### Directions for the preparation of Chapter 61/61A/61B Forest Management and Forest Stewardship Plans

#### Additional Elements for Climate or Bird Habitat plans are highlighted in blue

This set of instructions will guide foresters in developing plans appropriate for enrollment in Chapter 61, 61A, 61B or the Forest Stewardship program. The combination of instructions for these programs is designed to clarify the requirements for each. When incorporating Stewardship into management plans, foresters should keep in mind that the primary emphasis of this program is landowner education. In contrast, the Chapter 61, 61A and 61B programs were designed to fill a regulatory function.

The purpose of all forest management planning is to help landowners better understand current forest conditions and future management needs and opportunities. The plan should provide a "road map" of management activities to help landowners meet their objectives while protecting, improving, or restoring the health and productivity of forest resources, and providing for long-term sustainable forest management. After reading their stewardship plan, a landowner should understand how the recommended management actions will help them meet their goals and be inspired to take action. It should also provide useful information to anyone with a current or future interest in the property, including heirs and subsequent owners.

These directions provide additional instructions for items that are required when developing Bird Habitat and/or Climate plans. These items are in blue-shaded boxes, and they are meant to guide what content is required to be incorporated into bird/climate plans. These elements are most clearly communicated when they are merged with the foundational stewardship plan requirements.

Plans completed per these directions serve as the basis for various DCR regulatory and voluntary programs. Although plans completed in the Forest Stewardship format cover a broad spectrum of topics and components, there may be additional requirements to engage with other programs and/or funding sources (e.g., USDA NRCS) that are not covered by these instructions.

#### Filing

For the approval of Chapter 61, 61A, 61B or Forest Stewardship, please submit to the appropriate DCR Office:

- One master copy of the Forest Management Plan with original signatures.
- Two additional copies of the Forest Management Plan.
- One original Application Certificate, with original signatures, for Ch61, Ch61A, Ch61B.
- Two copies of the Application Certificate.

Deadlines vary by program.

- Plans receiving cost-share through the Working Forest Initiative (Forest Stewardship Program) will have a filing deadline on the DCR cost-share form (Approval Notice and Cost-share Reimbursement Form).
- Ch61 new plans and recertifications must be postmarked or received by DCR on or before 5 pm June 30
- For Ch61A and Ch61B, please check with the town assessors for forest management plan filing deadlines.
- Provide DCR at least <u>8 weeks</u> for processing forest management plans (including costshare plans) prior to the assessor's deadline.

#### **Multiple Towns**

When a contiguous property is contained in more than one town, one Management Plan may be prepared, but proper reference shall be made in each section of the Management Plan (i.e., Records, Stand Descriptions & Management Practices) for the portions in each Town. If space is insufficient, attachments containing this information shall be added to the plan. A separate original Application Certificate shall be provided for each town listed in the plan. The property in each town will be assigned a separate case number.

#### **Forms and Directions**

All forms are posted on the DCR Service Forestry Website: <u>https://www.mass.gov/info-details/state-forestry-laws-forms-and-instructions</u>

#### Formatting

All pages should be printed on letter-sized paper (8  $\frac{1}{2}$ " x 11"). Larger maps for complex properties are welcomed, but a letter-sized version of the same map, or letter-sized tiles of the map, shall be included for reproduction purposes.

Color elements may be incorporated into the documents, but critical plan elements, such as the locus map and property map, must be legible when photocopied in black and white.

# Forms Reference Table

	Required for:			
Name of Form	61/61/61B	Stewardship	Bird Habitat	Climate
Cover Page				
How to use this Report			Х	Х
Property Information Form	Х	Х	X	Х
Property Information Form				
<u>Overflow</u>				
Landowner Goals Form		Х	X	X
Executive Summary (if				
needed)				
Property Overview, Regional		X	Х	х
Significance, and				
Management Summary				
Stewardship Issues:				
No longer required				
Replaced by Caring for your				
Woods series				
<u>Setting Goals</u>				
<u>A Starting Point</u>				
Working with Nature				
<u>A Valuable Resource</u>				
Stewardship Issues: climate				
Caring for your Woods series				
Adapting to Changing				
<u>Conditions</u>				
Managing for Forest				
<u>Carbon</u>				
Stand Summary Table			X	X
Stand Descriptions Form	Х	Х	X	X
<u>Management Summary</u> <u>Table</u>			X	X
Management Practices Form	Х	Х	Х	Х
Signature Page	Х	Х	Х	Х
Certificate for Chapter	Х			
61/61A/61B Forest Lands				

## **Cover Page**

Highly recommended but not required. Preparer has full creativity.

### How to Use this Report

Required for Bird Habitat and/or Climate plans. This may be adapted to include other stewardship elements important to the landowner(s) such as chapter 61, timber or recreation.

## **Property Information Form**

#### ALL PLANS – Stewardship Items in BOLD

ADMINISTRATIVE BOX (located in the upper right-hand corner)

1. DCR will fill in: Case Number, Owner ID, Date Received, Plan Period, Rare Species Habitat, and Additional Case Number. The plan period is the 10-year certification period, which begins January 1 of the year following plan submission and approval. For Rare Species Habitat, the Service Forester will indicate yes or no after checking <u>the Natural Heritage Program Atlas</u> to see if the property falls within rare species Estimated Habitat or Priority Habitat polygons. An additional case number is generated for a contiguous property that falls within two towns.

