

**GRASSLAND RESERVE PRACTICE EFFECTS  
NETWORK DIAGRAMS**

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# 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*.

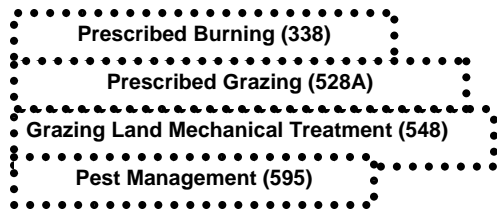
Brush Management is applied to accomplish one or more of the following:

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.

The following page contains 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.

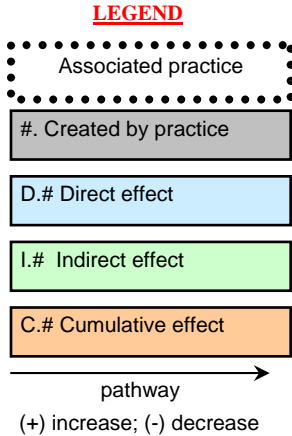
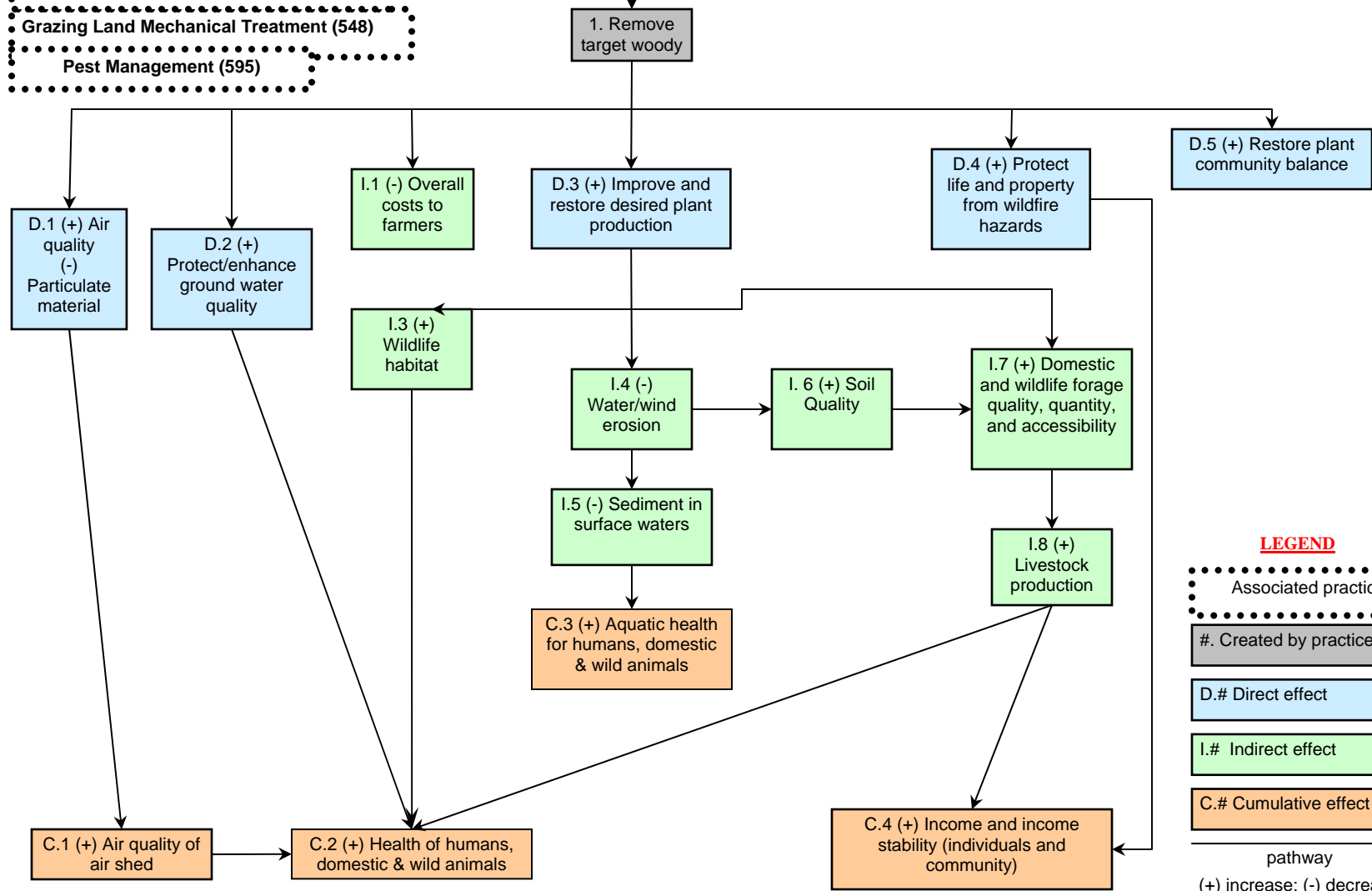
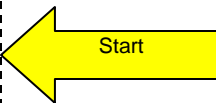
# Brush Management Practice

Version 5.29.02



**Brush Management (314)**

Initial setting: Rangelands, native pasture, pastureland, and hayland where reduction or removal of woody vegetation is desired.



