	BEST MA	NAGEMENT PRACTICES FOR NEW ENGLA	ND COTTONTAIL HABITAT (NEC) DRAFT 10	0-26-2011					
DRAFT	process. Managers may wish to modify the Unique plant communities (coastal scrub,	he BMPs presented here are directed at ma nese guidelines based on other species and laurel, alder swamps) may require more sp	resource considerations. Habitats types hecific prescriptions.	nere are general (e.g., native shrublands).					
	15 feet high, with multiple layers of veget	outcome of habitat management is to creat ation at a minimum stem density of 20,000 nerbaceous browse openings. Well-drained	/acre. This early successional thicket is id	leally an extensive tangle of saplings,					
		atch sizes should be at least 10 to 25 acres se by and connected by a corridor. Connec ous plants critical as forage.							
	Rotational considerations: A rule of thur retaining the minimum of 10 to 25 acres of	nb for large properties (> 100 acres) is to k of suitable habitat.	eep 10% of the forest in regenerating seed	lling/saplings at all times, but always					
	there is good evidence that <u>no</u> NEC are pr management exists.	nat are unlikely to be occupied by rabbits, r esent, work areas should be treated as if th	e site is probably occupied, and the poten	ntial for incidental take through					
	August through winter. If trees are cut in	pied or potentially occupied areas, manage late winter, crowns left on site will provide what percentage of potential habitat to cut	cover and browse at a critical time. Man	agement should be conducted					
INITIAL HABITAT	Forest > 20 years old, trees > 6" dbh - native understory (potentially occupied)	Forest > 20 years old, trees > 6" dbh - invasive understory (potentially occupied)	Forest > 20 years old, trees > 6" dbh - sparse understory (unlikely to be occupied)	Successional Forest, trees 3"- 6" dbh	Seedling-Sapling Forest. Good habitat!	Shrubland - mostly native shrubs, Good habitat!	Shrubland - mostly invasive shrubs	Old Field	Grassland/Meadow/Wet Meadow
Definition  PRACTICE/TREATMENTS/ACTIVITIES	Trees > 6" dbh, understory primarily native shrubs and seedlings that may provide NEC food and cover. Minor invasive understory component.	Trees > 6" dbh, understory primarily invasive shrubs and seedlings that may provide NEC food and cover	Trees > 6" dbh, little understory providing no or poor NEC habitat	Area dominated by trees > 3" dbh and < 6" dbh, no longer ideal habitat due to canopy closure and decline in stem density.	Area dominated by trees ≤ 3" dbh, and ≤ 5 meters in height.	Area dominated by multistemmed woody plants and seedling sapling trees, such as alders, viburnums, blueberries, dogwoods, etc.	Area dominated by invasive shrubs such as bush honey suckles, Japanese barberry, or multiflora rose, and young seedling or sapling trees less than 5	Transitional areas dominated by grasses, forbs, as well as some shrubs and small trees. The vegetative make up varies with the area's management history and	grasses, sedges and other herbaceous vegetation without or with a very small
Removal of Trees/shrubs by handheld equipment (e.g., chainsaw, handsaw, loppers)	While cutting by hand in a mature forest may not be feasible for clearing large areas, It may be practical to incrementally add to existing habitat. Remove, or gridle, all trees greater than 3' dbh and decadent shrubs. Apple trees, scrub oak, low-branching conifers, evergreen shrubs or other trees of exceptional value may be left. Leave a few decadent, shallow rooted, buttressed trees for escape cover.	While cutting by hand in a mature forest may not be feasible for clearing large areas, It may be practical to incrementally add to existing habitat. Remove, or gride, all trees greater than 3' dbh and decadent shrubs. Apple trees, scrub oak, low-branching conifers, evergreen shrubs or other trees of exceptional value may be left. Leave a few decadent, shallow rooted, buttressed trees for escape cover.	