**My Maine Woods-Western Mountains RCPP**

**and**

**NRCS EQIP Practices Crosswalk**

*Prepared by*

**Robert R. Bryan, L.F.**

**Forest Synthesis LLC**

**7-25-2017**

**Table of Contents**

[Overview 2](#_Toc488751072)

[My Maine Woods-Western Mountains Collaboration RCPP Goals and NRCS Practices Crosswalk 4](#_Toc488751073)

[NRCS/Forestry For Maine Birds Practice Descriptions 9](#_Toc488751074)

[666 - Forest Stand Improvement: Thinning for Wildlife and Forest Health 9](#_Toc488751075)

[666 - Forest Stand Improvement: Pre-commercial Thinning 11](#_Toc488751076)

[666 - Forest Stand Improvement: Crop/Mast Tree Release 12](#_Toc488751077)

[666 - Forest Stand Improvement: Patch Cut 13](#_Toc488751078)

[Old and Structurally Complex Forests 15](#_Toc488751079)

[Seasonal Harvest Restrictions 15](#_Toc488751080)

## Overview

A goal of the My Maine Woods Western Mountains Project is to implement forest management practices that will benefit wildlife species and habitats identified in the NRCS-RCPP proposal. Species and habitat objectives for the project include:

1. Protecting habitat for rare, threatened, or endangered species, including Atlantic salmon, Canada lynx, northern long-eared bat, Bicknell’s thrush and other species that may occur.
2. Adopting management practices benefiting the habitats used by a great majority of common wildlife species, in the Northern Forest for all or a portion of their life cycle, including:
	1. Maine Audubon's Forestry for Maine Birds (FFMB) species and habitats,
	2. Other umbrella and/or other focal species, and
	3. Contiguous blocks of forests.
3. Protecting and enhancing water quality, aquatic habitat, and aquatic connectivity for aquatic organisms.

This document includes a crosswalk between the RCPP project objectives and specific NRCS EQIP practices that can provide payments for practice design and implementation. The next section describes in detail how to use NRCS practices to implement the Forestry for Maine Birdsrecommendations for improving forest structure and composition for birds and other wildlife. To apply for NRCS practice payments a landowner will first need an approved NRCS Forest Management Plan (CAP-106 FMP).

**Considerations**

* For landowners seeking NRCS practice payments, the management recommendations and NRCS Record of Decisions (ROD) must include practice descriptions and identify specific “Resource Concerns” in the stand that relate to the applicable NRCS practice standard. Detailed practice descriptions are included for several of the FFMB recommended practices that are not clearly defined in the NRCS practices. This text may be copied and modified as needed based on stand-specific conditions and landowner goals.
* For wildlife resource concerns, the NRCS management plan and ROD must identify the specific species or species groups of concern and recommended treatment to address the concern. General statements such as “Enhancing wildlife habitat” or “lack of habitat diversity” are not acceptable NRCS wildlife resource concerns. The resource concerns in the practice descriptions included in the *NRCS/FFMB Practice Descriptions* section of this report are intended to provide sufficient specificity to meet this requirement.
* Depending on the harvestable volume and markets it may be possible to achieve the desired objectives with a commercial harvest operation rather than through NRCS practice payments. However, in many cases a combination of a commercial harvest and a follow-up NRCS practice such as removing non-commercial competing vegetation or other non–commercial practices may be required to fully address resource concerns. Because NRCS does not fund commercial forestry operations, NRCS guidance given to the project partners is that contracts for non-NRCS commercial work should be completely separate from contracts for any work to be funded by NRCS practice payments. A good rule of thumb is not to use the same piece of equipment at the same time for both commercial harvesting and NRCS-funded management.
* In many cases a combination of NRCS practices may be used, for example combining *646 - Upland Wildlife Habitat Management* in one part of a large stand and 666- *Thinning for Wildlife* in another.
* This document interprets the NRCS standards as they apply to the RCPP and FFMB objectives and is intended to be used as a supplement to the actual NRCS practice standards and related NRCS practice documents. Refer to the NRCS documents for all requirements related to these practices.
* Other landowner goals such as practices to improve stand health, timber quality and growth applicable to these practices are not described here, but these should be included in the management plan recommendations.

