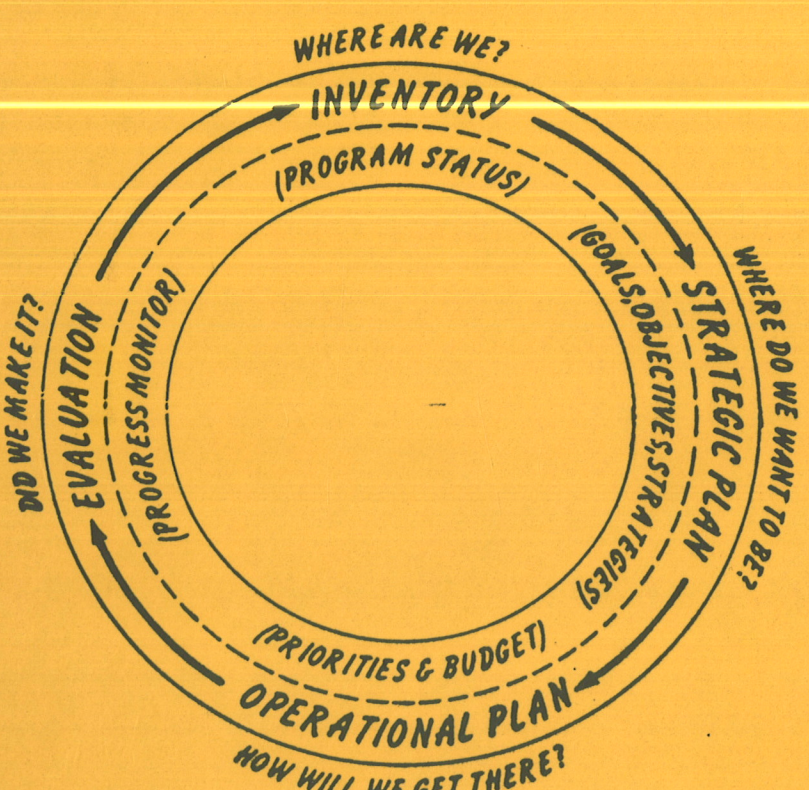
PLANNING, and the Future of Montana's Wildlife Resources



PROCEEDINGS:

Montana Chapter of The Wildlife Society

Annual Meeting

27 and 28 February, 1986

Billings, Montana

FOREWORD

Distracted by the complexity and dynamic nature of wildlife issues, wildlife professionals tend to function in a short-term, "crisis management" mode. However, the necessity for long-term wildlife management goals is emphasized by ever-increasing demands on wildlife populations and the habitats that sustain them. Recent and on-going formulation of major planning documents by state and federal wildlife and land management agencies, has also underscored the importance of effective, long-term planning, to the future of Montana's wildlife resources.

"Planning, and the Future of Montana's Wildlife Resources", the theme of three regional workshops and the 1986 annual meeting of the Montana Chapter of The Wildlife Society, brought together the state's wildlife professionals and representatives of prominent citizen organizations having wildlife interests and goals. The objective of this forum was to examine various wildlife planning efforts underway in Montana, how they do or do not mesh, and how these cumulative efforts will shape a future for wildlife. It is hoped that this exchange of ideas will improve the future outlook for Montana's wildlife resources through effective communication and cooperation among wildlife advocates from all sectors.

Dr. Douglas Crowe, Planner, and Deputy Director of the Wyoming Game and Fish Department, delivered a memorable keynote address. Other presenters included representatives of a wide array of professional and citizen entities responsible for, or actively promoting, wildlife conservation in Montana.

These proceedings were compiled and edited by Heidi B. Youmans, 1986 program chairperson.

Billings Regional Workshop, Montana Chapter TWS
January 22, 1986

Workshop Leader: Ray Hoem

10:00 - 10:15 a.m.	Opening Remarks, Housekeeping	Ray Hoem
10:20 - 10:50 a.m.	Charles M. Russell NWR	Ralph Fries
11:00 - 11:30 a.m.	Montana Wildlife Federation	Ken Frazier
11:30 - 12:45 p.m.	Lunch	
1:00 - 1:30 p.m.	Status of Waterfowl in Montana	Tom Hinz
1:40 - 2:10 p.m.	The Blackfooted Ferret	Dan Hinckley
2:20 - 2:50 p.m.	Long-Term Planning in Natural Resource Management	Clif Youmans
3:00 - 3:30 p.m.	Black Bear Investigations	Shawn Stewart
3:40 - 4:00 p.m.	Mt. Chapter TWS Action During 1985	Heidi Youmans
4:10 - 4:15 p.m.	WRAPUP	

Helena Regional Workshop, Montana Chapter TWS
January 16, 1986

Workshop leader: Wayne Brewster

We have taken a slightly different approach compared to many professional meetings. The session has been structured (and I use the term very loosely), into three sessions; one each on Trophy Hunting, Sensitive/T&E Species, and Waterfowl Management. We hope to accomplish three things: (1) provide topics and initial information to stimulate thinking; (2) ample opportunity for discussion and interaction on these topics; and (3) participation in the discussion by all attendees.

10:00 - 10:30 a.m.	Introduction, arrangements, schedule, etc.
10:30 - 11:30 a.m.	Trophy Hunting Discussion Leader: Glen Erickson
11:30 - 1:00 p.m.	Lunch (Informal discussion and arguments)
1:00 - 2:30 p.m.	Sensitive/Threatened and Endangered Species Management Discussion Leader: John Cada
2:30 - 3:30 p.m.	Waterfowl Management Discussion Leader: Don Childress
3:30 - 4:00 p.m.	Continuing discussion, wrap-up, other topics

Missoula Regional Workshop, Montana Chapter TWS
January 22, 1986

Workshop Leaders: Jim Claar and Joe Ball

9:00 a.m. Montana Bald Eagle Working Group
Robert Klaver, BIA, Pablo

9:30 a.m. Fisheries Management on the Flathead Indian Reservation
David Cross, Biologist: Confederated Salish and Kootenai Tribes

10:00 a.m. Grizzly Bear Cumulative Effects
Ron Escano, USFS, Missoula

10:30 a.m. Forest Management Plan: Lolo National Forest
Mike Hillis, USFS, Lolo National Forest

11:00 a.m. Regional Wildlife Management Panel:
Jon Malcolm, USFWS, National Bison Range, Moise
Marilyn Wood, MDFWP, Kalispell
Dr. Robert Ream, U of M
John Carter, Attorney: Confederated Salish and Kootenai Tribes
Dr. Lee Metzgar, U of M

LUNCH

1:00 p.m. Comments: Wildlife Management Efforts
Lance Olsen, Great Bear Foundation

1:30 p.m. Impacts of Water Levels on Canada Geese in the Flathead Drainage, Flathead Indian Reservation
Dennis Mackey and Bill Matthews, Confederated Salish and Kootenai Tribes

2:00 p.m. Habitat and Trail Situations Associated with the Grizzly Bear - Human Confrontations in Glacier National Park
Steve Nadeau, U of M

2:30 p.m. Winter and Spring Habitat Selection by White-tailed Deer in a Western Montana Second-growth Forest
Kevin Berner, U of M

3:00 p.m. MDFWP: Wildlife Projects in Western Montana
Marilyn Wood, MDFWP, Kalispell

3:30 p.m. Mule Deer Use of Agricultural Lands Adjacent to Missouri River Breaks Habitats
Sue Kraft, U of M

AGENDA

Montana Chapter of The Wildlife Society
1986 Annual Meeting, 27 & 28 February
Ramada Inn, Billings

THEME : Planning and the Future of Montana's Wildlife Resources

27 February

8:00 - 8:15	Introduction
8:15 - 9:30	**KEYNOTE SPEAKER Doug Crowe, Deputy Director, Wyo G & F** **Planning : The Process**
9:30 - 9:50	Dick Johnson, Deputy Director, MDFWP **Where We've Been, Where We Are, Where We're Going**
9:50-10:20	COFFEE BREAK
10:20-10:40	John Edwards, USFS, Custer NF **Forest Planning : A Forest Supervisor's View**
10:40-11:00	Carl Frounfelker, USFS, Helena NF **A Wildlife Biologist's Perspective of Forest Planning**
11:00-11:20	Ray Brubaker, BLM, Miles City **BLM Planning: A District Manager's Perspective**
11:20-11:40	Barney Schranck, Fish and Wildlife Service, Denver **Planning : The Refuge System**
11:40- 1:00	LUNCH BREAK
1:00- 1:20	Jim Richards, Montana Wildlands Coalition, Helena **Wildlands and Wildlife**
1:20- 1:50	Bill Long, Montana Land Reliance, Helena **Fences Don't Make Ecosystems**
1:50- 2:20	Joan Bird, Nature Conservancy, Helena **Planning to Preserve Species Diversity**
2:20- 2:50	COFFEE BREAK
2:50- 3:10	Lance Sheldon, Rocky Mountain Elk Foundation, Troy
3:10- 3:30	Ken Frazier, Montana Wildlife Federation, Billings
3:30- 4:30	Tom Hinz, MDFWP, Miles City **Waterfowl : The Lead Poisoning / Steel Shot Issue**

27 February

4:30- 4:50	Bob Martinka, MDFWP, Helena **The 1985 Farm Bill : Provisions for Wildlife**
4:50- 5:10	Don Childress, MDFWP, Helena **The Montana Waterfowl Stamp Program / DU Projects Planned for Montana**
5:30- 7:00	SOCIAL HOUR : NO HOST BAR
7:00	BANQUET **Guest Speaker : MARK HENCKEL of the "Billings Gazette"**

28 February

7:00- 9:00	**MT CHAPTER TWS BREAKFAST BUSINESS MEETING**
9:00- 9:20	Regional Workshop Reports
9:20- 9:40	Jerry Blackard, Fish and Wildlife Service, Denver **Federal Aid in Fish and Wildlife Restoration and Planning Standards**
9:40-10:10	Joe Ball, Wildlife Cooperative Unit, U of M **Cooperative Unit Program: Planning?**
10:10-10:30	Clif Youmans, consultant, Forsyth **Enfranchising Wildlife in the Planning Process**
10:30-10:50	COFFEE BREAK
10:50-11:10	Bruce Waage, Western Energy Company, Colstrip **Gobbler's Knob: A Case Study in Creative Reclamation and the Need for Flexibility in Reclamation Law**
11:10-11:30	Larry Thompson, Montana Natural Resource Information System, Helena **The Natural Resource Information System**
11:30-11:50	Rob Brooks, economist, MDFWP, Bozeman **Economics as a Planning Tool**
11:50-12:10	Ray Hoem, BLM, Billings **Strategies for the Future**

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KEYNOTE ADDRESS

WHAT IS PLANNING?

by

Doug Crowe
Assistant Director
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WHAT IS PLANNING?

Management is commonly described as being made up of the functions of planning, organizing and controlling. Planning is the foundation upon which the other two management functions rest. In fact, organizing and controlling merely carry out decisions made during the planning process.

There are perhaps as many definitions of planning as there are texts on business management. These definitions range from dictionary brevity to entire chapters of involved explanation. Further, the word "planning", as used in relation to organizational management, is often preceded by such adjectives as "Tactical," or "Comprehensive," or "Modular." The purpose here is not to discuss the relative merits of various definitions of planning, nor select from among the possible descriptive qualifiers. Rather, what is presented is a definition of planning as it relates to the management of an agency that manages wildlife:

> Planning is an integrated system of management that includes all activities leading to the development and implementation of goals, program objectives, operational strategies, and progress evaluation.

Important in the application of this concept is the idea that planning is not an isolated technique or a separate project to be implemented within an agency. It is a way of doing business and, properly implemented, provides a system for decision-making and evaluation within a framework of quantified management objectives.

Like all management systems, planning has its own terminology. The jargon is now new, but the terms warrant clarification in their relationship to wildlife management:

> PROGRAM. Programs are aggregates of projects and activities that result in a product output. They should be organized around those resources managed by the agency. Many wildlife agencies have traditionally identified programs along functional lines. But, law enforcement, game management, or research are not product outputs. These things are activities or processes. Outputs, the desired products of an agency, are such things as public recreation days associated with deer, or waterfowl, or sport fish, and programs should be structured along these lines.
>
> GOAL. A goal is a statement of the mission or policy of an organization. Wildlife agency goals

are at least partially defined by legislation, but these mandates are often vague. It is the responsibility of administration to translate them into the actual policies of the organization. In addition, every agency has a history of accomplishments and mistakes, and operates within a unique environment of opportunities and constraints to be considered as goals are developed.

Once formulated, goals reflect the policies to which the agency intends to adhere in the management of the wildlife resources in its charge. They provide internal direction and guidance while serving as a basis for relationships with other governmental entities, sportsmen, wildlife enthusiasts, and private enterprise.

OBJECTIVE. Objectives define the measurable results that an agency seeks to accomplish with its long-term operations. Unlike goals, they are not statements of intentions but are specific targets for program accomplishment and should be expressed in terms of desired outputs. Since objectives define the results that an agency intends to produce, it is imperative they are quantified and, thus, benchmarks for the evaluation of progress.

STRATEGY. When objectives have been determined, it can be expected that a variety of problems will be identified which may impede their attainment. The agency must then select approaches that will be utilized to overcome these problems and achieve program objectives. Strategies are the major actions an agency will take in its pursuit of objectives.

AN INTEGRATED SYSTEM

Planning for wildlife resources is, first and foremost, a system; a dynamic integrated system of management that involves continuous evaluation of objectives and monitoring of progress. It is perhaps best conceptualized by a series of four questions that form the basis of a planned management approach:

1. Where are we?
2. Where do we want to be?
3. How will we get there?
4. Did we make it?

Where are we? Every organization has inventories of various kinds and dimensions. These may range from animal population estimates to a

tally of supplies and equipment. They may, or may not, relate to the production outputs of the agency.

An important first step in the implementation of a planning system is to decide what needs to be inventoried and the level of detail required. This leads to the even more basic question of the desired outputs of the operation. The answer to this question is often not readily apparent. Quite possibly confusion will exist regarding just what it is that the agency is responsible for producing. The traditional view often centers on inputs or processes; such things as miles of road constructed, acres of habitat improved, or numbers of fish planted. Under a system of management planning, the focus shifts from inputs and processes to outputs and benefits (Fig. 1).

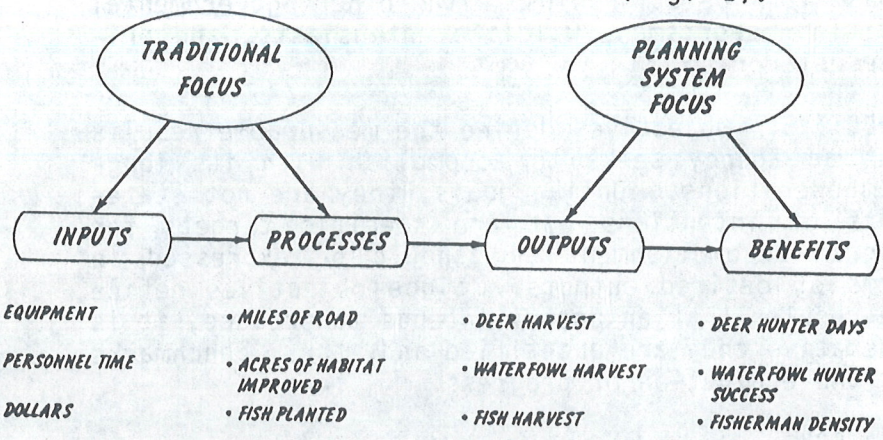

Figure 1. The changing management emphasis in a planning system.

Where do we want to be? Having addressed the question, "Where are we?," the next step is to decide where one wants to be. This involves the formulation of goals, objectives, and strategies. These combine to become a Strategic Plan for wildlife. An important consideration is that this plan is structured around program lines, not the organizational lines of the agency (Fig. 2).