# 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:

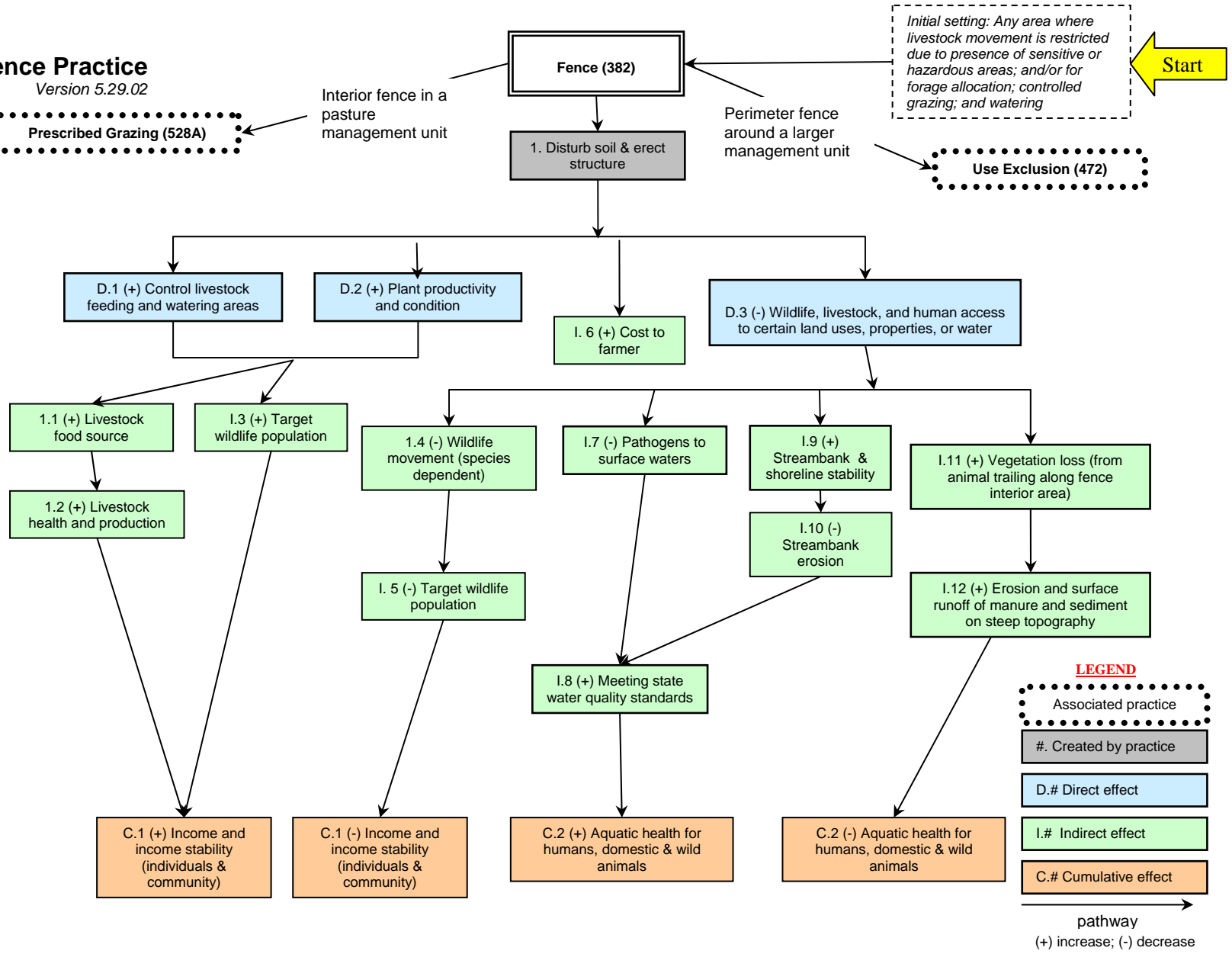
1. For ease of maintenance purposes avoid as much irregular terrain as possible.
2. Wildlife movement needs should be considered.
3. State and local laws may apply to boundary fences.
4. Consider livestock handling, watering and feeding requirements when locating fences.
5. Consider soil erosion potential 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**  
Version 5.29.02

Prescribed Grazing (528A)



**LEGEND**

- Associated practice
  - #. Created by practice
  - D.# Direct effect
  - I.# Indirect effect
  - C.# Cumulative effect
- pathway  
(+) increase; (-) decrease



# NUTRIENT MANAGEMENT

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 590



### NUTRIENT MANAGEMENT

This practice involves managing the amount, placement, and timing of plant nutrients to obtain optimum yields and minimize the risk of surface and groundwater pollution.

### PRACTICE INFORMATION

Nutrient management may be used on any area of land where plant nutrients are applied to enhance yields and maintain or improve chemical and biological condition of the soil. The source of plant nutrients may be from organic wastes, commercial fertilizer, legumes, or crop residue. The objective is to apply the proper amount of nutrients at the proper time to achieve the desired yield and minimize entry of nutrients into surface or groundwater supplies.

Planning Nutrient Management involves the following considerations:

1. National, state and local water quality standards

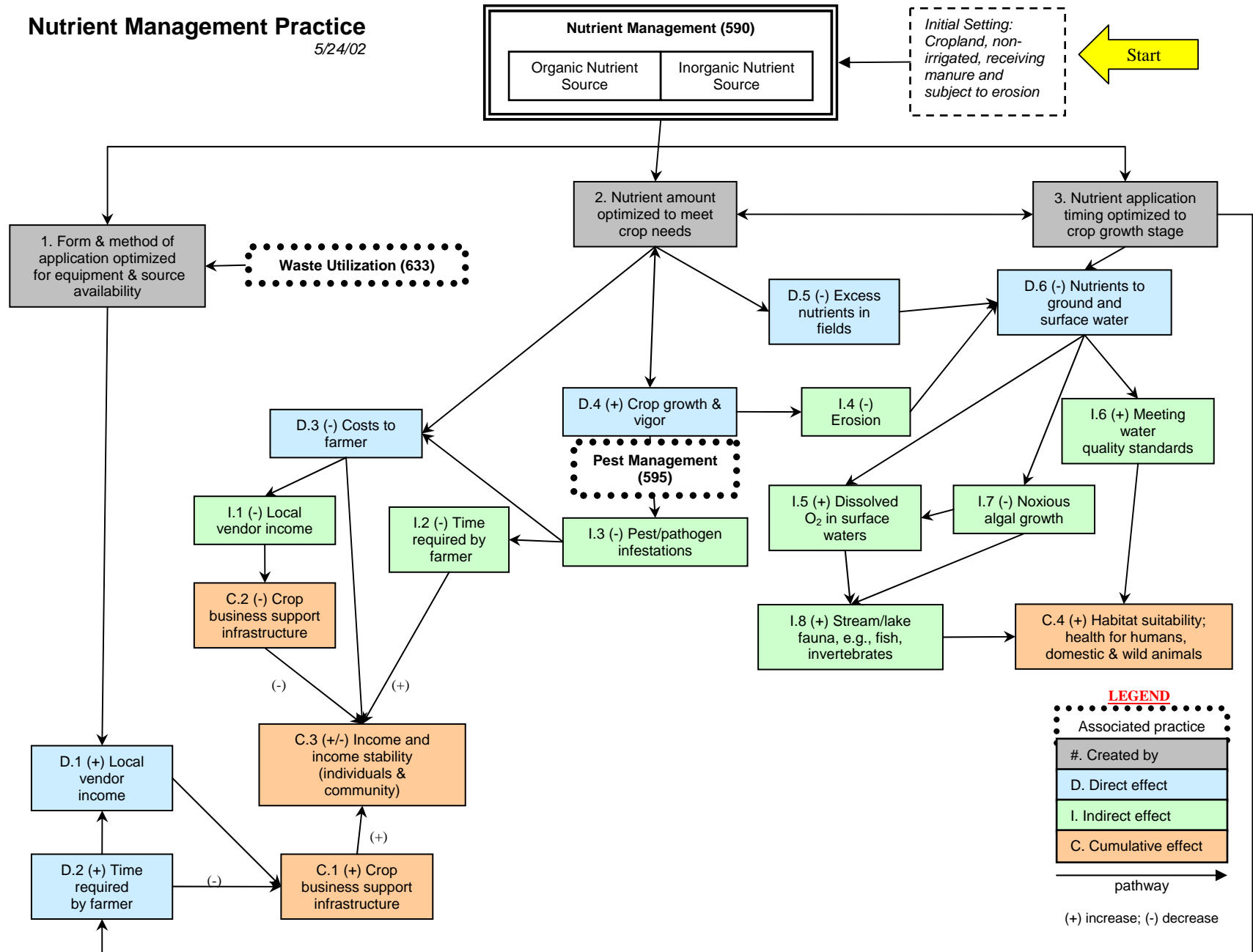
2. Sources and forms of plant nutrients available to the farmer
3. Amounts and timing of nutrients based on soil testing, planned yield and growing season of target plants
4. Evaluate use of crop rotations that enhance efficiency of nutrient utilization and improve soil tilth
5. Consider waste storage requirements and land area requirements for proper management of plant nutrients
6. Others

Additional information including standards and specifications are filed 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.

