Silviculture Handbook: Chapter 51 - Red Maple Cover Type
Revision Comments & Ad Hoc Team Responses
1-22-2015

1. I looked through this (again) tonight. Generally I thought it was well done. Congratulations to all of you that worked on this.
    - Response: Thank you, no response or edit needed.

2. I did review the draft Red Maple Chapter and it includes the couple of ideas that I was looking to see if they were covered. This draft seems to offer flexibility to accommodate differences in soils/species mixes/habitats/market opportunities across Wisconsin. This new chapter format is also great. I support moving forward with finalizing this chapter.

   Thanks for your work to update this chapter and especially for your efforts to represent WCFA on this hard working committee. No one within WCFA can claim they didn't have a chance to offer comments on the draft.

    - Response: Thank you, no response or edit needed.

3. I just read through the chapter and I like the changes that have been made in the layout. Using habitat types and the flow chart will aid in the decision making process. I also believe that including the economic aspect is important. I think this is something that has been kept behind the scenes in favor of "proper management based on science" when in reality if there is no market or economic gain from the forest products generated, there will be no "management" of the forest. Basically, if people can't earn money at it, the management isn't going to get done. Sorry, I got up on the soap box there a little.

    - Response: Thank you, no response or edit needed.

4. I just read the new Red Maple chapter. First, I'm impressed red maple has gained the stature that justified a 42 page chapter; it wasn't that long ago it was considered a weed tree. Overall I think the team did a very nice job with this topic. I certainly agree with the point Mark made, and seconded by Ben, regarding not precluding dry summer operability during overstory removal. I think on dry-mesic sites this is certainly true. On wet-mesic sites, such as we have in Price, Taylor and Sawyer County, we have to proceed with more caution and operator/equipment selection is extremely critical due to the shallow rooting nature of red maple on those sites. It is easy to set back the new regeneration (established or not) under those conditions. A dry fall, after the growing season, might be the most aggressive case we can make on wet-mesic sites. Just add a caveat to the handbook statement for dry-mesic sites.

    - Response: Thank you, the following section from the draft revision relates to this comment and concern:

      > "Overstory removal operations should be conducted during the winter or fall during non-growing season and preferably with frozen or dry soil conditions in order to minimize the damage to the regeneration." (pg. 51-16 paragraph 1)

    - Revision: The Red Maple Ad Hoc Team recognizes this concern. The section above has be revised to read:

      > "Overstory removal operations should be conducted during dry or frozen ground conditions in order to minimize the damage to advance regeneration." (pg. 51-16 paragraph 1)

5. Thanks for your work on this chapter! I imagine you are getting tired of it after the marathon of effort to get it this far. I hope you are still willing to consider and act on a couple points. On page 51-21, I think both the regular and extended rotations are too low on mesic sites (and a notch above and below). I see numerous stands of free to grow or well managed stands of MR sawtimber or mixed with hemlock that are about 90+ now and show no signs of slowing down or hitting the wall**.** I recommend adding at least 10 years to both the regular and extended rotations.

    - Response: Thank you, the Red Maple Ad Hoc Team recognizes this concern. The section above has been revised with the following addition:

        "Rotation ages may be shortened or extended (i.e. extended rotations may exceed 110 years) based on the considerations above." (pg. 51-21 paragraph 2)

    i) On page 51-23 there is a statement that sawmills want the trees at 18-24" to avoid excessive defect or age 75. There are issues with this whole concept. First of all this "conjecture" is not scientific, and seems to ignore that a major contributor to defect is injury, not simply size or age (other than the older trees have had more time to be injured by something). Secondly placing an arbitrary age of 75 alongside a diameter is misleading. Diameter growth is highly dependent on stand density and management. Unless you have study data to back up that something bad happens to MR at age 75, please strike the age 75 reference if not the whole sawmill speculation**.**

    - Response: The Economics Consideration section, new to the Red Maple Chapter revision, is intended to widen the scope of management concerns. The following, from the draft revision relates to this comment and concern:

        "Based on conversations with many Wisconsin mills, a consensus is that when today's red maple trees reach an average 18" – 24" DBH or approximately age 75, defect becomes more prevalent." (pg. 51-23 paragraph 1)

    - Revision:

        "Based on conversations with many Wisconsin mills (2014), there is a consensus that due to stand history (i.e. conversion from aspen, high grading, woodlot grazing, etc.) defect is more prevalent in red maple trees with an average 18" – 24" DBH or approximately age 75." (pg. 51-23 paragraph 1)

    - Revision: The following was added to clarify the purpose of considerations.

