Appendix E
Virginia Tech
Claytor Lake Scenic Report
Erosion Control Techniques

Table 4.4 Comparative Matrix of Erosion Control Techniques

	Images	Function	Construction	Pro	Con	Suitable sites	Natural	Ecologic
Retaining Walls				They are economical and easy to install.		Better limited to those visual management units whose character includes settlement.	---	---
Rip Rap			A research on methods of planting appropriate shoreline vegetation when installing rip rap is suggested.		It may contrast visually with the natural character of the shoreline.	Less densely developed portions	--	+
Planting and Seeding		This technique dissipates wave energy, filter sediment and nutrients from upland runoff, and improve wildlife habitat for terrestrial and aquatic species.	shallow water, replant	dissipate wave energy, filter sediment and nutrients		3:1 or flatter	++	++
Live staking		This technique is more applicable as a preventive measure before severe erosion problems occur				3:1 or flatter	+	+
Coir log revetment		This technique stabilizes slopes and minimize bank erosion	placed at the foot of bank slopes or in the water, molded to fit the bank line, and then anchored in place by wooden stakes or a rock footer	blend into the natural environment and effectively trap and retain sediment, retain moisture for plant growth, and provide bank stability while new vegetation takes root and increases in density		2:1 or flatter, bank foot	++	++

	Images	Function	Construction	Pro	Con	Suitable sites	Natural	Ecologic
Natural Fiber Matting Installation		This technique minimizes the loss of sediment from the land and trap wave-transported sediment.	laid over, can be planted with marsh grasses or riparian vegetation	flexible to be molded to the irregular surface contours; they are available from several manufacturers whose products are competitively priced			++	++
Rock Footer Placement		This technique anchors and supports bio-logs and stabilizes the restored shoreline.	supports the structural integrity of the bio-log	supports structural integrity and prevents from sloughing		Bank foot	+	+
Low-Crested Segmented Rock Sill Stabilization		This technique dissipates wave energy, protect newly planted marsh grasses from wave action in medium-energy environments	freestanding rock structures placed in the water parallel to shore to dissipate wave energy	protect newly planted marsh grasses from wave action		. This technique is applicable in newly planted areas where the bank is relatively flat.	-	++
Armoring with interlock blocks		Resistant to horizontal & vertical movement of pipelines/cables; protection against dragging anchors; wave, currents & storm protection		Permanent solution with low life-cycle cost	It will not be able to move interlocking blocks at high flows if the stream is small.	More intensively developed area	++	-
Gabions				It is potential to vegetate a standard gabion basket or wire faced wall offers unique landscaping potential as well.			- -	-

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