# Nutrient Management Practice

5/24/02



# 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.

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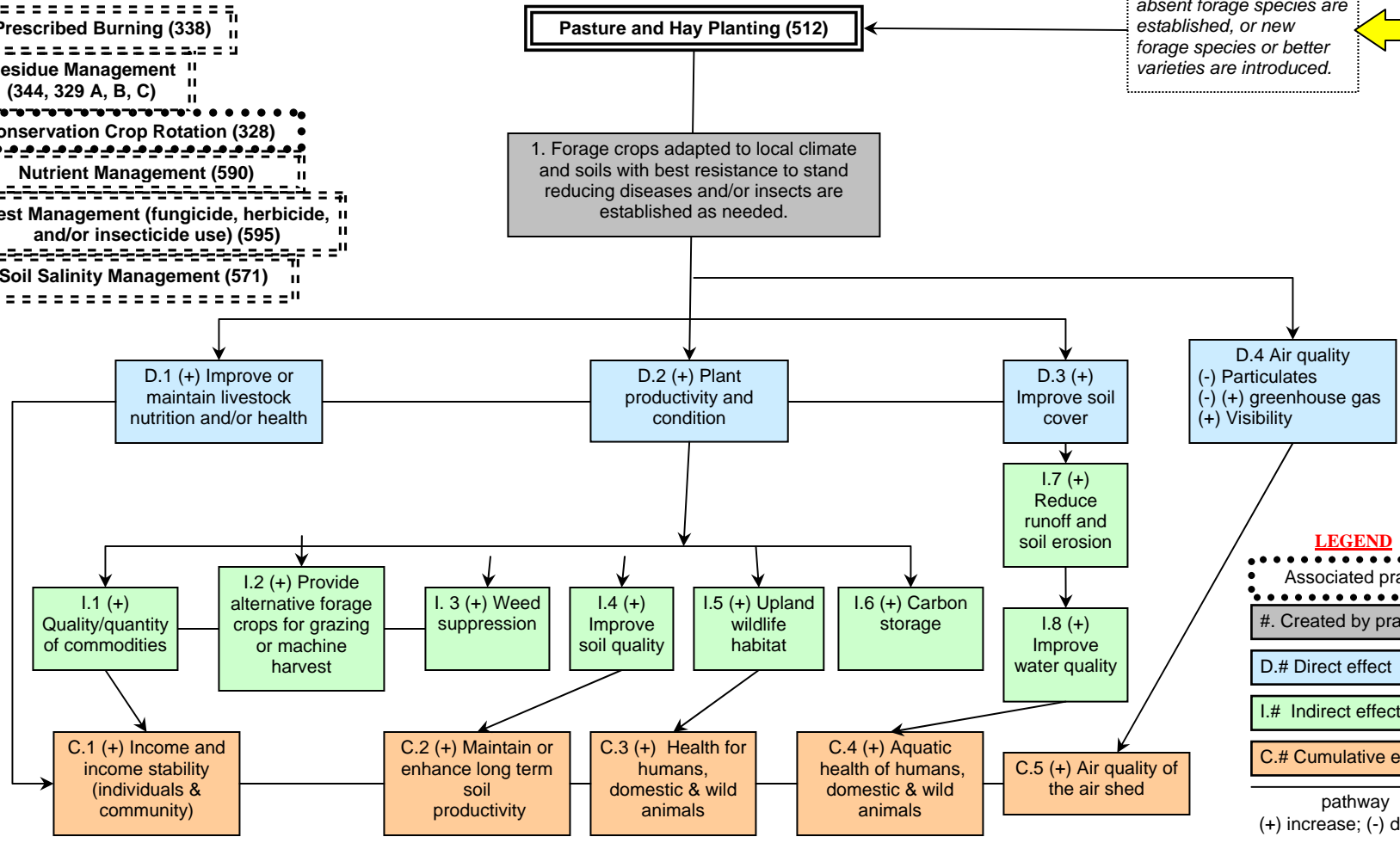


# Pasture and Hay Planting Practice

Version 5.29.02

- Prescribed Burning (338)
- Residue Management (344, 329 A, B, C)
- Conservation Crop Rotation (328)
- Nutrient Management (590)
- Pest Management (fungicide, herbicide, and/or insecticide use) (595)
- Soil Salinity Management (571)

Initial setting: Desired but absent forage species are established, or new forage species or better varieties are introduced.



**LEGEND**

- Associated practice (dotted border)
- #. Created by practice (grey box)
- D.# Direct effect (blue box)
- I.# Indirect effect (green box)
- C.# Cumulative effect (orange box)
- pathway (arrow)
- (+) increase; (-) decrease

# PEST MANAGEMENT

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 595



### PEST MANAGEMENT

Utilizing environmentally sensitive prevention, avoidance, monitoring and suppression strategies, to manage weeds, insects, diseases, animals and other organisms (including invasive and non-invasive species), that directly or indirectly cause damage or annoyance.

### PRACTICE INFORMATION

This practice establishes the minimum acceptable elements of a pest management program. It includes appropriate cultural, biological, and chemical controls, and combinations thereof.

The purpose of the practice is to establish a pest management program that is consistent with crop production goals and environmental concerns.

