DRAFT

4-25-86

MINUTES

MODOC/WASHOE EXPERIMENTAL STEWARDSHIP PROGRAM
STEERING COMMITTEE MEETING
April 25, 1986

Time: 8:20 a.m.
Date: April 25, 1986
Place: Surprise Resource Area Office, Cedarville, CA

Steering Committee Members Present:

Tom Ballow
Dawn Lappin
Wes Cook
John Lowrie
Sam Millazzo
Bill Reavley
Jean Schadler
John Younger
Doug Smith
Rex Cleary
Rick Delmas
Marv Kaschke
Spike Naylor
Joe Harris
Cecil Pierce
Curt Spalding

Members Absent:

Wayne Burkhardt
Harold Harris
John Laxague
Jeanni Conlan
Ed Berryessa
John Weber

Others Present:

Lee Delaney, Surprise Resource Area
Mike Lee, Warner Mountain Ranger District
Karen Shimamoto, to replace Mike Lee as Warner Mountain District Ranger
Mike Evans, acting Warner Mountain District Ranger
Alan Day, Lazy Bee Stewardship Area
Wynarda Erquiaga, Surprise Resource Area

1. MEETING TO ORDER

The meeting was called to order at 8:20 a.m. by Chairman Joe Harris. Attendance was taken at this time.

2. APPROVAL OF MINUTES

Tom Ballow motioned that the minutes from the January 17, 1986 meeting be approved. Rick Delmas seconded the motion. Motion carried.

3. APPROVAL OF AGENDA

The agenda was approved as typed except for one item under Reports. Instead of Project Maintenance Workshop, it should read Project Maintenance Proposal (Attachment #1).

4. INTRODUCTIONS

Chairman Joe Harris had Mike Lee of the Warner Mountain Ranger District introduce Doug Smith, the new Modoc Forest Supervisor. He also introduced Karen Shimamoto who will be replacing him in July as Warner Mountain District Ranger. Mike Evans was introduced, he will be acting Warner Mountain District Ranger until July when Karen Shimamoto will be taking over her new responsibilities.

5. REPORTS

Old Business - Chairman Joe Harris made some comments on facilitation. He explained that at some of the past meetings, discussions became rather lengthy. Harris explained how he was going to facilitate the meetings and if anyone had any comments or problems to let him know.

CRMP/ESP Report - Sam Millazzo presented the Committee Report on CRMP/ESP to the Committee. He explained that his Subcommittee presented their arguments of what is wrong with CRMP and what can we do about it to the CRMP Executive Committee on February 25, 1986. One of the reasons pointed out that CRMP is not working well is the fact that it lacks structure. The CRMP Executive Committee held another meeting on April 24, 1986 and the outcome of this meeting sounds very positive. A copy of the Subcommittee's proposal is attached (Attachment #2), also a copy of the Task Group's recommendations (Attachment #3).

Tuledad Dam - John Lowrie presented the Tuledad Dam Report. Lowrie explained that a TRT was approved for the Tuledad Dam Project to get it moving again. He advised the Committee that Alan Spencer (SCS Archaeologist on the TRT) thought the sites were much more recent than first thought. Lowrie also advised the Committee that one site (the larger site) was on private land. Alan Spencer's report should be to John Lowrie by the first of May. Lee Delaney explained that even though the site was on private land, BLM is responsible for the site. Lowrie told the Committee that Bob Cockrell had applied for a construction permit from the BLM. After review by the TRT, it is felt that it will be a lot less expensive to mitigate the Tuledad Dam site than previously expected.

Environmental Group Tour - Bill Reavley and Jean Schadler subchaired this Committee. Reavley had a letter from the National Wildlife Federation saying that they would be interested in such a tour and listed a number of other conservation organization that may be interested also. There was some discussion over what groups would be the target groups. Curt Spalding requested that just the environmental groups be invited and that we shouldn't slight the local organizations. It was the consensus of the Committee to go with conservation groups rather than a mixed group. Jean Schadler will chair this Committee and instructed to broaden the Committee. The names suggested were Curt Spalding, Marv Kaschke and Dawn Lappin.

Monitoring Workshop - Rick Delmas presented the information of the Monitoring Workshop. Delmas handed out a copy of the proposed agenda for the workshop to be held on June 24, 1986. He discussed the agenda and

what him and Wayne Burkhardt planned. There was some discussion on who the target group was. Some of the Committee members thought it was for the Committee and some (including Rick Delmas and Wayne Burkhardt) were under the impression that it was for the permittees. It was decided that it would be geared for the permittee but the Committee members were also invited to participated. Cecil Pierce expressed some concern about being able to do it all in one day.

6. MODOC NATIONAL FOREST LAND MANAGEMENT PLAN

Mike Lee presented the MNF Land Management Plan. He explained to the Committee that this Plan will hit the street in July. The National Forest Act was passed in 1976 and mandated that Land Management Plans be done on all National Forests within ten years. This deadline expires this year but it is felt that there will be an extension of one to two years. Mike explained that there are several management schemes and the decision will be based on budget, inventory and management objectives. He advised the Committee that the County and State have expressed concern since the main commodities for Modoc County (timber and livestock) are in a downward trend. Mike commented that the Forest Service would like to maintain returns to the County.

Mike presented a table of the different Forest Allotments on the Warner Mountains to the Committee. This table showed available forage, current AUMs and deer AUMs. Out of 26 allotments, 20 are in a deficit state. He would like to have TRT's for Lassen Creek and Yankee Jim. The reason for these two allotments is the high deficit and other high resource concerns.

CONCERNS

Lassen Creek
- Redband Trout
- Riparian Areas

Yankee Jim
- Wilderness
- Riparian Areas
- Redband Trout
- Overutilization

Redband trout has developed into a high interest level because there are very few pure strains of Redband trout left.

Jean Schadler expressed hurt, frustration and anger that the Forest Service did not bring this Land Management Plan before the Steering Committee sooner. She wanted to know why we went out public on Allotments, such as Emerson, for example when now they were showing that it was one of the allotments in trouble. There was a lot of the same feeling with the other Committee members.

Jean Schadler moved that we take on Lassen Creek and Yankee Jim TRT's this year as requested. Dawn Lappin seconded the motion. After some

discussion about whether Forest Service would have the manpower to do the pre-packets for the TRT, the motion was voted on. Motion carried.

Lunch Break - Meeting reconvened at 1:00 p.m.

Yankee Jim and Lassen Creek Allotment TRT's

Curt Spalding presented a procedure assignment for these TRT's (see Attachment #5) Curt Spalding motioned to follow these recommendations on assignments to Yankee Jim and Lassen Creek TRT's. Jean Schadler seconded the motion, motion carried by consensus.

In respect to Warner Mountain District inventory, two observations were made: 1) should the TRT's investigate procedures used in arriving at forage use figures shown in the inventory, and 2) will it be too late after the TRT's function for ESP Committee to have input into the Forest Service Land Management Plan? Also it was suggested that the TRT's should include a timber industry representative and perhaps the Steering Committee should be enlarged to include a timber representative.

7. GRAZING FEE PROPOSAL

Chairman Harris introduced Alan Day from the Lazy B Stewardship Area in Arizona to discuss his grazing fee contract bid proposal (see Attachment #6).

