

# ANIMAL TRAILS AND WALKWAYS

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - Practice code 575



### ANIMAL TRAILS AND WALKWAYS

Animal trails and walkways provide a travel lane through difficult or ecologically sensitive terrain.

**PRACTICE INFORMATION** This practice is installed on grazing lands as part of a conservation plan to accomplish one or more of the following:

1. Improve access to forage, water and /or shelter.
2. Improve grazing efficiency and distribution.
3. Divert travel away from ecologically sensitive and/or erosive sites.

Trails or walkways are often needed where animal movement is impeded or restricted because of steep rough terrain, rock outcrops, dense vegetation, water, etc.

Detailed design criteria is available on the NRCS national practice standard. To familiarize you with the general concept, the following practice criteria is provided:

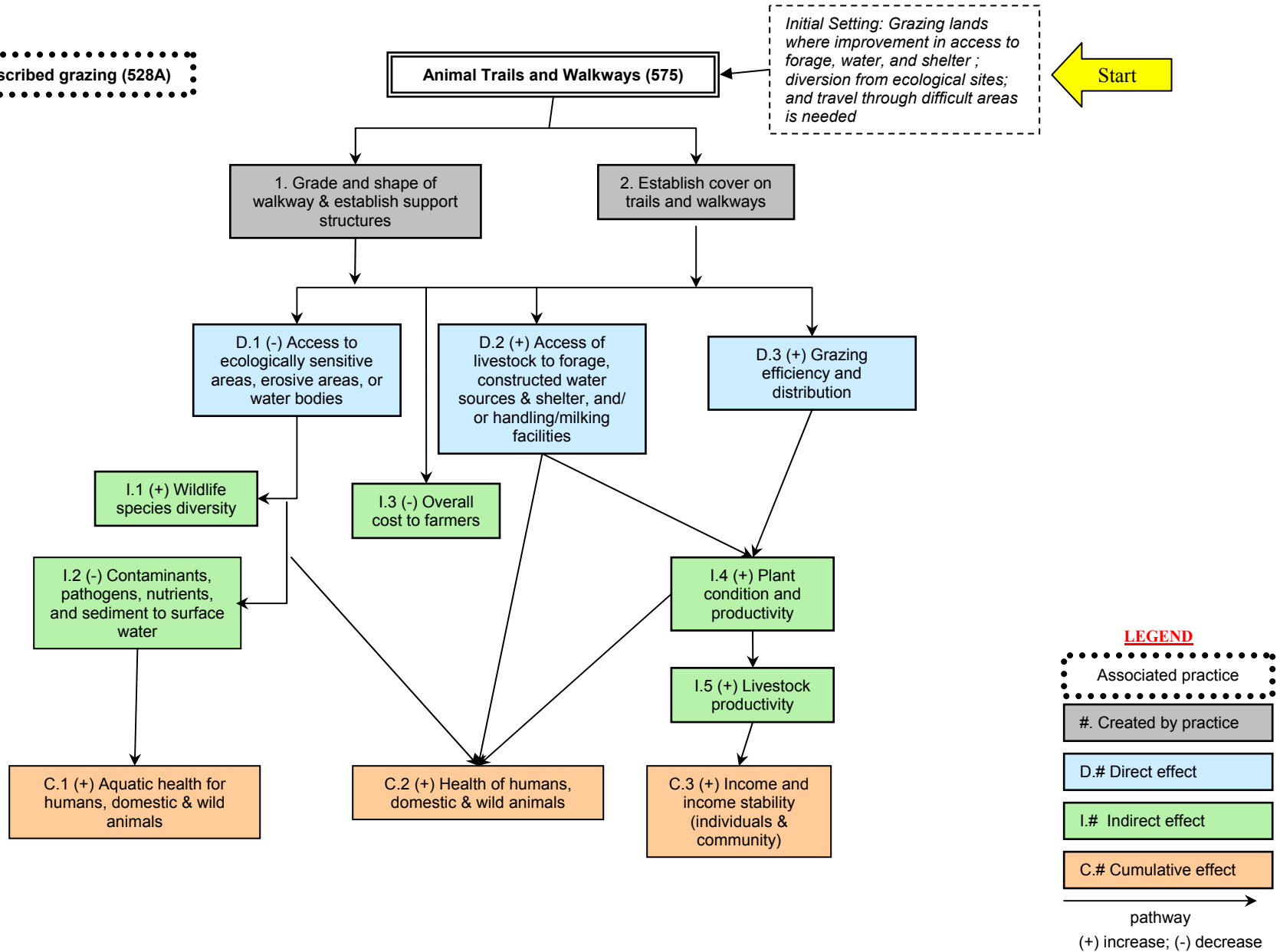
1. The structures will be wide enough for livestock movement and vehicles.
2. Soil erosion will be minimized during construction.
3. Supporting structures for water management will be provided.
4. Walkways will be constructed based on normal high water levels.
5. Walkway borrow pits will be staggered to provide access to grazing areas on either side of the structure.

The following page identifies the effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

# Animal Trails and Walkways Practice

5.29.02

Prescribed grazing (528A)



# BRUSH MANAGEMENT

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 314



### BRUSH MANAGEMENT

Brush management is removal, reduction, or manipulation of tree and shrub species.

### PRACTICE INFORMATION

This is a multipurpose practice applied on rangeland, native or naturalized pasture, pasture, or haylands where tree and/or shrub species are competing with forage species.

The brush management practice is designed to achieve the optimum level of control of the target woody specie (s) and protection of the desired specie (s). This will be accomplished by mechanical, chemical, biological prescribed burning or a combination of these techniques. The practice is also planned and applied to meet the habitat requirements of fish and wildlife.

To ensure an enduring desired response to brush management, the conservation plan will include

the grazing management practice labeled *Prescribed Grazing*.

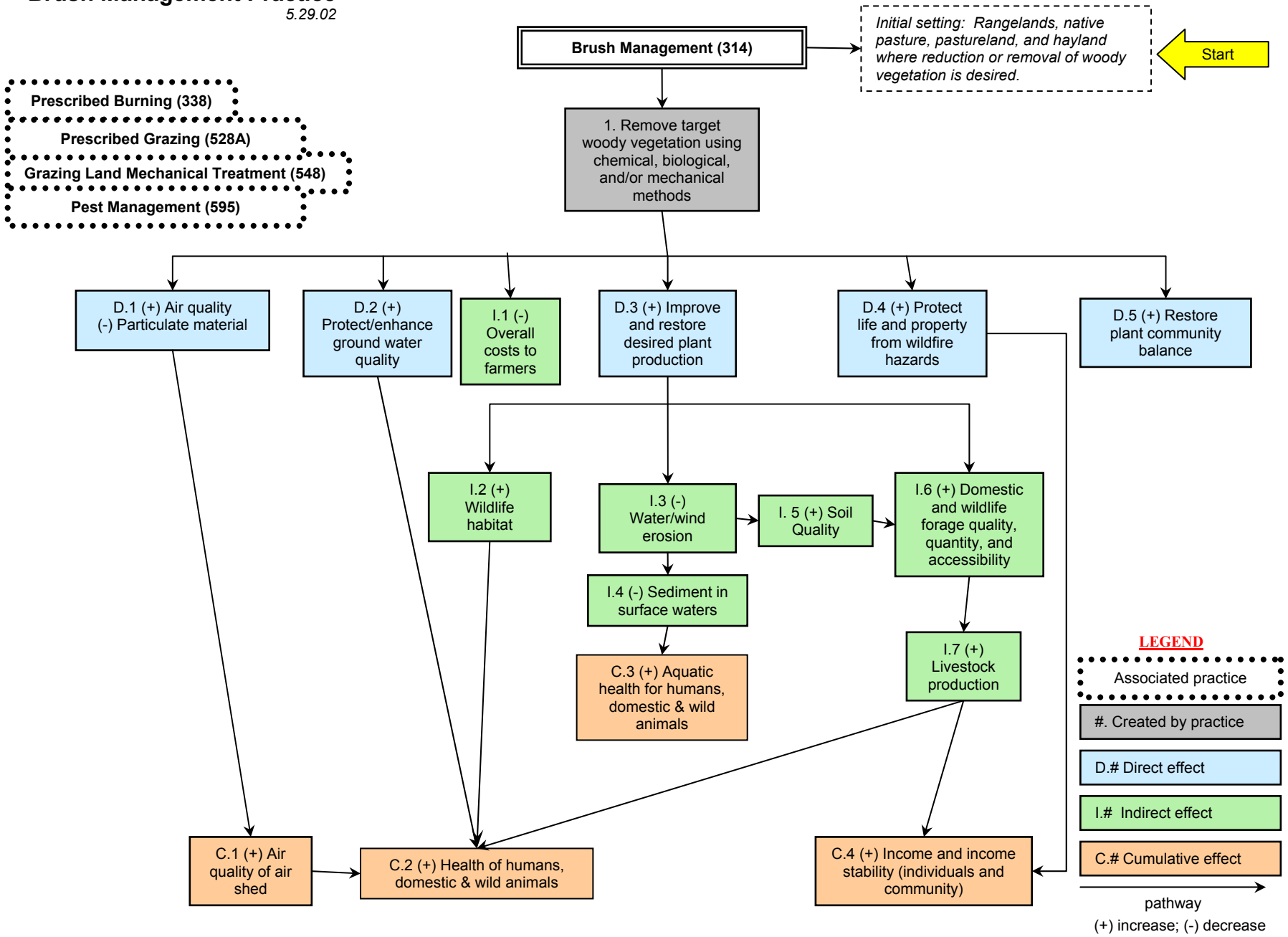
Brush Management is applied to accomplish one or more of the following:

1. Restore natural plant community balance.
2. Create the desired plant community.
3. Reduce competition for space, moisture and sunlight to favor the desired species.
4. Manage noxious woody plants.
5. Restore vegetation to control erosion and sedimentation; improve water quality, and enhance stream flow.
6. Maintain or enhance wildlife habitat including threatened and endangered species.
7. Improve forage accessibility, quality, and quantity for domestic and wild animals.
8. Protect life and property from wildfire
9. Improve visibility and access for handling livestock.

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# Brush Management Practice

5.29.02





# CRITICAL AREA PLANTING

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 342



### CRITICAL AREA PLANTING

Planting vegetation on critically eroding areas that require extraordinary treatment

### PRACTICE INFORMATION

This practice is used on highly erodible areas that cannot be stabilized by ordinary planting techniques and if left untreated may cause severe erosion or sediment damage. Examples of critical areas include the following:

1. Dams, dikes, levees, and other construction sites with very steep slopes.
2. Mine spoil and surface mined land with poor quality soil and possibly chemical problems.
3. Agriculture land with severe gullies requiring specialized planting techniques and management.

Erosion control is the primary consideration for plant material selection. However, a broad choice of grass, trees, shrubs, and vines are

usually available and adapted for most sites. Wildlife and beautification are additional considerations that influence planning decisions on a site needing this practice.

The following decisions must be made when planning this practice:

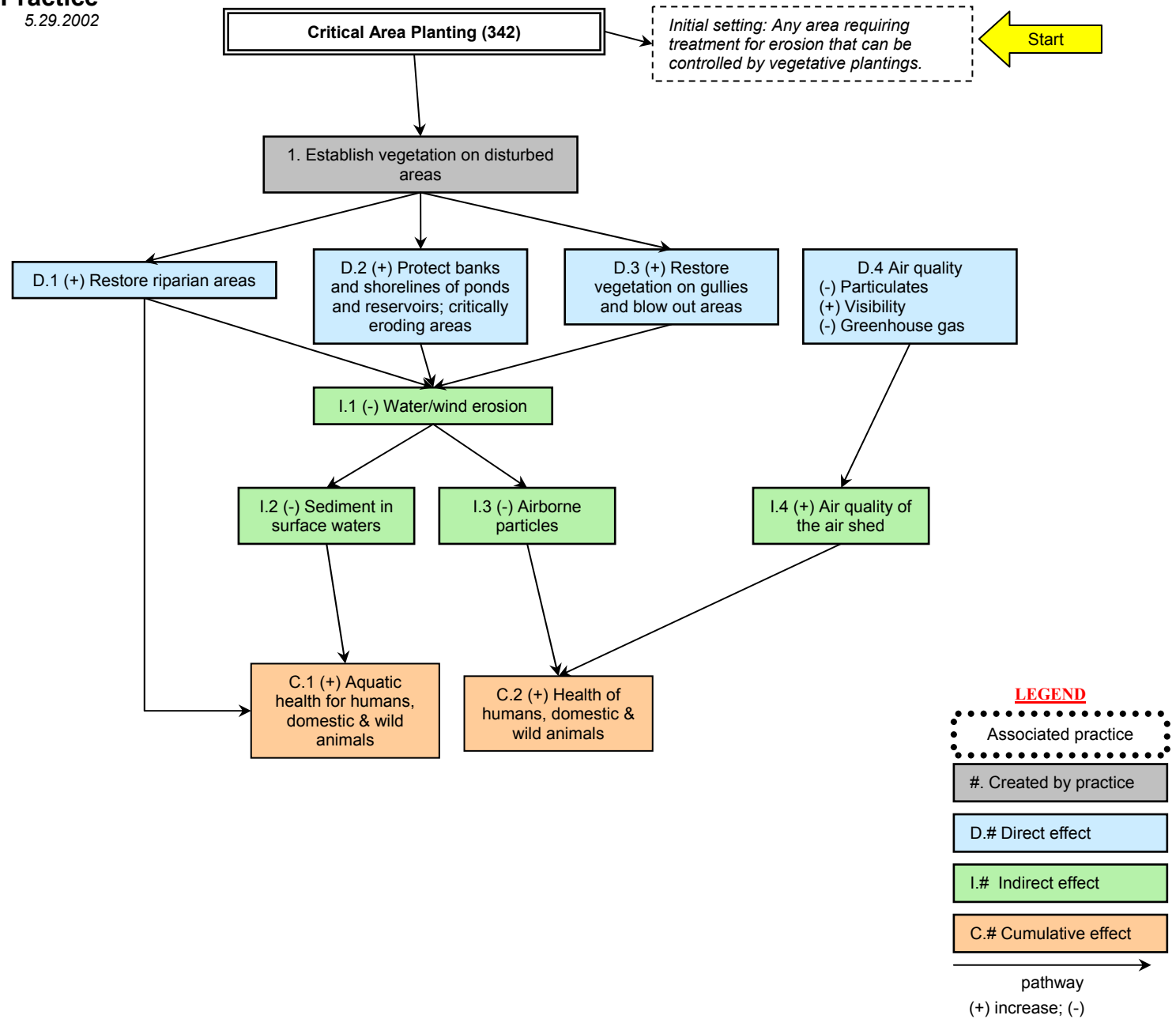
1. Function or use of the site following establishment.
2. Species of plants to establish
3. Methods and rates of planting
4. Fertilizer, lime, and soil amendments necessary for establishment and growth of the plants.
5. Mulching requirements
6. Planting site preparation
7. Irrigation requirement
8. Site management following establishment of the vegetation.

Additional information including standards and specifications are available in the NRCS Field Office Technical Guide.

The following page identifies the conservation effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

# Critical Area Planting Practice

5.29.2002



# FENCE

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 382



### FENCE

A fence is a constructed barrier to livestock, wildlife, or people.

### PRACTICE INFORMATION

This practice may be applied to any area where livestock and /or wildlife control is needed, or where access to people is to be regulated.

A wide variety of types of fencing has developed. However, fencing material and construction quality is always designed and installed to assure the fence will meet the intended purpose and longevity requirements of the project.

The standard fence is constructed of either barbed or smooth wire suspended by posts with support structures. Other types include woven wire for small animals, electric fence as a cost efficient alternative, and suspension fences which are designed with heavy but widely spaced posts and support structures. Designs for most types of fences are available at the local NRCS field office.

