly resource oriented and "reactive" (i.e., they are frameworks which are applied after a resource impact).
- ROS and VAMP are more oriented to visitor and use/activity and include an interpretive activities component - a "recipe" for potential interpretation.
- LAC and VIM applications can provide the opportunity for interpretive services and activities.
- ROS and VAMP applications result in the production of an interpretive "prospectus-type" document. Including interpretation in the ROS and VAMP frameworks is automatic. LAC and VIM require a conscious managerial decision to include interpretation.
None of the frameworks provides a superior time frame, and none appears to be more efficient than another. More important, the syndicate felt that, regardless of the framework, the issue of the timeliness of interpretation is seen as an element most directly affected by management priority and by the availability and quality of a data base that includes both resource and social science information. Assuming equal application and managerial emphasis, the syndicate felt that ROS and VAMP may have a more immediate interpretive application since these frameworks include an integral interpretive element.

Improving the timeliness of the interpretive applications of any of the frameworks is primarily dependent on a quality data base, management priorities, and commitment to the interpretive element. All of the frameworks are information-gathering/decision-building processes rather than decision-making processes. They may be equally good if they are provided within an atmosphere of innovation, creativity, etc.

Inclusion of measurable standards and performance requirements would improve the use of the frameworks and their application to programs such as interpretation. Standards and requirements provide the leverage for implementation.

Suggestions for further improvement and continued interpretive development using these frameworks include Canada/U.S. sharing of data (cultural, sociological and demographic); heightened communication links between Canada and the U.S.; exploring the possibilities of joint action, and a repeat of this kind of conference in 1990-91.
This syndicate considered the effect of various planning frameworks on the management of camping opportunities.

In discussing VAMP (Visitor Activities and Management Process), concern was expressed that information was not gathered directly from visitors (campers) regarding their preferences, expectations, motives or levels of satisfaction. The thrust of camper information gathering is instead directed at analyzing existing sources, including comment forms and trailhead registers, as well as focus group sessions with park staff and perhaps small, unobtrusive observational studies of camper behaviour.

Our concern was that management perceptions of camper needs and preferences often differed from those actually expressed by campers. A considerable body of literature exists that demonstrates this incongruity. It was also conceded, however, that the use of secondary data sources as prescribed in VAMP can be very productive in identifying problem areas and anticipating information gaps that may need to be filled with subsequent research efforts.

We then turned to look at ROS (Recreation Opportunity Spectrum), since it has been used extensively in the U.S. and, to a lesser extent, in Canada and other parts of the world. In the Canadian Parks Service, ROS was used in the Four Mountain Management Plan, the recently completed exercise that considered together the management plans for the four contiguous mountain parks in Western Canada - Banff, Jasper, Yoho and Kootenay national parks. In this set of plans, the backcountry areas (Zone II: Wilderness, as defined in Parks Canada policy) were segmented into three recreation-opportunity classes (wildland, primitive, and semi-primitive) based on ROS concepts, to reflect a range of social, physical and managerial parameters. What remained unclear was why frontcountry camping areas were not considered in this scheme.

ROS seems to present a useful rationale for providing a variety of types of camping opportunities in national parks; these could range from dispersed rustic campgrounds with no facilities provided to more developed campgrounds with paved access and a high level of services (e.g., electricity, running water, sewage, firewood, showers, etc.). As well as providing a conceptual basis for understanding camper preferences and desired services, ROS offers a basis for stabilizing park services such
that a wider cross-section of campers are encouraged to visit Canada's national parks. On the other hand, we felt that the full implementation of a ROS strategy in a region may require considerable political will; the present application of ROS to the Four Mountain parks, for example, largely has reflected or endorsed prevailing conditions and opportunities prior to the planning process. Yet to be demonstrated in Canada is a stronger test of ROS, whereby significant management changes have occurred in response to deficiencies, inadequacies, inconsistencies or inequities found in a regional analysis of camping opportunities from a ROS perspective.

Finally, we examined LAC (Limits of Acceptable Change) and VIM (Visitor Impact Management). Essentially, these two approaches deal with management responses to resource concerns or the effects of an area's recreational use. The impetus for the development of these approaches can be traced to the inadequacies and misapplication in recent years of the carrying capacity model. This model suggests that impact on a resource and on the quality of a recreation experience can be controlled by limiting the amount of recreational use an area receives. Unfortunately, empirical tests of the relationship between use levels indicate that the relationship is weak and non-linear. Most researchers now concede that impacts can best be controlled by other strategies, rather than relying on limiting use. Other strategies would include distributing use, concentrating use, limiting group size, and zoning different kinds of use.

The major contribution of LAC and VIM to camping management is that both of these approaches have liberated our thinking, moving us away from the simplistic response of limiting use and to a consideration of other approaches for dealing with visitor impacts.
CAMPING IN CANADIAN NATIONAL PARKS

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INTRODUCTION

Prior to this paper, two presentations were made about the Visitor Activities Management Process. While VAMP is the key to determining services offered at a park level, it does not systematically deal with what we see as the large, emerging, national issue of camping. In this paper we applied "VAMP-type" questions to analyze our situation and options, and to propose an approach to rationalize the camping offer in the Canadian Parks Service.

Why are we concerned about camping?

We have a large investment in camping and we suspect that national parks may no longer provide the type of camping experience the public would like to have.

Many of the campgrounds were built in the 1960's or early 70's and are in need of upgrading; we must determine which ones, when, how, and to what standards: those of the '60's or the '90's.

The following are questions that need to be addressed if we are to "get a handle on" camping services and experiences in Canadian National Parks:

1. What is the role of camping in national parks and what are the associated or similar services and facilities?
2. What is the supply?
3. What are the national and regional attendance figures?
4. What are the national trends?
5. What data are needed to assess and explain the pressure points?
6. What are the strategies needed to address change?
7. What rate of change is possible?

WHAT IS THE ROLE OF CAMPING IN NATIONAL PARKS?

In order to tackle the first three questions, we brought together staff from parks, regions and headquarters: from Visitor Services, management (park superintendent), Interpretation, Marketing and Socio-Economic Research.
We first addressed the role of camping in national parks and were able to identify a number of benefits:

- camping is a primary visitation generator;
- camping produces economic spin-offs to the tourism industry;
- camping is a primary revenue generator (there has been a 50% increase in revenue generated from camping permits between 1982 and 1987);
- camping is a primary mode of access to the "park experience";
- camping creates social benefits through national identity and pride;
- camping can respond readily to a slow growth market characterized by increased segmentation;
- camping can often respond to local and regional needs;
- camping has the potential to create high user satisfaction and loyalty.

The committee also proposed basic purpose and mission statements for camping.

The basic purpose of camping in national parks can be summarized as follows:

Camping provides:

- access to an enjoyable park experience;
- recreational opportunities;
- economic and social benefits;
- significant support to the national park image; and
- accommodation.

The committee wished to emphasize that camping is not an isolated activity. The many associated activities and services include:

- trails for walking and hiking;
- day-use areas, such as picnic facilities;
- water-related activities (e.g. swimming, canoeing, boating, etc.);
- interpretation services, such as visitor reception centres, guided walks, theatre presentations, etc.;
- camping facilities, such as kiosks, washrooms, and showers;
- roads.

The committee felt that the mission of camping in national parks is:

- to provide opportunities for the visitors to discover the unique and special heritage values of the parks while camping;
- to provide quality and excellence in the delivery of camping opportunities;
- to provide an enriching recreational experience; and
- to respond to current and future visitor needs.
If these are possible roles of camping, then how many camping opportunities are offered to the public by Parks?

**WHAT IS THE SUPPLY IN C.P.S.?**

Generally, there are three campsite categories in national parks:

- fully serviced
- semi-serviced
- primitive

<table>
<thead>
<tr>
<th>Category</th>
<th>Atlantic Region</th>
<th>Quebec Region</th>
<th>Ontario Region</th>
<th>Prairie &amp; Northern</th>
<th>Western Region</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully Serviced</td>
<td>284</td>
<td>---</td>
<td>29</td>
<td>311</td>
<td>887</td>
<td>1511</td>
</tr>
<tr>
<td>Semi-Serviced</td>
<td>2663</td>
<td>841</td>
<td>428</td>
<td>750</td>
<td>4237</td>
<td>8919</td>
</tr>
<tr>
<td>Primitive</td>
<td>146</td>
<td>---</td>
<td>206</td>
<td>223</td>
<td>587</td>
<td>1162</td>
</tr>
</tbody>
</table>

Table 1: Approximate Distribution by Category of Campsites within Parks

However, there are 100 exceptions to the above categories, so we are looking at eliminating the categories and allowing visitors to select their campsite amenities from a shopping list of options.

**WHAT IS THE USE OF THE CAMPING OFFER?**

The timing of our data analysis trails our own perceptions. Nationally, the trends for national parks camping show decline from 1982-87. Regionally, analysis for 1986-87 shows the beginning of a change in campsite utilization with slight decreases for three regions and increases for two.

Preliminary data for the past two years suggest a substantial reversal of the decline in some areas. Is this a trend or just a couple of good weather seasons? We do not yet know the answers.
Towards Serving Visitors and Managing Our Resources

Within individual regions there is considerable consistency in use of the camping offer, but these data are often not comparable from region to region (e.g. patterns of camping are very different in Atlantic Canada from those in the west).

WHAT ARE THE NATIONAL TRENDS WITH RESPECT TO CAMPING?

In general,

- camping continues to be popular in the U.S. and Canada;
- there is considerable expansion in the provincial and private sectors;
- some reports suggest that there is a steady increase in the sales of recreational vehicles and tents outside Atlantic Canada; and
- there seems to be an increase in the participation of older campers in some areas, such as British Columbia.

Is this recent upswing part of a new trend, or is it a short-lived change? The reasons for change are not known.

Within the National Parks,

- campers are being turned away on weekends from fully serviced campgrounds during the entire summer at most locations, and on weekdays at many locations;
- people are also being turned away from some semi-serviced campgrounds;
- primitive campsites seldom reach capacity;
- fairly detailed studies done at Fundy National Park in New Brunswick show that there is greater demand for specific sites and that fully serviced sites are occupied 100% all summer. Clearly, the current offer has not kept up with the change in market, and revenue and visitation are being lost because we are turning people away.

WHAT DATA ARE NEEDED TO ASSESS AND EXPLAIN THE CHANGES WE ARE SEEING AND ANTICIPATING?

- improved data on demand for specific types of camping-associated packages of activities, facilities and services;
- standard data on customer needs and expectations, such as:
  - what do they want;
  - what are their preferences in terms of opportunities and settings;
  - what are their social expectations;
  - what are their tastes and requirements for packages of facilities and services;
- what related activities, services and facilities do they want in a park and adjacent to the park?
- standard data on customer satisfaction;
- up-to-date data on assets (facilities), such as:
  - what assets exist (e.g. U.S. Forest Service inventory, U.S. National Park Service media inventory). (We know that the replacement value of our campground facilities and related assets is about $1.5 billion.);
  - what is the cost to maintain these assets. (We know that there are tens of millions of dollars in annual shortfall in requests for recapitalization and maintenance of these assets);
  - what is the condition of these assets;
  - when do assets need to be recapitalized; and
  - how much will it cost to recapitalize assets?
WHAT CAN PARK MANAGEMENT DO TO ADDRESS CHANGE AND WHAT RATE OF CHANGE IS POSSIBLE?

We feel there are some actions that can be taken soon to begin to effect change, but that actually adjusting our camping offer will take considerable time.

Following are some of the actions we are working on or considering:

1. **Policy Level**

   We are recommending changes to national park policy so that it accurately reflects the purpose and mission statements for camping.

2. **Budget Priority**

   Camping has been considered a low-priority item in our budgeting exercises. Recognizing that the role of camping is more than just accommodation, we are recommending that this activity receive a higher priority rating in the annual budget-setting exercise (i.e. the Multi-Year Operational Plan).

3. **Data Requirements**

   As discussed earlier, we need to
   - update the information on our existing physical plant;
   - collect and analyze information on our visitors' needs, expectations, demands and satisfaction; and
   - develop and implement a long term camping activity data base.

4. **Regional Variation**

   Given the regional variation in the use of our camping offer, as well as that provided by the private sector and other public agencies, we need to address
specific changes to the camping offer at the regional level in the regional marketing strategies and at the park level in the park service plans.

5. Visitor Activity Management Process - Planning

We will be implementing changes gradually in conjunction with service plans (i.e. there will be 18 service planning projects in national parks during the next year which will be tied to the management planning cycle).

We will be looking for innovative ideas and hope the agency as a whole will adopt the risk taking attitude encouraged by the U.S. Forest Service and will include pilot projects to test new ideas within the VAMP exercises.

6. Maintenance and Recapitalization

We hope that soon we will no longer maintain and recapitalize outdated facilities. Clear analyses of existing facilities, coupled with data-backed visitor needs, will allow us to use our limited funds to upgrade key areas in order to be truly responsive to the visitor.

7. Other Areas

In the future, we will be looking at a wide variety of options related to camping, including reservation systems, and prioritizing, and we would be pleased to talk to people with experience in these or other areas.

ACKNOWLEDGEMENTS

I wish to give credit to the following people who provided input to this paper: Gary Sealey, Grant Tayler, Peggy Hewson, Per Nilsen, and Richard Pope.

LITERATURE CITED


INTRODUCTION

I have been asked to concentrate my remarks on some of the implications for national parks arising from the results of the foreign, long-haul pleasure travel market surveys that are being conducted under a joint agreement between Tourism Canada and the U.S. Travel and Tourism Administration. These surveys (often known as FTAMS for the foreign tourism attitude and motivation studies - a 'nickname' paralleling the Canadian Tourism Attitude and Motivation study which provided a model for the survey instrument) are based on in-depth interviews with approximately 1500 citizens in selected countries who have taken a long-haul pleasure trip, by air, lasting at least 4 nights within the 3 years preceding the survey or definitely plan to do so in the two years following the survey. The sample is not representative of the general population of each country, but it does represent probably the most important market segments for visits to North America's national parks and forests. To date, data have been released on France, Japan, the U.K., West Germany, Singapore, Hong Kong, and Switzerland. I will limit my comments to the first four countries since they are the most important markets, and because the data for the remaining 3 have just been obtained by Waterloo and have not yet been analyzed.

It has become commonplace to recognize that tourism and conservation, once frequent foes, are now often allies. It is no news to anyone here that tourism can play an important role in sustainable development and can be a potent force for the conservation of natural environments. It is, in part, for this reason that Environment Canada has begun to show more signs of interest in tourism and its relationship with the park system. Public awareness of parks is relatively low in Canada; they account for perhaps only 6 or 7% of all destinations for pleasure trips made by Canadians. Yet Canada is internationally recognized as having outstanding scenery, wildlife, and wilderness. Much of Canada's positive international reputation as a vacation destination is closely linked to the resources that our national parks are designed to protect and make available for visitor's enjoyment. Canada's national parks can be an important part of Canada's overall tourism marketing strategy and tourism, in turn, can be useful in helping to generate public and political support for the parks.

Appealing to tourists - attracting tourists - however, is a challenge for the Canadian Parks Service. The agency has limited information about the benefits
Towards Serving Visitors and Managing Our Resources

sought by potential visitors; their image of Canada and of national parks as vacation destinations; the types of activities they wish to engage in; the sources of information they use to make decisions about destinations; and so on.

The FTAMS data sets, while not providing all the answers, do give us the beginning of an understanding of the nature of the international tourism market for national parks. This information can help the CPS improve client services (an objective that Peggy Hewson has spoken of before): to develop and exploit new markets and support tourism growth and economic development in the vicinity of parks.

In the time I have available, I will concentrate on the sources of information for people who actually visited NPs on their last trip; motives for international pleasure travel; activities engaged in on their trip; criteria used for selecting specific destinations; and the major advantages and disadvantages Canada has in the eyes of the four international markets.

SOURCES OF INFORMATION

There is general consistency about where people seek information on potential destinations: friends and family, travel agents, and brochures and pamphlets. The Japanese are a bit unusual: “friends and family” does not appear in their top three, but library sources do. What we don’t fully know is exactly what brochures, pamphlets, and books potential visitors are looking at and what travel agents, as well as personal contacts, are telling people about Canada. As an attempt to get some feeling about what travel agents might be saying, I took a look at the section on Canada presented in the Fuller-Weissman Report, a major source of general information on foreign destinations for travel agents. Some of the expected names show up, such as Banff and Jasper - as well as some unexpected names, especially some of the national historic parks. Banff and Jasper were identified in connection with Alberta, no BC parks were named, nor were any in Ontario. Generally, the Prairies and Quebec parks are also ignored, but the Maritimes get heavy attention, especially Newfoundland.

While the market for the Fuller-Weissman Report is predominantly American, and thus we cannot extrapolate to our four countries, the evidence seems to suggest that travel agents may not have as full an appreciation of the range of parks and park products as we might like them to have.
Table I

<table>
<thead>
<tr>
<th>The Three Most Important Sources of Information for Trip Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>France</strong></td>
</tr>
<tr>
<td>Friends &amp; relatives</td>
</tr>
<tr>
<td>Travel agents</td>
</tr>
<tr>
<td>Brochures &amp; pamphlets</td>
</tr>
</tbody>
</table>

Table II

**National and National Historic Parks Cited in the Fuller-Weissman Report**

- Banff
- Jasper
- Rocky Mountain House
- Lower Fort Gary
- Carlton Martello Tower
- L'Anse aux Meadows
- Cape Spear
- Castle Hill
- Gros Morne
- Terra Nova
- Alexander Graham Bell
- Fortress of Louisbourg
- Habitation Port-Royal
- "Anne of Green Gables" (but not identified as a national park)
- Kluane
- Kejimkujik (identified as a shortcut between Lunenber and Digby)
MOTIVES

While the sources of information for trip planning showed significant similarity among the four countries, their motives for overseas travel are rather mixed. Opportunities to learn, to sightsee, and to get away from work or home appear in most lists, but the order is different and there are other variations. At the risk of oversimplifying a complex pattern, and also at the risk of ignoring important differences in the specific market segments from each country, it is interesting to note that the French and Japanese put learning at the top while the British and the Germans gave the experience of different lifestyles the highest rating.

Table III

Top Four Motives for Overseas Travel

<table>
<thead>
<tr>
<th>France</th>
<th>Japan</th>
<th>United Kingdom</th>
<th>West Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn new things</td>
<td>Learn new things</td>
<td>New, different lifestyles</td>
<td>New, different lifestyles</td>
</tr>
<tr>
<td>New, different lifestyles</td>
<td>See as much as possible</td>
<td>See as much as possible</td>
<td>Freedom to enjoy self</td>
</tr>
<tr>
<td>Get away from home</td>
<td>Get away from home</td>
<td>Do nothing at all</td>
<td>Thrills &amp; excitement</td>
</tr>
<tr>
<td>See as much as possible</td>
<td>New, different lifestyles</td>
<td>Get away from home</td>
<td>Get away from work</td>
</tr>
</tbody>
</table>

ACTIVITIES

If we now consider what other activities people engaged in during their last trip, as part of their efforts to put their motives for travel into practice, we again see some differences among the four countries. First, the Japanese report many fewer activities. This probably represents a cultural difference in the perception of what constitutes "participation", or in the way certain activities are defined. For example, photography does not appear in the Japanese list. But unless my own observations are inaccurate, I believe more than 50% of Japanese tourists take pictures. The difference here may be in how they define "photography" - for them it might not refer to simply taking snapshots or casual slides, but to a more serious involvement.
Next, even though the Japanese group all visited national parks, the most common and shared activities were anything but outdoor recreation. Listed activities are, in fact, shopping, dining out, and general sightseeing. Visiting wilderness, touring the countryside, viewing wildlife, and touring mountains are popular with the Europeans, but much less so for the Japanese. Further, while the data are not shown here on the types of trips people took, the majority generally defined their trip as a touring trip, not as an outdoor trip. This is a rather basic and important point: the great majority of foreign visitors who come to Canada and who would visit a national park will do so as part of a touring trip on which they want to see and do many different things, and not as part of an outdoor recreation vacation. Visits to national parks will likely need to be relatively short -- a day or two -- and combined with opportunities for shopping, other sightseeing, and dining. This emphasis on learning is of special relevance to the need for providing interpretive services as part of the national park experience.

Table IV

<table>
<thead>
<tr>
<th>Activities Engaged in by at Least 50% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>France</strong></td>
</tr>
<tr>
<td>Photography</td>
</tr>
<tr>
<td>Eat local foods</td>
</tr>
<tr>
<td>Dining out</td>
</tr>
<tr>
<td>Sightseeing</td>
</tr>
<tr>
<td>Shopping</td>
</tr>
<tr>
<td>Meet locals</td>
</tr>
<tr>
<td>Visit scenic landmarks</td>
</tr>
<tr>
<td>Visit seaside</td>
</tr>
<tr>
<td>Tour countryside</td>
</tr>
<tr>
<td>Observe wildlife</td>
</tr>
<tr>
<td>Visit historic sites</td>
</tr>
<tr>
<td>Swim</td>
</tr>
<tr>
<td>Visit mountains</td>
</tr>
<tr>
<td>Visit galleries, museums</td>
</tr>
<tr>
<td><strong>Japan</strong></td>
</tr>
<tr>
<td>Sightseeing</td>
</tr>
<tr>
<td>Shopping</td>
</tr>
<tr>
<td>Dining out</td>
</tr>
<tr>
<td>Visit theme park</td>
</tr>
<tr>
<td>Visit scenic landmarks</td>
</tr>
<tr>
<td>Guided excursions</td>
</tr>
<tr>
<td><strong>United Kingdom</strong></td>
</tr>
<tr>
<td>Shopping</td>
</tr>
<tr>
<td>Sightseeing</td>
</tr>
<tr>
<td>Photography</td>
</tr>
<tr>
<td>Meeting locals</td>
</tr>
<tr>
<td>Touring countryside</td>
</tr>
<tr>
<td>Visit scenic landmarks</td>
</tr>
<tr>
<td>Visit friends/relatives</td>
</tr>
<tr>
<td>Visit historic sites</td>
</tr>
<tr>
<td><strong>West Germany</strong></td>
</tr>
<tr>
<td>Dining out</td>
</tr>
<tr>
<td>Meet locals</td>
</tr>
<tr>
<td>Eat local foods</td>
</tr>
<tr>
<td>Visit cities</td>
</tr>
<tr>
<td>Photography</td>
</tr>
<tr>
<td>Visit scenic landmarks</td>
</tr>
<tr>
<td>Visit seaside</td>
</tr>
<tr>
<td>Tour countryside</td>
</tr>
<tr>
<td>Visit seaside</td>
</tr>
<tr>
<td>Swimming</td>
</tr>
<tr>
<td>Visit mountains</td>
</tr>
<tr>
<td>Visit wilderness</td>
</tr>
<tr>
<td>Attend festivals, events</td>
</tr>
<tr>
<td>Visit theme park</td>
</tr>
</tbody>
</table>
DESTINATION CRITERIA

What are the criteria used by different nationalities in selecting a foreign destination? The French and Japanese appear to be more interested in scenery, the opportunity to learn, and the type of welcome they get. People, value, and service are more important for those interested in national parks than weather. This, as we shall see, is fortunate for Canada. For the British and West Germans, however, weather is more important. Value and cleanliness are also very important for the British, while different cultures and wilderness appeal to the West Germans. An interest in scenery is common to all four, which is also good news for Canadian parks.

Table V

Top Five Criteria in Selecting an Overseas Destination

<table>
<thead>
<tr>
<th>France</th>
<th>Japan</th>
<th>United Kingdom</th>
<th>West Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity to learn</td>
<td>Outstanding scenery</td>
<td>Value for money spent</td>
<td>Experience different cultures</td>
</tr>
<tr>
<td>Meet friendly people</td>
<td>Value for money spent</td>
<td>Cleanliness</td>
<td>Wilderness</td>
</tr>
<tr>
<td>Outstanding scenery</td>
<td>Cleanliness</td>
<td>Reliable weather</td>
<td>Warm, sunny climate</td>
</tr>
<tr>
<td>Warm welcome for tourists</td>
<td>Inexpensive to get to</td>
<td>Outstanding scenery</td>
<td>Cleanliness</td>
</tr>
<tr>
<td>Experience different cultures</td>
<td>Warm welcome for tourists</td>
<td>Opportunity to learn</td>
<td>Outstanding scenery</td>
</tr>
</tbody>
</table>

CANADIAN ADVANTAGES

Many people in the audience will recall the decision about four or five years ago by Tourism Canada to downplay "Canada's three M's": moose, mountains, and mounties. While the reasons for that decision made sense, at least superficially, it was a decision that many people in the Canadian tourism industry questioned. To some, it seemed questionable to deliberately ignore four greatest traditional strengths. That strategic change has quietly faded away. And as Table VI suggests, it probably had no effect while it was in place. National parks, wildlife, outdoor activities, and mountains (at least as implied by skiing) are seen as our greatest strengths by all four markets.
If we compare this list to the criteria for selecting an overseas destination, we see some good matches that we can probably exploit. The French want a country where they have an opportunity to learn and with outstanding scenery. That’s not too far away from our strengths as seen by the French. They don’t mention friendly people and a warm welcome as strengths, but these are important in selecting a country. Those are things we can and must strengthen and promote; and, as you know, they are not incompatible with a national park experience.

The Japanese want scenery, value, cleanliness, and a warm welcome. Again, with the exception of a warm welcome, their preferences and Canada’s image are not too far apart.

The West Germans are interested in different cultures, wilderness and scenery - another pretty good match.

Finally, and in contrast, the British are concerned about value, cleanliness, weather, and scenery. We have the scenery, but our strong outdoor image does not seem to be addressing the more basic motives and interest of the British market. Here, at least, a shift from the three M’s to other benefits might help promote Canadian tourism and visits to our parks.

### Table VI

<table>
<thead>
<tr>
<th>Top Five Comparative Advantages of Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>France</strong></td>
</tr>
<tr>
<td>National parks</td>
</tr>
<tr>
<td>Fishing and hunting</td>
</tr>
<tr>
<td>Wildlife</td>
</tr>
<tr>
<td>Scenery</td>
</tr>
<tr>
<td>Snow skiing</td>
</tr>
</tbody>
</table>

**DISADVANTAGES**

Canada’s image is not all positive, of course. We have certain problems. Most of these are probably not surprising: weather, beaches, and urban activities such as nightlife or museums and theatre. Some of these we can do very little about, and we may not really even need to worry about them, at least for national park visits. The French concerns over value and budget accommodations, though, may need
attention. Identifying good quality, but inexpensive accommodation alternatives close to national parks, or actually in the parks, could help increase our attractiveness to the French.

Canada also has a reputation for having either no history or boring history. A stronger marketing emphasis on our national historic sites might be effective, although in the case of these four markets, a country that is just a little over 100 years old may not have much history to work with. Linking our history to the frontier, to indigenous cultures, and to the early exploration of the New World, with the implicit emphasis on European connections, may touch a responsive chord.

Finally, the Japanese market appears to have a bimodal split in their perception of Canada’s national parks: while a substantial portion think we do very well in this product, a smaller but still significant group think Canada’s parks are not nearly as good as those of other countries. I can’t explain this, unless they are making an implicit, narrow comparison to U.S. parks which might be better known, or perhaps a reaction against the very popular image of Banff as a honeymoon and resort destination, but not as a national park.

