

# COMPOSTING FACILITY

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 317



### COMPOSTING FACILITY

A composting facility is installed for biological stabilization of waste organic material.

### PRACTICE INFORMATION

The purpose of this practice is to biologically treat waste organic material and produce humus-like material that can be recycled as a soil amendment or organic fertilizer. The material may also be used by other acceptable methods of recycling that comply with laws, rules and regulations.

Composting is accomplished by mixing an energy source (carbonaceous) with a nutrient source (nitrogenous) in a prescribed manner to meet aerobic bacteria requirements. Correct proportions of ingredients are essential to minimize odors and avoid pest problems. Waste material for composting may include livestock and poultry manure, dead animal carcasses, and food processing material when it is considered part of a normal farm operation. This practice applies where: (1) waste organic material is generated by agriculture production or processing, (2) composting is needed to manage the waste organic material properly, (3) an overall waste management system has been planned that accounts for the end use of the composted material. The three types of

composting facilities covered in the NRCS Composting Facility standard are:

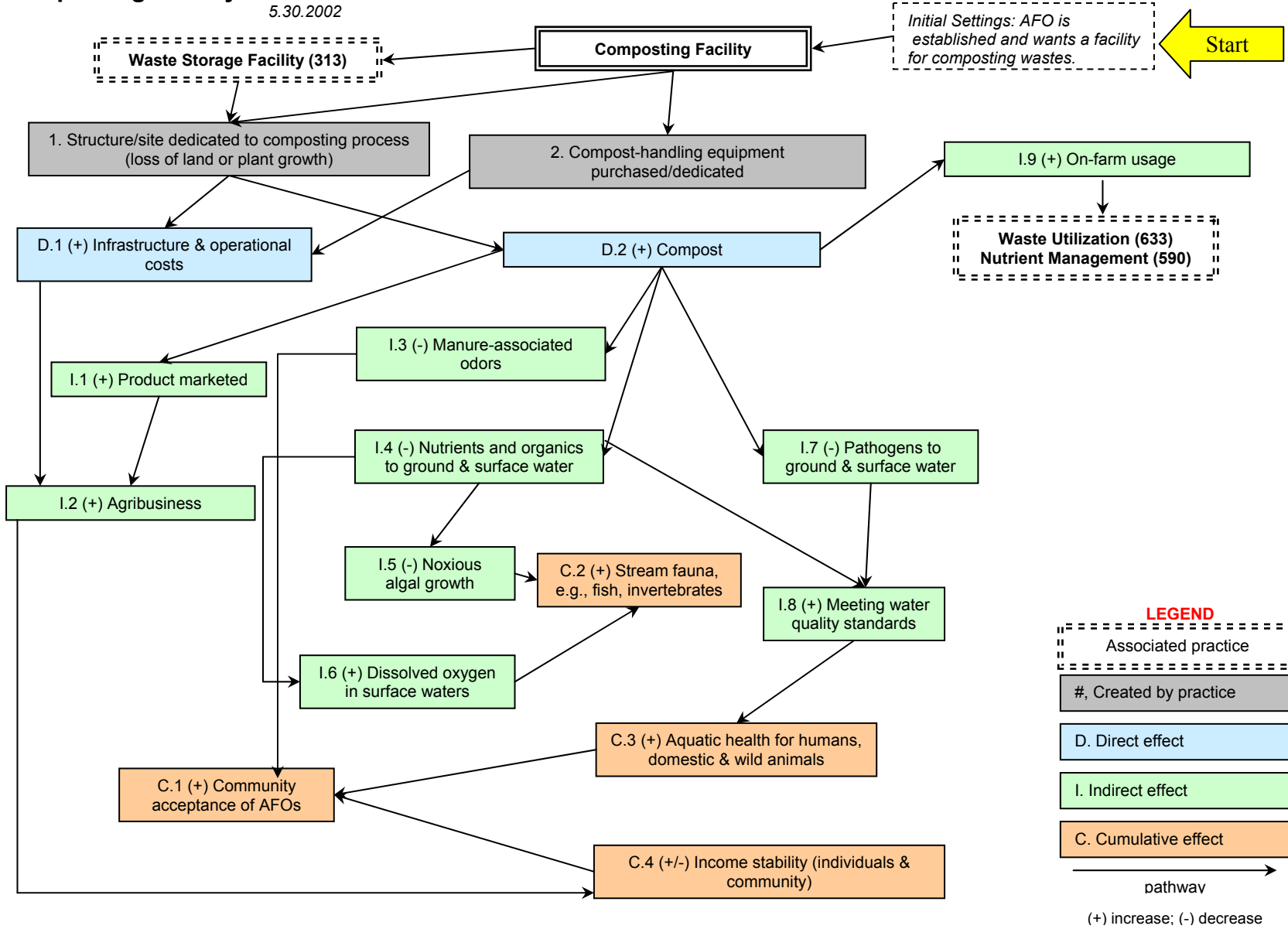
- **Aerated windrows** - Suited for large volumes of organic material managed by power equipment used to periodically turn the composting material.
- **Static piles** - The material is initially mixed into a homogeneous mixture that has the proper moisture content and bulk density to facilitate air movement throughout the pile without periodically turning the material. Forced air might be necessary to facilitate the composting process.
- **In-vessel** - An enclosed structure is used to contain a blended mixture of organic waste that is strictly controlled for optimum air and temperature. In-vessel composting also includes naturally aerated systems where organic materials are layered in a container and turned once during the composting process.