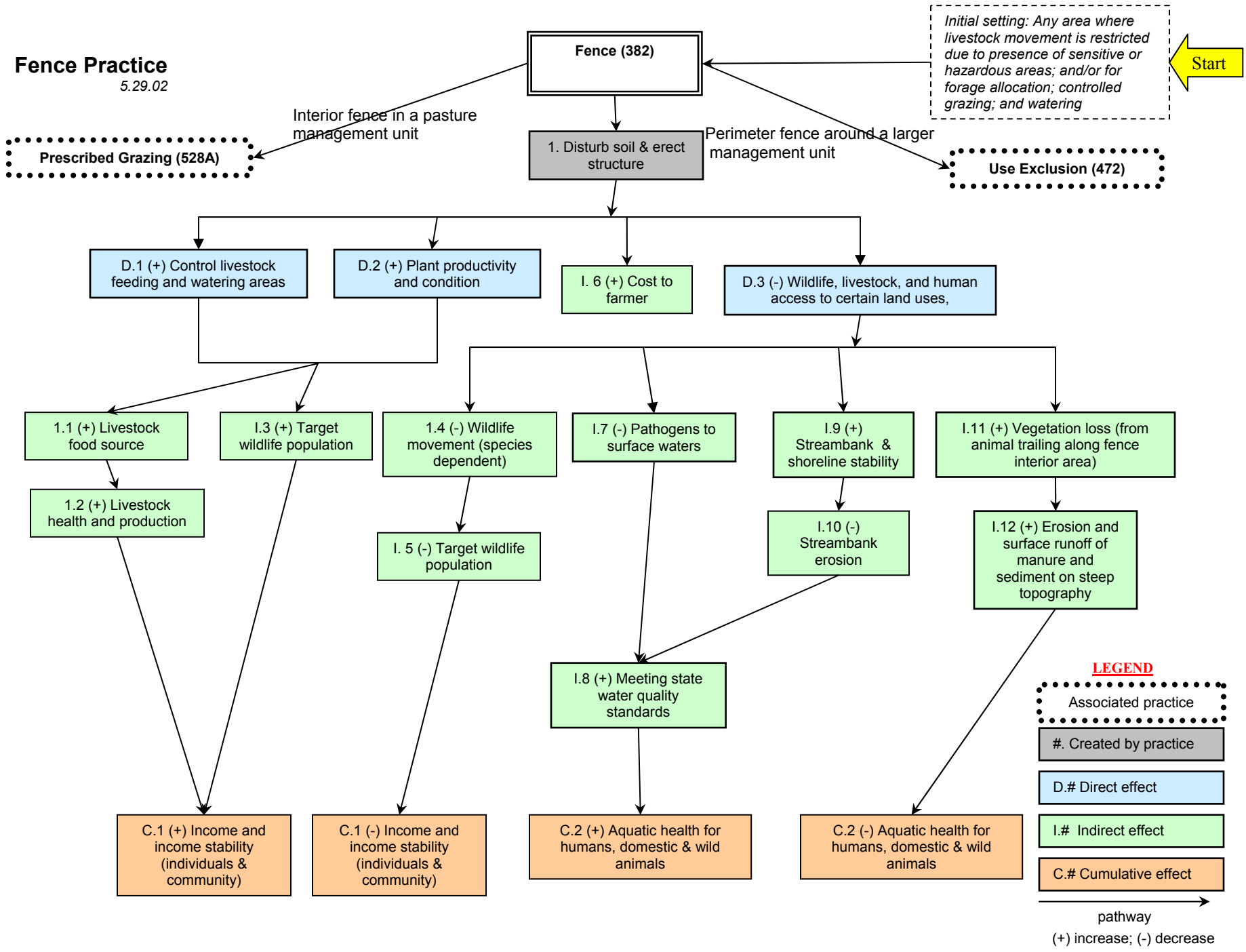
Things to consider when planning a fence include the following:

1. For ease of maintenance purposes avoid as much irregular terrain as possible.
2. Wildlife movement needs should be considered.
3. State and local laws may apply to boundary fences.
4. Consider livestock handling, watering and feeding requirements when locating fences
5. Consider soil erosion potential and feasibility of fence construction when planning fences on steep or irregular terrain.

Additional information including designs and construction specifications are available in the local NRCS Field Office Technical Guide.

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**Fence Practice**  
5.29.02





# FORAGE HARVEST MANAGEMENT

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 511



### FORAGE HARVEST MANAGEMENT

The cutting and removal of forages from the field as hay, greenchop, or ensilage.

### PRACTICE INFORMATION

This practice applies to all land uses where machine harvested forage crops are grown. It is designed to help the farmer or rancher optimize the economic yield of forage at the desired quality and quantity. In addition, the practice provides the following functions:

1. Promote vigorous plant growth for improved ground cover and protection from erosion
2. Soil improvement provided by healthy vigorous plants that increase soil organic matter, root channels, water holding capacity, earth worms, etc
3. Maintain stand life for the desired time period
4. Maintain desired species composition

5. Use forage plants as a nutrient uptake tool to utilize or reduce excess plant nutrients available in the soil

6. Provide food and cover for wildlife

The following management concepts are considered in the specifications of this practice:

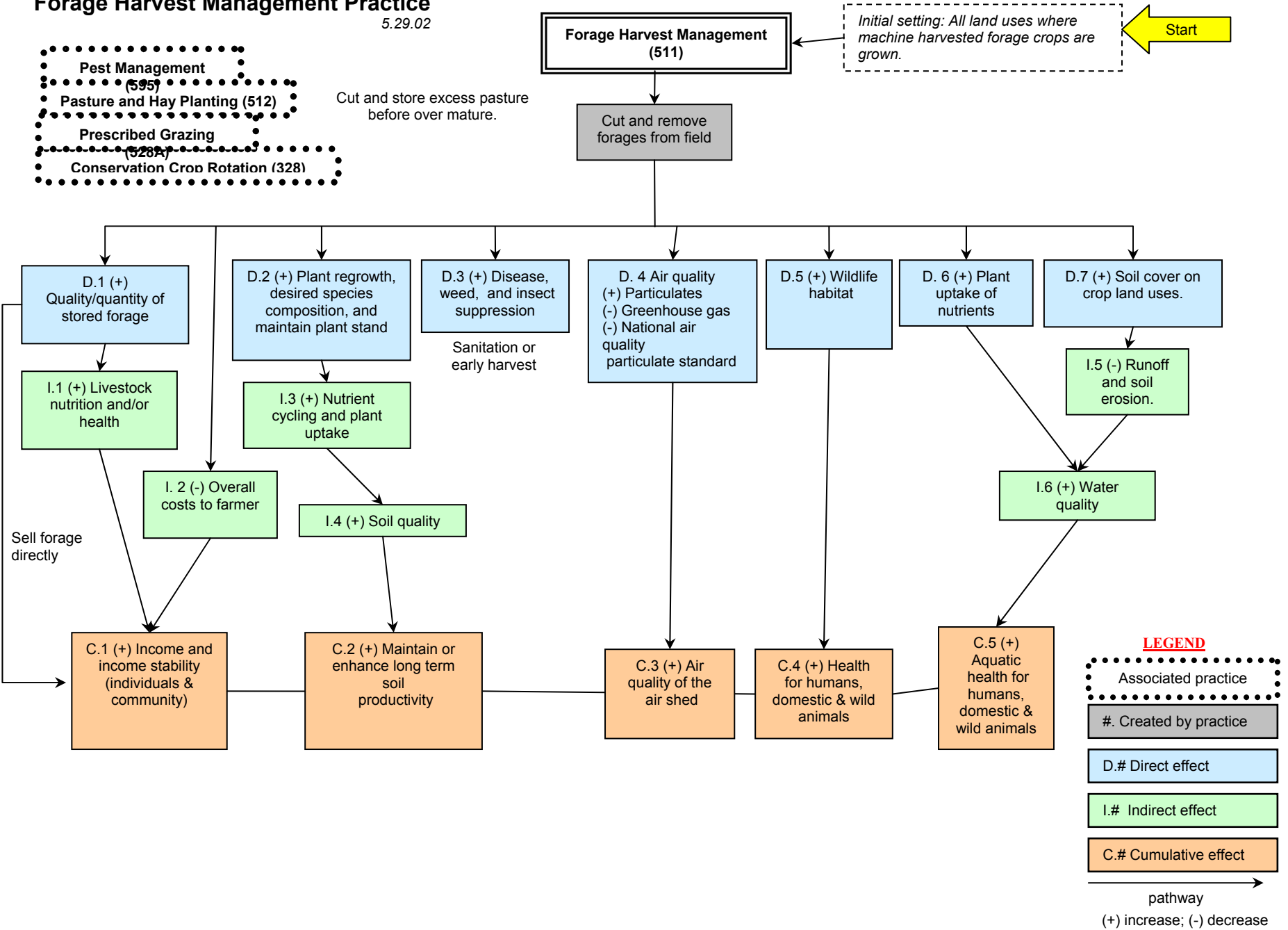
1. Stage of maturity and harvest interval
2. Moisture content for cutting silage/haylage as well as baling as hay
3. Length of cut for silage/haylage
4. Stubble height maintained for plant health and vigor
5. Management considerations that help improve wildlife food and cover
6. Additional considerations needed to help control disease, insects, and weed infestations

Additional information including standards and specifications are on file in the local NRCS Field Office Technical Guide.

The following pages contain the conservation effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

# Forage Harvest Management Practice

5.29.02



# PASTURE AND HAY PLANTING

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 512



### PASTURE AND HAY PLANTING

Establish native or introduced forage species.

### PRACTICE INFORMATION

This practice may be applied on cropland, hayland, pastureland, or other agriculture lands where forage production is planned.