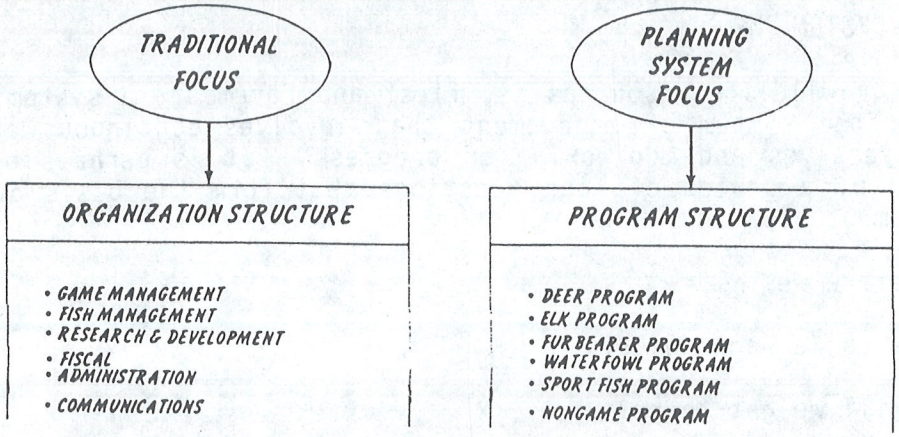

Figure 2. The changing management emphasis in a planning system.

How will we get there? To describe agency objectives in a Strategic Plan is one thing, to actually progress toward those objectives is quite

another. There must be a mechanism for accomplishing the objectives of the organization. This is operational planning, the process which "gives life" to the Strategic Plan.

Operational planning converts program objectives into projects (Fig. 3). It is the process whereby manpower and fiscal resources are allocated towards established priorities. Perhaps the most difficult aspect of implementing a planning system is the determination of priorities. Money and manpower will always be limited, so choices must be made. An agency cannot hope to approach the attainment of all program objectives simultaneously. Further, priorities must be periodically evaluated as the environment, user demands and the political climate change. Operational planning provides a mechanism whereby structured decisions can be made on which programs to build, maintain, or eliminate, or which new programs to add.

Did we make it? The answer to this question is the feedback segment of a planning system. Objectives become meaningful only when there is a mechanism for evaluation progress toward them. If evaluation measures are not developed to monitor progress toward objectives, there is no planning system. Managers will soon come to regard objectives as just an exercise in writing and the system will quickly be viewed as something that took a lot of time and effort with no results. The failure to implement concrete evaluation measures has destroyed many attempts at planning.

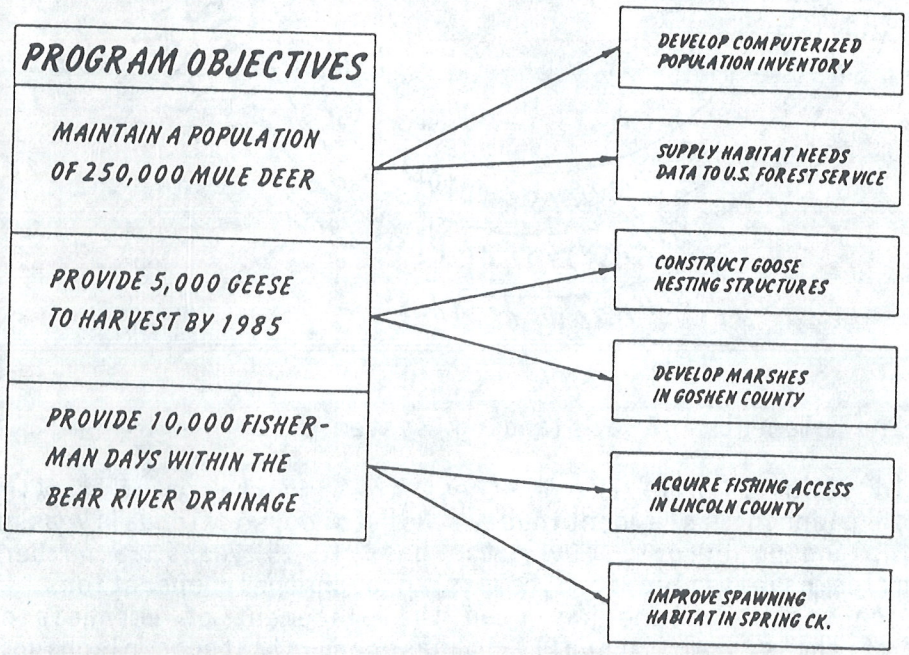

Figure 3. Converting program objectives to projects.

Properly implemented, evaluation measures are the basis for "fine-tuning" the system. Not only is progress toward objectives measured, but any lack of progress is highlighted. This allows management to identify and treat problem areas and determine if objectives are

realistic and attainable. Planning soon becomes synonymous with agency operations - a way of managing more effectively with the emphasis on continual improvement.

A MANAGEMENT CYCLE

The preceding discussion presented the key components of a planning system. Although each was considered individually, they should not be viewed in that manner. Inventory, strategic planning, operational planning, and evaluation are not separate. They intergrade as a continuous cycle in the process of management planning (Fig. 4).

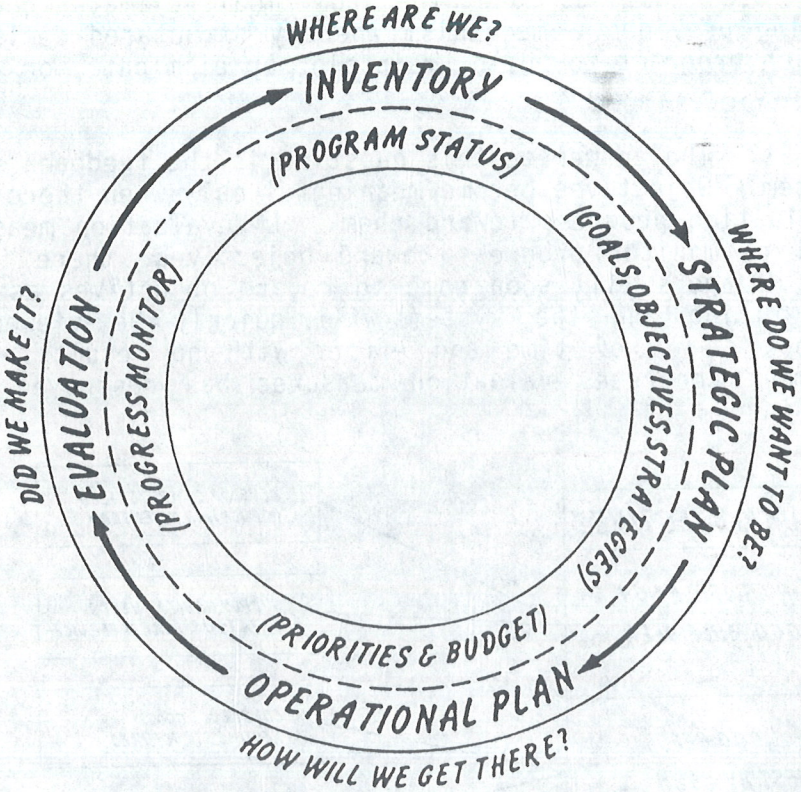

Figure 4. The elements of a planning system.

It would be difficult to overstress the importance of viewing the four phases of planning as a continuum. Not to do so virtually assures failure of a planning effort. Over the past 10-15 years, a number of wildlife agencies have failed in attempts to plan their operations. The most notable cause of failure has been the placement of emphasis on a single phase of the system. Usually it has been strategic planning. A Strategic Plan was developed outlining goals, objectives, and strategies. It was released with great fanfare, and then laid on a shelf where it died. Too often, "The Plan" was not based on measurable objectives, nor were there systems developed to facilitate its implementation and/or evaluation. The end result was a bad reputation for planning in the organization.

Planning, if it is to be successful, must be approached as a cyclic phenomenon; a comprehensive system of management that continuously feeds back upon itself for evaluation, adjustment, and fine-tuning. Indeed, in today's fast-paced society one of the major benefits of a system of management planning is its adaptability.

A WAY OF DOING BUSINESS

The installation of a system of management planning involves the entire operation of the organization and is not a decision to be entered into lightly. Planning, of itself, accomplishes nothing. It requires dedicated and committed management to make it functional. In the hands of such a cadre, planning has a great deal to offer. Properly implemented it will:

Promote action rather than reaction in conservation efforts. Wildlife agencies are notorious for the "day-to-day" management approach. Far too many administrators decide on the day's activities only after the morning mail is opened and the telephone begins ringing. Planning will move the organization away from crisis management towards a more future-focused approach. There are goals and objectives to pursue and strategies to address regardless of the day's "brushfires."

Provide a means of dealing with the increasing rate of change. It has been estimated that more change has taken place in the last 10 years than in all the years since this country was founded. Planning is a system designed to accommodate change. The feedback mechanisms built into the process provide the impetus to alter objectives, strategies and budgets as the organization's operating environment evolves. Change can be viewed as a part of normal agency operations rather than an object of dread and agency turmoil.

Alert other resource users to the needs of wildlife. Competition for lands and waters grows daily in this country. Activities which destroy or degrade wildlife habitat are accelerating at an alarming rate. If wildlife is to compete for these resources, the organizations responsible for its welfare must articulate its needs. Only with definitive objectives for wildlife and wildlife related recreation can be hope to compete for "wildlife's slice of the pie" and quantitatively demonstrate the impacts of various land uses.

Provide a means of dealing with the increased complexity of wildlife management. Any wildlife

manager knows that his is not a simple job. Recent environmental legislation, changing public attitudes, interagency agreements, political pressures, special interest lobbying and industrial development have brought the profession a long way from those halcyon days of arresting law violators and stocking fish.

Planning will not make these complicating factors disappear, but it does provide a structured and systematic approach to decision making in the midst of confusion.

Address the public demands for greater agency accountability. Government is under fire in this country. The public is demanding, and rightfully so, that agencies achieve meaningful results with the resources entrusted to them. Planning provides a mechanism for demonstrating the accomplishments of the agency. Objectives are articulated and the progress toward them is measured. This single factor can go a long way toward building credibility and public support for wildlife programs.

Having discussed in glowing terms what planning can do for an organization, it is only fair to give some attention to what it cannot do. In this context there is a quote by Machiavelli that should adorn the walls of all managers considering the implementation of a planning system:

"There is nothing more difficult to take in hand, more perilous to conduct or more uncertain of its success, than to take the lead in the introduction of a new order of things, because the innovator has for enemies all those who have done well under the old conditions, and lukewarm defenders in those who may do well under the new."

Planning will not be easy! The time required to realize the full benefit is not a matter of months but several years. During this time, it will require a great deal of support and involvement from senior administrators. Planning cannot be handled solely by staff people. It is doomed if the system is not regarded as the product of the organization's leaders.

Planning is not a panacea. It will not automatically cure all the organization's ills. Many administrators in wildlife organizations are not administrators because they want to be, but because an administrative post was the only means of promotion, increased pay, and recognition. Planning will not fix that. Wildlife agencies are fraught with

landed interests ("empires") which will make implementation more difficult and controversial. Planning will not fix that. All governmental organizations are subject to the pressures of elected officials jockeying for power and of confusing and conflicting demands from the public they serve. Planning will not fix that either!

In short, planning is not a surrogate for astute and progressive administration nor will it replace political acumen by the organization's leaders. Planning should not be entered into just because it is the latest fad in wildlife organizations. It is far too time consuming and expensive.

Before proceeding with the implementation of a planning system, the agency should ask:

1. Why do we want it; will it improve our effectiveness?

2. Do we really understand the full impact on our organization in terms of the time and effort required?

3. Is there strong administrative support for it?

Too many agencies, to their future sorrow, have moved into planning without thorough consideration of these points.

COMPREHENSIVE PROGRAM PLANNING

A Management System
(Where We've Been...Where We are...Where We're Going)

Richard L. Johnson, Deputy Director
Montana Department of Fish, Wildlife and Parks

WHERE WE HAVE BEEN

Our department became involved in comprehensive program planning in 1973, when a Planning Division was initiated under the guidance of Don Brown. Planning specialists from the US Fish & Wildlife Service provided assistance and guidance. Following the lead of Colorado, Kansas and Wyoming, the department produced its first strategic plan for its fish, wildlife and parks programs in 1978. That was about as far as our department planning effort went for several years. Following production of the plan, we had several new directors and planning was not a priority issue and did not receive much attention.

Our current director, Jim Flynn, indicated an interest in long-range planning early in his term that began in 1981. Also, in mid-1982, a Governor's Advisory Council composed of executives from private industry recommended that the Department of Fish, Wildlife & Parks "...develop a comprehensive planning process...." The advisory council perceived several problems due to lack of long-range, department-wide planning. These problems included:

"Because program objectives are unclear, field operators function autonomously, establishing their own goals and priorities, while costs and results were seldom monitored. Communication between divisions is inconsistent."

In 1983, Jim Flynn invited directors and planners from Wyoming, Kansas and Colorado to come to Montana to discuss their experience with comprehensive program planning.

Following those discussions, our director decided to implement a comprehensive planning process for the Department of Fish, Wildlife & Parks. A planning unit was established in the director's office with the task of developing a comprehensive planning process that will coordinate and provide direction for all department activities.

The director's primary reasons for implementing comprehensive program planning were to:

1. Provide better direction for our agency.
2. Establish common goals for all segments of the department.

The four-step planning process that resulted involves asking ourselves:

1. Where are we?
2. Where do we want to be?
3. How will we get there? and
4. Did we make it?

WHERE ARE WE?

Last fall we completed a public review of our strategic plan. It is now being prepared for final printing. During the process of preparing the strategic plan, we were forced to:

1. Organize our objectives into major resource programs and program elements.

2. Define what our objectives really are.

3. Obtain public consensus to pursue these objectives.

4. Focus department budgets on activities important for meeting objectives.

Operationally, we have used the process to identify priorities and to generate ideas for new projects. New projects have currently been chosen and submitted for approval through the Governor's Executive Planning Process. The new projects, if approved by the Governor and Legislature, will become part of the budgets for the next biennium. We are now preparing mid-year progress repors on the "new" projects approved in the previous biennial budgeting cycle. These reports will help us to allocate the new annual budget starting in July of this year.

WHERE ARE WE GOING?

We intend to continue to develop this process to better fit the needs of the agency. Our intention, also, is to have the program management system up and running well enough to qualify for the federal aid program funding option. Tomorrow Jerry Blackard will explain the standards and consequences of being on the federal aid program funding option.

Let me emphasize a point here. The program funding option affords advantages in our federal aid projects, but those advantages are not the primary reason for adopting comprehensive program management. Our primary reason for adopting the process is that we believe that long-range planning will enable us to accomplish our goals more effectively and efficiently.

We will continue to need assistance from federal aid planning specialists and advice from states successfully operating with the program funding option.

We have major challenges remaining:

1. We must continue to improve and adjust our strategic plan. There is some dissatisfaction with the plan internally. We have an overlap in some program elements (fish and parks programs both include fishing access sites).

2. We, and the public, are not satisfied with some of our current objectives. Some feel we have too much emphasis on quantity; we need to find better ways to measure quality.

3. We need to update our accounting system to effectively monitor our project costs and also relate them to our program objectives.

4. We must provide a focus for all department activities as we have done in our new projects.

Current level "base" projects are catch-alls of many activities and objectives. Project managers need to develop specific work plans for base projects based on program goals and objectives. Managers and supervisors will have to monitor and report on how work plans are carried out and if goals and objectives were met. Unless we do this we get back to the problem, brought out by the Governor's Advisory Council, of each person establishing his own goals and objectives.

We need to redirect more money and effort to projects which prove to be effective in getting results.

Our constituency is becoming more involved in and requiring more justification for the actions and projects that we carry out. We need clear objectives and closer communication with these groups.

As we continue to cycle through the planning process and improve implementation, I believe we can improve our department's effectiveness.

Some of the strong points I see in the process are:

- Planning provides a better sense of direction to our agency. We can better focus on resource objectives and problems as a department and minimize the traditional divisional emphasis.

- Planning provides a means to better utilize employee and public input into our decision-making process.

- Planning will establish resource objectives that will help us make a stand on key resource issues and improve public awareness and support.

- Planning will help us address resource problems in a more objective manner with other agencies.