Additional information including design criteria and specifications is 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, and soil. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

# Composting Facility Practice

5.30.2002



# HEAVY USE AREA PROTECTION

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 561



### HEAVY USE AREA PROTECTION

Heavy use area protection is protecting heavily used areas by establishing vegetative cover, by surfacing with suitable materials, or by installing needed structures.

### PRACTICE INFORMATION

Heavy use area protection is a practice used primarily in urban areas and land used for recreation purposes. However, the practice may be used on any land area frequently and intensely used by people, animals, or vehicles. Treatment provided by this practice is primarily for erosion control but also addresses other types of natural resource degradation including aesthetics.

The prescribed surface treatment is designed to accommodate the specific type of traffic expected to occur. Surface treatment may involve pavement for vehicle traffic or vegetation may provide sufficient protection for people and animal traffic.

Impermeable surfaces such as pavement increase runoff. Therefore, provision for drainage is always considered when planning this practice.

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

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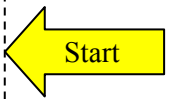
# Heavy Use Area Protection Practice

5.30.2002

- Use Exclusion (472)
- Prescribed Grazing (528A)
- Critical Area Planting (342)
- Fence (382)
- Diversions (362)
- Roof Runoff (558)

**Heavy Use Area Protection (561)**

*Initial Settings: AFO is established and wants to add a concrete area for feeding and water troughs.*



1. Establish area with appropriate foundation and construct the heavy use area

D.1 (+) Run-off from area

D.2 (+) Collectable manure for treatment

D.3 (+) Controlled water movement from area

Filter Strip (393)  
Waste Utilization (633)

I.3 (+) Nutrients and organics to ground & surface water

I.2 (-) Erosion

I.7 (+) Water availability

I.5 (+) Pathogens to ground & surface water

I.1 (+) Economic benefit to farmer

I.8 (-) Meeting water quality standards

C.3 (+) Aquatic health for humans, domestic & wild animals

C.4 (+) Income stability (individuals & community)

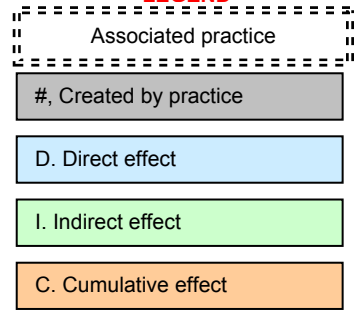
C.1 (-) Aquatic health for humans, domestic & wild animals