This practice is used for on or more of the following purposes:

1. Provide forage for livestock and/or wildlife.
2. Improve or maintain livestock nutrition and/or health.
3. Provide additional forage to fill gaps in a year long forage management program.
4. Provide emergency forage.
5. Reduce soil erosion, improve aesthetics, provide wildlife food and cover, improve

water quality, and other environmental benefits.

Plant species recommendations for this practice are based on the following considerations:

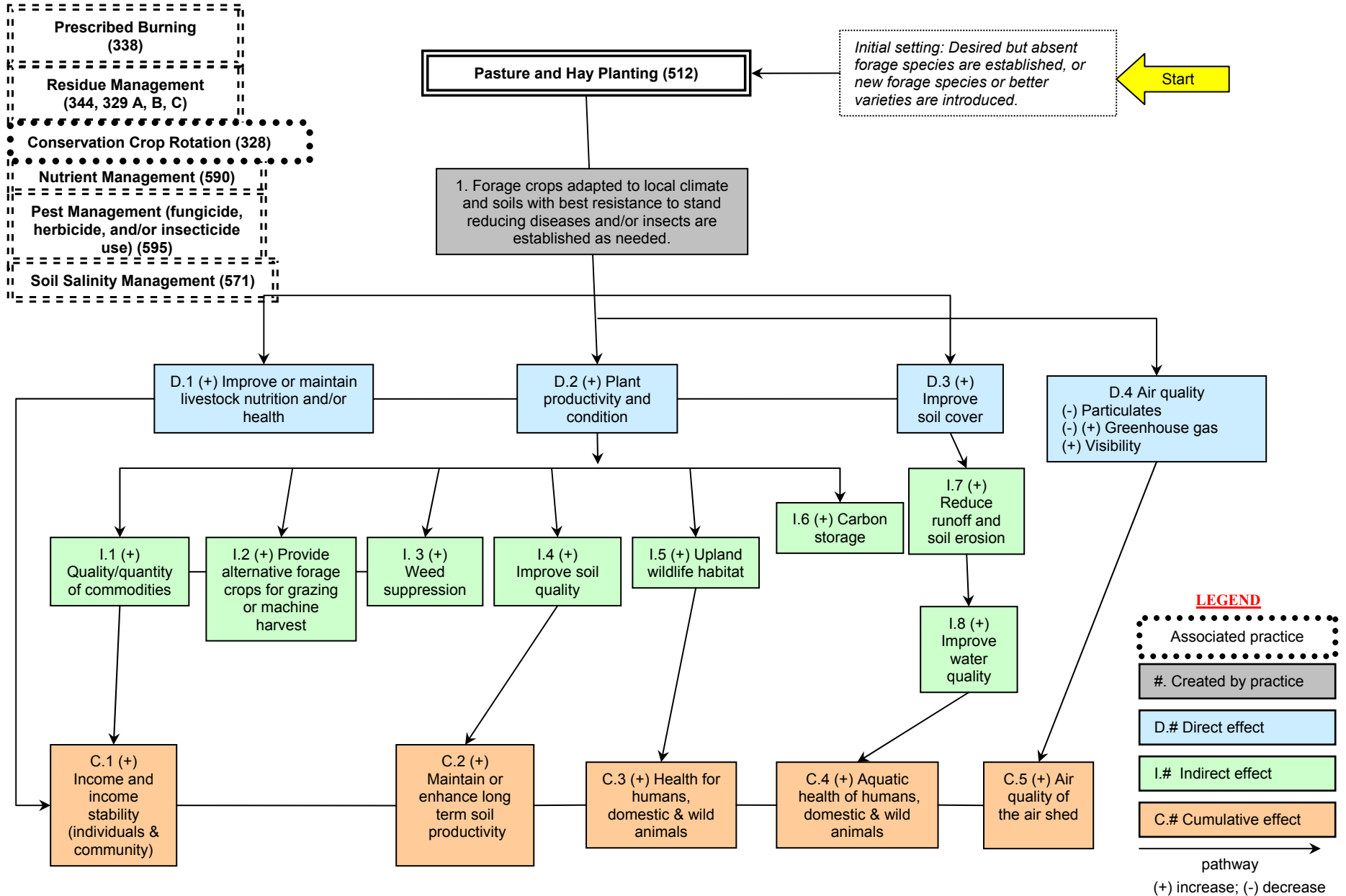
1. Climatic conditions such as annual rainfall, growing season days, humidity, and temperature extremes.
2. Site conditions including soil series, soil condition, flooding hazards, drainage, salinity, inherent fertility, slope, toxic elements, and other attributes associated with the specific site.
3. Plant resistance to pests common to the site.
4. Period of growth (cool vs. warm season)
5. others

Recommended species, seeding dates, seeding rates, seedbed preparation requirements, planting methods, and other technical requirements are provided in the local NRCS Field Office Technical Guide.

The following page identifies the conservation effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

# Pasture and Hay Planting Practice

5.29.02





# PIPELINE

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 516



### PIPELINE

The NRCS pipeline practice is used when a pipeline is needed to convey water for livestock, recreation or wildlife.

### PRACTICE INFORMATION

The purpose of this practice is simply to convey water from the source of supply to the point (s) of use. The objective is usually to decentralize the location of drinking or water storage facilities. The practice is applicable where water needs to be piped to another location (s) for management purposes, to conserve the supply, or for reasons of sanitation.

Pipelines installed under this practice are generally for livestock management purposes. A single water source can provide livestock water to several locations and be very effective in improving management of a grazing unit.

Pipelines are also used on recreation and wildlife lands to provide or distribute drinking water facilities for humans as well as wildlife.

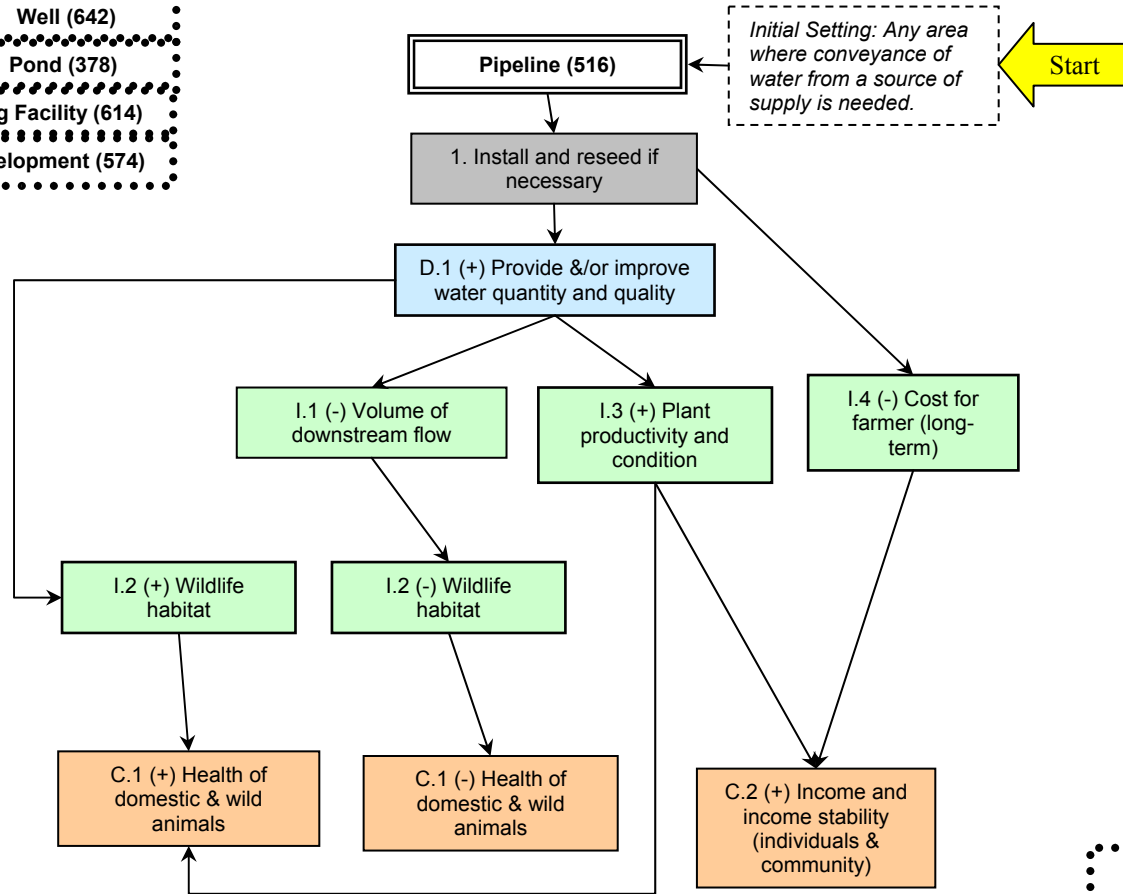
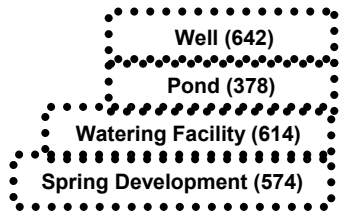
Additional information including design criteria and specifications are in the local NRCS Field Office Technical Guide.

