

WILDLIFE HABITAT INCENTIVES PROGRAM (WHIP)

RESTORATION AND MANAGEMENT OF NATURAL ECOSYSTEMS

FY 2004 PRACTICE COMPONENT LIST

The following is a listing of practice components and associated cost share and flat rates authorized for each natural community identified in the Restoration and Management of Natural Ecosystems standard. If a situation presents the need to consider other practices/components, the State Conservationist may authorize them.

Aquatic Ecosystems: Restoration and management will be aimed at improving both freshwater and coastal aquatic habitats for fish and other aquatic organisms by removing barriers to fish passage, attenuating stormwater runoff and restoring eelgrass beds. Cost share is authorized for:	
PRACTICE/COMPONENT	COST-SHARE/FLAT RATE <u>1/</u>
Fish Passage Restoration (dam removal, installation of fishways and eelways, culvert replacement/mitigation)	75% of actual cost not to exceed (NTE) \$10,000* per project. *(amount can be exceeded with program manager approval)
Eelgrass Restoration (includes labor and materials for transplanting 3” plugs 18” o.c.)	75% of actual cost NTE \$1100 per ¼ acre.
Stormwater Treatment	Deep Sump Catch Basin (sediment basin) = 75% of actual cost NTE \$1500. Deep Sump Basin with treatment = 75% of actual cost NTE \$5000. Maintenance = \$30/basin/cleaning <u>2/</u> Constructed Wetland = 75% of actual cost NTE \$7500
Control of Invasive Plants (mechanical, chemical or biological) <u>3/</u>	Mechanical Control with Subsequent Chemical Control: > 50% density = 75% of actual cost NTE \$400/acre. < 50% density = 75% of actual cost NTE \$300/acre. Biological Control = 75% of actual cost NTE \$5000 per contract Misc. Control Strategies = rate will be agreed upon with S.O.

1/ Cost share rates shown are flat rate unless otherwise specified.

2/ Maintenance cost share is allowed 2 times per year per basin (cleaning is recommended when sediment is within 1 foot of the outlet invert).

3/ Invasive plant control is intended to treat sites that are in the initial stages of invasion where success of control is highly likely only. See fact sheet for where to use biological control of purple loosestrife.

Beaver Dominated Wetlands and Uplands: Restoration sites will be in areas that can reasonably be assured to have had beaver in the past. Restoration and management will be aimed at accommodating beaver activity that is expected to fluctuate over the long term in response to food supply, predation, disease, etc. During periods when beaver are absent, natural reforestation will be allowed to take place. Surface water elevation of active beaver impoundments will be left to the control of beavers where possible. Where water levels must be controlled, control measures will be installed and maintained. Cost share is authorized for:

PRACTICE/COMPONENT	COST-SHARE/FLAT RATE <u>1/</u>
Installation of Beaver Pipes	4-8" pipe = \$250 each. > 8" pipe = \$300 each.
Installation of Water Control Structure	75% of actual cost NTE \$2,000 each.
Fencing (to restrict beaver from dam emergency spillway, specimen trees, lawns, etc.)	\$1.50 per L.F.
Control of Invasive Plants (mechanical, chemical or biological) <u>2/</u>	Mechanical Control with Subsequent Chemical Control: > 50% density = 75% of actual cost NTE \$400/acre. < 50% density = 75% of actual cost NTE \$300/acre . Biological Control = 75% of actual cost NTE \$5000/contract. Misc. Control Strategies = rate will be agreed upon with S.O.

1/ Cost share rates shown are flat rate unless otherwise specified.

2/ Invasive plant control is intended to treat sites that are in the initial stages of invasion where success of control is highly likely only. See fact sheet for where to use biological control of purple loosestrife.

Early Successional Habitats - Old Fields and Early Woodlands:

Restoration and management of old fields is aimed at retaining some grasses and primarily herbaceous weed cover, mixed with woody plants including hardwood and softwood seedlings and saplings. Within the forest environment, regeneration cuts stimulate the growth of shrubs, seedlings and saplings with herbaceous grass and weed cover. Cost share is authorized for:

PRACTICE/COMPONENT	COST-SHARE/FLAT RATE <u>1/</u>
Maintenance/restoration of successional vegetative stages (includes contract grazing, mowing, brush hogging or heavy chipping as with use of 'Brontosaurus')	Grazing =75% of actual cost NTE \$400/ac <u>2/</u> Mowing = \$65/ac. Brush Hogging = \$85/ac. Heavy Chipping = 75% of actual cost NTE \$1500/ac.
Control of Invasive Plants (contract grazing, mechanical, chemical or biological controls) <u>3/</u>	Grazing =75% of actual cost NTE \$400/acre <u>2/</u> Mechanical Control with Subsequent Chemical Control: > 50% density = 75% of actual cost NTE \$400/acre. < 50% density = 75% of actual cost NTE \$300 acre. Biological Control = 75% of actual cost NTE \$5000 per contract. Misc. Control Strategies = rate will be agreed upon with S.O.
Fencing (to restrict livestock)	\$1.50 per L.F.
Prescribed Burning <u>4/</u>	75% of actual cost NTE \$500/ac.