I.4 (-) Noxious algal growth

I.6 (-) Dissolved oxygen surface waters

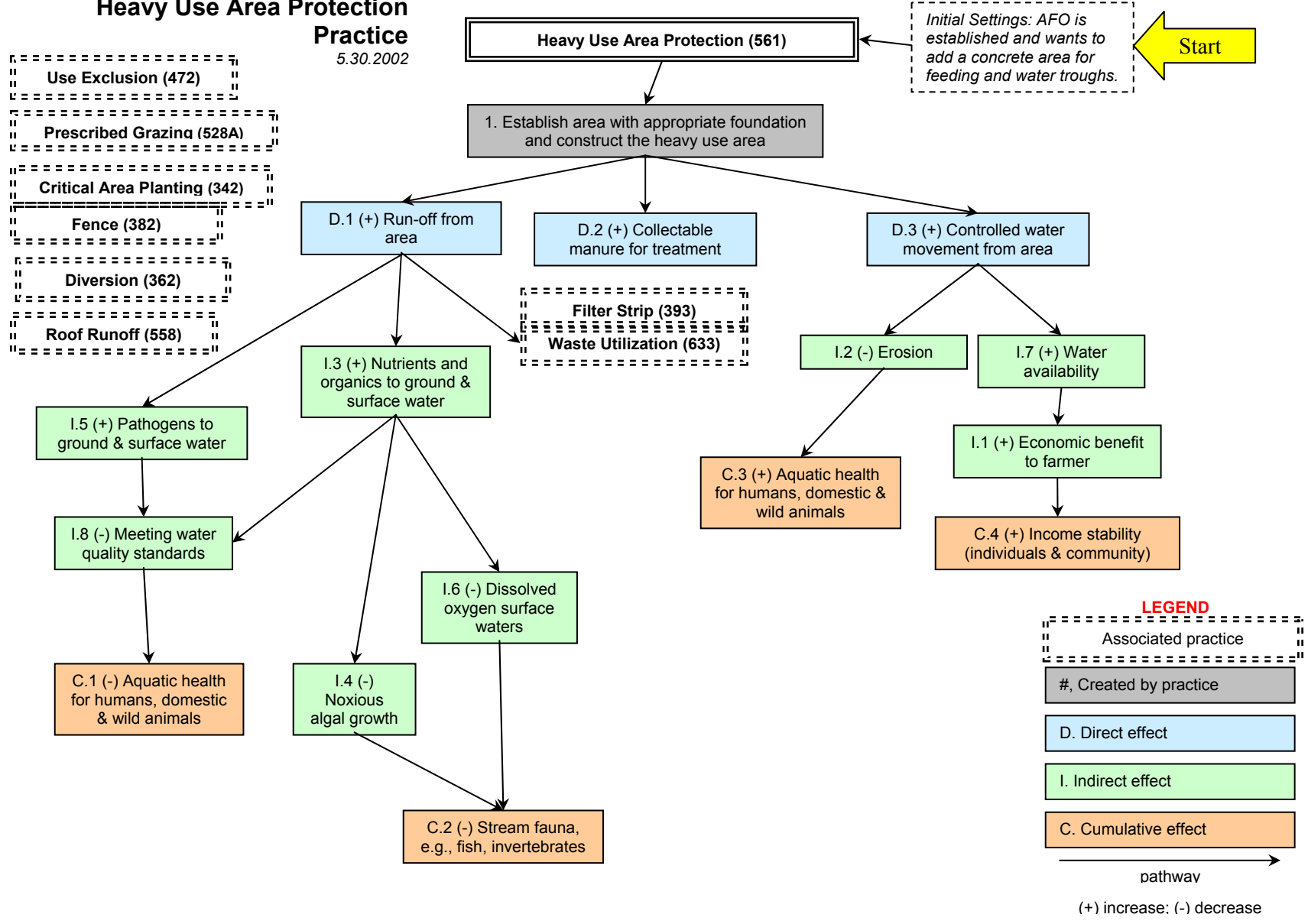
C.2 (-) Stream fauna, e.g., fish, invertebrates

**LEGEND**



pathway →

(+) increase: (-) decrease



# MANURE TRANSFER

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 634



### MANURE TRANSFER

Manure Transfer is a manure conveyance system using structures, conduits, or equipment.