Day has an individual Stewardship program. He believes he will expand to a steering committee similar to Modoc/Washoe.

In order to plan future ranch operations, it is necessary to know what is going to happen, especially with grazing fees, thus his proposal to bid fees over the ten years. Day realizes he cannot plan his operation or his improvement program without knowing what grazing fees will be. His bid starts with $1.50 per AUM (see proposed attachment) and increase to $2.00 in five years. Day believe fees will be considerably above $2.00 in five to ten years.

He is proposing that this type of approach can be experimented with under the Stewardship umbrella, that this will be necessary for any chance of approval. He would like our Committee to consider discussing this approach with permittees and give him some feedback.

Tom Ballow made a motion to appoint a subcommittee to study this proposal, discuss it with permittees and report back to M/W Steering Committee and Alan Day. Bill Reavley seconded the motion, motion carried by consensus (Rex abstained). Chairman Harris appointed Wes Cook chairman of this subcommittee and asked Cook to select the help he needs.

8. RESOURCE MANAGEMENT

Jean Schadler reported on her Savory School training. This school teaches a holistic approach to resource management (see Attachment #7).

It is a thought process that teaches one to better understand the variables that enter into resource management. It teaches that the better we understand concepts the faster we can improve our resources. Schadler is convenienced that exposure to this concept would be valuable to members of the Committee and her goal here is to make people interested enough to investigate further.

Consensus: Jean will follow up and try to get someone from the Holistic Center to conduct a training session for our Committee. She will find out what will be required of the Committee and report back.

9. PROPOSAL FOR RIPARIAN DEMONSTRATION PROJECT

Curt Spalding presented a proposal for a riparian demonstration project in Hays Canyon (see Attachment #8, 9 & 10). Everyone agreed that Hays Canyon would make a good riparian demonstration project. Since much of the Canyon is deeded land, it was agreed that it would be necessary to check first with the owners to see if they are interested in participating.

Rex Cleary motioned to select Hays Canyon site as a riparian project for demonstration and Committee training in holistic approach. Tom Ballow seconded the motion. Amendment to this motion required checking with owners first. If they object, pick another site rather than abandon the project. Motion carried by consensus.

It was also suggested to select a site for a similar demonstration on the Warner Mountain District. Karen Shimamoto suggested Lassen Creek as a possibility. She will check and report back. This could be considered by the Lassen Creek and Yankee Jim TRT's.

Chairman Harris asked Spalding to act as initial coordinator. He will work out details and call on Committee members to help. Also asked John Younger to check on ASCS cost sharing (area is in Nevada, owners are in California).

10. PROJECT MAINTENANCE WORKSHOP

Project maintenance has always been a problem and is getting worse now, especially fence maintenance. This is more important to this Committee now because of improvement projects that are in place. This may be becoming a serious problem. Indications are that some permittees are upset and becoming less cooperative. Not fixing fences may be a symptom of a deeper problem. Economic situation may be partially to blame. It was suggested that the Committee might want to look into this problem area with the possibility of experimenting with solutions.

Chairman Harris appointed Ed Berryessa and Harold Harris as a subcommittee to consider the problem and report to the Steering Committee. This was a motion by Curt Spalding, seconded by Dawn Lappin and carried by consensus.

11. MASSACRE MOUNTAIN/HIGH ROCK TRT

This is scheduled for May 15, 1986, 8:00 a.m. at the Cedarville BLM office. There have been requests to reactivate this TRT. An attempt is being made to use the same people who were on the original committee.

Jean Schadler motioned to reconstitute Massacre Mountain/High Rock TRT with recommendations that they review the original TRT recommendations, the degree to which these original recommendations have been implemented and the degree to which these recommendations are meeting the objectives of the management plan; recommendations needing revision be submitted to the Steering Committee as revised recommendations. Also, that the old agreement stands in absence of it being modified by consensus. Dawn Lapping seconded the motion, motion carried by consensus.

12. CRMP/ESP

Rex Cleary reported that efforts to bring ESP/CRMP closer together are moving and progress is being made. Jack Artz has become interested and is working with people in Washington. The Committee should contact Artz to see what kind of help he needs.

13. ORIENTATION OF NEW MEMBERS

Rex Cleary will coordinate and handle. This will be an Executive Committee meeting. It will be held on June 2, starting at 9:00 a.m. at the Forest Supervisors Office in Alturas. Permittees from Lassen Creek and Yankee Jim Allotments will be invited.

14. MEETING REVIEW

Agenda Item	Action	Who is in Charge
CRMP/ESP	None	
Tuledad Dam	None	
Environmental group	Schedule tour	Schadler/Reavely
Monitoring	Workshop-June 24	Delmas/Burkhardt
Project maintenance	Study & report	Berryessa/Harris
Massacre Mtn/High Rock	Reactivate TRT	BLM staff
MNF LMP	Lassen & Yankee Jim TRT	USFS staff
Grazing fee bid	Study & report	Wes Cook
Resource management	Training session	Jean Schadler
Riparian demonstration	Proceed with plans	Curt Spalding & entire Committee
Orientation	USFS-Alturas June 2	Rex Cleary
CRMP/ESP	Contact Jack Artz	Cecil Pierce

15. ADJOURNMENT

Chairman Joe Harris adjourned the meeting at 5:30 p.m.

AGENDA

Modoc/Washoe Experimental Stewardship Program
Steering Committee Meeting
April 25, 1986

8:00 a.m.	Call to Order - Check Attendance - Approval of Agenda - Approve Minutes	Harris
	Introductions - Modoc Forest Supervisor - Warner Mtn. District Ranger	Britton
8:15 a.m.	Reports	
	- Old Business	Harris
	- CRMP/ESP Report	Millazzo
	- Tuledad Dam	Lowrie
	- Environmental Group Tour	Reavley/Schadler
	- Monitoring Workshop	Delmas/Burkhardt
	- Project Maintenance Workshop	Delaney
	- Massacre Mtn./High Rock TRT	Delaney
10:00 a.m.	MNF Land Management Plan - TRT Needs	Lee/Shimamoto
11:30 a.m.	Lunch	
12:30 p.m.	Grazing Fee Bid Proposal	Alan Day
2:00 p.m.	Resource Management	Jean Schadler
2:30 p.m.	Proposal for Riparian Demonstration Project	Curt Spalding
2:45 p.m.	Adjourn	

Attachment #2

NDOW AND THE CRMP PROCESS *

The Nevada Department of Wildlife is a small organization (150 +/- people) with a big job to do and a lot of area to cover. In this Region, we cover 36,000 square miles with 29 field personnel, 5 administration people and 2 clerical positions. Much of what we do must be time efficient and cost effective. Resource planning and, in particular, range management planning, is one of the most effective ways we have of meeting wildlife needs. But unless the efforts we put forth under a given planning process provide meaningful results on a consistent basis, we either have to modify it or give it up.

From our personal experience in this Region, CRMP as currently structured and organized is n ot doing well, and the prognosis for improvement is not encouraging unless some changes are made in the process. In any planning effort that requires the resolution of conflicts between various user groups, one of the fundamental ingredients needed for success is an **attitude change** that will permit recognition and acceptance of the fact that **all** interests are legitimate users of the public domain. The obvious challenge is to identify and implement all of the other major elements that will maximize the success of what we set out to do.