        "MANAGEMENT CONSIDERATIONS
        The following considerations may be taken into account when making management recommendations." (pg. 51-22 Section Title)

    ii) On page 51-35 there is a site index chart with rotation age listed on the right margin. Are these rotation ages from the original document or added? I recommend striking them, or at least qualifying them. They seem to be setting rotation ages based simply on site index (getting accurate site index for MR is difficult since it often has not been free to grow) and seems at odds with other information in the chapter.

    - Response: Thank you, the rotation ages listed on the draft red maple site index chart have been removed.

iii) On page 51-30 there is a good statement about how MR often grows slowly until released. Many of our MR stands today originated from a less than desirable history and may not be a good indicator of MR's potential under a good management regime. This underscores much of what I am trying say regarding rotation age, defect, etc. That is stand origin (seed vs sprout), free to grow vs suppressed, managed vs abused has a big factor in quality, health and rotation age. I appreciate the discussion about this that follows the rotational age chart on 51-21, but that is not enough. There are still several arbitrational references to rotation ages in the Chapter that need to be deleted, amended or addressed.

- Response: The Red Maple Ad Hoc Team recognizes this concern. The intent of the guidance is not to eliminate professional discretion. A section has been revised with the following addition:

  "Rotation ages may be shortened or extended (i.e. extended rotations may exceed 110 years) based on the considerations above." (pg. 51-21 paragraph 2)

6. I was taking a look at the red maple chapter. Looking at the regeneration methods section, a shelterwood harvest is recommended and a coppice harvest is recommended, but a seed tree harvest is not recommended. A seed tree harvest falls between the two types of harvests that are recommended, why is it not recommended?

   - Response: Thank you for the feedback. Functionally, a seed tree harvest does not fall between shelterwood and coppice as coppice relies on vegetative reproduction whereas shelterwood and seed tree rely on seed origin reproduction. Field observation has shown that several sites deemed as successes for seed tree were likely closer to overstory removal harvests which rely on advance regeneration. If seed tree proves to be successful in trials or future research, the chapter can be revised.

   i) I am also wondering what would be recommend we you add guidelines into the mix, such as the green tree retention guidelines. If I were to set up a red maple coppice harvest and need to meet the green tree retention guidelines, is the only recommended method to leave patches or groups of retention rather that scattered remnants of the stand. If scattered remnants were retained the sale may start to resemble a seed tree harvest which is not recommended. I am wondering what your thoughts are on this and what type of research the team came up with to make these decisions.

   - Response: Dispersed or aggregated retention can be used for a number of different reasons. If dispersed trees are retained but not intended as a seed source then they would not be part of a regeneration system. Though this may look similar to a seed tree system, it has a different purpose. Green tree retention considerations are discussed in depth in *Chapter 24: Tree Marking and Retention Guidelines*, not in this revision or in general in individual cover type chapters.

   ii) I would also like to comment on the rotation ages. In Bayfield County our red maple is generally poor to medium quality and I am not sure how our red maple compares to the other parts of the state that contain more red maple such as Clark and Price counties. I personally think the rotation ages seem a little long, especially on the habitat type groups when the principal product is fiber. When I manage many of our stand that are generally around 90 years old, most of the red maple is not sound. I am wondering where the rotation age lengths came from. I think the chapter looks good.

   - Response: Rotation length guidance is based on a review of FIA data (statewide MAI/PAI evidence), a survey of statewide forestry professionals, and the best estimations of the authors and other contributors. To address rotation age flexibility, the following was added to the draft:

"Rotation ages may be shortened or extended (i.e. extended rotations may exceed 110 years) based on the considerations above." (pg. 51-21 paragraph 2)

7. Gentlemen, I reviewed the chapter. Looks good. Clear and concise. I like the table summarizing the Natural Regen Methods. Thank-you

    - Response: Thank you, no response or edit needed.

8. Given time constraints, I want to add my support to comments copied below.

    i) On page 51-21, I think both the regular and extended rotations are too low on mesic sites (and a notch above and below). I see numerous stands of free to grow or well managed stands of MR sawtimber or mixed with hemlock that are about 90+ now and show no signs of slowing down or hitting the wall. I recommend adding at least 10 years to both the regular and extended rotations.