## My Maine Woods-Western Mountains Collaboration RCPP Goals and NRCS Practices Crosswalk

| **RCPP and FFMB[[1]](#footnote-1)** **Forest Goals** | **Possible NRCS Practices to Implement** | **Comments** |
| --- | --- | --- |
| **Code #** | **Practice Name** | **Overview of NRCS Components Available[[2]](#footnote-2)** |
| Multiple canopy layers, restore native forest communities, small gaps, wildlife trees | 666 | Forest Stand Improvement | *Thinning for Wildlife and Forest Health* | This is the most flexible practice offered by NRCS to achieve RCPP and FFMB objectives. Potential applications of this practice include promoting understory and/or midstory canopy layers; promoting softwood inclusions in hardwood stands; creating small canopy gaps in older forests that are smaller than a patch cut; and promoting wildlife trees when the more stringent “release” requirements of the crop/mast tree release scenario are not needed. Subject to the sideboards on commercial harvesting in the *Considerations* section above, this practice could also be applied before or after a commercial harvest to control non-commercial understory and midstory vegetation (e.g., diseased beech, extensive suppressed fir) that is inhibiting regeneration or competing with desired trees for wildlife and/or is detrimental to forest health. For additional details and guidance on applying this practice, see *NRCS/FFMB Practice Descriptions* below.  |
| Native forest communities, wildlife trees | 666 | Forest Stand Improvement | *Pre-commercial Thinning*  | The primary NRCS objective is to promote desirable timber species and timber quality, but wildlife may be a secondary objective. For additional details and guidance on applying this practice, see *NRCS/FFMB Practice Descriptions* below. |
| Mast trees and other wildlife trees | 666 | Forest Stand Improvement | *Crop/Mast Tree Release* | Use this practice to release canopies of desired crop trees from competition. For additional details and guidance on applying this practice, see *NRCS/FFMB Practice Descriptions* below. |
| Young-forest species and canopy-gap species | 666 | Forest Stand Improvement | *Patch Cut* | There is no minimum size for a patch cut, but per NRCS this practice must a) have early-successional tree species focus or b) be used to treat insect, disease, or quality issues. Assuming one of those resource concerns are present and are addressed in the prescription, associated RCPP objectives that could be accommodated include: 1) increase habitat or species associated with gaps in older forests; 2) promote habitat for early successional wildlife species that do not require larger habitat patches as required by NRCS #647; or 3) to create a structurally diverse forest stand with multiple canopy layers distributed in patches. From the FFMB perspective, this practice would work for openings that are larger than small gaps that might be created under *666 – Thinning for Wildlife and Forest Health* but smaller than the minimum size (5 acres in aggregate) required under *647- Early Successional Habitat Management*. Subject to the sideboards on commercial harvesting in the *Considerations* section above, this practice could potentially be applied before or after commercial harvesting to treat non-commercial vegetation within a patch. See *NRCS/FFMB Practice Descriptions* below. |
| Reduce competition with desired wildlife trees | 666 | Forest Stand Improvement | *Competition Control -Mechanical* | This thinning practice has the goal of reducing competition using larger equipment (i.e., not chainsaw or brush saw) and creating a well-distributed stand with a forest products focus. Wildlife objectives would be secondary, but depending on the residual stand associated benefits could potentially include early successional habitat management, promoting vegetation more consistent with late successional conditions, and promoting native trees and shrubs of benefit to wildlife. See NRCS practice standards for details. |
| Invasive Plant Control | 314 | Brush Management | *Hand tools, brush hog, other mechanical treatments, and chemical controls* | NRCS components include various options for control of invasive plants. See NRCS practice standards and consult with NRCS about sites that might require multiple treatments. |
| Snags and Cavity Trees | 645 | Upland Wildlife Habitat Management | *Mast/Apple Tree Release* *Snag, Den, and Nest Trees**Grassland Bird Management* | The NRCS practice includes “Retain or manage for a minimum of 4 snag or den trees per acre. Preferably, one in four should be > 24 in. dbh, with the other 3 > 14 in. dbh (Elliott 1999). At a minimum, two shall be > 10 in. dbh and 2 > 6 in. dbh, • Manage uneven-age stands so at least 3 – 5% of the stand consists of snags and den trees (Elliott 1999), • In even-aged stands, leave at least a ¼ acre patch uncut for every 10 acres harvested with patches selected based on the presence of existing snags or cavity trees. • Snags, cavity and nest trees may be distributed among a forested landscape or clumped.” See the 645 *Conservation Practice Specification Guide* for details on how to implement the various scenarios in this practice.The 2017 payment rate schedule only lists “snags” but NRCS has clarified that this practices includes snags, den and nest trees. The principal application would be to pay for creating new snags or to promote decay and cavity tree formation, e.g., by girdling and other methods as described in the *Specification Guide*. |