Some of you may be familiar with a human behavioral study conducted in Massachusetts which covered a span of eleven years. It's called the Cambridge Study and is based on nearly eleven years of intensive **observation** of the behavior of thousands of

people as they worked together in small groups to solve problems. I think this study provides important clues to what is needed to make **any** planning process work.

The researchers discovered that:

1. Successful groups - those able to accomplish the objectives they had set out to accomplish - were characterized by a high degree of **motivation**, which was evident not only in the interest and involvement of members of the group in the task (a problem usually requiring some decision or plan of action or requiring a unique or more innovative approach) but also in the high degree of **committment** each member of the group had in carrying out the solution the group had come up with.

2. The researchers found that the high degree of motivation that characterized successful groups was not dependent on the problem worked on, but how the members of the group **interacted** with each other.

3. These interactions were recognizably different from the interactions of members of less successful groups. For example, in the successful groups, members were on the whole willing to listen to and understand what others were saying.

Second, they were willing to weigh both the advantages and disadvantages of an idea or suggestion rather than make a one-sided evaluation.

Third, conflict was dealt with openly and in a problem-solving manner rather than being smoothed over or avoided. Generally, it was the **idea** that was dealt with rather than the **person** expressing the opposing view point.

4. The effect of these interactions, in addition to their motivational aspects, was that fewer ideas were "lost" and a higher proportion of these ideas were developed into practical alternatives.

5. When the members of the more successful groups were questioned about their behavior - why, for example, they behaved as they did in a given situation - they found it difficult to answer. To them, the behavior came naturally. They were not aware of how or why they were behaving toward each other in a particular manner.

6. More important, though, it was clear that this behavior was the major factor in the motivation of the group and that

this high level of motivation was accompanied by greater productivity measured in terms of the high proportion of practical alternatives the more motivated groups came up with.

7. The key discovery of the Cambridge Research Study is that leadership and productivity had everything to do (**much** more than previously postulated) with how people **behave** towards each other - and that how they listen to and evaluate each other's ideas, and how they deal with conflict, etc., are directly correlated to how successfully they work together.

The foregoing may be all well and good, but how do you create the **environment** where these good things are most apt to happen? According to "Nevada's CRMP Handbook, and I quote:

"Coordinated planning may be accomplished simply by bringing together everyone who is concerned about a given piece of land, and only a minimum of organization is necessary (selecting a chairperson and a secretary)." It goes on to say that "the first step in the planning process is getting together a packet of information on the planning area including maps . . . . . showing important features. It is a good idea for someone (perhaps the land management agency) to volunteer to get this information together." The point that needs to be emphasized is that under these CRMP guidelines, one gets the impression that no one is really in charge, and the ultimate fate of the planning effort rests with the strengths (or weaknesses) of the chairperson and the other individuals who happen to be involved.

It would seem to ~~be~~ Me that if the CRMP process could utilize an organizational structure that requires the land agencies to orchestrate or otherwise guide each planning effort, we would have taken the first step in shoring up the current process.

There are those who will feel threatened by a more formal program structure, fearing that a stronger involvement by land agencies would overshadow local participation and somehow weaken the entire process. Based on our experience, the opposite would occur. It would seem logical that with strong agency involvement and commitment, the planning could be woven more readily into their budget and work program process resulting in more consistent implementation of the planning that is done. By making a few organizational changes in the CRMP program as we now have it in Nevada, we're convinced we can achieve success more consistently. All major user groups have a high level of commitment to their own interest - what is needed is a properly structured program that will bring those energies together for the good of the basic range resource.

The proposal we would like to submit for consideration involves establishing a standing CRMP steering committee for each Bureau of Land Management District, or at least set up such a group in one district on a trial basis. Where there is also a Ranger District involved, the same committee would be used for both agencies since, in many cases, they have permittees running in common and share other resource management problems. The purpose of this committee would be to serve as a local CRMP group that would be called on to develop and guide major planning efforts throughout the district whenever the agencies felt it was needed. The District Manager and District Ranger or Forest Supervisor are key players and must be full participating members of the Steering

Committee . In selecting committee members, careful consideration has to be given to chosing representatives of all major interest groups who can authoritatively and effectively speak for their organizations. This group would be guided by the following "philosophy of operation":

> The CRMP Steering Committee concept recognizes the necessity for each representative to participate with power and influence equal to every other member or group of members. Therefore, no action shall be taken over the objection of any member of the Steering Committee. Whereas, an alliance of resource interests shall not take precedence over any other resource, neither shall any member impede progress toward management problem solving through unreasonable use of objections. Recommendations or actions not acceptable to a Steering Committee member shall always have the option of further subcommittee work to incorporate the concerns of objecting members. Renewed debate based upon new evidence, persuasion, or new method of approach shall be an option.
>
> In order for the Committee to reasonably weigh the value and impact of any recommendation upon the land and its users, the groups must have access to the collective knowledge of Committee members. Each Steering Committee member has an obligation to clearly articulate the philosophy, needs and limits of the group he/she represents. Each member must also recognize the obligation to hear and be sensitive to the philosophy, needs and limits of every other member. Committee actions must fall within the scope of the Steering Committee Role Statement, and the Role Statement should clearly state the purpose of the CRMP Program. The Steering Committee must be committed to cooperative problem solving to accomplish the goals of environmental improvement and integrated land management. The Steering Committee identifies the means by which those goals will be pursued.
>
> Any proposal which falls outside the limits of the Role Statement, or which does not gain unanimous support of the membership through the consensus procedure, will not be undertaken by the Steering Committee.
>
> This Operating Philosophy should result in direct benefits to each participating member and his/her group. These would include increased experience in consensus

decision making, expanded knowledge about natural resources and their users, clearing lines of communication, professional contacts and final plans that are truely multiple use oriented.

Land management agencies benefit by improved efficiency for input to the federal planning processes. The level of cost savings will vary but litigation and other potential court expenditures should be diminished resulting in dollars being channeled into problem solving rather than adversarial encounters with various user groups.

Sam Millazzo
Regional Supervisor
Nevada Department of Wildlife

* Presented to the State CRMP Executive Group, February 25, 1986 in Reno, Nevada.

COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF NEVADA RENO

Department of Range, Wildlife & Forestry
Renewable Resources Center
College of Agriculture
University of Nevada Reno
1000 Valley Road
Reno, Nevada 89512
(702) 784-6763

April 24, 1986

MEMORANDUM

TO: CRMP Executive Group

FROM: Task Group: Wayne Burkhardt, Chairman (Ex)

SUBJECT: Recommendations Concerning Nevada CRMP

The following table briefly summarizes the planning accomplishments of the local CRMP committees active in Nevada since 1980. This summary is based on the more detailed report enclosed with Tom Ballow's letter of April 11, 1986.

CRMP PLANNING ACCOMPLISHMENTS

Local Group	Number of Plans Completed
Elko	3
Glenbrook	1
Gerlach-Hualapai	0
Reno	1
Eureka	1
Lander	0
Tonapah	5
Bridgeport	2
Winnemucca	4
Lovelock	2
Modoc-Washoe	28
Clark	4
Ely	0
Lincoln	34
Sheldon	1

There are obvious differences in local planning accomplishments. the Task Group believes that CRMP accomplishments are in part related to the manner in which CRMP efforts are organized and conducted. With the intent of improving the effectiveness of CRMP in Nevada the Task Group submits the following recommendations for the Executive Groups considerations.