The Department of Fish, Wildlife & Parks is committed to a planning process. We have made some mistakes in the process and will probably make more in the future, but if we continue to learn by our mistakes, I feel we will have a plan we can be proud of and that will make our department stronger and better able to cope with the increasing problems we have managing Montana's wildlife resource.

A WILDLIFE BIOLOGIST'S VIEW OF FOREST PLANS AND PLANNING

Carl R. Frounfelker
USFS, Helena National Forest
Helena, MT

Thank you for giving me the opportunity to speak to you today.

For the next 15-20 minutes I would like to address the subject of National Forest Plans and the National Forest Planning Process.

This talk was originally scheduled to be presented by a forest planner about forest planning. For those of you who were expecting a forest planner, I have some good news and I have some bad news. First the bad news: I'm not a forest planner. And the good news: I'm not a forest planner! But in all seriousness I feel very strongly about the value of the Forest Plans and the Forest Planning Process. I want to discuss the Forest Plans and the Forest Planning Process, separately.

Forest Plans

Forest Plans are simply documents that describe a course of action for land management of each National Forest. Each plan has its own unique set of goals and objectives that pertain to the entire National Forest. Although these are commonly broad in scope, they are written with the intent of addressing the specific issues and concerns on each National Forest.

Another integral part of each Forest Plan are the Forest-wide standards. These standards pertain to all lands on the Forest regardless of where they are or their individual attributes. The Forest Plan also displays specific designations of pieces of National Forest having similar resource capabilities. Examples of designations on the Helena National Forest would include Minimum Level Management, Livestock/Elk Winter Range, or Timber Management/Elk Summer Range. A further definition of management practices is found in guidance statements for each designation. These guidance statements include language addressing each resource within the specific areas. For instance, within the Timber Management/Elk Summer Range designation, the resource areas of recreation, visual, range, water and soils would each have their own guidance statements pertaining to those resources for that specific management area only. This may seem a little confusing, but if you think of the system as a hierarchical arrangement with Forest-wide standards at the top, management designations with their descriptions next and finally, individual resource guidance within each management area, the confusion may be reduced.

Forest Planning

Unlike Forest Plans, the Forest Planning Process is not something you can place your hand on nor is it something you can look to for guidance or direction in the task of natural resource management. Forest Planning is a process, and nothing more. It's a process of data analysis. And like any process it can be employed at any time if conditions warrant. For the last few years the Northern Region of the Forest Service has been collecting data, compiling data, and analyzing data using the planning process to develop and produce the Forest Plans. The planning process therefore gives its user a "snapshot" of things to come, given existing circumstances (the natural environment, management concerns, and public issues). This "snapshot" of the future is the Forest Plan.

Since the Forest Service will apply the planning process at the end of the first planning period (ten years), another "snapshot" of the future will again be produced, that again takes into account existing circumstances.

I hope the above summaries clarify and make a distinction between Forest Plans and the Forest Planning Process.

If you have participated in the development of one or more Forest Plans, some key words may have come up that may need some explanation. The following are a few words that I would like to briefly explain.

Implementation- This is the start-up of any land management activity designed to either maintain an existing condition or attain a desired future condition. Implementation is not limited to only the start-up of activities, but could also pertain to the continued application of a course of action to yield a long term goal. An example might be the attainment and/or maintenance of an elk summer range, or long term management to provide for a desired number of acres of old-growth conifer stands, etc. As part of implementation, I feel we have the obligation to attempt to achieve our goals in the shortest time feasible.

Montioring - This is the periodic calculation(s) or data collection needed to determine the degree to which resource objectives are being accomplished. For wildlife and fisheries, this involves following the status of listed indicator species to determine their security and future management needs.

Biologists have the choice of either measuring actual changes in numbers of animals through measuring the populations (elk winter range for example), or measuring changes in habitat in terms of quality and quantity of the species to be monitored. The way each indicator species will be dealt with is found in the monitoring plan for each National Forest.

Indicator Species - Species selected to represent a group of species with similar habitat requirements, or selected game animals that are economically or recreationally important. Examples of indicator species might include elk, either or both species of deer, bighorn sheep, one or more species of cavity-users, one or more species of fish, etc.

Finally, I would like to take a few minutes to elaborate on several points that help to clarify in my mind the Forest Plans and Forest Planning Process, and where I see the managerial portion of the Forest Service headed.

The term "flexibility" is one that could cause concern if viewed from the position that "What I want, is what I got, and I don't want it to change". This position is not only short-sighted but has the potential to operate in opposition to the short and long-term objectives of any resource program. The flexibility of being responsive to changes in existing conditions is an advantage and not a detriment to land management.

Leadership in the Forest Service is shifting away from that of a champion or advocate of a specific resource program - although this attribute will always be needed - toward management of a decision-making process that retains the integrity of each resource while striving for conflict resolution. Added to this is the desire for conflict resolution dealing with problems in both time and space.

Being aware of the need for communication between the Forest Service and the public will become an important aspect of arriving at solutions to resource conflicts. In the past, interest groups were few and well organized. Today, more and more interests are surfacing, which are well represented and very knowledgable. This has caused the agency to handle resource conflict more on an interactive plane with the competing interests rather than through a one-on-one confrontation in the media or political arena.

I hope that this discussion will help you in your understanding of Forest Plans and the Forest Planning process.

BLM PLANNING: A DISTRICT MANAGER'S PERSPECTIVE

By

Ray Brubaker
District Manager
Bureau of Land Management
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Miles City, Montana

The BLM planning system is a process that operates within a complex governmental structure, where interests clash and legal boundaries are not always neatly identified. The decisionmaking process is a place where the scientific concepts of biology bump up against the constantly changing realities of government policy and public opinion. It is the focal point where scientific data, public policies and legal constraints, and economic and social values collide.

Within this system, the wildlife biologist, and other staff specialists, function as an extention of the academic institution where you were trained and learned the accepted scientific methodology. In this capacity, you provide some of the raw material that is an essential ingredient in the decisionmaking process that leads to planning decisions. Please note that what you supply is one---but not the only---essential ingredient in the decisionmaking process.

In addition to reliable unbiased staff work, good decisionmaking needs public involvement. We are not in the business of governing wildlife. Our decisions are all in print and animals do not read, nor do they identify political boundaries. We are, in fact, governing people for the purpose of affecting wildlife. The direct impacts of our decisions are ultimately on people. People, of course, are all different and, because of these differences, the very nature of the resources with which we are dealing, generates competing opinions.

Our planning base is land. The land provides a livelihood for the vast majority of Montanans--whether you are a logger, a farmer or rancher, a coal miner or biologist in a private or governmental organization. The land provides our needs just as it provides habitat for wildlife. But, as we all know, our land base is finite--and therein lies our need for good land use planning decisions. Some land uses are incompatible. As an example, we cannot have wilderness and off-road vehicle use on the same piece of land. Other uses, such as livestock grazing and wildlife, are partly compatible and partly competing and, if all parties concerned are willing to listen to one another's viewpoint and make some compromises, the incompatibilities can be minimized.

What frequently happens, however, is that both sides of an issue organizes and seeks to convince the public and the decisionmaker, that their particular purpose or value is in the public interest.

In recent times, these organizations have grown in number and broken into subgroups, with even more narrow interests in public land. Positions have grown more rigid, and a polarization which appears to be ever widening, has taken place between those who would make consumptive use of public lands and those who desire to protect, or preserve them.

The ultimate result of this polarization now seems to be lawsuits, which are quickly making lawyers and judges the prime decisionmakers on public lands. I have been told on several occasions by proponents of one position or another that, "We do not have to sit down and compromise with this group or that group because we believe the courts are on our side."

Perhaps that statement sounds a little like sour grapes from one whose decisions have not faired well in court--and, possibly, that is true to some extent. But, it is my observation that lawsuits are expensive, requiring vast amounts of staff time to prepare briefs. They are time-consuming, often taking in excess of 3 years to work their way through the various levels of the court system; and while that is happening, implementation of badly needed management decisions are delayed and permits for commodity uses and development, which would help our struggling economy, are on hold. My goal over the past few years in Miles City, has been to strive to assess all factors going into a planning decision and try to minimize this drift toward the courts making our decisions for us.

When Heidi asked me to talk about BLM planning to a group of wildlife biologists, I began to think of just how this group perceives a BLM District Manager. While I cannot assess that perception with 100 percent accuracy, I would speculate that there is some sentiment in this room that BLM managers are political animals, who normally bow to the whims of the mining and oil and gas interests, and probably worst of all, the western livestock industry, at the expense of wildlife on public lands. On the other hand, I know from experience that the ranchers, miners, and oil company executives, all believe that BLM management decisions place entirely too much emphasis on protection of wildlife habitat and other environmental concerns.

I believe Theodore Roosevelt summed up the BLM perspective on land use planning best, shortly after he became President, when he said "Conservation means development as much as it does protection." BLM planning is designed with that philosphy as its basis. A plan should provide for orderly and prudent use and development of public lands, while protecting crucial wildlife habitats and other environmental concerns.

Our planning objectives specific to wildlife are to protect, maintain, and enhance:

Crucial habitats for wildlife

Existing, or potential fisheries habitat

Habitat for threatened or endangered species

Wetland and riparian habitats

It may be of interest to this group to note at this time, that BLM has implemented an agencywide policy on riparian area management. The purpose of this policy is to standardize our definition of riparian habitat bureau-wide, and to add emphasis to management of these critical areas. In the Miles City District we are, at this time, compiling an inventory of riparian areas throughout the district. This inventory will assist us in planning for the protection and management of these areas.

In the last 2 years, we have completed three Resource Management Plans (RMPs) in the Miles City District. Two of these plans received protests against some part of our decision---but, the planning decisions were upheld by the Director. The third plan, the Powder River RMP, was completed without a single protest.

The reason these planning efforts were successful is, in part, because of the quality of the staff work done by BLM biologists with support and input from the Fish and Wildlife Service and the Montana Department of Fish, Wildlife and Parks' biologists. I want to acknowledge that support and invite you to continue your interests in BLM planning. I thank you for allowing me to present this planning perspective in your Wildlife Society meeting.

Title: A Look at National Wildlife Refuges

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Good morning, ladies and gentlemen. I feel especially honored to be here today to share some information with you about the National Wildlife Refuge System. The Montana Chapter of the Wildlife Society has shown itself to be an extremely confident group of professionals, and in many respects, you represent a true "environmental conscience." This is the case not only in Montana, but also across the nation.

I would like to discuss some planning on National Wildlife Refuges (NWR), but yet there is need to focus on some Montana NWR's, their issues and what is happening. I believe that the complexities of planning take on a new meaning when addressed in this light.

To begin with, I think it is important that we examine the past before we can judge or understand future planning needs. I am sure that most of you would agree than the early history of the settlement of this country has been that of exploitation. For example, in 1848, some 110,000 bison hides and 25,000 bison tongues were shipped through the portals of St. Louis, Missouri. By 1900, with few exceptions, the American bison were gone. In 1914, the last passenger pigeon died in the Cincinnati Zoo. We went through the dustbowl days of the 1930's and waterfowl populations plummeted. There are some 421,000,000 acres of cropland in the United States, and according to the Soil Conservation Service, 69 million are highly erodable. Montana has 5,000,000 of those acres which represents 7 percent; far more than its fair share. Soil erosion has been a national disgrace for years, and today it takes two bushel of soil to grow one bushel of corn. Wetland drainage has been with us since the 1900's, and even today some 458,000 acres are drained annually. These data point up the fact that this nation needs to develop an Environmental Conscience - to develop a nurturing attitude toward the land!

And, in my opinion, this environmental conscience started to develop in the early 1900's, and this was the beginning of a national system of refuges.

The first NWR was established in 1903 when the 3-acre Pelican Island Refuge was set aside in Florida's Indian River. The purpose of this refuge was to protect the brown pelican and other birds from the plume hunters. In 1908, the first waterfowl refuges were created with the establishment of the Malheur in Oregon and Lower Kalamath in California.

The major thrust for Federal involvement in migratory birds came in 1918 with passage of the Migratory Bird Act. Later, in 1929, the Migratory Bird Conservation Act authorized land acquisition for migratory birds. This was the beginning of the real expansion of the National Wildlife Refuge System began. As with many programs, the authorization was approved, but limited money was available to do the job that was needed. The Migratory Bird Hunting Stamp Act of 1934 solved this problem, and the System began to move forward. Today, there are over 400 NWR's in the U.S. covering 88 million acres. Refuges are located in every state except West Virginia. Alaska has only 16 NWR's, but most of the acreage (77,000,000).

Here in Montana, there are 20 NWR and six Wetland Management Districts (also part of the Refuge System) covering 1,113,500 acres. Seven of these refuges have permanent staffs assigned, and they are responsible for management of the remaining stations. Montana is famous for its natural beauty and wildlife resources, and the Service has shared in at least a small way through the refuges; and, these areas become more important every year. Most of you are familiar with these areas, but I would like to highlight them.

The National Bison Range was established in 1908 with cooperation of the American Bison Society. The purpose of this 18,500 acre station is to maintain a genetic pool of the American bison. That has been its past, and that will be be its future. Each year, some 350-400 bison utilize and prosper in the areas 8 pasture system. The annual sale to maintain herd size is held the first week of October. Last year, 66 animals were sold for an average price of $635.

Up until about 1960, the Benton Lake NWR, created in 1929, was managed by the Bison Range. In 1961, resident staff was added and the development of six impoundments consisting of 6,000 acres of marsh were created. Water from the existing watershed was inadequate in most years and a supplemental water supply was obtained by utilizing the irrigation return flows from Muddy Creek. This water is pumped from a distance of 28 miles. Up to three 350 h.p. electric pumps are used to move the water at an annual cost of $35,000-40,000. Today, Benton Lake is considered an outstanding waterfowl area producing 20,000+ ducks from the 12,000 acre landscape. However, the future of this refuge could be clouded by the presence of rising salt levels as well as suspected contaminants. The water system is not a flow through system and salt levels are rising. An outlet drain has been considered for years and perhaps some day changes will be made.

In 1935, two additional NWR's were established in Montana. The first was the Medicine Lake Refuge located in northeast Montana and containing 32,000 acres. Some 11,400 acres were later designated as a wilderness area in 1976. Three endangered species utilize Medicine Lake at various time of the year. These include the whooping crane, bald eagle, and peregrine falcon. Refuge Biologist Steve Martin discovered the nesting

of piping plovers, a threatened species, along Medicine Lake in 1985. This represents one of only three known nesting localities in Montana. Duck production is estimated at 25,000, yet, it could be higher. In an attempt to increase production, a predator control study has been initiated where skunks, red fox and raccoons have been removed to increase nesting success. Our latest venture at the refuge is the drilling of two oil wells on one site. The wells were authorized because neighbors were "draining" the oil field under the refuge. Naturally, it was previously determined that the operation would be compatible.

Red Rock Lakes, located in the Centennial Valley of southwest Montana was established in 1935 to perpetuate the trumpeter swan. There are 40,000 acres at Red Rock and 32,000 were designated as wilderness in 1976. The refuge lakes and marshes provide habitat for 258 species of birds, 49 species of mammals, and 5 species of trout, including the Arctic grayling. Swan production has been a real success story; at least up until the 1980's. Since then, production dropped and the transfer of cygnets, eggs and adults to other locations for establishment of populations was halted. However, in order to determine the cause of decreasing production, a 2-year study was initiated through the Montana Cooperative Wildlife Research Unit. Ruth Gail has been carrying out the study and the results should become available later this year. While we have had our problems in the past, I should point out that 1985 was an excellent year as 43 cygnets were raised. That is the best production since 1979 when 54 were raised. Ducks Unlimited has also shown interest in this refuge, and the outlet structure will be rebuilt with their assistance in 1987.

Two more NWR's were added to Montana in 1936. One was the Bowdoin Refuge located near Malta. In its early years, duck production was 12,000 or more. However, due to water quality and quantity problems, production last year amounted to mere hundreds. These water quality problems appear to growing each year, and the Service is currently working to resolve the issue through a public involvement and computer modeling process called "AEA" - Adaptive Environmental Assessment process. This is our planning process at the refuge currently. Frankly, we pray a lot for rain/snow - we all need the moisture.

