



Oak to Cut or Not to Cut?

Regenerating Oak/Hickory Woodlands in Southwestern Wisconsin

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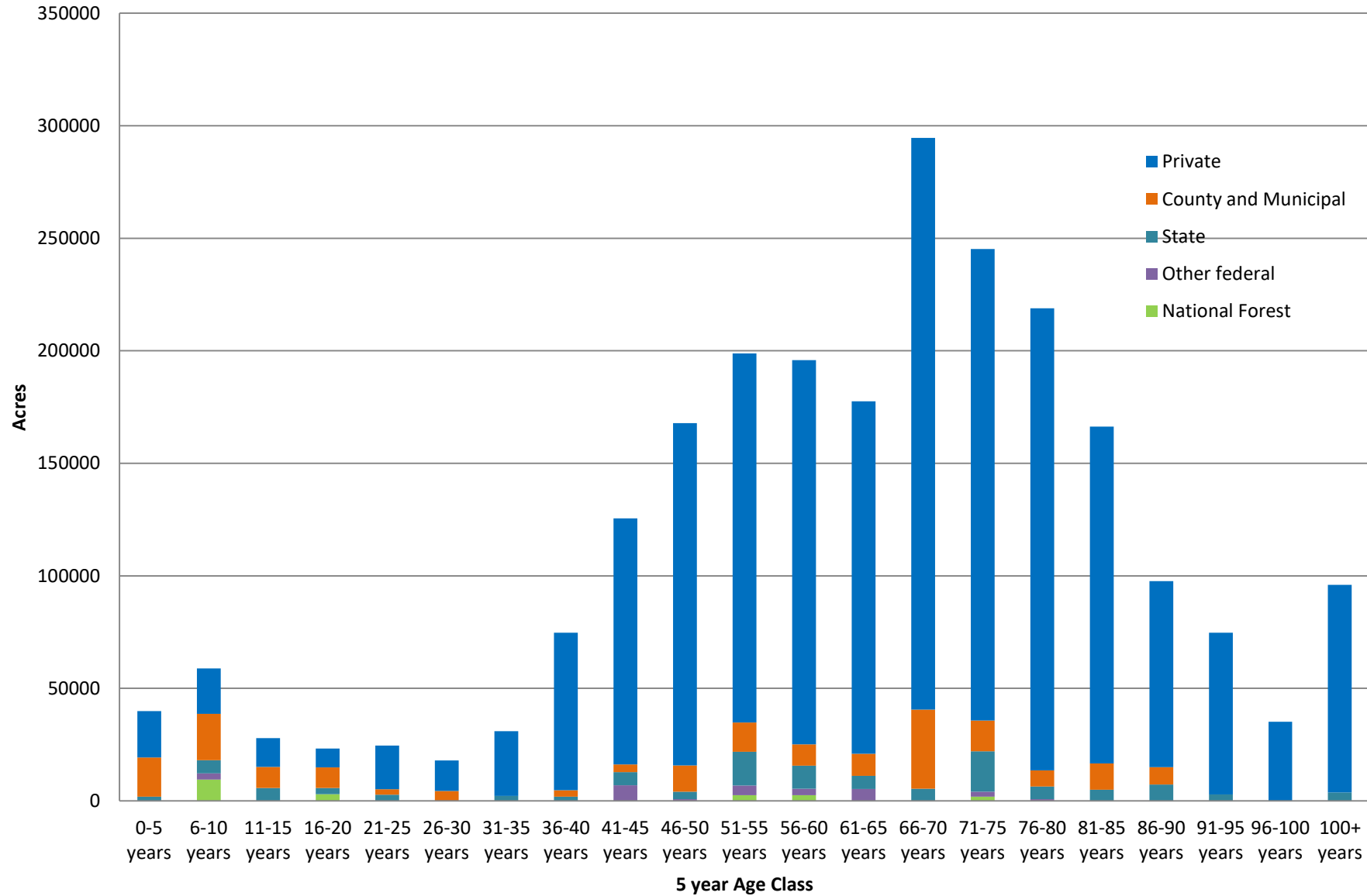
Oak Forest Basics

- Mismanagement or no management is resulting in:
 - Conversion to more shade tolerant trees and shrubs on dry mesic / mesic sites.
 - Loss of Oak biodiversity with implications for insect and bird populations
 - Loss of Oak as a potential future “renewable” resource.