The following are major considerations regarding the pest management practice:

1. Use integrated pest management principles to assure the techniques are environmentally sound.
2. Use crop rotations to break up pest cycles
3. Use hand weeding or spot treatment when appropriate

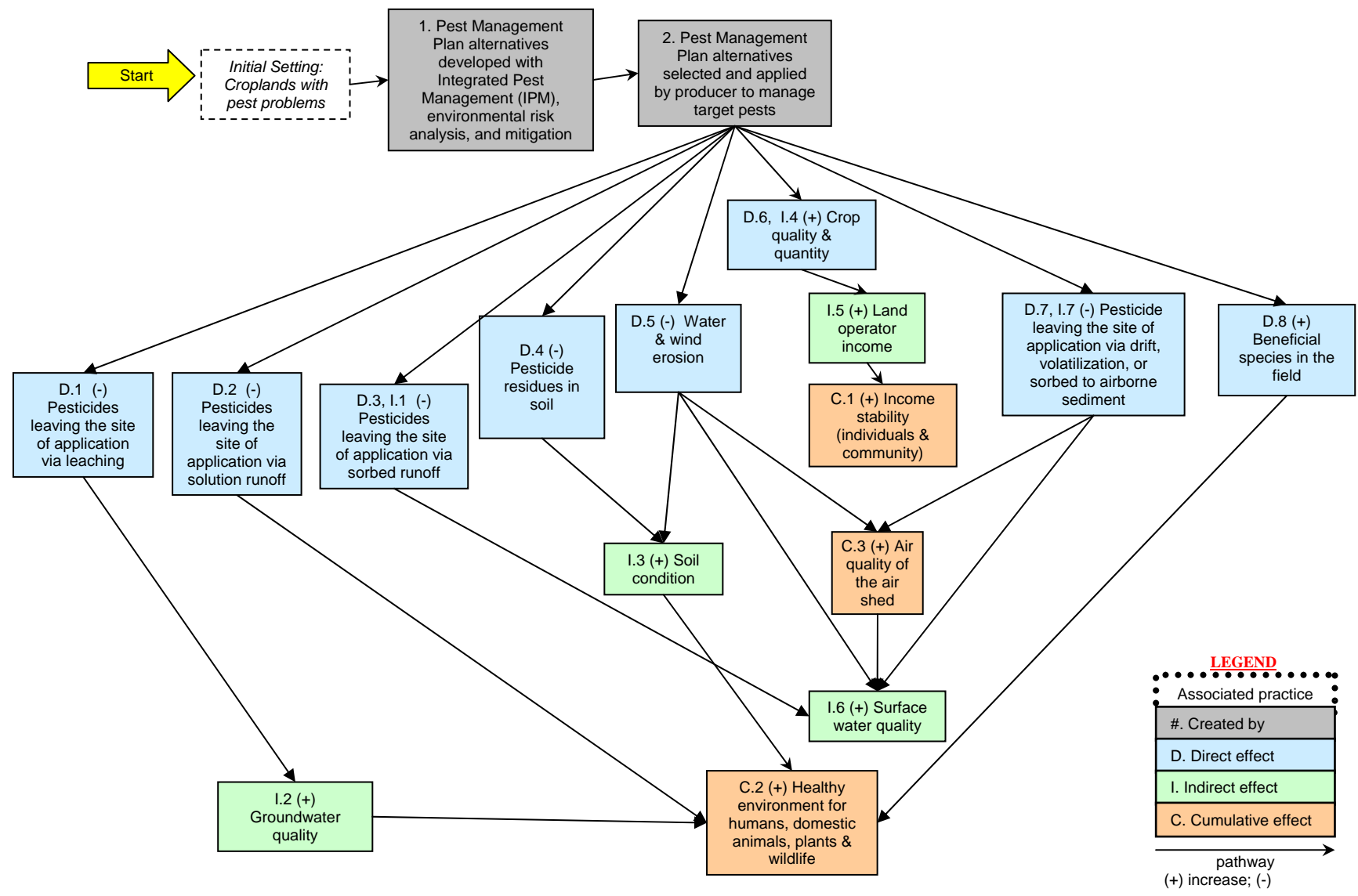
4. Use biological control and beneficial insects
5. Scout fields and apply chemicals at the correct time and dose rate
6. Consider the effects of repetitive use of the same chemicals on pesticide resistance
7. Control erosion to reduce runoff and associated pollution
8. Use field borders and buffer strips to reduce potential for pollution from runoff
9. Become familiar with common pests including life cycles and learn alternative control techniques
10. Use chemicals safely
11. Always follow label instructions
12. Use extreme care in preparing tank mixes and rinsing chemicals from tanks
13. Assure farm workers are properly trained in safety precautions

Additional information including standards and specifications are included 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.

**Pest Management Practice**  
5/30/02

Pest Management  
(595) applied



# 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.

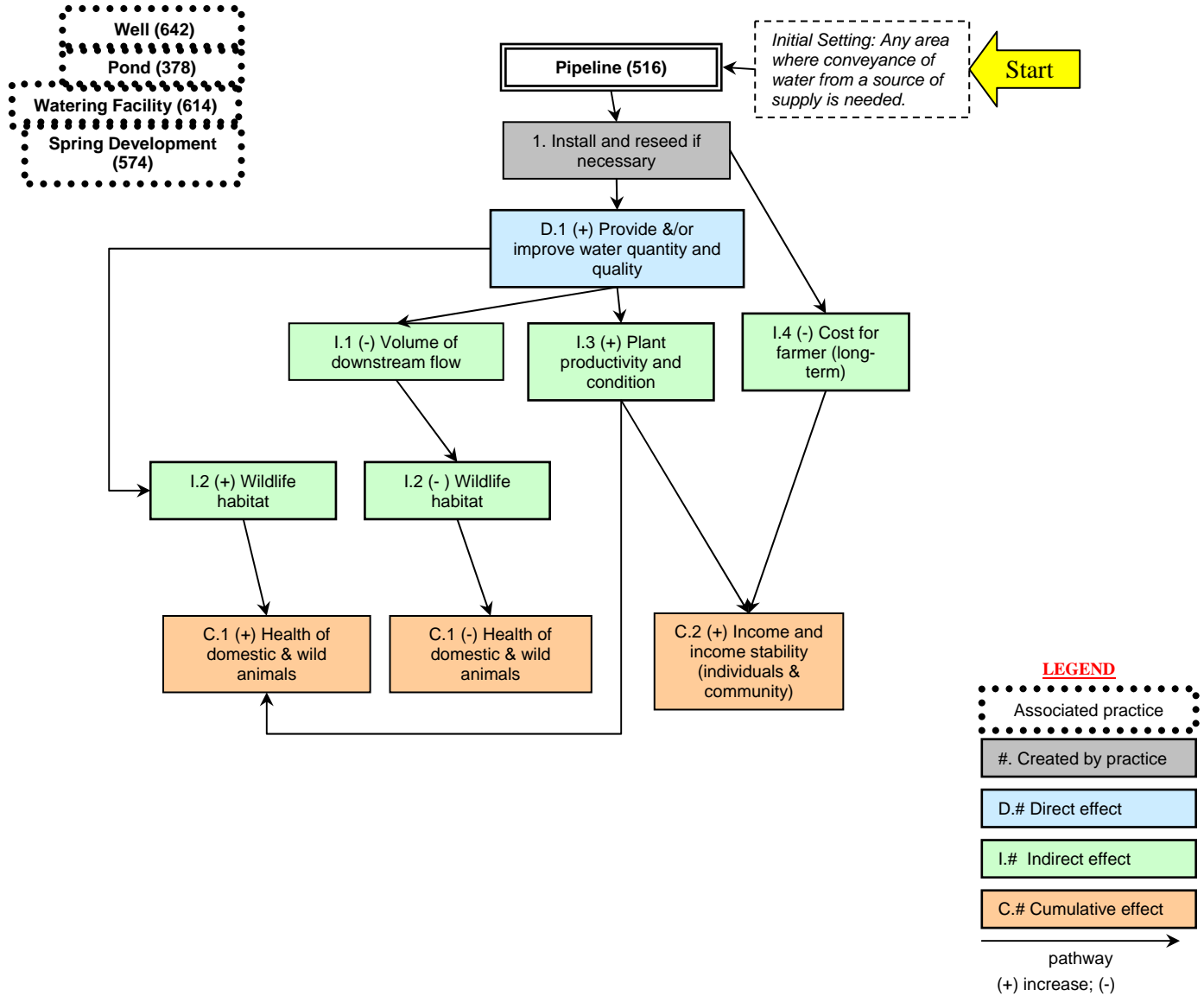
Pipelines are also used on recreation and wildlife lands to provide or distribute drinking water facilities for humans as well as wildlife.