| Old forest species | 666  | Forest Stand Improvement | *Thinning for Wildlife and Forest Health*  | FFMB goals include promoting habitat to benefit species associated with old, structurally complex forests, including and an abundance of large, old trees, large snags and cavity trees, and multiple canopy layers. For additional details and guidance on applying this practice, see *NRCS/FFMB Practice Descriptions* below. |
| Young-forest species | 647 | Early Successional Habitat Development/Management | *Various hand cutting and mechanical options*  | In forest areas create a total of ≥5 acres of early successional habitat (defined by NRCS as seedling stands <4.5 ft. tall and sapling stands <4 in. DBH). The ≥5 acre threshold may be in individual patches, in smaller patches that are in close proximity, or in a combination of new harvesting and other nearby early successional habitats such as powerlines or shrublands. This practice also includes options to manage for American woodcock as well as grassland and shrubland wildlife species. See the current NRCS *Conservation Practice Specification Guide Code 645* for specific requirements. |
| Protect water quality | 655 | Forest Trails and Landings | *See comments* | Includes Trail Erosion Control; Grading and Shaping with Vegetative Establishment and Temporary Stream Crossing. Eligible projects must address resource concerns associated with soil erosion and other forms of soil degradation and water quality impacts. See NRCS practice standards for details. |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Reduce Habitat Fragmentation, Protect Soil and Water Quality | 654 | Road/Trail/Landing Closure and Treatment | *See comments* | Includes various options for “putting a road to bed” depending on the amount of work needed. Eligible projects must address resource concerns associated with ongoing soil erosion and other forms of soil degradation and water quality impacts from unmaintained roads. Combine with other practices such as Critical Area Planting and Mulching. See NRCS practice standards for details. |
| **Related Practices** |  |  |  |  |
| Aquatic Organism Passage | 396 | Aquatic Organism Passage | *Modification or removal of barriers*  | Consult with NRCS for stream crossing assessment, best practice to apply (396 or 578), and engineering design assistance. Maine regulations may also apply. See NRCS practice standards for details. |
| Aquatic Organism Passage | 578 | Stream Crossing | *See comments* | Includes various options for culverts, bridges and fords. Consult with NRCS for stream crossing assessment best practice to apply (396 or 578), and engineering design assistance. NRCS Maine regulations may also apply. See NRCS practice standards for details. |
| Soil and Water Quality Protection | 472 | Access Control | *See comments* | Includes gates and/or boulders or other access barriers to prevent unauthorized access. Use this practice to protect roads, trails, and other sensitive sites from vehicle damage. See NRCS practice standards for details. |
| Forest Restoration | 490 | Tree/shrub Site Preparation | *See comments* | Includes mechanical site preparation or chemical site prep. Prepare soils and/or control competition prior to planting. See NRCS practice standards for details. |
| Forest Restoration | 612 | Tree/Shrub Establishment | *See comments* | Use for planting shrubs or mostly hardwood trees. The emphasis is on hardwoods as this is not intended to cover timber production softwood plantings. Could potentially be used to restore softwood component in hardwood stands if wildlife were the primary objective- check with NRCS. See NRCS practice standards for details. |
| Forest Restoration | 342 | Critical Area Planting | *Site preparation and herbaceous seeding*  | May be used to address existing erosion problems or be combined with other practices related to road work or stream crossings. Primary focus is on areas with erosion and/or water quality concerns. See NRCS practice standards for details. |
| Forest Restoration | 484 | Mulching | *Mulching planted sites*  | Combine with 490, 612, 342 or use as a temporary practice. See NRCS practice standards for details. |
| Wildlife Habitat Enhancement | 660 | Tree/Shrub Pruning | Pruning for Wildlife | The NRCS does not provide clear standards for Pruning for Wildlife. Applicable goals would be to improve the production of plant nuts and fruits (e.g., apple trees) and more generally to improve the growth and vigor of understory plants (e.g., browse). Check the applicable NRCS practice standard and consult with NRCS on possible applications. |
| Riparian Habitat | 301 | Riparian Forest Buffer | Planting bare root trees and shrubs  | Options include planting with or without shelters. Use to restore forest buffers in un-vegetated areas. See NRCS practice standards for details. |
| Wildlife Nesting and Cover | 649 | Structures for Wildlife  | Bat boxes, nest boxes, brush piles, and nest platforms | See NRCS practice standard and related documents for details. |