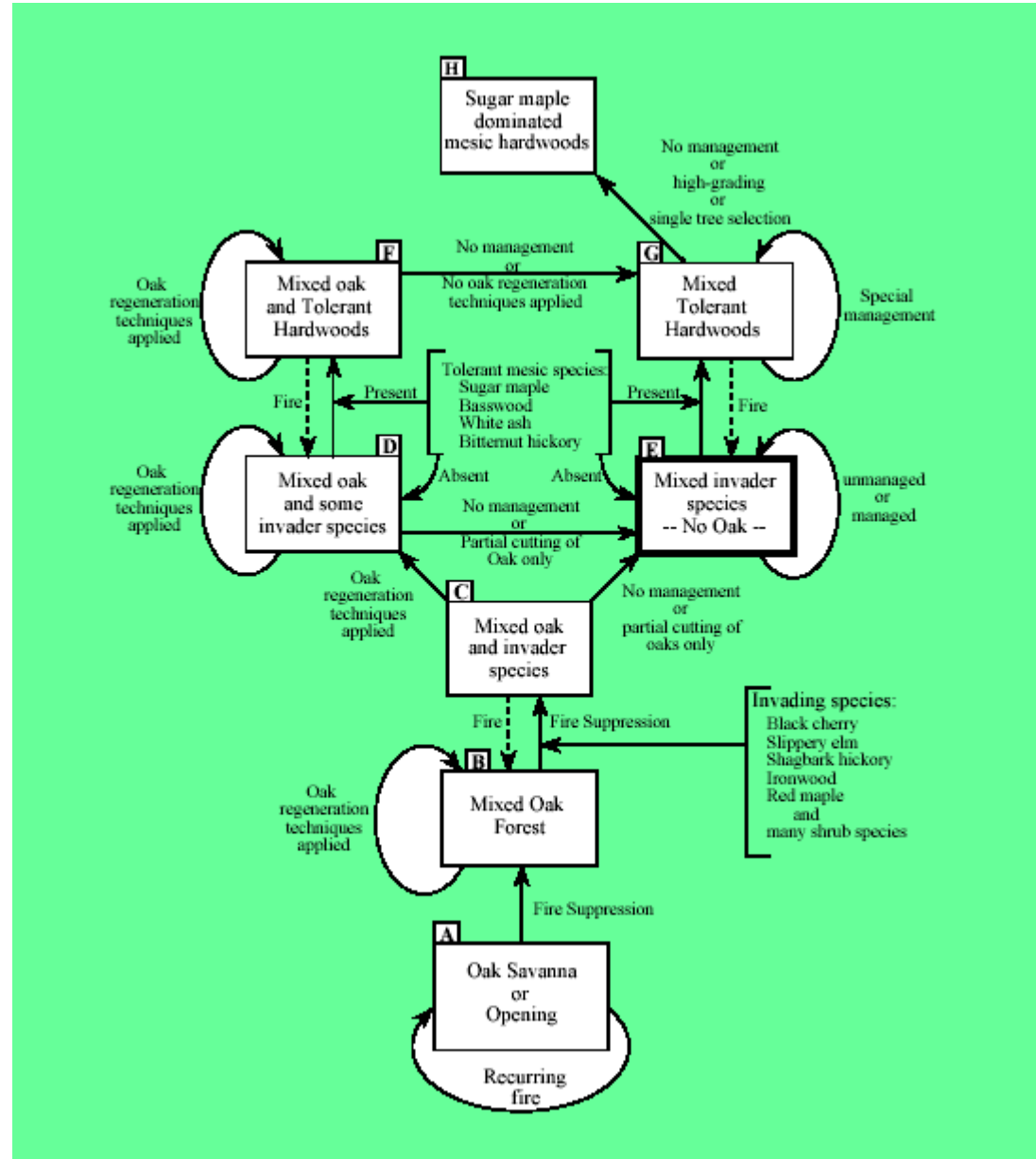


Is the current age class distribution balanced?