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

Version 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.

The following pages list 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.

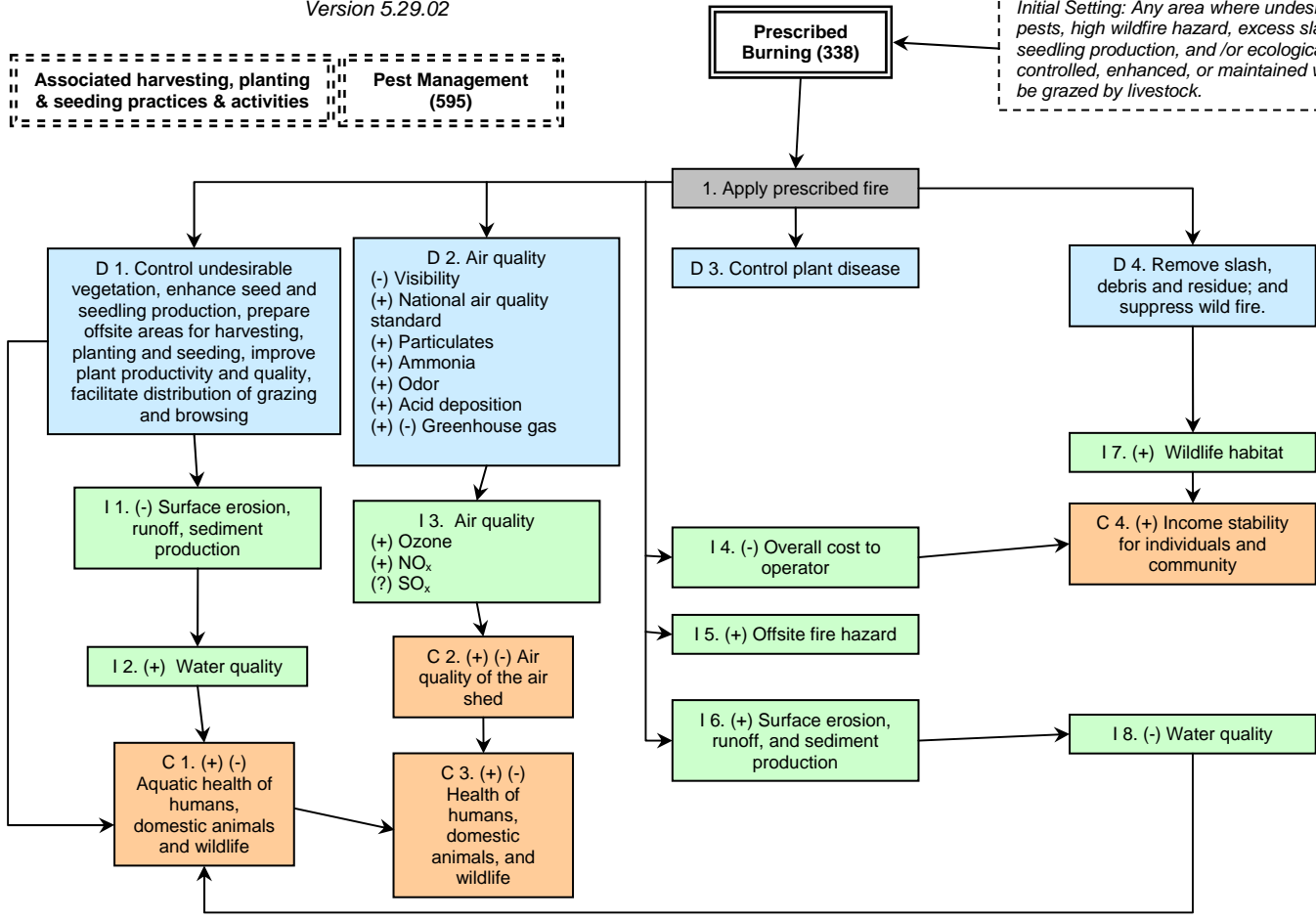
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# Prescribed Burning Practice

Version 5.29.02

Associated harvesting, planting & seeding practices & activities  
Pest Management (595)

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.