NRCS/Forestry For Maine Birds Practice Descriptions

The section describes how to use NRCS practices to implement the Forestry for Maine Birds(FFMB) recommendations for improving forest structure and composition for birds and other wildlife. The NRCS practices included below are those that may have a variety of applications for FFMB management or where the additional information may be helpful for identifying possible resource concerns, developing management recommendations, and writing silvicultural prescriptions.

Other NRCS practices listed in Table 1 but not included below are directly applicable to the FFMB and My Maine Woods goals. Therefore, further interpretation is not neededon how to apply these to My Maine Woods/FFMB management. Examples include Brush Management for invasive plant control, Snags, Den and Nest Trees, Aquatic Organism Passage, and Early Successional Wildlife Habitat Development/Management. Refer to the NRCS Practice Standards and related documents for details on practices not listed below.

Other objectives (e.g., timber quality and growth) are not described below, but based on the landowner’s goals, other objectives should be incorporated into practice descriptions in the NRCS Record of Decisions and other applicable NRCS documents.

### 666 - Forest Stand Improvement: Thinning for Wildlife and Forest Health

NRCS Intent: This thinning is intended to manage the density, vigor, and composition of sapling, pole and small sawtimber stands to promote food and cover for specific wildlife species or species guilds and/or to diversify habitat structure, species composition, and arrangement to increase wildlife species diversity as well as protect, improve, or restore forest health. Thinning for Wildlife is intended to treat wildlife habitat concerns identified during the conservation planning process to enable movement, or provide shelter, cover and food in proper amounts, locations and times to sustain desired wildlife during all or a portion of their life cycle.

NRCS Resource Concerns: Many wildlife-related concerns can be addressed with this practice. Examples include:

* Stands with minimal understory or midstory for bird species associated with those layers. This would include understory/midstory nesters identified in the FFMB guide as well as canopy nesting species that use understory and midstory layers for post-fledgling foraging habitat (e.g. wood thrush, scarlet tanager).
* Restoring, enhancing, or maintaining softwood inclusions in hardwood stands (FFMB).
* Lack of canopy gaps for gap-associated wildlife (e.g. Eastern wood-peewee, great-crested flycatcher) where variable-density thinning rather than patch cutting best fits landowner goals (FFMB).
* Lack of older structurally complex forest habitat (Class 4 -5 as defined by FFMB) where this thinning will be used to multiply canopy layers, and grow large, old trees.
* Stands with minimal understory browse or cover where deer and/or moose management is an objective.
* Restoring specific wildlife habitats, such as deer wintering areas.
* Thinning to promote mast tree species where the level of thinning for individual Mast/Crop Tree Release (release on at least three sides with a minimum 5-foot clearance) and other technical requirements of the Mast/Crop Tree Release practice are not needed or desired.

FFMB Goals: 1) Promote understory and/or midstory canopy layers; 2) Promote softwood inclusions in hardwood stands; 3) Create canopy gaps 4) Grow large, old trees and promote some that will develop into snags, dens, and cavity trees.