2. Plan preparer will provide Original Case Number if the property is being recertified or amended.

#### CHECK-OFFS

In the upper left-hand corner, indicate by an  $\underline{X}$  if the plan has been prepared for Chapter 61, 61A or 61B certification, recertification, amendment; Stewardship new, renewed; Cost-shared (EEA = Working Forest Initiative; Other = NRCS, RCPP); if the plan is focused on Birds; Carbon/Climate Also, indicate if a plan changes between programs (e.g., CH61 to CH61A, and if the plan has a conservation restriction including the holder of the CR.

#### Indicate X for Bird Habitat and/or Climate Forest Stewardship Plan.

#### OWNER, PROPERTY LOCATION, AND PLAN PREPARER INFORMATION

- 1. Property Owner(s) shall be the name or names of the owner(s) of record as it appears on the current deed for the property to be classified. If joint ownership, all names must be filled in. If a corporation, trust, partnership, or similar entity, include the name of the responsible agent.
- 2. Mailing Address shall be the mailing address of the property owner, or in the cases of the corporation, trust, partnership or similar entity, the responsible agent(s) address.
- 3. Phone shall include the area code and number of the owner or responsible agent.

- 4. Email Address is optional
- 5. Property Location shall indicate the town(s) in which the property is located. Also list the road(s) where there is <u>primary access</u> to the property.
- 6. Plan Preparer(s) name, mailing address, telephone number, and Massachusetts Forester License number.

#### <u>RECORDS</u>

General information in the form of a table shall be entered in the space provided or utilizing the "<u>Property Information Form Overflow</u>" form or as an attachment to the plan if sufficient space is not available.

The table shall contain the following for each Town included in the Plan:

- 1. Assessor's tract/map numbers shall be entered for those Towns which use this type of designation.
- 2. Lot/parcel numbers shall be entered to locate the parcel on the Assessor's Maps.
- 3. Deed Book and Page Numbers shall be entered for the lot or lots that are being considered for certification.
- 4. Total Assessed Acres shall be entered for each lot/parcel. *The owner is responsible for reconciling any discrepancies between Assessor's records, deeds, and registry records before certification.*
- 5. Ch. 61/61A/61B Excluded Acres: the number of acres to be excluded from Chapter 61, 61A, or 61B <u>forest</u> certification shall be entered for each lot/parcel. Non-forest land that is classified shall be included in the area excluded from <u>forest</u> certification. The landowner is solely responsible for this information.
- 6. Ch. 61/61A/61B Certified Acres: the number of acres to be certified under Chapter 61, 61A, or 61B as <u>forest</u> land shall be entered for each lot/parcel. See 10 (3) below.
- 7. **Stewardship Excluded Acres:** the number of acres to be excluded from Stewardship shall be entered for each parcel.
- 8. **Stewardship Acres:** the total number of <u>eligible Stewardship acres</u> shall be entered for each lot/parcel.
- Total Acres is the sum of CH 61/ 61A/61B excluded acres, total CH61/61A/61B certified acres, total Stewardship excluded acres, and total Stewardship acres. The CH61/61A/61B acreage figures must balance and match the acreage figures on the CH61/61A/61B Application Certificate.
- 10. Chapter 61/61A/61B Excluded area description shall be entered in the space provided or as an attachment to the Plan if sufficient space is not available. The description shall include the following:
  - a) metes and bounds description of areas to be excluded from classification which should be tied into a specific point on the boundary map. This shall be the same description of the exclusion as it appears on the Application Certificate Form. Metes and bounds description may be omitted if the exclusion is clearly recognizable, i.e., bounded by a stonewall(s), waterbody, or agricultural land,

and unlikely to change in ten years. *Check with your Service Forester if you want to omit the metes and bounds description before submitting the plan.* 

- b) The written description may be substituted by a suitable boundary map meeting the standards for Maps (see 17 below). Exclusions shall be placed on the property map, showing metes and bounds as required above.
- c) In the case of Ch. 61A or 61B plans, only forest land acres are included in the management plan and certificate. Although fields, croplands, and other areas are classifiable under Ch. 61A or 61B by the assessors, their acreage is not certified by the DCR. Such land will be listed as excluded acres in the forest management plan and the certificate.
- 11. **Stewardship** excluded area description: If the area to be excluded from Stewardship in a joint Stewardship/CH61/61A/61B plan is the same as that to be excluded from CH61/61A/61B state that this is the case. If the area is not the same, or if the plan is not a joint plan (i.e., Stewardship only), describe the area to be excluded, referring to recognizable features such as the house, outbuildings, the lawn, landscaped area, stone walls, fields, fences, etc. Also indicate the area to be excluded from Stewardship on the property map. A metes and bounds description of the area to be excluded from Stewardship is not required.

#### **HISTORY**

A history of the property shall be entered in the space provided or as an attachment to the Plan if sufficient space is not available. The history shall include the following:

- 1. Indicate the year the property was acquired and the year formal Forest Management began.
- 2. <u>Boundaries</u>: Indicate by an <u>X</u> in the place provided if the boundaries are painted or blazed and painted. If boundaries are not painted or blazed and painted, please indicate how the boundaries are easily discernible, i.e., flagging, signage.
- 3. If the property is being recertified, list the treatments prescribed but not carried out since the last certification with reasons why.
- 4. List the silvicultural and forest protection accomplishments over the last 10 years, by stand, treatment, yield of products (if any), acres treated, and the dates the treatment took place. Where harvesting will be completed after the date the Plan is submitted to DCR and before the next certification period, include the anticipated harvest in this section. In the case of a new Chapter 61 or 61A, this information will be used to help determine if the property has been in a forest or agricultural use for the prior two years.
- 5. Enter remarks which are pertinent to the Forest Management of the property such as the registered survey plan, conservation restriction details (deed book and page, year), name of the previous owner including case number if an amendment because of change of ownership, etc.

