

**Massachusetts WHIP  
FY 2011 Practice Guide  
12/20/2010**

Conservation practices may be eligible for inclusion in a WHIP contract based on the land use and resource concerns identified during the development of a conservation plan. Payments are made at the rate indicated for the unit quantity contracted. The "WHIP HU" column shows the payment rate for applicants who self-certify as a member of a historically underserved group (limited resource, socially disadvantaged, or beginning farmer/forest owner). The "WHIP EH" column shows the rate for contracts that are funded as Essential Habitat agreements for New England Cottontail.

\* The "Unit Cost" column may reflect forgone income on some practices. MA NRCS will not pay for forgone income on some WHIP practices; therefore, the WHIP payment rates shown may not be a direct reflection of the WHIP percentage rate.

Unless otherwise noted under State WHIP Rules, all forest applications must have a forest management plan.

**KFAF Initiative:** All KFAF applications MUST include at least one of the following Core Conservation Practices that will be implemented under the contract: 666 - Forest Stand Improvement, 338 - Prescribed Burning, 643 - Restoration and Management of Declining Habitats, 612 - Tree and Shrub Establishment. The Supporting Conservation Practices allowed under the KFAF initiative are: 314, 315, 384, 391, 394, 472, 490, 560, 578, 645, 655, and 660. No other practices are allowed in KFAF applications.

Practice Code	Lifespan	Practice Name	Unit Cost *	Payment Unit	WHIP % Rate	Payment Rate			State WHIP Rules
						WHIP	WHIP HU	WHIP EH	
<b>314 1 Brush Management</b>									
314		<i>Light Clearing-Heavy Brush</i> Cutting of woody vegetation averaging 1-2" DBH	467.33	ac	75%	350.50	420.60	420.60	Cannot be used as a stand along practice for controlling exotic invasive species - it must be combined with herbicide and/or flame treatment. It cannot be combined with Invasives Control-Intensive treatment.
314		<i>Invasives Control - Chemical/Mechanical</i> Treatment of woody, exotic invasive plants using herbicide, flame, or by mechanical pulling of plants. Cost includes all labor, equipment and materials.	450.00	ac	75%	337.50	405.00	405.00	Multiple treatments allowed as necessary. Connection to at-risk species and forest management plan not required.
314		<i>Invasives Control - Intensive</i> Treatment of woody exotic invasive plants that entails cutting by chainsaws, etc; immediately prior to an herbicide application. Cost includes all labor, equipment and materials.	850.00	ac	75%	637.50	765.00	765.00	Only 1 intensive treatment allowed per area. Additional treatments of non-intensive control may be scheduled. Connection to at-risk species and forest management plan not required.
<b>315 1 Herbaceous Weed Control</b>									
315		<i>Invasives Control - Mechanical/Chemical</i> Treatment of herbaceous, exotic invasive plants using herbicide, flame, or by pulling of plants. Cost includes all labor, equipment and materials.	200.00	ac	75%	150.00	180.00	180.00	Multiple treatments allowed as necessary. Connection to at-risk species and forest management plan is not required.
