

G
Supervision

San Francisco, California
July 10, 1935

MEMORANDUM FOR MR. SWIFT -

The following is a tentative outline of your duties during the coming year:

Work with Mr. Johnson, or alone, in contacting Supervisors on regional plans for game studies. It will be necessary to do considerable "selling" if we are to secure the material we wish and get it in uniform shape. Assist Mr. Johnson in supervision of fish and game activities and in studies and stream improvement work.

You should inventory and analyze all available data on erosion control. You should contact Messrs. Kramer and Kraebel on a survey of erosion conditions which has been tentatively planned, and represent the Division of Range Management in the joint survey.

You will have direct supervision of all grazing survey work.

You should inventory and analyze all material on administrative research, and take an active leadership in this work.

With the assistance of all members of this office, you should prepare a detailed outline for the course at the Feather River Training Camp, following this up to its preparation in final form.

In administrative inspections, you should give special consideration to forage conditions, erosion, the feasibility of proposed range improvements, and standards of construction of existing improvements.

A memorandum report should be submitted to the Regional Forester on all inspection trips. All of the material contained in such a report should have been previously discussed with the Supervisor or his representatives. If, through omission or impossibility, points in the report have not been taken up with the field force, your memorandum should state that this is the case.

You should keep in mind in your inspections that the purposes of the inspection are to raise the level of knowledge of the field force, to check on standards and methods, to act as a leader in range administration, and to assist the field force in the coordination of

uses, etc. Please keep in mind also that inspection policy should be helpful rather than critical, and in failures it is best to analyze causes rather than results.

In this office, Mr. Nelson's policy will be continued concerning the use of the first personal pronouns in correspondence. These are generally unnecessary, and since many letters prepared by you will be signed by others, their elimination from the correspondence of this office will avoid confusion.



F. P. Cronemiller
Acting Assistant Regional Forester

R
Special
Range Report

San Francisco, California
November 2, 1935

GRAZING SURVEYS AND MANAGEMENT PLANS

The first grazing surveys made in California were started on the Modoc Forest in 1918, and in the next three years approximately 70% of the Forest was covered. Since then other Forests ^{surveys} have been ^{initiated} covered in the following order:

Mendocino - 1917
Stanislaus - 1925
Sequoia - 1926
Lassen - 1927
Plumas - 1930.

The above were 100% surveys, but in 1933 and 1934 partial surveys were made of the Klamath, Trinity and Santa Barbara, and at present a re-survey is being made of the Modoc. It is fifteen (15) years since the original Modoc survey, ^{but} and this period may ^{not} be typical of the life of the survey data. ~~However,~~ the Modoc survey was made at the peak of a rainy cycle when forage production was abundant and, furthermore, the grazing survey idea was new and the methods not well developed. Since the original survey the dry years have caused considerable reduction in the volume of forage and the original figures no longer apply.

Grazing surveys provide the basix data for management plan develop-ments. Perhaps, the most ^{available?} valuable portion over a period of years is the map which contains types giving their location, area and values of grazing purposes. In addition to watering places are shown salt boxes, fences and other improvements, and cultural features that may enter into the use of the range. This basic map information should be valuable throughout

the life of the management plans. Frequently, grazing survey work is weak in that it does not obtain adequate information on the actual management phases. Because various members of the crew may work the same allotment there is often no chance to obtain a uniform impression of the management problems. Furthermore, the crew members are frequently too inexperienced to recognize and recommend steps to improve the management problems that do occur upon the areas they survey. However, it is always possible for the Chief of Party, or the men already on the Forest, to obtain the management information necessary; either from their own knowledge or from that of the permittee using the allotment.

Ordinarily, there would be few changes in the basic information contained in the grazing survey maps. Types change very slowly unless some disturbance as fires or logging enter the picture. Although reproduction frequently changes the type values this is a more gradual process. Above 6,000 feet elevation the change in type is ordinarily very slow and would hardly be recognized over a 15 to 20 year period unless some unusual disturbance occurred.

In California 8,642,017 acres have been surveyed by grazing crews. The average field cost has been about \$.008 an acre, and the office costs including compilation are, perhaps, half this amount making a total acre cost of \$.012. Most of areas surveyed have been worked on the extensive method and bearing with the first the amount covered by the extensive method would be from one half to two thirds. Where good topographic maps are available, and where the types are of comparatively low value and a rather large acreage, the extensive method is the most desirable. For high value

areas such as mountain meadows, and where there are private land problems, the intensive method is always used.

