
Chapter 11

Conservation Planning on Grazing Lands

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Chapter 11

Conservation Planning on Grazing Lands

600.1100 General

General Manual 180-CPA (Part 409) establishes Natural Resource Conservation Service (NRCS) policy that guides NRCS employees as they provide assistance to clients for planning and implementing resource conservation plans.

The NRCS National Planning Procedures Handbook provides guidance on the "how to" of the planning process as related to the planning policy established by the General Manual.

The National Range and Pasture Handbook (NRPH) provides NRCS policy and the "how to" of grazing lands resource conservation planning. This handbook provides guidance and information concerning the planning process specifically for rangeland, grazed forest land, naturalized pasture, pastureland, hayland, and grazed and hayed cropland. The NRPH provides the technical guidance for developing resource information for inclusion in the Field Office Technical Guide (FOTG).

General Manual 450-TCH, Amendment 4 (Part 401) establishes NRCS FOTG policy. The local FOTG contains the technical information needed to assist clients in the development and application of conservation plans. It contains general resource information about the field office area, soil and site (range ecological sites, forest ecological sites, and forage suitability groups descriptions) information, quality criteria to be met by Conservation Management Systems (CMS's), guidance documents depicting the resource management planning thought process, practice standards for all practices applicable to the local field office area, and examples of the Conservation Effects Decision Making Process.

The Grazing Land Applications (GLA) decision support system part of the Field Office Computer System (FOCS) provides automated assistance in working with grazing lands clients to develop their conservation plans.

600.1101 Objectives

The objectives of conservation planning on grazing lands are to assist clients to:

- Understand the basic ecological principles associated with managing their land—the soil, water, air, plants, and animals.
- Realize they are part of the complex ecosystem and that their management decisions influence the ecological changes that occur.
- Realize their responsibilities and importance for protecting the environment and maintaining future options for the use of the resource.
- Develop a plan that meets the needs of the soil, water, air, plant, and animal resources and their management objectives.

Conservation plans for grazing lands include decisions for manipulating the plant community to manage the soil, water, air, plant, and animal resources. These five resources are clearly related and respond to each other in an interactive mode. On grazing lands, plants are the resource that directly affects the soil, water, air, and animal resources. Animals are resources, but they are also tools used in managing the plant resource that, in turn, affects soil, water, and air. Therefore, proper use of the grazing and browsing animals in managing plant communities is basic to achieving the desired results of an ecologically sound grazing lands conservation plan.

The major objective on grazing lands is the design and establishment of a grazing management plan that, when coupled with any necessary facilitating and accelerating practices, will meet the quality criteria for the five resources established in the local FOTG and the objectives of the client. When properly implemented, these conservation plans for ranches, dairies, and other livestock farms benefit the client, the local community, and the Nation. **Well-managed** grazing lands, along with the carbon sink they afford, the clean water and air they produce, the recreation they provide, and the plants, livestock, and wildlife they support, make a major contribution to the natural beauty of the landscape and to the maintenance of a quality and economically sound environment. NRCS assists clients to manage their grazing lands to meet their objectives and, at the same time, meet the needs of the soil, water, air, plant, and animal resources.

600.1102 Developing conservation plans

NRCS assists clients who own or control the land for which conservation plans are being prepared. It must be understood that:

- Clients make the decisions.
- Clients apply the practices and pay for them.
- NRCS is assisting them in preparing their plans.
- Conservation planning is productive when firm decisions have been made by the client. Recording practices in a conservation plan by NRCS personnel when the client has not made the decision to apply the plan, is not appropriate planning leading to resource management systems application. Conservation planning is productive when clients understand their ecosystem to the degree that their daily decisionmaking is impacted and they reflect this with decisions in the conservation plan.

For these reasons, **it is important that clients fully participate in all phases of planning.** Much of the understanding they acquire about the nature of their resources, on which they may base many of their decisions, comes during the inventory stage. Clients should know the kinds of plants on their land, how they grow, how they compete with each other, and how they respond to the intensity, frequency, and duration of harvest. Clients should also know how they can manage plants to achieve their objectives. It is essential to work on the land with the decision-maker that is empowered to make the necessary resource management decisions.

(a) Areawide conservation plan

Conservation plans generally are developed by an individual client. This client has the authority to make decisions on their property that solve the resource problems and achieve their desired objectives. An individual client's conservation plan is called a *Conservation Plan*. See the National Planning Procedures Handbook (NPPH) page 8.