**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:

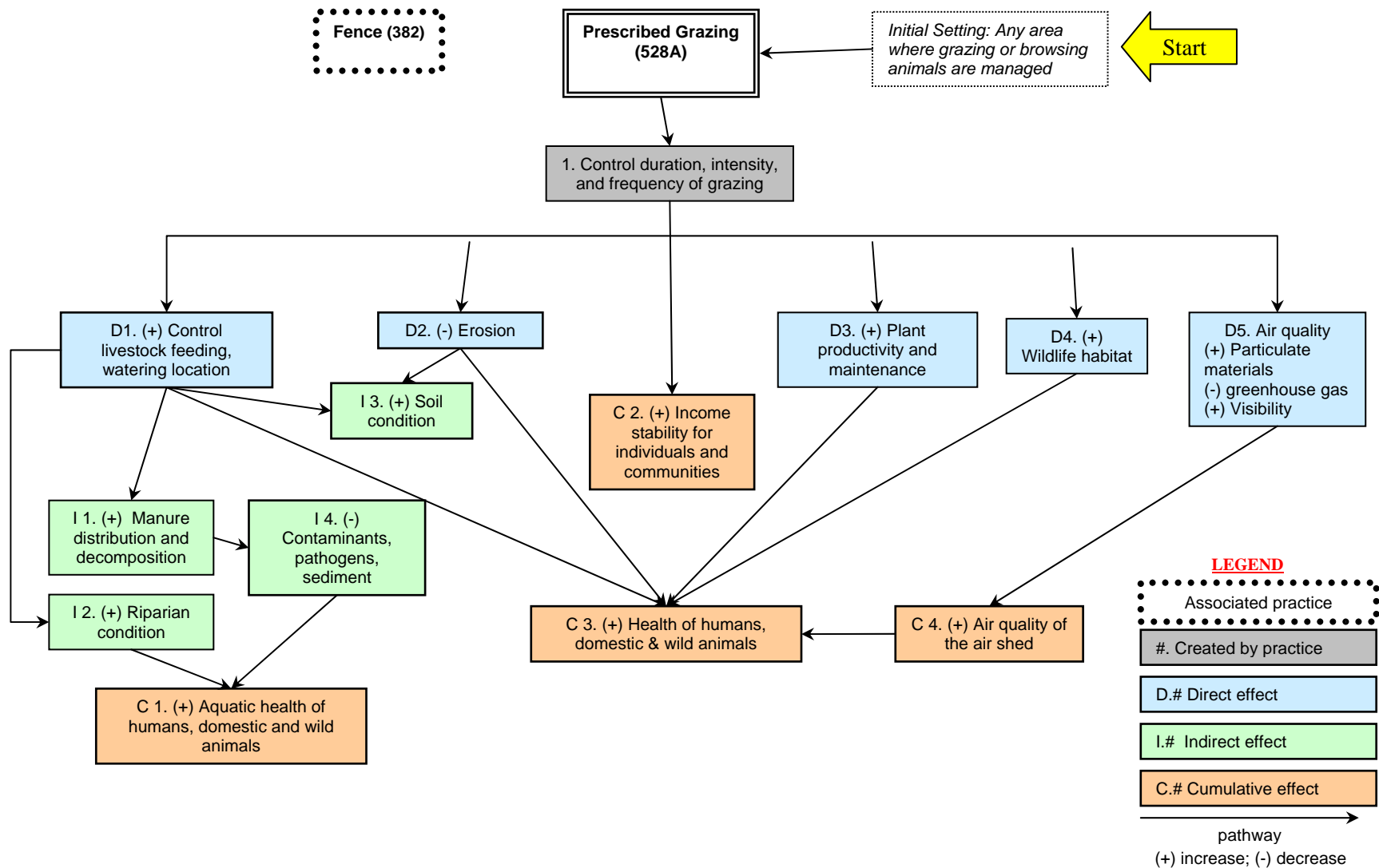
1. Expected forage quality and quantity for all lands providing forage.
2. Numbers and kinds of animals utilizing available forage on the unit.
3. Inventory of all sources of forage and supplemental feed including documentation of surpluses and deficiencies.
4. A planned grazing schedule for livestock 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.

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.

# Prescribed Grazing Practice

Version 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.

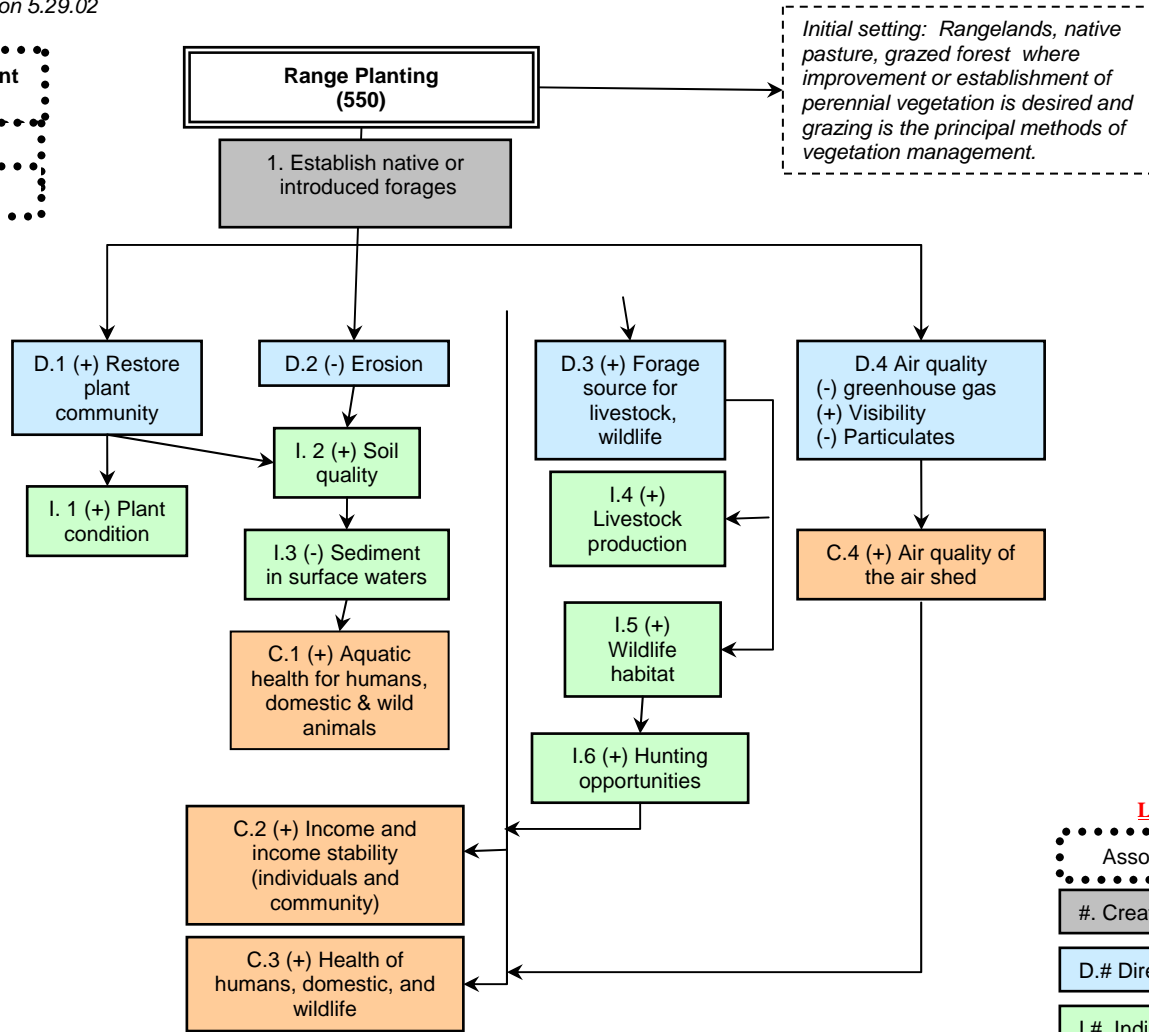
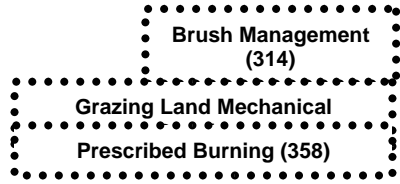
Additional information including practice specifications can be obtained from your local NRCS field office or USDA service center.