315		<i>Purple Loosestrife Control-Biological</i> Treatment of purple loosestrife using biological control. Cost entails the release of a minimum of 10,000 <i>Galerucella</i> beetles per acre of infestation.	1,500.00	ac	75%	1,125.00	1,350.00	na	
315		<i>Phragmites Control</i> Treatment of phragmites using chemical and/or mechanical methods. Cost includes all labor and materials for one treatment	3,000.00	ac	75%	2,250.00	2,700.00	na	
<b>327 3 Conservation Cover</b>									
327		<i>Establish Cool Season Grasses</i> A field seeded to cool season grasses to benefit wildlife. Cost includes seed bed preparation, soil amendments and application, seed and seeding cost, and post planting weed control.	878.85	ac	75%	440.25	528.30	na	
327		<i>Establish Warm Season Grasses</i> A field converted seeded to warm season grasses to benefit wildlife. Cost includes seed bed preparation, soil amendments and application, seed and seeding cost, and post planting weed control.	905.00	ac	75%	678.75	814.50	na	
327		<i>No Till Overseeding with CSGs</i> A grassland overseeded with cool season grasses to benefit wildlife. Cost includes soil amendments and application, rental of no-till seeder, seed and seeding cost, and post planting weed control..	680.60	ac	75%	505.95	607.14	na	
327		<i>No Till Overseeding with WSGs</i> A grassland overseeded with warm season grasses to benefit wildlife. Cost includes soil amendments and application, rental of no-till seeder, seed and seeding cost, and post planting weed control.	794.50	ac	75%	591.38	709.65	na	
327		<i>Frost Seeding Renovation</i> Late winter broadcasting of small, smooth seeded legumes and/or Timothy to enhance wildlife fields. Cost includes lime and application, seed and seeding cost.	643.70	ac	75%	257.03	308.43	na	
327		<i>Pollinator Habitat</i> Minimum 1/2acre plot is planted to 9 flowering forbs to attract and support native pollinators. Cost includes seed bed preparation, soil amendments and application, seed and seeding cost, and post planting weed control.	2,228.58	ac	75%	1,655.63	1,986.75	na	Pollinator patch must be a minimum of 1/2 acre.
327		<i>Pollinator Enhancement - Plugs</i> Field currently dominated by flowering forbs is enhanced for pollinator habitat by planting herbaceous plugs in 2000sf at 2' on-center. Cost includes bed preparation, plugs and planting and post planting weed control.	1,559.75	ac	75%	1,158.75	1,390.50	na	Existing pollinator patch to be enhanced must be ≥ 1/2 acre. Plug planting at 2' OC must be done on 2000 sf/ per ac with minimum patch sizes of 25 sf.
<b>338 5 Prescribed Burning</b>									
338		<i>Prescribed Burn</i> Conducting a prescribed burn on a field dominated by herbaceous and/or shrubby vegetation. Cost includes preparation and approval of a written burn plan by certified fire planners, and all equipment and personnel needed to conduct the burn.	461.44	ac	75%	336.00	403.20	403.20	Purpose must be to improve the site for wildlife and/or enhance oak regeneration.
<b>342 10 Critical Area Planting</b>									
342		<i>Disturbed Areas</i> Typically used on steep eroding banks <1 acre or disturbed areas needing erosion control and site cannot be stabilized by ordinary conservation treatment. Cost includes site preparation, purchase and application of soil amendments, seed and mulch. Work is typically done using a small dozer.	1,786.58	ac	25%	412.38	824.75	na	
342		<i>Manual Herbaceous Seeding</i> Typically used on steep eroding banks where machinery cannot be utilized. Cost includes site preparation, purchase and application of soil amendments, seed and mulch. Work is all done by hand labor.	1,729.89	ac	25%	400.44	800.88	na	

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<b>382 20 Fence</b>									
382		<i>Barbed Wire</i> Installation of a four strand, barbed wire fence to exclude livestock in order to protect wildlife habitat. Cost assumes 4 strand barbed wire fence and includes all materials and labor including, but not limited to, corners, brace assemblies, posts at 16' spacing and all wire.	3.46	If	75%	2.52	3.03	na	Only eligible for payment if fence is for livestock exclusion in order to protect wildlife/aquatic habitat
382		<i>Woven wire</i> Installation of a woven wire fence to exclude livestock in order to protect wildlife habitat. Cost assumes 48" woven wire with one strand of barbed wire on the top and includes all material and labor including, but not limited to, corners, braces assemblies, posts at 16' spacing and all wire.	3.63	If	75%	2.64	3.17	na	
382		<i>High Tensile Electric</i> Installation of a three strand high tensile fence to exclude livestock in order to protect wildlife habitat. Cost assumes 3 strand high tensile fence and includes all material and labor including, but not limited to, corners, braces assemblies, posts at 35' spacing, fence charger and all wire.	2.47	If	75%	1.80	2.16	na	
382		<i>High Tensile Non-Electric</i> Installation of a 6 strand high tensile fence to exclude livestock in order to protect wildlife habitat. Cost assumes 6 strand high tensile fence and includes all material and labor including, but not limited to, corners, braces assemblies, posts at 35' spacing and all wire.	2.49	If	75%	1.81	2.18	na	
<b>384 10 Forest Slash Treatment</b>									
384		<i>Slash Treatment</i> Treatment of forest slash to prevent hindrance of early successional habitat. Slash may be treated by lopping, crushing, hauling, burning, or chipping.	771.00	ac	75%	578.25	693.90	na	Not eligible for payment if slash is left from a recent cut condoned by the current landowner
<b>386 10 Field Border</b>									
386		<i>Field Border - corn silage</i> Field border of cool season grasses established along the perimeter or adjacent to cropland. Minimum width of field border is 30'.	1429.33	ac	75%	458.25	549.90	na	Do not use if field border is planned to be predominantly shrubs/trees. Field border must be managed for wildlife. If scattered shrub planting needed, can add Std. 612 - Shrubs each.