Administrative grazing surveys have been made at various times throughout the Region by rangers and staff men, and the present acreage so surveyed is estimated at about 2,000,000 acres. For the most part these surveys are on problem areas where specific information regarding the forage values or the land lines, is necessary for grazing administration.

For the California Region there are 939 cattle allotments and 311 sheep allotments. 723 or 77% of the cattle allotments now have management plans, and 244 or 80% of the sheep allotments have management plans. Forests covered by grazing surveys as the Lassen, Stanislaus, and Sequoia, have management plans for all allotments and the problems of numbers, seasons and distribution are over 90% satisfactory. The Stanislaus Forest is, perhaps, the finest example in the Region of a satisfactory management plan set-up. Following the completion of the survey in 1927 the recommended numbers and distribution changes were put into effect. The results have been so favorable that the actual carrying capacity of the Forest has increased and it was possible this year to increase their allowance.

On some Forests as the Tahoe, Eldorado and Sierra, the management plan situation is very satisfactory yet no grazing survey has been made. This is because the staff men and rangers have taken an active interest in the grazing problem and have developed satisfactory plans without the aid of a survey. On Forests where a survey has not been made, or where the Forest personnel is not interested in the grazing problem the plan situation is usually unsatisfactory. First of all they lack the basic information from which to build the plans and without interest the grazing problems are al-

lowed to go without correction. Certainly, the plan development is in need of some active interest on every Forest, although it does not matter whether this comes about through grazing surveys or interested personnel.

One of the advantages of grazing surveys is that it acts as a training school for future grazing personnel. On the surveys they learn the importance of knowing various plants and especially the more valuable or so-called "key" specie. Since utilization is one of the things they are constantly studying they acquire the ability of recognizing the degree of use wherever they may be. Utilization is the greatest problem in Range Management and, therefore, the training young men receive on surveys will always be invaluable to them in range inspection work.

Wednesday
Feb 1937

Bob:

Received your airmail yesterday. Taltst and I had been wondering about your arrival, so were glad to get something "official".

Sounds as tho the Southwest is off to a good start. I am afraid the California situation will be quite a shock by comparison. The W. R. C. office is down to bedrock. Johnson in Washington, Donahut on 3A, and I am now putting out the Annual Fish & Game Report. Besides the above, Utilization is at a standstill because my successor has not been selected and moved to S. F. The Experiment Station, I believe, is in about the same fix. Understaffed, and only part of them on hand. Although Larry Short is helping Taltst now, it is my understanding that he will soon return to Missouri.

A decision that I have just made will further upset or delay the work. My doctor has

copy sent
Chapman
R.H.

convinced me that it should have
my gall bladder removed. Since it
apparently must be done some time, I
thought it would be best to do it
right away - that is, when I leave the
R.O. It is supposed to incapacitate
me for a month or so. I believe it
will take the rest of February to
clean up my R.O. work, so that
would keep me off utilization until
March one, or possibly 15. Would have
helped you to have known this sooner,
but, as I said, this just now developed.
Here I am sending this letter airmail
so that you will be at least a week
forewarned, and possibly can spend
some spare time in the S.W. to
advantage. I sincerely regret having
to take so much time off now, but
I should make me a better man
afterwards. Of course, you should tell
Chap and those immediately concerned,
but until the thing is done would
prefer that the gall bladder be
confidential.

Lloyd

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

February 26, 1937.

MEMORANDUM TO DR. W. W. STOCKBERGER
Director of Personnel.

Dear Dr. Stockberger:

With reference to the recommendation for Lloyd W. Swift as Forest Ecologist in Berkeley, California.

Mr. Swift will report to Dr. E. S. Campbell, Senior Forest Ecologist, P-5, in charge of the western-wide study of utilization standards on the National Forests. Both Dr. Campbell and Mr. Swift have been given headquarters at Berkeley, California, primarily for convenience in handling the project. Office space will be furnished them by the California Forest and Range Experiment Station at Berkeley, but they will not report to the Director of this station. Dr. Campbell reports directly to me as Chief of the Division of Range Research. Mr. Swift will be Dr. Campbell's main assistant and will report through Campbell to the Division of Range Research in Washington.