Occupation by NEC is not a concern; precautionary measures not needed. To minimize disturbance to other wildlife and maximize regeneration, cutting is recommended in winter. While cutting by hand in a mature forest may not be feasible for clearing large areas, it may be practical to incrementally add to existing habitat. Remove or girdle all trees greater than 3" dbh and decadent shrubs. Apple trees, scrup oak, low- branching conflers, evergreen shrubs or other trees of exceptional value may be felt. Leave a few decadent, shallow rooted, buttressed trees for escape cover.	Cutting by hand in young forest may occur when a land owner is incrementally adding to existing habitat. Remove all trees greater than 3" dbh and decadent shrubts. Apple trees, scrub, low-branching conifers, evergreen shrub or other trees of exceptional value may be left. Leave a few decadent, shallow rooted, buttressed trees for escape cover.	evergreen shrubs or other trees of exceptional value may be left.	Evaluate and remove trees or shrubs > 3' dbh during winter. Consider treating stems of species that will not contribute to high stem density, such as oak. Evaluate and treat for invasives as needed. Large patches should be cut incrementally.	Evaluate and remove trees or shrubs > 3' dth. Large patches should be cut incrementally. Conversion of invasive to native plant species is preferable, but not always feasible. Managing and utilizing the invasive species as habital may be warranted in cases where the site and adjacent lands are overwhelmingly dominated by invasives.	Evaluate and remove trees or decadent shrubs 3" dbh. Apple trees, scrub oak, low-branching confers, evergreen shrubs or other trees of exceptional value may be left. Evaluate and treat for invasives as needed.	Evaluate and remove trees or shrubs > 3* dbh. Apple trees, scrub oak, low-branching confirers, evergenes shrubs or other trees of exceptional value may be left. Evaluate and treat for invasives as needed.
Heavy duty mulching and mowing (e.g., Brontosaurus, Fecon)	Generally, mulching and mowing equimment are not feasible for removal of large hardwoods, but may be used for one step in the removal of livasive or undesirable understory.	Generally, mulching and mowing equipment are not feasible for removal of large hardwoods. Brush mowing of invasive understory will be the preliminary step of invasive treatment, followed by herbicide application prior to tree harvest. Brush mowing is ideally done in winter, followed by herbicide in the growing season, with tree emoval the following winter. In occupied or potentially occupied sites, incremental removal may be necessary.	N/A	This a preferred method for removal of trees in this size class, with removal rates of up to one acre per day. It permits precision cutting and minimizes environmental impacts. This may be achieved in incremental stages if warranted.	N/A	This is a valuable technique for restoring significant areas of decadent or undesirable shrubs, with removal rates up to two acres per day. This may be achieved in incremental stages if warranted.	This is a valuable technique for restoring significant areas of decadent or undesirable shrubs, with removal rates up to two across per day. This may be achieved in incremental stages if warranted.	This is a valuable technique for maintaining suitable structure and composition of woody vegetation or to create transitional zones at field edges. Old fields should contain no more than 25% woody cover no larger than 3" dbh. Apple trees, scrub oak, low-branching conifers, evergeren shrubs or other trees of exceptional value may be left.	This is a valuable technique for removing encroaching woody vegetation or to create transitional zones at field edges.