Clients cannot always solve the resource problems or meet the social objectives of management through their actions on their operating unit. This is a situation where neighbors can work together to develop a conservation plan that will solve their resource problems and take advantage of a socioeconomic opportunities.

Neighbors can work together in many ways to solve resource management problems and meet their socioeconomic objectives. They can work together to:

- Develop a wildlife management and recreational hunting enterprise.
- Solve water quality problems in a stream or lake.
- Manage a riparian area that transverses their land.
- Manage a stream as a fishery and recreational fishing enterprise.
- Develop a hiking, trail riding, canoeing, or bird-watching, or similar enterprise that requires cooperation of all the landowners.

In many instances, landowners not only need to work together to solve problems and improve their socioeconomic status, but need to include public land managers, resource management agencies, cities, districts, and organizations that have a bonafide interest in the activities planned and applied on the private land because of offsite impacts. In these instances an area wide plan can be developed that coordinates the activities of all concerned. See NPPH, Areawide Conservation Plan or Areawide Conservation Assessment, page 8. Many times the Coordinated Resource Management (CRM) process is useful in assisting all the interested parties to come together for direct participation in the planning process. In this way all that have a vested interest in the management and use of the identified area can have ownership in the plan that results. See Coordinated Resource Management in the NPPH, page 11.

600.1103 Conservation planning process

(a) Preplanning

Preplanning is of major importance to the effectiveness of the planning process. Preplanning for an individual ranch or livestock farm includes the following activities.

- Gather materials and information needed for the conservation planning process, such as:
 - Maps (aerial, topographic)
 - Soils information (maps and interpretations)
 - Rangeland ecological site descriptions, forest ecological site descriptions, pasture and hayland suitability group descriptions
 - Wildlife habitat evaluation procedures
 - Conservation practice standards
 - Grazing lands job sheets (similarity index, range trend, range health, pasture health, grazed forest and naturalized pasture health, forage and livestock inventory, grazing management plan, plan narrative)
 - Equipment, such as forage clipping equipment, sharpshooter spade, knife
 - Informational material used to demonstrate techniques and principles to land managers.
 - Computer with Grazing Land Applications decision support system
- Prepare yourself for the planning effort:
 - Be knowledgeable about the basic ecological principles of pastureland, hayland, rangeland, grazable forest, and naturalized pasture in your work area and be prepared to discuss them in a manner that land managers can understand.
 - Be able to interpret maps; determine range similarity index, range trend, range health, pasture health, grazed forest health, forage value ratings, wildlife habitat evaluations, forage and animal inventories; and prepare grazing management plans and conservation plan narrative.
 - Understand all the grazing land conservation practices applicable to your work area.
 - Understand the husbandry for the livestock enterprises in the area.
- Understand the quality criteria for soil, water, air, plants, and animals as specified in Section III of your FOTG.
- Understand and be proficient in the nine steps of conservation planning.
- Understand and be proficient in the use of the GLA decision support system in FOCS to assist in the planning process.
- Determine as much as possible about clients. This allows you to understand their desires, objectives, and level of knowledge of ecological principles on grazing lands. Secure this information from notes in current conservation plans and visiting with field office personnel who may have worked with the individuals on prior occasions.
- Make firm dates with the clients and discuss the purpose of the planning dates. Ensure that they understand time requirements to schedule sufficient time for the planning dates. Arrive at the assigned time prepared for the day's work.
- Ensure that clients understand the basic knowledge and ecological principles for rangeland, grazed forest land, naturalized pasture, pastureland, hayland, and grazed and hayed cropland. Important items to know and understand are:
 - Identity of plants on their land
 - How plants grow
 - Plant vigor
 - Effects of kind, time, and degree of grazing use, lack of fire, and other management decisions on the historic edaphic climax plant community or the pastureland plant community
 - How plants compete with each other in native plant, pastureland, or hayland plant communities
 - Ecological site concept (explain the soil, plant relationship)
 - Pasture and hayland suitability groups
 - Range similarity index
 - Range trend
 - Range health
 - Forest understory reactions to canopy manipulation and grazing management
 - Forage value ratings
 - Forage production and habitat values of the different range conditions or plant communities that can exist on a range site