1. Role of agency participating in CRMP:

   Public land planning is a mandated agency activity and CRMP can be an effective process for accomplishing good planning. To work effectively the lead agency (agency with management responsibilities for the land and resources being planned) should play a dual role in consensus decision making:

   a. The lead agency must take the lead by providing the logistic & technical support necessary to drive the process and assure accomplishments.

   b. The lead agency should participate within the CRMP decision making process as an equal to any other participant. There is an important distinction between the agency driving the process verse driving the decisions.

2. Training for agency participants:

   Effective participation in consensus decision making is an acquired skill. Training should be provide via:

   a. workshops on consensus decision making

   b. agency CRMP handbook or guideline

3. Keeping CRMP meetings on track and productive:

   Often it is nearly impossible for a CRMP chairman to keep a meeting moving in a productive manner and at the same time effectively participate in the decision making. Well define agenda and the use of facilitators have proven effective in preventing "townhall" type CRMP meetings. There is a need to provide facilitator training and trained facilitator services to local CRMP efforts.

Range Monitoring Workshop

Date: Tuesday June 24, 1986 at 10:00 A.M.
Location: B.L.M. Office Cedarville
For: Local B.L.M. & Forest Service Permittees

Agenda

10:00 → 10:30 : Overview of Monitoring – Wayne Burkhardt
How an annual assessment of: trend, photo points etc. tie together to give a picture of the overall condition of an allotment.

10:30 – 10:50 : Riparian Considerations - Paul Bailey, F.
Key points which need to be considered when evaluating a riparian area.

10:50 – 11:10 : Utilization – Rick Cooper, B.L.M.
Actual use mapping and key area assessment.

11:10 – 11:30 : Stockmans Diary – Rick Delmas, Farm Advisor
Its purpose and significance.
What should be included in it.

11:30 – 11:50 : Photo Points – Wayne Burkhart, Univ. of Nev.
There usefulness and how to establish them.

Travel to the field: b/t 11:50 – 12:30

Lunch at a Riparian area followed by a discussion of the Riparian Area and Adjacent Area and Management Implications

Insert #1

~~Lee~~ Wynarda

Attachment #3

Yankee Jim and Lassen Creek Allotment

Assignment to TRT's:

Objective: Analyze the allotment, the Forest Plan data and proposals, and develop consensus recommendations on (1) a preferred alternative for the Forest Plan, and (2) developing an AMP. → the allotment

Suggested tasks:

1. Review the validity of forage production figures.
2. Review the livestock operations in the allotment.
3. Review deer numbers and deer herd plan for Warner Mountains.
4. Review all resources and their interrelationships, included redband trout, riparian areas, wilderness values, and water quality.
5. Consider ability to implement, subject to budget, etc., and indicate funding needs.
6. Develop consensus recommendation to Stewardship Committee, including (1) an array of alternatives and a preferred alternative, and (2) an AMP.

Lazy B Cattle Company
ESTABLISHED IN 1880

P. O. BOX 550
Lordsburg, New Mexico 88045

P. O. BOX 188
Duncan, Arizona 85534

HARRY A. DAY, PRESIDENT
H. ALAN DAY, MANAGER

TELEPHONE
(602) 359-2318

Mar 26 1986

Mr. Robert F. Burford
Main Interior Building
18th and C Streets N.W.
Washington, D.C 20204

Dear Mr. Burford;

Enclosed please find my proposal for grazing on B.L.M. lands that we discussed on my recent visit to Washington. Also enclosed is an evaluation by the district of my proposal. I feel the idea has merrit and would like to pursue it for all the stewardship areas . I would be most happy to talk to you or your staff about any changes or additions to this bid since it is a preliminary bid and may need changes or additions.

Thank you for your consideration on this matter.

Alan Day

Alan Day

A CONTRACT BID PROPOSAL FOR A GRAZING FEE AND RANGE IMPROVEMENTS ON PUBLIC LANDS

Submitted by LAZY B CATTLE CO.

To The BUREAU OF LAND MANAGEMENT U.S.D.I.

This is a proposal of the Lazy B Cattle Co. to contract with the Bureau of Land Management U.S.D.I. for a joint grazing fee/ range improvements package over the next ten years.

BACKGROUND

The Lazy B Cattle Co. is located in southeastern Arizona and southwestern New Mexico and grazes livestock on public lands administered by the BLM, Safford District. The current grazing preference is 3,075 CYL at 73% federal range or 26,937 AUM's (BLM). Average use however has been at about 20,000 AUM's (BLM). The remainder of the grazing is on Arizona and New Mexico state lands and private land.

The Lazy B Cattle Co. has been in the livestock business at this location since 1880 and under continuous ownership by the Day family since that time. Alan Day is the current manager and has been for 25 years. The condition of the range resource varies from fair to excellent with a majority in good condition.. Trend appears to be upward overall, but many areas could be improved through more intensive management.

Lazy B's management efforts and varied resource potentials allowed it to be included into the Experimental Stewardship Program in 1980. Since that time management has been very aggressive in applying new and innovative grazing practices and range improvements. These have been very successful and Lazy B has been recognized as one of the most accomplished individual ESP's.

Producing beef on public lands involves a great number of non-fixed variables which make planning difficult and expenditures tight. Payback on costs for range improvements are uncertain and lowers the incentive for private investment. This in the end is reflected by range resource conditions. Based on the success Lazy B has seen over the last five years, it would like to expand and further intensify it's management efforts to improve range conditions, produce beef and stablize production fluctuations through sustained yield of the forage resource.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
SAFFORD DISTRICT OFFICE
425 E. 4th Street
Safford, Arizona 85546
(602) 428-4040

IN REPLY REFER TO:

4120
(045)

APR 10 1986

Mr. Alan Day
Lazy B Cattle Company
Box 188
Duncan, Arizona 85534

Dear Alan:

It is always a pleasure to review and respond to your inputs on how (together) we can improve management of the public lands. As a participant in the Experimental Stewardship Program, I commend you on your enthusiastic approach in exploring innovative and cooperative grazing management policies and systems.

I have received and reviewed, with my staff, your proposal to contract grazing fees and funding for range improvements with BLM through the next 10 years. It appears that this proposal contains two major thrusts. 1) If you knew what the grazing fees would be (even if they were higher than present) during this time period, that you could better plan your overall management and in particular the development of improved grazing management. 2) As an off-shoot of a stable grazing fee you would be more willing to place private investments into range improvements on public lands. I can agree with you and support these basic concepts. However, the specifics of how we set a fixed grazing fee and give credit for range improvements is uncertain at this time.

The following are concerns I have with this proposal.

1. 4130.7-1(a) of the grazing regulations states that "Grazing fees shall be established annually by the Secretary". There are no regulations pertaining to a contract for grazing fees. For these reasons I will need to send your proposal through channels to the Secretary of Interior for his approval.

2. As you know I am not currently authorized to give credits on grazing fees for range improvements. Grazing fee credits for range improvements were only authorized on a few Experimental Stewardship Plan (ESP) areas. However, since your proposed grazing fee is greater than the current grazing fee, then there is no actual credit, therefore, it looks as though we could do this now. This may change during the ten year period, if the grazing fee increases.