Forest harvesting, commercial or non- commercial generally with use of a skidder, forwarder, fellerbuncher, etc.	Harvest all trees greater than 3" dbh. Leave tree parts < 6" in diameter (slash) on site to provide cover and winter food, nutrient replenishment to the site and prevent deer brows of regenerating trees. Tops should be lopped not to exceed 4" in height. Leave one or two brush piles per acre (see brush pile practice). Assess within the first growing season post harvest for imassive treatment and within 10 years for a recurrent and within 10 years for a result. Plan harvest rotations to maintain a minimum of 10-25 acres in the less than a minimum of 10-25 acres in the less share 15 year old age class at all times. Apple trees, scrub oak, low-branching conflers, evergreen shrubs or other trees of exceptional value may be left. Leave a few decadent, shallow costed, buttressed trees for escape cover.	Harvest all trees greater than 3" dbh. Leave tree parts < 6" in diameter (slash) on site to provide cover and winter food, nutrient replenishment to the site and prevent deer brows of regenerating trees. Tops should be lopped not to seceed 4" in height. Leave one or two brush piles per acre (see brush pile practice). Assess within the first growing season post harvest for invasive treatment and within 10 years for a recut. Plan harvest rotations to maintain a minimum of 10-25 acres in the less than 15 year old age class at all times. Apple trees, scrub oak, low-branching confiers, evergreen shrubs or other trees of exceptional value may be left. Leave a few decadent, shallow roated, buttressed trees for escape cover.	food, nurrient replenishment to the site and prevent deer browse of regenerating trees. Tops should be lopped not to exceed 4' in height, Leave one or two brush pile per acre (see brush pile practice). Assess within the first growing eason post harvest for invasive treatment and within 10 years for a recut. Plan harvest rotations to maintain a minimum of 10-25 acres in the less than 15 year of lage class at all times. Apple trees, scrub oak, low-branching conflers, evergreen shrubs or	N/A	N/A	N/A	N/A	N/A	N/A

INITIAL HABITAT	Forest > 20 years old trace > 6" dist	Forest > 20 years old trees > 511 dt.	Forest > 20 years old trees > 5" dt.t.	Successional Forget trees 2" 6" th	Soudling Sanling Forest Cond by Little	Shruhland mostly native should Com	Shruhland mostly impaire short	Old Field	Grand Mondow West Manda
DRAFT	Forest > 20 years old, trees > 6" dbh - native understory (potentially occupied)	Forest > 20 years old, trees > 6" dbh - invasive understory (potentially occupied)	Forest > 20 years old, trees > 6" dbh - sparse understory (unlikely to be occupied)	Successional Forest, trees 3"- 6" dbh		Shrubland - mostly native shrubs, Good habitat!	i Snrubland - mostly invasive shrubs	Old Field	Grassland/Meadow/Wet Meadow
Invasive treatment - chemical	Within one year post harvest, assess and treat area for invasives that have become established. Treatment is recommended between August and September. Assess for follow up treatment annually and treat as required. Herbiddes election (broad-spectrum, selective) and application method (foliar, cut-stem, basal barly will depend on target species and desirable vegetation outcome.	If the invasive understory is providing suitable habital, incremental removal may be warranted. While chemical treatment may be done post harvest, it is recommended that it be done before tree harvest to prevent an explosive release of invasive growth after canopy removal. Treatments should be done during the late growing in August or September. Assess for follow-up treatments annually and treat as required. Herbicide selection (broad-spectrum, selective) and application method (foliar, cut-stem, basal bark) will depend on target species and desirable vegetation outcome. Selectors of dead standing invasives may be left to provide winter cover.	Within one year post harvest, assess for invasives that have become established, and treat if necessary. Continue annual assessments and treat as required. Treatment is recommended in August and September. Herbicide selection (Worad-spectum, selective) and application method (foliar, cut-stem, basal bark) will depend on target species and desirable vegetation outcome.	Within one year post harvest, assess and treat area for invasives that have become established. Treatment is recommended in August or September. Assess annually and repeat treatment as required. Herbicide selection (broad-spectrum, selective) and application method (foliar, cut-stem, basal bark) will depend on target species and desirable vegetation outcome.	Assess annually and treat as required, preferably in August or September. Herbicide selection (broad-spectrum, selective) and application method (foliar, cut-stem, basal bark) will depend on target species and desirable vegetation outcome.	Assess annually and treat as required, preferably in August or September. Consider treating stems of species that will not contribute to high stem density, such as oak. Herbicides selection (broad-spectrum, selective) and application method (foliar, cut-stem, basal bark) will depend on target species and desirable vegetation outcome.	Conversion of invasive to native plant species is preferable, but not always feasible. If the area is occupied, large patches should be treated incrementally. Assess annually and treat as required, preferably in August or September. Herbicide selection (broad-spectrum, selective) and application method (foliar, cut-stem, basal bark) will depend on target species and desirable vegetation outcome.	Assess annually and treat as required, preferably in August or September, Herbicide selection (broad-spectrum, selective) and application method (foliar, cut-stem, basal bark) will depend on target species and desirable vegetation outcome.	Assess annually and treat as required, preferably in August or September. Herbicide selection (broad-spectrum, selective) and application method (foliar, cut-stem, basal bark) will depend on target species and desirable vegeration outcome.