Everyone's favorite refuge, Charles M. Russell NWR (CMR) was created by Executive Order 7509 in 1936, and it has been steeped in controversy ever since. CMR contains roughly 1,000,000 acres and is the second largest refuge in the lower 48. This unique refuge was jointly managed by the U.S. Fish and Wildlife Service (FWS) and the Bureau of Land Management from 1936-1975. In 1975, the refuge was turned over to BLM, but in 1976 Congress passed the "Game Range Bill" and gave sole management of CMR to the FWS. Since then, the FWS has been in the process of developing an Environmental Impact Statement (EIS), and the Final EIS was finally issued November 1985. The proposed action recommends reducing the grazing from 60,000 AUM to 40,000 AUM for cattle

- an average 33 percent reduction. The next step in the National Environmental Policy Act (NEPA) process is the issuing of a Record of Decision (ROD) which actually selects the plan of action. The ROD is being completed in Washington now. It has been a long time in coming, and we are all anxious to have this come to an end. Once the ROD is completed, Habitat Management Plans will be completed for each of the 65 allotments. We anticipate this planning exercise will take up to five years.

The newest refuge to Montana is the Lee Metcalf NWR established in 1964. It is only 2,700 acres, but is a truly unique area located along the Bitterroot River. Refuge Manager Bob Twist will be leaving the last of May, and I am sure he would enjoy hearing from any of you when you are in the area.

Most NWR's were established for waterfowl, but some were established for other wildlife species. Yet, all NWR's are for people. Last year some 327,000 people visited Montana refuges. CMR was first with 153,000 visits, while National Bison Range was second with 103,000 visits. Nonconsumptive use of Montana NWR's amounted to 177,000. Environmental Education (EE) and interpretation are also popular on NWR's, and some 98,000 visits for this activity were recorded. The Bison Range and Bowdoin conduct college credit EE programs each year. Hunting, when properly conducted, is also popular on NWR's. Some 29,000 visits were recorded last season. On waterfowl refuges only 40 percent can normally be open to waterfowl hunting. There is no hunting on the Bison Range, and CMR is nearly 100 percent open to hunting.

Specific planning can be difficult when the future is an unknown, and the Gramm-Rudman Hollings bill as proposed will have major impact on refuge operations. Proposed budget changed for the FWS are: 1986 - 4.3 percent reduction, 1987 - 20 percent reduction, and 1988 - 30 percent reduction. Refuges will keep the doors open with a 4.3 percent reduction, but there will be a number of internal changes. However, if the extensive reductions proposed for 1987 and 1988 are implemented, there will be drastic changes that we cannot accurately visualize at this time.

Even with reduced budgets, there are a few projects on Montana NWR that have been the result of careful planning. 1) The Halfbreed Lake NW project is moving forward. This has been a cooperative venture involving Ducks Unlimited; Montana Department of Fish, Wildlife and Parks; The Nature Conservancy, and the FWS. Working together will result in the acquisition and development of some significant Montana waterfowl habitat. 2) Benton Lake and Medicine Lake NWR's have developed research oriented predator management programs. The result of these operations will help guide some of the future management of refuges in Montana. 3) Ducks Unlimited has been very generous with providing funding for waterfowl projects at Medicine Lake, Red Rock Lakes and Benton Lake. Careful planning and design efforts have enabled

us to do this, and other projects are being considered at Ninepipe/Pablo, Bowdoin, Halfbreed and Red Rock Lakes NWR's. 4) The Service's volunteer program has been very successful, and we owe a special thank you to all the individuals that have provided assistance to our field operations. In 1985, 4,785 hours were donated by 264 people in Montana.

There are a wide variety of planning efforts at work on Montana NWR's. Planning is necessary if we are to accomplish goals, and I have tried to point out some of those accomplishments. In any planning activity, cooperation and coordination with other agencies is extremely important.

Perhaps the key element for refuge operations, management and planning, now and in the future, is the legislation, rules and regulations that have already been put in place. There are two Acts that will continue to guide the planning efforts for the refuge system. The first is the National Wildlife Refuge System Administration Act of 1966. This act states that everything that takes place on the NWR must be compatible with the purposes for which the area was established. The second Act is the Refuge Recreation Act of 1962. The guidance provided here is that all recreational uses must be compatible with the purpose of the refuge and sufficient funding for development has to be provided.

Finally, the EIS for the operation of the National Wildlife Refuge System was first prepared November 1976. The agreement at that time was that it would be reevaluated after 10 years. It is now 1986, and the review process is underway. Scoping meetings will be held nationwide. The one closest to Montana is to be held in Denver, Colorado, on March 20, 1986. The Draft EIS should be out for comment by August. The final EIS could be out by the end of 1986.

National Wildlife Refuges here and across the U.S. - they are the best, and we expect them to provide wildlife habitat far into the future. That we are planning on!

WILDERNESS AND WILDLIFE

Jim Richard
Chairman, Montana Wildlands Coalition
East Helena, Montana

I became actively involved in promoting wilderness while President of the Montana Wildlife Federation. It became clear to me that an inextricable tie exists between wild, roadless country and high quality hunting and fishing. Not only do roadless lands offer an attractive environment for pursuing fish and game, sportsmen in Montana more and more are realizing the importance those wildlands play in providing for wildlife, especially elk, moose, mountain goats and bighorn sheep.

I have served as chairman of the Montana Wildlands Coalition since its inception. The Coalition formed three years ago to advocate a good statewide Wilderness bill from our Congressional Delegation. The Coalition has approximately 15,000 individual members and more than 40 Montana conservation groups.

Admittedly, we do not need designated Wilderness to have quality big game hunting. As a matter of fact, Wilderness alone does not provide adequately for the year-round needs of wildlife. But we do need roadless country to provide security and escape cover. Security cover is especially important to ensure that mature elk are protected from easy hunter access. Montana wildlife biologists have provided unequivocal evidence that road access has a tremendous impact on elk, especially large elk. Terry Lonner and John Cada have shown that roading results in the harvest of most mature bulls early in the season. Rich DeSimone points out that over 90 percent of the bull elk are killed each year in the Elkhorns. Most of that harvest occurs in the first few days of the hunting season. Throughout the recent history of elk regulation and seasons in Montana, the accelerated timber harvest of the 1950's and 1960's resulted in a shortening of elk seasons and restrictions on open either-sex seasons.

As the security cover of elk has been disrupted by logging, and (more importantly) roading, mature elk become more vulnerable to hunter harvest. Sound game management dictates a response of more restrictive seasons and regulations. And as more roads are built into our present roadless National Forest areas, the future forebodes even more restrictiveness.

In the Forest Service planning process now nearing completion, a vast amount of new road construction is proposed in currently roadless areas. At present 25,000 miles of Forest Service system roads exist in Montana -- equal to the

circumference of the equator. Over the next five decades another 24,000 miles of new roads are planned within the National Forests -- doubling the present road mileage. On the Beaverhead National Forest, for example, more than 2,000 additional miles of road were proposed in the draft Forest Plan. The Beaverhead Plan honestly observed that the new roading would adversely impact elk populations and hunting. The Plan suggested, however, that the logging and roading impacts on elk be mitigated by shorter elk hunting seasons and more restrictive regulations.

Today, Montana residents enjoy an unusual luxury. We can lay down $10 for an elk license and have the opportunity to hunt anywhere in the state for a bull elk during the five week general big game season. In most areas of Montana's elk range, a hunter has some chance of coming across a mature bull elk in unroaded, relatively secure habitat. Except for Wyoming and Idaho, nearly all other elk hunting in the lower 48 states requires a drawn permit. In Montana, quality elk hunting (i.e., "elbow room" and a chance to take a trophy bull) is provided by secure habitat, not contrived regulations, seasons, and permit drawings. A Montana elk hunter competes with the animal and his habitat, not against the odds of a computerized lottery.

It is ridiculous to deprive montana hunters of this wonderful hunting available to the average montanan by destroying the habitat that makes it possible. It is almost criminal to destroy some of the nation's finest elk habitat in order to cut and haul out six inch saw logs.

Montana's National Forests are poor producers of timber; but one thing these forest do well is produce outstanding fish and wildlife. The timber on the National Forests in Montana, especially on these east slope Forests, provides a greater public benefit standing as big game security than as dimension lumber or chips for the paper mill in Missoula.

The last few years the issue of below-cost-timber sales has generated national and statewide interest. It would be hypocritical for me to denounce below-cost timber harvest when other Forest activities aren't paying their way, including grazing and much of the recreation use. While I will not rail against below-cost timber sales per se, I will go to the barricades to oppose subsidizing Forest management practices that destroy other resources, such as fish and wildlife habitat.

The fact that roadless, wild country is vital to Montana's renowned hunting is undeniable. Also evident is the fact that the management of the National Forests under the proposed Forest Plans will diminish a significant portion of that vital habitat. Because Forest Plans and this current federal administration will not protect our wildlands, sportsmen in this state validly are pushing for Wilderness designation of a reasonable portion of the

remaining roadless lands.

Out of the collective 6 million acres of unprotected roadless country, the Montana Wildlands Coalition, including hunters and fishermen, want Wilderness protection for less than half of those 6 million acres. The conservationists' proposal has eliminated most of the conflicts with commodity resources such as timber and minerals. The livestock industry is virtually unaffected by Wilderness designation. Our proposal is a reasonable one that will maintain our tremendous wildlife and wildlands heritage and not have a significant impact on the natural resource industries that are so important to this state.

I would like to invite the Montana Chapter of the Wildlife Society to join the Montana Wildlands Coalition. There is an important relationship between professional biologists and citizen sportsmen. You biologists provide the technical and professional expertise, research and management recommendations that make Montana's wildlife management probably the best in the nation. But biologists alone can't make wildlife management happen in this world. We citizen sportsmen provide both the financial and political support necessary for you to do your job (and to have a job). We need each other.

Often the professionals have taken the lead on certain issues. For example, biologists led the way in weaning us from our dependency on hatcheries and "put and take fishing." There is a debate currently taking place among professional wildlife people, and that is a healthy debate.

In the case of Wilderness it is the sportsmen who are taking the initiative in protecting the wildlands that are so important to wildlife. The Montana Wildlands Coalition needs the credibility that a professional society of biologists would lend to the issue. I think it is appropriate for this organization to join us laymen in this admittedly political struggle.

FENCES DON'T MAKE ECOSYSTEMS

William F. Long
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I'm Bill Long, the Financial Director for the Montana Land Reliance. I want to talk this afternoon about the importance of protecting private land in Montana for wildlife and fisheries resources. Often times the values on private ground are pushed to the back burner while the public lands get the attention. However, most of our quality fishing water and big game hunting herds depend on the private landowner for their survival. We must do everything possible to encourage good stewardship of both public and private land and water resources--because ecosystems do not begin or end at fencelines. I would like to share with you our efforts at the Montana Land Reliance.

The Montana Land Reliance is a non-profit Montana corporation that has protected almost 40,000 acres in western Montana since 1978. The Reliance was started in 1978 by individuals who were shocked by the changes that occurred in western Montana valleys in the 60's and 70's. The initial intent was to help pass the original subdivision legislation in Montana. It was quickly evident that this legislation was not the solution, because there are too many loopholes, such as the occasional sale. It has been our experience at the Reliance that permanent, effective solutions to private lands protection cannot be accomplished by telling a landowner what to do with his or her property.

Instead, we have used voluntary contributions of conservation easements as our major conservation tool. A ranch is a bundle of rights; in that bundle are the water rights, mineral rights, and development rights. When a private landowner donates a conservation easement, the development rights are split off and given to the Reliance. We hold these as negative rights, insuring that the property will not be developed for second homes, or residential development, or be stripmined. We monitor each easement on at least an annual basis, and will take legal steps to stop any attempt to break the terms of the conservation easement. All our easements to date are perpetual. They run with the title of the land forever, no matter who owns it.

In exchange for the donation of a conservation easement a landowner can receive state and federal tax deductions, for the value of the easement. An independent appraiser hired by the landowner does an appraisal to determine the development value. At estate time the value of the estate will be decreased by the value of the conservation easement donation. Conservation is the primary motivation to donation of a conservation easement to the Montana Land Reliance. The landowner wants to know the property will be forever protected.

The Reliance has a Montana board of directors who are landowners and professionals who work with landowners. We also have four directors-at-large who provide contacts outside Montana. We receive no government funding; the bulk of our funding comes from individuals.

We have almost 40,000 acres under conservation easements, with 30,000 acres of elk habitat and over 50 miles of trout water protected. We hold easements in the Bitterroot, the Big Hole, the Madison, the Blackfoot, the Hilger Valley north of Helena , the Yellowstone and the north end of the Crazy Mountains. We have conservation easements on all the above rivers, plus O'Dell and Nelson Spring Creeks.

This has been accomplished working with the private landowner at a cost of less than $20 per acre in areas where purchasing this land would cost many times that amount. The conservation easement is a very effective conservation tool that is not costly, is permanent, and keeps the property on the tax roll. We are effective because we can act quickly and are non-political. Our strength is as problem solvers. We are very specific about our goals and stick to them.

Let me give you an example. We had a landowner who wanted to protect a very valuable piece of water but the ranch also had a feeder stream that had been decimated by cattle grazing. To get the entire ranch and the valuable water protected we chose not to push getting control over the feeder stream in the easement. But by developing a relationship with the landowner, we gradually convinced him to protect the feeder stream, too. Two years after donating the conservation easement, the owner, at his expense, spent $30,000 and fenced the cattle out of the feeder stream. By fencing the feeder stream, stabalizing the banks and allowing the stream to flush itself out, spawning trout will again begin to use this water. Fish from a nationally famous Montana water will now have a new spawning and nursery area.

Private landowners have protected 17 miles of spawning grayling habitat in the upper Big Hole River through two conservation easements donated to the Montana Land Reliance. In the Bitterroot, critical elk habitat is protected by a Reliance easement on a ranch that boarders national forest land. The public hunts this herd in the fall on public land, but when the snow is too deep, the elk move to the private ranch to survive till another hunting season. There are significant public benefits from private actions. The ecosystem does not stop at the fenceline.

Possibly the most graphic example of the inability to separate public and private ownership is spring creeks. As any of you who are anglers know, we in Montana are blessed with some of the finest spring creeks in the world. Most have been destroyed due to poor agricultural practices and reckless development. However, some remain as excellent fisheries and spawning areas. This is due to the stewardship of private landowners who care about the spring creek ecosystems. However, this stewardship may irrevocably change due to the Supreme Court decision on stream access in 1983. The Montana Supreme Court ruled that the public has the right to use any stream if they stay within the high water marks. This ruling was clarified during the last legislative session with HB 265. The Supreme Court decisions, and the subsequent legislation, have the potential to destroy the remaining healthy spring creeks. No longer having control over their waters, the landowners might decide to develop the property, or to run excessive amounts of cattle, or dewater the creek. Whatever the method, we could lose these remaining jewels. However, we at the Reliance see the opportunity to give the spring creeks permanent protection.

We are proposing that the Montana Department of Fish, Wildlife and Parks and Commission consider the following: in exchange for the donation of a perpetual conservation easement and strict controls over the riparian habitat, the private spring creek landowner regains control over access to his property. The landowner gives up <u>forever</u> the right to change the use of the property, including the spring creek and controls domestic cattle grazing and dewatering; the two deathblows to spring creeks. The public gives up access to the spring creek, which was not even an issue with the original Supreme Court cases; it was right to float navigable streams.

Two examples illustrate how the public wins. O'Dell and Poindexter spring creeks have public ownership on their lower stretches but private ownership in the headwaters. They flow from private to public. Protection of these headwaters by the private landowner will insure the public values on the public ownership will forever be protected. I should add that we are not just talking about habitat values, but also

open space, which makes living and recreating in Montana so special. Fortunately, three miles of upper O'Dell Spring Creek has been protected by a conservation easement by the Reliance and we are working on an easement on the private portion of Poindexter Spring Creek. Private land conservation protects public resource values.

Both the Department of Fish, Wildlife and Parks and the Commission are responsive to our spring creek idea. Because of our non-political conservation role, we are the appropriate ones to garner the necessary support from private landowners and the Montana sportsman. If we can create adequate support for the incentive program, and if the Department has the legal authority to establish this program by regulations, the Reliance will work closely with the Department and the Commission to design and implement the program.