<b>391 15 Riparian Forest Buffer</b>									
391		<i>Zones 1 &amp; 2 Establishment</i> Creation of a forested buffer adjacent to a water course or water body. Cost assumes area is currently in cultivation or unprotected, and includes labor and materials for planting 200 trees and shrubs (with protectors) per acre.	2,431.90	ac	75%	1,642.50	1,971.00	na	Minimum widths of zones must meet practice standard
391		<i>Natural Regeneration</i> Assisting the natural regeneration of a forested buffer adjacent to a water course or water body. Scenario assumes area is capable of regenerating woody species from the seed bank or a nearby seed source. Cost includes labor and materials for a one time mowing and herbicide treatment to control exotic invasive plants.	624.26	ac	75%	303.19	363.83	na	
391		<i>Buffer in Forest</i> Protection and enhancement of a riparian forested buffer during forest harvest operations. The cost includes on the ground designation of forest buffer by professional forester, and enhancement of the buffer through the planting of 100 2-0 tree seedlings per acre. Trees do not have protectors.	222.20	ac	75%	161.25	193.50	na	
<b>394 5 Firebreak</b>									
394		<i>Construct Firebreak</i> Creation of a 25 foot wide firebreak in shrubland/forested area. Cost includes cutting and removal of woody material.	1.38	If	75%	1.01	1.21	1.21	Only eligible for payment if prescribed fire is needed for managing wildlife habitat and/or enhance oak regeneration.
<b>395 5 Stream Habitat Improvement &amp; Management</b>									
395		<i>Dam Removal</i> Removal or partial removal of a dam in order to improve the stream for wildlife and aquatic organisms. Cost includes all labor, equipment and materials and is based on the square feet of structure to be removed (SF = dam height x dam length)	278.25	sf	60%	159.00	225.25	na	Price includes instream features and bioengineering practices along bank.
<b>396 5 Fish Passage</b>									
396		<i>Denil Fish Ladder</i> Installation of a denil fish ladder around a fish passage barrier such as a dam (6.5 feet or less hydraulic fishway height). Cost includes all labor, equipment and material costs.	31,710	vf	75%	22,650	27,180	na	Price includes instream features and bioengineering practices along bank.
396		<i>Weir Pool Fish Ladder</i> Replacement, installation or upgrade of weir pool fish ladder to allow passage of aquatic organisms. Cost includes all labor, equipment and materials.	31,710	vf	75%	22,650	27,180	na	
396		<i>Weir Pool Fish Ladder Repair</i> Repair of an existing weir pool fish ladder to allow passage of aquatic organisms. Cost includes all labor, equipment and materials.	51.45	If	75%	36.75	44.10	na	
396		<i>Alaskan Steep Pass Fish Ladder</i> Installation of an alaskan steep pass fish ladder around a barrier such as a dam. Cost includes all labor, materials and equipment.	19,845	vf	75%	14,175	17,010	na	
396		<i>Dam Removal</i> Removal or partial removal of a dam in order to improve the stream for wildlife and aquatic organisms. Cost includes all labor, equipment and materials and is based on the square feet of structure to be removed (SF = dam height x dam length)	278.25	sf	60%	159.00	225.25	na	Price includes instream features and bioengineering practices along bank.