## Landowner Goals REQUIRED STEWARDSHIP PLANS ONLY

This form should be used as a pre-planning worksheet and must be submitted at the same time as the plan. It is designed to help landowners describe and document their goals and vision for their property, and it can be used to facilitate discussion between the landowner and consultant about expectations for forest management on their lands

Landowners should review the <u>Caring for Your Woods: Setting Goals</u> booklet (mailed to them when they apply for forest stewardship plan cost-share), discuss with and ask questions of their forester, and then complete the landowner goals form, including a written statement in their own words describing the goals they have for their property. The Landowner Goals form should be signed and dated below the "Stewardship Purpose" statement acknowledging the landowner's commitment to the principles of the Forest Stewardship Program.

Goals given "high" importance must be directly addressed in the plan.

<u>Important:</u> the goal "enhance the quality/quantity of timber products" must be checked "high" if the plan is to also be classified under Chapter 61/61A

## **Executive Summary**

#### All Stewardship Plans - Optional

Provide a brief overview of the management plan. The executive summary should connect landowner goals with key concepts of the plan. Executive summaries can be organized as the plan preparer sees fit but should:

 Connect the primary plan components to the landowner's goals (e.g., why current conditions hinder/support a landowner's goals, why management recommendations will help to achieve those goals). Stewardship Plans, especially for large landowners or for public land, may be long and complicated. An executive summary provides a quick overview with focus on the connection of landowner goals and management actions.

- Highlight noteworthy stand conditions or threats that require action (the list need not be exhaustive).
- Select two priority management focuses and convey an urgency for action as needed, such as by highlighting points of risk within the system that may require prioritization.

**For climate plans,** a connection to stand vulnerability should be included. Foresters could consider including a visual indication of vulnerability such as the vulnerability indicator table included in the Sample Forest Stewardship Climate Plan.

**For bird plans,** a connection between focal birds and how the modification of forest structure can meet the needs of species in decline.

## Property Overview, Regional Significance, and Management Summary ALL STEWARDSHIP PLANS

PROPERTY DESCRIPTION, REGIONAL SIGNIFICANCE, AND MANAGEMENT SUMMARY Write several paragraphs, providing an overview of the property as a whole and its regional context. Explain in general terms the management actions being recommended and how they will advance the landowner's goals. Organize it any way you wish, but you must cover the following:

- Establish the landscape/regional context by describing the local pattern of land use, (urban, suburban, rural; farm, forestland). If the property's general attributes distinguish it in some way from the surrounding landscape, make note of it.
- Provide a property overview, describing the property size, location, topography, dominant forest types and, age. Also note the overall forest health, the quality and/or variety of wildlife habitat, water resource concerns, outstanding physical or cultural features, and any other property-wide stewardship issues or concerns such as browse or invasive insects and diseases. This is a good place to connect and bring together the goals, property-specific places, and interests of the landowner. It may be helpful to reference individual *Caring for Your Woods* booklets relevant to specific stewardship issues. This can be a way to direct a landowner to a resource they already have and limit the need for in-depth explanation of these issues in the stewardship plan.
- If no issues of concern are present, make note of it as a baseline for future plans.
- What value does the property have, or what role does it play in relation to nearby protected lands dedicated to drinking water supply, wildlife habitat, recreation, open space, etc? Is it the last vestiges of forest in a suburban landscape or is it situated in a large area of contiguous forest?
- Summarize the management recommendations, indicating the property's potential to achieve the landowner's goals and, as applicable, describe how recommendations can address climate vulnerabilities or support bird habitat. Highlight the most important goals and the activities/management recommendations that will be employed to meet them. Consider discussing the timing and prioritization of practices or how a landowner might take the first step toward implementation.

**For Bird Habitat plans**, be sure that linkages are made between habitat deficiencies, landowner goals, and the need for management interventions throughout this section. Include a Forest Birds section that covers the following items:

 A statement about the importance of landscape-level attributes as it relates to forestbreeding bird habit.
 Sample language: "Bird species vary in their sensitivity to fragmentation and forest patch size needed for quality habitat. This sensitivity is less pronounced in highly forested landscapes. Therefore, emphasis is placed on summarizing habitat features at the landscape level, followed by a property-level assessment."

