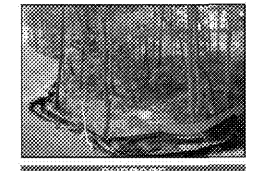


VEGETATIVE BEST MANAGEMENT PRACTICES

- Bf** Buffer Zone
- Cs** Coastal Dune Stabilization
- Ds1** Disturbed Area Stabilization (With Mulching Only)
- Ds2** Disturbed Area Stabilization (With Temporary Seeding)
- Ds3** Disturbed Area Stabilization (With Permanent Vegetation)
- Ds4** Disturbed Area Stabilization (With Sodding)
- Ds** Dust Control on Disturbed Area
- Fl-Cd** Floculants and Coagulants
- Sb** Streambank Stabilization (With Permanent Vegetation)
- Ss** Slope Stabilization
- Tac** Tackifiers

Bf BUFFER ZONE

DEFINITION
A strip of undisturbed, original vegetation, enhanced or restored existing vegetation or the re-establishment of vegetation surrounding an area of disturbance or bordering streams, ponds, wetlands, lakes, and coastal waters.



PURPOSE

- Reduce storm runoff velocities
- Act as a screen for "visual pollution"
- Reduce construction noise
- Improve aesthetics
- Filtering and infiltrating runoff
- Cooling rivers and streams by creating shade
- Provide food and cover for wildlife and aquatic organisms
- Flood protection
- Protect channel banks from erosion

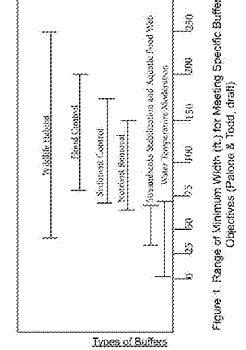
INSTALLATION

- Important factors, such as slope, hydrology, width, and structure shall be considered.
- The GA EPD enforces a 25 ft minimum undisturbed stream buffer requirement for warm water fisheries and a 50 ft minimum undisturbed stream buffer requirement for cold water fisheries

The purpose and location prescribed in this BMP Manual is for informational purposes only. The user is responsible for obtaining the appropriate permits and approvals from the relevant regulatory agencies. Please refer to the applicable regulatory agency for the most current BMP Manual. Please refer to the Erosion Control Management Plan for specific installation details and specifications.

Bf BUFFER ZONE

If any land-disturbing activity, exempt or non-exempt, occurs within a mandated stream buffer, all cut and fill shall be stabilized with appropriate slope stabilization.



General Buffer
• Areas of undisturbed, original land surrounding the disturbed site.
• A width should be selected to permit the zone to serve the purpose(s) listed above.

Vegetated Stream Buffer
• A vegetated stream buffer of 50 ft or greater can protect waters from excess sedimentation.

Bf BUFFER ZONE

- The size of the stream and topography of the area must be considered to determine the appropriate width.
- The buffer should be increased 2 ft in width for every 1% slope.

- Planting Techniques**
- Plantings for buffer re-establishment and enhancement can consist of bare root seedlings, container-grown seedlings, container-grown plants, and baled and turfed plants.
 - Standard erosion control grasses and legumes may be used in denuded areas for quick stabilization.
 - Refer to Tables 6-1.1 & 6-1.2 in the Manual for Erosion & Sediment Control in Georgia for complete listing of all Native Plants & Lined Hardwood Cuttings.
 - Streambank stabilization techniques may be required if steep slopes and hydrologic patterns down it necessary.
 - Soil preparation and maintenance are essential for the establishment of planted vegetation.

Table 1. Effectiveness of Vegetative Buffer Strips

Purpose	Grass	Shrub	Tree
Filter Sediment	High	Low	Low
Filter Chemicals	Medium	Low	Low
Stabilize Stream Banks	Low	High	High
Improve Aesthetics	Low	Medium	High
Improve Habitat	Low	Medium	High
Reduce Noise	Low	Medium	High

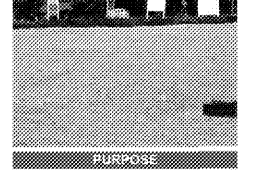
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Cs

Ds1

DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)

DEFINITION
A temporary cover of plant residues or other suitable materials, produced on site if possible, applied to the soil surface.



PURPOSE

- Reduce runoff and erosion
- Modify soil temperature
- Conserve moisture
- Prevent surface compaction and crusting
- Control undesirable vegetation
- Increase biological activity in the soil

INSTALLATION

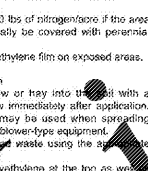
- Apply mulch or temporary grassing to exposed areas within 14 days of disturbance.
- Applicable to graded or cleared areas if seedlings may not have a suitable growing season to produce an erosion resistant cover.
- Mulch can be used as a singular erosion control device for up to 6 months.
- Apply at the appropriate depth. Refer to Table 1 for specifications.

Site Preparation
• Grade to permit use of equipment for applying and anchoring mulch.

Ds1

DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

DEFINITION
The establishment of temporary vegetative cover with fast growing seedlings for seasonal protection on disturbed or denuded areas.