396		<i>Arch culvert, ≤ 15'</i> Replacement of existing road culvert with a fish friendly arch culvert, ≤15' wide, in order to allow passage for aquatic organisms. Cost includes all labor, equipment and materials.	1,254.75	If	75%	896.25	1,075.50	na	
396		<i>Arch culvert, &gt; 15'</i> Replacement of existing road culvert with a fish friendly arch culvert, greater than 15' wide, in order to allow passage for aquatic organisms. Cost includes all labor, equipment and materials.	1,538.25	If	75%	1,098.75	1,318.50	na	
396		<i>Sediment - debris removal</i> Removal of sediment and debris from stream in order to allow passage of river herring. Cost includes all labor, equipment and materials.	3.74	If	75%	2.67	3.20	na	
<b>472 10 Access Control</b>									
472		<i>Forest boundary line</i> Blaze and paint woodland property boundary line. Cost includes research, locating line and materials.	0.25	If	75%	0.19	0.23	0.23	Supporting practice only - If KFAF application, must be done in addition to a cost-shared Core conservation practice; If non-KFAF application, must be done in addition to another forest practice (cost-shared or non-cost shared such as a commercial timber harvest).

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<b>490 1 Tree/Shrub Site Preparation</b>									
490		<i>Chemical prep - field/forest</i> Using herbicide to control competing vegetation in a forest/field prior to planting to trees/shrubs. Cost includes all labor, equipment and materials.	63.86	ac	75%	46.50	55.80	55.80	Eligible for payment only when planting is done to improve habitat for wildlife.
490		<i>Mechanical prep - field</i> Site preparation of a field (typically by disking) in order to control competing vegetation prior to planting to trees/shrubs. Cost includes all labor, equipment and materials.	123.60	ac	75%	90.00	108.00	108.00	
490		<i>Mechanical prep-forest</i> Using a skidder to scarify the soil in a forest stand to prepare it for natural or artificial regeneration. Cost includes all labor, equipment and materials.	397.58	ac	75%	289.50	347.40	347.40	
<b>500 10 Obstruction Removal</b>									
500		<i>Stump removal</i> Removal of stumps in order to improve turtle nesting habitat. Cost includes all labor, equipment and materials needed to remove stumps (typically by grinding).	1,700.00	ac	50%	850.00	1,275.00	na	Only eligible for creating turtle nesting habitat.
<b>516 20 Pipeline</b>									
516		<i>Pipeline, Buried</i> Installation of a buried pipeline for livestock watering. Cost includes all labor, equipment and materials needed to install the pipe, frost free hydrants, air valves, and drain valve. Refer to other practices for components making up a complete livestock watering system: spring development (574), watering facility(614), pumping plant(533).	4.43	lf	75%	3.23	3.88	na	Eligible for payment only when done in conjunction with riparian buffer establishment and exclusion of livestock from stream
516		<i>Pipeline, Above Ground</i> Installation of a above ground pipeline for livestock watering. Pipe is not buried due to bedrock issues or to maintain flexibility with prescribed grazing plan. Cost includes all labor, equipment and materials needed to install the pipe.	1.90	lf	75%	1.39	1.66	na	
<b>533 15 Pumping Plant</b>									
533		<i>Centrifugal Pump and Motor, ≤ 5 hp</i> Installation of a pumping plant (pump and motor/engine) for irrigation or livestock watering. Cost includes all labor, equipment and materials.	283.25	hp	75%	206.25	247.50	na	Eligible for payment only when done in conjunction with riparian buffer establishment and exclusion of livestock from stream or when done for irrigation in association with an alternate water supply in order to improve stream habitat for wildlife/aquatic species
533		<i>Centrifugal Pump and Motor, &gt; 5 hp</i> Installation of a pumping plant (pump and motor/engine) for irrigation or livestock watering. Cost includes all labor, equipment and materials.	180.25	hp	75%	131.25	157.50	na	
533		<i>Submersible Pump, ≤ 3 hp</i> Installation of a submersible pump for well. Cost includes all labor, equipment and materials.	463.50	hp	75%	337.50	405.00	na	
533		<i>Submersible Pump, &gt; 3 hp</i> Installation of a submersible pump for well. Cost includes all labor, equipment and materials.	339.00	hp	75%	247.50	297.00	na	
533		<i>Livestock Solar Pump</i> Installation of a solar or wind powered pump for livestock watering. Cost includes all labor, equipment and materials.	3,175.00	ea	75%	2,325.00	2,790.00	na	
533		<i>Pump and Tank</i> Installation of a pump and holding tank to provide water by gravity to downhill livestock watering facilities. Cost includes pump, tank and labor and installation.	2,626.50	ea	75%	1,912.50	2,295.00	na	Eligible for payment only when done in conjunction with riparian buffer establishment and exclusion of livestock from stream
<b>560 10 Access Road</b>									
560		<i>Forest - erosion control</i> Installation of erosion control structures on 1000 ft of forest access road. Erosion control typically entails construction of 3 broad based dips on 2% grade, ditching, and seeding of disturbed soils.	5.58	lf	75%	4.08	4.89	4.89	Supporting practice only - If KFAF application, must be done in addition to a cost-shared Core conservation practice; If non-KFAF application, must be done in addition to another forest practice (cost-shared or non-cost shared such as a commercial timber harvest).