- Landscape Analysis: A landscape analysis within a 2500 ac block surrounding the property which includes:
  - Percent forest
  - Degree of fragmentation
  - o The Extent of mature forest vs. young forest
  - Non-forest areas such as farmland, suburban, urban, and wetlands
  - Protected open space
- Bird Habitat Characteristics: An overview of some important bird habitat characteristics – refer to "Managing Forests for Trees and Birds in Massachusetts: A Guide to Habitat Assessments and Silvicultural Practices" (pages 2-7)
  - Habitat characteristics found on the property
  - Habitat characteristics missing on the property or missing from the surrounding landscape

**For Climate plans**, be sure that linkages are made between climate change, vulnerability, landowner goals, and the need for management interventions throughout this section. Include a Climate (or Climate Change and Carbon) section that communicates the following items:

- Climate Change Impacts and Vulnerabilities: Provide a description of climate change impacts and associated property-level vulnerabilities (These should be as site-specific as possible, refer landowners to <u>Caring for Your Woods: Adapting to Changing Conditions</u> booklet for more general climate impacts.) that are expected over the next 50+ years for all major forest communities that are present on the property. Differentiate between near-term and long-term vulnerabilities as necessary (e.g., a site or species may have near-term forest health concerns, long-term climate vulnerabilities based on climate models, or both). A discussion of climate vulnerabilities is often warranted early in the Property Overview section. See <u>Managing Forests for Climate Change in Massachusetts</u> for a summary of climate impacts and additional resources. These may include items such as extreme rainfall, storms, altered seasonality, drought stress, and tree species changes. Include a discussion of climate impacts on woods infrastructure (trails, culverts, landings, etc.) as appropriate.
- State whether the general management approach is to resist climate change, build ecosystem resilience, and/or help transition forests toward future conditions. Often it is appropriate to select one of these adaptation approaches as a **primary** strategy while still describing the secondary/tertiary role of the other two. To connect to landowner's goals and to aid landowner understanding, explain the reason for the selected management approach and provide examples of management recommendations that fall under the given approach. Refer to <u>Managing Forests for Climate Change in Massachusetts</u>
- Climate Change Challenges and Opportunities for Management: Based on expected climate change impacts and vulnerabilities for the property identify:

- Major climate change challenges and opportunities with regards to management objectives and landowner goals, including situations where climate change may create significant barriers to achieving the landowners' goals. Refer to <u>Managing Forests for Climate Change in Massachusetts</u>
- Potential effects, positive or negative, of climate change impacts on forest carbon—with more robust discussion when the landowner identified this as a management goal. Refer to <u>Managing Forests for Climate Change in</u> <u>Massachusetts</u>
- Estimation of existing forest carbon stocks. Refer to <u>Estimating Carbon for Forest</u> <u>Stewardship Climate Plans</u>
  - Estimating Carbon for Forest Stewardship Climate Plans provides tables (one for live trees and one for dead trees within each ecoregion) relating carbon stocks in tons per acre (t/ac) to the basal area in square feet per acre (ft<sup>2</sup>/ac). These tables can be used to estimate carbon stocks for your Forest Stewardship Climate Plan.
  - Other tools may be used to estimate carbon stocks, but the reported units should be tons/ac. Regardless of which tool is used, describe method(s) or tool(s) used to estimate and interpret carbon stocks.
  - When providing a property level estimation, calculate carbon stocks by the individual stand and then sum over all stands.
  - Provide context for carbon stock estimates. This includes how the stand or property compares to other forests in the region given by the percentiles provided in the Estimating Carbon for Forest Stewardship Climate Plans tables. Note that if another tool is used to estimate carbon stocks, the percentiles reported will not be valid unless basal area is used to look up percentiles.
  - It is also helpful to translate carbon stock numbers into a metric most relatable to most landowners. The EPA <u>Greenhouse Gas Equivalencies Calculator</u> is a good resource for translating carbon stock measurements into other units such as miles driven or fuel oil burned.
- Carbon Storage and Sequestration Opportunities: (In climate plans with carbon goals identified)
  - Description of potential carbon sequestration and any significant barriers to continued carbon benefits into the future.
  - The carbon estimation document provides a graphic representation of how sequestration rates change in relationship to stand age Refer to <u>Estimating</u> <u>Carbon for Forest Stewardship Climate Plans</u>. Include qualitative discussion of other carbon pools, such as downed woody debris, forest floor, or soil carbon.
  - Described broad strategies and actions to maintain or increase carbon benefit. These can include strategies that benefit sequestration, storage, or both. Refer the reader to the stand descriptions for specifics.

## **Stewardship Issues**

The Stewardship Issues section of the plan has been replaced by the "Caring for your Woods" booklet series which is mailed to landowners when they apply for Stewardship Plan costshare through the Working Forest Initiative. Referring to these booklets is a great strategy for reducing explanatory text in the Property Overview section.

- <u>Setting Goals</u>, helps you identify high-priority goals, provides questions to ask a forester, and explains the landowner goals sheet found in Forest Stewardship Plans.
- <u>A Starting Point</u> Covers the basic of management plan including the roll of a forester, Chapter 61 tax program and estate planning.
- <u>Caring for your Woods</u> <u>Working with Nature Private Lands Forestry</u> gives a peek into how a woodlot fits into the natural surroundings as well as potential changes from climate change and invasive species.
- <u>Caring for your Woods A Valuable Resource</u> provides a basis for putting a plan into action
- <u>Caring for your Woods Adapting to Changing Conditions</u> discusses actions to ensure that the trees, wildlife, and other forest species can cope with changing conditions.
- <u>Caring for your Woods Managing for Forest Carbon</u> considers additional actions that increase the ability of forests to absorb and store carbon from the atmosphere to reduce the amount of heat-trapping carbon dioxide in the atmosphere.

Property-specific information on these land stewardship topics can be very useful to the landowner and should be concisely incorporated into the Stand Description and Management Practice narratives, or in the Property Description section when a corresponding landowner goal from the Landowner Goals page is checked high. See instructions for those sections.

