

Prepared for: _____

Prepared by: _____

Farm: _____ Tract: _____ Date: _____



DEFINITION

A shaped or graded channel that is established with suitable vegetation to carry surface water at a non-erosive velocity to a stable outlet.

PURPOSE

- To convey runoff from terraces, diversions, or other water concentrations without causing erosion or flooding.
- To reduce gully erosion.
- To protect/improve water quality.

CRITERIA

Capacity shall be increased as needed to account for potential volume of sediment expected to accumulate in the waterway between planned maintenance activities. Total capacity is incorporated in the site specific design below.

Provide freeboard above the designed depth when flow must be contained to prevent damage or when the vegetation has the maximum expected retardance.

Use Subsurface Drains, Underground Outlets, or stone center waterways to keep vegetation established on sites having high water tables, prolonged flows, or seepage problems.

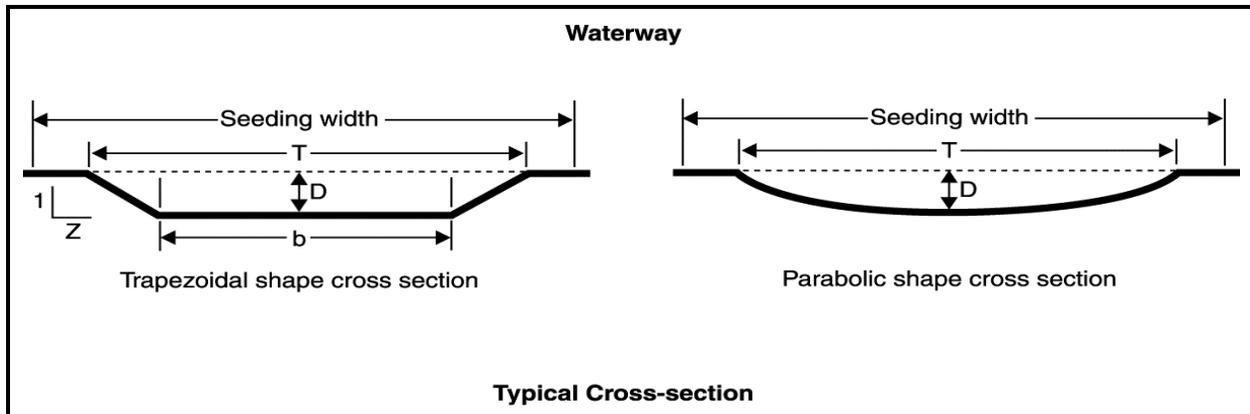
All grassed waterways will have a stable outlet with adequate capacity to prevent ponding or flooding damages. The outlet can be another vegetated channel, earthen ditch, grade stabilization structure, filter strip, or other suitable outlet.

Grassed waterways will be vegetated according to designed specifications.

OPERATION AND MAINTENANCE

- Establish Maintenance Program to maintain waterway capacity, vegetative cover, and outlet stability.
- Protect waterway from concentrated flow by using diversion of runoff or mechanical means of stabilization (silt fences, mulching, and haybale barriers, etc.).
- Exclude livestock whenever possible or implement a controlled grazing system.
- Regular inspection of grassed waterways to remove sediment deposits and reseed damaged areas.

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A grassed waterway can have a cross-section configuration that is trapezoidal or parabolic. Side slopes are constructed to be no steeper than a ratio of two horizontal to one vertical. The intent is to accommodate maintenance and tillage/harvesting equipment that will cross the waterway. Keep the bottom width of trapezoidal waterways less than 100 feet unless multiple or divided waterways or other means are provided to control meandering of low flows.

- Avoid use of herbicide that would be harmful to the vegetation in and adjacent to the waterway area.
- Avoid using waterways as turn-rows during tillage and cultivation operations.
- Mow or periodically graze vegetation to maintain capacity and reduce sediment deposition.
- Control noxious weeds.

SPECIFICATIONS

Site-specific requirements are listed on the specifications sheet. Additional provisions are entered on the job sheet. Specifications are prepared in accordance with the NRCS Field Office Technical Guide.

Landowner _____ Field number _____

Purpose (check all that apply)		
<input type="checkbox"/> Convey concentrated flow runoff	<input type="checkbox"/> Other (specify):	
<input type="checkbox"/> Reduce gully erosion		
<input type="checkbox"/> Protect/improve water quality		
Layout		
Waterway shape:	<input type="checkbox"/> Parabolic	<input type="checkbox"/> Trapezoidal

Grassed Waterway	1	2	3
Waterway number			
Reach number			
Grade (%)			
Depth - D (ft)			
Top width - T (ft)			
Bottom width-b (ft)*			
Side slopes (Z:1)*			
Length (ft)			
Seeding width (ft)			
Seeding area (acres)			

Plant establishment			
Species**			
Seeding rate (PLS) (lb/ac)			
Lime (tons/acre)			
N (lb/acre)			
P2O5 (lb/acre)			
K2O (lb/acre)			

*Trapezoidal only

Vegetated Filter			
Waterway number			
Strip width (ft)			
Strip length (ft)			
Area of filter strip (ac)			
Slope (%)			
Specials**			
Seeding rate (PLS) (lb/ac)			
Lime (lb/acre)			
N (lb/acre)			
P2O5 (lb/acre)			
K2O (lb/acre)			

**For multiple species separate with a "/" (e.g., species 1/species 2/species 3)

Site Preparation
<i>Prepare firm, weed-free seedbed. Apply lime and fertilizer according to Critical Area Planting(342) standard. Additional requirements:</i>
Planting Methods(s)
<i>Establish stand of vegetation according to specified seeding rate. Drill grass and legume seed ___ inches deep uniformly over area. If necessary, mulch newly seeded area with ___ tons per acre of mulch material. Drill and seed small grain as a companion crop, as necessary, at the rate of ___ pounds per acre, but clip or harvest before plants head out. Additional requirements:</i>
Operation and Maintenance
<i>Maintain original width and depth of the grass area. Regularly remove debris and sediment from waterway and filter area. Harvest, mow, reseed, and fertilize to maintain vigorous vegetation. Inspect periodically and, after major storms, repair eroding or bare areas. Additional requirements:</i>

LANDOWNER/OPERATOR’S ACKNOWLEDGEMENT:

The landowner/operator acknowledges that:

- a. He/she has received a copy of the drawings and specifications, and that he/she has an understanding of the contents, and the requirements.
- b. He/she has obtained all the necessary permits. (IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO OBTAIN ALL NECESSARY PERMITS AND /OR RIGHTS AND TO COMPLY WITH ALL ORDINANCES AND LAWS PERTAINING TO THIS INSTALLATION.)
- c. No changes will be made in the installation of the job without prior concurrence of the NRCS.
- d. Maintenance of the installed work is necessary for proper performance during the project life.

PRACTICE COMPLETION:

I have made an on site inspection of the site (or I am accepting owner/contractor documentation), and have determined that the job as installed does conform to the drawings and practice specifications.

Completion Certification by:

Planner _____ Date _____

I have reviewed this plan and agree to install as designed.

Cooperator _____ Date _____

Additional Specifications and Notes: