Table 6.10a Temporary Seeding Recommendations for Late Winter and Early Spring

Seeding mixture	
Species	**Rate (lb/acre)**
Rye (grain)	120
Annual lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains)	50

Omit annual lespedeza when duration of temporary cover is not to extend beyond June.

Seeding dates
Mountains—Above 2500 feet: Feb. 15 - May 15
Below 2500 feet: Feb. 1- May 1
Piedmont—Jan. 1 - May 1
Coastal Plain—Dec. 1 - Apr. 15

Soil amendments
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

Table 6.10b Temporary Seeding Recommendations for Summer

Seeding mixture	
Species	**Rate (lb/acre)**
German millet	40

In the Piedmont and Mountains, a small-stemmed Sudangrass may be substituted at a rate of 50 lb/acre.

Seeding dates
Mountains—May 15 - Aug. 15
Piedmont—May 1 - Aug. 15
Coastal Plain—Apr. 15 - Aug. 15

Soil amendments
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

Practice Standards and Specifications

Table 6.10b Temporary Seeding Recommendations for Summer

Seeding mixture	
Species	**Rate (lb/acre)**
German millet	40

In the Piedmont and Mountains, a small-stemmed Sudangrass may be substituted at a rate of 50 lb/acre.

Seeding dates
Mountains—May 15 - Aug. 15
Piedmont—May 1 - Aug. 15
Coastal Plain—Apr. 15 - Aug. 15

Soil amendments
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

6.64

SKIMMER SEDIMENT BASIN

Definition

An earthen embankment suitably located to capture runoff, with a trapezoidal spillway lined with an impermeable geotextile or laminated plastic membrane, and equipped with a floating skimmer for dewatering.

Purpose

Sediment basins are designed to provide an area for runoff to pool and settle out a portion of the sediment carried down gradient. Past designs used a perforated riser for dewatering, which allowed water to leave the basin from all depths. One way to improve the sediment capture rate is to have an outlet which dewaters the basin from the top of the water column where the water is cleanest. A skimmer is probably the most common method to dewater a sediment basin from the surface. The basic concept is that the skimmer does not dewater the basin as fast as runoff enters it, but instead allows the basin to fill and then slowly drain over hours or days. This process has two effects. First, the sediment in the runoff has more time to settle out prior to discharge. Second, a pool of water forms early in a storm event and this further increases sedimentation rates in the basin. Many of the storms will produce more volume than the typical sediment basin capacity and flow rates in excess of the skimmer capability, resulting in flow over the emergency spillway. This water is also coming from the top of the water column and has thereby been "treated" to remove sediment as much as possible. (Adapted from SoilFacts: Dewatering Sediment Basins Using Surface Outlets. N. C. State University, Soil Science Department.)

Conditions Where Practice Applies

Skimmer sediment basins are needed where drainage areas are too large for temporary sediment traps. Do not locate the skimmer sediment basin in intermittent or perennial streams.

Planning Considerations

Select locations for skimmer basins during initial site evaluation. Install skimmer sediment basins before any site grading takes place within the drainage area.

Select skimmer sediment basin sites to capture sediment from all areas that are not treated adequately by other sediment control measures. Always consider access for cleanout and disposal of the trapped sediment. Locations where a pond can be formed by constructing a low dam across a natural swale are generally preferred to sites that require excavation. Where practical, divert sediment-free runoff away from the basin.