<b>574 20 Spring Development</b>									
574		<i>Well Tile</i> Installation of a 4' diameter well tile, 8' deep. Cost includes precast manhole, cover, crushed stone and all labor and equipment.	4,185.95	ea	75%	3,058.27	3,669.92	na	Eligible for payment only when done in conjunction with riparian buffer establishment and exclusion of livestock from stream
574		<i>Tile Drain</i> Installation of 4" perforated plastic tubing approximately 3-4' deep to collect seeps and deliver to a watering facility. Cost includes labor, equipment and installation.	20.60	lf	75%	15.20	18.24	na	
<b>578 10 Stream Crossing</b>									
578		<i>Ford</i> Installation of a stream ford for livestock. Cost includes labor, materials and equipment for excavation, fill, geotextile and armoring. Add fence (382) and seeding (342) as needed.	3,229.77	ea	75%	2,362.43	2,834.92	na	Non-forested situations - Eligible for payment only when done in conjunction with riparian buffer establishment and exclusion of livestock from stream . Forest applications (both KFAF and non KFAF) - Supporting practice only: If KFAF application, must be done in addition to a cost-shared Core conservation practice; If non-KFAF application, must be done in addition to another forest practice (cost-shared or non-cost shared such as tsi, timber harvest, etc). <u>NOTE: Only Stream Crossing scenarios are eligible for inclusion in KFAK applications.</u>
578		<i>Stream crossing, 12-24"</i> Installation of a culvert for crossing an intermittent stream. Cost includes all labor, equipment and materials. MA Stream Crossing regulations NOT involved.	8.26	sf	75%	6.06	7.27	7.27	
578		<i>Stream crossing, 24-36"</i> Installation of a culvert for crossing an intermittent stream. Cost includes all labor, equipment and materials. MA Stream Crossing regulations NOT involved.	12.23	sf	75%	8.96	10.75	10.75	
578		<i>Stream crossing, &gt;36"</i> Installation of a culvert for crossing an intermittent stream. Cost includes all labor, equipment and materials. MA Stream Crossing regulations NOT involved.	15.96	sf	75%	11.66	13.99	13.99	
578		<i>Culvert for Fish Passage</i> Installation of twin, 48" culverts to improve fish passage. Cost includes all labor, materials and equipment. Priced by the square foot of the travel portion of the crossing, top of bank to top of bank. MA Stream Crossing regulations ARE involved.	28.23	sf	75%	20.58	24.70	24.70	
578		<i>Arch culvert, ≤ 15'</i> The installation of bottomless arch culverts to ensure passage of aquatic organisms and other wildlife. The arch span is 15 feet or less. Cost includes all labor, equipment and materials. MA Stream Crossing regulations ARE involved.	1,317.75	lf	75%	941.25	1,129.50	1129.50	
578		<i>Arch culvert, &gt; 15'</i> The installation of bottomless arch culverts to ensure passage of aquatic organisms and other wildlife. The arch span is greater than 15'. Cost includes all labor, equipment and materials. MA Stream Crossing regulations ARE involved.	1,617.00	lf	75%	1,155.00	1,386.00	1386.00	

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<b>578 10 Stream Crossing (continued)</b>									
578	Bridge		92.70	sf	75%	67.50	81.00	81.00	Eligible for payment only when done in conjunction with riparian buffer establishment and exclusion of livestock from stream. Not eligible for inclusion in KFAF applications.
