Operation & Maintenance Plan
Vegetated Treatment Area (Code 635)

Landowner/Operator: Date:

NRCS Service Center: Conservation District:

Practice Location: Tract/Field ID:

(Lat/Long or UTM Coord, or Sec/TS/R)

Expected Lifespan

The minimum expected lifespan of this practice is at least 10 years.

A properly operated and maintained **Vegetated Treatment Area** is an asset to your property. The purpose of this practice is to provide a permanent stand of vegetation to treat runoff from bunk silos. The estimated life span of this practice is 10 years. The life of the practice can be assured and usually extended by developing and carrying out a good operation and maintenance program.

This practice will require you to perform periodic operation and maintenance to maintain satisfactory performance. The following are some requirements to help you develop a good operation and maintenance program.

Inspection and Maintenance

1. Inspect after significant storm events and at least annually to identify repair and maintenance needs. Complete needed repairs as soon as possible.
2. Protect the vegetated treatment area from damage by farm equipment, traffic, and livestock.
   a. Do not use as a roadway.
   b. Avoid operations that displace soil, compact soil, damage vegetation, or alter design flow depth.
   c. Avoid damaging vegetated treatment areas with herbicides. When spraying for grass control on adjoining cropland, spray only when drift is away from vegetated treatment area.
   d. Do not allow livestock access to the vegetated treatment area. Livestock could damage the treatment area and hinder the proper flow and treatment of effluent. If necessary, install and maintain fences to exclude livestock from the area. Repair or replace damaged fences and gates as soon as possible. Keep gates closed at all times.
3. For maximum nutrient removal from the water to be treated, vegetation must be maintained in a vigorous condition. Grass stems must remain upright during design flow. Re-seed areas where vegetation fails. Periodic mowing and harvesting of the forage is required.
   a. Fertilize according to a soil test, as necessary.
   b. In order to maintain a vigorous stand of vegetation, over seeding may be required.
   c. Mowing and/or vegetation harvest must be performed on a regular basis to stimulate growth, maintain an upright growth habit, plus provide for removal of nutrients that are contained in the plant tissue. Vegetation height after mowing should not be less than 6 inches. In the first three years mow frequently to achieve the desired stem density.
4. Development of rills and small channels from erosion, equipment, or other means within the vegetated treatment area must be minimized. Needed repairs must be made immediately to reshape the area and reestablish sheet (overland) flow. Hand grade rill and small channels at least annually to keep the area level and remove any build-up of deposited materials.
5. Remove woody vegetation by mowing or the use of pesticides. Be careful not to kill desired vegetation with pesticides. Use only those pesticides that are labeled for the specific use.
6. Manage the feed storage areas and feed residuals to minimize leachate and to minimize the contact between feed residuals and runoff water. Practices to consider include:

a. Minimize leachate production by harvesting and storing silage when the material is dry. At harvest, the whole plant moisture of the forage should not exceed 70 percent (at least 30% dry matter). Other wet feeds may leach at different moisture levels and management should be adjusted, accordingly.
b. Filling and Packing: Fill bunker silo and thoroughly pack the forage to maximize oxygen exclusion, thereby reducing respiration of plant material, dry matter loss, and leachate generation. Fill and compact bunk silos in six inch packing layers. Continuous packing during fill with approximately 1,000 pounds of packing tractor weight per ton harvested per hour is recommended.
c. Cover silage with six mil plastic immediately after filling and compaction is completed to exclude oxygen should also shed water. Divert runoff accumulated on top of the plastic away from the bunk silo. Do not just divert the runoff to the edge of the silo, where the water can flow down the wall and into the silage. This can increase leachate production and severely increase spoilage losses.
d. When feeding silage out of the bunk silo, maintain a smooth and vertical feed out face. Avoid knocking down more feed than will be used on that day. Keep loader traffic areas smooth to minimize feed spill. Frequently scrape and/or sweep the storage floor and apron to collect feed that is spilled.
e. Remove all spoiled and waste feed immediately from the bunks silo and transport to a designated waste storage facility or approved field stacking location. Storage spoiled and waste feed in the silo will increase the production of leachate.

Operation, Maintenance and Inspection Costs

1. It is estimated that the annual time to routinely inspect and make minor repairs to your Vegetated Treatment Area will be:
   a. Inspection = 1 hour/month
   b. Minor Repairs = 1 hour/month
   c. Hand Grading = 4 hours/year
   d. Additional lime, fertilizer, and seeding = 2 hours/year.
   e. Mowing and vegetation removal = 10 hours/year
   f. Major repairs to damage caused by major storm event will require extra time and materials.
2. Most maintenance, such as mowing, seeding, hand grading, etc., can be accomplished using common farm equipment or tools. Occasional damage, caused by major storm events may require heavy construction equipment to make repairs.

Specific Requirements for Your Practice

1. _____
2. _____
3. _____
4. _____
5. _____

Specific Site Requirements

Clear Form