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    - Response: The Economics Consideration section, new to the Red Maple Chapter revision, is intended to widen the scope of management concerns. The following, from the draft revision relates to this comment and concern:

        "Based on conversations with many Wisconsin mills, a consensus is that when today's red maple trees reach an average 18" – 24" DBH or approximately age 75, defect becomes more prevalent." (pg. 51-23 paragraph 1)

    - Revision:

        "Based on conversations with many Wisconsin mills (2014), there is a consensus that due to stand history (i.e. conversion from aspen, high grading, woodlot grazing, etc.) defect is more prevalent in red maple trees with an average 18" – 24" DBH or approximately age 75." (pg. 51-23 paragraph 1)

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seem to be setting rotation ages based simply on site index (getting accurate site index for MR is difficult since it often has not been free to grow) and seems at odds with other information in the chapter.

- Response: Thank you; the rotation ages listed on the draft red maple site index chart have been removed.

iii) On Menominee we harvested many large diameter red maple that exceeded 75 years old and had nearly flawless hearts. It all depends on stand history. The rotation ages on dry-mesic and mesic sites should be extended by 20 years. If you're going with subjective statements in this chapter from log buyers, then mine are as valid as those.

I've never met a log buyer yet that didn't want to cut a tree as soon as it was merchantable. That doesn't mean the tree is mature or that it has hit its highest value. The economics never mentions veneer and hopefully DNR is not promoting < 18" diameters just so they won't "create problems at many pulp and chipper mills". (Odd that all of my loggers can take wood larger than that to pulp mills.) The first two paragraphs on page 51-23 would promote the degradation of our forests and should be extensively revised.

I hope that more analysis can be incorporated into the rotation ages and diameter discussions in this chapter. It would be greatly improved.

- Response: The Economics Consideration section, new to the Red Maple Chapter revision, is intended to widen the scope of management concerns. The following, from the draft revision relates to this comment and concern:

> "Given current markets, another consideration is tree diameter. Based on conversations with many Wisconsin mills, many cannot accept wood over a certain diameter due to mechanical constraints of large wood in the debarking and chipping process. In general when the diameter reaches 18" it creates problems at many pulp and chipper mills. Both product mills share the same size limitation." (pg. 51-23 paragraph 1)

1. Revision:
"Given current markets, another consideration is diameter. Based on conversations with many Wisconsin pulp and chipper mills (2014), many are unable to accept wood over 24" dia. due to mechanical limitations in the debarking and chipping process." (pg. 51-23 paragraph 2)

9. I don't have much to comment on, not having much red maple experience. I did notice that the Hydrology paragraph on 51-4 was duplicated under the associated species section on 51-3.

- Response: The duplicated paragraph in "Type Description: Associated Species" has been deleted.

10. I couldn't help but notice this section, Economics Considerations, in the Red Maple Draft Chapter. I assume we are going to be seeing similar verbiage in all chapters from now on?

- Response: The Economics Consideration section, new to the Red Maple Chapter revision, is intended to widen the scope of management concerns. This section will be included with future chapter revisions. This section has been modified from the draft version (see above).

i) Diameter was removed from the order of removal some years ago. With this draft, does this mean trees that exceed 18" in diameter now meet the High Risk category in order of removal? Having a hard time getting my head around that – particularly if there are no external factors pointing in that direction.

- Response: No, the Economics Consideration section, new to the Red Maple Chapter revision, is intended to widen the scope of management concerns. The following, from the draft revision relates to this comment and concern:

  "Based on conversations with many Wisconsin mills, a consensus is that when today's red maple trees reach an average 18" – 24" DBH or approximately age 75, defect becomes more prevalent." (pg. 51-23 paragraph 1)

- Revision:

  "Based on conversations with many Wisconsin mills (2014), there is a consensus that due to stand history (i.e. conversion from aspen, high grading, woodlot grazing, etc.) defect is more prevalent in red maple trees with an average 18" – 24" DBH or approximately age 75." (pg. 51-23 paragraph 1)

- Revision: The following was added to clarify the purpose of considerations.

  "MANAGEMENT CONSIDERATIONS
  The following considerations may be taken into account when making management recommendations." (pg. 51-22 Section Title)

11. I reviewed the red maple chapter and will offer my comments.

i) 51-2: All of the pages referenced in the table of contents are off by one number. Type Description is 51-2 but should be 51-3, and so on.

- Response: Good catch; this is due to the page numbers starting with the preface and not the index. This will clear up automatically on the final draft which does not include the preface.

ii) 51-3 and 51-4: The paragraph on 51-4 under Hydrology that starts with "Red maple grows on diverse sites…." This paragraph is also on page 51-3 under Associated Species. Seems like it should be deleted from page 51-3.