## **Stand Summary Table**

A Stand Summary table is required for Bird Habitat and Climate plans. For each stand, as applicable, identify notable features related to bird habitat, climate/carbon considerations, or other unique features. Recommended but not required for Chapter 61/61A/61B or basic stewardship plans.

Stand	Acres	Forest/Habitat Type	Important Observations regarding Bird Habitat, Climate Change, Carbon Or Unique Features and Attributes	Climate Risk	Carbon/Acre

# Stand Descriptions

#### ALL PLANS - Stewardship Items in BOLD

Stand descriptions are required for all management plans. For Chapter 61/61A/61B and Stewardship Plans, stands are a group of trees sufficiently uniform in species composition, arrangement of age classes, and condition to be a homogeneous and distinguishable unit. The information required for the description should be gathered from an on-the-ground inventory of all forested land.

Non-forested units may also be treated as a stand, and in place of forest inventory data, some form of field reconnaissance must be utilized to furnish a stand description that adequately captures the natural resources attributes of the unit. Non-forested components and accessory uses of the land may be treated as part of a more heterogeneous forested stand if the non-forested areas are a small fraction of the stand and the nature of these non-forested components is addressed in the greater stand description.

#### FIELD DATA SUMMARY

 Objective Code - required only for joint Stewardship + CH61/61A/61B plans. CH61 = all stands that are being classified under CH61/61A/61B STEW = stands that are not being classified under CH61/61A/61B
 This meaninglude Bind Habitat or Climate Forward Forestry.

This may include Bird Habitat or Climate Focused Forestry

- 2. Stand Number Enter the number as listed on the forest stand map.
- 3. Type Enter the forest type that best describes the stand as listed in Appendix A
- 4. Acres Enter the total acreage of each stand. If the stand is located in two towns, list the acreage by town. If the assessed acres differ substantially from the deed(s) or field reconnaissance, then multiple acreages may be listed with reference to assessed /deed/field.
- 5. Mean Stand Diameter Determine from the appropriate stocking guide and cumulative diagnostic sheet. See Appendix B for sample stocking guides. **Stewardship** plans may use the following size class designations in place of MSD when timber is not a primary objective:

Seedling/sapling = < 4.0" dbh	Medium trees = 10.0-15.0" dbh
Poles = 4.0-9.9" dbh	Large trees = >15.0" dbh

- 6. Basal Area Enter the basal area per acre (in square feet) of each stand. This may be determined by a prism or angle gauge. Use the minimum diameter of trees counted as recommended in diagnostic and silvicultural guides.
- 7. Volume per Acre Estimate the total volume in the stand. The volume per acre may be calculated by use of the Quick Cruise Computer found in USDA Forest Service, NA-FR-15, (Appendix C, Ashbey, Burl S.), or from the Composite Board Foot Volume Table for 10 factor Angle Gauge found in USDA Forest Service Agricultural Handbook 355 NEFES (Appendix C, Roach & Gingrich), or any other reasonable scientific method.
- 8. Site Index For forested stands, the site index for each stand shall be determined by using the appropriate publication(s) listed in Appendix C. If the stand is a mixture of species, the site index value should be annotated with the species code or full name of

the dominant species. For non-forested stands covered in a **Stewardship** plan, use field observation and/or USDA-NRCS soil surveys for a general indication of site quality as it relates to the management objectives.

#### STAND NARRATIVE

The narrative should help the landowner understand the quality and features of the stand without technical terminology. Elements identified as landowner priorities on the Landowner Goals form should be emphasized and elaborated upon.

For properties with elements common to many stands, the common elements should be covered in the property overview to reduce repetition in the stand description section.

If desired, multiple management options can be discussed within the stand narrative, although the landowner will need to commit to one of the options in the management section.

For Ch61 and stewardship plans, a narrative description *shall* include details on:

- Overstory: species and condition
- *Regeneration*: species and distribution
- *Soils/Site Factors*: provide the name of the type and important characteristics such as moisture, drainage, and productivity by interpreting the site index of the dominant species and the site's suitability for growing timber.
- Desired Future Condition of the Stand: describe the species, age class distribution, future product potential, anticipated ecological attributes, and other stand characteristics expected for the stand based on current condition and anticipated management practices.

Other noteworthy items to discuss for a Forest Stewardship plan are:

- *s*hrub/ground cover species
- topography: slopes-note occurrence(s) of slopes greater than 30%
- stand condition: vigor, health problems
- noteworthy features: views, trails, specimen trees, ledges
- cultural features: cellar holes, stone walls
- habitat features: vernal pools, dens/snags, mast trees, species richness, vertical diversity/age classes, fish habitat
- invasive non-native plants: species, distribution, and potential threat
- other notable stressors such as deer browse, forest health issues, etc.
- stand history: any known past management or natural events

#### Stand Data for Bird Habitat and Climate Plans

Please include the data listed below; foresters may format the data as most beneficial for each stand description. The <u>Forest Stewardship Climate Plan Sample Plan</u> provides example tables that cover these items. Due to the large number of data items, foresters are encouraged to present the data in table format and use the narrative to interpret the data for the landowner to understand habitat components and climate vulnerabilities.

Forest/Habitat	Bird Habitat	Climate Change vulnerability and risk,		
Component		adaptation options		
Canopy/Overstory	Structural Diversity <ul> <li>canopy height</li> <li>percent cover and distribution</li> <li>type</li> </ul>	Species Diversity <ul> <li>species diversity</li> <li>proportion at-risk trees</li> </ul> <li>Structural Diversity <ul> <li>canopy height</li> <li>percent cover and distribution</li> </ul> </li> <li>Forest Health <ul> <li>tree vigor</li> <li>pests/pathogens</li> </ul> </li>		
Midstory	<ul> <li>Structural Diversity</li> <li>percent cover and distribution</li> <li>type</li> </ul>	Species Diversity <ul> <li>species diversity</li> <li>proportion at-risk trees</li> </ul> <li>Structural Diversity <ul> <li>percent cover and distribution</li> </ul> </li> <li>Forest Health <ul> <li>tree vigor</li> <li>pests/pathogens</li> </ul> </li>		
Understory and Regeneration	Structural Diversity <ul> <li>percent cover and distribution</li> <li>type</li> </ul> Stressors <ul> <li>location and percent cover of invasive vegetation</li> <li>deer browse</li> </ul>	Structural Diversity <ul> <li>percent cover and distribution</li> </ul> <li>Stressors <ul> <li>location and percent cover of invasive vegetation</li> <li>deer browse</li> </ul> </li> <li>Regeneration <ul> <li>Seedling abundance</li> <li>Seedling species diversity</li> <li>Proportion of at-risk trees</li> </ul> </li>		
Habitat Features	<ul><li>Soft Mast</li><li>Leaf Litter</li></ul>			
Site Features	Snags Adequate/not adequate Coarse Woody Material Count of pieces Fine Woody Material Adequate/not adequate	Infrastructure <ul> <li>Erosion and soil disturbance</li> <li>Culverts or other structures</li> </ul> <li>Water quality <ul> <li>Steep slopes</li> <li>Filter strips</li> </ul> </li>		

	Operability <ul> <li>Risks due to increased precipitation or storm events</li> <li>Snags <ul> <li>Adequate/not adequate</li> <li>Coarse Woody Material (Carbon)</li> <li>Count of pieces</li> </ul> </li> </ul>
Climate Vulnerability	<ol> <li>Identification of key climate risks</li> <li>Overall evaluation of how vulnerable the stands are to climate change and related stressors in the near (&lt;20 years) and long (50+ years) term</li> <li>Make connections to carbon storage</li> </ol>

#### Stand Narratives for Bird Habitat and Climate Plans

These descriptions may cover some of the same elements in a Forest Stewardship/Ch61 plan but are thought of through a different lens. Depending upon property size and complexity, content relevant to multiple stands or the whole property may be covered in the Property Overview to help reduce redundancy.

**Bird Habitat** the narrative should focus on whether various habitat components are present, sufficiently present, or lacking. The narrative should provide the landowner a framework for whether the stand has adequate habitat components for select Focal Birds indicated through landscape-level analysis or whether management actions are needed to enhance habitat components.

**Climate change** is impacting our forests and will continue to cause change. The narrative should discuss stand vulnerability and allude to adaptation options. Not all the reported data items need to be discussed; however, the landowner should be left with a sense of how vulnerable various stand components are to climate change and whether to take action. Plans focusing on carbon should focus on components that would positively or negatively affect carbon storage and sequestration.

## **Management Summary Table**

Recommended but not required for Chapter 61/61A/61B or Stewardship plans

Required for Bird Habitat and Climate plans. The Table should identify how each recommended management action will promote a landowner's goal while helping to achieve the desired future condition. **Remove <u>Benefits</u> sub-columns as needed or alter column headers to reflect the plan type and landowner goals**. For Plans that include Birds, Climate, and Carbon <u>landscape</u> view is recommended.

	رە بە	Landowner Goal	Desired Condition	Management Action	Benefits			Value/Cost/Cost Sharing
Stand	Obj Code				Bird Habitat & Focal Birds	Climate Change Adaptation	Forest Carbon	Opportunity

- Object Code actions with an object code *CH61* are required to be accomplished as a commitment to the Massachusetts Current Use Program. Practices with object codes of *STEW* are voluntary and are provided as suggestions of activities that can help landowners achieve their objectives.
- Landowner Goal identifies the primary goal that the management action supports.
- Desired Condition –the future condition of the forest such as even-aged or uneven-aged
- Management Action silvicultural recommendation or action such as invasive species removal
- Benefits in a few words summarize your stand descriptions
  - o Bird Habitat & Focal Birds implications for bird habitat and focal species
  - o Climate Change Adaptation adaptation/resilience benefits of the action
  - o Forest Carbon Identify how management influences short- and long-term carbon sequestration and storage, including both enhancement of carbon and/or reducing the risk of carbon loss.

## **Management Practices**

#### ALL PLANS - Stewardship Items in BOLD

These are the management practices to be accomplished in the next 10 years. For Chapter 61/61A/61B plans, these prescriptions are considered commitments by the owner(s). For joint Stewardship + Chapter 61/61A/61B plans, these prescriptions are commitments when the objective code "CH61/61A/61B" designates the practice as a requirement for enrollment in Chapter 61/61A/61B. If multiple management options are discussed within the stand narrative, one option must be chosen for discussion in the management practice description along with a statement as to why the option was chosen. The owner(s) cannot diverge from the approved silvicultural prescriptions in Chapter 61/61A/61B management plan without the prior written approval of the State Forester (usually an amended management plan). If the owner(s) diverges from the approved treatments, the State Forester may decertify or deny recertification of the property as outlined in the respective written law for each program.