As I mentioned earlier, ecosystems do not stop at fencelines. In the short lifetime of the Reliance we have seen what can be accomplished through private sector land conservation. This spring creek incentive program could satisfy both public and private needs through the permanent protection of private lands.

In closing I would like to make an observation we often use at the Reliance. People perceive us being in the conservation business, which we are, but we are really in the PEOPLE business. It has really been the key to our protection efforts. Through our spring creek incentive program we want to bring together people on both sides of the access controversy to protect the remaining healthy spring creek ecosystems.

Thank you.

PLANNING FOR THE PRESERVATION OF SPECIES DIVERSITY

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A few years ago, when I was a struggling zoology graduate student in Missoula, E.O Wilson from Harvard University published a book called Sociobiology. This book is an impressive synthesis of animal social behavior, and its analysis of human behavior made waves that reached far beyond zoology departments. Wilson states in his book that man has distinguished himself from other animals by acquiring the intelligence to consult the past and PLAN the future. This idea is intriguing. It seems that humans are forever trying to identify just what it is that separates us from the "lower animals". And forever being challenged by animals with opposable thumbs, animals that use tools, animals that use language... I am not convinced that the ability to plan is the last word; but our longevity and excellent memory have undeniably increased the potential of learning from the past and preparing for the future. It is also painfully obvious that this potential is seldom realized.

In this day and age, planning is more than an interesting human evolutionary development. It has become an absolute necessity for our survival, not to mention the other species with which we share the earth. Unless we use and heighten this ability, we stand to lose many of the species which have evolved with us on this planet, as well as ourselves.

E.O. Wilson is one of the most respected research and theoretical zoologists living today. Concerning the present acceleration of extinction rates he says:

> "The one process ongoing in the 1980's that will take millions of years to correct is the loss of genetic and species diversity by the destruction of natural habitats. This is the folly our descendants are least likely to forgive us".

The Nature Conservancy has been an unusually successful organization, largely due to the single-mindedness of its mission. That mission is the prevention of this folly.

Nature Conservancy is a plan-happy organization. We have to be. The organization now owns over 900 private preserves around the country, most of which we plan to own

indefinitely, and manage for the rare species or communities that occur on them. Whenever we acquire a preserve, the established procedure is to raise an additional 25% of the cost of the property, for long-term future management. These funds go into a stewardship endowment to ensure that preserves will be managed indefinitely. We are in this business for the long haul, so we'd better be planning.

The Nature Conservancy is generally known as "the guys that buy land", which we do. But that's only part of the story. Land acquisition is effective, but an expensive way to preserve habitat. As the Nature Conservancy has grown, other methods have been explored and are now widely used to protect habitat. And in order to decide what land to protect, and what to do with it after we get it, other programs have been added to the structure of the organization. The three main programs are:

1. Identification. The need for good data on rare species and communities is essential in deciding where to focus protection efforts. This information was often lacking, so the Nature Conservancy designed Natural Heritage Programs to inventory rare biota. The Montana state legislature, the Montana Department of Fish, Wildlife and Parks, and TNC recently joined together in 1985 to fund the Montana Natural Heritage Program, which is now creating a database on rare biological occurrences in the state. It has always been the contention of the Nature Conservancy that a biological inventory should be in the public domain, and it is our hope that this program will eventually be fully adopted by the state.

2. Protection. Based on Natural Heritage data, actions are taken to protect those species and communities that are most rare and most threatened.

3. Stewardship. Management and management research is needed to insure the survival of species which have been chosen for some kind of protection.

Protection began in The Nature Conservancy with land acquisition, but other methods may be nearly as effective at much less of a financial investment. Conservation easements are a valuable tool for protecting a piece of property without buying it. When an easement is donated, a property owner essentially conveys the development rights to a qualified recipient. If the recipient is a tax-exempt non-profit organization such as The Nature Conservancy, the property owner can claim a charitable deduction for the fair market value of those rights. This amounts to the difference between the developable value of the property, and its value after the easement is attached.

It is important that wildlife biologists be familiar with conservation easements, because they are useful in preserving wildlife habitat, and in some cases are financially advantageous to the property owner. The Trust for Public Land produced a video which explains conservation easements, using The Nature Conservancy's Blackfoot River Corridor Project as an illustrative example. The title of the video is "For the Common Good: Preserving Private Lands with Conservation Easements", and it is available through our office to wildlife biologists in the field for public showing.

The Nature Conservancy also has a voluntary protection program which we refer to as registry. If a private property owner is unwilling to sell a piece of property or donate a conservation easement, or if the rare species or natural communities on that property are not terribly threatened, the owner may be willing to enter into a voluntary protection agreement. This assures us that the landowners will protect those rare occurrences to the best of their ability, and contact us if they intend to change the use of the property, or sell it. This is a recently developed strategy of which we were at first skeptical. However, it has turned out to be both successful, and cost effective.

Another recent program expansion for The Nature Conservancy is Public Lands Protection Work. Since the Natural Heritage Program has been operating, many rare occurrences have been found on public lands. We are notifying agencies of rare species and communities under their management. Through comments on planning documents and other communications, we supply public land management agencies with information they need, as well as reminding them of their official responsibilities to manage for species diversity. Consistent with our tradition, we prefer to work by developing cooperative relationships, rather than by confrontation and harrassment. So far, we have had some encouraging results, but we have a long way to go.

MONTANA NATURAL AREAS CONFERENCE

In conjunction with our public lands protection efforts in Montana, The Nature Conservancy is organizing a statewide interagency Natural Areas Conference to be held in Billings this fall. One of the goals of the conference will be to promote communication and cooperation among the many state and federal land management agencies in their natural areas efforts. It is also our goal to promote cooperation between the academic/professional community, and the agencies in the development of a statewide natural areas system.

A Natural Areas Program is not a new concept to Montana. In fact, Montana was one of the first states to start thinking about natural areas as a way to preserve the best examples of Montana's ecosystems. In 1973, members of three professional societies; the Society of American Foresters, the Society for Range Management and the Soil Conservation Society of America formed a natural areas committee. In 1974, a state Natural Areas Act was passed in the Montana legislature, and the Department of State Lands was charged with its administration. In 1976, an attorney general's ruling declared that parts of the act were illegal, because they deprived the state of revenues from school trust fund lands. Although only a small portion of lands considered for natural areas would have been school trust fund lands, this ruling has slowed the progress of the natural areas effort in Montana.

In the meantime, Montana has fallen behind much of the rest of the country, as natural area programs have been instituted in many states. There is a National Natural Areas Association, which publishes a Natural Areas Journal. The Nature Conservancy has worked closely with these efforts, because natural areas are an effective way of accomplishing our goals. However, preservation of rare species is only one of several possible reasons for designating a natural area. They act as important baseline sites for monitoring and measuring the success of land management techniques, and they are important for research and educational purposes, with a guarantee of availability in the future.

The Montana Natural areas Conference is scheduled for October 15-17, 1986 in Billings. The conference will begin with a series of presentations on the natural areas concept and the history of the Montana Natural Areas Committee and 1974 legislation. In the second part of the conference, potential natural areas sites will be discussed. The conference discussion groups will correspond to the six geographical regions which were drawn by the original natural areas committee. Each regional group will meet separately and discuss in turn six different categories of natural areas; aquatic and riparian habitats, forests and woodlands, shrublands and grasslands, rare plants, geology and landforms, and wildlife. People with expertise in one of these categories may choose to attend meetings in more than one regional group. The scheduling will be staggered so participants can move from room to room to follow topic areas.

The success of the upcoming conference, and the effort to build an ongoing statewide program will depend on the active involvement of many individuals in agencies and professional societies. We are especially dependent on field biologists to participate in identifying potential natural areas. The collective expertise concentrated in the Montana Wildlife Society is a valuable resource, and will be a major contribution to building a successful and enduring Montana Natural Areas Program.

The Nature Conservancy is new on the natural areas scene in Montana. A foundation has been laid by the hard work of many dedicated professionals, but there is much left to be done, and some hurdles to overcome. What we hope to bring to this effort is long-term committment, and the spirit of cooperation which we have found to be so effective and essential in accomplishing goals.

WILDLIFE ISSUES

Lance Schelvan
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We don't need more issues when it comes to wildlife, and I'm not sure we even need too many more answers. I think we need to gather the support that's out there and run with it.

Sometimes I wonder if we aren't faced in the wrong direction. Managers and planners tend to be a technical lot, focused forward, and somewhat downward at nature. Perhaps we need to take a mid-trajectory pause and look back - back to the post-fire '30's and '40's; the last bison, clearing the eastern hardwoods, cutting the King's pines - back to Scotland or Germany; places where stags are smaller now.

Imagine all our planners and managers - federal, state and private - with graduate degrees in history, and a minor in biology or forestry. We should probably stop there, but I really do think that there have been enough Roosevelts along the way - especially on this continent - that we needn't be in some of the dilemmas we're in now. There are enough Leopolds right here in this room to maintain Montana's natural resources forever.

What is the problem? I believe that there is a problem, and I think it has two primary facets:

1. Wildlife professionals don't appear to be a big, happy family, and they sometimes don't even appear to be related. I believe that the solution to this problem lies in meetings such as this, which facilitate communication and promote unity. The Rocky Mountain Elk Foundation has begun a growing tradition of workshops aimed at communication among professionals concerning elk. There will be many more.

2. No one is ever going to accuse professional wildlife managers and researchers of hard-sell tactics!! While the bison were being exterminated from the plains, writers and illustrators were sending glowing reports to the East, telling of the infinite wealth and pleasure the West had to offer. A train ticket and gun were all that was needed. I submit that there are now more writers, photographers and video producers in the West than bison - and they are still generating the same stories. The last elk hunt, God forbid, will be a sold-out edition of the last outdoor magazine.

There weren't many biologists around when the bison were being eliminated from the draws, but there are over 160 of you in this room in 1986. You know the answers to our wildlife dilemmas, but do the hunters know? I suggest that you inform them. Write factual science fiction about Montana - be colorful - be creative! Create a scenaro for 20-50 years from now. Encourage people to think....and they will.

When I was involved with the National Forest Planning in northwestern Montana, I always anguished over the lavish inattention the public paid to what I considered important plans and meetings. In a recent issue of our BUGLE magazine a Montana FWP Commissioner proposed a plan for easing hunting pressure on bull elk, by means of a hunter "self-elimination" permit process. Months later, we are still receiving mail from all over the continent - not just radical rhetoric, but good, well-reasoned responses. When Commissioner Bob Jensen wrote that article, he created a scenario which hunters could visualize and identify with - no appendices filled with numbers - just some real-world "WHAT IFS." Wildlife planners and managers need to write Louie L'Amoure versions of what the "New West" will be, "as planned". I think that organizations such as the Rocky Mountain Elk Foundation can help - and we plan to. We don't need to take sides and we don't need to look for issues...we just need to make the answers and outcomes of our wildlife dilemmas more legible - more REAL - to the public!

THE LEAD POISONING/STEEL SHOT ISSUE: PLANNING FOR FUTURE USE OF OUR WATERFOWL RESOURCES

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In 1985, the U.S. Fish and Wildlife Service's duck breeding population index for Montana was the lowest ever recorded, due in part to an extended period of drought in eastern Montana. However, the picture across the entire breeding range is more complex and equally distressing. Despite comparatively better water conditions in the Prairie Pothole Region, several duck breeding populations, notably mallards and pintails, are also at all-time low levels. This phenomenon (presented to this group at its annual meeting in 1984) is a reflection of poor recruitment due to low nest success, which is a function of a dwindling base of secure upland nesting habitat - particularly for early nesting ducks.

Waterfowl managers of the Central Flyway are becoming increasingly concerned that for some species and sexes of ducks, losses due to hunting, predation and other natural mortality factors, are no longer completely compensatory. The estimated annual loss of 2 million waterfowl due to ingestion of toxic lead shotgun pellets may be contributing to the current decline of waterfowl populations. As a result, plans are underway for conversion within the next few years to use of non-toxic steel shot ammunition for waterfowl hunting in the United States. Iowa and Nebraska, as well as some heavily gunned areas of Texas and other states, have already converted to steel shot for waterfowl hunting. Montana and many other states have adopted plans for phasing in steel shot for waterfowl hunting by 1988. These plans generally involve implementing an intensive information and education program. The video tape presentations you are about to see represent the types of information that MDFWP is utilizing in an attempt to reach Montana's waterfowl-using public. Our information and education program represents an effort to call public attention to this problem and to offer what some waterfowl managers are suggesting is an appropriate, albeit long overdue, solution.

Farm Bill Facts

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"Montana Second in U.S. in Wind Erosion." "Petroleum County Possesses Sodbusting Ordinance." "A 1980's Dust Bowl?" Although the economic plight of Montana's farmers and ranchers has dominated agricultural news lately, the plowing of highly erodible lands and the subsequent wind erosion of the soils has been an increasingly significant problem for the past decade. Of the 17 million acres of cropland in Montana, an estimated 5 million acres are classified as unsuitable for cultivation or highly erodible. In 1985 alone, over 2 million acres of Montana croplands were significantly damaged by wind. Before damage is reported, erosion rates usually exceed 5 tons per acre per year. This problem is not unique to Montana, but in 1984 only Texas reported more land damaged.

This problem, the gradual destruction of soils that developed over thousands of years, has not gone unnoticed by agricultural and conservation groups. Beginning in 1983, a coalition of these groups began working on national legislation that would address the sodbusting problem and also attempt to stabilize and restore the areas that had been damaged. The result of their efforts was the Food Security Act of 1985, better known as the 1985 Farm Bill, which was signed into law by President Reagan on December 23, 1985. From the conservation perspective, this is one of the most significant pieces of legislation that has been enacted in a number of years.

There are four significant conservation provisions in the bill. Two of these, the sodbuster and swampbuster, are aimed at protecting existing habitat. The other two - the conservation reserve program and the Farm Debt Restructure or conservation easement provision - are aimed at restoring highly erodible or other farmland types to permanent vegetative cover. The Conservation Reserve Program (CRP) is of the most interest to us at this time so we will deal with it in greater detail here.

The CRP has five major objectives which are as follows: (1) remove highly erodible soils from production; (2) improve water quality; (3) control soil erosion; (4) reduce commodity outputs; and (5) improve wildlife habitat. The primary means of achieving these objectives is the establishment of permanent vegetative cover on qualified lands for a period of ten years.

The Agricultural Stabilization and Conservation Service (ASCS) has the lead role in implementing the program. Cooperating agencies include the Soil Conservation Service (SCS), Cooperative Extension Service (CES), and the local Soil and Water Conservation Districts. The United States Forest Service (USFS), U.S. Fish and Wildlife Service (USFWS), and the Montana Department of Fish, Wildlife and Parks will also provide technical advice and information as needed.

Lands eligible for CRP include all croplands in Soil Capability Classes 5 through 8. (The SCS groups soils into eight capability classes, the risk of soil damage or the limitations in use becoming greater from Class I to Class 8) along with any land in Classes 2 through 4 that is eroding at three times the tolerance level. The tolerance level (T) is the allowable rate of soil erosion. The national goal is to enroll 5 million acres in the program this year (1986) and a total of 40-45 million acres by 1990. The Montana goal for the 1986 crop year is 359,400 acres. By 1990, nearly 3 million acres or about 17% of Montana's total cultivated acreage could be enrolled in the CRP. It is obvious from these statistics that this program could result in significant beneficial effects for wildlife, especially if the permanent vegetation that is established is designed specifically for wildlife.

To enroll in the program, each landowner with eligible acreage who is interested in the program may submit a bid to the ASCS for the dollar amount (yearly) he thinks he wants or needs per acre to take the land out of production and establish a permanent vegetative cover. To be eligible, the land must have produced crops in at least two of the past five years. Once the land is in the program, and a permanent vegetative cover is established, no livestock grazing, haying or other economically useful product may be removed from the land for a period of ten years. If this agreement is broken, the landowner will be required to pay back all of his annual payments plus interest to the government. The maximum payment per year that will be made to any farmer is $50,000.

