

Final Report: 2018 Silviculture Handbook Survey

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Overview

The goal of this survey was to take a close look at how foresters use the Wisconsin DNR's Silviculture Handbook, to understand how we can improve the silvicultural resources and information to better meet the needs of foresters working in Wisconsin. The online Silviculture Handbook survey was open June 5 – 22, 2018. Two reminders were sent to potential Handbook users. Any questions about the survey may be directed to Carmen Hardin, Applied Forestry Bureau Director at carmen.hardin@wisconsin.gov.

Respondents

In total, 305 respondents completed the survey. 284 of the respondents identified as "users" (i.e. they referred to the Handbook within the last 5 years). The survey had a strong response, representing a diversity of users. As expected based on our understanding of who uses the Handbook in their work, the majority of respondents were state, private consulting and county forestry professionals.

Table 1. Respondents by work position.

Work position	Percentage of respondents	Number of respondents
State forester/land manager/technician	51%	155
Private consulting forester/land manager/technician	19%	58
County forester/land manager/technician	13%	39
Other role (please specify)	8%	24
Industrial forester/land manager/technician	7%	20
Tribal forester/land manager/technician	2%	5
Federal forester/land manager/technician	1%	3
Logger	< 1%	1

- About half of respondents, 53% (161), work on Managed Forest Law lands.
- 28% (86) of respondents identify as DNR cooperating foresters.
- Respondents most commonly work on non-industrial private, state and/or county land:
 - 63% (191) non-industrial private land
 - 45% (135) state land
 - 42% (127) county land
 - 11% (34) federal land
 - 10% (29) REIT/TIMO/industrial land
 - 3% (9) tribal land
- Most respondents have many years of forestry experience:
 - 41% (123) have more than 20 years
 - 25% (77) have 11-20 years
 - 22% (67) have 5-10 years
 - 12% (37) have less than 5 years
- Respondents represent all regions of the state, with more working in northern and central Wisconsin:
 - 41% (124) Northeast WI
 - 39% (117) Northwest WI
 - 31% (94) Central WI
 - 18% (56) Southwest WI
 - 13% (38) West Central WI
 - 12% (36) Southeast WI

Note: Of the 18 non-users who responded to the survey, 13 didn't know the Handbook existed, 4 don't need silvicultural information for their jobs, and 1 prefers to use other silvicultural resources.

Use of the Handbook

Respondents most often use *Section II: Silvicultural Methods* and *Section III: Cover Types* in their work. Less than 20% of respondents use the other sections of the Handbook on a regular basis (daily, weekly or a few times a month).

- 50% of private consulting foresters, 37% of state foresters, 29% of industrial foresters, and 16% of county foresters use *Section II: Silvicultural Methods* daily, weekly or a few times a month.
- 70% of private consulting foresters, 51% of state foresters, 39% of county foresters, and 35% of industrial foresters use *Section III: Cover Types* daily, weekly or a few times a month.

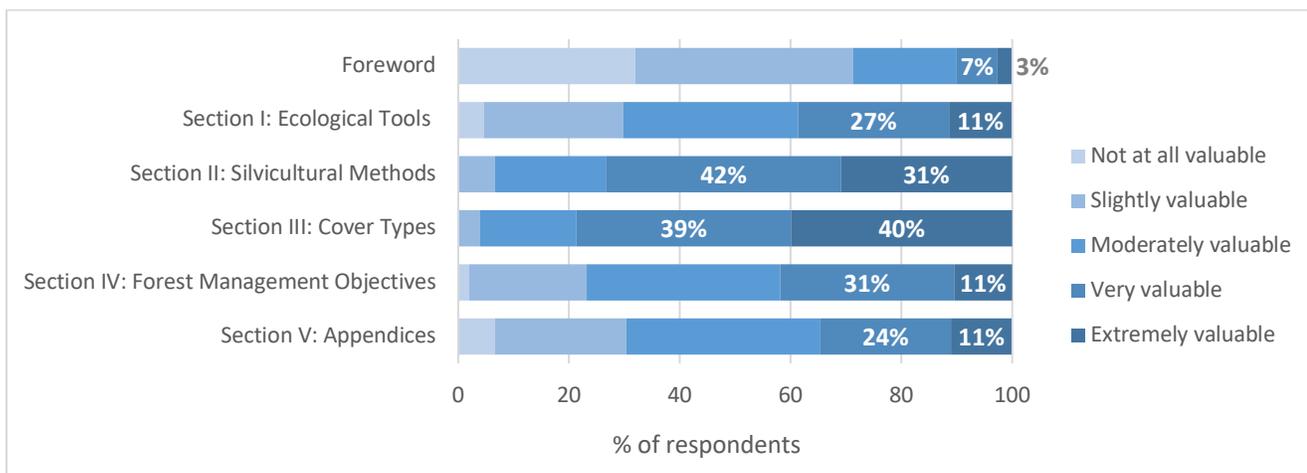
In an open-ended question, respondents said they typically use the Handbook in their work for:

- writing management plans
- checking site index and stocking charts, rotation ages and regeneration techniques.
- reference when working in new cover types or when in need of alternative management options.
- developing prescriptions.
- providing management recommendations for or exploring options with landowners.
- establishing timber sales and writing cutting notices.