- Multiple use opportunities on grazing lands
- Soil erosion, condition, and contamination
- Waste management on grazing lands
- How grazing lands are managed with live-stock to protect or improve water quality and water yield
- Principles of water use by plants and how grazing management impacts it
- How grazing management can protect or improve air quality, such as odors or wind-blown dust
- Domestic animal need for food, water, and shelter
- Wildlife needs for food, water, and cover

An understanding of these basic principles by clients is essential to the grazing land planning process. Without this knowledge they cannot continuously inventory and analyze their resources, recognize problems and their causes, develop proper and obtainable objectives, formulate and evaluate treatment alternatives, plan a course of action, implement the plan, and continuously evaluate results and make improvements.

The success of a conservation plan is totally dependent upon the client's capabilities to make sound ecologically and economically feasible decisions on a daily basis. NRCS must ensure that clients have this understanding as it relates to their lands.

(b) Nine steps of conservation planning on rangeland, grazed forest, naturalized pasture, pastureland, hayland, and grazed and hayed cropland

Phase I of the planning process includes the first four steps, which are: identify problem, determine objectives, inventory resources, and analyze resource data. These four steps are interactive, usually occurring at the same time and not necessarily in the order as shown in the National Planning Procedures Handbook (NPPH). Clients generally request NRCS to assist them with particular problems they have identified. If they do not understand the basic ecological principles associated with their problems, they may have recognized a symptom as a problem and not recognized the cause of the symptom. In reality, the cause is the real problem needing treatment. For this reason, there is a logical sequence to follow in grazing land conservation planning even though the steps may occur concurrently, in any order, and may be repeated in the planning process.

After teaching or ensuring that the client understands the basic grazing lands ecological principles (part of preplanning), the first step in the planning process is to inventory resources. This is then followed by the analyze resource data, identify problems, and determine objectives planning steps. The following sections describe the planning steps in the order shown in the National Planning Procedures Handbook.

(c) Identify the problem

(1) General

When clients contact NRCS requesting assistance, they have perceived a problem and want to solve it. The perceived problem may actually be a symptom caused by the real problem. An example: the client has recognized streambank erosion occurring, and forage production is decreasing. To the client, these are definite problems, but both are symptoms of the problem of continuous grazing and poor grazing distribution. This problem has caused the plants in the pasture, particularly along the stream, to become very low in vigor and die. While doing so, they have not produced to potential and have been replaced with lower producing plants. The loss of cover and change in composition have decreased water infiltration, increased runoff, increased erosion, increased sediment yield to the stream, lowered water quality, reduced forage production and quality, reduced food and cover for wildlife, and continued to reduce forage for livestock production. The problem was not what the client originally perceived, but the lack of sound grazing management that caused the symptoms.

The NRCS objective is to help land managers recognize real problems, not just symptoms. When poor grazing management is a problem, the NRCS conservationist should not tell managers the problem is poor grazing management; instead, **the conservationist must lead them to recognize that grazing management is the problem.** This can be accomplished by helping them understand their grazing land ecosystems as described in preplanning. The process of recognizing the problem continues from preplanning through the steps of resource inventory and analyzing the resource data.

(2) Standard of recognizing problem

Land managers are led to recognize the symptoms and causes of problems through an understanding of the grazing land ecosystem and the inventory process.

(3) Activities

The activities needed to identify the problem are shown below.

What	How
Clients identify perceived problems	Personal observations, often without the knowledge required to identify the cause of the problem.
Clients develop an understanding of grazing lands ecosystems	NRCS personnel ensure that land managers understands their grazing lands ecosystems by teaching and showing them on their land.
Clients recognize the real problems, the causes of problems	NRCS assists land managers to: <ul style="list-style-type: none"> • Inventory of the resources in the grazing lands ecosystem. • Identify all the symptoms—soil, air, plant, and animal problems and potential problems—and the causes of each. • Recognize all the causes of symptoms as resource problems that must be addressed in the planning process.

(d) Determine the objectives**(1) General**

All clients have a set of objectives. These objectives may or may not include the proper management of the grazing lands ecosystem to accomplish their desired objective. If not, the reason may be a lack of understanding of all the interactions in the ecosystem.

To assist clients in the planning process, objectives must be established by them after they fully understand the grazing lands ecosystem, have inventoried the resources, and identified the problems.