^{most of} The work of the project will be handled by men assigned specifically for this job by each of the western regions and each of the western experiment stations. These men will report to Dr. Campbell through the regional foresters and directors of the experiment stations, respectively.

Very truly yours,

W. R. Chapline,
Chief, Division of Range Research

WRC:rm

Copy for Campbell at Berkeley.

FOR MR. SWIFT

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
CALIFORNIA REGION



ADDRESS REPLY TO
REGIONAL FORESTER
AND REFER TO

760 MARKET STREET,
SAN FRANCISCO, CALIFORNIA

6
Fish and Game

June 12, 1937.

Dear Sir:

The forthcoming publication on land utilization by Weeks, Wieslander, and Josephson for the five counties of El Dorado, Nevada, Placer, Yuba, and Butte, offers an opportunity to set forth the Sierra foothill wildlife problems. In discussing this matter with the authors, it was found they would welcome the viewpoints of wildlife technicians. As a result, it was thought desirable to have a small group meet with them at 9 a.m., June 25, in Berkeley.

The primary purpose of the meeting will be to discuss the wildlife problems common to the five counties, especially as these problems are related to the other land uses and values. One approach to the wildlife question would be by vegetative types. This would probably be the most helpful to the authors as they have already studied the vegetative factor in detail. In fact, it is expected that Mr. Wieslander's cover-type maps will be made available for the group's consideration.

A few of the things that probably should be considered are:

I. The shortage of winter deer feed in the pine belt; the possibility of obtaining migration to lower and more suitable types, or the manipulation of the cover where they now winter.

II. The effect of various practices as close grazing, burning, and clean cultivation on quail and the possibility of increasing their numbers through water development or the manipulation of the cover to give more edges.

III. The proper place of wildlife in all vegetative types. As it now stands, an area has to be unsuited to other uses before it becomes principally valuable for wildlife.

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Please advise me regarding your attendance. If June 25 is unsatisfactory to several of the group, another date might be arranged.

Very truly yours,

LLOYD W. SWIFT, Acting,
In Charge, Range Utilization
Standards Study.

(Copies sent Messrs. Dixon, Horn, Storer, True, Johnson, Weeks, Wiselander and Josephson.)

Swift *ews*

ER(G)
Management
Utilization Standards

October 27, 1937

W. R. Chapline
Chief, Division of Range Research
U. S. Forest Service
Washington, D. C.

Dear Chap:

Your letter of October 21 was more than welcome with the reassurance that the Washington Office will support our emphasis on the soil in range utilization standards.

Tentative standards prepared by Swift for Region-5, all start with the following primary objective: "To maintain the soil in its natural maturity, or if it is impaired, to return it to its natural maturity." Each standard is pointed directly toward attaining that objective. We had difficulty in putting across such a strong statement even to soils men. It probably requires modification, but at least the idea aims squarely at the situation about which Mr. Clapp expressed concern in his memorandum of October 20.

Unfortunately Mr. Clapp is correct in saying that far too many men judge utilization and grazing capacity on the forage or even on livestock alone. The way to correct that situation is through intensive training and demonstration, in which our utilization standards will be invaluable. You should have seen Swift put over his soils idea to the 35 youngsters at the Feather River Training School last week.

The soils and watershed phases are already so dominant in our thinking that I see no need to modify the plan of work. The broad objectives in the main plan are not repeated in the regional plans, which are mainly job lists for the men assigned to the study. The work could only be questioned by one who has a fragmentary concept of our program. We are trying to work out our standards for a given set of conditions, then figure out the modifications needed for major variations. For example, on certain slopes and soils our standards will call for 50% less utilization than usual, on others only total exclusion will suffice. That implies a lot of research in future years, far beyond our present mainly empirical effort. What we ask now is that the Chief's Office and Regional Foresters back off play when such standards are in shape for actual field application.

My most immediate concern is to get tentative standards whipped together in all six regions. If the slow regions can be prodded into action, I will see that the soil phases are given due attention. I will have very definite recommendations after I have completed my winter's swing through all of the regions.

Very sincerely yours,

In Charge, Range Utilization Standards

San Francisco, California
October 15, 1937

G
Supervision

MEMORANDUM FOR RANGE MANAGEMENT:

When Mr. Woodhead was here he was enthusiastic about the R-1 system of range inspection. On my recent trip there, I was able to go over much the same plans and range. My inspection was made with Mr. Sandvig and chiefly involved the Wall Creek C&H allotment on the Madison District of the Beaverhead Forest.