- Response: The duplicated paragraph in "Type Description: Associated Species" has been deleted.

iii) 51-8: Vegetative reproduction paragraph. (looks like missing the word to): Compared to oak species, stump sprouting with red maple does not decrease in relation residual basal area and peaks in partial harvest treatments (Atwood 2009).

- Response: Good catch, "to" has been included.

iv) 51-14: First paragraph references Table 52.6 but there is no table 52.6 in the document. Looks like Table 52.6 is a central hardwood table (page 52-37 in the central hwd chapter) Looks like quite an in depth table and lots of big numbers and statistical formulas. My only comment would be how many people are actually going to use this?

- Response: This Table 52.6 is the background for calculated relative density, not derived from a stocking chart. This was not repeated in this chapter for the reasons you mention.

v) 51-14: Uneven-Aged Systems paragraph. (looks like missing the word for) Uneven-aged silvicultural systems, group selection and/or patch selection may be utilized for the management of red maple stands on the mesic and wet-mesic sites which have the potential sawlog production.

- Response: Good catch, "for" has been included.

vi) 51-15 and decision models on 51-19, 20: On 51-15 under Shelterwood it says to leave 50-75% crown closure. Regeneration is usually accomplished using a two-step shelterwood. Initial harvesting (seed cut) is designed to provide proper crown closure and tree spacing depending on the preferred species composition, leaving a high and uniform crown cover of 50 - 75 % in the residual shelterwood overstory. On the decision models it says to leave 30-50%. These should match up I would think. 30% seems awfully low.

- Response: To avoid potential confusion, residual canopy cover targets have been removed from the red maple decision models.

vii) 51-19: Under the first step under thinning, it says to retain 90 BA. This is a high BA for a first thinning. I would think it should say at least 70-90 like on the mesic decision model. Also each model is different under thinning. Dry says 90 BA whereas mesic one says 90 FT2

- Response: To avoid potential confusion, both the intermediate treatments discussion and the decision models have been modified to refer to 70-90 BA.

viii) Referencing Table 51.5 on page 51-38, since this table is not referenced in the document it was kind of hard to interpret to me. It took numerous readings to get what it is trying to say. Not sure if the write up on 51-38 could be better cleaned up to reflect rate of returns and better describe the table? Just something about it stumped me for a bit. Also the sentence describing the table has log-grades (letter) I and 2 instead of the (number) 1 and 2.

- Response: This table was a relic from a previous version of this chapter. Table 51.5 has been deleted.

ix) 51-24 (red needs to be capitalized in middle paragraph) "White Pine-red Maple Swamp"

- Response: Thank you, "red has been capitalized in the final draft.

x) Minor capitalization comments in general, review "red maple" throughout document.

- Response: The capitalization of "red maple has been reviewed and edited throughout the document.

xi) Do they make stocking charts that estimate crown closures under 80% so you can relate crown closure to basal area based on stand diameter? (50% cc would = this basal area for each diameter class)

- Response: There are no relative density or crown closure charts currently available which the authors are aware of. This has been noted as a need for future improvement of this chapter. Please note that if inventory tracks diameter in red maple stands, it may be possible to calculate relative density. A discussion of this can be found on page 51-14.

12. I have just a few comments for you:

i) Under natural regeneration methods, I see the seed tree system to be a viable option for sites by me. Particularly on ArAbCo habitat types. One harvest and you are done. The seed trees can be retained as green tree retention, age class diversity and future coarse woody debris.

- Response: Thank you for the feedback. Field observation has shown that several sites deemed as successes for seed tree were likely closer to overstory removal harvests which rely on advance regeneration. While the authors did note some possible successes, this was not included in red maple guidance yet. If seed tree proves to be successful in trials or future research, the chapter will be revised.

ii) I question the upper limit of crown closure to retain in the shelterwood method. I would think 50% is more than enough and 75% is too much.

- Response: The guidelines in this chapter revision reflect a desire to provide flexibility in shelterwood application. 75% as an upper limit to residual crown closure mimics the residual crown closures used for northern hardwood shelterwood see cuts. If 75% proves to be unsuccessful in application, the chapter will be revised.
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iii) Under the rotation length, particularly for the wet-mesic, 110 years is too long for a fiber site. I would think 90 years is long enough.

- Response: See response to Comment 5 above.