

# The Scale and Cost of Seasonal Timber Harvesting Restrictions in Wisconsin

Michael Demchik, Joseph Conrad, Melinda Vokoun

Professor, Assistant Professor, and Associate Professor, University of Wisconsin-Stevens Point

## Objectives:

1. Identify the most commonly imposed seasonal restrictions and the degree to which seasonal restrictions vary by geographic area, soil type, and forest type in Wisconsin,
2. Estimate the cost of seasonal restrictions, and
3. Summarize the known ecological consequences of seasonal timber harvesting restrictions.

## Findings:

- **Overall, 67% of timber sales analyzed had at least one seasonal timber harvesting restriction.** The most common restrictions were to protect soil/water (44% of sales), access/transportation issues (18%), oak wilt (18%), rare/threatened/endangered species (8%), recreation conflict (6%), and hunting (2%) (Table 1).
- **Fewer than half of timber sales were available for harvest April-July.** Nearly all timber sales were available for harvest December-February, while fewer than half of sales were available for harvest April-July (Table 2). Approximately 75% of sales were available August-November.
- **Professional judgment and landowner objectives were foresters' primary motivators for most restrictions.** Program requirements (e.g. Managed Forest Law) were motivators for invasive species, cultural/archaeological, and oak wilt restrictions. State and federal regulations were the primary motivators for rare/threatened/endangered species restrictions.
- **Mills have responded to seasonal timber harvesting restrictions by holding high inventories, increasing the use of satellite wood yards, and increasing delivered prices.** Ninety percent of pulpmills had employed all three strategies. Sawmills' responses were more variable.
- **We estimated that seasonal restrictions reduced stumpage prices by \$22.2 million per year (\$3.15 per ton of restricted timber).** This estimate was developed using annual harvest volumes by species, percent of sales restricted by species and estimated price reductions reported by foresters, and stumpage price reports.
- **Pulpmills reported annual costs of \$2.6 million per firm as a result of seasonal restrictions.** This equates to \$4.90 per ton of delivered wood. Small sawmill reported average annual costs of \$193,000, or \$16.49 per ton. Increased inventory levels, satellite wood yard costs, and reduced wood quality from extended storage were the primary costs.

- **The most impactful restrictions reported by mills included oak wilt, access/transportation, and seasonal weight restrictions on public roads.** All three of these restrictions affected large acreages and made many acres of timber unavailable for extended periods each year.
- **Restrictions designed to protect resources or species that utilize the forest resource may have unintended consequences.** While there is research and thought that supports protection of resources and species, there is little research determining the effectiveness of restrictions designed to protect resources or species. Similarly, there is little research in terms of ecological consequences of the restrictions. For example, harvests in pine stands are often concentrated in spring because other species may be unavailable for harvest. Likewise, the requirement to harvest many hardwood stands during winter reduces soil scarification, which may impact disturbance dependent species such as oak. These consequences are not well understood.

Table 1: The percentage of total sites with seasonal harvest restrictions due to each classification of reasons sorted by landowner classification.

Reason for Seasonal Restriction	State	County	MFL	Non-MFL	Overall
Soil/hydrologic disturbance	36	45	63	30	44
Access/transportation	22	12	14	20	18
Oak wilt harvest season restriction	23	16	10	14	18
Rare/threatened/endangered species.	14	1	3	5	8
Recreation conflict	11	2	3	9	6
Hunting	1	0	4	1	2
All reasons	72	66	75	55	67

Table 2: Percent of timber sales available by month and ownership. Note: some of the sales listed as available during December through March may not actually be harvestable during the entire period depending on weather conditions. MFL = Managed Forest Law.

Ownership	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
State	100	100	75	52	52	52	56	87	87	87	87	100
County	99	99	72	43	43	44	46	67	67	67	67	100
MFL	100	100	67	31	30	30	32	59	61	61	61	100
Non-MFL	100	100	88	77	77	77	77	91	91	91	91	98
Total	100	100	74	47	46	47	49	73	73	73	73	100