

EXHIBIT 1

2000 TENNESSEE STATE AVERAGE COST LIST
Unit cost Reflects 100 Percent of Allowable Cost

ESTABLISHMENT OF VEGETATIVE COVER:

Component Description	Unit	Rate
Annual Ryegrass	lb	\$0.47
Barley	bu	\$9.20
Bermudagrass (Seed)	lb	\$2.50
Bermudagrass (Sprigs)	cu ft	\$2.00
Bicolor/Shrub Lespedeza (seed)VA70, BC101 varieties	lb	\$6.25
Bicolor/Shrub lespedeza (seed) Amquail	lb	\$16.00
Bluegrass	lb	\$1.50
Bluestem, Big	lb	\$15.00
Bluestem, Little	lb	\$15.00
Boron (alfalfa only)	lb	\$2.50
Browntop Millet	lb	\$0.75
Buckwheat	lb	\$0.54
Certified Alfalfa	lb	\$3.55
Crimson Clover	lb	\$1.50
Crown Vetch	lb	\$17.00
Eastern Gamagrass	lb	\$10.00
Foxtail Millet	lb	\$0.40
Hairy Vetch	lb	\$1.62
Indiangrass	lb	\$15.00
Illinois Bundleflower	lb	\$35.00
Japanese Millet	lb	\$0.69
Kobe Lespedeza	lb	\$0.90
Korean Lespedeza	lb	\$0.75
KY 31 Fescue	lb	\$0.75
Lime	ton	\$17.00
Maximilian Sunflower	lb	\$40.00
Mulch	ac	\$224.00

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Nitrogen	lb	\$0.26
Orchardgrass	lb	\$1.05
Partridge Pea	lb	\$18.00
Pearl Millet	lb	\$0.62
Phosphorous	lb	\$0.25
Potassium	lb	\$0.14
Redtop	lb	\$4.38
Reed Canarygrass	lb	\$5.00
Rye	bu	\$10.65
Seeding (Conventional) includes seedbed preparation and seeding costs	ac	\$30.00
Seeding (No-Till)	ac	\$19.00
Sideoats Grama	lb	\$8.00
Sericea (Scarified)	lb	\$3.96
Sorghum-Sudan Hybrid (sudex)	lb	\$0.50
Sudan Hybrids	lb	\$0.55
Sudangrass	lb	\$0.50
Subsoiling (for tree planting)	ac	\$20.00
Switchgrass	lb	\$6.00
Tall Fescue (Fungus Free)	lb	\$0.98
Timothy	lb	\$0.82
Virginia Wildrye	lb	12.00
Weeping Lovegrass	lb	\$6.75
Wheat (Non-Certified)	bu	\$7.00
White Clover (Ladino, Regal, White Dutch)	lb	\$2.30
Red Clover	lb	\$2.15
Quail Haven Soybean	lb	\$8.00

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SITE PREPARATION

Chemical Weed Control

Johnsongrass, Tall Fescue, and others Eradication (Fall Treatment)	ac	\$47.00
Johnsongrass, Tall Fescue, and others Eradication (Spring Treatment)	ac	\$47.00
Mechanical Weed Control: Includes disking, shredding or mowing	ac	\$11.00

TREE/SHRUB ESTABLISHMENT (Does NOT Include Site Preparation)

Loblolly Pine	ea	\$0.14
Shortleaf Pine	ea	\$0.16
White Pine	ea	\$0.23
Virginia Pine	ea	\$0.16
Large Seeded Oak Acorns	ea	\$0.07
Small Seeded Oak Acorns	ea	\$0.03
Oak Seedlings	ea	\$0.40
Black Walnut	ea	\$0.40
Green ash	ea	\$0.40
White Ash	ea	\$0.40
Yellow Poplar	ea	\$0.45
Sweetgum	ea	\$0.47
Blackgum	ea	\$0.43
Sycamore	ea	\$0.47
Baldcypress	ea	\$0.40
Silky Dogwood	ea	\$1.00
Gray Dogwood	ea	\$1.00
Flowering Dogwood	ea	\$0.49
Crabapple	ea	\$0.23
Chinese Chestnut	ea	\$0.60
Speckled Alder	ea	\$0.23
Indigobush	ea	\$0.23