A skimmer is a sedimentation basin dewatering control device that withdraws water from the basin's water surface, thus removing the highest quality water for delivery to the uncontrolled environment. A skimmer is shown in Figure 6.64a. By properly sizing the skimmer's control orifice, the skimmer can be made to dewater a design hydrologic event in a prescribed period. Because the spillway is actually used relatively frequently, it should be carefully stabilized using geotextiles, or rock if necessary, that can withstand the expected flows. The spillway should be placed as far from the inlet of the basin as possible to maximize sedimentation before discharge. The spillway should be located in natural groundcover to the greatest extent possible

Table 6.11.c

HERBACEOUS PLANTS-Seeding recommendations for primary stabilization
Seeding dates should depends on planting date (effectiveness goal: 0 mos. - 1 yrs. without an ongoing maintenance program)

Common Name	Botanical Name / Cultivar	Mother's Milkweed	Eas. Tube Nose Bumble-bee	Fertilization/ Mulching	Mountains	Piedmont	Coastal Plain	Sun/Shade tolerance	Wildlife	Riparian Buffers	Invasive Species	Installation / Maintenance Considerations	Clay or Inversion, commentary
NATIVE SPECIES					**Optimal Planting Dates**								
Blue Wildbean	Baptisia australis	N	A	No soil test	03 • 4/15	10 • 4/1	10 • 4/1	Sun	NR	Void planted	No	Resprouts well fr. rhizomes; Mx with; 3 to 5 other seed species; Mx with; 3 to 5 other seed species; Mx for lower winter soil drainage adaptations.	Warm season grass
Coreopsis	Coreopsis tripteris	N	A	No soil test	03 • 4/15	10 • 4/1	10 • 4/1	Sun	NR	Void planted	No		
Downy Woodsedge	Carex pondicosa	N	F	No soil test	03 • 4/15	10 • 4/1	10 • 4/1	3 to 4 hrs. sun/day	Yes	Excellent, but easily eaten	No		Warm season grass
Eastern Wildbeebalm	Monarda bradbu	N	J	No soil test	03 • 4/15	10 • 4/1	10 • 4/1	Sun & shade	NR	Void planted	No		Cool season grass
Golf Rush	Juncus effusus	N	K	No soil test	03 • 5/15	10 • 5/1	10 • 4/15	Sun	Yes	Poorly adapted	No		Warm season grass
Shallow Sedge	Carex lurida	N	L	No soil test	03 • 5/15	10 • 5/1	10 • 4/15	Sun	Yes	Poorly adapted	No		Warm season grass
Fox Sedge	Carex vulpinoidea	N	L	No soil test	03 • 5/15	10 • 5/1	10 • 4/15	Sun	Yes	Poorly adapted	No		Warm season grass

NOTE:
1. Spacing rates are for bulked seed where diameter sized.
2. Fertilizer & Limestone - rates to be applied in absence of soils tests. Recommended application rate assumes significantly disturbed site soils with little or no residual value.
3. Mulch - Mulching is recommended for most applications. Mulch should be applied uniformly to a minimum depth of 1/4 inch.
4. Mature, warm season grasses require six or more months to germinate under optimum conditions. If they are planted in the summer, then a whole year will have to pass before they germinate.
5. Seeding is not recommended for medium stabilization unless erosion is likely. Hydroseed is applied and no other mechanical stabilization method is practical.
6. Seeding is not recommended for medium stabilization unless erosion is likely. Hydroseed is applied and no other immediate stabilization method is practical.
7. Long term stabilization can only be accomplished with an adequate, immediate, and primary stabilization program. To achieve long term protective cover with the species listed in this table, a minimum of 2 years without disturbance is required. Short term cover crops may be established and maintained. To assure the long term protective cover will be established, the reviewing and approving governing body may require a performance maintenance bond.

HERBACEOUS PLANTS-Seeding recommendations for primary stabilization
Seeding dates should depends on planting date (effectiveness goal: 0 mos. - 1 yrs. without an ongoing maintenance program)