Unfortunately, due to the grazing fee controversy and drying up of available 8100 monies, it is difficult for Lazy B to plan and justify the cost of intensified management and range improvement projects. In specific, it is doubtful that the $15,000.00 of 8100 monies promised to Lazy B for project work each year for the next 5 years will be available. Therefore, Lazy B Cattle Co. would like to propose a higher but fixed rate of payment per AUM over a 10 year period with a portion of that credited back to Lazy B to be used for range improvement projects. These projects will all be placed on public lands and appropriately cleared through the Safford District Office.

This proposal is designed to fit within Section 12 of ~~PLMPA~~ PRIA. It is an innovative approach that will encourage private investment in improvements on public lands and provide greater stability for the steward so he can better plan on a long range basis. It is hoped that this proposal will be a model all stewardship areas could use if they so desire.

PROPOSAL

1987-1993: $2.00 per AUM
$1.50 paid to BLM
$ .50 credit to Lazy B for range improvements

1994-1997: $2.30 per AUM
$2.00 paid to BLM
$ .30 credit to Lazy B for range improvements

Example based on 1985 actual grazing use.

1987-1993:

$2.00 per AUM
$1.50 X 19,240 AUM's = $28,860.00 paid to BLM
$0.50 X 19,240 AUM's = $ 9,620.00 credit towards range improvements
38,480.00 total grazing fee

1994-1997:

$2.30 per AUM
$2.00 X 19,240 AUM's = $38,480.00 to BLM
$0.30 X 19,240 AUM's = $ 5,772.00 credit towards range improvements
44,252.00 total grazing fee

3. In your Lazy B ESP, and defined in a letter dated 09/06/84, we made a "commitment to fund range improvements in your allotment for up to 50% of the yearly grazing fees paid or $15,000 per year" over a 5 year period. Under current budget constraints we were unable to meet this commitment this fiscal year. If we accepted your proposal, I feel we would no longer be committed to you for these range improvement funds making them available for other project work.

4. This proposal fits with Bureau policy of attempting to increase private investment on public lands by users.

5. This proposal will not adversely affect multiple use of the public lands. In fact, it will enhance the range resource, wildlife habitat, and the watershed through improved grazing practices and range improvements.

6. It would be difficult to apply this proposal to all operators individually due to the differences in each operation. Therefore, it will need to be limited in its application until some of the bugs are worked out. Limiting the use of this concept to ESP will give us the time necessary to develop criteria for expanded use. One of my main concerns is to make sure that any system we use is equitable to everyone.

I understand that you will attempt to get other ESP areas involved and that you do not intend to be the only ESP to enter into such a contract. While you work on that, I will try to come up with direction how we can possibly implement this. Therefore, I am forwarding a copy of your proposal, and of this letter, to the the State Director for further processing. I will keep you informed of anything that develops.

Sincerely,

Les

Lester K. Rosenkrance
District Manager

HOLISTIC RESOURCE MANAGEMENT MODEL

GOAL

QUALITY OF LIFE
PRODUCTION AND LANDSCAPE DESCRIPTION

ECOSYSTEM BLOCKS

Succession | Water Cycle | Mineral Cycle | Energy Flow

TOOLS

Money & Labor (Rest | Fire | Grazing | Animal Impact | Living Organisms | Technology) **Human Creativity**

GUIDELINES

Whole Eco-System

Soc./Cul. Aspects
Human Resource
Skills
Organiza-tion

Weak Link

Cause & Effect

$ Marginal Reaction
Gross Margin

Biological Plan & Control

Time Growth Rate

Stock Density

Herd Effect

Population Control

Burning

Flexibility
Strategic
Tactical
Opera-tional

$ Plan
Monitor
Control
Replan

Insert #2

Attachment #8

RIPARIAN DEMONSTRATION PROJECT -- PROPOSAL 4/24/86 FOR DISCUSSION

Riparian areas are the most productive of range vegetation types as well as the most sought after by many users. To an environmentalist, riparian areas are the bellweathers of rangeland conditions. If the riparian zones are thriving, chances are the surrounding range is also in good shape.

Background:
As you know, the Modoc-Washoe Experimental Stewardship Committee has had riparian improvement as a stated objective for years now. It shows up in the Cowhead-Massacre and Tuledad-Home Camp EIS's and MFP's, in many TRT agreements, and in many AMP's. The ESP Report to Congress reports at length on riparian benefits in the Home Camp Allotment (p. 49). True, some progress has been made. Much of is has come from on-the-ground work by BLM and TRT's and permittees, on the allotment level. Much more can be done from the Stewardship Committee level.

In the past, riparian improvement has not received primary attention and direction at Stewardship meetings (with a couple exceptions). Discussions have ended in disagreement. The September 27, 1985 Minutes leave an impression that "more damage (is) done by natural causes than livestock." There is little consensus on the problem of riparian degradation, let alone the solutions. To my knowledge, there is no pilot project underway to document how to improve riparian zones in the Stewardship area. However, BLM this year is giving a higher priority to riparian areas and their improvement.

Proposal:
With five years of Stewardship behind us, it seems the time is right to start a demonstration project for riparian improvement. The primary objective would be to restore a degraded stream to health. Secondary objectives would be to experiment with various techniques, scientifically document that work, and communicate the results to the public, agencies, and researchers.

Possible Area(s):
One area that may meet the needs is the Hays Canyon area. It is close to Eagleville and easy to drive to with highway vehicles. It shows a variety of stream conditions from good to really awful. The creek flows through stable headwaters, then a deeply-downcut gully in a meadow, through some willows, then out through a rock-lined stream bed. It has good potential for structural rehabilitation. It is now under a grazing system giving early-season grazing only, and hot-season rest, which will benefit riparian vegetation. This will benefit permittee and environment alike. It lies in a picturesque rocky canyon. And, it is in the Home Camp Allotment, one of Stewardship's very first projects. There are other possible areas, as well.

Recommendations:
1. That the Stewardship Committee begin a riparian demonstration project.