When working with clients, it is often best to not ask for firm objectives until these three processes have been accomplished. Some people do not like to change their mind once they have made a firm commitment to an objective. Assist them to understand and inventory their grazing lands resources and identify the problems before they express their objectives.

(2) Standard

NRCS employee leads the client to develop ecologically and economically sound objectives.

(3) Activities

The activities needed to determine the objectives are shown below.

What	How
Client expresses management objectives	This is accomplished many times without a sound understanding of grazing lands ecological principles, resource inventories, or problems identified.
Client expresses objectives for management that are ecologically, economically, and socially sound	NRCS personnel: <ul style="list-style-type: none"> • Ensure that client understands the grazing lands ecosystems. • Assist managers in inventorying their grazing lands resources. • Assist managers in recognizing resource problems and causes. • Assist clients to establish objectives that are ecologically, economically, and socially sound.

(e) Inventory the resources

(1) General

Once the client understands the ecological principles of their grazing lands, they generally ask:

"What is the similarity index on my rangeland?"

"What are my range trends?"

"What is the range health?"

"How does my pasture compare to its potential?"

At this point the client is beginning to understand the dynamics of the grazing lands ecosystem and the fact that it is important to determine and understand as much as possible about their grazing lands. They will desire your assistance in inventorying the grazing land resources.

(2) Standard

NRCS employees assist clients in inventorying their grazing lands ecosystems and facilitating practices currently in place, current grazing management schemes, current husbandry practices, livestock performance, wildlife habitat and numbers, etc., to gain complete knowledge of current ecological and performance status. During this process the conservationist should develop an understanding of the client's resources available to implement the conservation plan.

(3) Activities

The activities needed to inventory the resources are shown below.

What

How

Secure needed materials for inventory

NRCS secures maps (aerial photos and soil maps), equipment used in the field, and technical information, such as range ecological site descriptions, forest ecological site descriptions, and pasture suitability groups.

Conduct the inventory

NRCS personnel:

- Assist the client to identify range sites, forest sites, and pasture suitability groups on aerial photos from soil interpretations and ground truthing.
- Determine similarity index, trend and health, and record on the plan map.
- Determine grazing distribution and indicate on map. Identify the key grazing sites and key species.
- Record fences, watering facilities, salt and feeding areas, bedding grounds, roads, corrals and working pens, poisonous plant areas, and other important features on the plan map.
- Complete wildlife habitat evaluations.
- Determine soil erosion, condition, and contamination.
- Identify sediment depositions.
- Evaluate water quality and water yield.
- Determine wildlife numbers and condition.
- Develop forage inventory.
- Develop livestock and wildlife inventory.
- Develop forage and animal needs balance sheet.
- Determine husbandry practices and livestock performance.
- Identify cultural resources, if present.
- Identify endangered plant and animal species and habitat, if present.
- Identify active and potential recreation resources.
- Identify available resources.

(f) Analyze resource data**(1) General**

After the inventory process is complete, an analysis of the data is necessary to assist the client to identify and quantify problems. Again, it is imperative for clients to understand the grazing lands ecosystems and concepts before they can analyze resource data. It is only then that they can understand the relationship of soil, water, air, plant, and animal resources in ecosystems and the causes that create resource problems. The analysis may point out opportunities that the client has not recognized, such as fee hunting, camping, bed and breakfast, renting farm and ranch housing facilities for weekends, trail drives, fishing, hiking, bird-watching, and new livestock enterprises.

(2) Standard

NRCS assists client in analyzing the inventory data so they may recognize resource problems as well as new opportunities.

(3) Activities

The activities needed to analyze resource data are shown below.

 What

 How

Evaluate the current grazing lands ecosystem in relation to site potentials

NRCS assists land managers to determine:

- If the current plant community provides the desired attributes of forage production, habitat, water quality and quantity, air quality, soil protection, and animal performance.
- Plant vigor of desired species.
- Range trend (on rangeland).
- Grazing distribution uniformity.
- Forage value rating on grazed forest and naturalized pasture.
- Desirability of pastureland plant species for the season and forage production needed.
- If pastureland is being managed for desired level of forage quality and quantity.
- Forage production and wildlife habitat values in relation to potential for the site.
- Balance between forage production and the forage requirements of domestic animals and wildlife.
- Effects of the current grazing management program on the plant community, domestic animals, and wildlife of concern.
- Significance of cultural resources, if present?
- Endangered or threatened plant or animal species, if present.
- Opportunity for new enterprises.