Table VII

<table>
<thead>
<tr>
<th>Five Key Disadvantages of Canada in International Tourism</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>France</strong></td>
</tr>
<tr>
<td>Beaches</td>
</tr>
<tr>
<td>Reliable weather</td>
</tr>
<tr>
<td>Budget accommodation</td>
</tr>
<tr>
<td>Value for money spent</td>
</tr>
<tr>
<td>Historic sites</td>
</tr>
</tbody>
</table>

CONCLUSIONS

National parks and their associated services represent an important international tourism product. But foreign visitors normally don't visit national parks for the same reasons that domestic visitors do. Visits tend to be much shorter, and are usually part of a touring trip in Canada rather than an extended camping or outdoor recreation vacation. Visitors value the opportunity to learn; a warm welcome combined with high quality interpretation based on Canada's scenery; linking with other tourism products, such as local, good quality (yet affordable) accommodation; local shopping opportunities such as crafts; good quality dining based on local foods;
and tour operators catering to the languages and customs of the visitors. By making these benefits available to foreign tourists, we can help insure that their visits are rewarding and that they get from their national park visit everything we want them to.
INTRODUCTION

Mathieson and Wall (1982:1) define Tourism as ... the temporary movement of people to destinations outside their normal places of work and residence, the activities undertaken during their stay in those destinations, and the facilities created to cater to their needs. The study of tourism is the study of people away from their usual habitat, of the establishments which respond to the requirements of travellers, and of the impacts they have on the economic, physical, and social well being of their hosts. It involves the motivations and experiences of the tourists, the expectations and adjustments made by residents in the reception areas, and the roles played by the numerous agencies and institutions which intercede between them.

Based on this definition, resource management agencies have been involved in the business of tourism for a long time. In many instances, the social science functions that developed in those organizations spent much of their time attempting to examine recreation visitors (tourists) in resource, historical, and cultural settings that were removed from their work, seeking to understand and describe the patterns of this participation. Although not described as the study of tourism at the time, the effort was clearly related to this social phenomena.

The initiatives and strategies that are being addressed at this meeting have taken on new meaning and are more important than ever for several reasons. First, many resource agencies have an internal orientation - they are concerned about what happens in the facility or the organization - and are much less interested in external relationships. However, the rise of agency service functions and the economic impacts that many of these places (parks, forests, etc.) create on local and regional populations are forcing a greater sensitivity to recreation and tourism. For example, the Forest Service concept of "community stability" has rarely ever been thought of as being related to tourism. Yet in many of the more traditional "big timber" areas, it is being explicitly stated that the economy is more dependent on recreation visitors than timber.

The second issue at stake has to do with image. The efforts under way to examine the social and economic fabric of visitor groups is partly related to the fact that many organizations are not perceived as being particularly credible in pursuing their mission or the recreation objective ("You say that this is important, but you don't seem to be doing much.").
A third possibility may also be declining attendance, although it’s not clear that this change is well understood by upper administration. That will be examined in another context later on in this paper.

However, thinking about visitors makes us expand our thoughts to another group to whom we have not paid much attention until recently - the international visitor. The purpose of this paper will be to (1) frame the role of the international traveller in the U.S. environment, (2) point out recent research on these travellers that relate to resource based areas, (3) suggest how this information might relate to the initiatives and decision frameworks under discussion, and (4) point out some of the key change issues that will have to be addressed.

INTERNATIONAL TRAVELLERS

Although the opportunity has been available, it is only recently that the United States has been perceived as an international tourist destination (Andereck et al. 1988). The International Tourism Quarterly (1980) notes that between 1965 and 1975 tourist flow into the U.S. increased from 7.8 million to 15.7 million visits, a 7.2% annual growth rate. Andereck et al. (1988) note that the growth in international tourism from overseas visitors is even more dramatic, increasing 1200% between 1970 and 1981. Wynegar (1987) has calculated a 1638% increase in inbound tourism to the U.S. since 1960 and a 637% gain in outbound travel. Wynegar (1988) notes that the total foreign tourism to the United States in 1988 is estimated to be 33.5 million persons, up sharply from the 29.6 million in 1987. Overseas visitation was 12.6 million visitors, with very sharp changes between 1987 and 1988 coming from Japan (+27%), the United Kingdom (+31%), and West Germany (+31%). Overseas travel by Americans was estimated to be 14.2 million in 1988. Wynegar’s projections are for a continued increase in the international foreign and overseas travel (Wynegar 1988).

CURRENT RESEARCH ON INTERNATIONAL TRAVELLERS

While the magnitude of visitation expressed over time is important for us to examine, additional information is needed for us to understand the international tourist. The joint research that has been under way between Tourism Canada and the U.S. Travel and Tourism Administration in cooperation with the Park Services from the two countries, gives a sense of the role of national parks and forests as well as historical and cultural places in the international or overseas traveller’s mind. A significant number of these overseas travellers indicate they either have visited a national park in the past or express an opinion that a national park is an important factor in planning their trip.

Information concerning National park visitors as well as historic site visitors comes from the two countries I have spent the most time examining (United Kingdom and West Germany). There tends to be age differences between the two
groups, with national park visitors being younger than those visiting historic sites. Important criteria for making an overseas trip are different for those visiting a historic and national park area for visitors from the two countries. United Kingdom travellers express much stronger feelings about factors that influence their travel than those from West Germany. The list goes on in comparisons done in a very descriptive fashion for the two countries (O'Leary 1989). If we begin to look in greater detail at these data (and we are) there appear to be clear cultural differences apparent. This is what Cohen argued was important to consider in the Annals of Tourism special-series on International Tourism several years ago. One also begins to wonder about the interpretation of the information since Europeans (and Japanese with the other data) have very different experiences with the types of resources we are looking at. Posed in this way, the initiatives take on new meaning in terms of how issues like experiences, quality, interpretive programs, overseas travel information from the agency, etc., are handled for the overseas traveller. At some point these issues must be included in the agency initiatives where they haven’t been before.

INITIATIVES AND PLANNING AND DECISION FRAMEWORKS

A number of agency approaches or initiatives have been put forward to try and address the question of visitor management. Perhaps most well known are the Recreation Opportunity Spectrum used by the Forest Service, the Natural Resources Inventorying and Monitoring program of the National Park Service, the Interpretive Challenge of the National Park Service, America’s Great Outdoors of the U.S. Forest Service, and Recreation 2000 by the Bureau of Land Management.

THE RECREATION STRATEGY

The Recreation Strategy is a conceptual framework aimed at finding creative and imaginative ways to take advantage of outdoor recreation opportunities on the National Forests by working with people. Much of the background was developed by members of the Forest Service and contributors from outside through a series of workshops and meetings and then through a report to the Chief. Having gone through a process of retrenchment toward recreation, many raised the question of whether the Recreation Strategy was a facade or a serious attempt to develop a focused successful effort. Members of the agency appeared to feel that while it was really too early to tell, the pronouncement was indeed a serious attempt to make a difference. The charge or challenge was relatively nonspecific. It searches for people to be somewhat entrepreneurial with ideas and to be innovative in their actions in an organization not known for innovation. It charges personnel to search out quality, although there is little guidance given as to what constitutes quality and how to know when you’ve got it.

The "Challenge" posed a series of questions and challenges: who are the customers; are they the same as those who visited out sites five or ten years ago;
where do they live; what do they want to experience when they visit a National Forest; what will contribute to customer satisfaction; what is the setting significance; how do we design and maintain quality opportunities; how to modernize facilities; finding funding sources; and build partnerships.

In terms of the international visitor the basic questions of whether any international visitors come to National Forest areas now, whether they could be attracted in the future, as well as how they view the issue of quality are all integrally related to the "challenge".

THE ROS CONCEPT

The ROS was a largely resource-based approach to provide for recreation diversity (Driver et al. 1987). Driver and Brown (1987) said that the objects of planning were posited as opportunities for activities in particular settings to realize desired experiences. As one of the major actors in bringing ROS to the forefront, Driver describes what this system is designed to accomplish.

"ROS involved specifying recreation goals in terms of classes of recreation opportunity, identifying specific indicators of these opportunities that permit their operational definition and defining specific standards for each indicator that make distinctions among the opportunities possible. The result is a clear definition of recreation opportunities as both the products of management and the services desired by recreationists (Driver et al. 1987:204)."

This "clear" system ought to provide an ideal visitor management framework. The intent was to create a procedure that was not too complicated for managers to implement. Leisure Sciences published an article about ROS in 1987 by Driver, Brown, Stankey and Gregoire; in this discussion, three key themes appeared to emerge. First, there was a need to work more on developing the standards that would guide definition of recreation opportunities. Although the article noted that it was not the intent of ROS to serve as a research paradigm, in fact this really is where it came from in the first place. There was some information that would allow us to understand bits and pieces of the system, but rough or detailed information about standards and implementation in field situations for much of the country was still far behind. Since the "Betty Crocker" format was not available for field personnel, there was some difficulty in selling the idea for implementation. A second issue was the need to look at what was happening when ROS was tried in the field and use that information to adjust and improve this scheme. Finally, if quality of an opportunity was a concern, it had not been factored consciously into the framework and something needed to be done to examine the question.

ROS addresses visitors including the international travellers in two ways. First it tries to focus on conditions in which an experience can take place describing
certain system components that shape the environment. In most instances, this
represents what exists. Secondly, it raises questions about how international visitors
from many environments think about the habitats that are provided. For example,
how does a European traveller think about wilderness and what does that person
expect to be able to do in those places?

UNDERSTANDING THE RECREATION VISITOR: A RESEARCH FUNCTION

In general, there is little visitor management (except in terms of law
enforcement) taking place in resource organizations in the United States. When I
first began my graduate student career I was fortunate to begin in a Cooperative
Park Study Unit. Many exciting things were going on, but if I were to look back on
that I recall that one of the most important concerns was to be sure that a regular
attempt was made to think how the research under way applied to field needs. I
think back on that and I believe one problem was the CPSU represented a separate
entity that was removed from the day to day view of the regional office or individual
park. It represented the university types, and a special kind at that. This perception
that I developed at that time has really not changed, nor does it appear to be
different for the U.S. Forest Service and their use of experiment station or research
unit involved in some activity that had little perceived relationship to what went on
in the field. I recognize that I am making some generalizations here as an outsider
looking in. However, I have done research in both situations and feel this is a fair
description.

Since few people located in the field have the time and expertise to be able to
gather the information necessary for the visitor-management function, developing
a close relationship between the staff and line functions is essential. A few attempts
have been made to develop more of a liaison, and there apparently exists a formal
or informal mandate for the Forest Service research units to work more with the
National Forest System, but there is still a long way to go in sorting through how the
relationship will proceed. This is particularly true in developing expectations about
what the outcomes of these new relationships ought to look like. Inputs and outputs
will have to be structured both from the top and the bottom in the resource
organizations. A good example will be an examination of the international traveller.
There will be needs to develop a portrait about the nature of visitation across the
system, where it is primarily taking place, but also what it means for individual
facilities. What kind of information do we need for visitor management to address
the issue of "what it means?" In many ways the model we ought to examine is the
Canadian Parks Service's Socio-Economic function. The difference between the
Canadian and the U.S. approaches appears to be that the U.S. began their social
science programs as research functions, while the Canadians appeared to begin as
part of a management, planning, and environmental impact program, which has now
evolved to do some research.
STRATEGIES ARE A RESPONSE TO RECREATION GROWTH: ARE THINGS GOING TO GROW?

One of the opening lines in Dale Robertson's missive to the people in the Forest Service is that the Recreation Strategy needs to be responsive to the growing outdoor recreation needs of the American people. Certainly the PARVS research done for the RPA process and the projections that were made, know that recreation will increase. But the question is, will it occur in the traditional places? Reading these reports as well as looking at the President's Commission on Americans Outdoors reports our conclusion is that visitation is shifting (places; time; ways). There are some people in resource agencies who are absolutely overwhelmed by visitor use, while others are being underwhelmed. In both cases, the managers need to be sensitive to where they are now and where they could be with visitors. For those that have large numbers of visitors and anticipate growth, both the quantity and the quality of what they manage is important. For those who are "underwhelmed", the issue might end up being how to attract more visitors either because of economic needs of an area or because of a need to redirect attention away from certain popular places to the lesser known areas. Hornback (1988) has estimated that by 1990 there will be 290 million visits to the National Park system, increasing in 25 years to a level of between 446 to 669 million visits. This underscores the growth image presented by Robertson. Hornback also describes possible impacts of international tourism on the National Parks. Deregulation of the airlines will be a major force in bringing international travellers to the American interior during the next twenty years. Wynegar (1987) mentions interest in the interior by foreign tourists as additional problems emerge with coastal beach and urban conditions. While projects of use are on the rise, foreign use of the national parks is unknown. Hornback noted that if one third of those visiting came to a National Park area, this would include approximately 9 million visitors or about 3% of the total number of visits to the system. The expenditures of this number of people would be substantial and represent a significant reason to understand them as a portion of the visiting population. However, a major concern must be where they are going to go (where would you like them to go?), in an effort to best respond to their needs.

RECREATION IS COMPLICATED

In reading the Driver et al. (1987) description of ROS one of the specific goals identified for the ROS framework was that it would be simple. Made complicated, managers and planners might not be willing to use it. The dilemma is that managing for recreation, particularly the range that can take place in the many environments that resource management agencies are responsible for, is complicated. The reason that ROS has been difficult to implement is that once the ecological classification and map information is in place, the tough information must then be put in place. However, without a commitment to gathering the information about visitor use and patterns associated with that use, the necessary ingredients that must be in place for
Tourism Futures and the Resource Management Agency

Visitor planning and management are not there. Since the organization must have defensible information on its journey to court to defend plans, the problem is the absence of visitor data.

For domestic information, the information is not in place; for international information, we have even farther to go.

SEARCHING FOR QUALITY

A theme in all of the efforts, be they initiatives or decision frameworks, is the quest for quality. A person could be pessimistic and suggest that given how little we know about quantity, this more complicated concern is a real challenge. Graefe and Vaske (1987) note that understanding quality in the travel experience requires an understanding of recreation participation motivation and how visitors perceive important elements of the places they visit.

The international survey information indicates that there are some identifiable "important" items that these visitors search for on a trip. In some cases, these data look like some of the same features sought by older travellers to National Parks. In neither of these situations where we now have information is it being used by the organization in planning and management.

One of the challenges for public sector agencies, particularly in situations where partnerships emerge, is defining how the public sector provides quality opportunities, particularly where there is no clear market transaction (Picherack 1987). Looking at Disney or any of the other private sector firms is not necessarily the solution.

QUALITY AND DATA MANAGEMENT

If we are to improve the operations side of the organization, then we must be able to go back and use a well-maintained data set. This provides the opportunity to see how things are going, to check on the operation, to address a new issue or concern with other information. The data are used to "fine tune" the operation in a rational way and allow the very specific decision to be made.

Right now, most resource management agencies are missing the follow-through from the large decisions. There is a need to continue to work past the management plan. This commitment and the ability to take the step that allows one to get at quality must be continually monitored since it is in this area that research support has been virtually non-existent. Information of this type could have an influence on repeat visitation, as well as the first time visit. Since "word-of-mouth advertising" based on past visits often influences the choices made by the new visitor, the importance of creating conditions for a quality experience is essential. For some travellers (e.g. the Japanese), the successful experience is of importance not only to
the visitor, but also to the tour operator if that person is to have others continue to do future business.

STATE AND NATIONAL HISTORIC AREAS

The data from the international surveys show some tendency for Europeans not to view the U.S. as being competitive in its historical opportunities. This is not to say that they don't visit, but there does not seem to be an effervescence associated with the U.S. offerings. Why should these people feel this way? Certainly North America does not have the long historical traditions of Europe. However, resource agencies have exciting geological, physical and cultural history to offer, some of which includes the participation of immigrants who came from the countries in which surveys were conducted. Part of the objective that might be developed for efforts like "The Interpretive Challenge" is to develop themes based on research done in different countries to determine messages that might elicit interest and be exciting to these visitors.

LINKING OUTSIDE THE PARK

If there is a clear finding from the international travel surveys, those people who say that visiting a national park is important, also note they would like to shop, eat in nice restaurants, experience the local culture, etc. In effect, the experience that is described cannot be realized only in the park. United Kingdom travellers appear even more frenzied in the sense they strongly emphasize "doing as many things as I can possibly do". A key observation is that travel agents as well as pamphlets and brochures play a key role in how the traveller gets information. The link to transferring the objectives the organization would like to develop in this area is clear and in place. How should agencies take advantage of these opportunities?

MARKETING: A PROACTIVE TOOL AND AN INTEGRATIVE FUNCTION

The role of parks and forests in society change as do the missions and objectives for management. Changes occur if for no other reason than natural succession and catastrophe. In a national park, one immediate group affected would be the interpretive staff. In Yellowstone, part of the new story will probably be the fires of 1988 and the spin that the staff will put on the conflagration. As one research forester mentioned to me several weeks ago, the story might be not that a fire occurred (since that has gone on for thousands of years), but that we intervened to prevent it from continuing. Will the story be presented in the same way to the visitor from West Germany as to the visitor from New Jersey? It is more than a rhetorical question, and one that needs to be addressed since the Park Superintendent has carried the message to visit to Europe. An image of a park should be expected to change over time. The park image at varying points in time and for different groups of people needs to be understood if a manager or planner wants to address activities, technology, etc.
The current focus of the organizations at this meeting all address the need to be more responsive to visitors and potential visitors in terms of what people do now and what might emerge in the future. Marketing provides the organization with a different tool that allows us to control programs for the purpose of achieving organizational objectives. It implies that knowledge exists about target groups or markets "... to identify needs and desires and using effective pricing, communication, and distribution to inform, motivate, and service the market (Kohler 1976:7)."

With this definition, the data requirements for marketing will probably use some of the more traditional material from resource agencies, but there will need to be a quantum jump, particularly on a system wide basis in the United States, to collect the new (underscore the term new, because it is) types of information that will be necessary. Marketing in the U.S. is generally perceived as advertising to get more people to come to the facilities. Since many resource personnel would like to see visitors stay home, the activity is looked upon with some disdain. What the Chief of the Forest Service is saying they need to do, what the Interpretive Challenge is suggesting they need to move toward, what Recreation 2000 is indicating must be accomplished by the Bureau of Land Management, will require that marketing information be added to what else needs to be accomplished in terms of data needs.

In Canada, there have been bridges built between the Canadian Park Service, Tourism Canada, and Statistics Canada to elicit international travel information. These data, even in the earliest stages of the relationship, have emerged to change a number of ways in which the agency approaches both the U.S. and other nations. Their commitment to additional analysis will probably lead to other changes and initiatives. In the U.S., the process has developed from lukewarm to no support from the resource organizations. One of the first major innovations will probably have to include developing new relationships that hooks agencies like USTTA, the U.S. Forest Service, and the National Park Service together. We are only now beginning to try to incorporate ideas (not action) into the way in which these types of information might influence visitor management for these groups in the agency. This problem is related to the issue addressed early in this paper, i.e., not much is known in the resource agencies about their foreign visitors. In the absence of having any information, it is difficult to develop a plan of action to do almost anything.

I believe that developing these organizational relationships has begun on an informal basis, but needs to develop further. In addition, I also believe that state and regional organizations looking to improve their economic activity will pursue the relationships and information with greater vigour than their federal counterparts.

More important, the mission must include decentralized information at the local or regional level and an analysis phase that allows detailed follow-up to unearth what this data means to the organization. We have a history of collecting lots of data, but little experience with aggressive analysis to elicit information the data contain.
AGENCY CHALLENGES

In a recent Sunday New York Times travel presentation, the U.S. National Parks were highlighted as places that are interesting to visit in the winter. Be assured that all the Western Parks had not disappeared and burned up. The "crown jewels" were still there waiting for all to come and see; and if you hadn't seen them in the winter, what an opportunity.

USA Today has noted that this same message of coming to visit was being carried to Germany by the Superintendent of Yellowstone to assure potential visitors that there were still neat things to see. No one was saying don't come or even visit another place, even though the same National Park Service had produced their own report examining a rather extensive list of threats to the parks, many of those being in the same "crown jewels". The Times article did not describe alternative places, nor did it talk about lesser known facilities to go to. The message appeared to be that we're still here, we're not hiding anything, and the winter would be a fine time to check us out.

Several days after the article appeared, Sir Edmund Hillary was quoted as saying that all the people who were trying to climb to the top of Mt. Everest were ruining the mountain; time for a five-year hiatus to let the mountain recover. Tour operators were taken aback. No need to stop; it was time for better education to make those who were coming become more responsible.

These stories represent people and organizations dealing with domestic and international tourists, people that resource management agencies are interested in and - perhaps trying to serve. Many of the people at this meeting have been the persons who have had a pronounced effect in getting resource management agencies to think about visitor management. At the same time, if it had really worked the way many of us would have liked, the tone of the conference and the manner in which we look at many of the U.S. agencies would probably be different. I will not be presumptuous to speak about the Canadian condition since they do that quite well themselves.

After a great deal of thought, it seems to me that several problems have arisen to get us where we are and which will continue to pose difficulties for the emerging tourism challenge.

In 1988, as a result of analysis done of the Public Area Recreation Visitor Survey (PARVS), Andereck et al. (1988) made four recommendations about looking at international visitors. I refer to those generally and then add a few others.

1. Benefits sought by international visitors should be identified and evaluated in a systematic way. We are at the beginning of this investigation in virtually all the resource based agencies in the U.S. We have only begun to develop data
strategies that put us in a position to use existing data-gathering efforts and insert questions that may allow us to understand more about international travel including those who do and do not come from overseas.

2. International tourism on public lands must be based on the protection and wise use of an area's basic natural and cultural resources. Our examination of the international surveys suggest that the U.S. is seen to have an advantage in terms of its national parks and forests, but not in terms of its historical or cultural areas. Showing international visitors how strong that commitment to protection is and the role that resources play in our society could be a message carried back that we should strive to achieve. Intervening to be certain that protection is a strong goal is imperative if the competitive advantage we have continues. The messages developed for different visitors become a key and assessing how people receive those messages is critical.

3. There is clear evidence that tourists can be influenced by information. The joint international travel surveys all showed the importance that overseas visitors place on information in trip planning. While this should not be a surprise, it should also be viewed as a window of opportunity for the organizations in letting people know what to do, what is possible, and what is different. However, we have only begun looking at the possibilities. Can we identify groups (young/old; male/female; heavy travel/light travel) for whom the communication strategy should be different? Should we focus objectives on specific groups, and if so, who? The task is not just to stimulate demand but also regulating level, timing, and characteristics of demand in a way that will help the organization achieve its objectives (Kohler 1976:8). In the U.S., this remains an idea not an objective.

4. Looking for the non-traditional hook is going to be a major chore for resource organizations. If the strategies identified are to work in any of the organizations, then where they are going cannot be seen as only doing more of what we've done before. Kanter (1983) talks about an organizational mentality of looking back, a "culture of organizational immortality". It is a long view of looking backward in history, to the way in which so-and-so identified it ought to be. However, most firms are becoming involved in long-term planning because of external events and their need to be ahead rather than behind. Looking ahead for the resource organizations is going to include many non-traditional choices that could cause interesting dilemmas and consternation without information.

Examples of where these changes will hit home particularly with international visitors will include as examples:

a. Reaching out to new organizations;

b. Looking at year-round visitors;
c. Marketing the lesser known parks.

Kanter (1983:356) suggests: "... modifications in organization design and improvements in human resource systems constitute innovation-promoting innovations. They make the organization ready to both stimulate and take advantage of unprogrammed innovations that come from participating teams at the bottom and entrepreneurial managers in the middle and higher." Taking advantage of innovation will require more than saying that there should be change. It must incorporate resources, information and support; it must highlight and develop a culture of pride in the organization; get departments and groups talking to each other; reduce the complexity of doing things; involve people early in plans.

Cooperation between publicly managed lands and the tourism industry at all levels should be expanded and encouraged. Part of this cooperation ought to include ideas about data sharing, development, and some old-fashioned entrepreneurial activity.

Agencies will have to change how they organize themselves in terms of visitor management activities. Research activity will be important, but if the current separation continues, the ability to introduce new ideas into the organization will be short-circuited. It seems very clear that resource agencies will have to work harder with their field staff in terms of visitor management as a key focus of the staff.

5. Identifying needs, managing and analyzing data resources: The VAMP program being developed by the Canadian Park Service suggests a way to think about collecting visitor data and using it in the visitor-management activities of the organization (see Tayler and Graham, this volume, Graham, Nilsen and Payne, 1988 and Environment Canada, Parks, 1988). Other initiatives and strategies presented at this meeting suggest the need for similar designs. The most important ingredient missing in the U.S. agency initiatives and strategies is not what to collect - there are a number of efforts oriented in that direction - but where the data fit in the management function of the agency. Where does information about the international visitor fit functionally in the organization? This missing ingredient is very clear in the monitoring and inventory effort in the National Park Service and should be dealt with as soon as possible to avoid the process being seen as research or as an auxiliary function.

BEING AN INTERNATIONAL PLAYER

In the earlier material I showed you, it should have been clear that material areas in this country represent an advantage for attracting international visitors. In the early 80's the U.S. had a net international travel account deficit of more than $2.7 billion dollars. When President Reagan signed into law the National Tourism
Policy Act, it gave USTTA the mandate to foster travel to the U.S. from abroad as a "stimulus to economic stability" and to the growth of the U.S. travel industry, to reduce the nation's travel deficit. Would import substitution, getting some U.S. citizens to visit a national forest instead of travelling to some other place work? It's a good question in need of examination.

A large majority of international visitors identify national parks and forests as a key advantage the U.S. has. It is an opportunity, based on an economic or a land stewardship argument, that the agencies can take advantage of. If we can develop an international perspective about timber, why can't we develop a similar interest in recreation and tourism?

This group has an extraordinary opportunity to establish the way in which recreation management and planning ought to occur in the natural resource arena. In the early days of forestry in this country we looked to the Germans to provide a model for management. It was a useful place to start, but we've grown from that. The people in this room are looked upon as leaders in the United States, Canada and the world in resource management and planning. The decisions you will make can establish an enduring legacy for those who will follow.

LITERATURE CITED


INTRODUCTION

Managers of park and heritage areas have jumped on the marketing bandwagon to varying degrees. Some are not convinced that marketing is the way to go, others are convinced but do not know how to get there, and others are making strides in adapting product and service marketing approaches to the unique field of natural and cultural area management. Protected-area management is unique in that desired goals appear to be in contradiction. On one hand, managers are attempting to preserve and protect the natural environment and, on the other hand, they are trying to provide the opportunity for a satisfying leisure experience for visitors who want to explore that environment. This unique characteristic presents an interesting marketing challenge.

WHAT MARKETING IS NOT ...

Perhaps one of the best ways to define marketing in a visitor management context is to first describe what marketing is not. Marketing is not "all things to all people". That is, managers need to focus on visitors in order to develop an effective marketing strategy, but first visitors need to be defined into target groups based on shared characteristics (e.g. families, tour groups, seniors, tourists). Marketing will not be successful if managers make assumptions about what or who the average visitors are. If one attempts to visualize what the average visitor looks like, the point becomes clear (e.g. part male, part female, part young, part old, part first-time visitor, part experienced visitor). In fact an "average visitor" would look like very strange indeed and it would be extremely difficult to make marketing mix decisions based on this image.

Marketing is not only for product-oriented organizations although we tend to rely on traditional marketing models which are based on manufactured goods. We need to draw from these models where appropriate but we also need to draw on service and social marketing models in relation to the service that we are offering (Lovelock and Weinberg 1984, Crompton and Lamb 1986, Tourism is Your Business 1986, Gummesson 1987, Mahoney undated). For example, traditional marketing models often underemphasize the role that employees play in the marketing mix, in part because those who manufacture goods are not the same as the ones who deliver them. Yet, in a natural resource setting, employees play a critical role in both the development and delivery of services and thus the satisfaction experienced by
visitors. In the end we will be able to develop our own marketing models which are based on the unique features of protected area management.