1/ Cost share rates shown are flat rate unless otherwise specified.

2/ Contract grazing is allowed on sites that are not conducive to the use of machinery and or chemicals. Price includes portable fence, animal transport and caretaker.

3/ Invasive plant control is intended to treat sites that are in the initial stages of invasion where success of control is highly likely only.

4/ Allowed no more than once during life of 5 year contract or twice during life of 10 year contract.

Early Successional Habitats – Grasslands: Grassland restoration and management is aimed at developing and/or maintaining large stands of grasslands in both cool and warm season, native and non-native species. Large grassland areas are important elements of habitat for migratory birds, small mammals and insects. Cost share is authorized for:

PRACTICE/COMPONENT	COST-SHARE/FLAT RATE <u>1/</u>
Maintenance/restoration of grassland (includes mowing, contract grazing or brush hogging) <u>2/</u>	Mowing = \$65/ac. Brush Hogging = \$85/ac. Grazing =75% of actual cost NTE \$400/ac <u>3/</u>
Prescribed Burning <u>4/</u>	75% of actual cost NTE \$500/ac.
Seeding Native Warm Season Grasses <u>5/</u> (includes seedbed prep and soil amendment if necessary)	\$600/ac.
Seeding Cool Season Grasses (includes seedbed prep and soil amendment if necessary)	\$300/ac.
Soil Amendment (liming and fertilizing) <u>6/</u>	\$100/ac.
Fencing (to exclude domestic livestock)	\$1.50 per L.F.
Control of Invasive Plants <u>7/</u>	Grazing =75% of actual cost NTE \$400/ac <u>3/</u> Mechanical Control with Subsequent Chemical Control: > 50% density = 75% of actual cost NTE \$400/acre. < 50 % density = 75% of actual cost NTE \$300/acre. Biological Control = 75% of actual cost NTE \$5000 per contract. Misc. Control Strategies = rate will be agreed upon with S.O.

1/ Cost share rate shown is flat rate unless otherwise specified.

2/ Allowed every other year only

3/ Contract grazing is allowed on sites that are not conducive to the use of machinery and/or chemicals. Price includes portable fence, animal transport and caretaker.

4/ Allowed no more than once during life of 5 year contract or twice during life of 10 year contract.

5/ Allowed as part of 10-year contracts only

6/ Allowed only once for life of contract

7/ Invasive plant control is intended to treat sites that are in the initial stages of invasion where success of control is highly likely only.

Fresh Water Wetlands: Restoration will be on hydric or formerly hydric soils. Restoration and management will be aimed at restoring hydrology and a plant community that is recognized as appropriate to the site. Cost share is authorized for:	
PRACTICE/COMPONENT	COST-SHARE/FLAT RATE <u>1/</u>
Hydrology Restoration	Tile Busting = \$200 each. Ditch Plugging = \$250 each.
Removal of Old Fill	75% of actual cost NTE \$5.25/c.y.
Vegetative Restoration – seeding	\$250/ac.
Vegetative Restoration – Tree and Shrub Planting	\$5.00 per plant, NTE \$500/ac. (includes plant protector, nutrients and labor).
Control of Invasive Plants (mechanical, chemical or biological) <u>2/</u>	Mechanical Control with Subsequent Chemical Control: > 50% density = 75% of actual cost NTE \$400/acre. < 50% density = 75% of actual cost NTE \$300/acre. Biological Control = 75% of actual cost NTE \$5000 per contract. Misc. Control Strategies = rate will be agreed upon with S.O.
Restoration/Creation of Woodland Vernal Pool <u>3/</u>	75% of actual cost NTE \$5.25/c.y.

1/ Cost share rate shown is flat rate unless otherwise specified.

2/ Invasive plant control is intended to treat sites where success of control is highly likely only. See fact sheet for details on where to use biological control for purple loosestrife.

3/ Not to exceed 2/10 acre in size, must be located within 500 feet of an existing vernal pool that has a breeding population of amphibians, and to be constructed to a depth and shape similar to adjacent pool

Mesic Forests: Restoration and management will be aimed at controlling introduced and invasive plants, reversing the trend in regeneration failure of oak and conservation of native forest vegetation. Cost share is authorized for:	
PRACTICE/COMPONENT	COST-SHARE/FLAT RATE <u>1/</u>
Control of Invasive Plants (mechanical, chemical or biological) <u>2/</u>	Mechanical Control with Subsequent Chemical Control: > 50% density = 75% of actual cost NTE \$400/acre. < 50% density = 75% of actual cost NTE \$300/acre. Biological Control = 75% of actual cost NTE \$5000 per contract. Misc. Control Strategies = rate will be agreed upon with S.O.
Fencing (to exclude domestic livestock)	\$1.50 per L.F.
Woodland Improvement (cutting or girdling low economic/habitat value trees for forest regeneration) <u>3/</u>	75% of actual cost NTE \$200/ac.
Tree Planting (includes seedlings of desirable species, tree protectors, nutrients and labor).	\$5.00 per plant.
Mass Tree Release	\$10 per tree.
Restoration/Creation of Woodland Vernal Pool <u>4/</u>	75% of actual cost NTE \$5.25/c.y.