Use the **STEW** object code to clearly distinguish the practices recommended for Stewardship that are not required for Chapter 61/61A/61B.

#### MANAGEMENT DATA SUMMARY

 Objective Code - required only for joint Stewardship/CH61/61A/61B plans. CH61 = silvicultural practices in stands classified under CH61/61A/61B or boundary work.

**STEW** = stewardship practices in any stand or for the whole property that would not be required for 61/61A/61B.

NRCS practices codes or other program practice codes may be inserted as needed

- 2. Stand Enter the stand number as listed on the stand map where the treatment is to take place.
- 3. Type Enter the forest type as listed on the stand description.
- 4. Silvicultural Prescription Enter the treatment to be accomplished using the terms as described in Appendix C. Designating the treatment areas on a map is recommended. Indicate practices other than silvicultural treatments to be completed for Stewardship plans here. Use language comparable to what's used in the USDA-NRCS EQIP practices, such as forest stand improvement and prescribed burning.
  - Home | Natural Resources Conservation Service (usda.gov)
  - <u>Massachusetts NRCS programs.</u> Specific NRCS practice codes can be requested at the local USDA Service Center or found on the NRCS website.
  - <u>Applications and Forms | Natural Resources Conservation Service (usda.gov)</u> Quantify activities in terms and units used in anticipated EQIP practices.
- 5. Acres Enter the number of acres to be treated in each stand.
- 6. Basal area Estimate the -basal area expected to be removed per acre.
- 7. Volume Estimate the volume of products to be removed from the stand.

8. Timing - Indicate the dates when the silvicultural prescriptions or Stewardship practices are expected to take place. Wide ranges of timing, such as the entire certification period, are not acceptable without a clear explanation.

#### MANAGEMENT PRACTICE NARRATIVE

The narrative should help the landowner understand the practices recommended with an explanation of technical terminology as appropriate. Practices should relate to the landowner's goals to help them understand why a particular practice is recommended. Silvicultural practices should be listed first, followed by non-silvicultural practices.

#### Silvicultural practice narratives must contain:

- 1. The primary landowner goal associated with the management action.
- 2. Practice purpose that describes how the recommended practice helps create the desired future condition and how the stand condition meets the landowner's goals
- 3. Trees to be removed and retained- species, conditions, diameter, canopy position, and spatial arrangement.
- 4. Special considerations such as erosion control, habitat protection, access, cultural feature protection, timing, and/or equipment.
- 5. Barriers to implementation.
- 6. As applicable, link actions to climate vulnerabilities, focal species, or habitat conditions.

#### Non-silvicultural practice narratives must include:

- 1. Practice description and purpose: what is to be done, and how the practice helps the landowner achieve their objectives
- 2. How the work is to be done and by whom
- 3. Special considerations: timing, feasibility, possible cost-share. For some practices, a discussion of how to locate or install the practice would be desirable and may be required for external cost-share programs. If NRCS funding possible, indicate location of practice on map.
- 4. Barriers to implementation
- 5. As applicable, link actions to climate vulnerabilities, focal species, or habitat conditions.

Bird Habitat and Climate plan practice narratives should meet the above requirements while also integrating descriptions of how management actions will help address climate vulnerabilities and provide potential benefits to bird habitat and forest carbon, as applicable to the plan type and forest. Also, describe any barriers to implementation.

- Benefits Summarize key benefits, as follows, to reflect landowner goals.
  - o Bird Habitat and Focal Birds List Focal Birds or habitat features that would be expected to benefit. See <u>Foresters for the Birds Resources</u>.

- Climate Change Adaptation Describe how the management actions reduce climate risks, enhance resilience, and/or enable forests to adapt to anticipated future conditions.
- Forest Carbon Identify how management influences short- and long-term carbon sequestration and storage, including both enhancement of carbon and/or reducing the risk of carbon loss.
- Barriers Describe any issues that may limit or prevent the implementation of said strategy. Barriers may be related to factors such as physical location, time, cost, ecological concerns, etc.

#### MONITORING Recommended for all plans

Define the process for monitoring forest conditions based on the management plan. Identify who will be responsible for completing the monitoring, what they will be monitoring, and the timing and/or frequency of the monitoring. Monitoring results such as regeneration failure, exotic insect infestation, and damage from natural events-wind, ice, etc. may necessitate amendments to the management plan.

#### BOUNDARIES

At the time of initial certification or recertification, the boundary lines must be made substantially discernible to be referenced by the State Service Forester against the property map provided. This may include painting, flagging, or signage. In situations where the boundary is a stone wall or feature easily recognizable as a boundary line, at a minimum, the corners must be marked. For **Stewardship plans**, boundary identification is not a requirement but is highly recommended.

For any management activities that will fall under a Forest Cutting Plan, boundary lines must be properly painted or blazed and painted within 50 feet of the cutting area.

It is recommended that boundaries be painted or blazed and painted at the time of initial certification or when the property is surveyed (if applicable) and re-painted upon each recertification.

See the following bulletin for more information; Wood, H. Peter, Kulis, Richard W., <u>Woodland</u> <u>Boundaries</u>, Cooperative Extension Service, University of Massachusetts, Amherst, MA.