Marketing is not only advertising and promotions, which unfortunately still is a widely held assumption. In fact, decisions about advertising should be made quite far along in the marketing process after information has been gathered in a number of crucial areas. Market research on direct and indirect competitors and on current and potential visitors is essential since it provides information for programming, services, distribution methods, pricing, and promotion. Depending on the specific marketing objectives of the agency and the information revealed through market research, cost-effective promotional strategies that reach the desired target audience can be devised.

Marketing is not only for profit-oriented organizations. It is an equally useful strategy maintaining the financial viability of not-for-profit and voluntary organizations as well. Cost recovery and break-even financial goals will more likely be achieved if the agency is aware of its position in the market place, has a clear picture of its visitors, and if it keeps up to date on trends affecting visitation patterns, and makes decisions accordingly.

Marketing is often viewed as a strategy for increasing demand or customer use. However, in a park and natural resource setting, marketing is not only a strategy for increasing visitation, but can also be used to decrease use if necessary. For example, if overcrowding is causing damage to an environmentally sensitive area, demarketing can be used to redirect or reduce use while at the same time increasing the number of satisfied users (Howard and Crompton, 1980).

Marketing is not or should not be a one time occurrence. Some people feel that once a marketing plan has been developed, their energies can be diverted in other directions. However, the implementation of the marketing plan is an ongoing process that requires regular attention and annual evaluation.

Marketing is not a separate management function. Some people feel that the marketing department and marketing personnel are the only ones responsible for marketing efforts. While this may be true to some extent, each person in the organization should view themselves as a part-time marketer. That is, they should keep the visitor in mind when making decisions and should attempt to promote the goals of the agency whenever possible.

Marketing is not only the "four P's" of product, place, price and promotion. These are the variables of the marketing mix which are commonly manipulated to achieve marketing goals. There are a number of other "P words" that should be considered when marketing in a visitor-management context. These include people (e.g. staff), partnerships (e.g. cooperative efforts with other groups or organizations), programming, packaging (e.g. grouping of complimentary programs or services), and
public relations (Tourism is Your Business: 1986). Not all elements of the marketing mix need to start with the letter "P". A fundamental question that needs to be asked is whether products or services or a product/service combination is what we are marketing. An "S" for service should be included in the marketing mix if agencies decide that service is the business they are in.

Finally, marketing is not a magic wand that will cure all the problems that an agency is facing. It is a strategy for improving decision-making so that the benefits to both parties in the market exchange (e.g. the visitors and the agency) can be enhanced. While there are many advantages to marketing, it will only be an effective remedy if used properly in conjunction with other management functions and in relation to influencing forces outside the organization.

WHAT MARKETING IS ...

According to the American Marketing Association (1985) marketing is

the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational objectives.

In order to create satisfying exchanges, this process requires that a number of questions be answered: Where are we now? Where do we want to be? How will we get there? And, how will we know if we have made it?

To answer the first question, a situational analysis of the political environment, social environment, economic environment, local communities, and current marketing strategies is necessary. This will provide the information to address the second question about the future in which marketing objectives should be set and target markets should be clearly defined. In order to put plans into action to answer the third question, market mix decisions must be made, managed, and implemented, and problems must be addressed along the way. As mentioned previously, this involves making decisions regarding the product/service, place, price, promotions, public relations, partnerships, people, and packaging. The final question relates to the evaluation of the marketing effort. Although indicators of success are often more difficult to assess when marketing seemingly intangible recreation experiences, it is important that both marketing objectives and the marketing process be evaluated on a regular basis so that changes can be made where necessary. The marketing system must be creative and responsive to change, and not become a rigid, inflexible tool.
BENEFITS AND PROBLEMS ...

There are numerous benefits to be gained by adopting a marketing orientation which addresses the four questions discussed above. These include improved visitor satisfaction, improved word-of-mouth advertising, more repeat visitors, greater public support, improved planning and decision making, better coordination and communication, improved attraction and use of resources, and improved accountability.

However, the adoption of a marketing orientation is often not a smooth transition, particularly for resource-based organizations which are under political control. The following is a list of some of the problems which might be encountered and need to be resolved:

- the tension between agency mission and customer wants
- dealing with multiple publics and multiple goals (eg. government, suppliers, commercial enterprises, special interest groups)
- having inadequate information/data
- a lack of integration of marketing throughout the entire organization
- underemphasised social relationships in the marketing strategy
- inadequate training of personnel on new marketing initiatives
- inadequate support from management and/or government for new marketing initiatives
- the difficulty of identifying measures of success
- the difficulty of predicting the future.

CONCLUSION

Nevertheless, these problems can be overcome in an agency committed to adopting a marketing strategy that avoids the faulty assumptions about what market is all about and modifies existing marketing models to suit their needs. In order to deal with the apparent contradictory goals of park and heritage area agencies, marketing should not be viewed as a process that totally replaces past resource-based management strategies but rather one that complements existing approaches.

LITERATURE CITED


LAND BETWEEN THE LAKES - BACKGROUND

In 1963 President John F. Kennedy assigned the Tennessee Valley Authority (TVA) the responsibility for development of Land Between the Lakes (LBL), a 170,000-acre peninsula which lies between Kentucky Lake and Lake Barkley in western Kentucky and Tennessee (Figure 1). The initial concept plan called for LBL to be managed as a multiple-use area which would provide public recreation and education opportunities and which would serve as a national demonstration in outdoor recreation, environmental education, and resource management. The plan envisioned a wide array of facilities and programs to meet the specified mission:

To manage the resources of LBL for optimum yield of outdoor recreation and environmental education for the American people. In so doing, to utilize our demonstration assignment to research, test, and demonstrate innovative programs; to help stimulate the development of the surrounding region; and to extend the beneficial results as widely as possible.

LBL offers a variety of recreation and education opportunities. There are primitive, rustic, and developed campsites, resident group camps, an off-road vehicle area, wranglers camp, myriad trails, and special events and programs. The environmental education program focuses on teacher training and resident and day-use student visits. At LBL, interpretation is employed as a means to raise environmental consciousness, educate visitors about how to enjoy and wisely use LBL resources, and enhance the quality of life through resource-related leisure activities. A living history farm, nature center, educational farm, multi-media theater and planetarium, observatory, trails, roadside exhibits, and variety of special programs serve as interpretation delivery methods.

LBL also has a comprehensive natural resource management program. Approximately eight million board feet of timer are harvested annually under a plan which provides for recreation, wildlife benefits, and timber stand improvement. Both game and non-game species are managed to provide hunting and wildlife viewing opportunities.
Figure 1
As a national demonstration area, LBL tests facility and program designs as well as management strategies and processes. Results are passed to other agencies through seminars and on-site tours. Current demonstration seminar topics include Maintenance Management Systems, Marketing for Public Agencies, and Communications for Resource Managers. University internships and apprenticeships provide pre-service practicum training opportunities. Multi-university consortium offer seven to ten day problem-solving courses using LBL as a learning laboratory. Approximately 50 biological and social science research projects are conducted at LBL annually through cooperative agreements with universities, foundations, other agencies, and corporate sponsorship.

CHANGING TIMES

LBL is funded by congressional appropriations and revenues generated through user fees and timber and other sales. Beginning in 1980, appropriations began to decline from just over seven million dollars in fiscal year 1979. As a line item in the Federal budget, funding for LBL was actually eliminated in the President's budget package two years in a row and drastically reduced a third year. Although a supportive Congress reinstated funding, it was less than required to operate under the existing management philosophy. The initial reaction was to cut operations across the board. When that was not enough, facilities were closed and programs reduced based on unit costs rather than established priorities.

Annual visitation to LBL had stabilized at around two million visits. Many of the visitor facilities were over 20 years old. They were outdated and had deteriorated due to lack of maintenance and capital improvement funding. Camping and other facility visits were declining. Also, staff morale was seriously affected by the facility closings, staff reductions and threat of additional cuts.

Recognizing that appropriations would probably continue to decrease, TVA formed an agency-wide task force to formulate an operational strategy for the future of LBL. The result was a strategic plan which reaffirmed LBL's mission and moved the organization from a "products offered" management philosophy to a "market needs" orientation. Like many public agencies, LBL had operated from a viewpoint that staff knew best what the visitor should get. Visitor services was considered as only one element of the total operation. The new strategy requires a planning and operational approach which responds to visitor/customer interests and needs in all activities within the parameters of the agency mission. The LBL strategic plan provides three major directives: (1) The visitor is most important; (2) Demonstrations set LBL apart; and (3) Natural resources are the foundation and their productivity must be sustained.
RESULTS OF THE MARKETING STRATEGY

The marketing strategy was initiated in June 1985. The strategic plan had recognized that LBL was vastly underutilized, except for summer holiday weekends. An increase in visitation was a high priority in order to better achieve program goals, as well as increase cost recovery. As expected, appropriations continued to decline, with the level for fiscal year 1988 providing only 60 percent of the spending power of the 1979 appropriation level. To offset this reduction, new fees were initiated and existing fees increased to bring them in line with comparable services in the region. Basic improvements were made in services, facilities, and program offerings to increase visitor satisfaction which would, in turn, increase length of stay and return visits. Promotion was carefully targeted to maximize the impact of limited resources.

Management alternatives, including contracting campground gate operations, were implemented to increase efficiency. Due to these efforts, revenues almost tripled from 1979 to 1988 and cost recovery reached 22 percent of the total LBL annual expenditure in 1988. Targeted marketing proved very successful. For example, form 1987 to 1988 visitation increased by 12 percent at developed campgrounds and by 20 percent at interpretive facilities.

To supplement appropriations and revenues, over 1.2 million dollars in direct and in-kind funds are generated annually from external sources. This funding supports research, intern and apprentice scholarships, and facility and program development. The LBL Association, a non-profit support organization, provides over 10,000 hours of volunteer hours to LBL program each year. It also administers scholarship and facility improvement contributions. The Association coordinates a new regional tourism cooperative which was formed to (1) establish a regional tourism destination identity, (2) implement a cooperative promotion campaign, (3) and improve communications among tourism interests in the western Kentucky and Tennessee lakes region.

HOW THE MARKETING STRATEGY WAS IMPLEMENTED

In June 1985, a transition team was established to initiate the marketing effort by reassigning existing personnel. In 1986, LBL was reorganized to consolidate visitor services and establish a Marketing and Planning Group (with existing personnel). The group was to coordinate design and implementation of a marketing system (Figure 2). An integrated annual planning System (Figure 3) was developed to aid in setting priorities and provide program direction. A marketing information system was developed. Data was compiled from existing internal records, staff perceptions, and market surveys conducted jointly with other agencies and universities. A process for analysis of the market data relative to targeting services and promotion was developed and refined (Figure 4). Also, a visitor services and customer relations training program was initiated for all LBL staff.
Figure 2
Marketing System

A. Situation Assessment
1. Mission
2. Current Conditions
3. Forecast
4. Goals

B. Marketing Strategy
1. Segmentation
2. Positioning
3. Targeting

C. Implementation
1. Planning and Budgeting
2. Marketing Information System
3. Internal Marketing
4. Customer Relations Program
Figure 3

LAND BETWEEN THE LAKES
INTEGRATED PLANNING PROCESS

- TVA Multi-Year Plan
- LBL Strategic Plan
- River Basin Goals
- Visitor Needs Assessment
- LBL Goals
- LBL Strategies
- Department Objectives
- Organization Objectives
- Organization Actionplans
- Maintenance Support Actionplans
- Marketing Plans
- Administrative Plans
- Operations Plan
- Resource Plans
- Security Plans
### Decision Process Matrix

<table>
<thead>
<tr>
<th>Market</th>
<th>Cost Recovery</th>
<th>Educational Potential</th>
<th>Economic Impact</th>
<th>LBL Market Size</th>
<th>Satisfaction</th>
<th>Market Potential</th>
<th>LBL Capacity</th>
<th>National Trend</th>
<th>Resulting Emphasis</th>
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</tbody>
</table>

**Legend:**
- **1**: Good
- **2**: Fair
- **3**: Poor
To date, the marketing effort has been concentrated on existing visitor markets, which are less expensive to address than new markets. The emphasis has been on (1) increasing length of stay and return visits with current visitors, and (2) attracting new customers, with demographic profiles similar to existing users, in gradually expanding geographic radii of current geographic market origins.

The Public Areas Recreation Visitor Survey (PARVS), a multi-agency visitor study coordinated by the U.S. Forest Service Southeastern Experiment Station, was the most comprehensive survey conducted at LBL. The resulting data is the basis for much of LBL's market segmentation and targeting. Over 1,000 surveys were conducted in 1985 and 1986. The survey consisted of a 20-minute, on-site survey instrument and a mail-back trip-spending data booklet. Demographic, geographic, and behavioural data was obtained relative to overall visits to LBL and to specific facilities.

In the on-site PARVS survey, visitors were asked their "main reason for coming to LBL." Response to this question proved very useful in initial market segmentation. This data gave staff a new perspective of why people visit our area (Figure 5). For example, staff had thought campers should be segmented by the type of camping they desired - primitive, rustic, or developed. The "main reason" question revealed that some people camped because they wanted a camping or outdoor living experience, while others camped to be close to their favourite hunting, fishing, or other recreation activity area. Sightseeing, including visits to interpretive facilities, was the "main reason" selected most often, thus elevating interpretive activities in LBL's planning and budgeting prioritizing. Activity profiles sorted by "main reason", as well as market segmentation by various demographic and geographic factors, also help managers allocate resources.

PARVS identified the level of satisfaction of various markets. This information was analyzed to determine which market services could be improved (i.e., camping) and which ones were unfeasible to address (i.e., lake swimming due to poor water circulation and maintenance costs). The availability of the services by the public and private sectors in the surrounding areas was also considered.

Since LBL has a mission charge to be an economic stimulus to the surrounding region, trip spending by market has become another important consideration in the marketing decision process. PARVS and other surveys show that visitors who come to "relax", participate in "water sports", and visit as part of motor coach tours are among the biggest spenders while in the region.

Other specific market research was conducted to supplement PARVS. Ongoing data gathering will provide new market data, track changing needs, and monitor satisfaction levels. The total cost to TVA of all market research conducted at LBL has been approximately $13,000 since 1985. Additionally, approximately one person-
LAND BETWEEN THE LAKES
MAIN REASON FOR COMING

- Sightseeing 44.3%
- Camping 14.5%
- Fishing 18.8%
- Hunting 10.1%
- Other 12.3%
year of staff time is devoted to market research coordination, analysis, and planning annually.

The marketing decision process matrix shown in Figure 4 is a simplified view of LBL's market data as they relate to achieving multi-year goals, current market condition, and market/delivery potential. The "Resulting Emphasis" column targets the markets where most potential for success exists. The number 1's have the highest potential, the number 2's fair potential, and the number 3's the lowest. The ratings in the emphasis column are not determined arithmetically, since managerial judgement in each decision block is considered very important. The decision matrix rankings are initially set by the marketing staff but are then reviewed with program managers and altered as needed before finalizing. The resulting emphasis column targets the markets which will receive the most service, development, and promotion attention for the year. This does not mean that other markets are eliminated, but rather that the targeted markets are the focus for new initiatives and promotion.

SUMMARY

LBL has found that marketing does not necessarily mean bottom-line profit in all operations as might apply in private business. Instead, it has provided a method to prioritize activities based on a systematic process responsive to visitor/customer needs. Through the marketing process, profit centers (such as developed campgrounds) as well as subsidy centers (such as environmental education activities and non-game resource management) have been identified. The marketing mode has also improved operational efficiency. By targeting, the limited available resources can be used to the greatest good in attracting visitors to LBL and increasing their level of satisfaction once they arrive.

The market-oriented operation strategy has worked for LBL. Although there are still obstacles to overcome, the benefits are already significant. With customer satisfaction as a primary aim, LBL now has a unified direction, making it much easier to focus energy and resources. The marketing and related planning efforts have been successful, not only in realizing organization goals and increasing cost-recovery but also in improving LBL's image and support in TVA and Congress.
INTRODUCTION

The climate system involves transfers of energy between the air, land, ocean and ice, with the average temperature resulting from a balance of in-coming and outgoing radiation. Of particular importance to this energy budget are tri-atomic molecules, such as water vapour (H₂O), carbon dioxide (CO₂) and ozone (O₃), which reduce the rate at which energy is lost to space. Other gases such as chlorofluorocarbons (CFCs) and methane (CH₄), which have similar radiative characteristics, also play a role in retaining energy within the atmosphere. Without these "greenhouse gases" the average temperature would be some 40°C lower than it currently is (Barry and Chorley, 1971). Injection of these "greenhouse gases" into the atmosphere is altering the energy balance of the earth. As the concentrations of these gases increase so too will the average temperature of the earth. Current predictions based on a doubling of CO₂ call for rapid and significant changes in average temperature. By the year 2050 or sooner, the average temperature of the earth may increase by between 1.5 and 4.5°C (Luther, 1985). While the effects of these greenhouse gases are better understood for temperature, there is still a great deal of uncertainty with respect to precipitation (Stone, 1984).

With the recognition that climate is a principal controlling factor of ecosystems, there exists an immediate requirement to study potential climatic change in terms of its ramifications to Canada's terrestrial ecosystems. Where are the ecosystem shifts most likely to take place? What are the environmental consequences associated with some shifts? Answers to these questions are fundamental before evaluation of these changes in terms of the development and implementation of the resource management planning process can take place.

Climate warming has the potential of restructuring both the location, quantity and character of Canadian ecosystems. The use of broadly based ecological units, as a basis for the analysis of a climatic change scenario, allows us to address the issue in a broader context, thus avoiding the problems associated with working at the organism level. It is the response of a particular ecosystem or group of ecosystems that is of primary interest.
Within Canada, the most recent and climatically oriented ecosystem framework is the Ecoclimatic Regions of Canada produced through the Canada Committee on Ecological Land Classification (CCELC) (Ecoregions Working Group, 1989). Beyond being produced and critiqued by a host of scientists across Canada, the product provides Canada-wide coverage at scales equivalent to or finer than the resolution of current general circulation models (GCMs).

THE ECOLOGICAL MANIFESTATION OF CLIMATIC CHANGE

Temperature is one of the most critical limiting factors in molding the types of ecosystems which are associated with the Canadian environment, even in the context of large systems such as the Arctic and the Boreal. The energy and moisture balances, productivity rates and the basic character of these systems can be altered significantly with singular increments of degrees celsius, and can be drastically transformed if increments of multiple degrees are involved. The ecological manifestation of climatic change depends on site factors such as the type, texture, depth and composition of soils, the availability of water, slope, aspect, elevation and on the current vegetative makeup.

One cannot assume that global changes in climate will result in wholesale shifts of ecosystems to areas which are climatically better suited. First, a considerable lag may occur before vegetation and soils reflect a new prevailing climate. Second, adjacent geomorphology and physiography may not be conducive to the extension of ecosystems. Although the climate may be similar, no soil may exist, exposure may be incompatible, or some other overriding ecological condition may restrict establishment of vegetation or soils. In Canada, the Canadian Shield, in terms of geology and soils, is often much different from major landscapes immediately to the south. The extension of prairie grasses and associated environment, for example, to the Shield area is unlikely to occur. Although the Prairie type climate may extend well beyond the southern edges of the Shield, the potholes themselves will not move.

The potential effect of anthropogenic climatic change on the migration of vegetative species has far-reaching implications. Ecotypes have developed and established themselves over the centuries to attain a certain dynamic equilibrium. Anticipated climatic warming (1.5°c - 4.5°c over the next 50 to 100 years) is, to our knowledge, unprecedented in human history. Will species be able to adjust and re-establish within this relatively short time frame? To put it in perspective, American beech, a heavy seed tree species, is capable of migrating approximately 20 km/century (Roberts, 1989). In contrast, a suitable climate for this species may extend some 700 to 900 km northwards over the next century. Can the beech react to this sudden warming? And what of the increased competition from more southerly species extending their range to sites currently occupied by the beech forests?
Certain ecosystems by their very ecological make-up or location are extremely sensitive to climatic change. Wetlands, certain coastal ecological communities, ecological "refugia," and those communities representing the fringe of their natural range are among the first to manifest change from climatic fluctuations. The nature of the change may have strong habitat or economic implications. For example, loss of large tracts of coastal salt marsh would result in loss of fish and waterfowl habitat. Reductions in the water levels of prairie potholes would not only result in a loss of wildlife habitat but may considerably reduce water availability within an area.

With enhanced greenhouse warming, and within certain ecosystems, role of fire in vegetative succession or the maintenance of existing ecosystems will be altered and thus cause dramatic changes to these ecosystems. The hazard to human populations may increase. Such risk increases can be predicted with recognition of the ecological trend and considered accordingly. In contrast, some coastal areas may receive increased precipitation. Regardless of ecological shifts, if the trend is for more rain and cloud, consequences may show up in a decrease in visitation to national and provincial parks, conservation and other popular recreational areas. For example, concern has been expressed about the potential consequences of climatic warming on the lucrative skiing season of Quebec (Lamothe and Periard, 1988) and Ontario (Wall, 1988).

ECOLOGICAL CLASSIFICATION AND CLIMATE

Analysis of the sensitivity of terrestrial ecosystems to climatic change requires consideration of all aspects of the resource base. It would be naïve to portray an ecological scenario on the basis of isotherms and isohyets alone without recognizing the characteristics of the land affected. For example, increasing the temperature regime in the Canadian Shield will not have, in many cases, a significant effect on the productivity of the land, since it is commonly dominated by rock and shallow soils and thus has other major limiting factors. However, through the use of climatic parameters it is possible to assess the degree to which climate can influence ecosystems. To obtain a viable scenario of the consequences of climatic change on our ecosystems, climate data must be considered in context with ecological parameters.

An earlier investigation by Rizzo and Wiken (1989), assessed the ecological sensitivity of climatic change through the application of a model which depicted changes in the distribution and character of selected Ecoclimatic Provinces of Canada (Figure 1). The investigation was initiated by first identifying climate variables useful for characterizing the ecoclimatic provinces. A model was then generated which produced classification functions for each of the ecoclimatic provinces. The validity of these functions was examined by reproducing the ecoclimatic province map processing the climate data through these classifications functions. The results are illustrated in Figure 2. Also included in this map are areas which have less than a 60 percent probability of being correctly classified.
Figure 1: Ecoclimatic Provinces of Canada [Corrections not shown]
These areas are strongly associated with transition zones or ecotones found between adjacent ecological regimes. Because these margins are transitional, they reflect areas most sensitive to change and thus highlight areas which could reveal early signs of change attributed to climate warming.

Based on the strength of these functions, the Goddard Institute for Space Studies (GISS) general circulation model results for an atmosphere with double pre-industrial levels of CO$_2$ (2XCO$_2$) were processed through the classification model (Figure 3).

Based on the GISS scenario of climatic change, the ecological manifestations would be significant for Canada. Some of these changes would include the discontinuity of the boreal cool temperate provinces; the reduction of the subarctic, arctic and boreal provinces; an increase in the size of the cool temperate, moderate temperate and grassland provinces; and the formation of transitional grasslands and a semi-desert ecoclimatic province.

Changes in the setting of the natural environment make park reserves and other areas vulnerable to a wide range of disturbances. Clearly, with the magnitude of the change depicted, consideration should be given to the implications of such change. With this backdrop of potential ecological change, how can resource managers and planners best be prepared for climatic change impacts? An understanding of the ramifications of climate warming on the varying ecological regions of Canada is fundamental. Change, whatever it is, will not be uniform across Canada. Sensitivities of regional ecosystems must be recognized. To this end, indicator ecological units should be determined and monitored. As a guideline, the kinds of ecosystems mentioned as sensitive previously should be evaluated for such a role. The strategic planning process should consider all probable scenarios. Likewise, the uncertainty of climatic change predictive models calls for flexibility in planning options. Step-wise strategies that accommodate trends as they begin to show should be developed. In essence, the process can follow along a set course until signals from an early warning system (e.g., indicator ecosystems) suggest the need for reassessment and implementation of alternate options.

NATIONAL PARKS AND CLIMATIC CHANGE

The Canadian Parks Service of the Federal Department of the Environment is involved in the development, implementation and management of conservation areas. Thus, a discussion of the potential ramifications of climate warming, using the Parks Service as an example of possible concerns, may help to focus the kinds of issues and problems that deserve consideration.
Figure 2. Ecolimatic Provinces of Canada (base case) generated from the Classification Model

Legend

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Scale

1000 km

current ecolimatic province boundaries

Ecological Applications Research Division Sustainable Development
Figure 3  Ecoclimatic provinces generated from the classification function for the GISS 2 x CO₂ climate scenario

Legend

Area %

<p>| | |</p>
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Scale: 1000 km

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Canada's Changing Environment: Implications of Climate Change to Resource Managers

412
The Canadian Park Service has a mandate to create and manage a nation-wide system of parks that would incorporate and preserve representative Natural Areas of Canadian Significance (Parks Canada, 1983). To aid this process, the Canadian Parks Service has segmented the country into 39 different terrestrial Natural Regions. What would the nature and extent of these Natural Regions be under climate warming? In fact, are these Natural Regions suited to an ecological analysis of climatic change? Without an appreciation of the effect of climatic change on ecological regions, a strong possibility exists that over-representation of certain natural areas may be incorporated into the National Parks system to the exclusion of others entirely. The task for parks system planners becomes one of analyzing the viability of using the Natural Regions as a framework for ecological change or incorporating other ecological classifications into the planning process.

Another difficult issue confronts the park planner. Parks established to preserve specific existing Natural Areas of Canadian Significance may not encompass those areas fifty to one hundred years from now. In a policy sense, how does one incorporate the notion of conservation and more-so, preservation, without hindering natural ecological evolution, albeit, this evolution is being anthropogenically induced? The real threat exists that certain ecological successional trends will be accelerated; other ecosystems may abruptly diverge from current successional evolution due to stronger influences such as fire, drought or increased precipitation. In essence, the park resource manager may be placed in the untenable position of trying to protect the unprotectable. The management of change becomes a much more tangible issue.

Very closely related to the need to understand and manage ecological change is the need to consider fully land use changes and activities surrounding the park boundary. Climatic change does not recognize institutional boundaries. A regional overview would be required to best monitor potential impacts on parklands. In turn, the relatively pristine nature of most of our National Parks make them suited for regional monitoring purposes. In fact, a very positive factor of our global warming trend is that it may hasten the conversion of park resource managers to regional resource managers.

At a more operational level, several concerns arise from climatically induced ecological changes. Fire and insect infestation are in the forefront. With a warming trend, many areas of Canada could experience a heightened fire threat from natural causes. Precipitation, except along coastal areas, is not expected to increase appreciably with this warming. Fire dominated vegetative communities would be expected to increase. Too much fire could also eliminate communities or change them altogether. Certain existing National Parks will have fire as a major ecological factor not heretofore considered as such. The debate over the benefits of suppression versus benefits of non-suppression will intensify.
Similar arguments would arise about impacts related to insect infestation. The warmer winters expected in the "greenhouse world" may lead to expanded ranges and greater survival rates. The focus for both concerns at this stage should be the determination of those ecological units and associated National Parks where the role of fire and the incidence of insect infestation are expected to be key ecological factors. Again, the concept of indicator ecosystems through a monitoring program would prove beneficial.