2. That clear objectives be agreed on early.

3. That monitoring, and documentation of the progress (including photos), be a top priority.

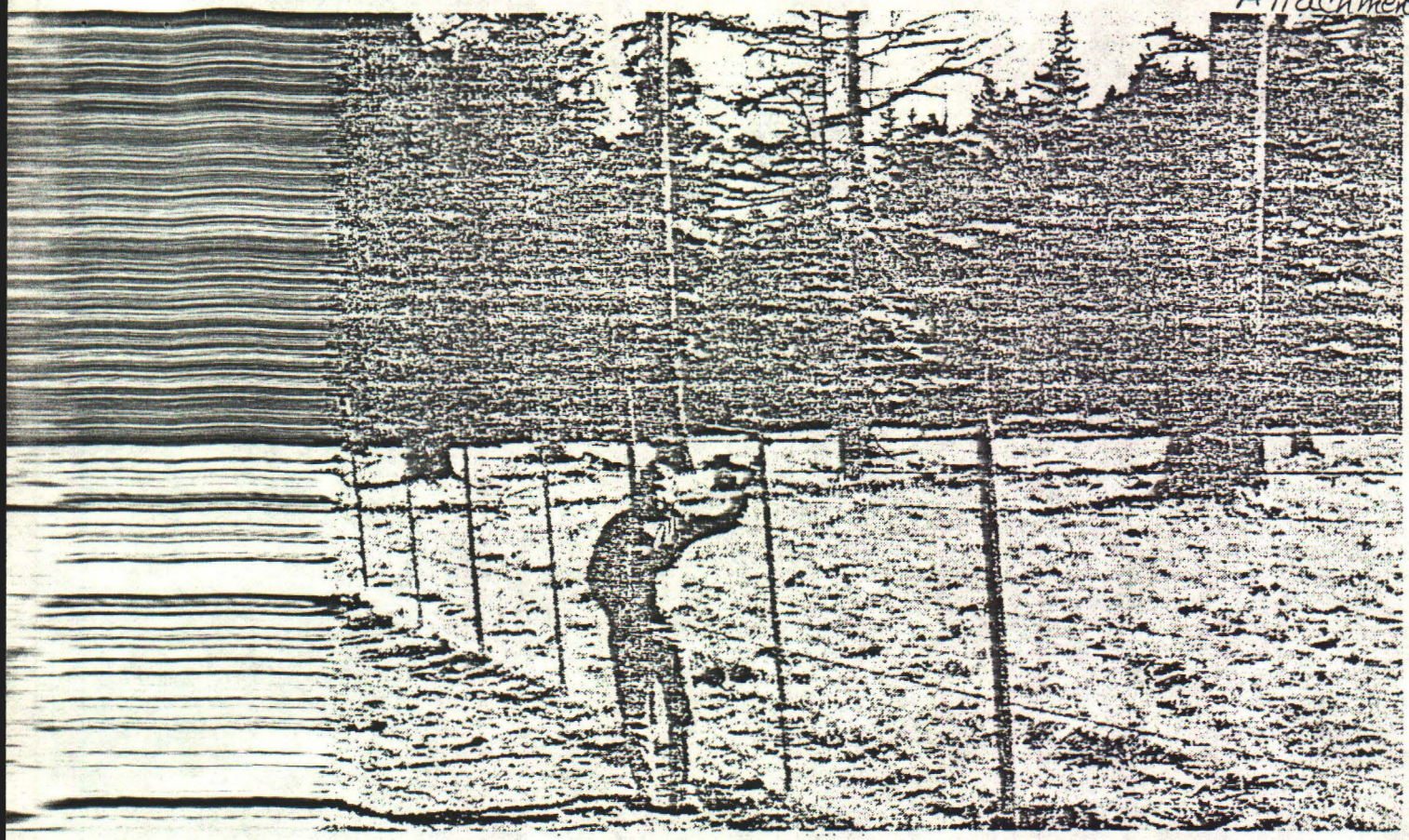
4. That the Committee not burden agency staff with any extra work in implementing this project.

5. That the Committee not delegate it to a subcommittee, but take it on as a full Committee.

6. That Committee members contact those in academic/research sectors who may be interested in both helping with and benefiting from such a project.

Chris Spring 4/24/86

VF 83 [illegible] Attachment #9



onditions on either side of this fence highlight grazing management's importance in the high country range area. e of the fence is managed grazing, with deer and elk excluded. Wildlife biologist Larry Bryant stands on the near d grazing occurs.

h Country Streams, Cattle Are Compatible

Ongoing Oregon Study Shows Streamside Pastures Can Be Improved, nd Maintained, Through Controlled Grazing

orest and Range

High country streams and cattle are compatible — if appropriate grazing plans are used.

A comprehensive range research project, initiated in 1976 in the Blue Mountains of Oregon, indicates depleted streamside zones can actually be rejuvenated while sustaining grazing — if cattle are on a regimented grazing system, and pastures receive less than 70 percent of their potential use.

The eastern Oregon study is the most comprehensive of its kind in the United States. It's providing an ongoing look at cattle grazing's impact on water quality, fish habitat, streambank soil erosion and compaction — while also assessing the importance of streambanks for beef production.

The research is centered in the 29,652-acre Starkey Experimental Forest and Range on the Wallowa-Whitman National Forest, with elevations ranging from 3,740 to 4,940 feet. The area already had a considerable documented grazing history.

Four miles of Meadow Creek were divided into four phases with five units within each. A combination of grazing prescriptions are used in the units: season-long, rest-rotation, deferred-rotation and no-use, plus fenced-in control areas. In all, there are 19 different streamside test areas involving more than 30 miles of fence.

After six years of detailed measurement and data collection, wildlife biologist Larry Bryant is convinced nothing is more important to streambank zones than tight control of cattle use.

In uncontrolled situations, overgrazing easily occurs because cattle prefer these areas. Nutritious vegetation there is especially attractive; in summer, cattle like the environment.

As a result, they tend to spend a disproportionate amount of time in these habitats compared to upland areas. If not controlled, the situation can result in overuse and damage. But, the studies have shown proper management can alleviate damage, enhance growth of desirable vegetation, and protect water quality while sustaining grazing by livestock.

Streamside areas that have a high value for grazing should be managed as separate pastures with some type of rotation grazing system, Bryant believes. This doesn't mean streams must be fenced corridors. He says other pasture configurations, depending on the location and topography, can be installed.

Grazing these pastures late in the season can produce better use of the up-slope grazing areas, and can reduce grazing impact on the streambank zone, he adds.

Looking at the environmental impacts of cattle grazing, Bryant found that no matter which of the various grazing strategies was used — as long as grazing use was moderate — productivity of the flood plain vegetation improved.

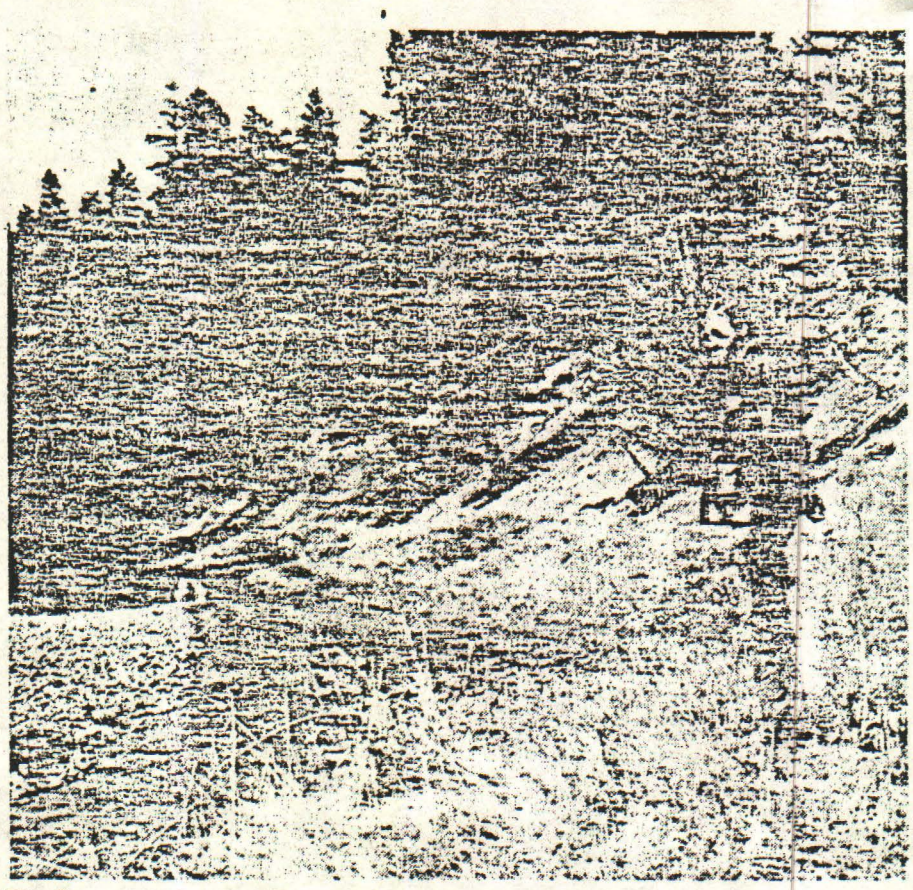
During the six years of moderate grazing on Meadow Creek — both with and without grazing by free-roaming deer and elk — the stream's banks showed continuing recovery from earlier overuse.