## Maps

#### ALL PLANS

At least two maps will be provided with each plan, a property map and a locus map.

#### PROPERTY MAP

The property map should include boundary information, stand identifiers, and other physical features relevant to Ch. 61/61A/61B and/or Stewardship plans. If this information cannot be included on one legible map, then include two or more maps.

Landmarks may include property identifiers such as utility pole number or street address, or *lat/long* that may help Service Foresters locate the property.

Each map must contain the following:

- 1. A magnetic or true North arrow
- 2. Scale
- 3. Name and address of the owner (indicate mailing address if different from location address)
- 4. Name of the agent responsible for preparing the map
- 5. Date Prepared
- 6. Source of the information, such as assessors map, survey, field reconnaissance
- 7. Name of the lot (if applicable)
- 8. Physical features labeled (roads, mountains, streams)
- 9. Name of town or towns where land is located
- 10. Labeled political features (town, county, state lines)

The Property Map shall be printed with the following standards and if the property is Classified it shall establish the area to be classified in a manner that corresponds to the permanently marked boundaries on the ground.

- The property map shall be printed on one or more sheets 8-1/2 x 11 inches in size. Larger maps will not be accepted. If the property map cannot be printed in its entirety on one 8-1/2 x 11 sheet, the property shall be mapped by compartments. Compartment boundaries are defined by physical features such as roads, easements, streams, etc. The arbitrary dividing of a large, small-scale map into 8-1/2 x 11 sheets will not be accepted.
- 2. The scale shall not be smaller than 1 inch equals 1000 feet or larger than 1 inch equals 200 feet.
- **3.** For all plans, the property map shall show approximate bearings and distances (metes and bounds) to indicate the property boundaries. For Chapter 61/61A61B plans, the property map shall show approximate bearings and distances (metes and bounds) to indicate excluded areas as well. This description shall be the same as provided in the records section of the Property Information Page (see page 3 above)

- 4. It is recommended that the property map be printed in only two colors, black on white, blue on white, etc. If full color is used then the map must still be legible when photocopied. Property boundaries, stand boundaries, roads, etc., shall be denoted by different weights of lines, cross-hatching, broken lines, etc.
- 5. The map shall indicate principal forest stands, excluded areas, access, accessory land, and any other information pertinent to the management of the property. The forest stands shall be numbered consecutively. The stands will be identified using the Forest Types listed in Appendix A.
- 6. When it is anticipated that the landowner may apply for cost-sharing management practices (such as through NRCS), it is recommended that those practices be shown in the appropriate locations on the stand map as applicable.

If a single map showing the boundary and stand information is too cluttered, create two maps labeled "Boundary Map" and "Forest Stand Map". Use the same size, scale, and printing requirements as outlined above for each map. Additional maps such as topography, soils, woods roads and trails, wetlands and riparian areas, critical habitat, and natural and cultural features may be included.

#### Locus Map:

On a USGS topographic map indicate the approximate property boundaries. Use an appropriate scale that shows the location of the property in the landscape. Each map must contain the following:

- 1. A magnetic or true North arrow
- 2. Scale
- 3. Name and address of the owner (indicate mailing address if different from location address)
- 4. Name of the agent responsible for preparing the map
- 5. Date Prepared

# Signature Page

#### ALL PLANS

Check each box that applies. The original signature(s) of the owner(s) of record must be given in the space provided. If joint ownership, signatures from all the owners are required. If a corporation, trust, partnership, or similar entity, the signature of the responsible agent must be provided. These signatures are signed under the pains of perjury.

The signature of the person responsible for the preparation of the Forest Management Plan must be given in the space provided. If the person is an agent of a Forestry Consulting Firm, the name of the firm will also be listed.

The Service Forester shall sign the Forest Management Plan when he/she considers that the plan, the property, and the Application meet all the requirements of Chapter 61 and the Rules and Regulations. And/or the plan meets the standards and guidelines set forth by the Stewardship Program.

Chapter 61/61A/61B only: The DCR Commissioner or designee shall sign the Forest Management Plan in the space provided when the property, the Forest Management Plan, and Application meet all the requirements of Chapter 61 and the Rules and Regulations.

# Certificate for Chapter 61/61A/61B Forest Lands

#### Chapter 61/61A/61B only

One original of the Application Certificate, <u>with original signatures</u>, plus two additional copies must be submitted along with the Forest Management Plan for review for Chapter 61/61A/61B or joint Forest Stewardship + Chapter 61/61A/61B approval.

- 1. The Case Number will be filled in by the forestry clerk.
- 2. Name shall be the name or names of the owner(s) of record as it appears on the current deed for the property to be classified. If joint ownership, all names must be filled in. If a corporation, trust, partnership, or similar entity, include the name of the responsible agent.
- 3. Address shall be the mailing address of the property owner, or in the case of a corporation, trust, partnership or similar entity the responsible agent's address.
- 4. The blanks must be filled in with the appropriate information: Mass. General Laws Chapter being applied for, number of acres requested for certification, total acres of the parcel, the county where property deed is registered, deed book and page, the name of the town where the property is located, assessors map and lot number, and total acres to be excluded from the classification.
- 5. The description of acres excluded shall be a metes and bounds description or reference to the description on the property map. If the excluded area is described through the property map, then a copy of the map must be attached to the certificate. This description shall be the same as provided in the records section of the Property Information Page (see page 3 above)
- 6. All landowners must sign and date the certificate.