The following page identifies the conservation effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, and soil. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

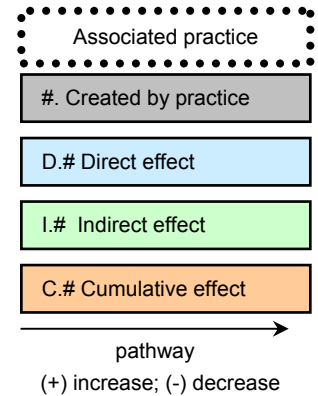


# Pipeline Practice

5.29.02



## LEGEND



# POND

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 378



### POND

A pond is a water impoundment made by constructing a dam or by excavating a pit or dugout.

### PRACTICE INFORMATION

If a dam is constructed, the pond is referred to as an embankment pond; if the pond storage is achieved solely by excavating material, the pond is referred to as an excavated pond.

The purpose of this type of pond is to provide water for livestock, recreation, and fish and wildlife. Other uses include providing a water supply for things such as fire control and crop or orchard spraying.

The NRCS POND standard applies under the following conditions:

1. If a dam is constructed, failure will not result in loss of life, damage to homes, commercial buildings, main highways, railroads, or interruption of public utilities.
2. The product of the storage (acre feet) times the effective height of the dam is less than 3000.

3. The effective height of the dam is 35 ft. or less.

Design and installation of a pond requires the following conditions:

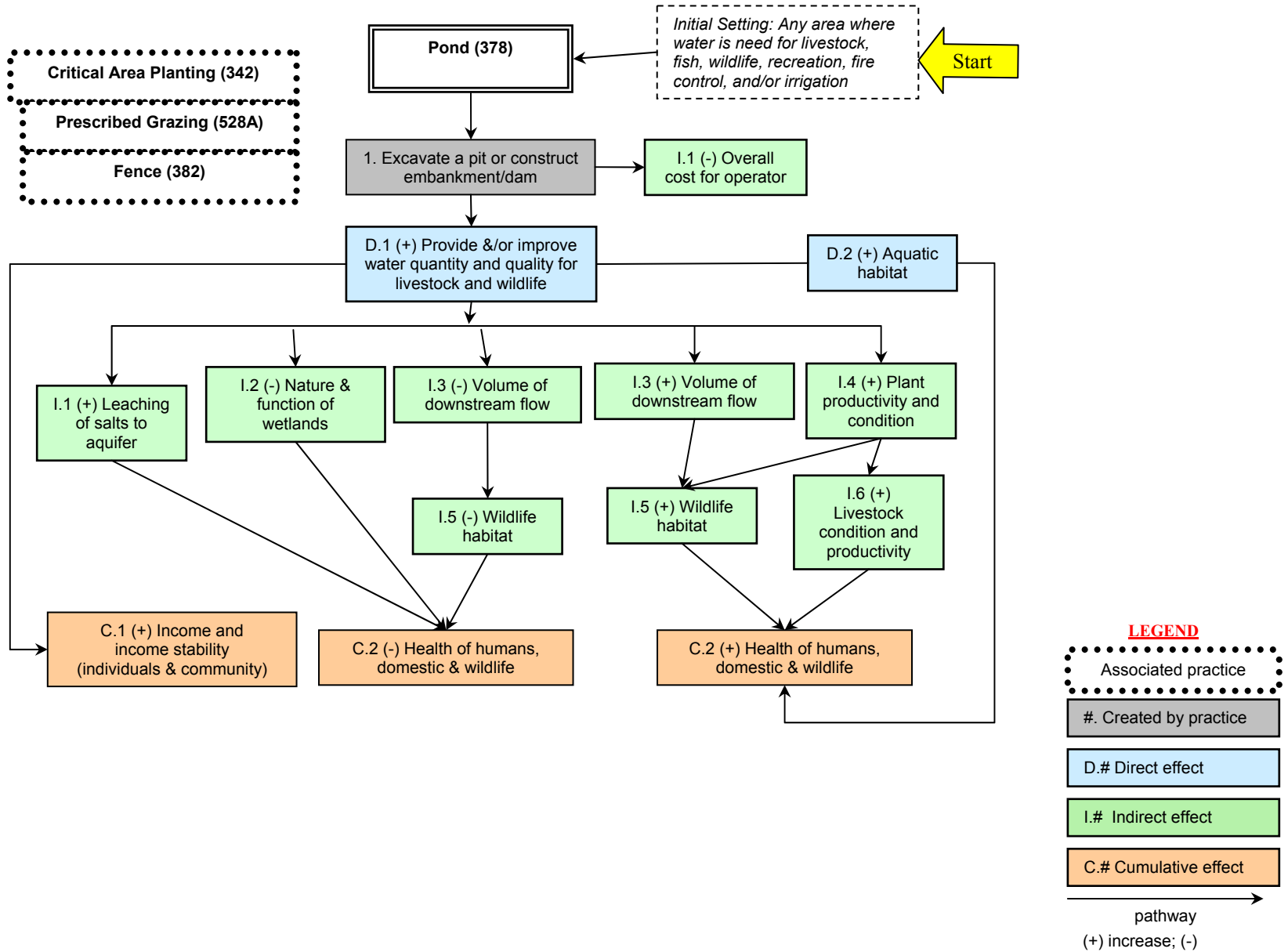
1. The site must be such that runoff from the design storm can pass safely through a natural or constructed spillway. The spillway (s) may be the principal spillway, emergency spillway, or combination of both.
2. The drainage area must be protected from erosion that would significantly reduce the expected life of the structure.
3. The drainage area must be large enough so that surface runoff and groundwater flow will normally maintain an adequate supply of water in the pond.
4. The water quality must be suitable for the intended use of the water.
5. The topography and soil must be suitable for the structure.

Additional information including design criteria and specifications are filed in the local NRCS Field Office Technical Guide.

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# Pond Practice

5.29.02



# PRESCRIBED BURNING

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 338



### PRESCRIBED BURNING

Prescribed Burning is applying controlled fire to a predetermined area of land.

### PRACTICE INFORMATION

This practice applies to all land uses for the following purposes:

- To control undesirable vegetation.
- Prepare sites for planting or seeding.
- Control plant diseases.
- Reduce wildfire hazards.
- Improve wildlife habitat.
- Improve forage quantity and quality.
- Slash and debris removal following forest management activities.
- Enhance seed / seedling production.
- To facilitate distribution of grazing and browsing animals.

Safety precautions are carefully planned before the burn and monitored during the burn. Existing barriers such as streams, lakes, roads, wetlands, and constructed firebreaks, are important considerations in planning the practice.

This is a highly specialized practice that requires intensive training and sufficient support personnel and equipment.

A safe successful burn must be timed for proper humidity, wind conditions, air temperature, and fuel conditions (ignitable vegetation).

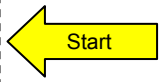
Additional information including design criteria and specifications are in the local NRCS Field Office Technical Guide.