### PRACTICE INFORMATION

The purpose of the practice is to transfer animal manure, bedding material, spilled feed, process waste water, and other residues associated with animal production to a treatment facility or to agricultural land for final utilization as a source of organic material.

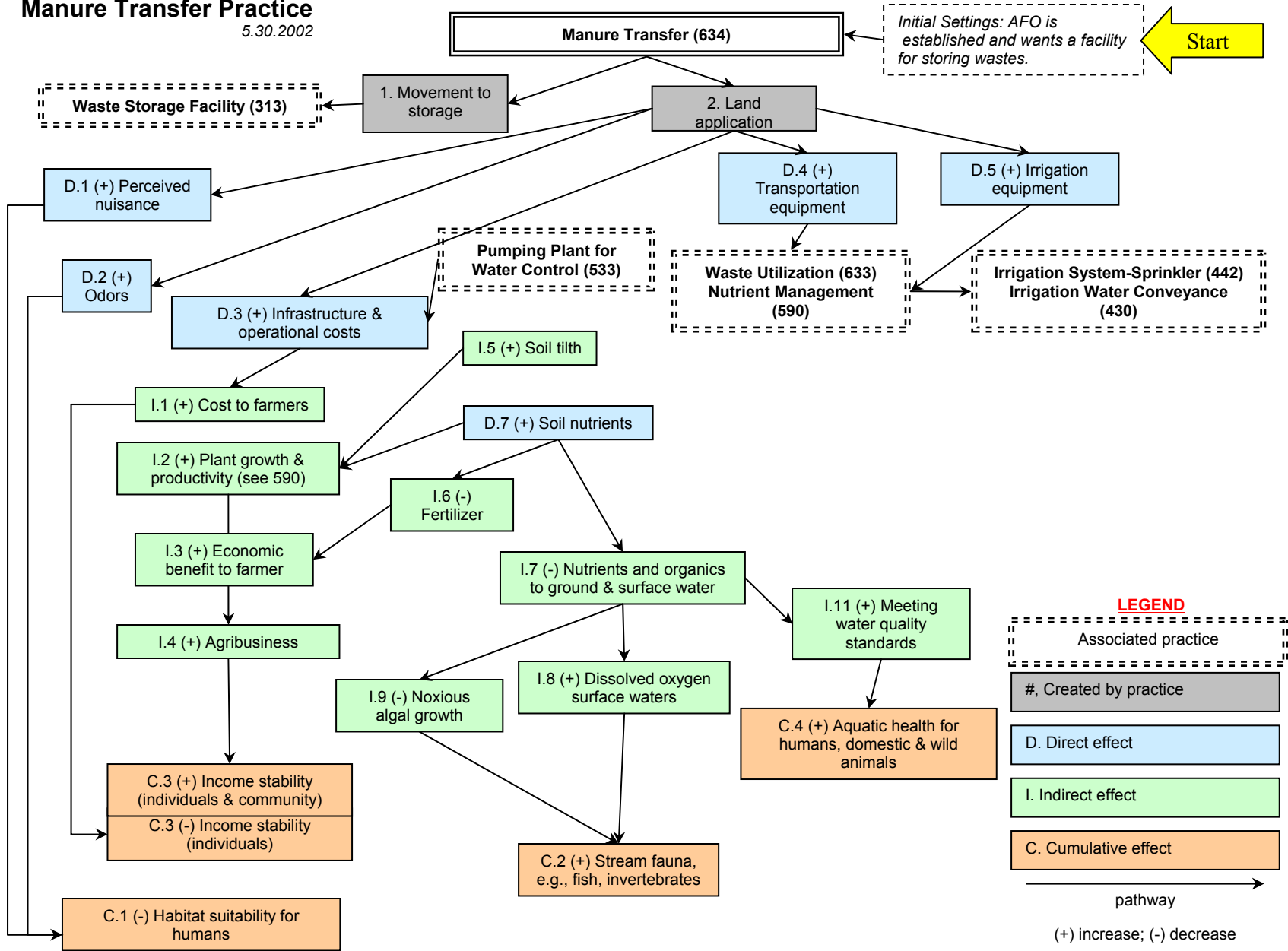
This practice is only one component to a manure management system. Manure transfer may involve one to several conservation practices such as various types of structures, pipelines, pumps, and even delivery trucks.