(g) Formulate alternative solutions

(1) General

Phase II of the planning process begins with development of alternative solutions. On grazing lands, the alternative solutions **must** include a forage inventory and a grazing management plan. These should be prepared for the first year of the plan. A future forage inventory and grazing management plan representing predicted responses and future grazing management plans should also be prepared.

At least one of the alternatives developed should be a Resource Management System (RMS), meeting the quality criteria for all resource problems identified and the objectives of the client. The Conservation Effects Decision (CED) worksheets generated in FOCS can be used to present impact of the RMS and other alternatives to the client.

In developing Resource Management System alternatives, vegetation management practices will be planned that meet the needs of the plants and animals. Facilitating practices, such as fences and water development, will be planned when needed to enable the application of the planned vegetative management practices. Accelerating practices will be planned when needed to treat specific problems or opportunities that grazing management alone will not solve.

(2) Standard

NRCS employees will assist the client to develop treatment alternatives that meet quality criteria in the FOTG for resource problems identified and that accomplish objectives of the client.

(3) Activities

The activities needed to identify the problem are shown below.

What

How

Develop treatment alternatives

Select the vegetation management, facilitating, and accelerating practices that will meet quality criteria established in local FOTG for all resource problems identified, and meet management objectives of client. Develop sufficient number of alternatives from which client may select an alternative to meet their needs.

(h) Evaluate alternative solutions**(1) General**

After alternative solutions are developed, client evaluates them to determine which one best meets their objectives and solves the identified resource problems.

(2) Standard

Effects of each alternative are evaluated individually and compared to benchmark for their ability to solve or alleviate identified resource problems and meet clients objectives.

(3) Activities

The activities needed to evaluate alternative solutions are shown below.

What	How
Determine ecological, economical, and social effectiveness of treatment alternatives	Determine: <ul style="list-style-type: none"> • Effectiveness of the alternative to achieve the desired plant community. • Effectiveness of each alternative to solve or alleviate each of the soil, water, air, plant, and animal resource problems. • Economic and social feasibility of each alternative. Grazing Land Applications decision support system can assist in the economic evaluation of the treatment alternative. • If the producer has the willingness, values, skills, and commitment to apply the system of practices.

(i) Make decisions

(1) General

After all the alternatives have been evaluated, the client makes a decision on which alternative meets their objectives. This is accomplished by comparing the alternatives to determine which:

- Will best achieve the desired plant community
- Will meet the desired time schedule
- Is the most financially and economically sound
- Is consistent with the client's knowledge and skills
- Is consistent with the client's time and distance restraints

After the alternative is selected, it is recorded in a manner that will assist the land manager in application.

Application of the selected alternative is usually a logical sequence and should be reflected in the schedule of application in the plan narrative. The following logic provides ideas for scheduling application.

If livestock are on the operating unit, then prescribed grazing should be scheduled and applied from the beginning. If fencing and water development must be installed before applying the prescribed grazing plan, then they should normally be installed next.

Water developments generally are installed before fences because the specific locations of planned ponds, wells, and pipelines may need to be moved to a new location, which may affect the location of the planned fence. Once the water developments are applied, then the fencing can be installed without worry of whether the pond can be built or the planned well will yield a sufficient water supply.

After the fences and water distribution are installed, the prescribed grazing plan can be initiated. Accelerating practices, such as brush management, range planting, prescribed burning, and critical area treatment, can now be performed as fencing and water development will allow the needed grazing management to be applied. Each operating unit will have its unique set of circumstances that dictate the schedule of application. **A major point to remember is that grazing management is the key to the success of all accelerating practices.**

(2) Standard

NRCS leads the client to select alternatives that best meet the manager's objectives. Decisions are recorded in the conservation plan.

(3) Activities

The activities needed to make decisions are shown on page 11-12.