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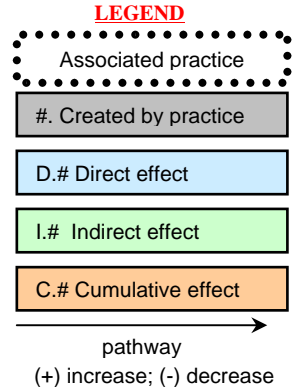


# Range Planting Practice

Version 5.29.02



Initial setting: Rangelands, native pasture, grazed forest where improvement or establishment of perennial vegetation is desired and grazing is the principal methods of vegetation management.



# 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

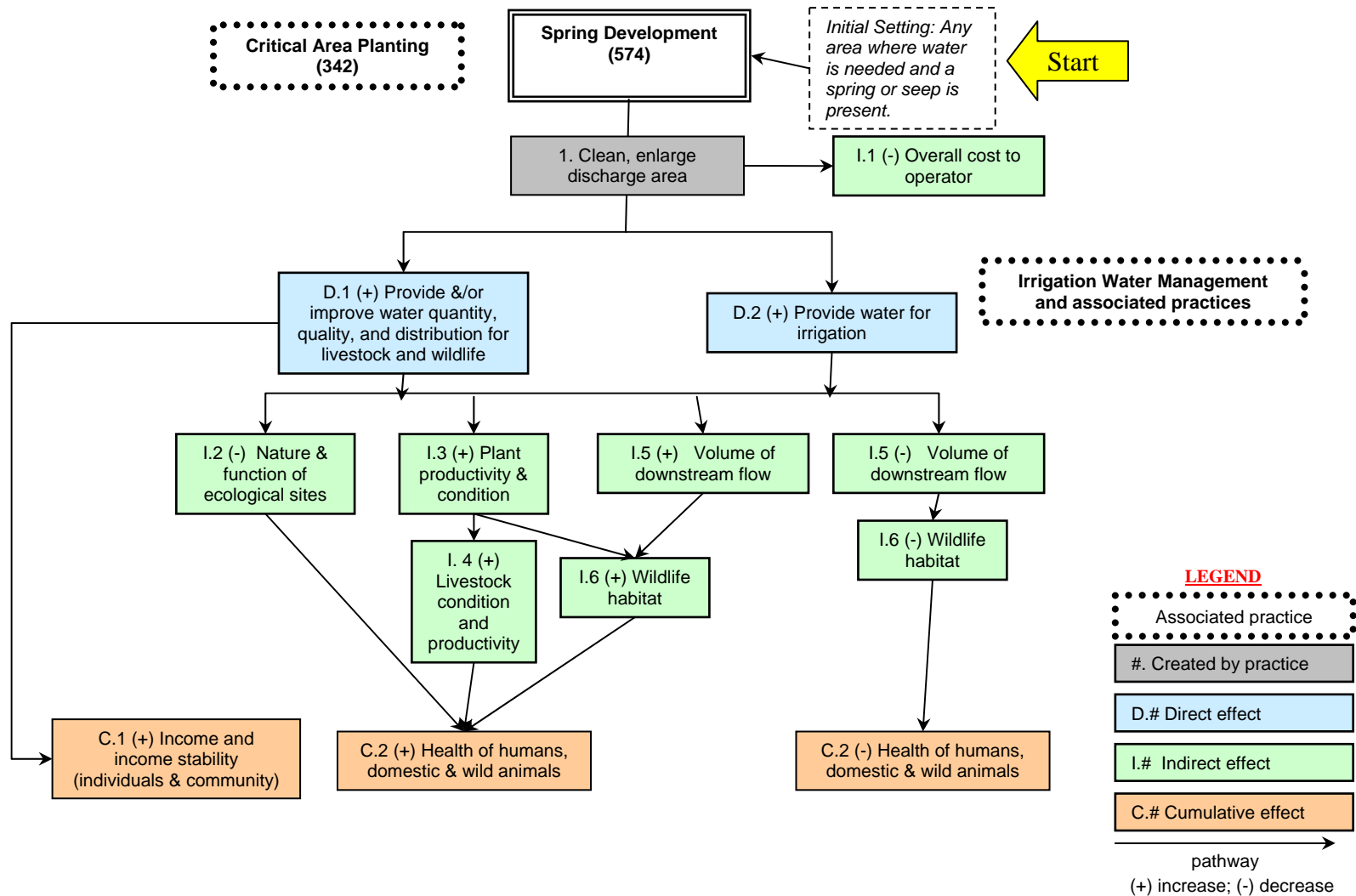
the spring. Other appurtenances might be needed such as a collection device to channel the water, and a spring box to provide a small amount of storage as well as a sediment trap and connection point for an outlet pipe (s). The outlet pipe (s) may then lead to a storage facility (s) such as a trough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

Version 5.29.02



# UPLAND WILDLIFE HABITAT MANAGEMENT

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 645



### UPLAND WILDLIFE HABITAT MANAGEMENT

Upland Wildlife Habitat Management is creating, maintaining, or enhancing areas of food and cover for upland wildlife.

### PRACTICE INFORMATION

The population dynamics of wildlife is highly dependent on food, water, and cover. The purpose of this practice is to enhance