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

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# Manure Transfer Practice

5.30.2002



# ROOF RUNOFF STRUCTURE

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 558



### ROOF RUNOFF STRUCTURE

A roof runoff structure is a facility for collecting, controlling, and disposing of runoff water from roofs.

### PRACTICE INFORMATION

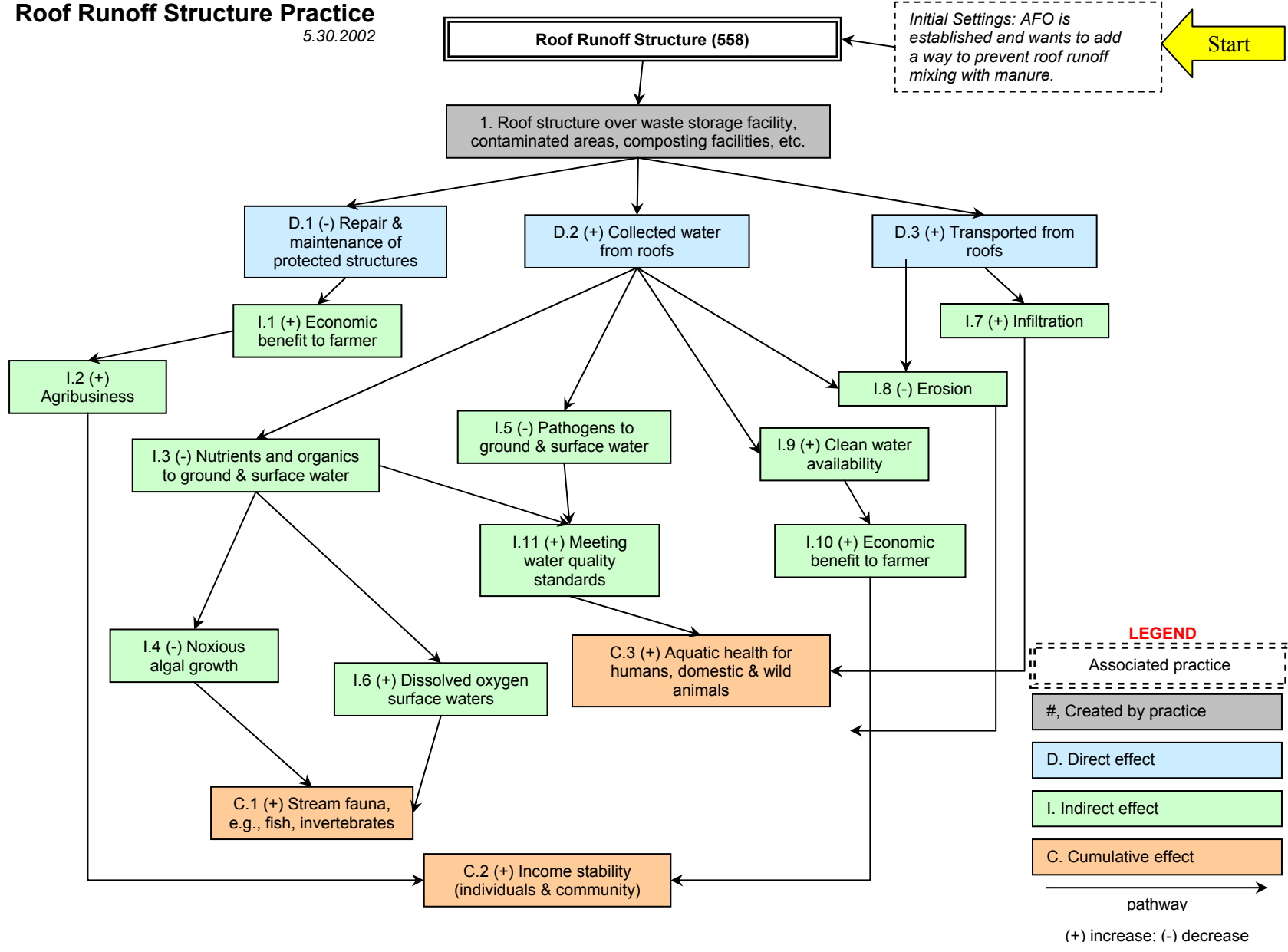
The purpose of this practice is to prevent roof runoff water from flowing across concentrated waste areas, barnyards, roads, and alleys. The practice reduces pollution, flooding, and erosion. It also improves water quality, drainage, and the overall efficiency of a waste management