Invasive treatment - mechanical (chainsaw, Brontosaurus, Fecon)	If post harvest invasive plants have grown to a size that is difficult to treat with chemicals alone, mechanical reduction of plant size and vigor can be used as a preteratment to chemical application. For undesirable tree species, such as tree of heaven, the stem may be girdled or cut initially, followed by chemical treatment.	For areas dominated by tall and very dense invasive plants (e.g., multiflora rose, bush honeysucdled), mechanical reduction can be used to reduce biomas and stress target plants prior to chemical application. Treatment is recommended prior to canopy removal.	If post harvest invasive plants have grown to a size that is difficult to treat with chemicals alone, mechanical reduction of plant size and vigor can be used as a pretreatment to chemical application. For undesirable tree species, such as tree of heaven, the stem may be girdled or cut initially, followed by chemical treatment.	Use of methanical equipment to remove invasives in a young forest is likely to be impractical. The restoration of this size class forest to seedling/sapling is essentially a moving treatment of the whole area. However, mechanical treatment of individual problem plants with hand held tools may be warranted.	Due to stem densities, treatment is impractical. However, if necessary, cut individual or patches of invasive plants, and follow with herbicide application. Assess annually and selectively treat as required.	Cut individual or patches of inwasive plants, and follow with herbicide application. Assess annually and selectively treat as required.	This is a valuable technique for restoring significant areas of decadent or undesirable shrubs, with removal rates up to two acres per day using a Fecon mover. If the goal is conversion to a more native shrubland, mowing should be conducted at peak biomass in June July, followed by herbicide treatment in August or September. This may be achieved in incremental stages if warranted.	Cut Individual or patches of inwasive plants, and follow with herbicide application. Assess annually and selectively treat as required.	Cut or mow individual or patches of invasive plants, and follow with herbicide application. Assess annually and selectively treat as required.
Invasive treatment - other (weed pulling/wrenching, flame torches, girdling)	These techniques are labor intensive and best applied on small acreages or sensitive areas. On large parcels treatment is suitable where invasives plants are minimal. Undesirable individual trees, such as black locust or tree of heaven can effectively be controlled by gridling. Flame torching has been demonstrated to be effective on barberry.	These techniques are labor intensive and best applied on small acreages or sensitive areas. Undesirable individual trees, such as black locust or tree of heaven can effectively be controlled by girdling. Flame torching has been demonstrated to be effective on barberry. If conducted with a large group, care should be taken to minimize NEC disturbance.	These techniques are labor intensive and best applied on small acreages or sensitive areas. Undesirable individual trees, such as black locust or tree of heaven can effectively be controlled by girdling. Flame toorking has been demonstrated to be effective on barberry. Weed pulling and wrenching is easiest in early spring	Use of these other treatments to remove invasives in a young forest is likely to be impractical. The restoration of this size class forest to seedling/sapling is essentially a mowing treatment of the whole area.	Due to stem densities, treatment is impractical. However, if necessary, cut individual or patches of imvasive plants, and follow with herbicide application. Assess annually and selectively treat as required.	Treat individuals or patches of invasive plants. When girdling, include herbicidic treatment to improve efficacy. Assess annually and selectively treat as required.	Impractical to apply broad scale control in dense shrubby vegetation. Selective treatment possible for individuals or patches. When girdling, include herbicide treatment to improve efficacy. Assess annually and selectively treat as required.	These techniques are labor intensive and best applied on small acreages or sensitive areas. On large parcels treatment is suitable where invasives plants are minimal. Undesirable individual trees, such as black locust or tree of heaven can effectively be controlled by girdling. Flame torching has been demonstrated to be effective on barberry.	These techniques are labor intensive and best applied on small acreages or sensitive areas. On large parcels treatment is suitable where invasives plants are minimal. Undesirable individual trees, such as black locust or tree of heaven can effectively be controlled by girdling. Flame torching has been demonstrated to be effective on barberry.