Common Name	Botanical Name / Cultivar	Mother's Milkweed	Eas. Tube Nose Bumble-bee	Fertilization/ Mulching	Mountains	Piedmont	Coastal Plain	Sun/Shade tolerance	Wildlife	Riparian Buffers	Invasive Species	Installation / Maintenance Considerations	Clay or Inversion, commentary
NATIVE SPECIES					**Optimal Planting Dates**								
Soft Rush	Juncus effusus	N	K	No soil test	03 • 5/15	10 • 5/1	10 • 4/15	Sun	Yes	Poorly adapted	No	Mx with; 3 to 5 other seed species; Mx with; 3 to 5 other seed species; Mx for lower winter soil drainage adaptations.	Warm season grass
Shallow Sedge	Carex lurida	N	L	No soil test	03 • 5/15	10 • 5/1	10 • 4/15	Sun	Yes	Poorly adapted	No	Mx with; 3 to 5 other seed species; Mx with; 3 to 5 other seed species; Mx for lower winter soil drainage adaptations.	Warm season grass
Fox Sedge	Carex vulpinoidea	N	L	No soil test	03 • 5/15	10 • 5/1	10 • 4/15	Sun	Yes	Poorly adapted	No	Mx with; 3 to 5 other seed species; Mx with; 3 to 5 other seed species; Mx for lower winter soil drainage adaptations.	Warm season grass

Table 6.11.c (con't)

HERBACEOUS PLANTS-Seeding recommendations for primary stabilization
Seeding dates should depends on planting date (effectiveness goal: 0 mos. - 1 yrs. without an ongoing maintenance program)

Common Name	Botanical Name / Cultivar	Mother's Milkweed	Eas. Tube Nose Bumble-bee	Fertilization/ Mulching	Mountains	Piedmont	Coastal Plain	Sun/Shade tolerance	Wildlife	Riparian Buffers	Invasive Species	Installation / Maintenance Considerations	Clay or Inversion, commentary
NATIVE SPECIES					**Optimal Planting Dates**								
Soft Rush	Juncus effusus	N	K	No soil test	03 • 5/15	10 • 5/1	10 • 4/15	Sun	Yes	Poorly adapted	No	Mx with; 3 to 5 other seed species; Mx with; 3 to 5 other seed species; Mx for lower winter soil drainage adaptations.	Warm season grass
Shallow Sedge	Carex lurida	N	L	No soil test	03 • 5/15	10 • 5/1	10 • 4/15	Sun	Yes	Poorly adapted	No	Mx with; 3 to 5 other seed species; Mx with; 3 to 5 other seed species; Mx for lower winter soil drainage adaptations.	Warm season grass
Fox Sedge	Carex vulpinoidea	N	L	No soil test	03 • 5/15	10 • 5/1	10 • 4/15	Sun	Yes	Poorly adapted	No	Mx with; 3 to 5 other seed species; Mx with; 3 to 5 other seed species; Mx for lower winter soil drainage adaptations.	Warm season grass

The costs of using a skimmer system are similar, or occasionally less, than a conventional rock outlet or perforated riser. However, the basin is more efficient in removing sediment. Another advantage of the skimmer is that it can be reused on future projects. The main disadvantage of the skimmer is that it does require frequent maintenance, primarily in removing debris from the inlet.

A skimmer must dewater the basin from the top of the water surface. The rate of dewatering must be controlled. A dewatering time of 2-5 days is required. **Any skimmer design that dewaters from the surface at a controlled rate is acceptable.**

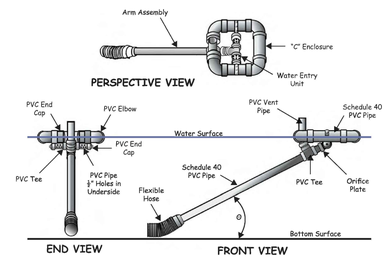

Figure 6.64a Schematic of a skimmer, from Pennsylvania Erosion and Sediment Pollution Control Manual, March, 2000.

REVISION BLOCK

NORTH CAROLINA PROFESSIONAL SEAL 041609 ENGINEER MICHAEL THOMPSON II

Michael Thompson

DATE 07/24/2017

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PROJECT NO. 2016-233
DATE 07/24/2017
SCALE
SHEET NAME **STORMWATER POLL. PREVENTION DETAILS**
SHEET NO. CE-502

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