Acres of Oak / Hickory by Age Class and Ownership (FIA 2011)



Forest Community Dynamics (with and without management) on Mesic and Dry-mesic Sites in Southern Wisconsin



Recommended and Extended Rotation Ages by Habitat Type Groups and Species Group

Habitat Type	Black/Pin Oaks	Red Oak	White Oaks
Dry	<i>70-90-110</i>	<i>70-100-120</i>	<i>80-110-150</i>
Dry Mesic	<i>80-110-140</i>	<i>80-120-150</i>	<i>80-140-250</i>
Mesic	<i>90-120-150</i>	<i>100-140-200</i>	<i>100-160-300</i>

Note: 1st and 2nd number represent the timber rotation age, and the 2nd and 3rd numbers represent the potential extended rotation age

Oak Regeneration

- The regeneration of oak forests is an ecological process, not an event.
 - The oak regeneration process may straddle the end of a rotation and the beginning of the new stand (10+ years).
 - It takes planning, deliberate actions, commitment and “luck”.
 - Includes site evaluation, pre-sale work, timed appropriate harvest, post-sale follow-up.
 - We don't have all the answers.





The Oak Management Process

Your woods will not look the same...

Disturbance is a good thing...

Timing is critical...

Site Evaluation

□ Timing of the harvest is critical.

– Considerations:

- Is oak regeneration feasible, or economical?
 - Advanced non-oak regeneration, high deer populations.
- You need existent, well developed, advanced seedling/sapling oak regeneration (min 400/acre >1500/acre desired). Not all your seedlings have to be oak (may require future management actions).
- Control of competing tree regeneration and competing vegetation (invasive plants)





Low intensity fire may play a critical role in the perpetuation of oak on mesic sites...

Competitive Advantage

Competition from other species might be reduced and the proportion of oaks in advanced reproduction might be increased with fire.

Use cautiously as fire can damage crop trees and kill young oak seedlings and acorns.

Under Planting

A man wearing a tan cap, a plaid shirt, and blue jeans is using a shovel to dig in a forest clearing. The ground is covered with dry leaves and twigs. In the background, there are several trees and pink markers on the ground. The scene is outdoors in a wooded area.

Planting oak seedlings in combination with natural seedlings can help improve success. Perhaps you may “augment” existing regeneration with 200-500 seedlings per acre.

Oak Harvest/Regeneration Methods



Even-aged: provide required sunlight

- Overstory Removal (regeneration established)
- Shelterwood (to establish regeneration)
- Coppice (stump sprouts, not reliable on larger size trees)
- Patch cut (0.5 to 2 acres,)
- Clearcut (relies on acorn crop, risky)



Overstory Removal

- Already have desired, established
- Essentially a clear cut.
- May require post sale cleaning

Key Component

- Controlling light to seedling
- Controlling competition
- Regeneration established



Overstory Removal.....



09.13.2012

Shelterwood

- To develop established seed origin regeneration
- Two-cut shelterwood is standard
 1. Preparatory cut (Optional)
 2. Seeding cut (may be non -commercial)
 3. Overstory Removal cut (ends in Clear Cut)

Key Components

- Controlling light to seedling
- Controlling competition
- Acorns incorporated into soil





Shelterwood harvest to establish regeneration.

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Even-aged Patch Clear Cuts

- .05 -5 acre patches
 - each patch is a “stand”
- area regulation at property level
- Need to start early in rotation age to allow for future harvests
- Treat the same as if a larger stand



Clearcut – Driftless Area

- No advanced regeneration
- Depends on regeneration by seed during or following cutting
- Timed to excellent acorn crop
- Can be risky
 - new seedlings originating post harvest may have problems competing, particularly on better sites
- Follow-up work may be needed to release
- If not successful, will require planting





Often times a combination of techniques.....

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Post-Sale work and follow up



A photograph of a forest clearing during a timber stand improvement project. The ground is covered with a thick layer of brown leaves and numerous cut logs and branches. Several trees are visible, some with fresh cuts on their trunks. The background shows a dense forest of bare trees under an overcast sky.

**Cleaning the Patches/Post sale
Timber Stand Improvement**

Invasive species management



Oak seedling monitoring & release.