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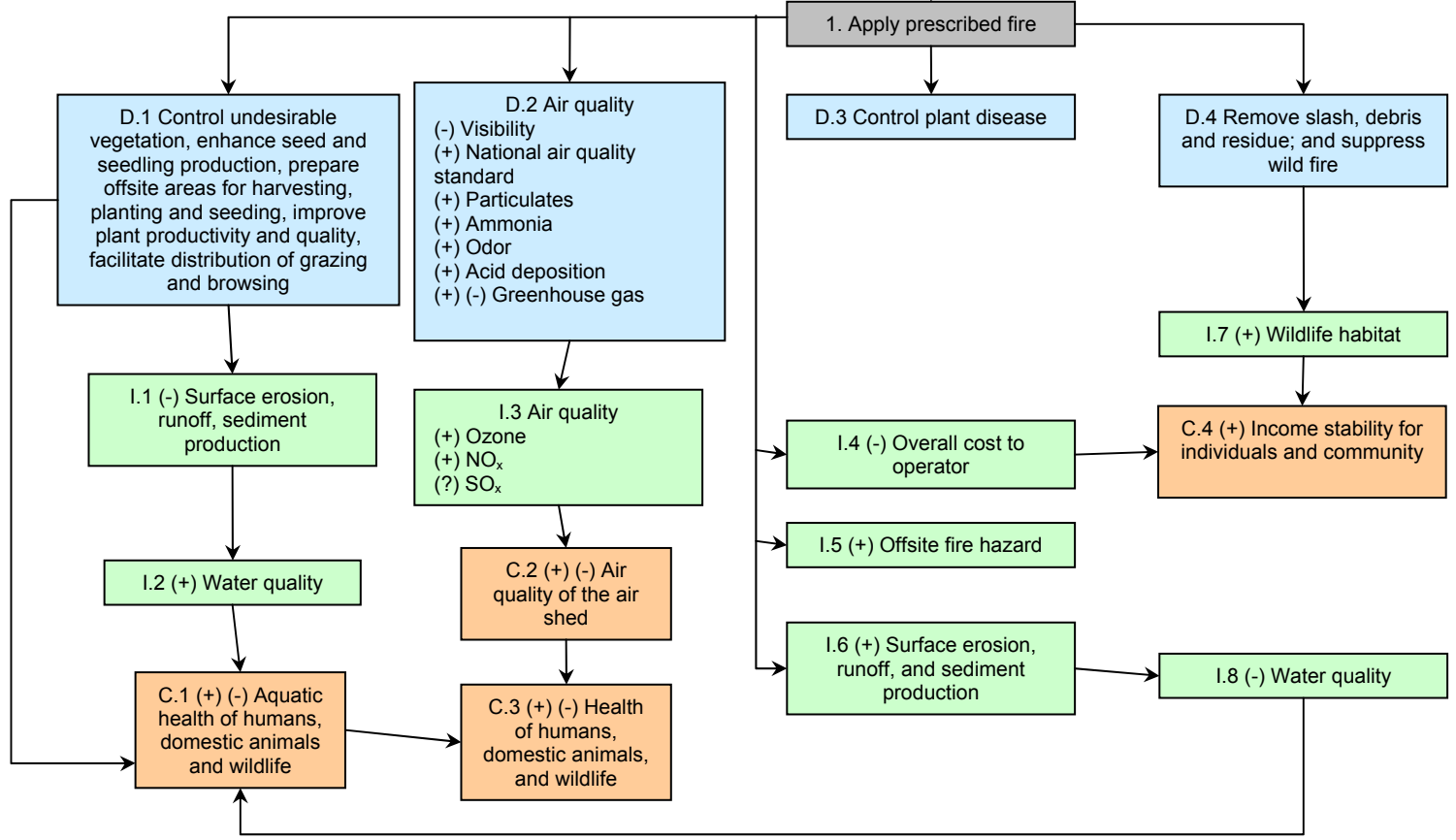
# Prescribed Burning Practice



*Initial Setting: Any area where undesirable vegetation, pests, high wildfire hazard, excess slash or debris., seedling production, and /or ecological sites are controlled, enhanced, or maintained with fire. Sites can be grazed by livestock.*



**Prescribed Burning (338)**



**LEGEND**

- Associated practice
- #. Created by practice
- D.# Direct effect
- I.# Indirect effect
- C.# Cumulative effect

pathway

(+) increase; (-) decrease



# PRESCRIBED GRAZING

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 528A



### PRESCRIBED GRAZING

Prescribed grazing is the controlled harvest of vegetation with grazing animals, managed with the intent to achieve a specific objective.

### PRACTICE INFORMATION

This practice may be applied on all lands where grazing and/or browsing animals are managed. Removal of herbage by the grazing animals is in accordance with production limitations, plant sensitivities and management goals. Frequency of defoliations and season of grazing is based on the rate of growth and physiological condition of the plants. Duration and intensity of grazing is based on desired plant health and expected productivity of the forage species to meet management objectives. In all cases enough vegetation is left to prevent accelerated soil erosion.

Application of this practice will manipulate the intensity, frequency, duration, and season of grazing to:

1. Improve water infiltration
2. maintain or improve riparian and upland area vegetation
3. Protect stream banks from erosion
4. Manage for deposition of fecal material way from water bodies

5. Promote ecological and economically stable plant communities which meet landowner objectives

A prescribed grazing schedule will be prepared for all fields and pastures and recorded in a manner that is readily understood and useable by the decision maker. The grazing schedule should include the following information:

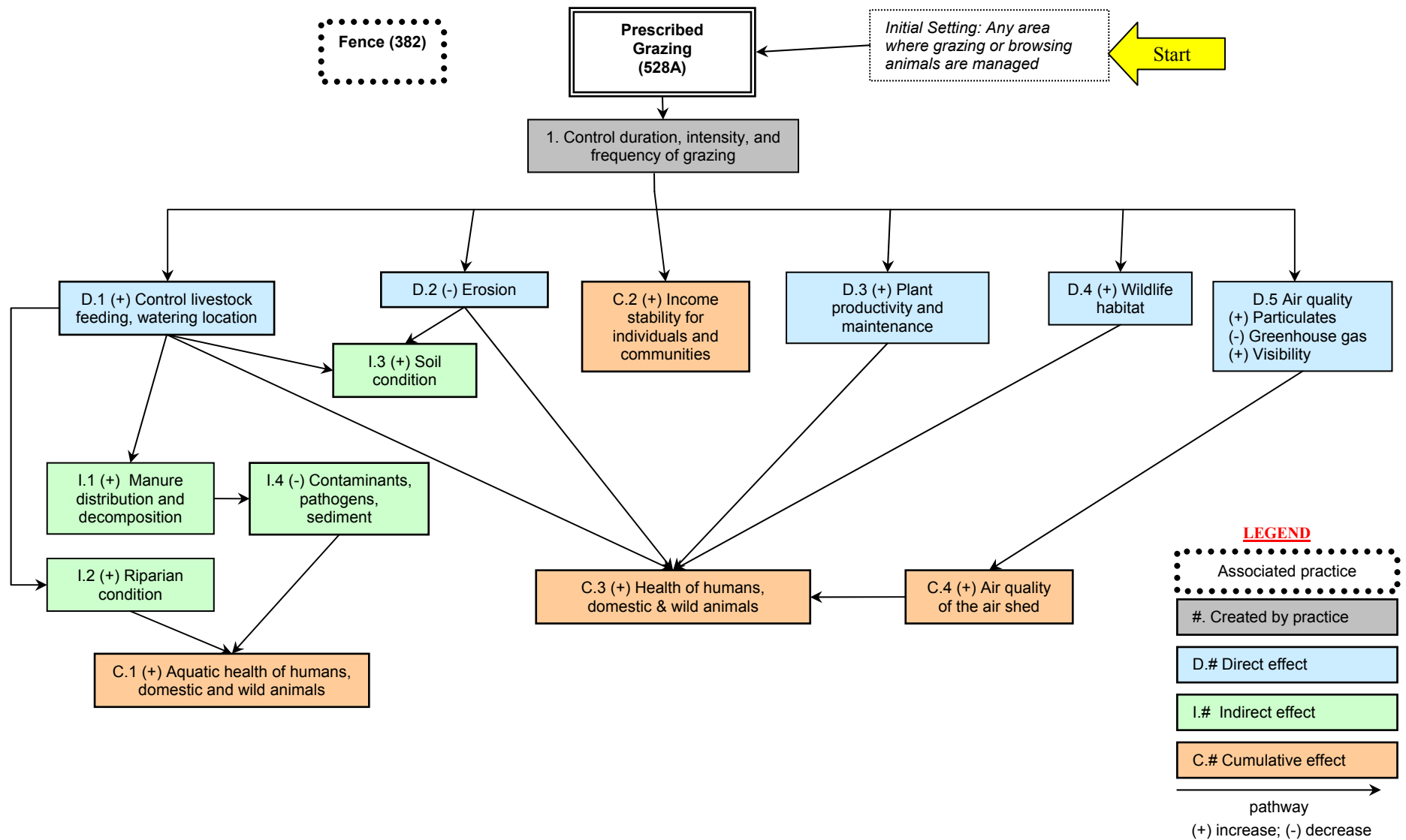
1. Expected forage quality and quantity for all lands providing forage.
2. Numbers and kinds of animals utilizing available forage on the unit.
3. Inventory of all sources of forage and supplemental feed including documentation of surpluses and deficiencies.
4. A planned grazing schedule for livestock showing periods of grazing, rest, and other activities for all fields and pastures included in the grazing plan.
5. A contingency plan that details potential climatic problems and a guide for adjusting to insure proper management of forage resources.

Additional information including practice specifications are available in the local NRCS Field Office Technical Guide.