Value to their work

Although respondents may only use parts of the Handbook on a regular basis, respondents do indicate they value the information in the Handbook for a variety of reasons.

Figure 1. Level of value the Handbook sections provide to their work, *by percentage of respondents.*



- 79% of state foresters, 78% of private consulting foresters, 77% of industrial foresters, and 48% of county foresters said *Section II: Silvicultural Methods* is very to extremely valuable to their work.
- 86% of state foresters, 82% of private consulting foresters, 71% of industrial foresters, and 57% of county foresters said *Section III: Cover Types* is very to extremely valuable to their work.

In an open-ended question asking respondents how the Handbook could be improved to be of more value to their work, the *most common* responses were:

- All the information is valuable, even if I don't use it often.
- Make it more relevant, applicable, and update the content more often.
- I'm not sure how it could be improved.
- It's too long and time consuming to read through.
- I am experienced and just don't need to reference the Handbook as often.

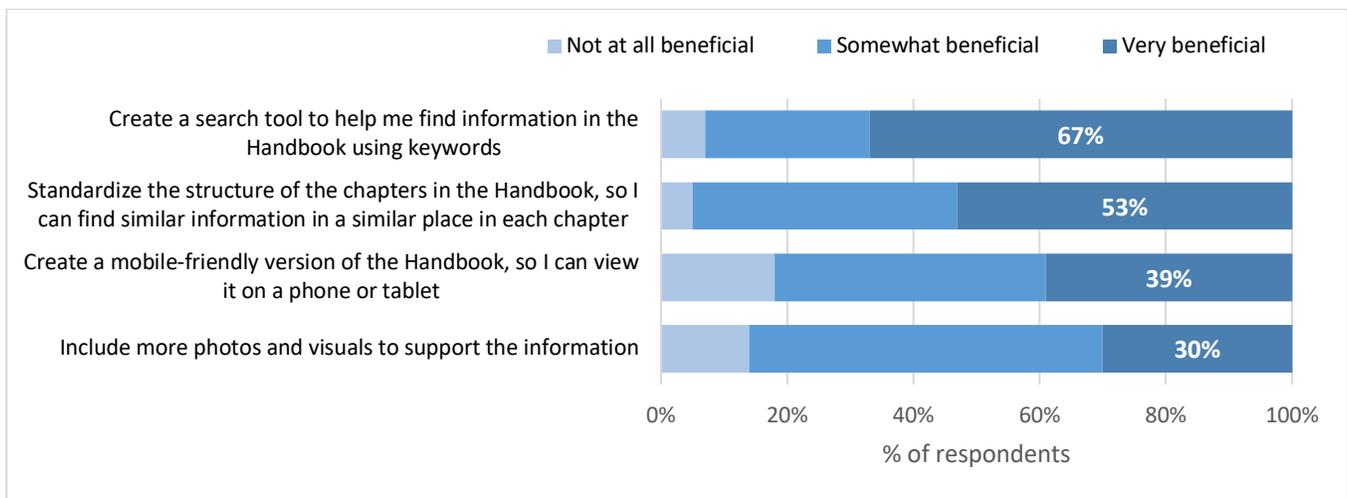
Silvicultural Trials directory on the DNR website:

Only 24% (62) of respondents use the silvicultural trials directory, while 42% (108) of respondents are completely unfamiliar with the directory. There is clearly an opportunity to better communicate with forestry professionals about current silvicultural trials, where they can find useful information coming out of recent trials, and how this information can support their work.

Format of the Handbook

When respondents were asked about four potential format changes to the Handbook, the majority of respondents indicated the most beneficial changes were tied to *finding information more easily*.

Figure 2. Level of benefit from potential format changes by percentage of respondents.



In an open-ended question asking respondents to provide other ideas for improving the format of the Handbook to support their work, the *most common* responses were:

- No changes are needed. No ideas come to mind.
- Standardize the chapters and organize the content to make it more user-friendly (e.g. quick links to site index curves, stocking charts, rotation ages).
- Make the Handbook more concise to make it “simpler and easier to use”. The chapters are too long, too “wordy”, and have “too much narrative”.

“The handbook is [a] very useful tool. If you use it and become familiar with it, it is very easy to use.”
– State forester

“The easier it is to view and find the necessary information, the more it will get used.” – County forester

“Be careful about making chapters too long, with too much narrative. Be concise, don’t try to add every possible comment/idea/alternative to these chapters.” – Private forester

Information in the Handbook

New content

Silvicultural techniques for managing invasive species was the most popular choice, across all work positions, for new content that would be very useful to their work (66% of respondents).