CLIMATIC CHANGE AND RESOURCE MANAGEMENT

The kinds of issues and analyses discussed within the framework of National Parks planning apply equally to provincial parks, ecological reserves and similar conservation and preservation initiatives. In fact, the concept and incorporation of ecological reserves deserve special attention with regard to climatic change. Such reserves often incorporate the more sensitive components of today's ecosystems. These ecosystems are the first to feel the effects of abnormal climate fluctuations. There may be a requirement to re-evaluate developmental pressures on these ecosystems with the recognition of the added stress factor of accelerating climatic change. If policies on fire management, for example, have to be developed or changed, now is the time for climatic change input.

Resource management dollars are scarce and are likely to remain so. A glimpse of the near future, through climate/ecology interaction models, can aid in the direction of these resources/funds. In many ways, potential "hot spots" from both environmental and economic perspectives, can be highlighted. This process of highlighting would enhance the development of a more flexible strategic outlook of a particular region.

There is one final point to consider. The impacts of global climate warming on the various regions of Canada should not be separated from other regional concerns such as acid rain (known more generally as toxic rain). Effects of the transport and deposition of toxics relate directly to climatic factors, as well as, site factors of the receiving environment. Increases in temperature would catalyze chemical reactions, and stimulate changes in the biotic environment. Ozone depletion, as well as accumulation of toxic levels of ozone and associated volatile organic carbons, fall under the general umbrella of impacts related to climatic change. At policy and strategic planning levels, these linkages should be recognized and serve as guides in the resource management decision process.

In the case of national parks and other areas dedicated to protection of species, ecosystems and natural process, a strategy example could be the development of a "natural" network of areas dedicated to this issue. A review of existing areas, followed by a filling in of areas where representation is inadequate, and the development of policies and operational structures to carry out and assist species
adjustment to the changes would provide a strong first step. In conjunction with this, there should be a monitoring program to provide indicators where action is required.

In summary, there is no need for resource planners and managers to be left "holding the bag" in the implementation of ill-conceived conservation strategies that do not consider natural evolution (although instigated and perpetuated by pollution) of ecosystems in response to the surrounding climate. Planners know their ecological land base or have the means to obtain essential information very quickly from existing sources. The pursuit of strategies that emphasize integrated regional issue analyses, that incorporate flexible planning options and monitoring, will provide the basis for focused actions plans when required.

LITERATURE CITED


INTRODUCTION

It is a pleasure to be here today, even on short notice, to participate in this workshop. I always enjoy my visits to your beautiful and intriguing country.

I am not a land manager or recreation researcher. I have had, however, some experience dealing with outdoor recreation issues and policy, and some exposure to the politics of outdoor recreation.

Over the past two days, you have heard from some of the top public lands managers and recreation researchers from Canada and the United States in sessions which, if I read the workshop program correctly, have been largely technical in nature. In the time allotted to me today, I want to shift the focus somewhat, and explore the political dimensions of outdoor recreation.

To put my remarks in perspective, some background about The Conservation Foundation might be useful. The Foundation is a 40-year-old non-profit policy analysis and communications organization. We do not have a membership, but rely on foundation grants, philanthropic contributions, and contracts and cooperative agreements with public agencies. With an interdisciplinary staff that includes scientists, planners, lawyers, experts in dispute resolution, and others, the Foundation seeks to identify emerging environmental and resource challenges and recommend constructive policy responses.

Overall, we seek to substitute consensus for conflict. This approach may be what inspired President Bush to choose CF's president to serve as administrator of the Environmental Protection Agency.

PROTECTED AREA PLANNING AND POLITICS: PAST AND FUTURE

Outdoor recreation is a highly political topic. Your planning processes, whether based on Limits to Acceptable Change, or Visitor Activity Management Planning, have political overtones. In some parts of the United States, there is no more politically charged issue than wilderness designation. And the outdoor recreation initiatives of both the U.S. Forest Service and Bureau of Land Management are intended to respond to, or anticipate political issues.
Towards Serving Visitors and Managing Our Resources

Today, I want to draw upon my experience with the President's Commission on Americans Outdoors and my knowledge of the U.S. multiple-use agencies - especially the Forest Service - to explore the politics of outdoor recreation plans of the Forest Service and BLM, and how they fit into the political process.

First, let us go back three decades, to the United States of the 1950s.

With the pent-up demand for consumer goods unleashed with the end of World War II, the U.S. enjoyed unprecedented economic prosperity. With more money, more leisure time, and new automobiles, Americans took to the outdoors in unprecedented numbers. Intensifying use of the National Parks inspired Mission 66 - a massive 10-year investment in facilities to accommodate the hordes of people who were, in the words of Pulitzer-prize winner Bob Cahn, "loving the parks to death".

For the Forest Service, this was a time of awakening. Prior to World War II, Forest Service management of the National Forests was largely custodial. Recreation use levels were low and there was little demand for the forests' timber, at least by today's standards. At war's end, however, timber harvests soared to provide lumber to satisfy the demand for housing as new families were formed and the baby boom resonated across the land. At the same time, the national forests were discovered by millions of people eager to camp, backpack, hunt, and otherwise experience the outdoors. The halcyon days of national forest management came to an abrupt and unsettling end. Custodial management gave way to management for high intensity use of all kinds.

All this reflected fundamental changes in American society. The nation had changed from a rural society to one largely urban, from an economy that had been based on agriculture to one based on industry, services, and communications.

And values were changing, too. Those who valued the forests for their beauty, wildlife, solitude, and outdoor recreation opportunities increased in numbers, and clashed with those who valued them for the economic benefits from harvesting their timber.

In the late 1950s, Americans interested in recreation, led by sportsmen's groups like the Izaak Walton League, persuaded the Congress to establish the Outdoor Recreation Resources Review Commission, called ORRRC.

Perhaps no commission before or since has had the impact of ORRRC. ORRRC has enriched the lives of nearly every American. It also has left an enduring imprint on the American landscape and on the politics of outdoor recreation in the United States.
ORRRC generated public support for many initiatives that became reality:

1. Creation of the Land and Water Conservation Fund, which since 1964 has provided $6 billion for park and recreation lands and facilities and has leveraged uncounted additional billions from states, localities, and the private sector.

2. Creation of the National Wilderness Preservation System as well as national and state systems of rivers and trails.

3. Establishment of new parks and recreation areas, including units of the National Park System, especially in metropolitan areas.

4. Establishment of the Bureau of Outdoor Recreation, which, with its successor Heritage Conservation and Recreation Service (HCRS), served as a focal point for federal recreation policy.

For two decades, the policies and programs spawned by ORRRC served the nation well. But the America of the 1980s was much different from that of the 1960s. And so was the politics of outdoor recreation.

America's population had undergone profound changes. There were about 50 million more of us. Americans were getting older, on the average. We were on the move to the South and West, and from central cities to the suburbs and rural communities. Families were smaller, and more were headed by women, who also were playing a far greater role in the workplace.

Recreation preferences had changed too.

Joggers by the hundreds and thousands ran along streets and park paths. Whitewater rafting, hardly known in ORRRC's day, had become so popular that access to some rivers had to be rationed. And new kinds of equipment, from large recreational vehicles to hang gliders, had transformed what we do outdoors.

A large and prosperous industry had grown up to help satisfy American's outdoor recreation needs and demands; hundreds of new conservation and environmental organizations had become powerful political forces at the national, state, and local levels.

But by the late 1970s, many of the initiatives generated by ORRRC were floundering on the shoals of national economic distress. Moreover, the policies of the new Reagan Administration challenged the value and effectiveness of many of the programs stimulated by ORRRC. Leaders in the outdoor recreation and conservation communities began to campaign for a new ORRRC-type study of the outdoor recreation situation in the United States.
In 1983, Laurance Rockefeller, who had chaired ORRRC 20 years before, was persuaded to convene a small group of experts in outdoor recreation to review the outdoor recreation situation. The Rockefeller Outdoor Recreation Review Group found that retrenchment in government funding was creating a gap between performance and need. Moreover, outdoor recreation opportunities were contracting, rather than expanding to meet increasing needs.

The Rockefeller group concluded that a new comprehensive reappraisal of the nation’s outdoor recreation situation - taking account of demographic change, new public values, and new outdoor recreation demands - was needed.

THE PRESIDENT’S COMMISSION ON AMERICANS OUTDOORS

Buttressed with the Rockefeller group’s findings, recreation interests prevailed upon President Reagan to establish what became the President’s Commission on Americans Outdoors or PCAO. The President could hardly have envisioned what the commission would recommend to him in the twilight of his administration.

The 15-member commission included representatives of the recreation industry, conservationists, state and local officials, and four members of Congress. PCAO Chairman Lamar Alexander, who was then the governor of Tennessee, rephrased the President’s charge and called on the commission to "Look ahead for generations and find out what Americans would want to do outdoors, then recommend actions necessary to assure that they would have the requisite opportunities, places, and facilities."

With little more than a year to do its work, the commission decided to go to the people. It set up an exhausting hearing schedule, ultimately holding 18 hearings, with associated field trips, in virtually every section of the nation, including Alaska.

Research by the Commission staff was augmented by contributions by numerous public agencies and private organizations. Thirty-two states provided special reports to the Commission. Dozens of recreation researchers contributed to an encyclopedic review of outdoor recreation research literature. Other organizations, like the U.S. Conference of Mayors, The Conservation Foundation, and American Forestry Association sponsored workshops and meetings on special topics. Perhaps no other commission had enjoyed such organizational and individual support. The PCAO report lists the names of more than 1700 individuals who directly contributed to the commission’s work.

Hearings surfaced a number of issues and ideas.

Funding was a major concern, especially by state officials who were besieged with demands by their constituents for new parks and recreation programs. The needs of urban dwellers, the disadvantaged, and special populations appeared to be
going unsatisfied. Especially worrisome were perceptions that the quality of the nation's outdoor recreation estate - and its natural resources generally - was declining.

But there were bright spots, too.

A willingness by the private sector, both for profit businesses and not-for-profit organizations, to do far more given some incentives and a receptive climate by public agencies. And, most importantly, a spirit of citizen activism. It was clear that people all across the nation were willing to put their money, muscle, and minds to work to help provide outdoors opportunities. Moreover, these human resources were barely being tapped.

Reflecting the populist views of Chairman Alexander, the commission determined early-on that Washington decision-makers would not be the primary target of its messages. Rather, they would be aimed at state and local leaders and ordinary citizens concerned about the qualities of the communities in which they live.

In his transmittal letter to the President, Chairman Alexander called for a "prairie fire of concern and investment, community by community, that can keep our outdoors great".

Dozens of examples of what communities, organizations, and individuals are doing to provide and protect outdoors opportunities are described throughout the report.

The Commission's report, Americans Outdoors: The Legacy, the Challenge, could have an impact on the American landscape and the way we think about our priceless resources as profound as that of ORRRC. We think its agenda should take America into the next century in providing outdoors opportunities for Americans, wherever they live, whatever they want to do.

PCAO Outdoors worked in a highly politicized environment. When the Commission began its work late in 1985, many conservationists were wary and skeptical. Feeling that their interests were underrepresented, conservationists worried that the commission would overemphasize private commercial development of outdoor resources, gloss over federal responsibilities, and play down resource protection.

But as final drafts of the commission's report emerged late in 1986, it was commercial interests and inholders who sounded the tocsin.

Timber, mining and grazing interests feared that increased emphasis on recreation on the multiple-use lands might interfere with their activities.
PCAO believed that a minimum of $1 billion would be required annually to provide adequate parks and facilities and recommended a dedicated trust fund to provide the money. This raised the hackles of park inholders, and those in the administration who opposed a larger federal role and increased spending for domestic programs.

The chairman of the Council on Environmental Quality wrote President Reagan that the Commission's report was "frequently incompatible with the stated goals and policies of our administration".

Conservationists, on the other hand, were jubilant. Paul Pritchard, president of the National Parks and Conservation Association said, "If there is an example of pulling victory from the jaws of disaster, this report is it."

Reagan administration opposition notwithstanding, the report was embraced by now-President Bush and his Democratic opponent Michael Dukakis. Both cited it a number of times in our recent presidential campaign.

The findings and recommendations of PCAO were hardly radical. The power of Americans Outdoors arises from the fact that a commission appointed by a conservative president, with a membership that could in no way be accused of any environmental bias, found that more money was needed for outdoor recreation; that strong laws, vigorously enforced, were required to protect environmental quality; that state and local governments should help shape growth; that acquisition of parklands should be increased; and that recreation should be given parity with other uses on those lands devoted to multiple-use.

Through these findings and others, PCAO laid the political Foundation for the Forest Service and BLM initiatives. The commission said things that no federal agency could say, given the temper of the administration and the firm hand of the Office of Management and Budget.

My reading of the Forest Service and BLM initiatives show evidence that they were influenced by Americans Outdoors in a number of ways.

This isn't surprising. Gary Elsner, now assistant director of the Forest Service's recreation staff in Washington, was detailed to the commission for several months and contributed to its section on federal lands. Rodger Schmitt, who played a major staff role in developing BLM's strategy, did yeoman duty for the commission throughout its life, again on detail from BLM.

Elizabeth Estill, now an assistant director on the Forest Service's recreation staff in Washington, exposed the commission to the Tennessee Valley Authority's innovative recreation programs at the Land Between the Lakes, where she was manager before moving to the Forest Service.
The PCAO report also converged with other strong political currents that were forcing the agencies to change.

Both the Forest Service and BLM were engaged in complex planning for the lands they administer. For the Forest Service, the process became especially controversial and intensely political, with the agency caught between wilderness advocates and the timber industry. Local sentiment almost everywhere was for greater attention to outdoor recreation, wildlife, and scenery on the national forests.

Both the Forest Service and BLM saw an opportunity to use the PCAO report to respond to this sentiment. And they seized the opportunity with enthusiasm.

Building on the PCAO blueprint, the Forest Service and BLM added its own halls and towers to the design. For example, Forest Service Chief Dale Robertson wants to capitalize on the broad geographic distribution of the National Forests, including their proximity to many large cities in the West. Lifting a phrase from the PCAO report, the Forest Service is vigorously promoting the national forests as "America's Great Outdoors". Bully for the Forest Service!

The BLM plan emphasizes diversity of outdoor recreation opportunities on its wide open spaces. Good for BLM!

Both plans look for low-cost, high-impact opportunities to improve the quantity and quality of outdoor recreation experiences. Both emphasize service to the agencies' customers. Both want to build partnerships, recognizing that partners are not just cheap sources of labour and dollars, but can be powerful friends and advocates, too. And they want to bring people onto the land and involve them in hands-on management as volunteers.

Both agencies have made impressive strides both in forging new partnerships and in enlisting volunteers. Both plans, as I read them, chart future directions, set out policies, and to a greater or lesser extent, establish specific goals.

But the success of any strategic plan has to be evaluated in terms of results. Both of these plans are too fresh to give them a fair evaluation. There are several criteria we might use in the future.

1. The extent to which the plans serve to enlist public enthusiasm and support.
2. The degree to which the plans are embraced by the top officials in the agency.
3. The degree to which the plans are incorporated into the other instruments of planning within the agency - in the case of the Forest Service the long-term national plan of the Resources Planning Act Program, and the land and resource management plans of the individual national forests.
4. The degree to which the elements of the plans are embraced in administration budgets and congressional appropriations.

I see promising signs and some mixed signals.

Public support appears to be building for the Forest Service's "America's Great Outdoors" and BLM's "Recreation 2000: A Strategic Plan".

Both plans appear to have support at the highest levels in the two agencies. Forest Service Chief Dale Robertson is head cheerleader for "America’s Great Outdoors".

As part of the Resources Planning Act process, the agency prepared a separate Analysis of the Outdoor Recreation Situation in the United States. This document will be out in final form shortly, and I recommend it to you as a comprehensive qualitative and quantitative analysis of the resource, present and projected use, and program needs over the next five decades.

Moreover, the 1990 RPA Program will set out a role the Forest Service is to play in providing non-community resources, such as outdoor recreation, and the future demand for outdoor recreation is one of 15 issues that will be analyzed and addressed in the document.

But words and agency enthusiasm alone will not carry the day. No matter how successful the agencies are in enlisting partners and volunteers, some additional money will be required - for expert, full-time personnel, to build and maintain facilities, to buy land where that is the only feasible alternative.

Here, the early results are uncertain.

President Reagan’s 1990 budget reflects a small increase for recreation use management over the 1988 and 1989 versions. On the other hand, the number of people the National Forests would be able to handle at one time with minimum standards of quality would actually decline by a little less than 10 percent.

The budget contains some $7.9 million for recreation facilities construction and rehabilitation. However, this sum is considerably below the appropriations level of previous years and will not make much of a dent in the agency’s massive rehabilitation backlog, with a need estimated at some $66 million.

Moreover, the administration’s proposed budget for Forest Service recreation administration falls far short of the need identified in the forests’ land management plans.
And it will be hard to convince recreation advocates that their interest is getting a fair shake when the administration's budget for timber sale preparation and administration amounts to 95 percent of forest plans.

Thus, considerable challenges lie ahead for the agencies and those who are interested in outdoor recreation.

SUMMARY

In conclusion, strategic planning is not simply technical analysis and a written action plan. It also is vision, inspiration, education, and cooperation.

Show people what can be done. That's vision.

Persuade them they can accomplish it. That's inspiration.

Show them how. That requires education.

Help them achieve it. That requires cooperation.

All are essential to the success of any strategic planning process.
Federation of Ontario Naturalists has 71 federated clubs and represents 20-25,000 naturalists in Ontario. It has an active environmental advocacy and education program and publishes *Seasons* magazine.

Mission statement: Committed to protecting and increasing awareness of Ontario's natural areas and wildlife.

The following are some of the emerging natural resource issues which will require interpretation and communications, and may offer particular challenges, as the public demands more information.

A. **Old growth/ancient forests in Ontario.** The public is no longer willing to view old trees merely as "decadent", "over mature" and as the "cellulose cemetery".

   This issue will go well beyond the current localized awareness of the Temagami area. People will begin to realize that although they lack the same emotional appeal as the old forests of the B.C. coast, the scientific values of a northern Ontario old growth, i.e. Black Spruce is the same or similar.

B. **An increased recognition of the need for a better biological inventory across the entire province.** The existing biological inventory in provincial parks is rapidly becoming dated, and the information required to adequately incorporate "non-timber values" into timber Management Plans, is not available.

C. **The public wants involvement and public participation, not just consultation.** The challenge is to build and establish trust, and to communicate what the meaning of supplied background material through a process of participation as well as consultation.

D. **Access to Crown lands.** Roger Clarke pointed out that when an area is accessed, it changes. The issue surrounding the "right" to access all Crown land has been brewing in Ontario for quite a while, and will likely boil over very soon.

E. **Greater concern for non-game wildlife species.** This will be a particular challenge for the Ontario Ministry of Natural Resources (OMNR). This Ministry has traditionally been wed to the consumptive side of wildlife use. While this segment of society is declining, the question is how successfully will the OMNR be in communicating with a new and distinct audience.
F. The Completion of the Provincial Parks System, and Areas of Natural and Scientific Interests (ANSI's) offers a special communication challenge. Most Ontario provincial parks have traditionally included a developed component within them. New parks will likely not have adequate development monies, and presumably will be more oriented toward protecting resources. How will the public respond?

CONCERNS WITH RESPECT TO NATURAL RESOURCE ISSUES INVOLVING INTERPRETATION AND COMMUNICATION

A. Existing low budget allocations, the cumulative effects of using contract staff, and the consequences of low recruitment of permanent staff into agencies is of great concern. I believe there is only a single social scientist in the Outdoor Recreation Branch of OMNR. In Ontario this may be one of the major contributing factors to a perceived staleness in the planning of a provincial parks system. With respect to the Ontario parks system, the 1970's were a time of new ideas, initiatives and moving forward; the "Blue Book" - Ontario Provincial Parks Management Planning, and Strategic Land Use Planning were all being developed. During the 1980's, budgets and staff levels were reduced and maintenance of existing services was almost impossible. However, there is evidence that the situation is turning around; I am heartened by the recent reaffirmation of the "Blue Book" by Minister Kerrio on May 17, 1989.

B. Is government and the environmental community up to the challenges posed by a public which is impatient for substantive changes on the environment front? This question is both structural and technical in nature.

Structural: There is a lack of money, power and resources.

Technical: In the 1960-1970's the focus was on various pollution issues, it was easy to "pick on" the "belching smoke stack". The INCO-Super stack became a world-wide icon. Now one almost has to be a toxicologist to deal with the combined effects of hundreds of invisible pollutants in our environment.

C. The lack of legal means to force government to change will continue to hinder the rapid advance of environmental controls or reform in Canada.

With a continued inability to appeal management plans of all types or the right to have "standing" before the courts, there will be an increased motivation towards embracing dangerous actions (such as tree spiking) which is a consequence of individuals feeling helpless to deal with specific issues.
OBSERVATION ON THIS CONFERENCE

A. It is good to see inter-agency communication across the Canada-U.S. border. The sharing of information and experiences is a key to progress in any field. The common call for increased linkages and partnerships was a positive outcome of the conference.

B. I was particularly pleased to see several provincial OMNR representatives at this event. As referred to earlier, the reaffirmation of the Blue Book is making the future look brighter for provincial park staff in Ontario.

It was good to see staff from the North East Region of the OMNR; perhaps some of the ideas and concepts we have dealt with over the last few days will be incorporated into the planning and management of Lady Evelyn Smoothwater Provincial Park (near Temagami) and Lake Superior Provincial Park (north of Sault Ste. Marie).

C. The American experience has made more obvious the benefits derived from local remedies for habitat protection and the need for a legal framework to provide incentives for government to act on the public will.

In Canada the public (including environmental groups) have little power beyond their ability to motivate the media and public opinion.

As Dr. Stephen McCool and Gerry Coutant’s examples so amply illustrate, progress in the U.S. has been quickest and most impressive in response to (or as a consequence of) specific legal challenges faced by decision-makers and government.

In conclusion, it was a pleasure to be here and I have enjoyed the opportunity offered over the last several days to discuss the issues, both formally and informally. The concerns and challenges discussed over the last several days are common to both nations. It has been a positive experience to know that such concerned and competent people are going to be facing these issues together.
SESSION VII

INTERPRETATION: PERSPECTIVES OF PARK,
PROTECTED AREA AND
NATURAL RESOURCE MANAGEMENT AGENCIES
INTERPRETATION IN NATIONAL HISTORIC SITES - THE CHALLENGE

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INTRODUCTION

Every day I am unavoidably reminded that we live in a much more sophisticated, not to say complicated, world. From my teenage son who speaks a computer language which I struggle to understand, to non-personalized banking machines and car washes, to visitor management specialists who sound more like psychologists and sociologists than people responsible for interpretation, I am reminded that the good old days are really a thing of the past.

The good old days for me, relative to my chosen career, go back to 1969 when I joined the Canadian Parks Service as an interpretive curator. From that year and well into the 1970's, I was constantly on the move, handling curatorial projects in British Columbia, Manitoba, Ontario, Quebec and Nova Scotia. I have very fond memories of those good old bad years. It seemed at the time that we had an endless supply of money. For example, if we needed a particular artifact for one of our period restorations, we would acquire three or four similar ones, just in case. In those years our designers did not have time to worry about interpretation plans. They were too busy designing and producing exhibits. We all knew what would work and what our visitors wanted. After all, we had our bible - Freeman Tilden's little book - and we had models to follow - Upper Canada Village, Old Sturbridge Village, Plymouth Plantation, Colonial Williamsburg.

Our park superintendents had one major performance indicator: the number of visitors to their parks. I still remember guides standing at the entrance to each of our parks, clicking away with a hand counter. And if the same visitor was counted twice, so much the better. Our main evaluation tool was the guest register. We would read with pride that our visitors thought our programs and displays were interesting, fascinating, good stuff! We would dismiss as malcontents and Philistines those who would dare to record our efforts as boring or confusing. Our visitors were happy, we were happy, and we were having great fun. And the beauty of it was that we did not have to remember what such acronyms as ROS, LAC, VIM and VAMP stood for. Neither did we have to understand what such phrases as market or visitor segmentation meant. I still have this horrible vision of our front line interpreters taking our visitors apart!

But enough of this. As my teenage son would say, the same one who speaks strange computer language, I have to wake up and smell the coffee. And he is right.
Indeed, we do live in a much more complicated and sophisticated world. We have
to pay attention to what our social scientists tell us our visitors want and we have
to be guided by our marketing specialists.

In discussing the issues (which I prefer to consider challenges) for interpretation
in historic sites, I will be referring to outside pressures and to pressures from inside
the agency.

OUTSIDE PRESSURES

The outside pressures are identified for us by our social scientists and our
marketing people. The social scientists describe the changing environment that exists
outside of the agency. They study and analyze demographic, social, travel, recreation
and economic trends. We learn from their studies that there is a decline in domestic
travel by Canadians and that more Canadians are travelling outside of the country.
We learn that U.S. travellers to Canada is still our number one foreign market, but
also that there is an increase of visitors to Canada from Asia, especially from Japan.
We are informed that Canada's population structure is changing - we are aging. In
that regard, we are told that the number of elderly Canadians travelling is increasing
and that these Canadians have more disposable income than ever before. The social
scientists also tell us that Canadians are searching for more specialized forms of
recreation activity. And in the area of cultural activities, we learn that participation
in arts-related activities such as attending museums, art galleries, public libraries and
live theatre is growing at a faster pace than either television or movie attendance.
This trend is attributed, in part, to the growing mature population and higher
education levels.

THE CHALLENGES

As a result of these trends, our marketing people tell us that the Canadian Parks
Service must be more market responsive. Thus, as interpreters, we are faced with
many challenges in relation to our market. Where appropriate: improving client
services, attracting new markets, building a larger constituency, improving public
awareness of our mandate, supporting Canada's tourism industry and using our
resources more effectively are some of the challenges of the next decade. Specifically, the challenges, as I see them, are the following:

1. How can we reach those Canadians who are no longer travelling in Canada? Do
we invest more resources to systematically develop outreach programs? Do we
develop off-site interpretation facilities to be located in large urban centres? Do
we try to reach the new generation of Canadians through their school systems?
Do we form partnerships with other heritage agencies (provincial and municipal)
to help each other deliver our respective messages? Can we afford, both in time
and money, any of this? In this regard, do we actively solicit funds from outside
our agency?
2. What about our foreign visitors? Do we change our interpretive products to meet their needs and expectations? Where we have a large number of visitors from Japan, such as at Anne of Green Gables in P.E.I., do we add Japanese to our French and English interpretive signage and publications? And what can we do to reach the various ethnic communities in our large cities?

3. How can we change our interpretive programs and services to better accommodate the needs of mature and elderly Canadians?

4. Should we offer more recreational opportunities at our historic sites? Can we do this without compromising our preservation mandate?

INSIDE PRESSURES

Added to these challenges are the ones which are imposed internally. For example, not unlike other cultural and heritage agencies, the Canadian Parks Service has, for the past several years, been operating in a climate of restraint. We are told by our managers that we are now required to do more with less. While we all do what we can in that regard, the burden of maintaining quality programs and services with fewer resources falls mainly on our front line staff. Thanks to their enthusiasm and dedication, we have, in fact, been able to do more with less. But can we realistically expect them to continue "going that extra mile" with no relief in sight?

Another kind of pressure has to do with our commitment to provide access, as far as possible, to disabled visitors to our parks and sites. This commitment is backed up with an implementation strategy. Health and safety concerns, and the new Canada Labour Code, impose yet another kind of pressure. Also, as an agency under the Department of Environment, we are being asked to support the environmental agenda. In effect, we are expected to interpret the historical dimension of human interaction with the environment.