The first sign-up of the Conservation Reserve Program was held March 3-14. Montana landowners showed considerable interest in the program by submitting bids on over 400,000 acres of cropland, most of which was located in the northeastern portion of the state. Daniels, McCone, Roosevelt, and Valley counties were the leading counties with acreage totals ranging from 29,000 to 43,000 acres each. Disappointingly, the Department of Agriculture in Washington, D.C. placed a rather low ceiling on the bids that they would accept ($32 to $42/acre, depending on the productivity of the land) with the result only about 15,000 acres were accepted into the program. Nationally, only

about 840,000 acres were accepted, far below the goal of 5 million acres. Because of this low acceptance rate, a new sign-up was announced for the period May 5 through 23. The results of this new effort were not available at the time of printing.

The federal government (ASCS) will share 50% of the cost of establishing permanent vegetative cover on lands accepted in the CRP. There are nine "eligible practices" for cost-sharing on CRP acreage. They are:

CP1- Establishment of permanent introduced grasses and legumes.
CP2- Establishment of permanent native grasses.
CP3- Tree planting.
CP4- Permanent wildlife habitat.
CP5- Establishment of field windbreaks.
CP6- Diversions.
CP7- Erosion control structures.
CP8- Grass waterways.
CP9- Shallow water areas for wildlife.

Of particular interest to wildlife enthusiasts are CP4, 5 and 9, which are permanent wildlife cover, windbreaks, and shallow water areas for wildlife. The Montana Department of Fish, Wildlife and Parks is looking at various ways of encouraging landowners enrolled in CRP to choose these practices. One possibility is for DFWP to share the landowners' cost of planting and installation.

In central and eastern Montana, much of our wildlife is associated with private agricultural lands. Intensified agricultural in the past several decades, first related to export demand and later to unfavorable agricultural economics, has resulted in a decline in wildlife habitat and more frequent wildlife/agricultural conflicts. The CRP provides an opportunity to reverse these trends, especially where upland game bird habitat is involved. Additionally, opportunities may also exist in some areas for reducing crop depredations from big game animals. Also, waterfowl as well as many non-game species would be the beneficiary of the creation of shallow water areas. This could aid the Duck's Unlimited effort to restore and preserve waterfowl habitat in North America.

National Farm Bill legislation since the mid-1950's has authorized several different types of land retirement programs. From a wildlife habitat perspective, the Soil Bank program authorized by the Agricultural Act of 1956 was by far the most successful. A portion of the Soil Bank known as the "Conservation Reserve" offered 5 or 10-year land retirement contracts, the last of which expired in 1969. Most of the other "set aside" programs available since then have either not been adequately funded or were

renewed on an annual basis so they did not result in suitable wildlife habitat.

Between 1957 and 1963, between 20 and 28 million acres of cropland were set aside annually under long-term contracts of the "Soil Bank" program. These large, long-term land retirement acreages were accompanied by tremendous increases in pheasant populations in the mid-West and northern Great Plains. In South Dakota, pheasant population estimates during the period 1958 through 1964 were double to quadruple those existing before "Soil Bank" was initiated and after its demise. As a result of the high pheasant numbers, large influxes of non-resident bird hunters provided an economic shot-in-the-arm for rural economics.

Can our modern era Soil Bank program provide similar results? We certainly hope so and the prognosis looks good! The goal of the CRP is to have 40-45 million acres enrolled by 1990. This would be nearly 50% more acres than peak Soil Bank years. SCS specifications for the permanent vegetation to be established are probably more keyed to wildlife now than they were in the 1950's. Since the CRP program is aimed at taking highly erosive soils out of production, which was not necessarily the case with the Soil Bank program, additional benefits in terms of long-term soil conservation and improved water quality should also result.

Farm Debt Restructure and Conservation Set-aside Program

This provision of the 1985 Farm Bill, also referred to as the Conservation Easement Provision, has significant potential for assisting farmers to weather these difficult economic times. In essence, this provision provides the Department of Agriculture with discretionary authority to offer farmers debt relief in exchange for conservation easements on a portion of their lands. However, this is an optional provision of the Farm Bill and at this time we are not sure whether or not this option will be implemented. Present indications are that it will be tested as a pilot program in several states or the option of implementing the provision may be left to the discretion of each individual state.

Although specific implementations and guidelines have not yet been formulated, a general consensus is that this provision will work as follows:

- The Farmers Home Administration (FmHA) can adjust the terms of a farmer's mortgage in return for conservation easements of 50 years or more on portions of their lands that are the least suited to production of commodities. Conservation easements are to be sued for purposes of conservation, recreation and fish and wildlife.

- The borrower's loan will be adjusted by the portion of the outstanding loan that the acquired easement acreage represents. In no case shall the amount that is cancelled exceed the value of the land on which the easement is acquired.

- Wetlands, uplands or highly erodible lands may be acquired if USDA, in consultation with the Fish and Wildlife Service (FWS), determines they are suitable. Lands, except wetlands, must have been row-cropped in each of the previous three years of record.

Conservation easements would provide opportunities for National Wildlife Refuge, State Wildlife Management Area, local entity, municipality or conservation group management. Funding of management and enforcement activities would be the responsibility of Federal or State wildlife agencies, private conservation groups, public works mitigation programs, and community service projects of schools, parks departments, etc. Public access rights are required to be an integral part of all easements.

Recent newspaper accounts have indicated that in excess of 600 Montana landowners may be having difficulties making payments on their FmHA real estate loans. Implementation of the Farm Debt Restructure Program could possibly make the difference on whether or not these people retain their lands. Montana's wildlife populations and the outdoor recreation opportunities could also benefit from implementation of this program.

Sodbuster and Swampbuster Provisions

These two provisions are aimed at preventing the plowing of highly erodible soils and protecting existing wetland habitat. They do not involve direct payments to landowners, but will require a monitoring program if they are to be successful.

Regulations to implement these provisions have not yet been formulated or published, but preliminary information indicates that they will work as follows:

- These provisions will affect any person who after December 23, 1985 brings into production a field which is predominantly highly erodible land or converts wetland for the purpose of producing an agricultural community. Wetland is defined as any land that has a predominance of hydrophytic (wet) soils and that under normal circumstances supports a prevalence of hydrophytic vegetation. Highly erodible land is any land classified by SCS as Class IV, VI, VII, and VIII or land that if used to produce an agricultural

commodity would have an excessive average annual rate of erosion.

Any producer who converts wetlands or breaks out highly erodible land will be ineligible as to any commodity produced during the crop year for:

1. commodity price support or production adjustment payments
2. farm storage facility loans
3. federal crop insurance
4. disaster payments
5. FHA loans if the proceeds are to be used to produce a commodity on converted wetlands or highly erodible lands.

When a person is determined in violation, that person loses all program benefits for the crop year on all farms in which he has an interest.

Another important aspect of the sodbuster provision is as follows: If a farmer continues to farm highly erodible lands - he will become ineligible for all of the federal payments mentioned above after the year 1990, unless he is operating under a conservation plan approved by the SCS and conservation district.

The 1985 Farm Bill is a very complex piece of legislation. The four provisions discussed here are only a small portion of a much larger package. As with most national legislation, considerable controversy surrounds many of the provisions. Some groups don't like any portion of the bill. Some like a few provisions, but not others. Very few people or groups like the entire package. The purpose of the above discussion is not to pass moral judgment on the economic and sociological implications of the bill. But it should be obvious that the several provisions of the bill that were outlined do have some very significant conservation implications. They are aimed at reducing a major problem of national significance and proportions - soil erosion. And in proposing a partial solution to the problem, some indirect benefits will be derived - benefits to wildlife, water quality, and our quality of life.

MONTANA'S WATERFOWL HABITAT PROGRAM (UPDATE)

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Montana has long been known as a big game oriented state. Resources have been directed toward those species which have been of greatest economic importance. Those individuals working in waterfowl have seen active waterfowl habitat programs lacking in the state sector.

In 1983 Ducks Unlimited announced their new U.S. Habitat Program which included Montana, North and South Dakota, Minnesota and Alaska as recipients of their redirected efforts. This program was aimed at habitat improvements on lands controlled by government agencies. Waterfowl managers throughout the state saw this as the beginning of a new dawn for management programs.

Agencies began submitting project proposals for review and project funding. The Big Lake project northwest of Billings was the first project underway in the state, and the first phase was completed by March 1985. Since then, three additional projects: Katy's Lake, Sparrow Slough and Benton Lake NWR, have been completed on Fish and Wildlife Service lands in the state. The total dollars expended by Ducks Unlimited on these four projects has been in excess of $1,017,000. Montana has 14 other projects which are under investigation or in the design phase at this time.

Ducks Unlimited announced a second program with the acronym MARSH in 1984. This program was introduced nationwide and has made available 7.5 percent of the proceeds generated from local DU fundraising activities in the state. These monies are available only to the state wildlife agencies on a varying matching basis. They may be used for acquisition as well as development.

In 1985 the Montana Legislature passed a bill proposed by the Montana Wildlife Federation which enabled the department to utilize a state waterfowl stamp. This legislation was significant in that it earmarked revenues from artwork sales and stamp sales for wetland habitat enhancement.

This is the first time earmarked revenues have been available for waterfowl habitat work in the state. These monies will be available for matching with DU's MARSH program and will provide for an ongoing program. The state is anticipating revenues of $100,000 annually for habitat work under this new program.

FEDERAL AID AND PLANNING STANDARDS

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During the mid-1930's, President Franklin D. Roosevelt and the Congress recognized that the wildlife resources of this nation were in serious trouble. A few farsighted conservationists, organized sportsmen, and the firearms and ammunition industries joined efforts with state wildlife agencies to meet the wildlife crisis with an ingenious long-range plan. At their urging, Congress earmarked a 10 percent tax on ammunition and firearms to be distributed to states for wildlife restoration. Thus, the Federal Aid in Wildlife Restoration Act, better known as the Pittman-Robertson Act after its principal sponsors, was signed by President Roosevelt on September 2, 1937. A companion act, called the Dingell-Johnson Act, was signed into law in 1950 and provides for the restoration of fish resources with sport or recreational value.

Thus, Federal Aid in Fish and Wildlife Restoration provides a stabilized source of funds to state fish and wildlife agencies. In fiscal year 1986, $122 million and $121 million, less administrative deductions, were made available to states for fish and wildlife restoration projects, respectively. As a condition to receive these funds, state directors of fish and wildlife agencies must use only hunting and fishing license dollars to administer their fish and wildlife programs. They must also retain control of the facilities and lands developed or acquired with Federal Aid funds. Law enforcement and public relations projects may not be funded with Federal Aid monies.

The P-R and D-J Acts were amended in 1970 to allow states to receive funds under a comprehensive plan option. This option requires a strategic plan outlining species problems and objectives, along with prioritized strategies to meet objectives. A management system covering all operations of an agency must also be in place. Standards for a strategic plan and management system have been developed with assistance from state fish and wildlife planning specialists. The management system must provide for processes to select work, determine Federal Aid eligibility, control and budget funds for work units, and evaluate results of work. The

purpose of the planning option is to provide decision makers with well-defined management alternatives to achieve state objectives and to focus on fish and wildlife resource needs and management results.

Colorado, Kansas, and Wyoming exercised the Federal Aid comprehensive planning option in July 1982. Tennessee and Maryland exercised this option in 1985. Thus, only five States in the nation currently receive Federal Aid under the comprehensive planning option. Managers in these states cite numerous benefits of utilizing a planned management system, including less paperwork, less Federal overview, increased budgets, and a better informed public.

CURRENT STATUS OF THE COOPERATIVE UNIT PROGRAM

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Summary

After several years of recurring threats of abolishment, the Cooperative Unit Program at last appears to be on relatively sound footing. The original attempt at abolishment apparently occurred because the program was perceived by some as a federal subsidy to states. A major effort to educate people about the cooperative nature of the program, and the combining of most Fisheries and Wildlife Units to accomplish an overall streamlining of the program, appear to have been successful. The program now appears to have broad support and to be as financially secure as could possibly be expected, given the overall austere fiscal situation.

ENFRANCHISING WILDLIFE in the PLANNING PROCESS[1]

by

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"PEOPLE IN THE "LINE" OF CONSERVATION FIRE-FIGHTING (THERE IS NOTHING YOU COULD CALL "STAFF") HAVE RARELY HAD TIME TO DRAW BACK AND TAKE A PAINSTAKING LOOK AT WHAT WE ARE ACTUALLY DOING." JOHN LIVINGSTON, THE FALLACY OF WILDLIFE CONSERVATION.

For many of us, the above quotation by John Livingston is particularly relevant because it embodies the sense of frustration and impatience we have with planning and its often worrisome results. If you are like me, you don't like to be distracted from the crisis at hand. Yet most of us would also agree that it is self-evident that wildlife conservation cannot succeed unless we plan for it to succeed. Beyond this platitude, our opinions diverge, as they should, for success is relative--to us individually, and most importantly, to our respective organizations. In the realm of conservation planning, organizational bias is very real and very pervasive, yet this bias is often invisible to us; why? As noted by Tim Clarke (1985):

"WE ARE SURROUNDED BY ORGANIZATIONS ALL OUR LIVES, WE WERE BORN INTO THEM, SPEND OUR LIVES WORKING AND LIVING AMONGST THEM, AND WILL DIE IN THEIR MIDST. WE TAKE THEM FOR GRANTED SO MUCH SO THAT THEIR PERVASIVENESS AND INFLUENCE IS LARGELY INVISIBLE.....".

If we examine plans from an organizational perspective, we may better understand why they are so often at odds with the resources they profess to protect, and why a plan is often considered successful on the basis of not what it does for wildlife conservation, but what it does for the organization which produces the plan. Given this phenomenon, a "successful plan" is not necessarily a plan that "will succeed."

The technical, political and organizational constraints on any plan affecting a public resource are considerable. These constraints have enormously complicated planning efforts and thus it should come as no

surprise that serious differences of opinion among resource managers have arisen as to what constitutes a successful plan. A "successful plan," in the current "task environment" of planning, is all too often one which simultaneously enhances our own organization's stability, perogatives and funding while not engendering a lawsuit. "Successful plans" are now being produced by the Forest Service, the BLM, the Fish and Wildlife Service, and the Montana Department of Fish, Wildlife and Parks, among others. A plan that "will succeed" in conserving wildlife, however, is an entirely different and (unfortunately) rarer species. Should there be any doubt, I will be speaking of how to avoid the former and foster the latter.

Habitat = Populations : Two Sides of the Conservation Equation

The most fundamental problem besetting our efforts to plan for the success of wildlife is that no single agency or organization is in a position to manage both wildlife populations and wildlife habitat. Hence, plans which are biologically sound, but which fail to integrate equal management incentives to both the wildlife and land manager are doomed to fail. While our respective agencies and organizations; state, federal and private have, and will continue to produce plans and goals, their efficacy will ultimately be a function of how well they transcend existing organizational perogatives and perspectives and promote wildlife from a unified front. Until then, conservation planning will remain a hostage to organizational arrangements in resource management. Given that the challange to conserve things wild has never been greater, nor their future more uncertain, it behooves us to examine where we are, where we're headed, and how we might proceed in producing a plan that can succeed for wildlife as well as benefit our respective organizations.

Resources, Non-resources and Constraints

Many have assumed that laws such as the Resource Planning Act (RPA) of 1974, the National Forest Management Act (NFMA) of 1976 and the Federal Land Policy and Management Act (FLPMA) of 1976, all of which mandated multiple-use, made all resources on public lands "equal." However, despite such external legal impedimentia, the Forest Service and the BLM, have routinely given the lowest priority to wildlife in the planning process. For example, in the proposed FY 1986 budget for the Forest Service, approximately $600 million is budgeted for timber sales, roads, minerals and grazing while resource stewardship programs such as soil and water, wildlife and fish, recreation and trails are allocated one fourth this amount--$170 million (Kirby and Arthur, 1985). In FY 1984, the Forest Service met only 34 percent of its goals for wildlife habitat improvement and 28 percent for

soil- and water-resource improvement. Simultaneously, the Forest Service met 98 percent of its timber goals and 140 percent of its goals for road construction (Hanson, 1986). Currently, many regions of the Forest Service have no money to improve soils, watershed, or fish and wildlife habitat (O'Toole,1985). In the BLM, the FLPMA planning process has focused mainly on timber and range, often to the exclusion of wildlife. This "one sided" planning emphasis is not being done because individual professionals within these organizations hate wildlife: this phenomenon clearly trancends individual perspectives and is fundamentaly a matter of how organizations determine what is and is not a "resource." To quote David W. Ehrenfeld (1976):

"RESOURCES CAN BE DEFINED VERY NARROWLY AS RESERVES OF COMMODITIES THAT HAVE AN APPRECIABLE MONEY VALUE TO MAN, EITHER DIRECTLY OR INDIRECTLY."