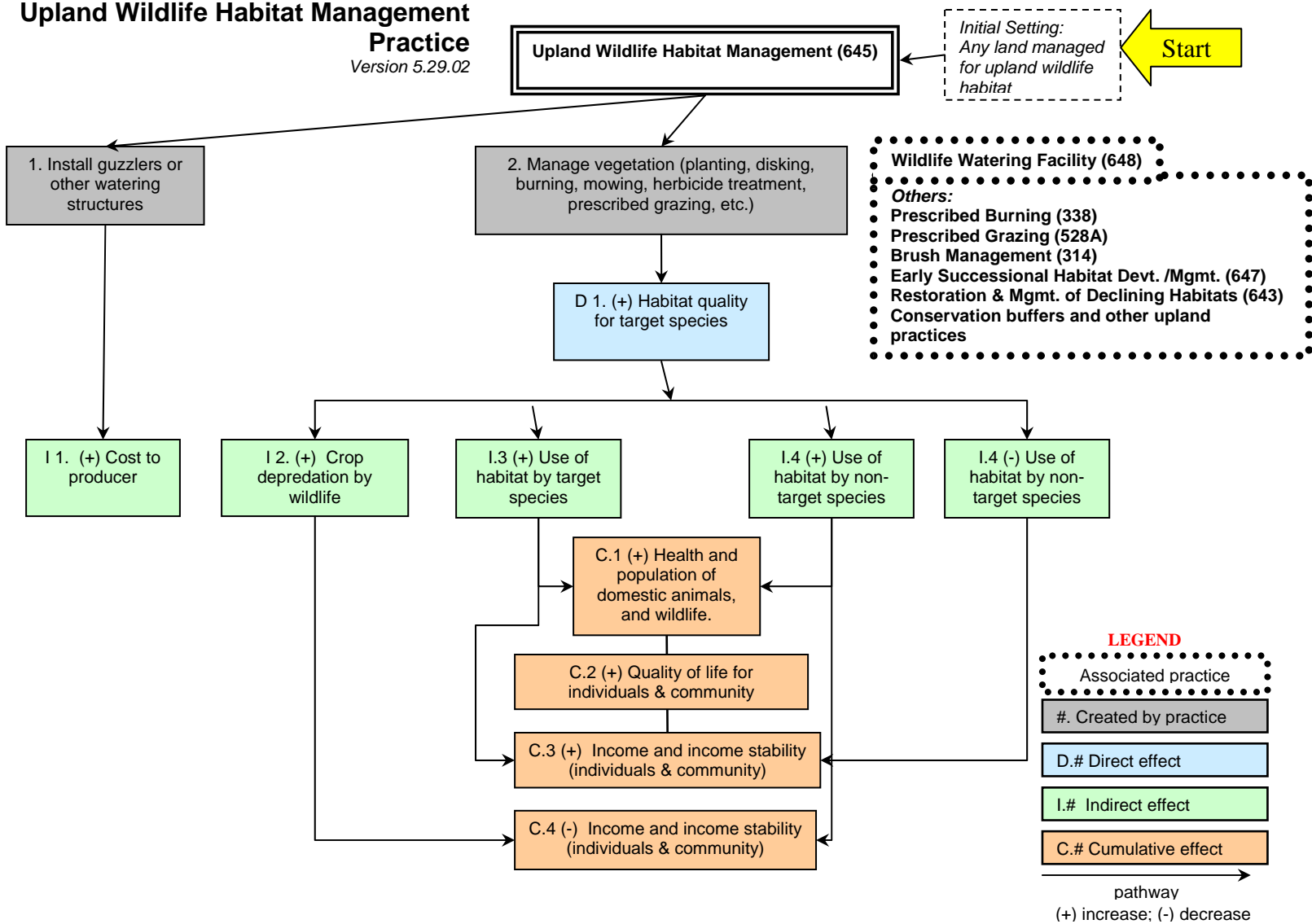
the wildlife habitat and maintain or increase populations of wildlife species. The practice applies to all areas where wildlife need improvements in food, cover, and management.

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.

# Upland Wildlife Habitat Management Practice

Version 5.29.02





# 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.

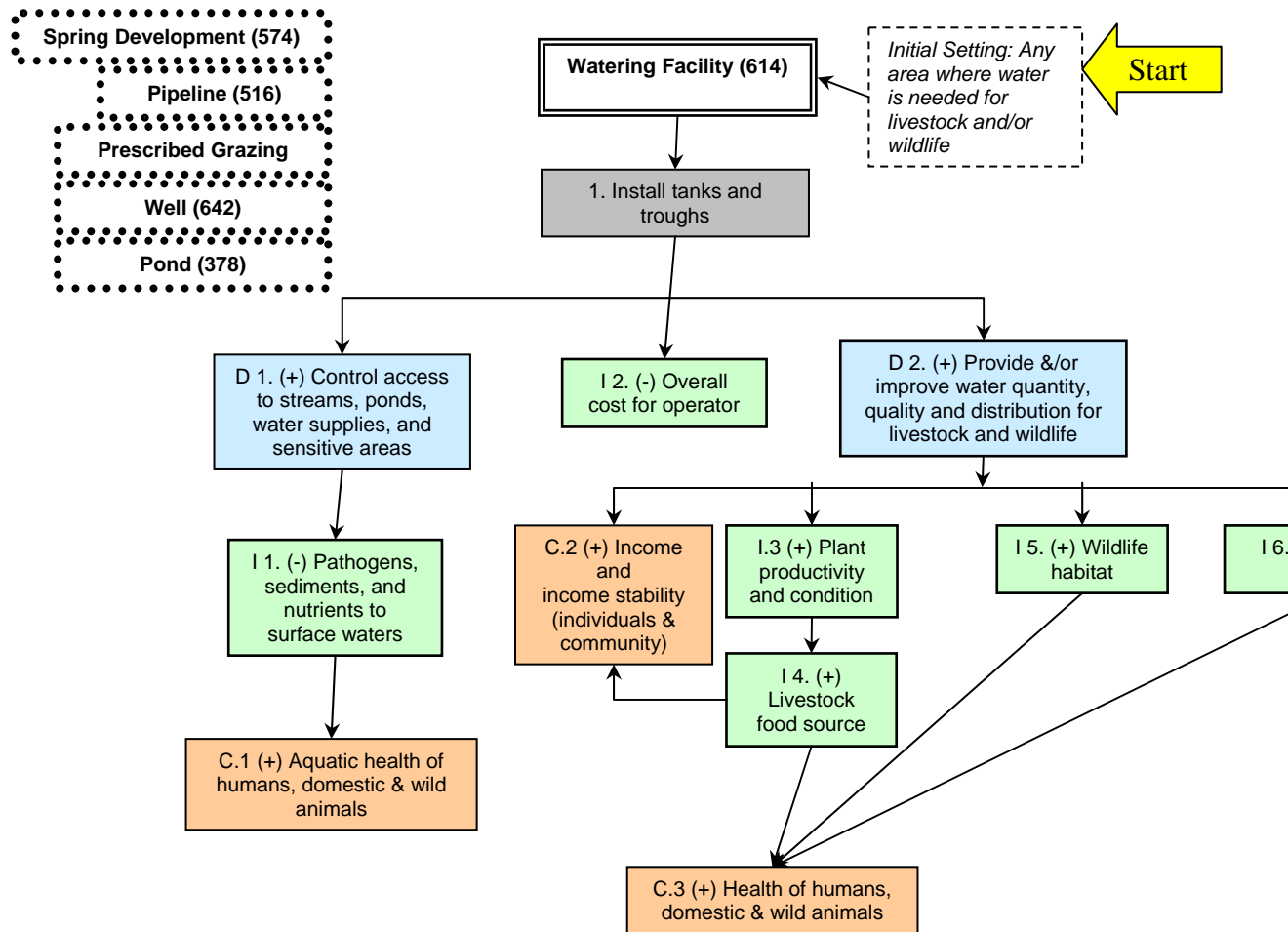
In addition to providing livestock water, troughs are sometimes installed to keep cattle out of streams and other surface water areas where water quality is a concern.

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

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# Watering Facility Practice

Version 5.29.02



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