What	How
Client selects best alternatives to meet their objectives	NRCS assists the client in comparing each of the alternative evaluations to determine the one that best meets the objectives.
Schedule of application	NRCS personnel assist the client in developing a long-term schedule of application that ensures proper sequence and timing of applications for success.
Conservation plan prepared	<p>NRCS assists the client in preparing the conservation plan. Client's copy should contain:</p> <ul style="list-style-type: none"> • Soil and water conservation district agreements. • Conservation plan maps, which should delineate as scale of map permits: <ul style="list-style-type: none"> — Operating unit boundary — Planned field boundaries, number, and acres — Land use of each field — Location of present and planned enduring practices — Range ecological site delineation — Range similarity index — Range trend — Pasture and hayland species — Pasture and hayland suitability groups — Forest ecological site delineation — Forage value ratings on grazed forest land and naturalized pasture — Other pertinent information, such as roads and livestock handling facilities • Soils map and legend • All inventory data • Forage inventory, livestock inventory, and grazing management plan • Record of treatment alternatives selected and schedule of application • Fact sheets and/or job sheets <p>NRCS case file contains</p> <ul style="list-style-type: none"> • All information placed in the client's copy • Directions for location of the land unit(s) • List of job sheets furnished to the client • Technical assistance notes • Record of accomplishments

(j) Implement plan

(1) General

The land manager is now ready to implement the plan. NRCS personnel shall provide technical assistance to the client in the application of all practices as needed and requested.

The most difficult and complex practices to apply are the grazing management practices—Forage Harvest Management and Prescribed Grazing. These practices, respectively, are the proper application of hayland harvest and the proper manipulation of livestock number, kind, and class through pastures in a time and manner that causes the plant community composition to move toward the one most desired and, at the same time, meet the needs of the livestock and wildlife of concern. For this to be successful, land managers often require close and continuous technical assistance from NRCS personnel as they learn to make the needed plant community observations and adjustments in management strategy.

NRCS does not establish grazing capacities. Neither does it require an agreed-on stocking rate in conservation plans. NRCS assists land users in making their own decisions concerning the number and kinds of animals that can be safely and profitably grazed.

(i) Forage inventory—Clients must have a clear understanding of their forage resources (their limitations and requirements) and of the grazing habits of the animals using the forage. In establishing an initial stocking rate, they should rely on their experiences as much as possible. Local production and stocking information can be used to supplement the client's experiences. This information is in the Ecological Site Descriptions for rangeland, forest land and the Forage Suitability Groups in Section III of the local Field Office Technical Guide.

A forage inventory must be developed that reflects an estimate of forage supply in each management unit (pasture or field) of the operating unit. See chapter 4 of this handbook for guidance in preparing a forage inventory.

(ii) Animal inventory—An inventory of the domestic animals occupying or planned to occupy the operating unit must be developed. This animal inventory should be separated into the necessary herds to allow

the desired husbandry to be practiced. This is generally by kind, breed, class, and age. If a management unit is critical to a particular herd, it should be noted. The number of livestock is shown in each management unit to be grazed by the day, week, month, or season, and a total is used to plan the forage demand in relation to forage production.

Herbivorous wildlife numbers should be determined by management unit and their forage requirements expressed in the same manner as the livestock. If they are migratory, such as elk, the time they are expected to be in the management unit must be determined. See chapter 4 for guidance on developing a forage inventory.

(iii) Activities affecting the prescribed grazing schedule—Items affecting the Prescribed Grazing Plan must be identified. Examples of these items include:

- husbandry practices
- nutrient requirements of animals
- forage quality requirements
- practice application requirements
- hunting season needs
- recreation activities, such as camping
- endangered plant and animal species needs
- watershed water quality and quantity needs
- riparian needs
- predator problems
- insect problems
- parasite problems
- poisonous plants
- animal shelter needs
- wildlife habitat needs
- aesthetic and social considerations
- cultural resources
- critical areas needing special treatment

(iv) Scheduling grazing—After the forage and animal inventory is completed and other factors affecting the prescribed grazing schedule is determined, the prescribed grazing schedule can be developed. This is accomplished by the client scheduling the livestock movement through the pastures in a manner that will:

- Balance forage requirement with forage supply.
- Meet the growth needs of the plants.
- Meet the forage quality needs of the animals.
- Meet health and husbandry needs of the livestock.

- Meet the needs of the wildlife of concern.
- Meet the needs of all other activities in the management and operating units.
- Meet the client's objectives.

Supplemental feed requirements needed to meet the desired nutritional level for the kind and class of livestock and browsing and grazing wildlife of concern will be specified. See chapter 6 for guidance on animal nutrition.