FFMB Objectives. This practice may be used to:

1. Establish or promote regeneration and understory/ground cover in dense, even-aged (single-story) stands (FFMB structure class 3a) or in dense two-aged stands (FFMB class 3b) where there is minimal cover below the midstory.
2. Promote a midstory that is suppressed by the overstory in two-aged stands (FFMB class 3b)
3. Promote softwood inclusions in hardwood stands
4. Create canopy gaps by using variable-density thinning or irregular shelterwood in uniform stands (e.g. FFMB Class 3a).
5. Promote desirable wildlife trees (e.g., mast trees, cavity trees, etc.) where a stand thinning will achieve desired objectives and where the Crop/Mast Tree Release practice, which requires canopy release on at least three sides, is not necessary.
6. Thin to promote structurally-complex older forest habitat (FFMB Class 4-5 stand structures).
7. Non-commercial control of undesirable competing trees or shrubs.

Typical scenarios: Use this practice to open the canopy and promote understory development in dense stands with little ground cover, understory or midstory. This might occur when one or more of these layers have Very Low or Low (<30%) canopy cover as defined in FFMB, or when targeted thinning will promote vigor of desired understory and midstory trees, such as maintaining deep crowns on midstory or co-dominant conifers. This could be part of a stand-wide uniform thinning, variable density thinning, or an irregular shelterwood thinning. Subject to the limitations on combining NRCS practices with commercial harvesting in the *Considerations* section above, when combined with a commercial harvest this practice could be used to pay for non-commercial control of understory-midstory vegetation (e.g., diseased beech, extensive suppressed fir) that is competing with desired trees for wildlife.

Supporting Data:

1. FFMB vegetation layer assessment and stand-data forms or equivalent
2. Stand-level forest inventory
3. Relative stocking per applicable silvicultural guidelines
4. Field notes

Outcomes:

1. Describe the expected short-term and expected long-term stand structure, composition, stocking, growth and quality of the stand and how the resource concerns will be addressed.

Other Considerations:

* This is the most flexible practice offered by NRCS to achieve RCPP and FFMB objectives. Per Gerry Barnes of NRCS, this scenario encompasses so many different habitat types as well as different target wildlife species that it was written to allow flexibility. NRCS (the wildlife biologist in most cases) will review the prescription written by the TSP to make sure the implementation meets the intent of the scenario for the target species. For example, what might be implemented for mid-level canopy migratory birds is different then what would be implemented for snowshoe hare. This scenario might also be used for thinning in Deer Wintering Areas.
* Subject to the sideboards on commercial harvesting in the Considerations section above, this potentially could be used as a non-commercial treatment before or after commercial thinning.
* Evaluate the area in stands across the property with little cover below the main crown canopy. This practice will have the most benefit on ownerships where generally uniform one or two-layer stands dominate.
* Stand assessments, prescriptions, and NRCS practice plans must clearly identify the resource concerns and associated wildlife species or species groups – see the examples under the NRCS Resource Concerns and FFMB Objectives paragraphs, above.
* Leave snags, cavity trees, and other wildlife trees as recommended in the FFMB guidelines.

### 666 - Forest Stand Improvement: Pre-commercial Thinning

NRCS Intent: This thinning is intended to increase the quantity and quality of forest products, and improve growth, vigor, and composition of seedlings and saplings.

NRCS Resource Concerns: Desirable trees in pre-commercial stand-size classes are at risk due to overstocking and/or competition from trees of poor quality, poor health, or undesirable species.

FFMB Goals: 1) Promote natural plant species diversity where current stand has undesirable composition due to past practices; 2) promote tree species composition desirable for wildlife, and promote overall stand health and vigor.

FFMBObjectives:

1. Promote wildlife trees in FFMB Class I, Class 2 stands; also in Class 3b stands where the lower canopy layers are in the seedling/sapling size classes.
2. Promote softwood inclusions within FFMB Class I and Class 2 hardwood stands.

Typical scenario: Use hand tools (e.g., chain saw or brush saw) to thin young, even-aged stands where commercial thinning is not feasible.

Supporting Data:

1. FFMB stand class, percent cover, and forest inventory
2. Rationale for thinning based on specific objectives

Outcomes:

1. Describe the expected short-term and long-term stand structure, composition, stocking, growth and quality of the stand.