<b>580 20 Streambank and Shoreline Protection</b>									
580	Bioengineering with Rock Toe		158.74	lf	75%	115.75	138.90	na	Eligible for payment only if treatment will improve or enhance the water body for wildlife/aquatic species
<b>612 15 Tree/Shrub Establishment</b>									
612	Forest regeneration-conifer planting		662.00	ea	75%	496.50	595.80	na	Non KFAF applications - Eligible for payment only when planting is done to improve habitat for wildlife. Forest regeneration planting is not eligible for payment. All species planted must be native to Massachusetts. KFAF Initiative - Forest regeneration planting is eligible only if prescribed in forest management plan. Does not need to be tied to at-risk species.
612	Forest regeneration-hardwood planting		842.00	ac	75%	631.50	757.80	na	
612	Forest regeneration - direct seeding		154.53	ac	75%	115.89	139.07	na	
612	Shrubs - each (1 gallon)		15.40	ea	75%	11.44	13.73	13.73	
612	200 Shrubs/AC - 1 gallon		2,959.50	ac	75%	2,137.50	2,565.00	2,565.00	
612	200 Trees/AC - 1 gallon		3,292.80	ac	75%	2,385.00	2,862.00	na	
<b>614 20 Watering Facility</b>									
614	Permanent, Tank & foundation		1,478.38	ea	75%	1,081.82	1,298.19	na	Eligible only in conjunction with development of alternate water supply where current use of existing surface water supply is causing wildlife/aquatic habitat degradation
614	Moveable Tank		236.90	ea	75%	172.50	207.00	na	
614	Waterer with Nose Pump		772.50	ea	75%	562.50	675.00	na	
<b>642 20 Well</b>									
642	Well, All Types		4,120.00	ea	75%	3,000.00	3,600.00	na	Eligible only in conjunction with development of alternate water supply where current use of existing surface water supply is causing wildlife/aquatic habitat degradation
642	Well Yield Test		5,000.00	ea	75%	3,750.00	4,500.00	na	
<b>643 10 Restoration and Management of Declining Habitats</b>									
643	Restore old growth characteristics		101.60	ac	75%	76.20	91.44	na	Eligible for payment only if landowner has forest management plan that prescribes the treatment
643	Scattered tree cutting		300.00	ac	75%	225.00	270.00	270.00	Eligible for payment only once every 3 years
643	Oak regeneration - low intensity		406.25	ac	75%	304.69	365.63	na	These scenarios are <u>not</u> to be used to create small wildlife openings or food plots in the forest. They should not be used to create grassland from forestland unless field verified by the state office. If ultimate goal is forest regeneration, landowner must have a forest management plan that prescribes treatment. If ultimate goal is permanent young forest/shrubland, a forest management plan isn't required but landowner should be encouraged to get one. If land is currently in CH61, inform landowner of need to check "change of use" requirements. When trying to determine payment scenario intensity level, 250 stems per acre equates to approximately 5 trees <8-10"DBH in a 30' x 30' quadrant. 500 stems per acre equates to approximately 10 trees <8-10"DBH in a 30'x30' quadrant
643	Oak regeneration - high intensity		1,314.00	ac	75%	985.50	1,182.60	na	
643	Oak regeneration - no timber		2,300.00	ac	75%	1,725.00	2,070.00	na	
643	Woody clearing - low intensity		406.25	ac	75%	304.69	365.63	365.63	

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<b>643 10 Restoration and Management of Declining Habitats (continued)</b>									
643		Woody clearing - high intensity	1,314.00	ac	75%	985.50	1,182.60	1,182.60	<p><b>These scenarios are not to be used to create small wildlife openings or food plots in the forest. They should not be used to create grassland from forestland unless field verified by the state office.</b> If ultimate goal is forest regeneration, landowner must have a forest management plan that prescribes treatment. If ultimate goal is permanent young forest/shrubland, a forest management plan isn't required but landowner should be encouraged to get one. If land is currently in CH61, inform landowner of need to check "change of use" requirements. When trying to determine payment scenario intensity level, 250 stems per acre equates to approximately 5 trees &lt;8-10" DBH in a 30' x 30' quadrant. 500 stems per acre equates to approximately 10 trees &lt;8-10" DBH in a 30'x30' quadrant</p>
		The creation of declining early successional habitat (typically shrubland/young forest) through the removal of the overstory canopy to create light conditions which will allow for regeneration of desired plant species/structure. Cost share is for cutting over 500 stems per acre and treating slash so as not to hinder management goals. The stems being cut are <8" DBH if hardwood, <10" DBH if softwood, and have no commercial value. This may be done in conjunction with a commercial timber harvest.							