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# Prescribed Grazing Practice

5.29.02



# RANGE PLANTING

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 550



### RANGE PLANTING

Range planting is establishment of adapted perennial vegetation.

### PRACTICE INFORMATION

This practice applies to rangeland, native or naturalized pasture, grazed forest or other suitable land areas where the principle method of vegetation management is grazing.

Vegetation types might be grasses, legumes, shrubs, forbs, shrubs and trees.

The practice applies where desirable vegetation is below the acceptable level for natural reseeding to occur, or where the potential for enhancement of the vegetation by grazing management is unsatisfactory.

Species, cultivars or varieties selected must be compatible with management objectives and adapted to climatic conditions, soil, landscape position, and range site. In addition, the selected species for planting must provide adequate cover for erosion control. Plants selected for establishment should also contribute to wildlife and aesthetics when opportunities exist and are in line with planning objectives.

Plant establishment requires the following:

1. Proper seedbed preparation
2. Observe recommended planting dates
3. Plant at the recommended rate or spacing
4. Use quality seed and plant material
5. Apply recommended soil amendments and fertilizer
6. Control weeds and grazing during establishment period

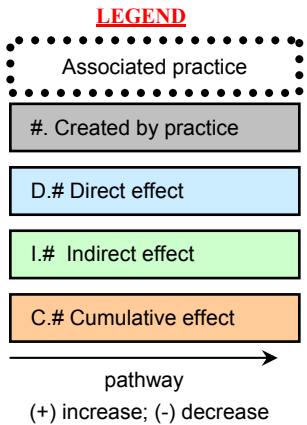
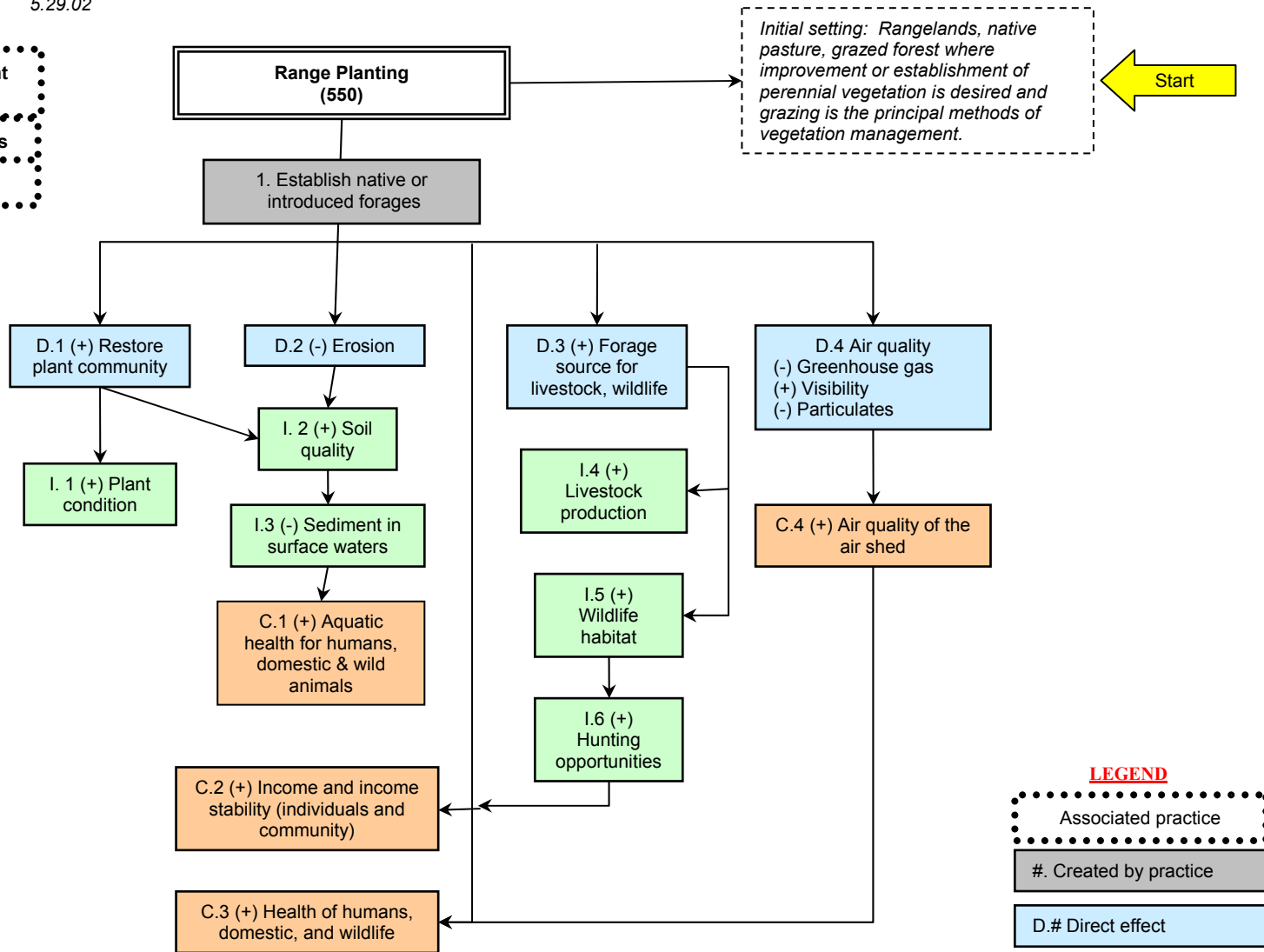
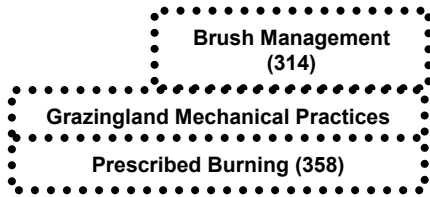
Other conservation practices such as Brush Management, and Grazing Land Mechanical Treatment may be needed to promote establishment and management of a successful range planting.

Additional information including practice specifications can be obtained from your local NRCS field office or USDA service center.

The following page identifies the conservation effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

# Range Planting Practice

5.29.02



# SPRING DEVELOPMENT

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 574



### SPRING DEVELOPMENT

Spring Development is improving springs and seeps by excavating, cleaning, capping, or providing collection and storage facilities.

### PRACTICE INFORMATION

The purpose of the practice is to improve distribution of water for livestock, recreation and wildlife. The practice also applies to irrigation when the quantity and quality are suitable for irrigating crops.

Spring development involves cleaning and/or enlarging the discharge opening of the spring. Other appurtenances might be needed such as a collection device to channel the water, and a spring box to provide a small amount of storage as well as a sediment trap and connection point for an outlet pipe (s). The outlet pipe (s) may then lead to a storage facility (s) such as a trough or tank.