Finally, as a self-imposed kind of pressure, some of us are questioning the relevance, in today's world, of some of our living history programs. Our approach to date has been, as is the case with other historical agencies, to present sanitized, non-controversial re-enactments of our past. But surely there must have been more to our past than candlemaking, soapmaking, housekeeping, blacksmithing, coopering and military drills? Should we not be making more of an effort to interpret some of the less savory aspects of our past? I know that this is a preoccupation with some of our colleagues in the United States, but only in a very few cases are Canadian interpreters addressing this issue.

THE CHALLENGES

Pressures from inside the agency, then, present us with the following challenges:
1. Should we be actively looking for partners from outside our agency, other than cooperating associations, to help us deliver our interpretive programs and services? Should cooperating associations and volunteers run entire programs for us? Can this be done without compromising our standards?

2. Should we be devoting more resources to researching and developing the design of exhibits and facilities which could function with no interpretive staff? Will our visitors accept increased use of non-personal media?

3. Can we provide better access for disabled visitors to our historic sites without drastically altering the historic fabric or upsetting the ambience which our designers strive to achieve through light and sound? Is there an acceptable compromise?

4. Can we address health and safety issues contained in the new Labour Code and yet maintain credible animation programs? In this regard, should we continue to allow the use of black powder in our historic sites?

5. How can we use our historic sites to increase public awareness of worldwide concerns related to acid rain and of Canadian efforts to improve the environment?

6. Should we be devoting more resources to social history research? How can we integrate such topics as poverty, alcoholism, prostitution, child labour, slavery, etc., into our interpretive programs without offending some of our visitors? As interpreters, should we be concerned with these topics or should we continue to sanitize our past?

CONCLUSION

The Canadian Parks Service is responding to most of these challenges in a variety of ways. At our historic sites, we are currently adopting such processes as VAMP and service planning to better respond to the needs and expectations of our visitors. Through market studies we are attempting to identify ways and means of reaching the non-travelling Canadians and the ethnic communities in our larger cities. We will be developing national education/outreach strategies and we will be devoting more staff time to exploring innovative methods to expand the availability of interpretation services to visitors and the Canadian public. We will be actively looking for partners from within the federal government and from the private sector to help us deliver our programs and services. We will be establishing closer links with those responsible for the preservation of our natural heritage and our interpretive programs will reflect the inter-relationship between the natural and the built environment. Our historic sites will be used, insofar as it is possible, to raise awareness about the fragile state of our environment. Through research and development projects, we will be looking
for ways and means of providing better access to disabled visitors to our historic sites. Our curatorial staff will be examining ways of integrating social history concerns into our living history programs. In all of this, we will also be developing methodologies to pre-test our interpretive programs and services.

The future for interpretation within the Canadian Parks Service looks extremely bright. With the good research data which our social scientists and marketing specialists provide, better planning tools and more sophisticated approaches to pre-testing and evaluating our products, we may very well be able to continue to deliver quality programs and services with fewer resources. Twenty years from now I am confident that we will also be referring to these exciting years as the good old days.
In this paper I will:

I. look at issues that are facing interpretation staff across the country in Canadian national parks;

II. discuss how we are addressing or not addressing those issues;

III. mention some general indicators of changes for interpretation; and

IV. introduce the concept of a strategy for addressing that change.

ISSUES

Underlying everything in interpretation right now is the fact that resources are limited. They have diminished greatly for field interpretation in the last eight years and could continue to do so.

I wish to touch on 12 issues.

1. planning for interpretation
2. resource protection
3. staffing/morale
4. training
5. changing visitation
6. access for the disabled
7. environmental degradation
8. out-of-date methodologies
9. decaying facilities
10. cooperative activities
11. core services
12. evaluation
PLANNING

For years Parks lacked a consistent approach that integrated Visitor Services, Interpretation and Public Safety. Now, to integrate these functions, we have the Visitor Activity Management Process which has been endorsed enthusiastically by some and rather less enthusiastically by others. Like most systems, it is "only as good as those applying it".

We are finding that the process is time consuming and it is sometimes difficult to schedule operational staff so that they can do the planning. We have been quite successful in training staff in the application of the process but we are in the early stages of its application; so to date only a few projects have been completed.

RESOURCE PROTECTION

The increasing visitor numbers and demands for a variety of services and facilities have put a strain on the natural resources we are trying to preserve. Resource conservation staff have not been augmented so that they can meet the demands being made on them.

Interpreters are working more and more with Resource Conservation at all levels of the organization to anticipate pressure points and to design interpretation programs that will head off and diminish visitor impacts through the visitor's awareness of, and concern for, resource-related problems.

STAFFING/MORALE

There has been a wide-spread replacement of seasonal interpreter positions with lower paid summer job-creation student positions. The latter positions are generally for shorter terms and require more supervision than the seasonal positions because the people recruited have lower qualifications. Little continuity can be expected because the good people find better employment elsewhere. We have no answers to this dilemma.

TRAINING/PROFESSIONALISM

We have been unable to acquire the resources that would enable us to mount ongoing training programs designed to maintain high standards of excellence for interpretation staff.

We have had some recent successes training staff to implement the specific initiatives of VAMP, volunteer management and cooperating association management; but there have been few resources nationally for training in resource management issues, evaluation, marketing, interpretive media, and environmental issues. As a consequence, we must expect that we will have staff unable to deliver
high quality messages in a professional and politically astute manner. To address this inadequacy in training we are exploring cooperative training ventures with such non-profit groups as Interpretation Canada.

**CHANGING VISITATION**

In many cases we do not know who we are reaching within our parks (and who we are not), what the visitors want, and whether they like, and are satisfied with, what they experience.

We do not know what communities or groups we should be targeting near our parks.

We need quantitative information, but even more urgently, we need qualitative information so that we can adjust our interpretive products to best serve our visitors. This need is being defined in each park through park service planning but we need to work closely with marketing and management planning to identify gaps in our knowledge and to add our weight to a call for more research.

**ACCESS FOR DISABLED PEOPLE**

Providing access for disabled persons is a government-wide priority which includes interpretation services and facilities. Many adaptations have already been made to accommodate disabled persons and new projects must consider this priority.

The provision of such access costs time and money to implement and, as we have already discussed, resources for all initiatives are very limited. Because of these limitations, staff at first reacted negatively when they realized that we would be committing resources to programs for disabled people. After considerable sensitization of our staff through sessions led by Bob Fern, Parks Access Coordinator, staff have become very positive and view this issue as an opportunity:

- to upgrade services and facilities;
- to reactivate projects that would otherwise lie dormant;
- to reach a much broader audience, e.g. seniors, families;
- to work with others to provide services and facilities, e.g. non-profit sector - research; private sector - donations of equipment and research.

**ENVIRONMENTAL DEGRADATION**

The Department of the Environment has the mandate to inform the public about such subjects as acid rain, endangered species, global climate change and sustainable development. Parks Interpretation is beginning to be recognized within the Department as a potential vehicle for the delivery of these messages.
The preparation of high quality programs on such subjects can take considerable time, but many staff are predisposed to this (many are closet environmentalists) and we have found that staff are very enthusiastic about delivering these types of messages.

Some staff are somewhat cautious because they were reprimanded for attempting to deliver environmental messages 10 to 15 years ago.

The preparation of background information in support of national environmental messages has afforded us the opportunity to work closely with Natural Resources staff in national parks and with other programs of the Department: Inland Waters, Canadian Wildlife Service, Atmospheric Environment, Corporate Communications; and to share research and production resources. For example, an exhibit on acid rain is being prepared jointly by the National Museum of Natural Science, Inland Waters, Atmospheric Environment and the Canadian Parks Service.

OUT-OF-DATE METHODOLOGIES

As noted earlier, Parks has little time or money for research into new media so we are networking with others who have done this type of work. We are actively looking for partners who can develop research or synthesize existing information for us e.g. non-profit organizations working in the area of access for the disabled.

DECAYING FACILITIES

For some time park interpreters have not been able to replace or upgrade old interpretive exhibits and signs. We are now attempting to link such projects more closely to the service planning process and once projects are given a priority, we are ensuring that those with the highest impact are done first. Our market studies have found that visitors expect and want high quality interpretive facilities. Such studies give us additional ammunition in waging the resource allocation war, but it is still difficult to convince others that interpretation services are as important as roads or campgrounds.

In light of the priority on access for disabled persons, we are making sure that appropriate facilities are accessible. We do not simply address a single exhibit; rather we ensure that the whole "package of opportunities" is accessible, e.g. roads or trails to the site, exhibits, washrooms, picnic areas.

COOPERATIVE ACTIVITIES

Cooperative Activities have become a high priority with senior management and initially some staff feared that these initiatives would result in interpreters losing their jobs. Generally, cooperating associations and volunteers have not threatened interpretation jobs. Cooperating associations have a strong social conscience - they
were among the first to protest the cutting of guided walks in 1985. Furthermore, it is now recognized that the management of Cooperative Activities (which was originally viewed as a "freebie") takes considerable time and expertise. Some parks have been successful in securing extra resources for cooperative activities.

Cooperative Activities programs have, among other successes, built a loyal constituency, trained junior staff in supervision, provided a pool of potential employees, and delivered interpretive products to the public that we did not have the resources to deliver.

**CORE SERVICES**

In constantly responding to "do more with less", many staff feel we should draw a bottom line, by defining core services, beyond which no further cuts should occur. I have heard two different definitions of core services:

- from interpretive staff: "basic services to the public that will continue to be delivered by park staff";
- from senior management: "basic services to the public that will continue to be delivered".

The implication of the second definition is that these services might be delivered by someone else.

This is one of the most important issues that we face in the next few years. In this presentation I have merely signalled its importance and indicated that I would like to discuss it with interested managers.

**EVALUATION**

Without evaluation of our services and facilities, we cannot hope to recognize deficiencies and make improvements. Generally we are lagging in this area both in the development and application of simple methodologies. We need to network with other agencies and cooperate with them and with researchers to remedy the situation. We need to build evaluation into regular staff responsibilities at the planning, implementation and operational stages.

**INDICATORS FOR THE FUTURE**

Now that you have a view of some of the issues facing Interpretation in National Parks, I will mention a few encouraging indicators - bright spots for Interpretation.

1. The Minister of the Environment knows that Interpretation exists. He asked us to deliver an acid rain message to American visitors and we did it. Interpretation
is recognized as a part of the management team that can be counted on to deliver results.

2. Natural Resources managers recognize Interpretation as an integral part of resource protection. At the Aquatic Resources Workshop which was held in Waterloo in the fall of 1989, Natural Resources staff voiced strong support for more cooperative projects with Interpretation.

3. The Canadian Parks Service National Market Study indicates there is a demand for interpretive products, services and facilities. People interviewed indicated that these are part of what makes a parks distinctive.

4. Other programs of the Department of the Environment are coming to National Parks Interpretation staff for help in delivering mutually important messages.

5. Cooperating associations are strongly supportive of interpretive programs and have recently urged us to complete the interpretation strategy we are currently drafting.

As you can see, we have many issues confronting Interpretation (and this list is not complete). With our Interpretation Strategy, we hope to address these issues, recommend actions for change and obtain senior management endorsement so that we can fund actions requiring dollars, and change staff priorities to address actions requiring time.
ISSUES FOR INTERPRETATION OF PARKS, PROTECTED AREAS, AND NATURAL RESOURCE MANAGEMENT AREAS

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INTRODUCTION

At the beginning of this conference, I outlined the evolution, direction, and implications of a five-year program for National Park Service (NPS) Interpretation called The Interpretive Challenge. Today, I would like to use The Interpretive Challenge to define the issues for interpretation in the United States National Park Service.

As the National Park Service approaches its 75th anniversary, existing and new pressures increase the difficulty of meeting our dual mandate - to preserve the resources of a diverse park system while providing for public enjoyment. Today, as it has been throughout the Park Service’s history, interpretation can be a powerful tool in helping achieve this crucial mission. Yet if interpretation, that unique function of NPS operations that interacts among the resource, the visitor, and park management, is to be effective, it must meet the highest standards of the profession.

Responsibility for meeting this challenge falls to managers at all levels within the NPS. Field interpretive specialists, park superintendents, regional directors, and the NPS directorate have renewed intensive and spirited efforts to revitalize interpretive programs and activities. Everyone agrees that the most important aspects to interpretive excellence rest within the parks themselves. The leadership of park superintendents, the personal efforts of park employees, and the subtle but powerful messages conveyed in the quality of facility design and maintenance all affect park visitors.

Utilizing The Interpretive Challenge, then, to define the major interpretive issues in the National Park Service today, five major issues/Challenges emerge:

CHALLENGE 1 - PROFESSIONAL EXCELLENCE

Interpretation is a professional activity requiring individuals who respect park resources and visitors, who possess knowledge from which to interpret, who skillfully communicate, and who contribute to the growth, development, and advancement of their profession. This first interpretive challenge addresses the need to provide adequate research and development regarding interpretation, to maintain interpretive professionalism, to improve interpretive fiscal and personnel management and staffing, and to expand career opportunities in interpretation.
Towards Serving Visitors and Managing Our Resources

To enhance interpretive program management and staffing, the goals are:

* to establish and/or maintain interpretive operations that will be managed and supervised by qualified interpretive managers in all parks, regional offices, and the central office;

* to improve the overall performance of interpreters;

* to improve the quality of professionalism and supervisory capabilities of mid-level interpretive managers;

* and to plan, program, and monitor budgets to meet park interpretive goals.

To provide research and development, the goals are:

* to analyze information about visitors' needs and activities, convey the implications, and integrate this knowledge into interpretive planning, training, and park operations;

* to review and evaluate interpretive products and services produced or provided by other public organizations and appropriate private institutions;

* and to analyze state-of-the-art information processes and services.

To ensure interpretive professionalism, the goals are:

* to ensure a better match between the capabilities and interests of the interpretive specialist and the requirements of the work to be performed;

* to enhance the ability to carry out our domestic mission through professional growth of employees;

* to foster an exchange of ideas and interpretive methods;

* and to improve training-by-detail assignments for interpreters.

CHALLENGE 2 - EVALUATION

Under the second challenge, Evaluation, the plan states "Interpretation deals with impact, understanding, and goodwill - impact of programs on visitor values and enjoyment, impact of visitors on resources, impact of interpreters on park management; understanding of visitors, understanding of resources, understanding of the NPS and its goals, and goodwill between people and organizations. The problem is how to measure impact, understanding, and goodwill."
The issues, then, are:

* to bring interpretive services throughout the National Park System to a consistent level of quality; and

* to develop a system that provides periodic feedback about the quality of personal and nonpersonal interpretive services and other interpretation.

**INTERPRETIVE CHALLENGE 3 - EDUCATION**

Interpretation is partially defined as an educational activity. We need to align ourselves with educational objectives, both in the formal classroom setting as well as in the park. We need to take advantage of research and learning strategies developed in successful park programs and the academic community. We need to promote more NPS educational programs that will truly be effective in schools and communities. Finally, we need to make available the tools and resources interpreters must have to present critical environmental issues, integrated our programs with urban communities, and implement successful community outreach programs.

In order to promote environmental and heritage education, the goals are:

* to strengthen the long-term importance of education to the NPS mission; and

* to increase coordination of education programs within local school systems.

To maximize learning opportunities in urban areas, NPS interpretation should strive:

* to introduce urban visitors to the National Park System and the National Park idea.

To enhance NPS outreach programs, it is important that we try:

* to involve interpretive operations in all outreach programs; and

* to ensure that all people have an equal opportunity to enjoy park resources and participate in their presentation.
CHALLENGE 4 - PROGRAM INTEGRATION

Program integration and service-wide thrusts are opportunities that must be carefully planned, energized with adequate resources, and backed with appropriate delegations of authority. Coordinated interdisciplinary programs will result.

In order to maximize program coordination, the goals are:

* to ensure better coordination and cooperation among all professionals involved in park operations and research;
* to maximize the opportunities for interdisciplinary planning and design teams; and
* and to raise sensitivity and awareness of the influence of the facilities, signs and quality of maintenance on visitors' perceptions.

To enhance partnerships in interpretive services, we are:

* to foster interagency cooperation in developing interpretive programs and facilities;
* to increase interpretive activities through cooperating association and concessioner programs throughout the NPS; and
* to increase field seminar and similar study programs.

And to promote leadership at national and international levels, it is goalworthy:

* to identify and offer learning experiences, provide information, and promote a conservation/preservation ethic in the United States and abroad; and
* to participate in, sponsor, and cosponsor national and international events and programs that involve or lead to protecting the world's natural and cultural heritage.

CHALLENGE 5 - MEDIA

The NPS has traditionally relied on interpretive media, films, exhibits, publications, and museums to complement the personal services activities of interpretation. The commitment to interpretation has resulted in a multi-million dollar capital investment. The maintenance and rehabilitation of these facilities are absolutely essential to meeting the public's right to quality. It also means that new media must be designed for longer life and heavier use and that publications must
be up-to-date. People responsible for design and maintenance of media need to receive training specific to new media. Changes in the ethnic makeup of the U.S. population and recent regulations dealing with accessibility for the impaired have highlighted the need to upgrade media and facilities and create new media formats.

To attack these media issues, the goals are:

* to staff and operate the interpretive design services as necessary to meet the increased demand for media planning, design, and production; and
* to achieve quality interpretive facilities and media in all parks.

CONCLUSION

These, then, are the major issues for Interpretation in the National Park Service. They are certainly not exhaustive, but do cover lots of territory in NPS interpretive management circles today. How much do they overlap with other agencies and groups attending this conference? I will be interested to hear.

LITERATURE CITED

INTRODUCTION

The U.S. Fish and Wildlife Service (Service) has direct administrative jurisdiction for the management of fish and wildlife, endangered species and certain marine mammals and their habitats over 90 million acres of lands and waters. The Service's primary mission is to conserve, protect and enhance fish, wildlife, endangered species and certain marine mammals and their respective habitats for the continuing benefit of the American people. Of the over 90 million acres, 98 percent are in the National Wildlife Refuge System with the rest encompassing fish hatcheries, fish and wildlife research centers and administrative sites. By law, all refuges except those in Alaska, are closed to public use unless opened for certain activities determined to be compatible with the purpose(s) for which the refuge was established. Because the majority of public use and the resulting resource interpretation takes place on refuge lands, the focus of this paper will be on national wildlife refuges (NWR).

Each refuge has one or more primary purposes for which it was established and upon which the management strategies are designed. Unlike other Federal agencies that manage their lands for multiple uses, the primary responsibility of the Service is to adhere to more narrowly defined, established purposes in managing a refuge. The majority of refuges have been established to conserve, protect and manage habitat for the enhancement of wildlife. When public use occurs on a refuge it must be compatible with the purpose(s) for which the refuge was established. As defined by the Service, "A use may be determined to be ‘compatible’ if it will not materially interfere with or detract from the purpose(s) for which the refuge was established". Some compatible uses may be supportive of refuge purposes, while others may be of a non-conflicting nature. The determination of compatibility must be based upon a site-specific biological analysis of anticipated resource impacts of a particular action. The resources are generally wildlife populations and habitats which represent the purposes for which a refuge was established. The analysis is made on a case-by-case basis by the refuge manager, using public-use management planning processes and guidelines established by the Service. The planning process, an important management tool for a refuge, includes the development of a well thought-out plan for public recreation. The plan enables managers to select credible and consistent activities that will benefit the public while minimizing resource
degradation as well as human/wildlife interactions detrimental to wildlife and their habitats.

VISITORS AND THE US FISH AND WILDLIFE SERVICE

Public use has drastically changed for the Refuge System over the years. The trend moved from virtually no public use during the early days of the System, through the period after WWII when all aspects of public use increased (due to improved economy and increased mobility), to the present in which public use of the System is widespread and growing in its demands.

The Service recognizes the need for the public to understand and appreciate wildlife and its management through participation in wildlife-oriented recreation; but it can only encourage compatible wildlife-oriented recreation as a secondary use on most refuges. The Service's commitment to provide compatible public recreational opportunities is stated in one broad goal of the System which describes a level of responsibility and concern for the Nation's wildlife resources for the ultimate benefit of the people. This NWR goal states that the Fish and Wildlife service also "provides an understanding and appreciation of fish and wildlife ecology and man's role in his environment and to provide refuge visitors with a high quality, safe, wholesome and enjoyable recreational experiences oriented toward wildlife to the extent these activities are compatible with the purposes for which the refuge was established".

Of the 443 refuges in the System, 327 are currently open to some form of public use. In 1987, approximately 25 million people visited those refuges. Although the Service's goal is to provide enjoyable recreational experiences oriented toward wildlife, it must also protect the diversity of its natural resources. This, too, is the overall aim of the refuge manager: to avoid adverse impacts on refuge resources by the public while ensuring the integrity of the refuge for its primary purpose(s). However, limited funding and staffing compels managers to manage for a refuge's primary purpose(s) even if a public-use activity is compatible.

The Service has recognized and is becoming more involved in programs that assist a refuge manager in resolving public use compatibility conflicts and the constraints on funding and staffing. The following public participation programs can and have generated greater appreciation and support for the goals, values and mission of the Service's diverse resource management areas and programs. These programs include the Volunteer, Challenge Grant, Youth Conservation Corps, Cooperating Association, and Adopt-A-Refuge programs.

In 1978, the Service was authorized, through the enactment of the Fish and Wildlife Improvement Act, to implement a volunteer program. This Act opened the door for people from all walks of life to donate their time, talents, labour, and enthusiasm to help the Service carry out its responsibilities for fish and wildlife conservation and public recreation. And contribute they do. Today the program has
12,400 people contributing over 478,600 hours - hours spent in gaining a greater awareness of Service responsibilities and issues by assisting in bird banding, wildlife surveys, environmental education, interpretation, and trail development and maintenance, etc. While the volunteers greatly augment the staffs of many refuges, funding to support the program must come directly from the refuge's already limited operational and maintenance funding. No special funding is provided. An added thrust to the volunteer program came from Congress in 1985, when it expanded the Challenge Grant (CG) program, originally a Forest Service initiative, to other agencies. The backbone of the CG program is that it builds on the strength of today's volunteer activism by providing matching funds to support associated activities.

The CG program is designed to allow individuals, conservation groups, public agencies or other non-federal entities an opportunity to assist in or to conduct natural resource-oriented projects on Federal lands. The goal of the Service's CG program is to enhance overall operations and maintenance of Service lands by completing projects through cost-sharing with the cooperators. If the proposed project does not conflict with the primary purpose for which the refuge was established and if the Service managers agree that it would contribute to the Service's goals, it can be accepted as a CG project. The CG program allows many individuals and organizations who wish to volunteer their resources to achieve particular personal or club goals to do this. To support their efforts, the government matches their contributions by furnishing up to 50 percent of a project's costs in either money, materials or some combination of both.

After one complete year of operation, the Service has found the CG program to be a highly useful, fiscally sound program that helps accomplish its goals. The success of the program is attributed to (1) the program operating with special appropriated funding; (if a project becomes a CG project, it receives its own funding and managers do not have to concern themselves with how a CG project will affect station funding on other programs); (2) the program drawing upon the already established volunteer program (the fact that people can contribute their time, talents and labour as payment for their share of a CG project makes it possible for anyone to get involved, no matter what their economic status); and (3) the fact that individuals or groups can suggest a CG project that interests them and if accepted, receive matching funds to complete it.

What better way to learn and appreciate what is involved in the management of a refuge than to get in there and get that hands-on experience. In California for example, members of the Westmoreland gun club donated their time, labour, and materials to reconstruct 1/4 mile of dike at Salton Sea National Wildlife Refuge. As a result, an estimated 120 acres of marshlands were restored for waterfowl and shorebird use. Other cooperative projects that have been funded under the CG program include the development of public use facilities such as fishing docks with
access for the handicapped, refurbishment of visitor centres and picnic shelters; the
development of waterfowl habitat including the construction of impoundments, fish
barriers and related water control structures; and the development, printing and
distribution of a variety of environmental education materials, as well as the
construction and installation of boardwalks, exhibits, observation towers, signs, trail
plaques and wildlife dioramas.

Another effort to gain increased financial and public support for refuge programs
is through the use of cooperating associations. There is good and growing
participation from these associations Servicewide. As private, non-profit, tax exempt
organizations, these associations improve and advance the interpretive and
educational activities of refuges through the sale of high-quality educational
materials to refuge visitors and the subsequent donation to the refuge of money,
goods or services (such as giving tours of a refuge) aimed at improving public service
and environmental awareness.

A large program that helps our future decision-makers gain an awareness,
appreciation and greater respect for the environment is the Youth Conservation
Corps (YCC). The YCC was established by law as a summer employment program
for men and women, ages 15 through 18, who work, learn and earn together by
doing a variety of projects that further the development and conservation of the
natural resources of the United States. Here is another hands-on experience that
currently employs 704 youth and provides an opportunity to relieve unemployment
and to gain for the future a better-informed, decision-making public.

One other program developed to build support for the Refuge System is the
National Audubon Society's (Society) Adopt-A-Refuge program. Building on the
long, productive, and cooperative working relationship with the Service, the Society,
in 1983, developed this program with several objectives in mind. The program was
conceived to build an active public constituency that would encourage wise refuge
management practices, monitor and resist neighbouring activities that could adversely
affect refuges, and publicize the needs of individual refuges and the System as a
whole. Over 51 refuges have been adopted since 1983. Positive responses have come
from both organizations to continue this valuable and supportive program for the
Refuge System.

SUMMARY

As you can see, there are many opportunities for the public to gain an
understanding and appreciation of the goals and objectives of the Service and the
Refuge System. The Service is dedicated to continuing its efforts to encourage the
public to take a responsible and supportive view of the environment so that public
use conflicts can be resolved with a minimal amount of time and effort and a more
meaningful outdoor experience can be offered to the refuge visitor.
In planning for the future of public use management and its subsequent interpretation, we must reflect upon the past, consider the present and recognize and appreciate the tremendous efforts that have been made in responding to the desires of the public for use of refuges while managing for enhancement of fish and wildlife and their habitats. Understanding that a man's judgment is only as good as his information, the Service will continue to encourage compatible public use activities and other public participation programs. An informed public, enlightened through participation in and interpretation of the Service's system of refuges, will result in greater acceptance of existing and future conservation and resource management programs.

Undoubtedly, the Service has its work cut out for it in providing, with limited funding and staff, compatible public recreation and interpretation on its refuges. However, by continuing successful public participation programs as discussed above and by marketing the enthusiasm and benefits of these programs, the Service can realize (and is realizing) a greater opportunity to overcome many of the limitations that surround the public use programs in the past.

There is a light at the end of the tunnel for managing public use on our resource management areas. Let us always believe that it is not a train.

Thank you for the opportunity to participate in this conference and we sincerely hope that we can continue to work together in the resolution of visitor management conflicts that both nations face as exemplified by this conference.
CHANGING PERCEPTIONS THROUGH PUBLIC INVOLVEMENT:  
A BUREAU OF LAND MANAGEMENT PERSPECTIVE

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INTRODUCTION

To Americans, the 271 million acres of Public Lands managed by the Bureau of Land Management (BLM) in the eleven western states evoke a variety of images. To many, they conjure up the romantic image of the Wild West: hard working, mysterious, and challenging. To others, they serve as a source of inspiration and freedom. Words like boundless, remote, immune to time or change all seem appropriate. To still others, the Public Lands epitomize a wasteland. They are too hot (or cold), too uncivilized, or too devoid of value to be worth caring about. Finally, for most Americans, the Public Lands have no image at all. They are just the blank spots on the map which surround our parks, forests and refuges. They are the lands that hold the world together. Even in the agency itself, a similar range of views can be heard. Regardless of which view may prevail, for BLM the situation has resulted in an overall lack of agency identity and a want of a sense of "ownership" by many Americans towards these vast areas. A direct consequence, and one which causes the most concern, has been the loss of important natural and cultural resources brought on by an "ownership by all is ownership by none" perception. As we move into the 1990's and beyond, our challenge will be to bolster our image and foster a feeling of stewardship and pride of ownership of the Public Lands we manage.