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Bicolor Lespedeza (Shrub Seedling)	ea	\$0.20
Paulownia	ea	\$0.51
Persimmon	ea	\$0.23
Hickory	ea	\$0.50
Pecan	ea	\$0.40
Red Maple	ea	\$0.56
Eastern Cottonwood	ea	\$0.56
Mapleleaf Viburnum	ea	\$0.44
Black Cherry	ea	\$0.42
Spicebush	ea	\$0.50
Washington Hawthorne	ea	\$0.40
Chickasaw Plum	ea	\$0.85
Wild Plum	ea	\$0.40
American Plum	ea	\$0.23
FIP Site Preparation, FP1	ac	\$100.00
Site Preparation - All Other Forestry Programs	ac	\$20.00
FIP Site Preparation for Natural Regeneration, FP3	ac	\$80.00
FIP Improving a Stand of Forest Trees for Practice FP2	ac	\$65.00
Non- Commercial Thin	ac	\$110.00
Release of Seedlings	ac	\$110.00

STRUCTURAL COMPONENTS:

Material (Installed): INCLUDES LABOR, DELIVERY, ETC.

CONCRETE:

Fiber Mesh or Welded Wire Fabric (not considered reinforced)	cu yd	\$90.00
Slab with Reinforcement (Rebar)	cu yd	\$130.00
Walls with Reinforcement (including circular walls greater than 3 ft. high)	cu yd	\$320.00
Other Reinforced in Place (Curbing)	cu yd	\$180.00

EARTHMOVING:

Dozer (< 130 hp); quantities determined beyond 40 hours	hr	\$50.00
Dozer (130-140 hp); quantities determined beyond 40 hours	hr	\$70.00
Dozer (141-165 hp); quantities determined beyond 40 hours	hr	\$75.00
Dozer (166-200 hp); quantities determined beyond 40 hours	hr	\$85.00
Dozer (>200 hp); quantities determined beyond 40 hours	hr	\$100.00
Rubber Tired Backhoe (70-90 hp); quantities determined beyond 40 hours	hr	\$35.00
Trackhoe (115 hp); quantities determined beyond 40 hours	hr	\$75.00

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DIVERSION	ft	\$2.67
POND	ea	\$1,000.00
EXCAVATION:		
Earth	cu yd	\$1.80
Rock	cu yd	\$10.00
Shale Rock	cu yd	\$4.00
EARTHFILL:		
Compacted	cu yd	\$2.00
Compacted with Sheepsfoot	cu yd	\$4.00
Hauled and Compacted	cu yd	\$8.00
Hauled and Compacted with Sheepsfoot	cu yd	\$10.00
FENCING (PERMANENT) Includes Posts, ALL Fencing Materials		
WASTE MANAGEMENT SYSTEM:		
39" Woven Plus 2 Strands Barbwire	lin ft	\$3.00
Chainlink with Vinyl Coating	lin ft	\$24.00
Chainlink - 4' high	lin ft	\$4.00
Metal Gate (12' min)	ea	\$100.00
LIVESTOCK EXCLUSION.ROTATIONAL GRAZING (Interior Fields and Special Use Areas - Permanent)		
Barbed Wire - 3 Strands Min. or 5 strands Hi-Tensile min.	lin ft	\$1.00
High Tensile Electric	lin ft	\$0.50
GEOTEXTILE	sq yd	\$1.25