Herb Schwan made the grazing survey in 1926. The acreages, forage acres, etc. were compiled in the usual manner and the management plan followed closely the outline in the survey instructions of that time. All plans were typed on letter-size paper for convenience in filing but were not adapted for use in the field.

In revising the plans the primary concern was to reduce the data to the bare essentials so that it could be available and readily used by the ranger on his range inspection trips. The survey unit and allotment capacities were retained, and the type maps cut to letter size but the written plan was discarded. The new setup was bound in a letter-size binder and consists of the following, examples of which are attached:

1. A type map, colored and with unit boundaries shown.
2. A vellum overlay.
3. A blank sheet for recording inspection notes.
4. Mimeographed forms, for a summary of the essential management and use data.

The above information is carried by the ranger when on range inspection, which by the way is almost always by horseback. As he progresses over the allotment he records his route of travel by an arrowed line, plotting by symbol or a note the character and location of things observed. Then on the blank sheet an elaboration is made of the things noted on the vellum, as well as statements on the condition of the range, degree of utilization, etc. The mimeographed form also has space for recording utilization obtained, violations observed, etc.

The ranger's annual grazing report discusses each allotment on his district. By referring to the inspection notes this can be done both easily and without generalities or guessing. Depending on the system preferred, the vellum and inspection notes can be removed and placed in the allotment file each winter or left until new sheets are needed. Because a continuous record of inspections is maintained, the ranger is in a position to discuss with considerable certainty the condition of the range and the grazing practices over a period of years.

On sheep allotments, the control is surprisingly tight. The attached form 52 R-1 (with the allotment map pasted in) is given the herder or permittee each spring. When the sheep leave the forest this card is returned to the ranger. If the reported camp days consistently disagree with the management plan and inspection has shown the range satisfactory, the plan is changed. If the camp unit is damaged by exceeding the planned use, the permittee is on the spot.

A further step in close supervision of sheep is the bedground clause, a copy of which is attached. This provides for a \$10 fine for using a bedground more than one night.

My own impression of the Wall Creek allotment and plan was about this:

A portion of the spring-fall range about Hyde Creek is depleted and in need of protection. This will be obtained when a spring is developed on unused spring-fall range adjoining. The remainder of the spring-fall range observed appeared to lack vigor. However, this would seem to be due to unfavorable site conditions, as there was no apparent difference between the plants at water and salt grounds and those in remote, conservatively used areas.

Natural barriers and fences separate the summer range from the spring-fall. When well within the summer range, a depleted, eroded, moist flat was visited. From this a depleted narrows between bodies of lodgepole connected with large area of satisfactory grass. Beyond this was a live stream bed, eroded, with dead willows and poor density. I was certain these sore spots pointed to an unsatisfactory range and said so. However, during the remainder of the day a goodly portion of the summer range was inspected, and although used, the grass had culms on most all of the bunches. On casual observation the range looked unused. Thinking back, I estimated the depleted area at about 1% of the usable range area. This is certainly a most satisfactory condition.

Admittedly, this range area has certain advantages not generally enjoyed by R-5. The forest was created about the time the homesteading of the Madison basin lands took place. This gave control before unregulated grazing could injure the forest ranges and almost entirely blocked the establishment of homesteads within the forest boundary. Furthermore the range is well adapted to regulated use, having mostly areas of rolling benches, supporting large uniform grass types of high capacity.

However, these advantages do not detract from the success of the plan. The fact that conservative use has been practiced is ample proof that R-1 is in control of the situation on the Wall Creek allotment. Since the allotment carries about 1000 cattle belonging to around 10 owners, the satisfactory condition must be due to proper supervision. This supervision is real, as the inspection system already outlined ties the plan definitely to the resource and enables the ranger to make an intelligent check on present and past conditions.

Some additional comments on R-1 are:

- (1) The Supervisor replies to the Ranger's annual grazing report. I do not believe this is practiced in R-5.
- (2) The Regional Forester sets up master seasons for the Forests and the Forest can establish any season within that. For instance, there would be a master spring-fall season, a master summer season, etc.

L. W. SWIFT.