system. The water from roof runoff can be stored and reused for cleaning and other purposes. The practice also reduces the volume requirements of lagoons and waste storage facilities, and reduces the volume of effluent water requiring treatment or land application.

Additional information including design criteria and specifications for installing roof runoff structure facilities are filed in the local NRCS Field Office Technical Guide.

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**Roof Runoff Structure Practice**  
5.30.2002





# WASTE STORAGE FACILITY

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 313



### WASTE STORAGE FACILITY

A waste storage facility is a waste impoundment made by constructing an embankment, excavating a pit or dugout, or by fabricating a structure.

### PRACTICE INFORMATION

A waste storage facility is a component of a complete agricultural waste management system. The purpose of the practice is to provide temporary storage of waste material generated by production and/or processing of agricultural products. The waste material may be animal manure, wastewater, or contaminated runoff.

An operation and maintenance plan is developed to specify requirements for emptying the storage facility. The plan specifies timing, rates, and volume of waste

applications. For ponds, the plan also includes requirements for timely removal of waste material to accommodate subsequent storms.

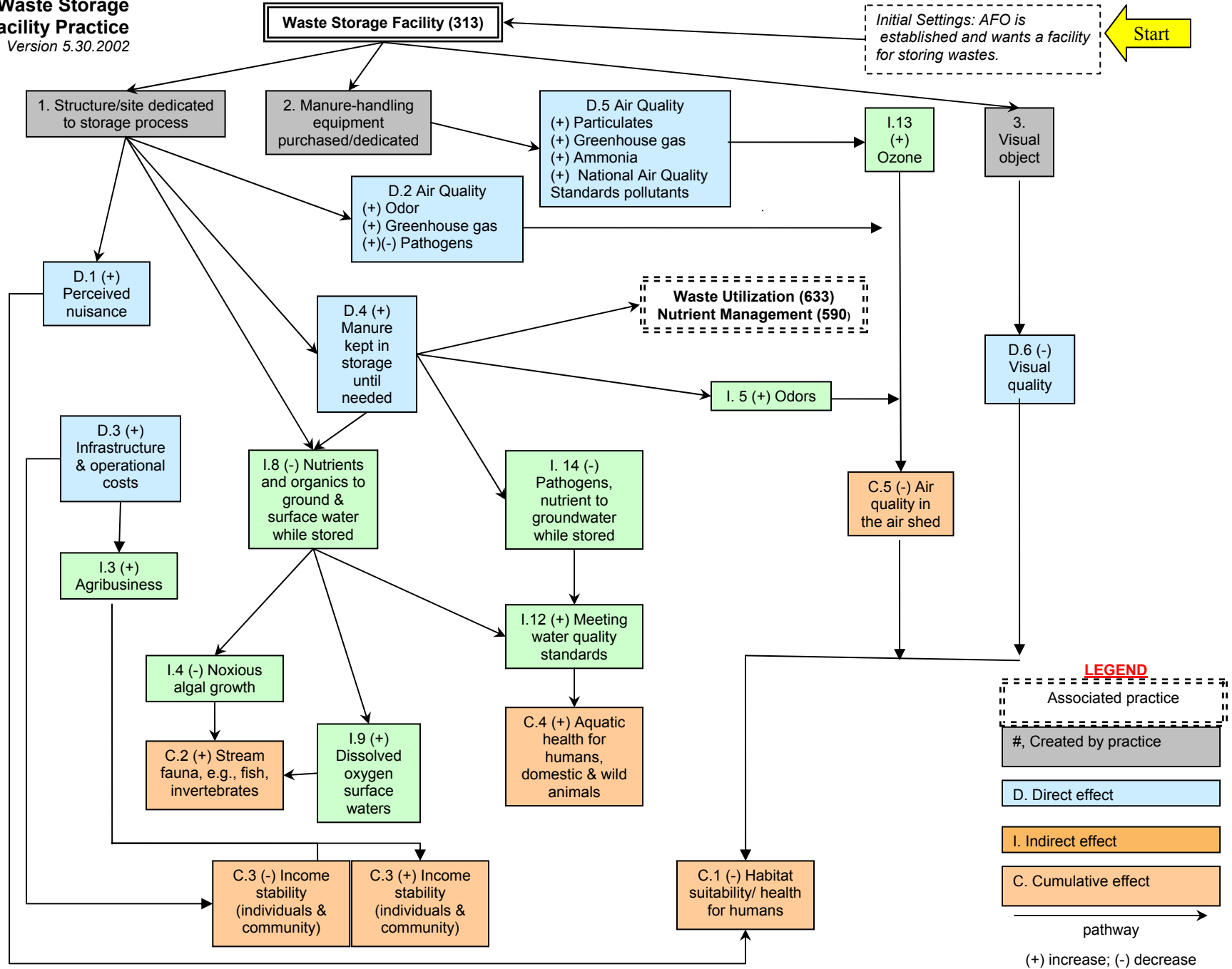
Design criteria for this practice includes:

- Site location
- Design storage volume
- Storage period
- Inlet structures
- Safety features
- Pond criteria
- Emptying facilities
- Fabricated structure criteria

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

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**Waste Storage Facility Practice**  
Version 5.30.2002



# WASTE TREATMENT LAGOON

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 359



### WASTE TREATMENT LAGOON

A waste treatment lagoon is an impoundment made by excavation or earth fill to provide storage for biological treatment of animal or other agriculture waste.

### PRACTICE INFORMATION

The purpose of this practice is to store and biologically treat organic waste, reduce pollution, and protect water quality.

This practice applies under the following conditions:

1. Where a complete waste management system has been planned.
2. Waste generated by agriculture production and/or processing needs treatment.
3. A suitable location is available.
4. The soils are suitable for retaining the waste or can be sealed to prevent seepage.
5. A water supply is adequate maintain the design depth of water in the lagoon.

The three general types of waste treatment lagoons are the following:

1. Anaerobic - require less surface area than naturally aerobic lagoons but may give off offensive odors.
2. Naturally aerobic - require more surface area but are relatively odor free.
3. Mechanically aerated - comparable in size to anaerobic lagoons but require energy for aeration.

Waste treatment lagoons are located as near the source of waste as possible but as far from human dwellings as possible. The location should also be where prevailing winds will carry odors away from residences and public areas.