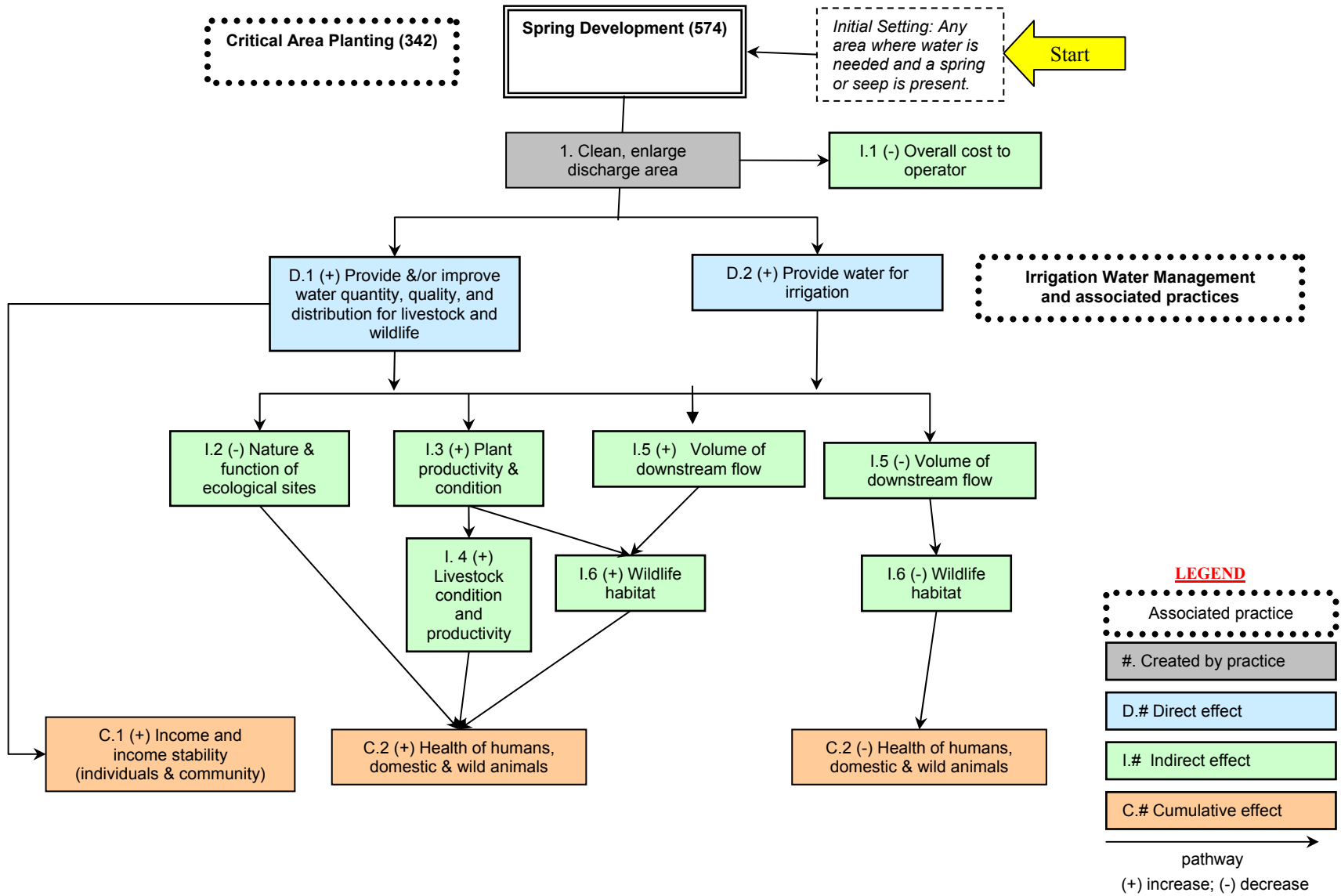
Additional information including design criteria and specifications are in the local NRCS Field Office Technical Guide.

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# Spring Development Practice

5.29.02



# USE EXCLUSION

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 472



### USE EXCLUSION

Use Exclusion is excluding animals, people or vehicles from an area.

### PRACTICE INFORMATION

The purpose of Use Exclusion is to protect, maintain, or improve the quantity and quality of the natural resources in an area. The purpose also includes aesthetic resources as well as human health and safety.

The practice is used in a conservation plan in areas where vegetation establishment or

maintenance is a concern. Protecting the vegetation is often essential to conserving the other natural resources.

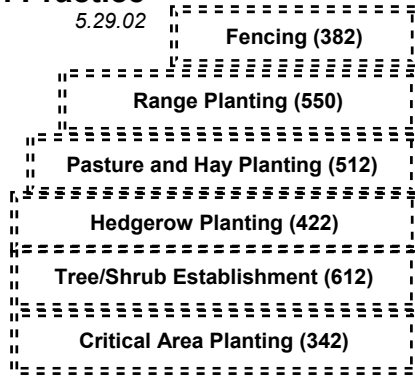
The barriers constructed for Use Exclusion must be adequate to prevent intrusion of the target animals, vehicles or people. The barriers are usually fences, but may also be natural and artificial structures such as logs, boulders, earth fill, gates, signs, etc.

Additional information including design criteria and specifications are in the local NRCS Field Office Technical Guide.

The following page identifies the conservation effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, and soil. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

# Use Exclusion Practice

5.29.02



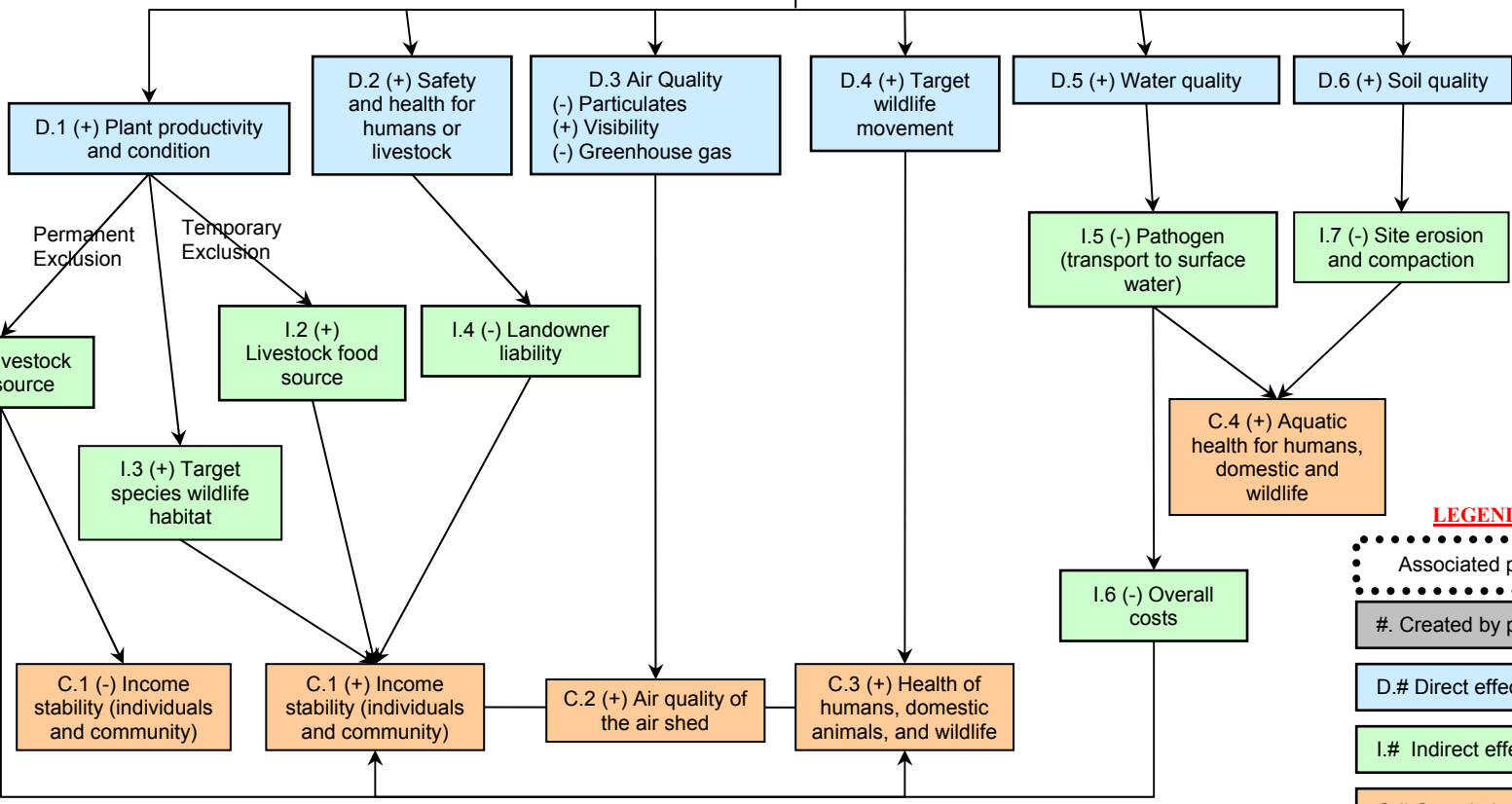
**Use Exclusion (472)**

*Initial Setting: Any land use needing permanent or temporary use exclusion.*

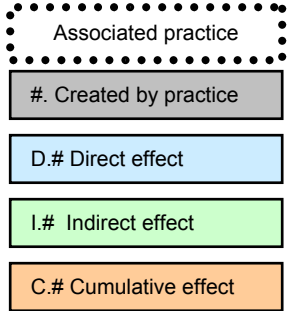


1. Animals, people or vehicles excluded from the site.

I.1 (+) Construction, replacement, & maintenance costs



**LEGEND**



pathway →  
(+) increase; (-) decrease

# WATERING FACILITY (Trough or Tank)

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 614



### WATERING FACILITY

A trough or tank is installed as a livestock watering facility.

### PRACTICE INFORMATION

A watering trough or tank provides livestock with drinking water at planned locations that will protect vegetative cover through proper distribution of grazing or other management techniques. The water source (s) may be a

well, spring, stream, pond or other sources including water hauling in some situations.

In addition to providing livestock water, troughs are sometimes installed to keep cattle out of streams and other surface water areas where water quality is a concern.

Additional information including design criteria and specifications are in the local NRCS Field Office Technical Guide.

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# Watering Facility Practice

5.29.02