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GALVANIZED LIVESTOCK PANEL (52" high by 8' wide)	ea	\$25.00
LUMBER		
LUMBER: One Board foot = 12"x12"x1" (Nominal Size)		
Non-Pressure Treated	bd ft	\$1.45
Pressure Treated	bd ft	\$1.50
PIPE (See Attachment)		
Pipes outlined in NRCS plan (Fittings Included in Cost)	SYS	@
Pipe Appurtenances	ea	@
PUMPS (Non-Portable)		
Slurry Manure (>4% solids) w/agitator, cutter blades, and other appurtenances Houle 8' Agi-pompe (24" dia. Mixing propeller, agitation nozzle, 20" dia. Impeller, etc.	ea	\$8,000.00
Houle Electromix System or equal to include mechanical or compressed air, liquid transfer pipe, electric motors, compressors and all appurtenances	ea	\$20,000.00
Electric Transfer Pump 15hp (w/agitator, chopper and other appurtenances)	ea	\$5,000.00
Electric Transfer Pump 20 hp (w/agitator, chopper and other appurtenances)	ea	\$5,500.00
Electric Transfer Pump 25hp (w/agitator, chopper and other appurtenances)	ea	\$6,000.00
Liquid Manure w/agitator nozzle, open impeller (3" min. And <4% solids):		
3 hp	ea	\$2,000.00
5 hp	ea	\$3,000.00
7.5 hp	ea	\$3,500.00
10 hp	ea	\$4,000.00
Water Pumps for Livestock Grazing Systems		
½ hp with appurtenances	ea	\$550.00
1 hp with appurtenances	ea	\$675.00
Air Tank	ea	\$240.00

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Material (installed)	Unit	Unit Cost (\$)
Pipe (fittings included in cost)		
PVC (ASTM D-1785 or D-2241 or D-3034)		
<1 inch	lin.ft.	1.00
2 inch	lin.ft.	1.50
3 inch	lin.ft.	2.00
4 inch	lin.ft.	2.15
6 inch	lin.ft.	3.50
8 inch	lin.ft.	5.25
10 inch	lin.ft.	7.30
PVC (ASTM D-2729) or Corrugated high density polyethylene AASHTO M252 or M294, Type S (smooth interior)		
4 inch	lin.ft.	1.30
6 inch	lin.ft.	2.20
8 inch	lin.ft.	3.40
10 inch	lin.ft.	4.00
12 inch	lin.ft.	5.65
15 inch	lin.ft.	7.50
18 inch	lin.ft.	10.50
24 inch	lin.ft.	16.00
30 inch	lin.ft.	24.00
36 inch	lin.ft.	35.00
42 inch	lin.ft.	50.00
48 inch	lin.ft.	55.00
Corrugated high density polyethylene drainage tubing ASTM F405 or F667 and AASHTO M252 or M294 pipe		
4 inch	lin.ft.	0.80
5 inch	lin.ft.	1.00
6 inch	lin.ft.	1.40
8 inch	lin.ft.	2.20
10 inch	lin.ft.	3.50
12 inch	lin.ft.	4.20
15 inch	lin.ft.	5.50
18 inch	lin.ft.	10.00
24 inch	lin.ft.	14.00
Corrugated Steel (galvanized)		
8 inch (16 ga.)	lin.ft.	6.50
10 inch (16 ga.)	lin.ft.	8.50
12 inch (16 ga.)	lin.ft.	9.00
15 inch (16 ga.)	lin.ft.	12.00
18 inch (14 ga.)	lin.ft.	15.00
24 inch (14 ga.)	lin.ft.	18.00
30 inch (14 ga.)	lin.ft.	24.00
36 inch (14 ga.)	lin.ft.	30.00
42 inch (12 ga.)	lin.ft.	40.00
48 inch (12 ga.)	lin.ft.	48.00
Corrugated Aluminum		
6 inch (16 ga.)	lin.ft.	5.70
8 inch (16 ga.)	lin.ft.	8.00
10 inch (16 ga.)	lin.ft.	9.00