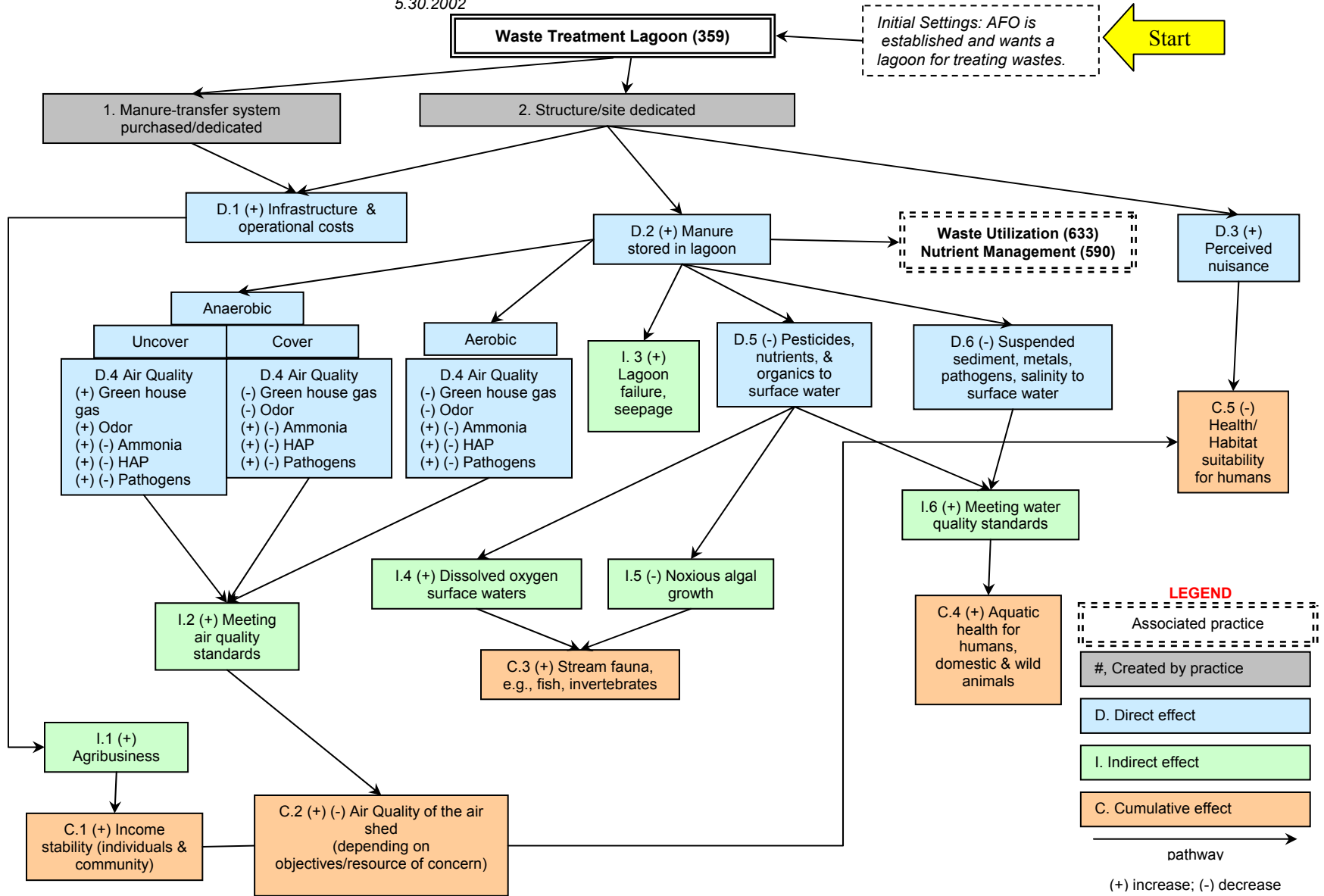
To improve efficiency and reduce sludge buildup, solids should be removed from the waste before it enters the lagoon. A solids trap or separator should be installed between the waste source and the lagoon.

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

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# Waste Treatment Lagoon Practice

5.30.2002



# WASTE UTILIZATION

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 633



### WASTE UTILIZATION

Applying agricultural waste, such as manure or wastewater, or other waste on the land in an environmentally acceptable manner while maintaining or improving the natural resources.

### PRACTICE INFORMATION

This practice may be used on any land suitable for application of waste as a fertilizer. This includes waste from barnyards, feedlots, dairy operations and other agriculture sources. The waste

material may also come from municipal treatment plants and food processing plants.

The purposes of applying this practice include the following:

1. Provide safe disposal of waste material
2. Provide fertility for food and fiber production
3. Improve soil tilth and fertility
4. Reduce erosion
5. Protect water and other natural resources

Additional information, including specifications, is filed in the local NRCS Field Office Technical Guide.

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# Waste Utilization Practice

5. 30.02