Moderate grazing intensity has increased grass production "three times straight across the board," Bryant reports. "This shows that with proper management, an overused or unproductive riparian (waterbank) zone can be improved."

Cattle production is also being monitored. The conclusion so far: There is no difference in overall weight gains between grazing systems, when all pastures are stocked at a moderate rate and maintained through a complete grazing system.

Bryant found the greatest impact on the streambank zone during the study has been nature.

"We had an inkling about the impact of ice flows here during the winter," he notes. "And, we knew that heavy icing occurred with some damaging effects to the stream channel every 10 years or so."



The Oregon study uses 19 streamside areas where different treatments are being compared. This area along Meadow Creek hasn't been grazed since 1974. Bryant says streams don't need to be fenced corridors, but they should be managed with some type of rotation grazing system.

The winter of 1980-'81 showed how extensive this damage could be: It altered streambanks many, many times more than the most intensive cattle stocking levels used in the study.

The impact of the winter's ice flow were obvious — streambanks undermined and vegetation scoured away. Future stream flows and icing conditions may finish what was started — realignment of portions of the stream itself.

None of the grazing systems affected the quality of Meadow Creek's water, as defined by the water quality standards of the Environmental Protection Agency. Studies of water quality at Starkey show cattle grazing can introduce fecal coliform into the water, but analysis reveals it is well below the EPA standards for nonpoint pollution in dispersed recreation areas, regardless of the grazing system at moderate stocking levels.

The research at Starkey still has some problems to address. As part of the program to restore the depleted banks of Meadow Creek, researchers wanted to plant trees and shrubs to decrease stream temperatures by increasing shade cover. The shading is necessary because stream temperature should not exceed 70°F for certain fish species.

They had little success planting trees such as Douglas-fir, spruce and lodgepole pine on cutover land. Only pine showed limited success. Bryant wants to involve research foresters in the study, to see if it is possible to regenerate forest species on the flood plain.

Eight species of shrubs were also planted on the flood plain, but only willows had a high survival rate. Willows are important along streams, however, for shade, streambank stabilization, fish cover, as a link in vegetative structure, and as a source of organic matter.

Growth of the planted willows is slow. Bryant says careful planning is necessary to know moisture levels available to shrubs during critical growing periods, and to select appropriate species and areas for planting.

Studies in the Starkey Experimental Forest are slated to continue into 1987. During the next five years, the same grazing systems will be maintained, with careful monitoring, to see if there are changes between systems over time. Work will also continue on streambank revegetation, as will efforts to improve fish production in the stream. ⊏

Reprinted from: Archer, Donald L., ed. Proceedings of the Bonneville Chapter of the American Fisheries Society; 1984 February 8-9; Logan, UT. Salt Lake City, UT: Bonneville Chapter of the American Fisheries Society; 1984: 78-84.

PROGRESS IN RANGE RIPARIAN-STREAM RESEARCH AT THE INTERMOUNTAIN FOREST AND RANGE EXPERIMENT STATION

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Boise, Idaho 83702

ABSTRACT

Eight options are available for land managers to use in managing range riparian-stream habitats. These options vary from the elimination of grazing until recovery occurs, to complicated grazing strategies. Options with the best opportunity for maintaining and improving riparian-stream habitats are the inclusion of the riparian pasture, fencing streamside corridors, changing the kind of livestock, and adding more rest to the grazing cycle.

INTRODUCTION

The management and improvement of range riparian-stream habitats is still in its infancy and research is only now beginning to yield significant results. Presently there are only eight major approaches for land managers to consider in managing range riparian-stream habitats for multiple-use objectives:

1. Eliminate grazing completely or until recovery occurs.
2. Reduce stocking numbers.
3. Implement specialized grazing strategies including the riparian pasture strategy.
4. Improve livestock distribution.
5. Change the season of forage use.
6. Change the kind and class of livestock.
7. Fence the riparian zone or streamside corridor to exclude livestock.
8. Rehabilitate by planting vegetation or adding artificial stream structures.

How effectively these approaches are applied to meet the needs of the different range riparian-stream habitats determines the ability of these habitats to produce forage and fish. Research

efforts at the Intermountain Forest and Range Experiment Station in Boise, Idaho, relates to each of these options. A brief evaluation of each management approach is developed and integrated with some of our research findings. In addressing these eight major options, "do nothing" was not considered even though it has been commonly used since the turn of the century. In the last 50 years, however, range managers have made continued accomplishments in better managing the nonriparian part of the range that is now spilling over into the riparian part. Advancements in management and research of riparian habitats now make the "do nothing" option obsolete.

ELIMINATE GRAZING

Studies on Big Creek, Utah, Tabor Creek, Nev., and Horton Creek, Idaho (Platts 1981, Platts and Nelson in press c, Platts and others in press) demonstrate that range riparian-stream habitats degraded by livestock over grazing can be rehabilitated once grazing has ceased. The elimination of forage use, however, may not meet multiple-use objectives and may not be a viable economic social, or political solution.

Eliminating grazing in critical areas until habitat recovery occurs is a viable option at this time, however, until research finds ways to rehabilitate riparian-stream habitats while the commonly used grazing strategies are being utilized. Methods that may replace the need to eliminate grazing are discussed later.

REDUCE STOCKING NUMBERS

Since the 1930's reducing stocking numbers has been one of the most common and successful options used for addressing over-grazing problems. Because of the attraction cattle have for riparian habitats this option by itself seldom solves riparian problems when the reduction is determined to fit the needs of the nonriparian range. Our studies (Platts and Nelson in press b and c) show that streamside forage can be overutilized under most of the commonly used grazing strategies while adjacent range and overall pasture forage use may be within the acceptable limits called for in the allotment management plan. Because livestock are selective grazers on both plants and over pasture areas, the reduction of stocking intensity must usually be combined with one of the other options, such as animal distribution, to achieve successful results in riparian habitats.