The prescribe grazing plan includes a contingency plan that details potential problems; i.e., drought, and a guide for adjusting the grazing prescription to ensure resource management and economic feasibility. The plan should include how the client will recognize the potential problem in the early phases (drought) and a plan of action that will be taken to offset and minimize the deterioration of the resources, livestock, and wildlife and the economics of the operation. See chapter 5 for guidance in design of the Prescribed Grazing practice.

(v) *Facilitating and accelerating practices*— Facilitating and accelerating practices all require technical design or specific application instructions. NRCS personnel are responsible for providing this information to the client, and the necessary on-site technical assistance during application to ensure technical adequacy and success. See Chapter 5 for a discussion of facilitating and accelerating practices.

(2) Standard

NRCS provides technical assistance to the client to ensure the successful application of the planned practices.

(3) Activities

The activities needed to implement the plan are shown below.

What	How
Application of Prescribed Grazing Schedule	NRCS personnel provide technical assistance to client in the design and application of the prescribed grazing plans. Prescribed grazing plan application is an ongoing process. For many clients it is a change in lifestyle as it becomes a daily decision process that may affect their daily routine. Each management decision made on the operating unit that affects plants, livestock, and wildlife is part of the plan. Application is a daily process. NRCS personnel must provide onsite assistance in a timely manner to continually teach clients to observe their grazing lands, livestock, and wildlife and make the grazing management decisions that will ensure success. GLA decision support system is a tool to assist in this process.
Application of facilitating and accelerating practices	Facilitating practices, such as fences, ponds, wells, water storage facilities, pipelines, and troughs all need to be installed according to a technical design to ensure success. NRCS personnel shall provide the onground technical assistance needed for design and installation. Accelerating practices, such as brush management, weed control, nutrient management, forest improvement, range planting, pasture planting, prescribed burning, waterspreading, critical area treatment, diversions, streambank and shoreline protection, and structures for water control, all need to be installed according to a technical design to ensure success. NRCS shall provide the technical assistance needed for design and installation.

(k) Evaluation of results

(1) General

After clients initiate the application of their grazing land management plans, NRCS should provide followup assistance. As previously stated, grazing management is an ongoing process. The client may need assistance of NRCS personnel to evaluate results of the applied Prescribed Grazing Schedule. It is a continuous learning process for the client and NRCS personnel who are gaining experience. Grazing management can often be fine tuned through adaptive management to more efficiently and effectively accomplish objectives. Many times, clients increase their knowledge in grazing management and desire to change to more intensive grazing management schemes. This often requires a plan revision to include more fences, water development, or both, as well as a completely revised Prescribed Grazing Schedule.

The client's objectives often change, or new technology arrives that the client should consider. New resource problems are often recognized as the technical

and management knowledge and skills of the client increases.

NRCS continuously gathers data from local grazing management application experiences. This information builds data bases of responses to treatment. These response evaluations are necessary to assist future clients in the planning process.

The initial planning process is just the beginning of the learning and understanding of grazing management for many clients. Experience has shown that most clients will not and cannot successfully apply their plan without followup evaluation assistance from trained NRCS personnel. For these reasons, periodic contact needs to be made with the client to ensure the continued success of the conservation plan and to collect response data for future assistance to clients.

(2) Activities

The activities needed to evaluate results are shown below.

What

How

Provide needed followup for evaluation of results, fine tuning of grazing management plan, revision of plan, and obtaining response data

Make firm date with client for followup evaluation assistance. Explain the purpose of the contact so they may prepare.

Review on the ground the results of the applied grazing management. Use the opportunity to teach and assist clients to recognize trends in plant community response. Assist them to adjust the grazing management to cause the plant community to respond as desired, provide quantity and quality forage needed by livestock and wildlife of concern, and meet the needs of the soil, water, air, plant, and animal resources.

Review the schedule of application of facilitating and accelerating practices. Review those that have been applied to evaluate their continued success. Assist in improving the schedule of application. Assist in recognizing any maintenance needed on applied practices.

Gather response data that will improve our ability to predict future responses to treatment. Special attention should be given to gathering response needed for the GLA decision support system.

Assist clients to identify new resource problems that need attention.

Provide clients new technical information applicable to their resource problems.

Assist the clients to revise their conservation plans as needed. Follow the nine steps of conservation planning to accomplish this process.