- over 50% of county foresters feel *return-on-investment decision-making tools* would be very useful.
- over 50% of industrial foresters feel *prescription writing guidance* and *stand/site assessment tools and management decision support models* would be very useful.
- over 50% of state foresters feel *silvicultural guidance on a wider array of forest products* and *stand/site assessment tools and management decision support models* would be very useful.

Landowner objectives

Over 50% of respondents (for all work positions) say the Handbook supports *timber production*, *forest health*, and *wildlife habitat* landowner objectives. Fewer than 50% of respondents feel the Handbook supports *economic return*, *landscape planning*, and *recreation* objectives. Respondents did not demonstrate a clear preference for *where* it would be useful to include information in the Handbook about landowner objectives. The most popular option, supported by only 43% of respondents, was to include them in “a general section on landowner objectives”.

In an open-ended question asking respondents about any other areas of the Handbook that could be improved to meet landowner objectives, the *most common* responses emphasize:

- the Handbook should maintain its focus on sustainable forestry and silviculture
- it’s the foresters’ job to understand and incorporate landowner objectives
- landowner objectives are too diverse to specifically address all of them in the Handbook

“Just describe different silvicultural techniques in each chapter and what the response will be. I will figure out how to apply that to landowner objectives.” – State forester

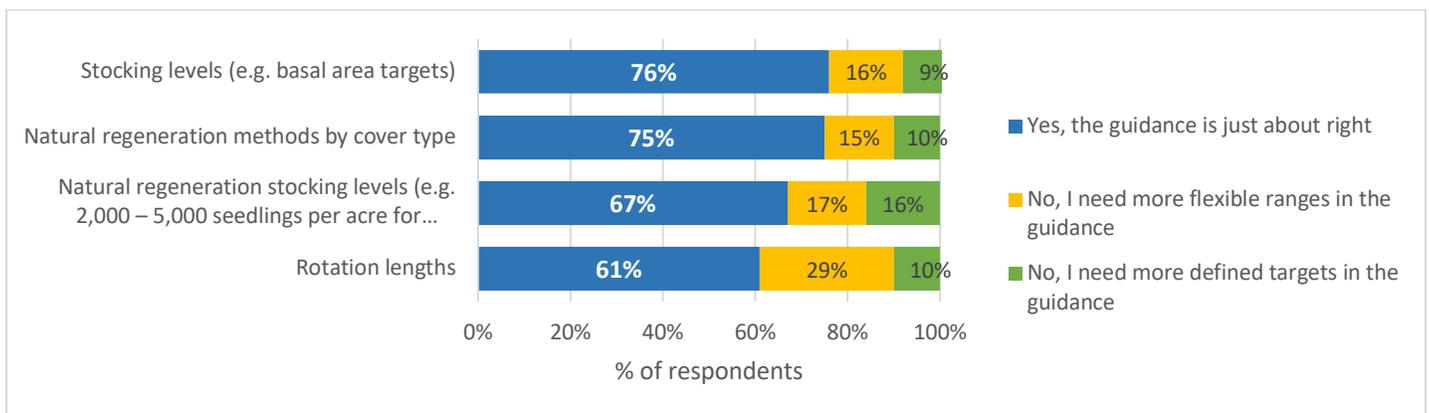
“Objectives seem too varied to effectively address in the Handbook and we shouldn’t be re-writing silvicultural techniques around landowner objectives.” – Private forester

“If this is MFL landowner objectives, I think they are too broad to try to cover specifically in the Handbook. The forester has to problem solve and there has to flexibility in the Handbook/enforcement.” – County forester

Flexibility in the guidance

Overall, over 60% of respondents feel the Handbook provides “just about the right” level of guidance to meet landowner objectives (Figure 3). For all four categories below, a slightly lower percentage of MFL respondents feel the guidance is just about right, compared to non-MFL respondents. In addition, a lower percentage of county and industrial foresters feel the guidance is just about right, compared to state and private consulting foresters. “Rotation lengths” is the category the fewest number of respondents are satisfied with, which is a fairly consistent trend across work positions.

Figure 3. Level of flexibility needed across four areas of Handbook guidance *by percentage of respondents*.



In an open-ended question asking respondents to describe the content or the situations in their work where they need more defined targets or more flexible ranges in the Handbook guidance, the responses were diverse. Most comments described using their professional experience to provide the flexibility they need, needing flexibility in rotation lengths for specific cover types, and needing guidance for unique regional markets and forestry challenges.

“Rotation ages need more flexibility to work with conditions in the forest and market variability.” – Private forester

“More specific targets management in NH and PR when the goal involves a certain product type.” – State forester

“Oak regeneration is difficult due to markets, deer density, and terrain. Defined regional targets could be developed. Alternatively, more flexible ranges could be developed to accommodate the silviculture necessary in the region” – Industrial forester