While exploring all the reasons why these perceptions persist is certainly beyond the scope of this gathering, examining how these images affect agency management programs is worthwhile. More importantly, how these images and perceptions can be changed by various agency initiatives, including the use of interpretation, outreach, visitor services, and marketing efforts have ramifications for all of us involved in land management.

To better understand the genesis of the present situation, one must only take a brief look back in time at the origins of the Public Lands. Government agencies, including the BLM, carry a lot of external and internal "baggage". These perceptions, biases, and procedures have a tremendous influence on how each agency carries out its individual mission. That baggage also affects the way the agency is seen by the
Towards Serving Visitors and Managing Our Resources

public and law makers. For BLM, the burden can be summed up in one word: impermanence.

If we were to chart the course of the Public Lands through history, we would see that from the years following the War of Independence, the public domain, as they were known then, were viewed as the nation’s collateral. They helped finance the war debt. They were used to encourage exploration and settlement. They served as an incentive for private development and investment. As the conservation movement began to crystallize around the turn of the 20th century, the public domain was again looked at as a land pool from which our new park, forest and refuge systems would emerge. In 1934 Congress passed the Taylor Grazing Act. While this law had the appearance of giving some degree of permanence to the management of the public domain, a last minute amendment mentioned “final disposal” of the Public Lands, thus keeping alive the possibility of sale or transfer.

In 1976, Congress passed the Federal Land Policy and Management Act. Given the previous 200 years of history, this law was truly a landmark for the public domain (and for the Bureau of Land Management). A major premise that underscored FLPMA was permanence. Public lands were to remain in federal ownership. More importantly, they were to be managed by BLM. Disposals, if they were to occur, were to be identified through land use plans and be a benefit to the public. To administer the country’s remaining public domain, or Public Lands as they are now known, BLM was given the comprehensive mission to manage these lands according to the principles of multiple-use and sustained yield. Major uses were defined to include livestock grazing, fish and wildlife development and utilization, mineral exploration and production, rights-of-way, outdoor recreation, and timber production. It would seem that the value of Public Lands were finally recognized in their own right. At the same time, BLM was recognized as a manager of the public lands rather than a mere caretaker pending disposal. Given this turn of events one could logically ask, "Why after 12 plus years do the old perceptions persist?" More importantly, what can BLM do to change perceptions and build a constituency that recognizes that the Public Lands are part of a national land management system? What strategies have proven successful?

After a number of false starts BLM began to take a serious look at its recreation program for it was here that we had the greatest potential to reach the public and begin to make a meaningful change. With nearly 60 million visits a year occurring on the public lands we knew we had a tremendous potential audience. We felt that if we could generate interest in the Public Lands we could begin to instill a sense of ownership of the Public Lands. A variety of methods, including the development of interpretation and educational outreach programs were employed. Initially, efforts concentrated on programs we knew had broad public appeal: cultural resources, off-highway vehicle recreation, improved public access, and wildlife viewing. I would now like to take a closer look at some aspects of these initiatives.
CULTURAL RESOURCE PROTECTION

BLM is responsible for managing the Federal government’s largest, most varied, and scientifically most important body of cultural resources. Damage to this vast resource from vandalism and looting has long been a major concern for BLM managers. We believe that most looting occurs not so much from malice but from a lack of knowledge of the scientific importance of cultural resources. The key to success in this endeavour is to involve the public in the management and protection of our nation’s heritage, both natural and cultural. Recognizing that increased Federal funding and supervision will not eliminate the depredation of historic sites, BLM directs a major portion of its cultural resource management budget towards protection activities with an emphasis on developing an educated and aware public that is sensitive to the importance of these resources. Hopefully, the public will be willing to become active owners and someday play a role in developing national policy for these resources. Let me briefly acquaint you with what we in the Bureau of Land Management are doing towards this end.

A recent BLM initiative in Oregon has been the establishment of OPERATION SAVE, or *Save Archaeological Values for Everyone*. While cultural resources in the American Southwest has received most of the attention from both archaeologists and looters, the Pacific Northwest has a rich heritage that is also in danger. As an outgrowth of the Department of the Interior’s *Take Pride in America* campaign, the initiative strives to heighten citizen awareness and involvement in the protection of irreplaceable cultural resources in that region.

Adopting the Yakima protective spirit TSAGAGLALAL or "SHE WHO WATCHES", OPERATION SAVE focused on public service messages, school programs and displays, and a toll-free number for the reporting of violations.

Another example of public involvement is the development of interpretative facilities. Last summer, the Bureau of Land Management opened it’s newest interpretive facility, the Anasazi Heritage Center near Delores, Colorado. The Center curates cultural resource materials from BLM and USFS lands in the Four Corners area. In addition to its role as a research center, the site serves as a major educational tool to build public participation in cultural resource management. For example, in cooperation with other local agencies, the Center participates in an Anasazi Education Outreach Program. This program is designed to include archaeology and related topics in the curricula of 10 southwest Colorado school systems. It provides schools with teaching kits containing cultural materials and provides training for the teachers to give them the background to use the kits effectively. The Center’s exhibits also explain the objectives of BLM Cultural Resource Management program with many designed to convey a strong anti-looting message.
In another approach to the problem, BLM initiated the "Site Steward" and "Adopt a Site" programs. These programs draw upon interested volunteers and avocational archaeologists to assist us in anti-looting patrols, monitoring site conditions, and undertaking data recovery and other management projects. In New Mexico, for example, BLM is actively using volunteers to record rock art for sites. In Arizona, BLM has even "drafted" military units into our protection efforts. Pilots of the Arizona National Guard have agreed to provide us with information on suspected looting activities observed during low-level training flights. In Nevada, our cultural resource specialists and other employees have actively taken our case to local communities through school programs and on-site tours.

BACK COUNTRY BYWAYS

Another effort designed to build public support and ownership and showcase the resources of the Public Lands and, at the same time, focuses on off-highway recreation. The program is called "Back Country Byways". Many in BLM felt that with the tremendous popularity of four-wheel drive vehicles, we could take advantage of this popularity by identifying and designating some of the 85,000 miles of dirt road found on the Public Lands as scenic "back country byways".

A 1986 study for the President's Commission on American's Outdoors found that 43% of American adults identified driving for pleasure as a favourite leisure pursuit. Next to walking, pleasure driving is America's most popular form of recreation. The scenic back country roads of America provide a great opportunity to help meet the demand for pleasure driving. Because many of these potential routes also pass near recreation sites, wildlife areas, operating ranches, and mining claims, we had a unique opportunity to give a much broader message to the public.

Recognizing this opportunity the Bureau, along with the American Recreation Coalition and its affiliate organizations and several other Federal Agencies, co-sponsored a National Conference on Scenic Byways in April of 1988. BLM made a commitment at that time to support a national effort to promote Scenic Byways. Our primary focus is on the many back-country roads where BLM has the opportunity to fill a niche in the National Scenic Byways system.

ACCESS IMPROVEMENTS

Owing to a legacy of over 200 years of land disposals, one of the greatest challenges facing the Bureau today is how, or where, to gain access to the Public Lands that are separated by surrounding private property. These land fragments form a "checkerboard" pattern which makes access and management difficult. Currently, a number of formal and informal efforts are underway to begin to "tie together" the scattered blocks of Public Lands to make them more accessible to the public.
In several areas of the Public Lands the BLM has successfully established partnerships with private land owners, other Federal agencies, and State and local governments. In Montana, hunting opportunities for elk, deer and antelope have increased substantially due to cooperative efforts between the BLM, ranchers, private landowners, and the state. Fourteen walk-in hunting areas on approximately 230,000 acres within the state were developed for those seeking access to quality hunting grounds. Private land owners agree to give access to hunters if they remain on foot or on horseback while on private land. Because of these cooperative efforts vandalism has been reduced and gates have not been left open as often. Road conditions have also improved and a successful increase in the amount of game available for hunters has been noted. As these cooperative partnerships continue to develop and strengthen, the public will find that there are fewer restrictive boundaries and more recreational opportunities on the Public Lands.

Another successful cooperative effort called "Operation Respect" was initiated in 1985 to help hunters find their way to Public Lands. BLM employees are stationed in the field to provide road reports, directions, maps, and updates on laws and regulations. The program was designed to encourage good relations between land owners and sportsman. Currently "Operation Respect" is being used in Wyoming and New Mexico.

WATCHABLE WILDLIFE

A final initiative which is just underway is our participation in a national Watchable Wildlife program. Working jointly with our Washington Office Division of Wildlife and Fisheries, other federal, state and local government agencies, and private interest groups such as the Defenders of Wildlife, Audubon Society, and the National Wildlife Federation, BLM is moving forward to capitalize on the public's desire to see wildlife "in the wild". Nationally, a full one-half of American adults participate in this activity. On BLM Public Lands, nearly 5 million trips were estimated to occur for this use alone. This program has a tremendous potential to increase public awareness of the resources found on Public Lands. As with all successful ventures, cooperation is vital. In Oregon, BLM has worked closely with the Defenders of Wildlife to help produce a wildlife viewing guide for the state. In addition, BLM has begun to identify and develop important viewing locations such as the Dean Creek Elk Viewing Area near Reedsport, Oregon. Other viewing areas include the Owens Valley Tule Elk Overlook and the Desert Tortoise Natural Areas in California, the Bird of Prey Natural Area in Idaho, and Betty's Kitchen bird watching area near Yuma, Arizona. BLM also has the opportunity to use wildlife watching to discuss the controversial issue of wildhorse and burro management on the Public Lands. Currently, one of the major attractions of Public Lands in and around Billings, Montana is the Pryor Mountains Wildhorse Range.

These then are a few of the more noteworthy initiatives undertaken by BLM to lift the burdens of our past and create new impressions for the future. Each is
intended to instill a sense of stewardship and ownership in the Public Lands and generate interest in protecting their important natural resources values. Thus far, the costs have been low and the benefits have been high. By giving the public an opportunity to work with us in a spirit of cooperation and partnership, we can hopefully move in a direction that will give the Public Lands managed by the Bureau of Land Management the permanence they deserve and the recognition they are entitled to as full and equal partners with the other splendid national land management systems the people of the United States have had the foresight to create.
INTRODUCTION

A little over a year ago interpretation in the States entered a new era. Many years ago a schism developed within the Association of Interpretive Naturalists (AIN), based on personality and philosophical differences. It led to the formation of the Western Interpreters Association (WIA). During the following years some philosophical differences were eliminated and the personalities retired.

Three or four years ago the AIN undertook a national marketing survey of interpreters, members and non-members. The WIA joined in sponsoring the study. It was found that both organizations were serving the same kinds of members, with similar needs and interests, and missing other segments of the interpretive personnel.

THE NATIONAL ASSOCIATION OF INTERPRETATION

The findings led to a vote to replace both organizations by a new one (or to merge them). As of January 1, 1988 the new National Association of Interpretation (NAI) was born. It is, therefore, now in its fourteenth month of existence. Even before its first day it had achieved over 140 Founding Memberships which, at one hundred dollars, is a fine show of support.

Paul Frandsen, of the Seattle Park Department, is president and I'm the vice-president, for NAI's first two years. We have ten regions, each with officers, regional workshops and regional treasuries. The national board consists of the ten regional directors plus the four national officers.

Our national office is in Ft. Collins, Colorado, on the campus of Colorado State University. We have a very nice arrangement with the University, for which we are most grateful. It includes office space, basic telephone service, utilities, use of copying machines, and the like, a free graduate assistant and several federally-funded work-study undergraduate student assistants during the school year. We employ our own professional full-time executive director, Judy Giles. We pay for our own telephone machines and tolls, copy paper, office supplies, and the like, purchased from the University's low-cost central supplies department.

At the national office we have a message repeater which we call Dial-A-Job. It is available 24 hours a day, to anyone, whether member or non-member, at no
cost other than the regular toll charge of the telephone company. The number is (303) 491-7410. When the office is closed (weeknights, weekends and holidays) another number (303) 491-6434) becomes Dial-An-Internship, instead of the regular office phone.

Professional dues are $40 per year. Our membership is now about 1,700 and our treasury is somewhere in the vicinity of eighty thousand dollars.

We have two affinity groups and will be organizing a number of others after a new marketing study of our members. One of these groups is the professional educators (faculty members), chaired by Dr. Gail vander Stoep, who now occupies the position at the University of Massachusetts from which I retired. The other affinity group is FIAC (Federal Inter-Agency Council), which I chair. This group consists of the eight federal chiefs of interpretation, most of whom you have met here: Nancy Marx of the US Fish and Wildlife Service, Ann Wright of the Tennessee Valley Authority, Gerry Coutant of the US Forest Service, Richard Lindo of the Canadian National Historic Parks Service, Mike Watson of the US National Park Service, Bob Schneider of the US Bureau of Land Management, and George Tabb of the US Corps of Engineers. The latter two couldn’t be here, but you’ve met Bill Civish, of the same agency. He drops in when he can, as does Ken Raithel of the National Park Service. An invitation will also be extended to Michelle Dondo-Tardiff, in her capacity as president of Interpretation Canada.

In addition to the affinity groups we have 26 committees at work. A few of these are the Marketing Committee, which is conducting the new marketing survey among our members. Another is the Publications Committee, chaired by Jann Young of California, our national secretary. It is still getting organized, but we have the Journal of Interpretation well under way and have already published a Research Monograph, a book of interpretive forms and a Membership Roster. Our publishing plan includes four issues of the Journal, each of which is to carry scholarly, technical, philosophical, and national and regional news components. These four issues, plus two others such as those mentioned above, are to alternate with six bi-monthly newsletters within each of the ten regions. In addition we publish a volume of either abstracts or proceedings of the national workshop.

Another committee which is broadening our scope is chaired by Ray Tabata of the University of Hawaii. Some of you will remember him because he presented papers at both Parksville and Ottawa. His committee is exploring potential relations with the tourism industry.

Yet another important committee, chaired by Ann Wright, plans and conducts the Interpretive Management Institute. This highly successful service is open to all interpretive managers and sometimes includes special sections for members of a federal agency. Currently the IMI is offered in connection with the national NAI
workshop (either just before or just after). There is some discussion going on about the desirability of "taking it on the road."

Dr. Gail vander Stoep is revising the directory of interpretive curricula in the US and Canada which was published several years ago by the US Forest Service.

This edition will be broadened to include formal and informal educational opportunities in both countries, such as the IMI, the ITI, and TIE, which I'll come back to in a minute. Obviously the informal opportunities are more ephemeral than college courses in their specific content, so the listings are more likely to consist of sources of current information and generalized statements, with examples of past courses. If you offer anything which should be included, please contact her very soon.

The winter issue of the Region I (New England and New York) newsletter announced several training opportunities. Briefly, the ITI is the Interpretive Training Institute. This is held in June, on Cape Cod in Massachusetts. It is a joint effort of the federal, state and regional agencies in New England and provides training at three successive, annual levels for seasonal interpreters who will be working in those agencies during the summer. Nineteen eighty-nine will be, I believe, the twelfth annual offering. Last year about 350 seasonals were in attendance.

In 1989, the TIE (Training for Interpretive Excellence) course, similar to ITI, but offered in New York State on a different weekend will make the same opportunity available to the four state interpretive agencies in New York State.

Last fall, our Region I workshop was held at Historic Deerfield in western Massachusetts. It provided an experience in evaluation by splitting the attendees into roving teams which visited historic homes for guided tours. With special preparation the teams developed evaluations and proposals which were presented to the Historic Deerfield management and interpreters in a general session with much healthy discussion and input from both directions.

This is an appropriate point at which to digress to the question of what we interpret. The AIN had the word "Naturalists"; we changed the by-laws but couldn't get agreement to change the title. The Western Interpreters Association had succeeded from the start in not specifying subject matter. After several name changes, the title of Interpretation Canada was discussed, though if I remember correctly, all of the Canadian names avoided the narrowness inflicted by a subject-matter component. Well, finally, the National Association of Interpretation has a non-specific title, too. Incidentally, we know it should be "for" and not "of" and hope to change that before long.
Towards Serving Visitors and Managing Our Resources

Our next three national workshops are committed already. The 1989 one will be in St. Paul, Minnesota November 5 to 10. The next will be in Charleston, South Carolina from November 27 through December 1. Note that this is a locale with a very rich historic character along with attractive natural characteristics. Then, Vail, Colorado will be the venue in early October, 1991, timed to coincide with the bugling of the elk.

A special feature of our present national workshops is a series of short, informal sessions for students, timed so as to avoid conflict with the regular sessions. Students have an opportunity to meet graduate faculty members, NAI officers, authors, consultants, federal agency chiefs of interpretation, researchers, and the like, with not more than two or three such personages at any one session.

In the realm of credentialing, we already have accreditation of interpretive curricula by the National Council for Accreditation of Parks and Recreation. The AIN-WIA market survey showed that two-thirds of the respondents favored certification for interpreters. We have done nothing yet. I've asked that the new marketing study include a question relating to certification. We'll see what ensues. If we move on this one it will be a long, difficult and probably expensive venture. It will certainly cause us to address the questions of what constitutes a professional and whether or not interpretation is a profession.

In another move, the NAI Board was voted to offer Continuing Education Units in conjunction with NAI educational programs, but none have been offered yet.

THE FUTURE

Now, briefly, a few other developments in the U.S. which don't particularly involve NAI. We have a whole continuum of professional organizations addressing rather specific segments of the field.

One of these is the American Association of Museums, which offers its Museum Assessment Program (MAP). This free service provides a professional peer as a consultant to any museum to help it assess its weaknesses and to recommend ways to overcome them. MAP serves as a preliminary to application for accreditation of the museum by the AAM.

The Natural Science for Youth Foundation addresses nature centres and children's museums. Its national workshop (joint with the National Audubon Society) begins on February 28 in San Francisco. This organization has asked the AAM to expand its museum accreditation program to include nature centres and that process is now under way.

Although I have nothing special to report on them at this time, it would be a definite omission to neglect to mention the Association of Living History Farms and
Agricultural Museums, the American Association for State and Local History, the American Association of Zoological Parks and Aquariums, and the American Nature Study Society.

Lisa Brochu, doing business as Wordsmith, Inc. of Lodi, California, has started a new publication. It is addressed to the natural resource and interpretation staff members of the federal agencies. It's called BE RESOURCEFUL and is off to a good, fast start.

On April 4-6, 1989 there will be a workshop in Lowell, Massachusetts, the first industrial revolution city in the US. The topic is Interpretation in Urban Areas. This workshop is sponsored by the US National Park Service, the Massachusetts Department of Environmental Management, the Metropolitan District Commission (of Massachusetts) and the New England Museum Association. This same group will be sponsoring a similar workshop on Cape Cod from November 28th to the 30th, 1989, on Interpretation of Critical Issues.

Finally, there is a proposal for a North American Conference on critical environmental issues in the developmental stage. Briefly we envision a series of specialized think-tank workshops on specific segments, to be held during the spring of 1990 at selected sites in the US and Canada. Materials coming from these are to be directed to the national workshops of Interpretation Canada and the National Association of Interpretation, which will be held during 1990.
ISSUES IN INTERPRETATION:
INTERPRETATION CANADA'S PERSPECTIVE

Robert Kelp, Michelle Dondo-Tardiff,
Robert Ashley and Barbara McKean
Interpretation Canada
Ottawa, Ontario

INTRODUCTION

Interpretation Canada (IC) had its modest beginnings in 1973. First called "The Association of Canadian Interpreters", it gained official status in 1975 with the passing of our constitution at a conference in Brandon, Manitoba. In 1980, the name of the association was changed to "Interpretation Canada: An Association for Heritage Interpretation". Our constitution has also developed through the years, reflecting the expanding nature of the organization.

In brief, the goals of Interpretation Canada are

- to provide training and professional development opportunities for the membership, through workshops and conferences;
- to inform and educate members and provide opportunities for contact and networking, through regular publications;
- to promote interpretation and interpretation programmes;
- to voice the concerns of members on interpretation issues;
- to promote and support activities on a regional as well as national basis.

Interpretation Canada is a volunteer organization funded and supported solely by membership fees and volunteer effort, with the generous support of the many agencies that employ our various executive members. At present, we are composed of five regional sections: Atlantic, Ontario, Central, Alberta, and British Columbia. Our membership hovers around the 600 mark, though we have a large market of potential members, as yet untapped. Members of Interpretation Canada work in a wide variety of natural and cultural heritage sites, including parks, museums, conservation authorities, art galleries, historical sites and settlements, private industry, and educational institutions.

Members are kept in touch through our quarterly publication Interpscan - a magazine that deals with interpretation issues, approaches, and technical information. Members also receive newsletters from the section to which they belong, and an annual membership directory. Annual national workshops feature current issues, trends and concerns, and provide a national forum for discussion and networking. Regional workshops are offered at regular intervals and focus on skills development.
Towards Serving Visitors and Managing Our Resources

Because members of IC span a full range of organizations and represent all levels in the field, from front-line interpreters to senior managers, we are always interested in the on-going development and improvement of interpretive services and visitor activities planning. Interpretation is, among many other things, a management tool. We often find that agencies have not fully integrated interpretive services into their management approach, because they have lacked a thorough definition of interpretation as a part of their programme, or have failed to see all that effective interpretive programmes can do for a site. A solid, realistic funding base has been a problem in past, though the recent resurgence in public interest in heritage and the environment, has created a political climate that may build further support for these endeavours. By sharing information about the value and potential of interpretive services, IC hopes to capitalize on this current interest in the field.

Recently, Interpretation Canada has undertaken a large scale self-analysis to determine our role and future directions for the 1990's. Some of the issues of concern to our members are most appropriate for discussion at this time. Though you will realize how closely interrelated these issues are, they can be divided into the following areas: Interpretation as a Profession, Employment in Interpretation, Training for Interpreters, Advocacy, and Networking/Communications.

INTERPRETATION AS A PROFESSION

Many discussions have focused on whether or not interpretation is truly a profession. Some argue that most interpreters begin in other fields: as biologists, teachers, archaeologists, writers, artists, etc., and that there is very little in their background that unites them. Many have received their basic training in interpretive skills through agency training and work experience, or through IC workshops, but there has been no mechanism to date to provide an in-depth comprehensive training of interpreters. Though many post-secondary institutions offer excellent individual courses in interpretation, a Canadian programme that grants a degree or diploma or certificate has yet to survive for more than a few reasons. Few agencies give full backing and support to comprehensive training, and IC hopes to work towards making such training more accessible by interpreters across this country.

Other than an annual Interpretation Awareness Week promoted by IC, there has been little or no coordinated means of promoting interpretation as a field, to the public. There is little in the way of public image or profile that interpreters have; perhaps all interpreters need to blow their own horns a little louder. Only recently was IC successful in having heritage interpretation included as an occupation in the Canadian Classification and Dictionary of Occupations. Many of our members are seasonally employed; hopefully their trips to the UIC office will be a little less confusing in future - which brings us to the next issue.
EMPLOYMENT IN INTERPRETATION

Interpretation Canada is concerned about employment in this field. Job stability for interpreters has always been a problem. Interpreters can spend years living from one seasonal contract to another, with no real commitment from any employer about long term opportunities or secure jobs. Concerns about an unpredictable future often discourages interpreters, and many excellent people move out of the field and into more financially stable careers, taking with them a wealth of experience and skills. Since interpretive services are usually among the first programmes to be reduced during budget cutbacks, interpreters who have succeeded in getting full-time jobs often find themselves without work, or shifted to other responsibilities. Though the agency may save in the short term, the loss of interpreter experience, and time spent training new staff makes this sort of turnover quite costly in the long term.

In the past decade, few agencies have increased their interpretive staff, and many have reduced or eliminated their interpretive efforts altogether. The use of lower paid student workers and volunteers in front-line delivery, has created concerns about the quality of visitor experience. There has been a move in some situations towards the contracting out of all interpretive services. This again creates concerns regarding the overall quality and standard of service the visitor experiences, and the potential for erosion of long-existing programmes.

TRAINING

Interpretation Canada is keenly pursuing the most effective ways in which quality training may be made available to all interpreters. The area of standards for personnel, programme and facility performance has presented a dilemma for some time. As stated previously, comprehensive training programmes do not exist, and agency-directed training has been eroded in most cases. The need to establish standards of excellence, and the potential for some sort of certification system, has been discussed for years. The questions remain the same. What types of training are needed, so that the interpreter has the tools he or she needs to perform well, at each level of position that they might hold? How can this training be offered on a continuing basis, and be made accessible to everyone in a country the size of Canada? What are appropriate, achievable, and measurable standards of excellence for interpreters and interpretation programmes? How can we bring the Canadian public and their heritage together in a coordinated, high quality fashion, at all sites, regardless of location or size? Without defined standards, and with a move towards less direct control by agencies, the content and quality of services may be in jeopardy.

IC is actively engaged in the process of developing professional standards and training programmes, but as a volunteer-driven organization, we can only proceed at a moderate pace. To meet this challenge, we are exploring ways to change our
financial base, and are considering the ways in which we may enter into cooperative ventures with other organizations and agencies. We look forward to new and rewarding joint ventures on training in the future.

ADVOCACY

Interpretation Canada has a major role in voicing the concerns of its members regarding policies and actions taken by various levels of government and other groups, on issues related to the management and interpretation of heritage resources.

We have been active in a number of issues, the most critical of which were the 1985 cutbacks in interpretive services offered by the Canadian Wildlife Service and Parks Canada. IC representatives submitted position papers to the then Minister of the Environment, and later met with her successor. Though the programmes were not fully reinstated as we had wished, we do intend to continue to lobby for support of interpretive efforts, and to work on educating the public about the role and value of interpretive programmes.

NETWORKING/COMMUNICATIONS

Interpretation Canada seeks to improve interpretive services and increase awareness of their value by taking an active role in conferences, working sessions, and other forms of industry development undertaken by other professionals in education, resource management, tourism and marketing, and heritage-related fields. Over the past few years we have been forging closer links with other related organizations in these fields, as well as providing our own networking through workshops and publications.

There has been an increase in interest regarding information-sharing and problem-solving on a global basis. Agencies offering interpretive programmes have a moral obligation to interpret some of the larger issues that affect their sites, complex though the issues may be. IC has actively participated in the creation of a triennial international interpreters congress, and has supported the development of a new international society for interpreters, called Heritage Interpretation International, the directorate of which has been established in Edmonton. One of our members has undertaken to publish an international journal for the field, called Heritage Communicator. IC has supported this effort, and is now looking at sponsorship of subscriptions for interpreters in Third World countries.

In conclusion, all these initiatives require time and money to undertake. The ongoing challenge for IC is to continue this type of development and sharing and exchange, with a small budget, and a volunteer work force. We strongly believe however, that only through partnership with other heritage agencies and organizations, will we be able to fully address these issues and meet our goals. We
will be active in any area, and with any partner who wants to work towards meeting mutual goals. Thank you for including us in your discussions today. Let's talk more about what we can do to assist each other to strengthen interpretation, and the public's perception of their heritage in the process.

