

229 P NP DM8
Programme décennal d'épandage de phytocides par voie
aérienne en milieu forestier sur des terrains privés de
Smurfit-Stone inc. sur le territoire de La Tuque et de la
MRC du Domaine-du-Roy
Mauricie 6211-13-011

Conifer sustainability in Ontario's forests

BAPE public hearing
La Tuque, Quebec
May 8, 2006
Michael Irvine

Ontario Crown Forest Sustainability Act:

- Large healthy, diverse and productive Crown forests and their associated ecological processes and biological diversity should be conserved

Outline:

1. Vegetation management is necessary to maintain conifer in forests
2. Herbicides affect wildlife through habitat modification, not toxic effects
3. Sustainability of some wildlife species requires that we maintain conifer in the forest

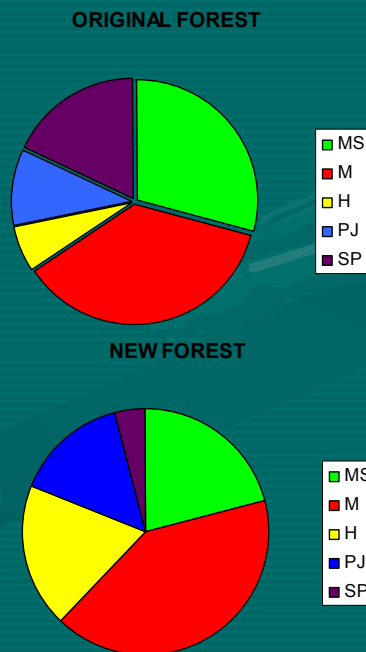
1. Vegetation management is necessary to maintain conifer in forests

What is vegetation management?

- Managing plants to meet an objective
 - industrial rights-of-way (railroad, hydro)
 - agriculture
 - forestry

Hearnden *et al.* 1992:

The new forest contains less spruce, less mixed conifer, more mixedwoods and more hardwoods