Seeding of shrubs. Plant 5-7 lbs/ac sumac, blueberries, roses, winterberry, silky dogwood, blackberry, chokeberryconsider site condition. Note, this is an experimental practice; allow 8-10 years to see benefits.	NA .	NA	NA	N/A	NA	NA	NA	Site preparation including mowing, herbiciding, tilling and planting. Best scenario, site prep in summer and plant in fall - broadcast or drill. May be used for creating field buffers, small patches or complete conversion to shrublands.	Site preparation including mowing, herbiciding, tilling and planting. Best scenario, site prep in summer and plant in fall - broadcast or drill. May be used for creating field buffers, small patches or complete conversion to shrublands.
Planting of shrubs - containers, bare root, whips. Select shrubs that root sucker or expand and grow quickly (willow, sumac, alder, poplar). Incorporate other preferred species such as field juniper, green brair, blueberries, native roses, winterberry, silky dogwood, blackberry, chokeberry.  Consider site conditions and if planting is actually necessary.	spaced ~ every 2-4 ft. in cleared sites in	post-harvest, plant clumps of 25 - 100 shrubs per tent have (400 sq. ft.), plants spaced "every 2-4 ft. in cleared sites in Spring or Fall. Bare roof/whips plant in Spring at greater densities, "every sq. ft. Temporary fencing may be needed. Intersperse shrub clusters with existing cover, stone walls and brush piles to minimize large open areas. Control weeds with herbicide prior to planting. After planting, apply mulch (e.g., fabric, chips).	shrubs per tenth acre (400 sq. ft.), plants spaced ~ every 2-4 ft. in cleared sites in Spring or Fall. Temporary fencing	Post harvest, to provide food and structure, introduce desirable species or to fill gaps. Plant clumps of 25 - 100 shrubs per tenth acre (400 sq. ft.), plants spaced "every 2-4 ft. in cleared sites in Spring a present ensities," every sq. ft. Temporary fencing may be needed. Barr cont/whips plant in Spring at greater densities, "every sq. ft. Temporary fencing may be needed. Barr densities," every sq. ft. Intersperse shrubc clusters with existing cover, stone walls and brush piles to minimize large open areas. Control weeds with herbicide prior to planting. After planting, apply mulch (e.g., fabric, chips).	NA .	NA .	lost-invasive plant control, to provide food and structure, introduce desirable species or to fill gaps. Plant clumps of 25 100 strubs per tenth acre (400 sq. ft.) plants spaced "every 2-4ft. in Carelard sites in Spring or Fall. Bare root/whips plant in Spring at greater densities," every sq. ft. Temporary fenning may be needed. Intersperse shrub clusters with existing cover, stone walls and brush pilles to minimize large open areas. Control weeds with herbicide prior to planting. After planting, apply mulch (e.g., fabric, chips).		To enhance food and structure, introduce desirable species or to fill gaps. Plant clumps of 25 - 100 shrubs per tenth acre (400 sq. ft.), plants spaced "every 2-4 ft. in cleared site in Spring or Fall. Bare root/whips plant in Spring at greater densities," every sq ft. Temporary fencing may be needed. Intersperse shrub clusters with existing cover, stone walls and brush piles to minimize large open areas. Control weeds with herbicide prior to planting. After planting, apply mulch (e.g., fabric, chips). For whole field conversion to shrublands, plant shrubs approximately every 4 feet to achieve "2,700 plants per acre.