LITERATURE CITED


SESSION VIII

RESPONDING TO THE ISSUES AND TRENDS
VISION AND ACTION

On Heritage Day (February 20, 1989), Canada's Minister of Environment, the Honourable Lucien Bouchard, announced the recipients of the annual Canadian Parks Service Heritage Awards. Those worthy people come from various parts of our enormous country and each have achieved something unique. Together, however, they have exhibited a certain vision of Canada as a country dedicated to the protection and presentation of its heritage.

The Meewassin Valley Authority is an example of a group of people with an important vision. The vision of the Authority, responsible for the section of the North Saskatchewan which flows through Saskatoon, won it the Governor General's Conservation Award. This local conservation authority decided that the job of protecting and properly presenting the values of the river would take it a hundred years, with its meager resources. Did it abandon the task? No. It faced it squarely in a plan laconically called the Hundred Year Plan! That plan was a vision of a better future for the river and the people bordering it at Saskatoon. By setting out a clear vision of valuable actions, the Authority rallied such support among its clients, potential partners and staff that it succeeded in implementing its plan for public access, development and protection measures in less than ten years. It is an example of the power of vision.

Staff vision is important to park and land management agencies such as forestry departments. In the Visitor Activities Branch, staff develop their appreciation of the future, as well as their organizational and cultural environment through an on-going and rather frantic sorting through and sharing waves of information, both formally and informally collected. The small Branch receives a stream of a thousand pages of lists, reports, manuals and periodical reading materials per day, and hundreds of telephone calls. I have experimented with different ways of constraining or directing the information and none of them has been more successful than simply circulating the material. Now we are able to get more of it faster, by a remarkable network of a thousand terminals electronically connected across the continent, allowing us not only to read but also to comment on or edit the written work of many of our colleagues in the field.

1 The ideas expressed in this paper are those of the author and do not necessarily represent those of the Canadian Parks Service.
Student essays are among the interesting papers that enter this stream. It was a University of Waterloo student who clearly and imaginatively identified the problems with, and potential of, the heritage shipwrecks at the Bruce Peninsula twenty years ago. I saw his thesis, which is a main reason why we have a Fathom Five National Marine Park. Another student, Al Helmesly, wrote some clear and thoughtful recommendations for an interpretation programme in the conclusions of his geography thesis. He went on to establish the first interpretation programme in the Ontario Provincial Parks. Students have a responsibility and an opportunity to shape the direction of park and resources management agencies.

For my Branch, formal reports of management and functional reviews, staff conferences and workshops, as well as training sessions, regularly bring to our staff the issues which are identified at the field level of the organization. Statements of direction arrive at my office from higher levels in the Parks Service or in the government, on government and departmental priorities, treasury board guidelines and Minister's and senior executive priorities. All of this is the celestial stew out of which the staff identify the pole stars for the guidance of their field colleagues, headquarters peers, and other cooperants. As far as I know, this untidy scramble for information and meaning is how most headquarters policy and priorities groups work at park and resources management.

My own job involves selling advice and guidance to a very decentralized organization. It is an organization which is bilingual and multicultural as well as multidisciplinary. It is receptive to vision because it has a long-term, enduring mandate. But it calls for clarity in communication.

My own vision is based on long-term "strategies", most of which are collected in the National Parks Documentation Centre. These "strategies" address priority actions for the planning and management of Visitor Activities in the context of the overall direction of the Canadian Parks Service. Several years ago, I found that the job of a policy officer was easier if there were a project charter for his or her work. So I instituted a system of project descriptions that is now used quite widely in the headquarters, to guide individual policy projects. The general "strategies" often combine several of these projects and set out goals over a period of years, with responsibilities for implementing them.

Thus there is a Cooperating Association Strategy, a Canadian Parks Partnership Strategy, an Access for the Disabled Strategy, and a National Training Strategy for Visitor Activity staff. Others that are being drafted and which will be recommended for approval include a Volunteers Strategy, a VAMP Implementation Strategy, a Camping Rationalization Project, and an Interpretation Strategy.

It seems the trick to effective staff leadership is to integrate these functional or specialized strategies with the broader direction established by the minister and senior executives, such as the Long Term Capital Plan, the Multi-Year Operational
Plan and its components, including the Human Resources Plan, the Park System Plan (an ever-changing chimera), and the Revenue or Fees Strategy (as it, too, evolves). Indeed, this is the most difficult part of the job and involves the most leadership skills.

Since the 1960's, my personal leadership styles have changed as the society around me changed from the anti-establishment hippie era to that of neo-conservativism, with its calls for improved management, scientific organizational process and a rise in specialist disciplines and stakeholders. I do not want to explore the history further, but only wish to indicate that vision in park management is not a fixed, unchanging glare into a well-defined future. I have changed, the society around me has changed, and the strategies that I have been following have changed too.

This week we have been discussing strategic responses in the United States to the Report of the President's Commission on America's Outdoors. I have learned much from our discussion of them and of the Canadian Parks Service Vertical Marketing initiative. We did not range widely over other strategies, such as the new federal Forest Sector Strategy for Canada, which includes new direction on both public recreation opportunities and public information. We also left aside any discussion of Canada's new Recreational Fisheries Policy and we ignored the just-completed review by Fitness and Amateur Sport of its recreation mandate. These are important gem-stones yet to be picked up. Researchers and resource managers should be aware of these other, related national initiatives in Canada. The whole policy environment of recreation and interpretation is changing. After we discussed Management Frameworks - LAC, VIM, ROS, and VAMP - in some depth, and after eating all this alphabet soup, I found six chewy bits left in my bowl:

1. Process Issues
2. Policy Issues
3. Priorities
4. Environmental Quality
5. Public Benefits and Values
6. Networking Issues/partnerships

Let us look at each of these six bits more closely.

1. PROCESS ISSUES

The processes are generally well understood now, by leaders in research, policy and planning; the limits and strengths of each process are clear to me, and I see areas where there is a need for some further development.

Staff skills and experience in applying them take time (5-10 years), money, and management commitment. In recognition of these requirements, I have already
recommended a priority on service plans and market research in our multi-year operational plan, and that priority has been approved.

There is a need for professional and organizational development; staff are complaining that the processes are not adequately reflected in their job descriptions, classification levels or pay and benefits. We have only recently reviewed classifications, but it appears to require further attention. THERE SEEMS TO BE A NEED FOR A NEW PROFESSIONAL PARK MANAGER IN CANADA, AND IN THE USA?

Poorly trained and unmotivated staff cannot implement these modern processes. We have just partially completed a five-year plan-cycle of national level courses; "partially" because we did not have sufficient funds to do all the training it called for. I intend to develop a new staff training strategy for visitor activities functions. To recognize professional requirements and to stretch our limited training funds, I have recommended a cooperative approach between our agency, universities and professional societies, based on the new long term training strategy. Some of the parties have agreed in principle, and we have now budgeted a small amount of money for the next phase, in 1989-90. I need more help with this issue of training, from all of the parties concerned, and I am hoping for encouragement from provinces through the Federal Provincial Parks Council. I hope for help from government and non-government sources south of the border, too.

2. POLICY ISSUES

As with other large agencies responsible for the management of parks and resources, the Canadian Parks Service is directed by a service-policy, informally known in the CPS as the "Beaver Book". These policies are normally long standing and written before the initiatives discussed at this workshop were developed (e.g., Recreation 2000, The Interpretive Challenge, America's Great Outdoors or Vertical Marketing).

Two recent ministers have indicated a need to update the CPS Beaver Book. So it is likely that it will be changed soon, particularly because of the need to make it consistent with the provisions of Bill C-30, which calls for the legislation of wilderness areas in our national parks.

Given the thrust to improve the provision of opportunities for outdoor recreation, one of the obvious questions that one might ask is: "are we going to change the balance in the existing policy?" The exact place to answer this question is during a policy review exercise. Students, academics and advocates should participate in such a review as it eventually gets underway.

One particular question that seems to emerge from a review of the ROS is whether the ROS categories approach would be an improvement on the existing
park zoning definitions in the Beaver Book. You may want to give some thought to this question.

3. PRIORITIES/ISSUES

I do not think a choice needs to be made between resources for acquiring new parks and the operation of parks which provide reasonably good services, including showers in the campgrounds and an interpretation programme which is articulated on the threats to parks and the parks' heritage values.

According to my provincial colleagues, the fastest growing industry in the parks sphere appears to be in the administrative function of government, especially in financial systems, possibly because of the need to respond to various central-agency audits. It appears that this growth has occurred at the expense of the mandated requirements of the park agencies to protect and present the heritage of the parks. Millions are being spent which would otherwise be available for the operation and acquisition of the parks.

In one provincial park agency, with its parks, districts, regions and headquarters, there are at least four levels of park administration. In the meantime, the park interpretation programme is far diminished.

The choice is not between acquisition, protection and interpretation, or a reasonable level of service for targeted users. 1. One choice is between non-productive management and working on really-needed park priorities; 2. Another choice is to maintain old facilities, many of them completely out of date, serving practically no one - or closing some facilities selectively during the year or indefinitely, using the savings to reinvest in new facilities, services and partnerships.

I feel park advocates should be well informed of the financial management issues. The Canadian Parks Service is currently implementing a Management Information Framework (MIF) which will, for the first time, allow for reasonable comparisons of services and outputs in financial terms across the country. It would be useful for some studied comparisons of the services and outputs.

In the meantime, parks operations staff in the provinces and locally feel they are feeding a huge financial management apparatus instead of getting support from it. Their range of discretionary decision-making has declined astoundingly since I started working at the provincial level twenty years ago.

At the federal level, the new "Increased Management Authority and Accountability" (IMAA) may help. You senior students of parks should watch it develop and decide for yourselves.
4. ENVIRONMENTAL QUALITY

The decision frameworks we reviewed of LAC, VIM, ROS and VAMP require better information on the environmental settings: we are ready in my Branch to put an increased emphasis on opportunity assessment.

Much of our data are tractable by GIS. The opportunity exists for at least some of our data for the various environmental managers and visitors activities managers to be managed through a common data management process. There is also a huge opportunity, and professional staff are alert to it, to integrate environmental and social sciences data analyses.

Nevertheless, we are delayed because of government purchasing policies in getting the micro computer support needed for manipulating the data, even though appropriate software and data bases are available.

There is a need to strengthen interpretation of environmental threats and global change, to help the public appreciate the significance of this change to their personal lives. Volunteers and paid consultants, as well as NGO's, could play an important role in developing good interpretive materials for use in parks and forest lands.

A need also exists for further training in the fact and in the science of these phenomena. I am concerned that the National Park interpreters be current with them, and that they be equipped to handle questions from other staff and the public responsibly. This is a training issue and an educational issue; there is a need for improved briefing material for interpreters, more monitoring of these phenomena, and more interpretation of the results of that monitoring.

5. PUBLIC BENEFITS AND VALUES

This aspect is closely linked to the need for improvements in opportunity assessment.

The topic of public benefits and values in recreation has an important relationship to the management of appreciative (or depreciative) behaviour, and the setting of appropriate recreational expectations by the agency among the public.

Public benefits and values is the poorest among six items which I have chosen to highlight. For instance, the faddish "VALS" categories are very foreign. I am not sure they are useful, for they are very hard to relate to our business, our processes, and our procedures for management; also, there appears to be no consistency among the consultants using them. We need to get a better handle on segmentation and targeting.
Some "tests" have certainly demonstrated passion, if not values - the Interpretation cuts made by Minister Blais-Grenier resulted in 15,000 letters being sent to her office.

Two volumes of the technical, formative and summative evaluation studies of interpretation projects seem to indicate that most, if not all, of the projects are successful.

Cooperating association sales are rising by 20% per year, with many new products. The return on investment is high. Volunteers and cooperative association members now include 6,000 people annually - the increase representing a measure of commitment.

Inside CPS we are fitting together two expansionary strategies on cooperating associations and volunteers, and there is plenty of staff and management support to do this.

My summary of this area, however, is that there is a real need for longitudinal values research, a toponomy of studies and the development of segmentation that managers can understand and efficiently relate to park standards, policies and practices.

6. NETWORKING ISSUES/PARTNERSHIPS

Anybody associated with the work that Bob Graham has been doing knows how difficult and how much energy it takes to get organizational approval to get together, to do better work than one could do working alone.

There is a need in Canada for some established mechanisms such as the USA Coop Studies units. Also desperately required are more staff exchanges and the creative use of university sabbaticals and demonstration projects which many could learn from.

Linkage with research units and between them and the University of Waterloo Heritage Resources Centre and the Tourism Research and Education Centre is overdue. These centres could also provide an important link with the dozen other universities and colleges which are affiliated in bilateral agreements with CPS. I am ready to work with the centres to assist in this networking.

There is also a need to involve the private sector, to help it consider the new data which is being collected, and the new processes which have been developed, as a basis of sound investments in the future of parks and tourism. The private sector has an opportunity to avoid unrealistic expectations, overbuilt facilities, and undue capital risk.
Towards Serving Visitors and Managing Our Resources

There is a need for better use, among government agencies and universities, of the new library and bibliographic systems. We will be putting a modest level of resources in our workplan for work on such a bibliography in the coming year.

The new interest of the public and politicians has provided managers, policy makers, students and researchers with an important forum of responsible action. In the United States, the forum has been provided by the remarkable President's Commission. In Canada, the importance of that forum will be gauged by the attention which Parliament will give to the State of the Parks Report and the tabling of Management Plans. It is noteworthy that these forums have been provided in part by the extraordinary work of the Canadian Parks Service and by the National Parks and Recreation Association. Much is due to their efforts. For my own part, I think it will be difficult to get many of the new ideas that we discussed this week into the first of these responses to Parliament. But over the years, we will certainly try hard to do so.
A CANADIAN PERSPECTIVE ON VISITOR MANAGEMENT

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INTRODUCTION

Any attempt to present a "Canadian perspective" on this workshop inevitably must encounter the questions of what that perspective might be and how it might differ from an American perspective. The difficulties posed by these questions are compounded by the obvious similarities between the two countries and by the fact that, when one discusses people's behaviour in parks and protected areas, one is considering a type of behaviour which is generally part of popular culture. Of course, it is precisely in the area of popular culture that similarities are most visible. Differences between the two countries, indeed important, far-reaching differences, do exist but they are subtle and not likely to be found in popular culture. Northrop Frye puts it well when he writes:

The distinctive is not the unique: what is distinctive is an emphasis, a special proportioning of elements that other societies may have in different proportions. (Divisions on a Ground, 1982, p. 46).

Where then might one look to find elements which are different in degree in Canada and the United States and which are relevant to the concerns for visitor management presented at this workshop?

There are three domains which I would suggest might help to provide an understanding of a Canadian perspective on this workshop on visitor management strategies: the Canadian constitutional and legal framework; Canadian culture; and the roles of Canadian environmental non-government organizations.

The Constitutional and Legal Frameworks

Canada is a monarchy; the United States is a republic. These two facts themselves account for a good deal of the difference between the two countries. Canadian federal and provincial government organizations are responsible to the Crown rather than to the people as in the United States. As Lucas (1976) has pointed out, most Canadian laws (in the environmental field) offer little opportunity for members of the public to be involved in any level of the decision process. When involvement does occur, it is at the discretion of the Minister or government department and carries no guarantee that such involvement will have any effect on
the decision. On the other hand, Margaret Shannon, writing about the U.S. Forest Service, makes it quite clear just how different the American situation is:

Legislative control over administrative decisions was thus strengthened by (1) specifying procedural requirements; (2) relying on formal administrative records (of both scientific analyses and citizen views) for justifying decisions; (3) restricting discretion by prescriptive substantive requirements; (4) including citizen participants not only as sources of public views, but also as co-formulators and enforcers of agency policies. (1987, p. 236).

A significant difference in emphasis to be sure. Whereas Americans have the guaranteed right to participate in and to review administrative decisions, such rights exist in Canada only in embryonic form in the new constitution. Current practice affords a great deal of discretion to the relevant Minister, even to the point of choosing not to enforce laws. Canadians have no effective way to involve themselves in such decisions nor to review them, save the occasional opportunity during elections. Even the courts, which act as law makers at times in the United States, play a substantially different role in Canada, traditionally applying and interpreting law rather than formulating it.

**Canadian Culture**

In order to appreciate how Canada and the United States differ and why these differences may be relevant to the initiatives discussed at this workshop, one can look to their cultures. First, consider the involvement and the role of government in economic and social life. Government in Canada has long had a role in social issues, even to the point of establishing a system of (federal) transfer payments to bolster economically weak parts of the country. Moreover, Canadians have come to accept this level of involvement and to expect that the senior levels of government would be there for them in times of personal or community distress and, on a regular basis, as providers of public services. Until quite recently, the individualism which has been portrayed as a definitive American characteristic has had but a small place in Canadian mythology.

Consider also the fact that, with the possible exception of Alaska, the American land base has been completely charted. Natural resource wealth has been identified and continues to be exploited. Natural (and cultural) heritage areas have been established. In Canada, there is still a feeling that there are many more opportunities for development and economic growth and that these can be exploited without the loss of meaningful values, especially those related to natural heritage. Indeed, for many Canadians, the sorts of natural heritage values generally accepted in the United States have little meaning. In parts of the country, especially in hinterland areas, there is still the hope that mining or forestry or, more recently,
tourism will provide the sort of stimulus needed for continuing economic prosperity. Concerns about pollution and about natural heritage protection are slowly making their way into the minds of Canadians; it will be a far longer trail to their hearts.

The myopia of Canadians with respect to heritage protection matters does not, however, apply to all facets of life. In fact, there is some irony in the realization that Canadians are quite cosmopolitan in their outlooks. The multi-cultural texture of society, a texture which is actively encouraged by governments, contributes to this outlook. In addition, Canadians have never been known for the sort of national drum-beating and patriotism which can often be associated with the United States. Canadians look to many parts of the world, including the United States, for their inspiration.

The Role of Environmental Non-government Organizations

The legal climate in Canada has a profound influence on the ways in which Canadian environmental non-government organizations operate. Lacking the opportunity to participate in decisions as equals with government departments, these organizations must depend heavily upon influencing decision makers and/or attracting (and keeping) the attention of an always fickle media. These same actions are used, of course, by their American counterparts but the legal guarantees for involvement and review afforded American organizations give them an additional, very powerful avenue of action.

Canadian environmental non-government organizations are not particularly powerful for another reason: they attract relatively few Canadians as members. Why this is the case is not clear. Perhaps, lacking political and economic power, these organizations are unable to put their cases to Canadians with sufficient zest and vigour; perhaps, Canadians keep their feelings about parks and other heritage areas to themselves rather than join environmental groups to express those feelings; or perhaps, Canadians are not yet convinced that natural heritage is an issue of sufficient importance to warrant their concern and/or support.

Another difference of degree. Although the Canadian organizations address many of the same concerns as their American counterparts, they do so in a much more muted way.

The relevant facets of Canadian culture for this discussion are the following: a reliance on the traditional roles of (senior) governments; an acceptance of a social democratic style of government involvement in economy and society; a relative openness to the other parts of the world; and, a narrow pro-development orientation toward the natural environment.
From this basis, it is possible to review the workshop by presenting some comments and, especially, posing some questions in a manner which at once might be both reasonable and Canadian in tone.

A COMMENTARY ON THE WORKSHOP

Perhaps the most obvious comment one can make about this workshop concerns communication. The workshop has been a successful vehicle for communication in several ways. It has provided an unusual opportunity for representatives of Canadian and American park and protected area agencies to discuss an issue of mutual interest in another workshop, perhaps in two years time, is confirmation that what went on in the workshop was useful and thought-provoking.

It is somewhat less obvious, but a fact nonetheless, that the communication which occurred at this workshop among agencies was of the one-way variety. A representative from one agency would outline that agency's approach to visitor management. To a degree, such one-way communication might be expected given the format of the workshop and the novelty of making such a presentation to other heritage agencies. However, there was also some reluctance, perhaps even fear, among the agencies to participate in a less-structured forum in which the weaknesses as well as the strengths of their particular approaches might be scrutinized. In this sense, the workshop may be seen to be successful in providing a bridge between various agencies; the agencies themselves, however, must be willing to use the bridge. In spite of hesitation at this workshop, the agencies seem willing to meet again and to discuss a more specific agenda.

For those of us from universities, the workshop has afforded an excellent opportunity to appreciate more completely current developments in the agencies and, therefore, possibilities for useful research. However, it is also clear that academics, and more especially social scientists, must work hard to ensure that they are understood and that their work is seen to be relevant to the sort of issues discussed here.

While communication is quite specific, it is but one dimension of a much broader matter which has been described here as "mindset". For those people from parks and protected area agencies and, perhaps, for those from environmental non-government organizations as well, the idea that natural heritage management efforts ought to be focused on visitors as well as on natural environments still is strange and somewhat worrisome. The tradition of managing land, water and other resources for specific objectives has served the agencies represented here well; moreover, that tradition has contributed to administrative cultures which are resistant to change. This workshop concerns a new "paradigm", a new way of thinking about heritage area management which will place demands upon agency and environmental group employees to change. These sorts of issues, especially those concerning training and professional development, have been aired quite well at this workshop.
This new paradigm represents a shift in thinking which goes well beyond the rather limited perspective gained from marketing and marketing research. While social science also is prominent there, this new paradigm combines it with the developing environmental planning frameworks and sound heritage area policies to produce a management orientation capable of reconciling the tensions between protection and use. For those in heritage area agencies, the apparent illegitimacy of social science, compared to natural science, is a barrier which can be overcome. The need to combine social science information with that from natural science in a management framework is a more difficult technical problem. However, for the environmental organizations represented here, especially those from Canada, the challenge presented by the visitor management initiatives is a daunting one. There is a very real concern that the attention to visitor management is a shift in policy emphasis away from natural heritage protection towards tourism. While representatives from the agencies here have stated that the initiatives discussed at this workshop do not signal a decline in their commitment to natural heritage protection, the environmental organizations have heard such statements in the past. They remain suspicious. This is unfortunate since visitor management, especially as outlined in several presentations here, can serve natural heritage protection quite well. Just as agency staff will have to be first convinced, and then tutored in the use and benefits of social science information, so too will the representatives of the environmental groups. For them, the adjustment to the new paradigm will be most difficult.

The new paradigm may also produce substantial changes in the structure of management itself. There seems to be universal support for the idea of partnerships among the agencies at this workshop. Such partnership arrangements, regardless of their specific natures, are thought to have the potential to stretch scarce agency dollars. Elsewhere in this workshop, the idea of partnerships has been weighed rather more soberly. Partnerships need to be defined more precisely. Participation in partnerships ought not to be limited to economic interests; native people, environmental groups and citizens may prove to be valuable partners in interpretation and management.

QUESTIONS AND CONCERNS

This workshop has also raised some questions and concerns which are tied more indirectly to the idea of visitor management. These matters are relevant, in varying degrees, to both countries. While they are not entirely mutually exclusive, they can be considered useful under three topical areas: the developing environmental ethic; the problem of marketing; and the principle of equity.

The Environmental Ethic

It is fair to say that market value, long the sole means of determining the worth of natural or human-made material in North America, is being confronted more
and more by a new way of valuing based on ecological criteria. This developing environmental ethic is best represented by the work of individuals such as Holmes Rolston III (1986), Bill Devall (1987) and Alan Drengson (1983) in academic literature. However, while individuals such as these may be writing about the environmental ethic in an academic forum, they seem to be giving expression to feelings and attitudes held by many millions of people in Canada and the United States. Especially in the United States, the successful work and growing constituencies of the major environmental organizations are fuelled by strong feelings of appreciation, even of love, of natural heritage features and areas. Such feelings bear no association with market values. Natural heritage is felt to be significant and meaningful on aesthetic, ecological and spiritual terms. While, in general, Canadians have not yet embraced natural heritage in such a non-utilitarian manner, there is evidence that the values underlying the ethic are present also in Canada (e.g., Evernden, 1985; Filion et al., 1985). For parks, protected area and natural heritage agencies in both countries, the developing environmental ethic poses two challenges beyond the most obvious one of simple awareness.

Members of the public who visit heritage areas are unlikely to be satisfied by traditional interpretation practices which seek to heighten awareness and to foster appreciation of natural heritage as merely vestiges of the past. More and more, they will want to know how current technologies and economies affect these natural heritage areas; they will want to understand how such continental influences as acid precipitation have changed ecological functioning. Such visitors may wish to know who is responsible for environmental damage in heritage areas; they may wish to know what they, themselves, can do to prevent more damage. Are the agencies represented here prepared to respond to these visitors?

The developing environmental ethic may also require these agencies to take on new leadership roles in the environmental field. Such roles might consist of acting as role models for more environmentally-backward agencies whose operations have not yet absorbed the environmental ethic and which continue to place economic values above all else. Again, this scenario may be more relevant to the Canadian Parks Service, given the differences between Canada and the United States with respect to the incorporation of the environmental ethic into public policy. Are these agencies prepared to champion this ethic?

Service or Product Marketing

Although one has become accustomed to reading accounts of how marketing will be the panacea for heritage agencies, there is a problem here which has nothing to do with the difficulties of using the techniques and theories of marketing. There is divided opinion, evident even in this workshop, over what is to be marketed. Some argue that visitors to natural heritage areas seek particular "products" and, therefore, marketing heritage is much like marketing tennis racquets, toothpaste or cars. Others, on the contrary, insist that, since visitors to heritage areas seek
experiences, the proper approach is to see that "services" are in place which will ensure that those sought-after experiences occur. The debate, then, concerns whether product or service marketing strategies are developed and implemented.

There is no doubt that this question is rather esoteric: the distinctions between product and service marketing are subtle. However, the question is worth exploring because the two approaches are quite different in ways important for managers of natural and cultural heritage. The product orientation brings with it a sales and revenue generation bias which may be useful in developing awareness of heritage sites but also harmful in attracting so many visitors as to do damage to that heritage. With its focus on things, man-made things, the product orientation pulls the visitor's attention away from the themes and features of natural heritage and emphasizes a consumer-producer relationship which is inappropriate in a heritage context. Using techniques such as socio-demographic and geographic segmentation, the product orientation seeks to appeal to everyone on the basis of comparative market value.

The service orientation brings a different focus, one which puts visitors and their experiences rather than profit, sales or revenue front and centre. Services may be intangible: for example, the person-to-person interactions common in a hospitality context. At the other extreme, services may be definitely concrete as in the case of a tram system to move visitors about a natural heritage area. In both examples, services support other activities for which visitors have come. The activities to be supported are controlled and approved by policy; levels of service are consistent with policy intentions. In a context where profits and/or revenue generation are not paramount concerns, a service marketing orientation offers an agency a means to improve experience possibilities for visitors while functioning within its mandate and policies.

There continues to be a concern in this workshop that marketing is viewed as the route to eliminating revenue problems for agencies facing either budgetary restraint or political demands to improve revenue generation. Adopting the product marketing approach stands to put agencies in conflict with their own policies and with some of the constituencies they seek to develop and nurture. Natural and cultural heritage experiences do not appeal to everyone; the messages and experiences natural and cultural heritage agencies present are often very specific to interests and visitor groups. If these agencies hope to build constituencies and to honour the protection component of their mandates, they must come to terms with these two forms of marketing and elect to adopt the service orientation.

The Principle of Equity

The questions raised above concerning marketing orientations are directly relevant to equity, a principle which is well established in both countries. In Canada, it is expected that when government provides services for its citizens, those services will be accessible, especially financially accessible, to all who wish to make use of
them. The provision of opportunities to experience elements of natural and cultural heritage serves national goals and ought, therefore, to be treated in the same manner as other government services. In the United States, although the role of government may be different from that in Canada, there is no doubt that the public lands and national parks are felt to be important national features which all Americans can expect to use.