Other Considerations:

* The primary NRCS objective is to promote desirable timber species and timber quality, but wildlife will also benefit when thinning is focused on timber species and improving timber quality in a way that will also benefit wildlife. In general practice *666- Thinning for Wildlife and Forest Health* offers much greater flexibility to prioritize wildlife. If *666- Pre-commercial thinning* is recommended, include the dual timber/wildlife objective in stand prescriptions written for the My Maine Woods-Western Mountains RCPP.
* Prioritize this practice in stands where the applicable resource concerns can be clearly identified.
* If present, leave snags, cavity trees, and other wildlife trees as recommended in the FFMB guidelines.

### 666 - Forest Stand Improvement: Crop/Mast Tree Release

NRCS Intent: Release valuable Crop/Mast trees that produce or have the potential to produce the desired benefits for timber or wildlife.

NRCS Resource Concerns: Growth of mast trees and/or crop trees as defined by NRCS is impeded by less desirable trees.

FFMB Goals: Promote wildlife trees.

FFMB Objectives: Release crop trees with the characteristics as described in the NRCS Code 666, Forest Stand Improvement, *Conservation Practice Specification Guide Sheet* to benefit wildlife and other landowner goals. As applied to theFFMBwildlife tree definitions and goals, the following would apply:

1. NRCS Wildlife Objective. NRCS’s Maine practice standards describe mast trees as “smooth-barked beech, oak, white or yellow birch, wild apple, wild crabapple, mountain ash, serviceberry/ shadbush, cherry, ash, chestnut, and butternut.” However, during discussions with My Maine Woods partners NRCS State Forester Gerry Barnes clarified that this practice is not limited to these mast species as long as a tree species identified and justified based on habitat and wildlife need. For example, in Vermont this practice has been interpreted to include “tree conditions of particular value for forest birds (e.g. large crowns for perching, nesting, foraging)” and “Manage to increase the production of seed and wood volume increment; favor a diversity of seed-producing native tree and shrub species and free them from overtopping and less-productive individuals.” Examples of valuable seed producing species that provide important wildlife food would also include our native conifers and other hardwood species. In addition to trees with large crowns, ensuring that conifers with deep crowns are free to grow will benefit both overstory and midstory species.
2. NRCS Aesthetic Objective. This includes “trees and species that are unique in appearance or character, produce attractive flowers and colorful foliage, and have attractive or unique bark” and that are “visible from travel lanes, vantage points, etc.” Gerry Barnes clarified that selection of aesthetic trees is a subjective choice based on landowner values, but these cannot be more than 25% of the selected crop trees. Thus, this could include desirable wildlife trees that were not mast trees but have unusual visual character, such as large decaying trees with future cavity tree potential. If they are “visible from travel lanes, vantage points, etc.”

Supporting Data:

1. No data are specifically required by NRCS, but field notes justifying the practice will be very helpful when applying for NRCS practices. The FFMB stand-data form includes a section for recording observations of wildlife trees and the need for wildlife tree or other crop tree release could be recorded on this section of the form.

Typical Scenario: Any stand where wildlife trees do not meet FFMB goals and other landowner goals and where crop tree release as defined by NRCS will help meet those goals.

Outcomes: See minimum outcome per NRCS specification guide sheet.

Other Considerations:

* Consider *666 - Thinning for Wildlife* as a more flexible alternative practice to promote desired trees where stand conditions or desired outcomes are not consistent with this practice.
* This practice can be used to address wildlife objectives as well as a landowner’s timber crop tree objectives.
* Leave snags, cavity trees, and other wildlife trees as recommended in the FFMB guidelines.
* In some stands commercial thinning may accomplish these objectives.

### 666 - Forest Stand Improvement: Patch Cut

NRCS Intent: This silvicultural method is intended to regenerate shade-intolerant tree species, and to control forest insects and pathogens. It may also include forest stands consisting primarily of suppressed or deformed trees of low value or desirability.

NRCS Resource Concerns: Shade-intolerant tree species are desired for timber or wildlife objectives but are lacking on the forest; or insect, disease, or quality issues are present.

FFMB Goals: The primary resource concerns to be addressed must meet the NRCS intent. However, associated FFMB resource concerns that could be addressed include the lack of habitat for young-forest birds and other wildlife or the lack of gaps within older forest species composition, and poor natural plant species diversity where a stand has been significantly altered by past practices.