Seeding of grasses and herbaceous vegetation to provide forage.	Post harvest, broadcast seed log landings, skid trails and daylighted roads in spring and or fall with cool season grass mix (e.g., orchard grass, timothy, red top, clovers) at 40 B/acre or as recommended by supplier. Fertilize and lime as soil tests indicate. Mow every two years to reduce woody vegetation. Treat invasives as necessary.	Post harvest, broadcast seed log landings, skid trails and daylighted roads in spring or fall with cool season grass mix (e.g., orchard grass, timothy, red top, clovers) at 404/acre or as recommended by supplier. Fertilize and lime as soil tests indicate. Mow every two years to reduce woody vegetation. Treat invasives as necessary.	landings, skid trails and daylighted roads in spring or fall with cool season grass mix (e.g., orchard grass, timothy, red top, clovers) at 40#/acre or as recommended by supplier. Fertilize and	Post mowing/mulching, seed small patches and access roads with cool season grass mis (e.g. orchard grass, timothy, red top, clowers) at 60 grare as recommended by supplier. Fertilize and lime as soil tests indicate. Mow every two years to reduce woody vegetation. Treat invasives as necessary.	NA	NA	Post mowing/mulching, seed small patches and access roads with cool season grass mix (e.g. orchard grass, timothy, red top, clovers) at 40H/acre or as recommended by supplier. Fertilize and lime as soil tests indicate. Mow every two years to reduce woodly vegetation. Treat invasives as necessary.	NA .	NA
Slash management	trees and shrubs. If re-entry is essential to future management of site (e.g.,	Remove all woody material > 6" in diameter from felled trees. Leave slash to provide winter cover and forage, replenishment nutrients and to discourage deer browse of regenerating trees and shrubs. If re-entry is essential to future management of site (e.g., herbickliding), removal of slash down to 3" diameter may be required)	Remove all woody material > 6" in diameter from felled trees. Leave slash to provide winter cover and forage, replenishment nutrients and to discourage deer browse of regenerating trees and shrubs. If re-entry is essential to future management of site (e.g., herbickliding), removal of slash down to 3" diameter may be required)	NA	NA	NA	NA	NA	NA

INITIAL HABITAT	Forest > 20 years old, trees > 6" dbh - native understory (potentially occupied)	Forest > 20 years old, trees > 6" dbh - invasive understory (potentially occupied)	Forest > 20 years old, trees > 6" dbh - sparse understory (unlikely to be occupied)	Successional Forest, trees 3"-6" dbh	Seedling-Sapling Forest. Good habitat!	Shrubland - mostly native shrubs, Good habitat!	Shrubland - mostly invasive shrubs	Old Field	Grassland/Meadow/Wet Meadow
Brush mowing (farm tractor/brush hog)	Periodic brush mowing of log landings and skid trails will extend the availability	Periodic brush mowing of log landings and skid trails will extend the availability of herbaceous forage.	* *	N/A	N/A	This is a valuable technique for restoring significant areas of decadent or undesirable shrubs in the 3" or smaller dbh size class, with removal rates up to two acres per day. This may be achieved in incremental stages if warranted.	This is a valuable technique for restoring significant areas of decadent or undersirable shribs in the 3" or smaller dbh size class, with removal rates up to two acres per day. This may be achieved in incremental stages if warranted.	This is a valuable technique for maintaining suitable structure and composition of woody vegetation or to create transitional zones at field edges. Old fields should contain no more day. 25% woody cover no larger than 3" dbh. Apple trees, scrub oak, low-branching conifers, evergreen shrubs or other trees of exceptional value may be left.	This is a valuable technique for removing encroaching woody vegetation or to create transitional zones at field edges.
Prescribed burns	N/A	N/A	N/A	N/A	Prescribed burns can be used to maintain grasslands and shrublands, and are especially effective in specific habitats such as scrub oak/pitch pine. Prescriptions need to be developed on a site specific basis in compliance with State and local regulations.	Prescribed burns can be used to maintain grasslands and shrublands, and are especially effective in specific habitats such as scrub oak/pitch pine. Prescriptions need to be developed on a site specific basis in compliance with State and local regulations.	Prescribed burns can be used to maintain grasslands and shrublands, and are especially effective in specific habitats such as scrub oak/pitch pine. Prescriptions need to be developed on a site specific basis in compliance with State and local regulations.	Prescribed burns can be used to maintain grasslands and shrublands, and are especially effective in specific habitats such as scrub oak/pitch pine. Prescriptions need to be developed on a site specific basis in compliance with State and local regulations.	Prescribed burns can be used to maintain grasslands and shrublands, and are especially effective in specific habitats such as scrub oak/pitch pine. Prescriptions need to be developed on a site specific basis in compiliance with State and local regulations.