The discussions at this workshop concerning marketing, doing more with less and developing partnerships have not addressed the principle of equity in any overt manner. It should be clear, however, that decisions taken which represent a greater commitment to revenue generation and facility development, especially that involving the private sector, compromise the principle of equity by pushing the costs of visiting heritage sites out of the range of some people. If the agencies here are sincere about meeting their mandates, they will tread very carefully indeed when making decisions which will affect the costs of visitation.

CONCLUSION

This workshop has achieved some excellent results. The developing communications, at formal as well as informal levels, among the agencies and social scientists here hold the promise of long-term benefits for management effectiveness. Continuing communication, it is to be hoped, will slowly put to rest the suspicion with which some parties to these discussions have regarded others.

The new management paradigm discussed here, although it faces difficulties in acceptance and implementation, promises the excitement of innovation in planning and management and higher effectiveness in the critical area of visitor satisfaction. The possibilities (and problems) of partnerships, especially with a widely-defined notion of what sorts of interests might constitute partners, are beginning to be explored and are certainly worthy of such exploration.

This workshop raises significant questions for these heritage agencies in an indirect manner. The adoption of a visitor management strategy with all that it implies about being aware of trends among potential users will require that an agency be prepared to understand and respond to the sorts of changes which are likely to accompany a wider acceptance of the environmental ethic. At the same time, and perhaps more especially in Canada, agencies will have to ensure that the new strategies do not put natural and cultural heritage experiences out of reach of some members of society. The questions surrounding the appropriate approach to marketing will also require very careful consideration, both in light of possible implications for equity and for constituencies.

In both countries, the adoption of visitor management strategies represents a redefinition of the relationship between each of the agencies and its constituencies.
This workshop has been successful in charting some of the considerations which will guide and condition that re-definition.

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APPENDICES
APPENDIX 1

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APPENDIX II

WORKSHOP PROGRAM

VISITOR MANAGEMENT: PERSPECTIVES OF SEVERAL CANADIAN AND UNITED STATES PARK, PROTECTED AREA AND NATURAL RESOURCE MANAGEMENT AGENCIES

A workshop and professional development opportunity co-ordinated by the University of Waterloo's Tourism and Research Education Centre and the Heritage Resources Centre took place February 14th - 17th, 1989 at the University of Waterloo in Waterloo, Ontario, Canada. Contributions and support came from the Canadian Parks Service, the U.S. National Park Service, the USDA Forest Service, the U.S. Bureau of Land Management, U.S. Fish and Wildlife, and the Tennessee Valley Authority. Representations from academic institutions and environmental organizations also contributed and participated.

BACKGROUND

In the next decade, heritage area (park, protected area and natural resource management) planners, managers and analysts will face increasing difficulty in administering, protecting and regulating parks and wildlands. Jurisdictional overlaps and gaps exist. Some have questioned the value and purposes of social science and research in park and protected areas. Others are focusing their criticisms on the bureaucratic system itself and how it has become embroiled in controversies with political overtones. Mechanisms must be found to reconcile conflicts where they exist (or are likely to arise).

The need to develop and implement integrated and forward looking initiatives to address visitor management, science, communication and research has led several American park, protected area and natural resource management agencies to publish initiatives which describe their future direction and priorities. These include the USDA Forest Service's America's Great Outdoors, the US National Park Service's The Interpretive Challenge and the Bureau of Land Management's Recreation 2000. Several environmental non-governmental organizations have prepared submissions in response to these initiatives. The tasks suggested in the initiatives and submissions are complex and challenging.

Park user interest groups, as well as all levels within heritage agencies have a mandate and responsibility to comment and participate in discussions related to these endeavors.

This workshop was suggested by specialists in visitor activity management, interpretation and research in Canadian and US park, protected area and natural resource management agencies. Representatives of the USDA Forest Service
Towards Serving Visitors and Managing Our Resources


A two-phased in-house/public workshop approach envisioned, promoting discussion, analysis, suggestions and public comment on the interactions between the parks and protected areas, and their methods of dealing with social science research and visitor management.

The discussions in Waterloo will form the basis for further liaison and discussion among interested agencies and individuals.

PART ONE

The first two days of the workshop ("in house session") will be dedicated primarily to discussion among a selected small group of Canadian and U.S. park, protected area and natural resource management agency representatives, citizen's environmental groups and selected members of the academic community centering upon:

(i) visitor activities, services and interpretation policies and initiatives (e.g. America's Great Outdoors, Interpretive Challenge, Recreation 2000 and some related Canadian Parks Service visitor activity management concerns);

(ii) research and data base needs;

(iii) four visitor management planning and decision frameworks (i.e. Recreation Opportunity Spectrum; Limits of Acceptable Change; Visitor Impact Management; and Visitor Activity Management Process, also known as ROS, LAC, VIM and VAMP); and

(iv) interpretation and visitor management.

The underlying premise for these two days is to exchange viewpoints, establish an understanding of current initiatives, identify research needs, and develop a continuing mechanism to track emerging work. Assessment statements for future actions will be developed and discussed as part of the "in-house workshop" and syndicates (small group meetings).

Participants will be asked to share their insights related to initiatives and practical experience, existing and current work, new approaches, different methodologies, and identify issues and concerns related to four current conceptual planning and visitor
management decision frameworks (ROS, LAC, VIM and VAMP) and their relationship to research and interpretation.

The majority of time during the "in-house" workshop will be dedicated to focused discussion and comment based on short overviews of the three US agency initiatives, environmental communication/interpretation issues, research needs and the four planning and decision frameworks (ROS, LAC, VIM and VAMP).

The program for the "in-house" workshop (February 14 and 15) is designed to meet seven objectives:

1) to provide an overview and discussion of selected visitor management policies and initiatives; four visitor management planning and decision frameworks; and issues and research needs for visitor activities, services, and interpretation.

2) to assess the relationships between social science and the four decision frameworks (ROS, LAC, VIM and VAMP).

3) to identify issues and concerns with processes, management techniques and research that are effective and efficient in decisions related to current and potential visitors to park, protected area and natural resource management areas (e.g. opportunity assessment, visitor impact management and environmental communication/interpretation).

4) to identify how improved management practices and plans can be effectively and efficiently implemented in areas such as the expansion of volunteer programs and co-operating associations.

5) to discuss the need for technologies and data base development and management.

6) to suggest a mechanism for continuing formal Canadian and American liaison in terms of heritage (park, protected area and natural resource) area management agencies, environmental organizations and interested representatives from the academic community.

7) to develop a series of suggestions on visitor management, environmental communication and interpretation, related to the four decision frameworks and the use of social science in the management of parks, protected areas and natural resource areas.

It is sincerely hoped that participants will bring case study materials, brief prepared presentations, and will review the enclosed materials in advance of the workshop. We hope all will be prepared to make comments, particularly in areas of special interest or expertise. The "in-house" workshop will include approximately
60 people and provide a unique opportunity to draw together ideas in a constructive as well as functional way.

PART TWO - Professional Development Workshop

The third and fourth days of the meeting (February 16 and 17) will be conducted as a professional development opportunity with more formal papers/presentations and responses. There are numerous professionals, academics, interest groups and students who will be unable to attend the "in-house" workshop, but who are extremely interested in attending this portion of the meeting.

Commitments and schedules have necessitated a reorganization in the sequence of the professional development workshop. During the professional development workshop the organizing committee is not looking for a restatement of presentations from the "in-house" meeting. Rather the committee would like presenters to focus on an overview of initiatives and issues with examples of applications and suggestions for future direction and research.

The program for the professional development opportunity is designed to meet seven objectives:

1) to provide a forum for presentation and comment on four decision frameworks (ROS, LAC, VIM and VAMP) which address the emerging issues of visitor management, science, communication/interpretation and research in the management of parks, protected areas and natural resource management areas.

2) to identify current areas of social science research, data collection, analysis and theory development for the four frameworks (ROS, LAC, VIM and VAMP).

3) to provide an overview and an opportunity to discuss four visitor management planning and decision frameworks (ROS, LAC, VIM and VAMP) and their future evolution.

4) to provide an opportunity to comment on whether the above noted four decision frameworks can help or detract from building constituency support and whether they can respond to several emerging trends (e.g. agency approach to planning, interpretation, tourism, marketing, the environment, current initiatives and responses of environmental groups).

5) to promote discussion on the role of parks, protected areas and natural resource management areas as benchmarks which assist the public to know and appreciate their environment and history through programs of communication and interpretation.

6) to focus attention on the research needs of visitor management.
7) to publish a proceedings based on the contributions of presenters.

**PROGRAM AGENDA**

**Tuesday, February 14, 1989: Day 1 "In-House" Workshop**

8:00 - 8:15 a.m. Introduction and welcome to workshop: 
....Dr. Stephen Smith, Professor and Chairman, Recreation and Leisure Studies, and Chairman, Tourism Research and Education Centre

8:15 - 8:35 a.m. The Search for New Approaches That Work 
....Dr. Ian Rutherford, 
Director General of National Parks, Canadian Parks Service

**Session I: Initiatives**

**Chairperson:** Dr. S. Smith, 
University of Waterloo, 
and Tourism and Research Education Centre

**Session I: Objectives**

1) To provide an opportunity to discuss and exchange information among North American park, protected area and natural resource management agency representatives.

2) To identify common issues, differences and similarities in the approach to visitor management, interpretation and social science.

3) To discuss constraints which will direct and shape current initiatives.

8:35 - 9:05 The evolution, direction, and implications of America's Great Outdoors 
....Ms. Elizabeth Estill, Assistant Director Recreation Management, USDA Forest Service Washington, D.C.

9:05 - 9:20 Commentary on America's Great Outdoors and Social Science in the USDA Forest Service 
....Dr. Richard Schreyer, Professor, 
Department of Forest Resources, 
Utah State University
9:20 - 9:55  Towards an agency marketing framework
            ....Peggy Hewson, Director,
                   Marketing, Canadian Parks Service

10:00 - 10:15  Coffee / Juice Break

10:15 - 10:45  The evolution, direction and implications of The Interpretive Challenge
            ....Michael D. Watson, Chief of
                   Interpretation, U.S. National Park
                   Service, Washington, D.C.

10:45 - 11:00  Commentary on the Interpretive Challenge and Social Science in
               U.S. National Parks
            ....Dr. Don Field, Dean,
                   School of Natural Resources,
                   University of Wisconsin

11:00 - 11:30  The evolution, direction and implications of Recreation 2000
            ....William T. Civish, Branch Chief,
                   USDI, Bureau of Land Management,
                   Recreation and Cultural Resources
                   Washington, D.C.

11:30 - 11:55  The NPCA Commission on Research and Resource Management Policy in U.S. National Parks
            ....Paul Pritchard, Executive Director
                   National Parks and Conservation
                   Association, Washington, D.C.

Noon - 1:00  Lunch, Cafeteria Notre Dame College

Session I:  Commentary

Chairperson:  Dr. J. G. Nelson, Professor,
              Faculty of Environmental Studies
              and Chairman of the Heritage Resources Centre, University of Waterloo

1:00 - 1:15  Issues, Summary and Comments
            ....Dr. Robert Payne, Professor,
                   School of Outdoor Recreation,
                   Lakehead University
Appendix II - Workshop Program

1:15 - 1:30  Interpretation Issues
            ...Dr. W. E. Randall,
            U.S. National Association of
            Interpretation
            and Professor Emeritus,
            University of Massachusetts,
            Department of Landscape Architecture
            and Regional Planning

Session II:  Implications: Syndicates to address five categories of issues

1:30 - 1:45  Syndicate Set up
            ....Stephen Woodley, Liaison Officer,
            Heritage Resources Centre,
            University of Waterloo

1:45 - 3:15  Syndicate Groups

3:15 - 3:30  Coffee/Juice Break

3:30 - 5:15  Short Report of Syndicates and Assessment Statements
             (5 minute presentation, 10 minute discussion)
             Chairperson: Stephen Woodley, Liaison Officer
             University of Waterloo

Shuttle Bus to Hotel. No Host Dinner.

Syndicates

1. Initiatives

   Chairperson: Gary Sealey, Director,
               Visitor Activities Branch, Canadian Parks
               Service, Hull, Quebec.

   Rapporteur: Dr. R.J. Payne, Professor
               School of Outdoor Recreation
               Lakehead University

Objectives:

To identify common shared issues, differences and similarities in direction of the initiatives for management of public opportunities.
To identify opportunities/limitations, and suggest courses of action to achieve the stated direction.

2. **Role of Partnerships**

Chairperson: Paul Pritchard, Executive Director, National Parks and Conservation Association, Washington, D.C.

Rapporteur: Kevin McNamee, Director, Conservation Programs, Canadian Parks and Wilderness Society, Toronto, Ontario.

Objectives:

To review approaches of Canadian and U.S. agencies responsible for parks, protected areas and natural resource management areas in developing partnerships which have resulted in increased stewardship and support for the agencies' mandates.

To suggest possible areas of joint venture to improve and expand public agency partnerships.

3. **Interface Between the Protection of Parks and Protected Areas and Visitor Management**

Chairperson: Dr. George Priddle, Professor, Department of Environment and Resource Studies, University of Waterloo

Rapporteur: Dr. Stephen F. McCool, Professor, School of Forestry, University of Montana

Objectives:

To review the current state of the art pertaining to opportunities and constraints imposed by parks and protected area settings.

To identify and recommend the types of initiatives that are needed to manage public opportunities within the limits of the natural and/or cultural resources.

4. **Interface Between Social Science and Visitor Management**

Chairperson: Scott Meis, Chief, Socio-Economic Information, Canadian Parks Service
Rapporteur: Dr. Rich Knopf, Professor, Leisure Studies Program, Arizona State University

Objectives:

To identify activities and capabilities of agencies with respect to social science:

1) data 3) information
2) research 4) analysis

To identify needs for social science activity in the form of data, research, and analysis improvements and possible co-operative ventures.

5. Interpretation to Engender Support and Understanding

Chairperson: Ms. Elizabeth Seale, Head, Visitor Activities Policy, Canadian Parks Service, Hull, Quebec

Rapporteur: David Pugh, Regional Chief of Interpretation, Pacific Northwest, Seattle, Washington, U.S. National Park Service

Objectives:

To re-examine the intent, role and direction of interpretation activities within North American heritage (parks, protected areas and natural resource management) agencies including the role of such areas as environmental benchmarks.

To assess the role of interpretation activities in addressing national and international environmental issues and programmes (e.g. acid rain, global climatic change).

To assess the role of communication/interpretation in constituency building and developing partnerships.

Session III

Evening Session (Waterloo Inn - Room 182)
Recreation Habitat and Opportunity Assessment: Linking Theory and Applications. (Classifying People and Resources in terms of Uses and Needs in Parks and Protected Areas).

Chairperson: Dr. Linda Caldwell, Professor, Recreation and Leisure Studies, University of Waterloo
Session III: Objectives

1. To identify, expand and enhance emerging research and paradigms related to "recreation habitat" and "opportunity assessment"

2. To focus attention on the interface between this research and heritage (park, protected area and natural resource management) area planning and management

3. To provide planners/analysts/managers with an understanding of the need for a broad interdisciplinary effort in this area.

7:30 - 7:50  Recreation Habitat: An Emerging Literature
........Dr. Richard Schreyer, Professor, Department of Forest Resources, Utah State University

7:50 - 8:10  Site Attributes
........Dr. Roger Clark, USDA, Forest Service, Recreation Management, Seattle, Washington

8:10 - 8:30  People and Protected Areas
........Dr. Richard Knopf, Professor Leisure Studies Program Arizona State University

8:30 - 8:50  A Commentary
........Dr. Roger Mannell, Professor, Department of Recreation and Leisure Studies, University of Waterloo

8:50 - 9:10  Comments and Questions

9:10 - 11:00 Hospitality Hour

Wednesday, February 15, 1989: Day 2 "In-House" Workshop

Session IV: Frameworks for Visitor Management

Chairperson: Dr. R. J. Payne, Professor, School of Outdoor Recreation, Lakehead University
Objectives for Sessions IV and V

1) To assess common elements of ROS, LAC, VIM and VAMP, and identify areas needing further development, specific research and data base needs, and;

2) To suggest future applications of the four frameworks.

8:30 - 8:50 Recreation Opportunity Spectrum
   ....Gerry Coutant, Chief of Visitor Services, USDA, Forest Service, Washington, D.C.

8:50 - 9:10 Commentary on ROS
   ....Dr. Roger Clark, USDA Forest Service, Recreation Management, Seattle, Washington

9:10 - 9:30 Limits of Acceptable Change
   ....Dr. Stephen F. McCool, Professor, School of Forestry, University of Montana

9:30 - 9:50 Commentary on LAC
   ....Dr. Richard Knopf, Professor, Leisure Studies Program, Arizona State University

9:50 - 10:05 Coffee/Juice Break

10:05 - 10:25 Visitor Impact Management
   ....Dr. Alan Graefe, Professor, Department of Recreation and Parks, Pennsylvania State University

10:25 - 10:45 Commentary on VIM
Towards Serving Visitors and Managing Our Resources

10:45 - 11:05  Visitor Activity Management Process
                Grant Tayler, Co-ordinator,
                Visitor Activity Development,
                Canadian Parks Service,
                Hull, Quebec

11:05 - 11:25  Commentary on VAMP
                Robert Graham, Professor
                Department of Recreation and Leisure
                Studies, University of Waterloo

11:25 - 11:45  Historical Resource Planning Perspective
                Rob Ashley, VAMP Co-ordinator,
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                Directorate, Canadian Parks Service,
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12:00 - 1:00  Lunch, Cafeteria, Notre Dame College

Session V  Visitor Management Issues

Chairperson:  Dr. George Priddle,
              Department of Environment and Resource Studies,
              University of Waterloo

Objectives as per session IV noted on previous page.

1:00 - 1:10  Strengths and Weaknesses of Decision
             Frameworks
             Dr. Richard Schreyer, Professor,
             Department of Forest Resources,
             Utah State University

1:10 - 1:20  Monitoring and Evaluation
             Scott Meis, Chief,
             Socio-Economic Information,
             Canadian Parks Service

1:20 - 1:30  Research Support, Information Collection and Analysis
             Dr. Don Field, Dean,
             School of Natural Resources,
             University of Wisconsin
Appendix II - Workshop Program

1:30 - 1:40  Decision Frameworks and Interpretation
            ....Gerry Coutant, Chief of Visitor Services,
            USDA Forest Service, Washington, D.C.

1:40 - 2:00  Practical Application of Frameworks to
            Camping

            Case 1  VIM and Camping
            ....Dr. Alan Graefe,
            Department of Recreation and Parks,
            Pennsylvania State University

            Case 2  VAMP and Camping
            ....Per Nilsen, Visitor Activity Development
            Officer, Canadian Parks Service,
            Hull, Quebec

2:00 - 2:15  Syndicate Set up
            ....Stephen Woodley, Liaison Officer,
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            University of Waterloo

2:15 - 3:30  Syndicates to address four categories of
            issues

3:30 - 3:45  Coffee

3:45 - 5:00  Short Report of Syndicates and Assessment
            Statements (5 minute presentation and 10 minute
            discussion).

            Chairperson:  Stephen Woodley, Liaison
            Officer, Heritage Resources Centre,
            University of Waterloo

Syndicates

i) Strengths and Weaknesses of Decision Frameworks (ROS, LAC, VIM,
VAMP)

            Chairperson:  Louis Deschenes, Head,
            Park Plan Review, Canadian Parks Service,
            Hull, Quebec.

            Rapporteur:  Dr. Stephen McCool, Professor,
            School of Forestry, University of Montana.
Objectives:

To identify strengths and weaknesses of the four decision frameworks and their common elements.

To recommend a conceptual framework that illustrates the relationship among the common elements.

To recommend possible areas for future development of decision making frameworks.

ii) Research Support, Information Collection and Analysis

Chairperson: Scott Meis, Chief,
Socio-Economic Information, Canadian Parks Service, Hull, Quebec

Rapporteur: Dr. Don Field, Dean,
School of Natural Resources
University of Wisconsin

Objectives:

To assess how social science can be planned and managed to improve input to the four frameworks.

To identify mechanisms for formal and informal liaison related to the four frameworks.

iii) Decision Frameworks and Interpretation

Chairperson: Gary Sealey, Director,
Visitor Activities Branch, Canadian Parks Service,
Hull, Quebec

Rapporteur: David Pugh, Regional Chief of Interpretation,
U.S. National Park Service, Seattle.

Objectives:

To assess the relationships between the four decision frameworks and interpretation.

To assess how interpretation services can be planned and delivered quickly, efficiently, and effectively.
To recommend possible joint actions to enhance the delivery of interpretation services.

iv) **Practical Application of Frameworks to Camping**

**Chairperson:** Dr. Richard Knopf  
Arizona State University

**Rapporteur:** Dr. Rick Rollins, Professor,  
School of Outdoor Recreation, Lakehead University

**Objectives:**

To review current proposed applications of the frameworks to camping in Canada and the U.S.

To review the steps needed to improve direction for management of camping opportunities.

**DINNER - FREE EVENING**

**Thursday, February 16, 1989: Day 1 Professional Development Workshop**

**Session VI**  
**Morning Session:** Chairperson: Robert Graham,  
Department of Recreation and Leisure Studies, University of Waterloo

**Session VI:** Objectives

1) To provide an overview of the strengths, weaknesses, and applications of four planning and decision frameworks related to visitor management (ROS, LAC, VIM and VAMP). Presentations will highlight how the frameworks have addressed heritage protection, and presentation/interpretation, appreciation and enjoyment of different types of sites (e.g. Wilderness Area, Marine Park, National Park, Historic Park).

2) To provide a forum to identify and discuss emerging trends related to the planning and decision frameworks.

3) To discuss issues related to future evolution, application, and development of the four frameworks.
Towards Serving Visitors and Managing Our Resources

8:00 - 8:15 Introduction and Welcome to Professional Development Workshop
    ....Robert Graham,
    Department of Recreation and Leisure Studies, University of Waterloo

8:20 - 9:00 Recreation Opportunity Spectrum
    ....Dr. Roger Clark,
    Recreation Management,
    USDA Forest Service,
    Seattle, Washington

9:00 - 9:40 Limits of Acceptable Change
    ....Dr. Stephen F. McCool, Professor,
    School of Forestry,
    University of Montana

9:40 - 10:20 Visitor Impact Management
    ....Dr. Alan Graefe, Professor,
    Department of Recreation and Parks,
    Pennsylvania State University

10:20 - 10:35 Coffee/Juice Break

10:35 - 11:15 Visitor Activity Management Process
    ....Grant Tayler, Co-ordinator,
    Visitor Activity Development,
    Canadian Parks Service

11:15 - 11:30 Commentary on Decision Frameworks
    ....Dr. Richard Schreyer, Professor,
    Department of Forest Resources,
    Utah State University

11:30 - Noon Panel Discussion and Questions

Chairman: Scott Meis, Chief Socio-economic Information,
        Canadian Parks Service

Presenters will form the panel.

Focus for this discussion will be implications for the evolution of research techniques and technology.

Noon - 1:00 p.m. Lunch, Cafeteria, Notre Dame College
Session VII  
**Trends in Visitor Management**

**Afternoon Session:** Chairperson: Dr. Dick Butler, Professor and Chairman, Department of Geography, University of Western Ontario

1:00 - 1:45  
**Long Term Tourism Trends**  
Dr. S.L. Smith, Professor and Chairman, Department of Recreation and Leisure Studies, University of Waterloo  
and  
Dr. J. O'Leary, Professor, College of Forestry and Natural Resources, Purdue University

1:45 - 2:30  
**What Marketing is About**  
Peggy Hewson, Director, Marketing, Canadian Parks Service, Hull, Quebec  
and  
Dr. Wendy Frisby, Professor, Recreation and Leisure Studies, University of Waterloo

2:30 - 3:15  
**Long Term Resource Protection Trends**  

3:15 - 3:30  
**Coffee Break**

3:30 - 4:00  
Dr. W. E. Shands, Senior Associate  
The Conservation Foundation, USA

4:00 - 4:30  
**The Environmental Non Government Perspective**  
Kevin McNamee, Canadian Parks and Wilderness Society, Toronto, Ontario

4:30 - 5:00  
Comments and Questions from Audience

No host dinner. Free evening.
Friday February 17, 1989 Day 2: Professional Development Workshop

Session VIII: Issues for Interpretation of Parks, Protected Areas and Natural Resource Management Areas

Morning Session: Chairperson: Dr. Robert Payne, Professor, School of Outdoor Recreation, Lakehead University

8:00 - 8:20  Canadian Historic Parks and Sites
            ....Richard Lindo, Director, Interpretation, Canadian Historic Parks and Sites

8:20 - 8:40  Canadian Parks Service
            ....Ms. Elizabeth Seale, Head, Visitor Activities Policy, Canadian Parks Service

8:40 - 9:10  U.S. National Parks Service
            ....Michael D. Watson, Chief of Interpretation, U.S. National Park Service, Washington, D.C.

9:10 - 9:40  USDA Forest Service
            ....Gerry Coutant, Chief, Visitor Services, USDA Forest Service, Washington, D.C.

10:00 - 10:30 Coffee/Juice Break

10:30 - 11:00 Bureau of Land Management
            ....Bill Civish, Branch Chief, USDI, Bureau of Land Management, Recreation and Cultural Resources, Washington, D.C.

11:00 - 11:20 Tennessee Valley Authority
            ....Ms. Ann Wright, Manager, National Demonstration Department, Tennessee Valley Authority

11:20 - 11:40 Interpretation Canada’s Perspective
            ....Interpretation Canada and Royal Botanical Gardens, Hamilton
Appendix II - Workshop Program

11:40 - Noon Interpretation: An American Perspective

....Dr. W. E. Randall, Vice President, National Association of Interpretation (US)

Noon - 1:00 Lunch, Cafeteria, Notre Dame College

Session IX: Responding to the Issues and Trends

Session Chairperson: Scott Meis, Chief, Socio-Economic Information, Canadian Parks Service

1:00 - 1:40 Canadian Parks Service

....Gary Sealey, Director, Visitor Activities Branch, Hull, Quebec

Richard Lindo, Director, Interpretation, National Historic Parks and Sites, Directorate, Hull, Quebec

1:40 - 2:10 USDI Bureau of Land Management's Recreation 2000

....Bill Civish, Branch Chief, Bureau of Land Management, Recreation and Cultural Resources

2:10 - 2:40 USDA Forest Service's America's Great Outdoors

....Gerry Coutant, Chief of Visitor Services, USDA Forest Service, Washington, D.C.

2:40 - 3:10 U.S. National Park Service's Interpretive Challenge

....Michael D. Watson, Chief, Interpretation, Washington, D.C.

3:10 - 3:25 Coffee/Juice Break
3:25 - 4:15  Academic Summary, Commentary and Questions
            US Perspective
            ...Dr. Alan Graefe, Professor,
            Department of Recreation and Parks
            Pennsylvania State University

            Canadian Perspective
            ...Dr. Robert Payne, Professor,
            School of Outdoor Recreation,
            Lakehead University

4:15 - 4:45  Environmental Organizations Perspectives
            ...Kevin McNamee, Director,
            Conservation Programs,
            Canadian Parks and Wilderness Society
            and
            Don Huff, Conservation Director,
            Federation of Ontario Naturalists

4:45 - 5:15  Panel and Audience Questions
            ...Panel to be announced

5:15 - 5:30  Closing Comments
            Robert Graham
            Department of Recreation and Leisure Studies
            University of Waterloo
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