Bending Lake
Research site

Jack pine - tended
and untended

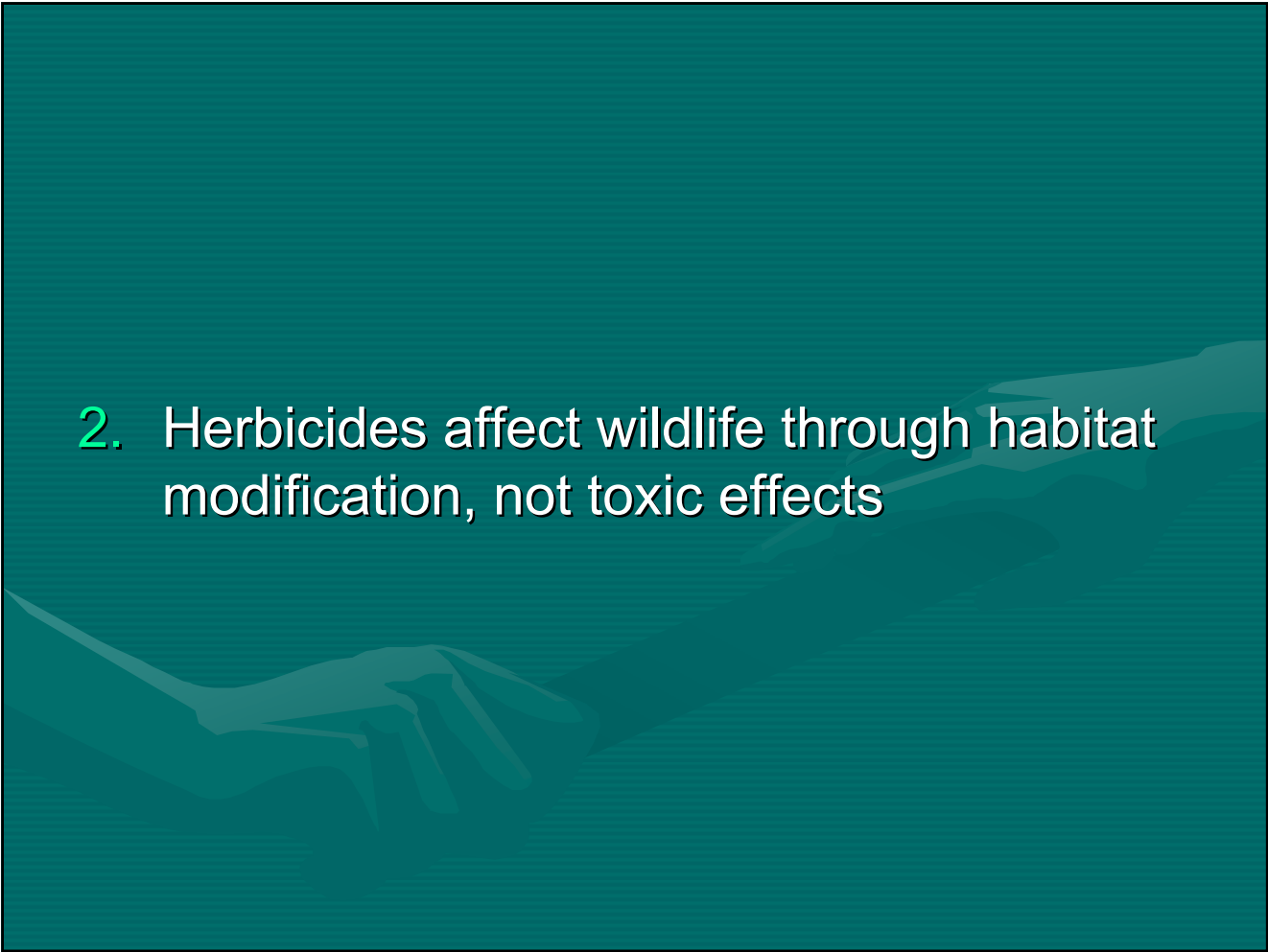


Thunder Bay - white spruce





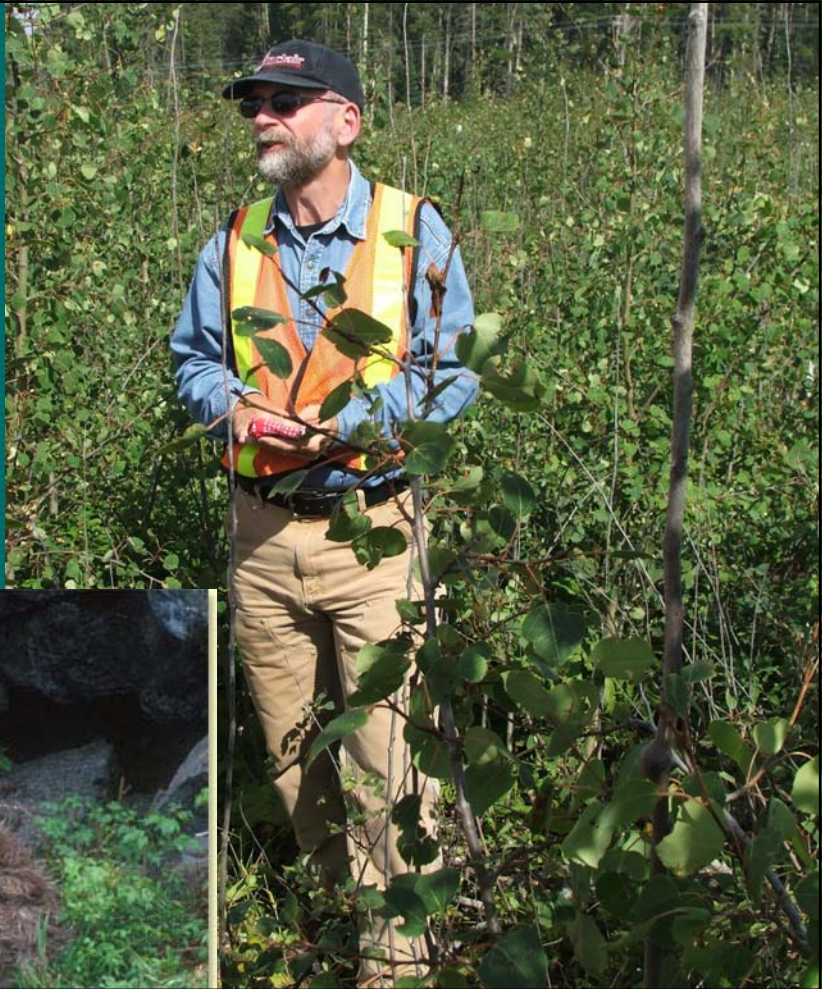