- Evaluate in 3 years, release oaks if needed
- Age 10, release oaks if needed
- Favor oaks during normal management practices



Timber Sale 101





Hire a Professional Forester

- **Have the timber marked**

- **Volume estimated**

- **Sold on bids.**

Generally sell, “Lump sum” Standing

Bakkenskov, LLC
Hardwood Timber Sale
 Seller: Bakkenskov, LLC
 John and Carol Nielsen
 502 Prairie Street
 Mt. Horeb, WI 53572
 608-206-4123

Location: NESW, NWSW, Sec. 15, T9N, R2W
 Richwood Township
 Excelsior Road, Fire #
 Richland County, Wisconsin
 (see attached map)

Sale Size: 279 trees on 20 acres.
Good Access. Level to sloping topography.

Estimated gross volume: **54440 bd. ft.**
Scribner
 193 bd. ft./tree average
 Red Oak 275 bd. ft./tree average

Trees are marked with **Orange and Red Paint.**
Walnut are marked with blue paint.

Tree quality is good to excellent.

Sale Conditions:

1. Harvesting only when ground is frozen or dry. No harvesting during oak wilt season.
2. Purchaser responsible for determining actual tree volume.
3. Scaled sale, Payment to be negotiated prior to harvesting.
4. Proof of insurance required prior to harvesting.
5. New roads and landings must be approved by landowner. Existing roads must be returned to a like or better condition.

Contact: John Nielsen, Nielsen and Nielsen Forestry, LLC 608-206-4123 with questions

Tree species	# of trees	Est. BF
Red Oak	76	20,840
White Oak	8	1,260
Sugar Maple	54	9,660
Walnut	11	2,620
Red Maple	11	1,740
Ash	84	13,460
Cherry	1	220
Aspen	6	1,120
Hickory	18	1,700
Basswood	9	1,080
Elm	9	1,140
Hackberry	3	640
Total	279	54440

60% of trees are 18" DBH and greater.

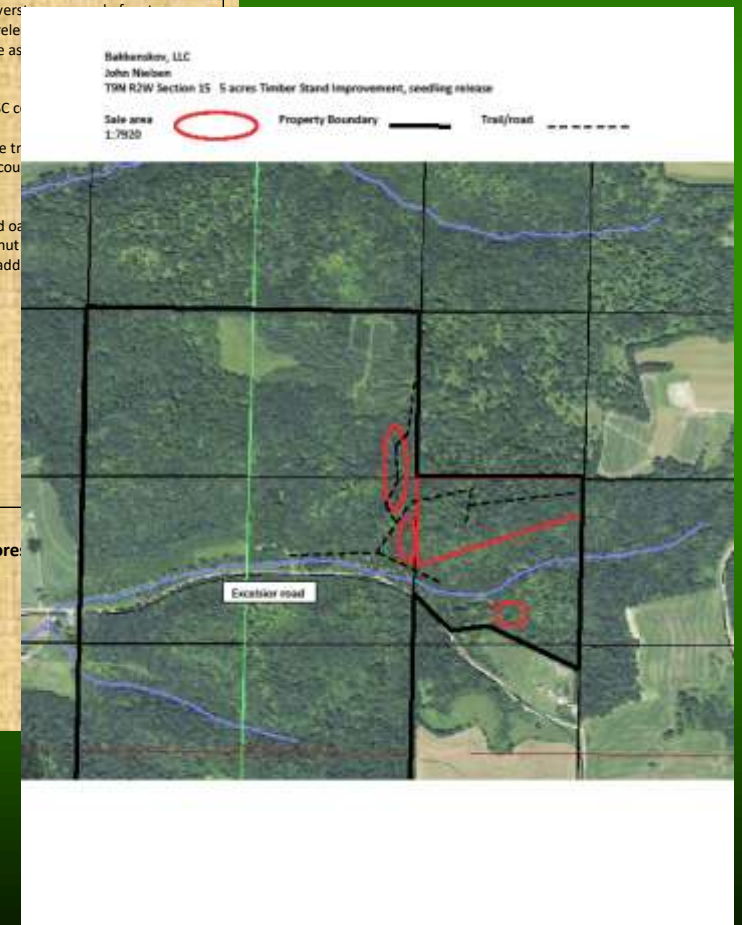
Purpose of the sale over patches of timber to release seedlings. And salvage as

Trees are ATFS and FSC o

Walnut were the same tr cut my walnut tree a cou

There is additional red oa as well as several walnut around 10,000 bd ft. add

John Nielsen, Nielsen and Nielsen Fore
 502 Prairie Street
 Mount Horeb, Wisconsin 53572
 or
 nielsenforestry@gmail.com



Have a Timber Sale Contract

- Protects your interests
- Payment schedule
- Special requirements**
ie. Fall/Winter logging

** be reasonable, too many restrictions can reduce interest in your timber sale.

Nielsen TIMBER SALE CONTRACT¹

This Contract is entered into by and between Bakkenskov, LLC(John and Carol Nielsen) (Seller), and
John Schwartzhoff (Purchaser). Contact information is listed in par. 53 of this agreement.