PURPOSE

- Reduce runoff and sediment damage of down stream resources
- Protect the soil surface from erosion
- Improve wildlife habitat
- Improve aesthetics
- Improve infiltration, and aeration as well as organic matter for permanent plantings

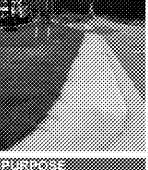
INSTALLATION

- Apply mulch or temporary grassing to all exposed areas within 14 days of disturbance.
- Applicable to rough graded areas that will be exposed for less than 6 months.
- Coordinate with permanent measures to ensure economical and effective stabilization.
- Take note of which species are not appropriate for companion crop plantings.
- When the soil has been sealed by rainfall or consists of smooth cut slopes, scarify the soil in order to provide a place for the seed to lodge and germinate.

Ds3

DISTURBED AREA STABILIZATION (WITH PERMANENT SEEDING)

DEFINITION
The planting of perennial vegetation such as trees, shrubs, vines, grasses, or legumes on exposed areas for final permanent stabilization.



PURPOSE

- Protect the soil surface from erosion
- Reduce damage from sediment and runoff to down-stream areas
- Improve wildlife habitat and visual resources
- Improve aesthetics

INSTALLATION

- Use conventional planting methods where possible.
- Final Stabilization means that 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the plan (uniformly covered landscaping materials in planned landscaped areas), or equivalent permanent stabilization measures.
- Select plants species based on site and soil conditions, planned use and maintenance of the area, time of year, method of planting, and the needs of the land user. (Refer to Table 1)

Ds2

Ds2

- Apply agricultural lime at the rate determined by soil test pH.
- Apply lime before land preparation and incorporate with a disk, ripper, or chisel.
- On steep slopes, apply fertilizer hydrolically.
- Select grass or grass-legume mixtures based on the area and season of the year.
- Apply seed uniformly by hand, cyclone seeder, drill, cultipacker-seeder, or hydrolic seeder.
- The appropriate depth of planting is 1x the seed diameter.
- Apply irrigation at a rate that will not cause runoff and erosion. Thoroughly wet the soil to insure germination of the seed.



Figure 2. Brown top Millet

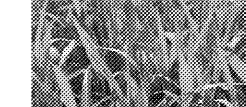


Figure 3. Rye grass

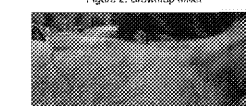


Figure 4. Ryegrass

MAINTENANCE

- Re-seed areas where an adequate stand of temporary vegetation fails to emerge.
- If optimum conditions for temporary vegetation is lacking, mulch can be used as a singular erosion control device.

REFERENCES

- Ds1** Disturbed Area Stabilization (With Mulching Only)
- Tac** Tackifiers

Table 1. Some Temporary Plant Species, Seeding Rates and Planting Dates

Species	Rates Per 1,000 sq. ft.	Rates per Acre	Planting Dates by Region		
			M-L	P	C
Barley Alone	3.3 lbs. / 8 lbs.	3 bu. / 8 bu.	8/1-10/31	8/15-11/15	12/1-3/1
Barley in Mixtures	0.8 lbs.	40 lbs.	3/1-3/31	3/1-3/31	2/1-3/1
Lespedeza, Annual	0.2 lbs.	10 lbs.	3/1-5/31	4/1-5/31	3/1-5/31
Lupinus albus in Mixtures	0.1 lbs.	5 lbs.	4/15-5/15	4/15-6/30	4/15-6/30
Lupinus albus in Mixtures	0.5 lbs.	25 lbs.	4/15-5/15	4/15-6/30	4/15-6/30
Millet, Browntop	8 lbs.	40 lbs.	4/15-7/15	5/1-7/31	4/15-8/15
Millet in Mixtures	2 lbs.	10 lbs.	4/15-7/15	5/1-7/31	4/15-8/15
Millet, Pearl	1.1 lbs.	55 lbs.	4/15-7/15	5/1-7/31	4/15-8/15
Oats Alone	2.92 lbs.	146 lbs.	4/15-11/15	8/15-11/15	9/15-11/15
Oats in Mixtures	7 lbs.	35 lbs.	4/15-11/15	8/15-11/15	9/15-11/15

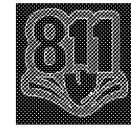
Table 2. Fertilizer Requirements for Temporary Vegetation

Types of Species	Planting Year	Fertilizer (N-P-K)	Rate (lbs./acre)	
			Rate	N Top Dressing Rate (lbs./acre)
Cool season grasses	First Seeding	6-12-12	1500	90-100
	Maintenance	6-12-12	1000	---
Cool season grasses & legumes	First Seeding	6-12-12	1500	0-50
	Maintenance	6-10-10	1000	---
Temporary cover crops seeded alone	First Seeding	10-10-10	600	30
	Maintenance	10-10-10	400	30
Warm season grasses	First Seeding	8-12-12	1800	90-100
	Maintenance	8-12-12	600	90-100

1. Universal site conditions may require heavier seeding rate.
2. Seeding rates may need to be altered to fit temperature variations and local conditions.
3. For Major Land Resource Areas (MLRAs), see page 69.
4. Seeding rates are based on pure live seed (PLS).

EROSION DETAILS I

ISSUED BY	PROJECT NO.
BSR	201822
DATE	DATE
BSR	NTS
APPROVED BY	DATE
BSR	01/15/2019



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