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EXHIBIT 1

Material (installed)	Unit	Unit Cost (\$)	
Corrugated Aluminum (continued)			
12 inch (16 ga.)	<i>lin. ft.</i>	12.00	
15 inch (16 ga.)	<i>lin. ft.</i>	16.00	
18 inch (14 ga.)	<i>lin. ft.</i>	20.00	
24 inch (14 ga.)	<i>lin. ft.</i>	23.00	
30 inch (14 ga.)	<i>lin. ft.</i>	30.00	
36 inch (14 ga.)	<i>lin. ft.</i>	36.00	
42 inch (12 ga.)	<i>lin. ft.</i>	44.00	
48 inch (12 ga.)	<i>lin. ft.</i>	50.00	
Reinforced Concrete			
24 inch	<i>lin. ft.</i>	15.00	
30 inch	<i>lin. ft.</i>	18.00	
36 inch	<i>lin. ft.</i>	21.00	
42 inch	<i>lin. ft.</i>	28.00	
Bare Steel (no flanges)			
16 inch dia. standard thickness	<i>lin. ft.</i>	30.00	
20 inch dia. standard thickness	<i>lin. ft.</i>	35.00	
24 inch dia. standard thickness	<i>lin. ft.</i>	45.00	
Pipe Appurtenances			
Steel Slip on flanges (to be welded)			
16 inch	<i>each</i>	115.00	
20 inch	<i>each</i>	195.00	
24 inch	<i>each</i>	275.00	
Shear Gate Valves			
16 inch manual w/ treaded turn handle	<i>each</i>	1400.00	
16 inch electric w/ motor	<i>each</i>	3300.00	
20 inch manual w/ treaded turn handle	<i>each</i>	2600.00	
24 inch manual w/ treaded turn handle	<i>each</i>	4200.00	
Anti-Vortex Baffle			
	<i>each (see below)</i>		
Pipe Size	Plastic	Aluminum	Steel
12 inch	35.00	50.00	45.00
15 inch	40.00	55.00	50.00
18 inch	45.00	60.00	55.00
24 inch	55.00	70.00	60.00
30 inch	65.00	80.00	70.00
36 inch	75.00	100.00	80.00
42 inch	100.00	115.00	100.00
48 inch	125.00	135.00	115.00
Anti-Seep Collars			
12 inch 48"x48"	60.00	100.00	100.00
15 inch 48"x48"	60.00	100.00	100.00
18 inch 48"x48"	60.00	100.00	100.00
24 inch 60"x60"	100.00	300.00	250.00
30 inch 72"x72"	125.00	350.00	300.00
36 inch 72"x72"	125.00	350.00	300.00
42 inch 84"x84"	150.00	400.00	350.00
Flared Inlets			
12 inch (16 ga.)	75.00	150.00	70.00
15 inch (16 ga.)	75.00	175.00	85.00

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Material (installed) **Unit** **Unit Cost (\$)**

Flared Inlets (continued)

Pipe Size

Pipe Size	Plastic	Aluminum	Steel
18 inch (16 ga.)	100.00	225.00	90.00
24 inch (16 ga.)	135.00	300.00	140.00
30 inch (14 ga.)	500.00	600.00	250.00
36 inch (14 ga.)	525.00	825.00	340.00
42 inch (12 ga.)	650.00	1150.00	500.00
48 inch (12 ga.)		1700.00	625.00

Fabrication of riser stub (metal pipe)

Heliarc weld (per inch of weld) inch 1.50

Concrete Blocks

8"x8"x16" each 1.50

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ROCK:		
Rock Riprap (Erosion Control)	tons	\$20.00
Crushed Stone, Maximum 2" size (Heavy Use, etc)	tons	\$20.00
Sand and Gravel Drain Fill	tons	\$20.00
ROOFING:		
For Manure Storage or Holding Areas (Includes Trusses, Bracing, Purlins, Metal Roof, and Nails)	sq ft	\$3.00
Guttering/Downspouts (for manure storage and holding areas)	ft	\$6.00
SEPARATOR, MECHANICAL		
(For Separation of Solid in Animal Waste)	ea	\$20,000.00
TANK OR COLLECTION BOX		
Pre-cast Concrete Tank (<1,500 gals)	ea	\$1,500.00
Pre-cast Concrete Tank (>1,500 gals)	ea	\$2,500.00
Pre-cast Concrete Collection Box with Grate	ea	\$600.00
Trough/Tank for Livestock Water (concrete)	ea	\$400.00
Mirafount Trough (20 gal.)	ea	\$500.00
Mirafount Trough (44 gal.)	ea	\$600.00
Mirafount Trough (70 gal.)	ea	\$750.00
Ritchie Trough (11 gal)	ea	\$400.00
Ritchie Trough (28 gal)	ea	\$500.00
Ritchie Trough (45 gal)	ea	\$600.00
TERRACE (Gradient)	lin.ft.	\$1.33
TRACTOR SAFETY DEVICE	ea	\$500.00
WELL DECOMMISSIONING	ea	\$667.00