Given this definition, it follows that the level of organizational consideration afforded wildlife will be proportional to its economic status relative to other commodities. Thus, an elk herd is a resource to a state wildlife agency because it derives direct economic gain from elk in the form of license dollars. However, to organizations such as the Forest Service and the BLM, which derive funds from timber, grazing and oil and gas, elk are a non-resource. As pointed out by David Ehrenfeld (1976):

"SPECIES AND COMMUNITIES THAT LACK AN ECONOMIC VALUE OR DEMONSTRATED POTENTIAL VALUE AS NATURAL RESOURCES ARE NOT EASILY PROTECTED IN SOCIETIES THAT HAVE A STRONGLY EXPLOITATIVE RELATIONSHIP WITH NATURE."

There are fates worse than being labeled a non-resource. Non-resources may exist where preservation costs are minimal and where there are no competing uses for the space they occupy (Ehrenfeld, 1976). When non-resources must compete with resources, then they become "constraints" and, to quote Jack Ward Thomas (1984):

"...A CONSTRAINT IS A MISERABLE THING TO BE."

Despite the best efforts of economists to assign accrued recreational and esthetic values to wildlife, current trends in public land management policy clearly indicate that the future of wildlife will ultimately be determined by the type and degree of incentives that land management

organizations are given to provide for wildlife. Regardless of laws, regulations and guidelines, we cannot expect organizations or individuals to prioritize management for things which do not benefit them and which compete with things that do.

Multiple-Use and Other Euphemisms

As I have suggested earlier, agencies, organizations and individuals typically seek to manage their resources in proportion to the the benefits they derive from them, independent of the public's welfare. A review of Forest Plans helps illustrate this phenomenon.

Forest plans are the result of the Forest and Rangeland Renewable Resource Planning Act of 1974 (RPA). This Act required the Forest Service to prepare a national program for managing the national forest (the RPA Program) every five years and it is also the law which primarily governs forest planning. The passage of the National Forest Management Act (NFMA) in 1976 amended RPA and required the Forest Service to prepare forest plans for all national forests. Forest Plans must comply with the National Environmental Policy Act of 1969 (NEPA) and be revised at least every fifteen years.

Prompted by deregulation of the banking industry, timber prices collapsed in the early 1980's as a result of increased interest rates on home loans. As a result of this price collapse, a backlog of 30 billion board feet of sold but uncut timber exists on national forests. This is after 10 billion board feet were "bought back" from the timber industry under the terms of the timber relief law, which served as a government bailout to timber companies that could not sell timber they had already purchased. Despite the current glut of timber on the market and exceptionally poor demand, the Forest Service is planning to continue and, on many forests, accelerate timber harvest and road programs. Considering the importance of this resource to maintaining the Forest Service's budget, such plans should come as no surprise. The timber program for fiscal year 1986 will be 543 million dollars or > 40% of their total budget. The timber program makes money for the Forest Service, but not the U.S. Treasury. Indeed, it is estimated that the U.S. taxpayers lost 2.1 billion dollars in the last decade from below-cost sales. The1986 RPA objectives of 10.7 billion board feet were set without any prior economic analysis in a "Top Down" planning approach. It is estimated that this volume will ultimately cost the taxpayers 190 million dollars.

Regardless of economics, the end result will be loss of valuble wildlife habitat. To meet RPA objectives, planners must include land for timber

management which has poor timber growing potential, steep slopes and highly erodible soils. These sales will lose the most money and will cause the most environmental damage because sales on such unsuitable lands typically require extensive roadbuilding. It is the inclusion of areas which are currently roadless, and which are uneconomic for timber production that raises many questions about the future of elk hunting in Montana and in the Idaho panhandle. The roading and logging of currently roadless areas fragments secure habitat into series of small habitat islands. This process, habitat insularization, is the most salient cause of species impovershment both regionally and globally (Soule and Wilcox, 1980). The importance of roadless areas as "reserves" for elk and the impact of habitat insularization on elk may be illustrated by the situation in the Clearwater National Forest in the Idaho panhandle.

It is no coincidence that Idaho is the number one producer of mature, bull elk in the nation. One out of every 10 elk harvested in Idaho comes from Game management unit 10 which includes over 570,000 acres of roadless country in the Clearwater National Forest. The Clearwater is within a zone of habitat which accounts for 60 percent of all the elk in Idaho and which provided 44,443 hunter days during the 1984 elk season. Game management unit 10 is also the number one producer of branch-antlered bull elk in Idaho. The high number of branch-antlered bull elk within unit 10 is directly related to the security provided by the roadless areas.

By way of comparison, the late season Gallatin and Gardiner hunts combined, the product of a vast reserve: Yellowstone National Park, provided less than one-tenth as many elk hunter-days. Given that a multi-agency study estimated an "elk user-day" to be worth $60 dollars, elk hunting on the Clearwater generates about $26 million to the economy of Idaho annually. Cumulatively, elk hunting and outdoor guides and outfitters already bring $61 million a year into the Idaho economy; none of this money benefits the Forest Service directly, and thus habitat for elk is of little organizational concern. We need only to examine the plan for the Clearwater Forest to appreciate what this organizational perspective means to elk.

Storm Clouds

In the Idaho panhandle, existing contracts of sold but uncut timber amount to a staggering 1.2 billion board feet. In the face of this glut of timber and a depressed market which is suffering from a lack of demand, the Forest Service proposes dramatic increases in timber harvests. Much of the timber being accessed by the ambitious roading program of the Forest Service is marginal. Roughly one-third of all roadless areas in the

Clearwater will be accessed within 10 years. An additional 4,880 miles of road will be built by the end of the planning period for a total of 9,080 miles. Within the next five years, 80 percent of the 8.8 million worth of capital investment road projects are slated for roadless areas. The average road density of forest lands managed for timber will be 5.8 miles of road per square mile. Results from the Montana Cooperative Elk-logging study show that in areas with road densities of 5.5 miles per square mile, elk use only18.8% of potential habitat.

The Forest Service road network currently totals over 342,000 miles (not counting many thousands of road miles built and maintained by other federal, state, county and local agencies). In the next ten years, the road network will increase by 40,000 miles of new, permanent roads (equal to entire interstate highway system) On Beaverhead National Forest, the Forest Plan proposes to increase roads from 1,685 miles to 4,710 (nearly tripling existing miles). The average road density on the Bitterroot National Forest is 3.3 miles/square mile on the developed portion. A 78% increase in road mileage is slated to occur on the the Bitterroot National Forest in the next 50 years. The Kootenai National Forest Plan proposes to build 4,600 miles of new road and eliminate 136,000 acres of existing unroaded wildlands in the next 20 years. The Helena National Forest Plan proposes to log 25,000 acres of land and build an additional 314 miles of road in the the next 10 years alone. The Gallatin National Forest plan proposes 220 miles of main roads and another 90 miles of local timber harvest roads in the next 10 years. The Lewis and Clark Forest plan provides for 110 miles of arterial and collector roads and 763 miles of local roads to be built during the planning period. The Custer Forest Plan proposes doubling road miles and tripling historic levels of timber harvest. I could go on, but I think the point here is that the Forest Service clearly is writing plans which will drastically impact the elk hunting potential in Montana and Idaho.

Converting Resources into Non-Resources

The Forest Service is correct when it maintains that elk are not endangered by its commodity oriented management. State wildlife agencies will simply adjust the hunting seasons to maintain populations comensurate with available habitat. There is no argument over whether elk can be produced on a "managed forest." We can produce elk in parking lots if we so desire. However, it is clear that the opportunity to hunt elk will have to decrease proportionately to their vulnerability to hunters. The perspective of the Forest Service is really quite straight forward i.e. "Don't expect us to subsidize elk hunting--if our roading and timber policies will mean more

restrictive hunting regulations and less opportunity to hunt, that's your problem." Hence, under the current dichotomy of management options, one organization's gain is another's loss. Unfortunately, more is at stake that simply elk license dollars or heavily subsidized jobs in the timber industry. The current philosophies are born out of organizational arrangements that, if allowed to persist, will ultimately foreclose on the future of wildlife and wildlands.

Wildlife management agencies cannot continue to blithely insist that the current imbalance in the conservation management equation is either equitable, or in the best interest of insuring a future for wildlife. Elk must become a resource in the fullest sense of the word to organizations on each side of this conservation management equation. Some of the ways to convert elk into a resource for the Forest Service would be to ear-mark a percentage of each elk license dollar sold for return to a special habitat maintenance/improvement fund managed by the Forest Service or BLM, much the same way range betterment monies are ear-marked from grazing fees. User fees are another means of converting non-resources into resources. However, care would have to be taken to insure that monies raised from such access fees would indeed be used so as to maintain and enhance wildlife habitat rather than to subsidize below-cost timber sales and road building programs. I am confident that such an approach is not only viable, but essential. The fate of wildlife and wildlands is simply to grim to allow them to long endure the consequences of mindless organizational machinations. Especially when we have at our disposal what the German poet Goethe considered mankind's two highest achievements: science and reason.

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GOBBLERS KNOB: A Case Study in Creative Reclamation and the Need for Flexibility in Reclamation Law.

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Western Energy Company is a surface coal mining company with coal mines in Texas, Wyoming and Montana. I will be referring to our Rosebud Mine at Colstrip, Rosebud County, Montana.

The energy shortage of the 1970's brought full scale surface mining to southeastern Montana in order to recover the abundant low sulfur subbituminous coal that lies beneath the land surface. Western Energy Company has been mining near Colstrip since 1968 and in 1985 produced 12.2 million tons of coal at our Rosebud Mine, disturbing approximately 350 acres of land each year. Western Energy Company currently has over 2,000 acres which has been reclaimed to prairie. This reclaimed land is both utilized by wildlife and grazed by cattle.

An increasing use of our reclaimed areas by wildlife has become more evident as the reclamation matures and increases in land area. Medcraft (1986) reported, year-round, deer used reclaimed land more than unmined land at their mine in northeastern Wyoming. Western Energy Company has documented an established Sharp-tailed grouse (Pedioecetes phasianellus) dancing ground in it's reclamation which has been active since the spring of 1982 to the present. Numerous species of birds have been documented to utilize the reclamation for food, cover and nesting such as: Ring-necked pheasant (Phasianus colchicus), Sharp-tailed grouse, waterfowl, American kestrel (Falco sparverius), Short-eared owls (Asio flammeus), Northern harrier (Circus cyaneus) and many songbirds.

In order to explain my case study, I need to first explain some aspects of a surface coal mine operation. At our mine, Western Energy Company will typically remove overburden material (material overlying coal seam) up to a limit of 200 feet. When overburden removal reaches 200 feet or more it becomes economically unfeasible to mine. The vertical cliff of overburden material which is left standing is referred to as a highwall. From it's base (top of coal seam) to the ground's surface, highwalls at Colstrip are composed of siltstone, shale or sandstone.

State and Federal laws enacted by the Surface Mining Control and Reclamation Act of 1977 (SMCRA) require that highwalls be reduced to a slope of at least five to one or 20% grade. When reducing highwalls to meet the requirements of the law, it increases the disturbance area, making it necessary to get behind the highwall on undisturbed sites to bulldoze in the required fill material.

Keeping this in mind, Western Energy encountered an unusual situation in what we refer to as our mining Area E. Our final highwall abutted a large butte referred to as "Gobblers Knob". Gobblers Knob has an elevation of 3,575 feet and rises abruptly 175 feet from the top edge of the highwall. The question arose, "Do we want to reduce the highwall and therefore Gobblers Knob to meet legal highwall reduction requirements of state and federal laws?". If we could leave a standing highwall at the front edge of Gobblers Knob we could also leave Gobblers Knob intact. In other words, in order to get the legal five to one slope it would necessitate increasing our disturbance area for required fill material, which would result in three-fourths of the butte being knocked down. Western Energy made a decision to get legal exception to leave the highwall. The decision was based on the following:

1. Gobblers Knob is a local landmark.

2. It provides diversity of habitat. It is vegetated with ponderosa pine, (Pinus ponderosa), junipers (Juniperus species) and other shrubs such as big sagebrush (Artemisia tridentata) and rubber rabbitbrush (Chrysothamnus nauseosus).

3. Its reduction would result in the loss of topographic relief.

4. It would increase mining cost if it were reduced, which would be passed on to the consumer.

5. If the butte and highwall were left standing, it would provide cliff habitat and enhance our reclamation

In general, the major legal justification for leaving the highwall was based largely on the highwall's potential value for wildlife. It took two years of documentation and support from the U.S. Fish and Wildlife Service and the Montana Department of Fish, Wildlife, and Parks to get approval, which was given by the Department of State Lands and the Office of Surface Mining, in August of 1982.

The highwall which was legally left on the east side of Gobblers Knob butte, stands 110 feet high at its highest point and 900 feet long. The Montana Department of State Lands should be complimented on their decision to legally allow the standing highwall, a "first in the nation".

Western Energy Company felt that the highwall would serve some of the same functions as the native sandstone cliffs which occurr naturally in our region. The highwall could possibly provide habitat for one or more of the following species of birds for nesting, roosting, hunting and perching: Great-horned owls (Bobo virgincanus), Prairie falcon (Falco mexicanus), Golden eagle (Aquila chrysaetos), Mountain bluebird (Sialia currucoides), Rock wren (Salpinctes obsoletus), American kestrel, Cliff swallow (Petrochelidon pyrrhonota), Say's phoebe (Sayoznis saya) and others.

Western Energy company has documented use of highwalls by American kestrels, Cliff swallows, and Rock wrens. Schwarzkoph (1980) was successful in moving three young Great horned owls which had nested on an active highwall at Colstrip.

In getting approval of the highwall it was stipulated that a wildlife enhancement plan be done. A plan was formulated in cooperation with the U.S. Fish and Wildlife Service; The Montana Department of Fish, Wildlife, and Parks; and Western Energy Company. Artificial eyries constructed for prairie falcon occupancy was the major element of the enhancement plan. We reviewed the literature, Boyce (1981), Call (1979), Crawford (1978, 1979), Leedy (1972), Platte (1974), Runde (1985), and used our knowledge of local Prairie falcon nest sites to design the artificial nest sites.

An enhancement plan was drawn up (Figure 1). It was decided that we would construct six eyries for Prairie falcons along with a large cavity for possible use by Golden eagles. Due to the territorial nature of raptors, it was understood that only one large raptor species could use the highwall at any one time. We planned to use dimensions described by (Call, 1979) for the prairie falcon eyries. They were 1 foot by 2 feet by 1 foot deep. Also Doug Runde (pers. comment 1985) in his work on Prairie falcons in Wyoming recommends eyries be placed at the upper 20% of the cliff face.

Two techniques that can be used to construct suitable cavities in consolidated rock are excavating with hand tools, and/or drilling and blasting. I preferred the second approach and was in contact with a Consolidation Coal Company employee from Sheridan, Wyoming, Earl Smith, who had developed a novel approach for constructing artificial Prairie falcon eyries (Smith 1985). I arranged to have Earl help me with the construction of eyrie sites at our highwall.