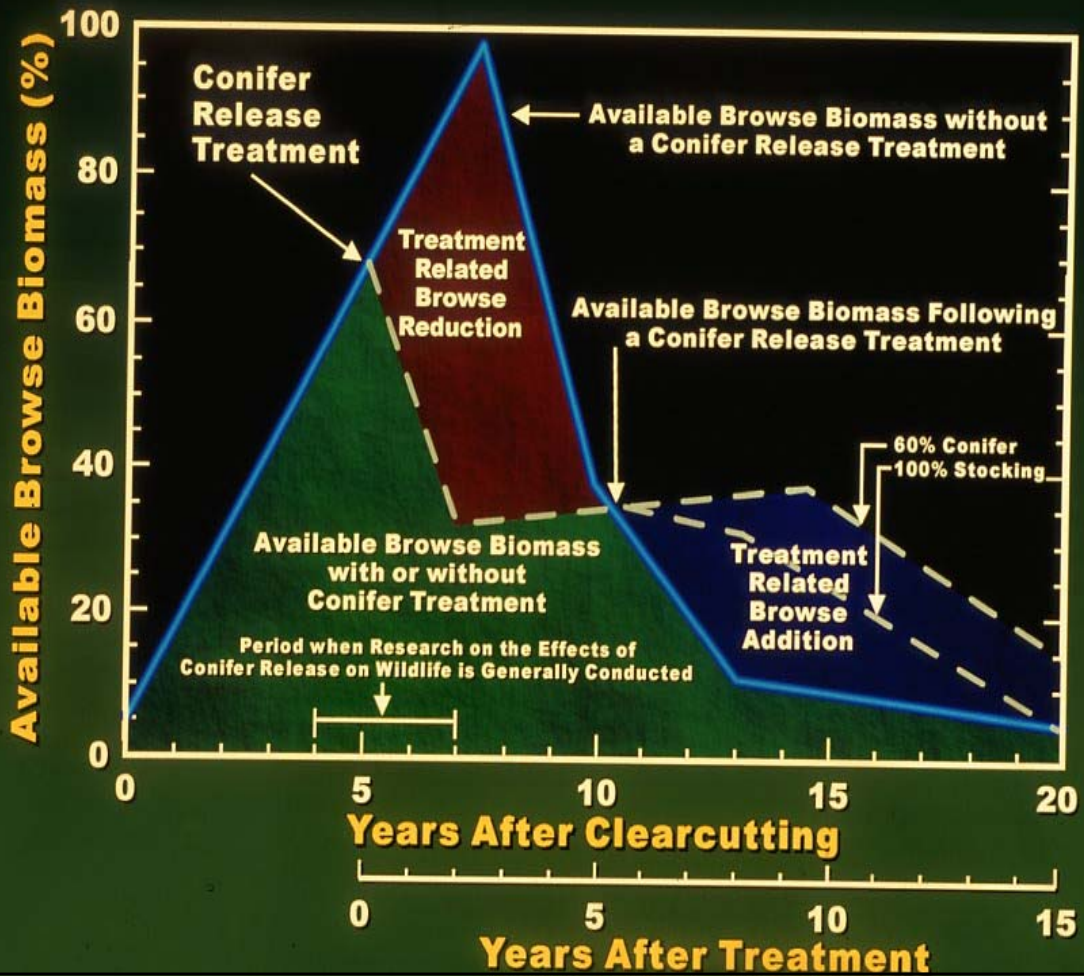
A teal-colored rectangular area with a faint, light-colored silhouette of a hand holding a pen, positioned in the lower-left quadrant. The text is centered within this area.