643		Woody clearing - no timber	2,300.00	ac	75%	1,725.00	2,070.00	2,070.00	
		The creation of declining early successional habitat (typically shrubland/young forest) through the removal of the overstory canopy to create light conditions which will allow for regeneration of desired plant species/structure. Cost share is for cutting at least 350 stems/acre and treating slash. The stems to be cut are a mix of sizes but all the stems (including those >8-10" DBH) have no commercial timber value as cordwood, pulpwood, etc.							
<b>644 1 Wetland Wildlife Habitat Management</b>									
644		Create turtle nesting habitat	2,100.00	ac	75%	1,575.00	1,890.00	na	<p>Nesting patch must be minimum of 20'x20'. If shrub planting needed, see Std. 612. If stump removal needed, see Std. 500</p>
		The creation of turtle nesting habitat, typically through a combination for the following activities: clearing vegetation, stripping loam, scarifying the soil surface, importing washed sandy/gravel soils. Cost includes all labor, equipment and materials.							
<b>645 1 Upland Wildlife Habitat Management</b>									
645		Snag Creation	104.65	ac	75%	76.20	91.44	na	<p>KFAF Initiative: not required to be tied to at-risk species.</p>
		The creation of 8 snags per acre by girdling. Cost includes forester marking snag trees and labor to girdle the trees.							
<b>647 1 Early Successional Habitat Development/Management</b>									
647		Herbaceous Management	142.70	ac	75%	104.23	125.08	na	<p>Cost share allowed every other year only</p>
		Manage an existing stand of grasses/forbs to provide wildlife habitat in the proper amounts and times. Cost is based on mowing after the nesting season (or late fall if stand is for pollinators) or performing strip disking to encourage annual plants that provide a seed source.							
647		Liming	125.00	ac	75%	93.75	112.50	na	<p>Multiple treatments allowed if supported by soil test</p>
		Apply lime at no more than 1 ton/acre per application to improve an existing stand of cool season grasses/forbs for wildlife habitat. Cost is based on purchase and application of lime based on soil test recommendations.							
647		Hedgerow Cutting	4,635.00	ac	75%	3,375.00	4,050.00	na	<p>Can only be used to visually connect adjacent grasslands managed for grassland dependent wildlife. Only one treatment allowed per area per contract.</p>
		The cutting and chipping of all tall growing woody vegetation within a hedgerow.							
<b>655 5 Forest Trails and Landings</b>									
655		Forest - bridge	127.72	lf	75%	93.00	111.60	111.60	<p>For temporary skid trails only. Stream crossing(s) must be removed within reasonable period after core practice is complete. Forest applications (both KFAF and non KFAF) - Supporting practice only: If KFAF application, must be done in addition to a cost-shared Core conservation practice; If non-KFAF application, must be done in addition to another forest practice (cost-shared or non-cost shared such as tsi, timber harvest, etc).</p>
		Installation of a temporary bridge (20' span) at stream crossing on forest road							
655		Forest - culvert	77.25	lf	75%	56.25	67.50	67.50	
		Installation of a new 30" diameter culvert (20' span) at stream crossing on forest road							
655		Forest - erosion control	4.16	lf	75%	3.03	3.64	3.64	
		Installation of erosion control structures on 1000 ft of forest road. Erosion control typically entails construction of 3 broad based dips on 2% grade, ditching, and seeding of disturbed soils.							