First we used an explosive referred to as a shape charge. Shape charges were developed by the military for the purpose of penetrating armor. The military could stick a shape charge to the outside of a tank and blow a hole inward. The shape charge works on the Monroe principle and is conical in shape and concentrates the explosive forces like a magnifying glass. We used nine shape charges glued to a heavy cardboard connected with detonating cord. The sheet was secured to the cliff face at the designated position with concrete nails. We fired the charge from the top of the cliff as shrapnel-like pieces of casting are propelled at potentially lethal velocities. The holes perforated by the shaped charges are conical rather than cylindrical, so a hand held auger with a T handle was used to ream the holes to a depth of 40 cm. Next we placed Deta prime, a plastic explosive in each of the nine holes. Each was connected with a detonating cord. The explosions were timed to explode in a specific pattern and firing sequence which resulted in a clean rectangular cavity and hand tools were not needed for final shaping. We then repelled over the cliff to shovel loose material out.

Western Energy Company plans in the spring of 1986, to hack young prairie falcons to the Gobblers Knob site with the hope of establishing a permanent nesting pair. Hacking methods will be employed which were established by the Peregrine Fund (1982) will include the use of a hack box and food chute system.

In summary, Gobblers Knob is just one example of creative reclamation. In the future, there will be many more opportunities at our mine to be creative.

I feel that regulators, as well as industry, need to move away from an out of date notion of the mid 70's in which reclamation was synonymous with restoration. In other words, you can't improve on mother nature. We need to use our knowledge to make an educated decision.

Replacement of what was there prior to mining should not be a goal in itself. There are many opportunities to reclaim what was not there. A couple of examples are:

1. In some cases, we have the ability to increase the land capability class of cropland by not regrading to approximate original contours (a legal requirement); instead, we could reduce the lands slope, thereby improving it's capability class.

2. When we mine through less productive badlands or gumbo knob habitat types, we have the capability to replace it with a more productive topsoil. Many are suggesting we replace this type.

3. We can create ponds which were not there prior to mining.

There are many other examples. We are limited only by our creativity. Regulators as well as industry need to think in terms of possibilities and practicality and not "assume" that you can't improve on mother nature.

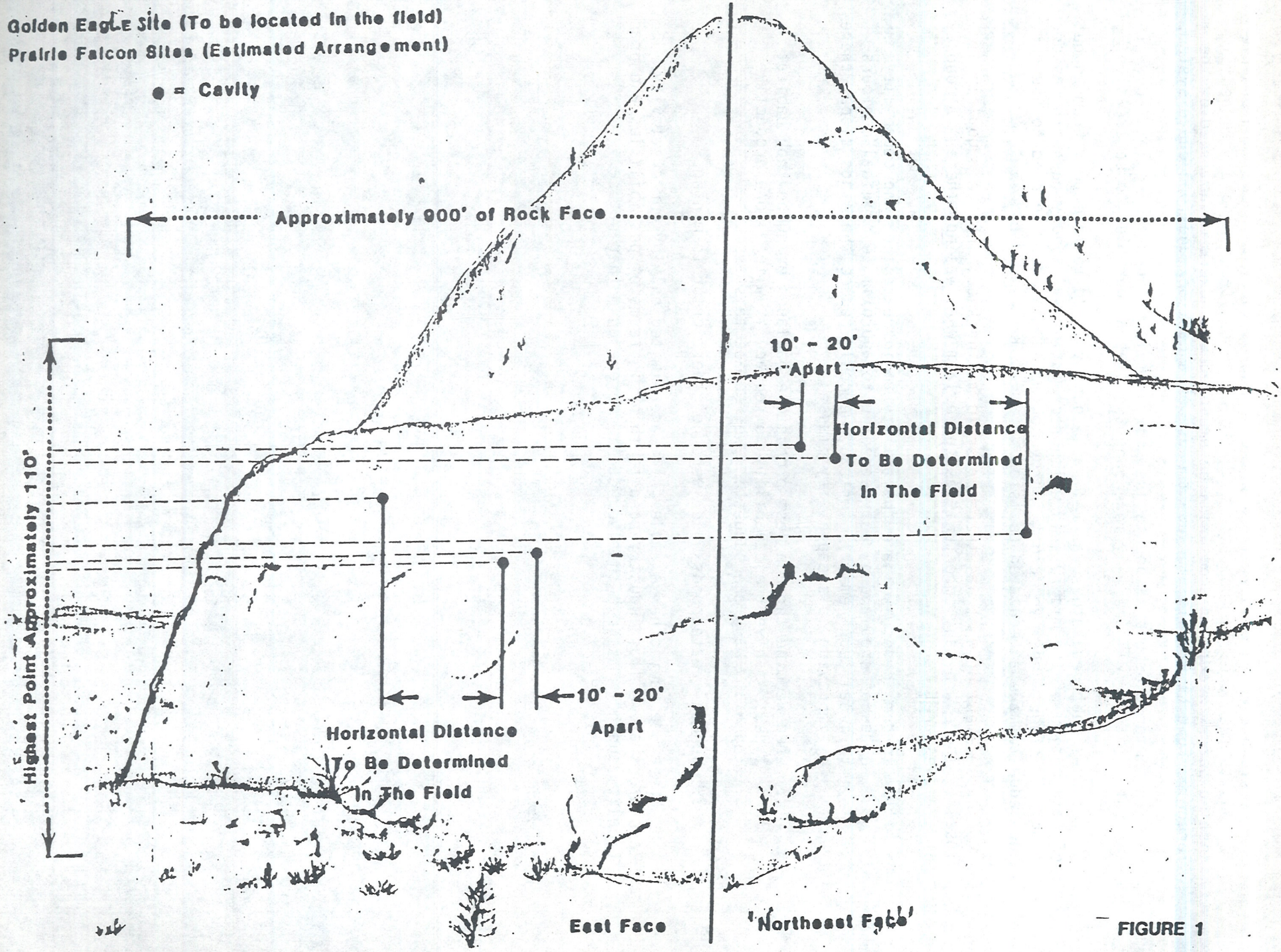
Golden Eagle Site (To be located in the field)
Prairie Falcon Sites (Estimated Arrangement)
● = Cavity
Approximately 900' of Rock Face
Highest Point Approximately 110'
10' - 20' Apart
Horizontal Distance To Be Determined In The Field
10' - 20' Apart
Horizontal Distance To Be Determined In The Field
East Face
Northeast Face

FIGURE 1

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STREAMLINING MONTANA'S WILDLIFE INFORMATION BASE: THE NATURAL RESOURCE INFORMATION SYSTEM AND NATURAL HERITAGE PROGRAM

By
Larry S. Thompson

"Intelligence," wrote Albert Einstein, "is not the ability to store information, but to know where to find it."

We biologists do a great job of gathering and storing wildlife data--often in huge quantities--but it seems we're better at tracking down deer and elk than at tracking down each other's boxes of data. This is unfortunate--and costly. Not only do we sometimes fail to benefit from each other's findings, we are even known (God help us) to repeat ourselves and to re-trample already well-trampled ground.

Two new programs, the Natural Resource Information System and the Montana Natural Heritage Program, will help solve this problem by helping biologists keep track of what's going on and what's already been done without sacrificing precious field time.

Both programs are located in the Montana State Library. This agency was selected as the home for the programs for two reasons. First, it is an agency that can remain strictly neutral on issues regarding environmental conflicts and other controversies. Second, it already has the ongoing function of helping provide information to those needing it. The State Library is therefore able to develop an information base without bias or advocacy.

The Natural Resource Information System, which officially began operation in December of 1985, will be a clearinghouse for information on Montana's natural resources. One of the first projects of NRIS will be to create an indexing system for sources of existing information on Montana's fisheries, wildlife, and other natural resources--especially those hard-to-locate but valuable unpublished sources such as one-of-a-kind maps, computer data files, baseline data files, and aerial photography not indexed elsewhere. This system will eventually allow users to obtain a listing of existing data for any natural resource for any specified area within the state. For example, biologists will eventually be able to obtain a listing of all small mammal studies conducted in southeastern Montana or of all existing habitat maps for Fergus County.

NRIS is also seeking other ways to improve user access to existing natural resource information, including development of statewide data bases for individual resources. For example,

NRIS has already begun a cooperative effort with the Montana Department of Natural Resources to develop a centralized and efficient water resources data management system. A user needs assessment has recently been conducted by NRIS to determine what services would be of greatest benefit to persons needing up-to-date information on Montana's natural resources. Work is under way to catalog all computerized geographic data such as ditgitized habitat or species distribution maps. And NRIS is serving the data management role for the fisheries, wildlife, recreation, and natural and cultural features data compiled for the Montana Rivers Study.

The Natural Heritage Program is one of the key statewide data bases to be included in the NRIS system. This program is a computer-assisted inventory of rare or exemplary flora and fauna in the state, including threatened and endangered species. The data base will be built initially through literature searches, but the information collected will later be verified by field studies.

The Natural Heritage program, run by The Nature Conservancy, was initiated by the Conservancy over ten years ago in order to help identify those lands the organization wanted to lease or purchase. Because the programs were often funded by state governments, the information was made available to the public, and industry soon discovered it as a low-cost and reliable source of data. Because the Conservancy does not use information from the Heritage Program for political purposes, industry around the country has learned to trust the data disseminated by the program--it's neutral, unbiased, and scientifically objective information.

NRIS will also help to avoid duplication of effort between and within government agencies by keeping tabs on what studies have already been done and what studies are under way. Many agencies have boxes and cabinets of valuable data--collected for various EIS's and other projects--gathering dust in their basements. And many millions of dollars worth of valuable wildlife baseline data gathered for specific permit applications never see the light of day once the permitting process is completed. The next time similar data are needed for the same area, chances are the studies will start from scratch. Many times persons seeking existing sources of data give up in frustration because it's too hard to track down these sources. Often they find it's easier to go out and gather the data over again. This leads to a tremendous amount of duplicated, wasted effort--and increased costs.

To illustrate this, a single bureau within state government--DNRC's Facility Siting Bureau--conducted baseline studies of nearly all natural resource categories over roughly 80% of the state in the decade between 1974 and 1984. Since no system existed to organize, index, and ensure compatibility of the information, data gathered during earlier studies could not

be used in later studies, and much duplicative study occurred. Today the valuable information gathered during these studies is virtually inaccessible--and, in fact, very few people even know it exists.

One of the primary goals of NRIS is to prevent this duplication of effort wherever possible, and to ensure that new data are assimilated into a growing information system, giving an ever clearer picture of Montana's resource base.

Information about both programs is available, from Larry Thompson, NRIS, Montana State Library, 444-3115, or David Genter, Montana Natural Heritage Program, Montana State Library, 444-3009.

STRATEGIES FOR THE FUTURE

Raymond Hoem
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Good morning! I will be brief, knowing that most of you have been patiently sitting here for a day and a half, and you're undoubtedly ready to go home. Besides, the weather is too nice -- we shouldn't be cooped up on a day like this!

Heidi asked me to share a few thoughts with you that I picked up during a recent meeting of BLM biologists from across the U.S. At that gathering, a number of topics pertinent to "planning for the future", were addressed.

I would first like to reiterate several points that Dr. Jim Kennedy presented to us regarding a study conducted by Utah State University. This study compared characteristics of professional Range Conservationists, Foresters, and Biologists employed by the Forest Service. Three primary generalizations emerged from the comparison of these three professions: 1) Biologists are more committed to their resource than are the other two professions. 2) Biologists tend to be much more idealistic and have a higher job satisfaction rate than the other two professions. 3) Biologists tend not to be as receptive to new ideas as do the other two professions. While the first two comparative generalizations probably come as no surprise to many of you, the third, which has both positive and negative merits, may come as a surprise. Although this study addressed groups within one agency, I believe that the results are applicable across the board.

Another point pertinent to today's topic was emphasized by both the Interior Solicitor and the Director of the Nevada Department of Wildlife. No one agency "owns" the fish and wildlife resources of any state. States have been granted the privilege (if you will) to regulate and protect fish and wildlife resources within their geographic boundaries. However, the ultimate manager of fish and wildlife resources is the private landowner. He/she/they do not own the fish and wildlife either, but the landowner can regulate wildlife populations through habitat manipulation. Therefore, it is the landowner to whom we must ultimately address our wildlife management concerns.

Looking toward the future, we must also address the issue of "economics". As far back as I can remember, we biologists have been singing the tune, "You can't put a dollar value on

wildlife." But, let me ask, "Why not"? I have been one of the bigger proponents of not putting a dollar figure on wildlife but wildlife has become big business. Bighorn sheep hunting licenses have recently been sold for nearly $80,000. Outfitters and guides demand as much as $300/day for extended hunting trips; much more for day trips. While I will not propose that the life of an antelope or an elk is worth $500, for example, I do maintain that if someone is willing to pay $500 to hunt an antelope or elk, whether a kill is made or not, then wildlife biologists must capitalize on that economic value and use it to our advantage.

During our discussions of the past two days, the economic benefits of wildlife has been mentioned repeatedly. Although we innately understand that economic value, we must learn to express it effectively. How many times have you realized or been told that wildlife considerations have received low priority because of "wildlife's low economic value" (and therefore, no sponsorship)? I support the study undertaken by FWP, to determine economic benefits of wildlife. That data should be available early next year; we must utilize it for the benefit of wildlife.

I have talked to this group before about computers and data management. Montana's wildlife biologists need a common data base system that we can all use, such as that described by Larry Thompson earlier today (The Natural Resource Information System). Related to the concept of cooperative data management is what I call the "compatability/cooperation syndrome", within our profession. I may be the only person in the room who has worked for the FWP, Forest Service and Fish and Wildlife Service, as well as the BLM. Each of us, as an employee of one of these agencies, tends to develop a circle of friends and contacts within that agency. As more pressures are brought to bear on the state's habitat base, and if current trends in agency funding continue, it will be imperative to widen that circle and work together more effectively.

We all work within various agencies which assume different roles with regard to the wildlife resource. We are paid to manage wildlife, not agencies. Let the managers manage the agencies; we must manage the resource. We don't always have to be the "best of friends", and in fact, we should at times agree to disagree. However, we must be willing to share information with our colleagues. During this session we have heard from several speakers that we are "poor communicators." We must work to improve that image, both inside and outside our profession. I would encourage the university system to incorporate course work into fish and wildlife curricula so that students graduate with better communication skills.

Lastly, I want to address the subject of politics. Montana is one of the best remaining areas in the world for fish and wildlife propagation, management and recreation. But, like the rest of the world, it's becoming more populated. More people means more rules; more rules means more government; more government means more politics; more politics means more interest groups interacting in wildlife resource decisions.

In playing politics, one has to be cautious about how we word memoranda or letters, and input to political decision-makers. We can no longer afford to stand up in a crowd and spew forth comments in the "King's English", expecting to earn the respect of those who govern us. We must learn to work within the system.

All the biological data that we can gather, all the facts that we can present, and all the new whiz-bang ways of presenting the facts have absolutely no meaning if those to whom we present them either will not listen or cannot act upon them. We must learn to whom to speak, how to effectively present facts, and how to gain support for our ideas.

We are not without allies. There are many conservation groups, political friends and concerned citizens who we can call upon. Let's involve them. Then, the next time a supervisor asks, "Where is your support?", you can muster letters or phone calls of support.

In summary, we have to break from the traditional conservative, idealogical biologist of the past. Let's accept usable new ideas, and utilize new tools as they become available. Contact landowners and earn their respect and trust, so that we and they can manage habitat cooperatively. Adapt the economics of wildlife to decision-making, earning the clout and sponsorship that wildlife must have in order to compete with other land uses. Let's work more together - albeit through computer technology, meetings or phone calls, to facilitate more efficient management of our wildlife resources. Don't be afraid to talk with your political representatives - be ready to give them good, factual data and earn their respect, which will further the wildlife cause. Find out who the "friends" of wildlife are, and work with them.

Before you leave today, I'm passing around an article ("Even the Bad Guys Wear White Hats: Cowboys, Ranchers and the Ruin of the West", By Edward Abbey, Harper's, January 1986.) which doesn't really pertain to the talk except to demonstrate that wildlife does have strong support in the public sector. While I'm not sure that this is the means to convince politicians that fish and wildlife must receive more support, I am convinced that public land managers should begin to direct more attention to "multiple-use", specifically fish and wildlife management. Articles such as this may make inroads for wildlife on public lands. Who knows, in 5 years or whenever, it may come to pass that the public land manager is directed to "keep his sacred cows and dead horses off my elk pastures."