Corridor Management (ROW)	should be prioritized as areas to create 25 -acre habitat patches. The corridor itself should be maintained in the 3" dbh	Forest areas adjacent to shrub corridors should be prioritized as areas to create 25 -acre habitat patches. The corridor itself should be maintained in the 3" dbh class through herbiciding and/or mechanical cutting.	should be prioritized as areas to create	Forest areas adjacent to shrub corridors should be prioritized as areas to create 25 -acre habitat patches. The corridor itself should be maintained in the 3" dbh class through herbiciding and/or mechanical cutting.	N/A	N/A	N/A	N/A	N/A
Field Mowing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Mow every 2 or 3 years to maintain grasses, forbs small woody vegetation as	Mow every 2 or 3 years to maintain grasses, forbs small woody vegetation as
Edge enhancement	young trees, vines and herbaceous material. A tiered approach may be taken to provide a variety of structure (e.g., shorter to taller from field to	Edge enhancements where forest meets old field, powerlines, or fields are desirable. Cut a swath of a minimum width of 50 feet to encourage simuls, young trees, vines and herbaceous material. A tiered approach may be taken to provide a variety of structure (e.g., shorter to taller from field to forest).	Edge enhancements where forest meets old field, powerlines, or fields are desirable. Cut a swath of a minimum width of 50 feet to encourage shrubs, young trees, vines and herbaceous material. A tierd approach may be taken to provide a variety of structure (e.g., shorter to taller from field to forest).	Edge enhancements where forest meets old field, powerlines, or fields are desirable. Cut a swath of a minimum width of 50 feet to encourage shrubs, young trees, vines and herbaceous material. A tiered approach may be taken to provide a variety of structure (e.g., shorter to taller from field to forest).	N/A	N/A	N/A	desired. Where field meets forest, it may be desirable to establish edges through plantings or natural regeneration. To serve as useful corridors, the shrub edge should be a minimum of 50° wide.	desired. Where field meets forest, it may be desirable to establish edges through plantings or natural regeneration. To seve as useful corridors, the shrub edge should be a minimum of 50° wide.
Strip Disking	N/A	N/A	N/A	N/A	N/A	N/A	N/A	To stimulate forbs in fields where present, light strip disking during late fall after seed set can be effective. Disks should run parallel, or nearly so, to the direction of travel and at a depton only 2 to 4 inches. Maintain at least 50 % residue remains. Do not perform light disking on sites where invasive or noxious plant species are present unless invasives process are controlled prior to disking. Any disking on areas which have never been plowed or have high erosion potential is strongly discouraged.	To stimulate forbs in fields where present. Iight strip disking during late fall after seed set can be effective. Disks should run parallel, or nearly so, to the direction of travel and at a depth of only 2 to 4 inches. Maintain at least 50 % residue remains. Do not perform light disking on sites where invasive or noxious plant species are controlled prior to disking. Any disking on areas which have never been plowed or have high erosion potential is strongly discouraged.
	managed forest will regenerate at the	This is principal process by which the managed forest will regenerate at the desired density of 20,000 stems per acre.	This is principal process by which the managed forest will regenerate at the desired density of 20,000 stems per acre.	managed forest will regenerate at the	This is the principal process by which the managed forest will regenerate at the desired density of 20,000 stems per acre.	managed shrubland will regenerate at	Managing and utilizing the invasive species as habital may be warranted in cases where the site and adjacent lands are overwhelmingly dominated by invasives.  This is the principal process by which the managed shrubland will regenerate at the desired density of 20,000 stems per acre.	Given consideration of available habitat for NEC and needs of other species, it may be desirable to allow native shrubs and trees to expand and dominate the steel. If this is the course of action, follow up with treatments such as brush mowing, herbiciding or prescribed burning to control invasives as required. Sites should be reclaimed on a 15 year rotation as with seedling/sapling forest.	Given consideration of available habitat for NEC and needs of other species, it may be desirable to allow native shrubs and trees to expand and dominate the stife this stife this sit ourse of action, follow-up with treatments such as brush mowing, herbiciding or prescribed burning to control invasives as required. Sites should be reclaimed on a 15 year rotation as with seedling/sapling forest.