2. Herbicides affect wildlife through habitat modification, not toxic effects

- Effects depend on the scale at which wildlife experience life (large animals more able to disperse than small)
- No effects at forest level <0.2 % of forest sprayed per year (compare with agriculture)
- Winners and losers within groups of similar animals

Large
herbivores:





Large herbivores

- Conditions following harvest, and before tending create excellent moose browsing areas
- Conifers are necessary for winter shelter
- Abundance of browse is temporary; herbicide spraying can increase the duration of browse



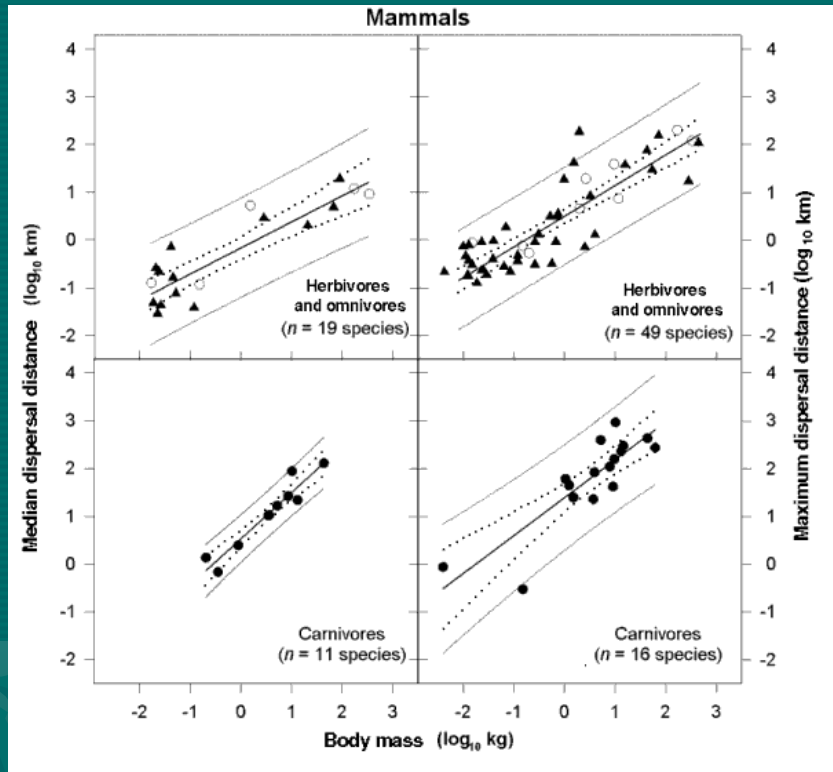
Small mammals



Small mammals

- Fallingsnow research site
- Redback voles reduced following Vision treatments but rebounded
- Shrews unaffected
- Effects depend on changing predation, and changes to food sources

Source: Lautenslager, R.A., F.W. Bell and R.G. Wagner. 1997. Alternative conifer release treatments affect small mammals in northwestern Ontario. For Chron. 73: 99-106



Source: Sutherland, G. D., A. S. Harestad, K. Price, and K. P. Lertzman. 2000. Scaling of natal dispersal distances in terrestrial birds and mammals. *Conservation Ecology* 4(1): 16.




Chestnut-sided warbler; white-throated sparrow



Songbirds

- Chestnut sided warbler reduced in manual vegetation management treatments
- Conifer release with herbicides had no direct effect on most breeding songbirds one growing season after treatment
- “migrant deception”

Source: Woodcock, J., R.A. Lautenschlager, F.W. Bell and J.P. Ryder. 1997. Indirect effects of conifer release alternatives on songbird populations in northwestern Ontario. For Chron. 73: 107-112



3. Sustainability of some wildlife species requires that we maintain conifer in the forest

Some species that depend on conifer

- American marten
- Moose & deer (winter cover)
- Heather vole
- Spruce grouse
- Blackburnian warbler
- Pine warbler
- Blue-headed vireo
- Pine grosbeak
- Red-breasted nuthatch
- Red crossbill

Good vegetation management can help us meet habitat objectives



Conclusions:

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