FFMB Objectives:

1. Increase the area in young-forest and/or increase the area in forest gaps.
2. Create a structurally diverse forest stand.

Typical scenario: Creating patches of young-forest habitat to benefit non-game species (see FFMB list) and/or management for game species such as woodcock, ruffed grouse, or white-tailed deer and moose within an ownership dominated by intermediate to older forest. This would generally be openings that are larger than small gaps that might be created under 666 – Thinning for Wildlife and Forest Health but smaller than the minimum size (5 acres in aggregate) required under 647- Early Successional Habitat Management.

Supporting Data:

1. Applicable stand inventory and observational data to support NRCS intent.
2. FFMB stand class, percent cover, and forest inventory.
3. Rationale for patch cut based on forest-wide and stand conditions and landowner’s goals.

Outcomes:

1. Describe the planned post-harvest residual stand, including sizes of gaps and residual structures within gaps, number of gaps and percent of post-harvest stand in gaps, and possible plans for repeating the practice in the future.

Other Considerations:

* There is no minimum or maximum opening size for the practice, but the gap must be large enough and residual canopy density low enough to meet the identified NRCS resource concerns.
* Options include patch clearcuts, expanding gap shelterwood, or irregular shelterwood groups with low-density retention.
* Leave snags, cavity trees, and other wildlife trees as recommended in the FFMB guidelines.
* Subject to the sideboards on commercial harvesting in the Considerations section above, this practice could potentially be applied before or after commercial harvesting to treat non-commercial vegetation within a patch.
* As an alternative NRCS practice, consider *647 - Early Successional Wildlife Habitat* Development/Management.
* Integrate FFMB wildlife objectives with landowner’s timber management objectives.

### Old and Structurally Complex Forests

NRCS Resource Concerns: Minimal habitat for species associated with older, complex forests, FFMB goal for older, complex forests not met.

FFMB Goal: Greater than 10% of the forest in old, structurally complex stands (FFMB Class 5).

FFMB Objectives: Promote structures associated with old, structurally complex forests, including an abundance of large, old trees; large snags and cavity trees; and multiple canopy layers.

NRCS Practices to Apply: Thinning for Wildlife (666)

Typical scenario: In maturing stands (FFMB Class 5 or early Class 6) couple appropriate NRCS practices with a commercial harvest (subject to the limitations described above), or implement NRCS practices where a commercial harvest is not desirable or feasible.

Supporting Data:

1. Applicable stand inventory and observational data to support NRCS intent
2. FFMB stand class, percent cover, and forest inventory, including distribution of stand structure classes across the property.

Outcomes:

1. Describe the planned post-harvest residual stand, including residual basal area by broad diameter classes, number of desired snags and other wildlife trees, etc.

Other Considerations:

* The general approach used by Keeton et al. for Structural Complexity Enhancement (SCE) in [The Vermont Forest Ecosystem Management Demonstration Project](http://nsrcforest.org/sites/default/files/uploads/keetonfull04.pdf) could be used as a guideline. This research was in northern hardwoods, but the approach could be adapted to other forest types and site conditions. NRCS no longer has a practice payment for large woody debris, but if there are few large downed logs (see FFMB guidelines), timber harvesting equipment could be used to create downed logs and tip-up mounds as per Keeton et al. Alternatively, some of the trees felled as part of the *666 – Thinning for Wildlife* practice should be left where they fall as large downed logs.

## Seasonal Harvest Restrictions

1. Northern Long-eared Bat (NLEB). As of April, 2017:
	1. For funded conservation activities, to avoid incidental take NRCS does not allow any harvest of trees during the pup rearing season (June 1-July 31).
	2. As of February 2017 there were no known maternal roost trees that would affect forest management.
	3. When requesting RTE species information MNAP and/or NRCS will notify the landowner if there is a known hibernaculum the vicinity that must be considered.
2. Bird Nesting Season. My Maine Woods recommends avoiding harvesting from May 15 to July 31 when possible to minimize destruction of forest songbird nests during the peak breeding season.
1. *Forestry For Maine Birds*, Maine Audubon, publication pending [↑](#footnote-ref-1)
2. NRCS requirements and payment rates vary by component. See current EQIP payment rates for details. [↑](#footnote-ref-2)