1/ Cost share rate shown is flat rate unless otherwise specified.

2/ Invasive plant control is intended to treat sites where success of control is highly likely only

3/ Site must be appropriate for even aged forest regeneration (generally >75 year old northern hardwood or mixed northern/central hardwoods forest on stable soils) of tree species that are intolerant to intermediate in shade tolerance (e.g., quaking aspen, black cherry, red oak). Landowner must retain at least 10 square feet of basal area per acre of the original overstory canopy, but must retain no more than 25 square feet of basal area per acre of the original overstory canopy (try to retain groups of 3 or more trees scattered throughout the stand) in order to create early successional forest habitat with valuable structural attributes.

4/ Not to exceed 2/10 acre in size, must be located within 500 feet of an existing vernal pool that has a breeding population of amphibians, and to be constructed to a depth and shape similar to adjacent pool.

Riparian Areas: Restoration and management will be aimed at re-establishing natural woody and herbaceous vegetation along rivers, streams, lakes, ponds, wetlands and other aquatic areas. The plant community will be restored to a natural riparian plant community appropriate to the site. Cost share is authorized for:

PRACTICE/COMPONENT	COST-SHARE/FLAT RATE <u>1/</u>
Tree and Shrub Establishment (includes seedlings of desirable species, tree protectors, nutrients and labor)	\$5.00 per plant.
Tree and Shrub establishment (live stakes, live poles – includes labor)	\$1.00 per live stake.
Grass Establishment <u>2/</u>	Native Warm Season grasses = \$600/ac. Cool Season grasses = \$300/ac.
Control of Invasive Plants (mechanical, chemical or biological) <u>3/</u>	Mechanical Control with Subsequent Chemical Control: > 50% density = 75% of actual cost NTE \$400/acre. < 50% density = 75% of actual cost NTE \$300/acre. Biological Control = 75% of actual cost NTE \$5000 per contract. Misc. Control Strategies = rate will be agreed upon with S.O.
Fencing (to exclude livestock)	\$1.50 per L.F.
Livestock Watering Facility	75% of actual cost NTE \$500 ea.
Streambank Resource Area Restoration <u>4/</u>	\$20 per L.F. NTE \$5,000 per contract.

1/ Cost share rate shown is flat rate unless otherwise specified.

2/ Rates shown include seed bed preparation.

3/ Invasive plant control is intended to treat sites where success of control is highly likely only. See fact sheet for when to use biological control for purple loosestrife.

4/ Must be paired with Riparian Forested Buffer Restoration adjacent to site

<p>Salt Marshes: Restoration and management will be aimed at restoring tidal flow to approximate natural conditions, control of invasive plants and Open Water Marsh Management. Cost sharing is authorized for:</p>	
PRACTICE/COMPONENT	COST-SHARE/FLAT RATE <u>1/</u>
Hydrologic Restoration-Installation of Culverts (includes all associated excavation, fill, ditching, site stabilization and permits)	75% of actual cost NTE \$10,000 * per project. * (amount can be exceeded with program manager approval)
Hydrologic restoration-Removal of Old Dredge Spoil	\$5.25 per C.Y.
Hydrologic restoration-Open Marsh Water Management	75% of actual cost NTE \$1,000 per ac.
Control of Invasive Plants (mechanical, chemical or biological) <u>2/</u>	<p>Mechanical Control with Subsequent Chemical Control:</p> <ul style="list-style-type: none"> > 50% density = 75% of actual cost NTE \$400/acre. < 50% density = 75% of actual cost NTE \$300/acre. <p>Biological Control = 75% of actual cost NTE \$5000 per contract.</p> <p>Misc. Control Strategies = rate will be agreed upon with S.O.</p>

1/ Cost share rate shown is flat rate unless otherwise specified.

2/ Invasive plant control is intended to treat sites where success of control is highly likely only

Xeric Forests (pine barrens): Restoration sites will be on substrates of excessively drained or outwash soils. Restoration will be aimed at restoring pitch pine-scrub oak plant community. Area will be managed as a disturbance community by application of management techniques, which mimic natural processes. Cost share is authorized for:	
PRACTICE/COMPONENT	COST-SHARE/FLAT RATE <u>1/</u>
Prescribed Burning <u>2/</u>	75% of actual cost NTE \$500/ac.
Planting of Native Plants (pitch pine, scrub oak, wild lupine)	75% of actual cost NTE \$1,000/ac.
Control of Invasive Plants (mechanical, chemical or biological) <u>3/</u>	Mechanical Control with Subsequent Chemical Control: > 50% density = 75% of actual cost NTE \$400/acre. < 50% density = 75% of actual cost NTE \$300/acre. Biological Control = 75% of actual cost NTE \$5000 per contract. Misc. Control Strategies = rate will be agreed upon with S.O.
Fencing (to exclude domestic livestock)	\$1.50 per L.F.

1/ Cost share rate shown is flat rate unless otherwise specified.

2/ Allowed no more than once during life of 5 year contract or twice during life of 10 year contract.

3/ Invasive plant control is intended to treat sites where success of control is highly likely only