IMPLEMENT SPECIALIZED GRAZING STRATEGIES

The chief goal of a specialized management strategy is to maintain or improve livestock production, while maintaining or improving rangeland conditions by controlling the numbers, kind (cattle or sheep), class (calves, steers, cows), and distribution

of livestock. Commonly used grazing strategies, however, were developed primarily to increase the production of nonriparian grasses and forbs (Heady 1975). Therefore, the application of these strategies to enhance riparian habitats has been mainly unsuccessful. Meehan and Platts (1978) and Platts (1981) were unable to identify any widely used livestock grazing strategy that was capable of maintaining high levels of forage use while rehabilitating damaged streams and riparian zones. One of the main reasons is that range management practices historically combined different vegetational habitats into one management unit. Therefore, special management of riparian and stream habitats was difficult to implement and rarely obtained. Furthermore, our research has not been able to demonstrate that any grazing strategy will work under heavy grazing intensity.

Some specialized grazing strategies look promising for rehabilitating degraded riparian habitats. One of our studies showed that a rest-rotation sheep grazing strategy with good herding and favorable stocking density had undetectable impacts on the riparian-stream habitats (Platts 1981). This study demonstrated that under good sheep management riparian-stream habitats can be maintained and even improved.

A double rest-rotation grazing strategy (1 year grazing, 2 years rest) for cattle was used with success on pastures surrounding Johnson Creek, Idaho. Good riparian habitat conditions were maintained. The single rest-rotation strategy appears to be quite successful if grazing intensity on riparian zones can be maintained below 25 percent (Platts 1981). Most grazing strategies, with inclusion of the riparian pasture strategy, can be successful (Platts and Nelson in press a). A special management riparian pasture set aside within a large allotment can be managed to achieve a riparian vegetation response (Platts and Nelson in press a). This approach provides the best opportunity for maintaining or improving riparian-stream habitats. Some commonly used grazing strategies could become compatible with riparian protection under this approach.

Cattle were stocked in 11 of our Idaho study sites, which functioned similarly to riparian pastures. These cattle were stocked to achieve specific forage use levels. The use of nonriparian forage normally exceeded that of streamside forage by an average of 10 percent. This is just the opposite trend that normally occurs under overall allotment management. The time and location of grazing in the special riparian pastures can be controlled much more efficiently than in the large allotment pastures.

IMPROVE LIVESTOCK DISTRIBUTION

This is one of the most difficult options to work with (except when sheep are the grazers) because it is not easy to counter the natural attraction of livestock to riparian zones. Range managers

have had difficulty developing grazing strategies that improve the unbalanced animal distribution pattern that develops between riparian and nonriparian habitat types. Our studies in the Great Basin and Northern Rocky Mountains (Platts and Nelson in press b and c) show that under the commonly used grazing strategies (mainly rest-rotation, deferred, and season-long continuous) forage use on streambanks averages 25 percent higher than on the adjacent non-riparian lands. Use on streambanks along Gance Creek, Nev., was as much as 60 percent greater under a deferred grazing strategy (Platts and Nelson in press b). Consequently, if the range manager employs even a moderate overall grazing intensity, the streamside zone could be receiving heavy grazing. The options need to be improved to handle livestock distribution.

CHANGE SEASON OF FORAGE USE

Whether anything can be gained by changing the season of forage use alone is still unclear. In our studies the time of grazing appeared to affect the use of streamside vegetation in high elevation mountain meadows. Streamside forage use compared to adjacent range averaged 13 percent greater during late grazing, and was only 9 percent greater during early grazing. This relationship suggests a general tendency for cattle to avoid certain streamside zones early in the season when soils and vegetation may be quite wet. Early grazing, however, can cause accelerated damage to water-saturated streambanks from caving caused by hoof trampling. Bryant (1982), however, found that in the Blue Mountains of Oregon just the opposite occurred.

Fall grazing, after streambanks have dried out and toughened up, removes the vegetation mat needed to buffer streambanks from floods or next spring's high flows. With no vegetative mat covering the streambanks, high flows have direct access to the exposed streambank soils causing high erosion rates. When considering a change in the timing of forage use as a management tool, each riparian and stream habitat type must be considered separately.

CHANGE KIND AND CLASS OF LIVESTOCK

Reverting grazing allotments from cattle to sheep could improve many riparian-stream habitats (Platts 1981). Agencies and private operators are still in the process of converting sheep allotments to cattle. Under present economic, political, and social conditions there is little opportunity to change livestock use to best fit the needs of the riparian-stream habitat. I know of no published account where this option has been used for improving riparian habitat. Research has not attempted to determine if benefits to riparian habitat could be gained by using certain classes of livestock.

FENCE RIPARIAN STREAM CORRIDORS

Except for eliminating grazing entirely, fencing the riparian-stream corridor provides the best chance for rehabilitating degraded riparian habitats in the shortest time. Our studies generally show that when the riparian and stream habitats are fenced to exclude grazing, riparian habitats improve quickly, stream morphology improves slowly, and fish populations may or may not improve depending on whether the population limiting factors were affected by fencing (Platts 1981, Platts and Nelson in press c). Our Big Creek studies show that because of interacting effects within the watershed, the fenced area must surround a sufficient length of stream to reduce the influence of factors developed offsite that will inhibit fish populations inside the fenced exclosures.

But the livestock industry opposes fencing as a practical solution to this problem except in rare and unusual cases (Swan 1979). When evaluated by itself, fishery use to make fencing economically feasible would have to increase by 47 recreation visitor days per mile of stream per year (Platts and Wagstaff in press). To fence or not to fence in order to improve riparian and stream habitat has become a political and economic question. Consequently, fencing is not an easy solution for riparian stream rehabilitation.

REHABILITATE BY PLANTING RIPARIAN VEGETATION OR ADDING STREAM STRUCTURES

Vegetation manipulation is a common range management option, but more study is needed concerning the effectiveness of this rehabilitation technique in riparian zones. Our studies, still in the beginning stage, show that artificial planting of riparian vegetation using good methods can be productive under rested (non-grazed) conditions. Whether these plantings will prove to be a viable enhancement and rehabilitation tool under moderate to heavy grazing will need further study. Potentially, revegetation of damaged riparian-stream habitats may offer a valuable alternative to other techniques such as fencing.

The success of rehabilitating streams in overgrazed ranges with artificial stream structures is mixed. Projects can either succeed or fail even though the stream structures survive and perform to perfection. In Big Creek, 17 instream improvement structures were placed inside and outside an exclosure in 1970. An additional 26 structures were placed inside the exclosure in 1971. The structures inside the exclosure were successful in creating good water column form (pools and riffles) and helped establish dense streambank vegetation. The structures in the heavily grazed area failed; therefore, there was no improvement in the stream or riparian habitat. Trout populations did not respond to the improved habitat conditions that occurred in the Big Creek exclosure. Limiting conditions in the water column generated from upstream

sources, such as detrimental temperature, turbidity, and nutrient conditions, were probably responsible. Stream structures attain their rehabilitation potential only within a complete watershed approach (Platts and Rinne in press).

CONCLUSIONS

Different options are available for land managers to use in making livestock grazing compatible with riparian-stream habitats. Research has shown that degraded riparian-stream habitats can be rehabilitated, but social, political, and economic conditions often do not allow simple solutions. More research directed toward the more promising options and more emphasis by landmanagers on using these options is needed for better management of riparian-stream habitats.

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U.S. GOVERNMENT PRINTING OFFICE: 1984—576-040/10,516 REGION NO. 8

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