Brush piles, stone walls, rock piles, and constructed burrows. Green bria'r or grape planted near these structures will provide extra protection. Brush piles, stone walls, rock piles and planting clusters should be spaced to minimize the distance NEC are exposed between shelter areas.	brush piles per acre. (6' -20' on a side and 4'-5 high; bottom layer of logs spaced 10'-12' apart; 2nd layer same but perpendicular to 1st; top with smaller limbs and branches). Periodically add new imits and branches to extend the longevity of the pile. Burrows may be constructed with corrupated plastic drainage pipe if no natural burrows exist. Avoid damage to stone walls during logging operations. Maintain or build stone walls or piles with adequate	Pre or post harvest, construct one or two brush piles per acre (6:20° on a side and 4'6' high; bottom layer of logs spaced 12" apart; 2 rid layer same perpendicular to 1st; top with smaller limbs and branches). Periodically add new limbs and branches to extend the longevity of the pile. Burrows may be constructed with corrugated plastic drainage pipe if no natural burrows exist. Avoid damage to stone walls during logging operations. Maintain or build stone walls or piles with adequate interstitial spaces for rabbits to enter.	two brush piles per acre (6 '.20' on a side and 4'-6' high, bottom layer of logs spaced 12" apart; 2nd layer same but perpendicular to 15st, top with smaller limbs and branches). Periodically add new limbs and branches to extend the longevity of the source of the Burrows may be constructed with corrugated plastic drainage pipe if no natural burrows exist. Avoid damage to stone walls during logging operations. Maintain or build stone walls or giles with adequate	Post mowing/mulching, construct one of who brush piles per acre (6-20° no a side and 4-6° high; bottom layer of logs spaced 12° apart; 2nd layer same but operpendicular to 1st, top with smaller limbs and branches). Periodically add new limbs and branches to extend the longevity of the pile. Burrows may be constructed with corrugated plastic drainage pipe if no natural burrows exist. Avoid damage to stone walls during mowing. Maintain or build stone walls or piles with adequate interstitial spaces for rabbits to enter.		Burrows may be constructed with corrugated plastic drainage pipe if no natural burrows exist. Maintain or build stone walls or piles with adequate interstitial spaces for rabbits to enter.	Burrows may be constructed with corrugated plastic drainage pipe if no natural burrows exist. Maintain or build stone walls or piles with adequate interestitial spaces for rabbits to enter.	Brush piles may be used as cover at field edges. Construct one brush pile per acre (6°-20° on a side and 4°-6° high; bottom layer of logs spaced 21° apart; 2nd layer same but perspendicular to 1st; top with smaller limbs and branches.) Periodically add new limbs and branches to extend the longewity of the pile. Burrows may be constructed with corrugated plastic drainage pipe if no natural burrows exist.  Stone walls or piles with adequate interestitial spaces can provide critical cover.	Brush piles may be used as cover at field edges. Construct on brush pile per acre (6'-20' on a side and 4'-6' high; bottom layer of logs spaced 12" apart; 2nd layer same but perpendicular to 1st; top with smaller limbs and branches; Periodical add new limbs and branches to excluded the longevity of the pile. Burrows may be constructed with corrugated plastic drainage pipe if no natural burrows exist.  Stone walls or piles with adequate interestitial spaces can provide critical cover.
Restoring Natural Hydrology - to be developed									
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	England cottontail in southern New Hamp Oehler, J.D., D.F. Covell, S. Capel and B. Lo Habitat Technical Committee, MA Division	ng (Eds). 2006. Managing grasslands, shru	blands and young forest habitat for wildlif	e - A guide for the Northeast. Northeast					
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