The Seller hereby authorizes the Purchaser to enter upon the following described lands (the Premises) for purposes of cutting and removing timber marked or otherwise designated by the Seller:

County: Richland Town Name: Richwood

Town: 9 N; Range 2W ; Section 15 ; Legal Description(s) SWNW, NWSW

Town: 9 N; Range 2W ; Section 16 ; Legal Description(s) SENE

Those Premises are further described on the map(s) or diagram(s) attached to and made a part of this Contract.

FOR AND IN CONSIDERATION of the following terms and conditions the Seller and the Purchaser mutually agree:

CONTRACTING PARTIES

1. **CONTRACTING PARTIES**

- Seller and Purchaser. In this Contract, the Seller and the Purchaser include their respective officers, employees, agents, directors, partners, representatives, successors, heirs and members.
- Purchaser Ceases to Exist. If the Purchaser ceases to exist, in fact or by law, the Seller may terminate this Contract without waiving any remedies available to it and take all action necessary to assure its performance.
- Subcontracting. This Contract or work under it may not be assigned or subcontracted in part or in whole without prior written approval from the Seller and may be changed or amended only in writing. The Purchaser agrees to notify the surety, if any, of any such change or amendment.

ENTIRE CONTRACT

2. **ENTIRE CONTRACT.** This Contract, together with specifications in the request for bids as well as reference to parts and attachments, shall constitute the entire agreement and any previous communications or agreements pertaining to this Contract are hereby superseded. Any amendments to this Contract shall be in writing, signed and dated by both parties.

3. **ATTACHMENTS.** Any and all attachments to this Contract shall be made a part of this Contract and be fully complied with, including:

- Map(s) or Diagram(s) of Sale Area;
- Payment Schedule and Conditions of Payment;
- Other: _____

CONTRACT PERFORMANCE, PERIOD, EXTENSIONS AND TERMINATION

4. **PERFORMANCE**

- Commencement. Cutting and removal of timber in conformance with this Contract may commence and continue only after the signing of this Contract by both parties and only after submission and maintenance of all bonds, certificates or statements required under it.
- Contract Oversight. Cutting and removal of timber purchased under this Contract shall be conducted in conformance with this Contract and in a good and workmanlike manner with reasonable diligence to assure completion of all performance within the Contract period specified in par. 5. The Purchaser shall notify the Seller or the Seller's Agent 36-48 hours prior to commencing harvest of the timber designated herein and upon completion of the cutting. In the event that the harvest is temporarily discontinued for more than one week, the Purchaser agrees to notify the Seller upon discontinuance and resumption of harvest. Notification under this paragraph may be made by telephone to 608 206 4123 (phone number). The Seller or the Seller's Agent may require an onsite meeting before commencement of harvesting.
- Inspection. The Seller retains the right of ingress and egress to and on the sale area and may inspect the sale area and trucks hauling forest products from or traveling on the sale area at any time. If the inspection reveals any violations of this Contract the Seller shall promptly notice the Purchaser. Upon notice from the Seller, the Purchaser shall promptly take measures to remedy the violation.
- Access. The Purchaser has no access or privilege to go upon the Seller's property other than to comply with this Contract and may not authorize access or use to others except for the sole purpose of performing this Contract.

5. **CONTRACT PERIOD**

¹ Where options are listed with "OR", strike the option(s) that does not apply.

**Remember...
Oak Regeneration is a process....**



A photograph of a dense thicket of vegetation, likely a forest edge or a brushy area. The plants are mostly green, with some brown and tan hues, suggesting a late summer or autumn setting. A person's head is visible in the center of the thicket, partially obscured by the leaves. The background shows a line of taller trees under a blue sky with some clouds. A white text box is overlaid on the upper part of the image.

And... the oak regeneration process is dependent on seedlings being there....



Questions?

Thank You