<b>657 15 Wetland Restoration</b>									
657		Box Culvert Replacement	2,520.00	lf	75%	1,800.00	2,160.00	na	
		Remove undersized culvert and replace with larger box culvert. Cost includes mobilization, traffic control, de-watering, structure removal and disposal, culvert replacement, bedding and backfill and site stabilization.							
657		Box Culvert Replacement - Substantial Partnering	2,520.00	lf	35%	840.00	1,440.00	na	
		Remove undersized culvert and replace with larger box culvert. Cost includes mobilization, traffic control, de-watering, structure removal and disposal, culvert replacement, bedding and backfill and site stabilization. Partners are providing substantial construction funds.							
657		Culvert removal - channel reshaping	29,600	ea	75%	22,200	26,640	na	
		Remove undersized culvert and reshape and stabilize channel. Cost includes mobilization, traffic control, de-watering, structure removal and disposal, channel shaping and site stabilization.							
<b>658 15 Wetland Creation</b>									
658		Seasonal Wetland	0.76	sf	65%	0.49	0.68	na	<p>Purpose must be to provide habitat for breeding salamanders and amphibians. Wetland must be designed to hold water for long enough period to accommodate targeted species requirements.</p>
		Creation of shallow (<18"), seasonal wetland through excavation of soil. A liner is not required to hold water. Cost includes all equipment and materials for excavation, shaping and seeding and mulching of disturbed soils surrounding the created wetland.							
658		Seasonal Wetland w/ liner	2.27	sf	65%	1.48	2.05	na	
		Creation of shallow (<18"), seasonal wetland through excavation of soil, installation of minimum 30 mil PVC liner, and geo-textile pad sandwiching the liner. Cost includes all equipment and materials for excavation, shaping, installation of liner and geotextile pads, and seeding and mulching of disturbed soils surrounding the created wetland.							
<b>660 10 Tree/Shrub Pruning</b>									
660		Tree Pruning	0.30	lf	75%	0.23	0.27	na	<p>KFAF initiative: does not need to be tied to at-risk species. Landowner must have forest management plan that prescribes the treatment.</p>
		Removal of lower branches of desirable 3-8" DBH crop trees in a forest stand.							

**Massachusetts WHIP  
FY 2011 Practice Guide  
12/20/2010**

Practice Code	Lifespan	Practice Name	Unit Cost	Payment Unit	WHIP % Rate	Payment Rate			State WHIP Rules
						WHIP	WHIP HU	WHIP EH	
<b>666</b>	<b>10</b>	<b>Forest Stand Improvement</b>							
666		Low Intensity Thinning The intent is to manage the composition of the stand. Cost share is for cutting between 250 and 500 stems per acre and treating slash so as not to hinder management goals. The stems cut are <8" DBH if hardwood, <10" DBH if softwood, and have no commercial value. This may be done in conjunction with a commercial timber harvest.	406.25	ac	0.75	304.69	365.63	na	KFAF initiative: does not need to be tied to at-risk species. Landowner must have forest management plan that prescribes the treatment.
666		High Intensity Thinning The intent is to manage the composition of the stand. Cost share is for cutting more than 500 stems per acre and treating slash so as not to hinder management goals. The stems cut are <8" DBH if hardwood, <10" DBH if softwood, and have no commercial value. This may be done in conjunction with a commercial timber harvest.	812.50	ac	0.75	609.38	731.25	na	
666		Chemical Release - Thinning The chemical release or thinning of a forest stand using herbicide applied as foliar spary or basal bark application. The intent is to regulate the growth or improve the species composition of the stand.	240.00	ac	0.75	180.00	216.00	180.00	
666		Thinning - Girdling Manual thinning of a forest stand using a chainsaw to girdle the trees. The trees to be girdled are >8" DBH.	140.00	ac	0.75	105.00	126.00	na	