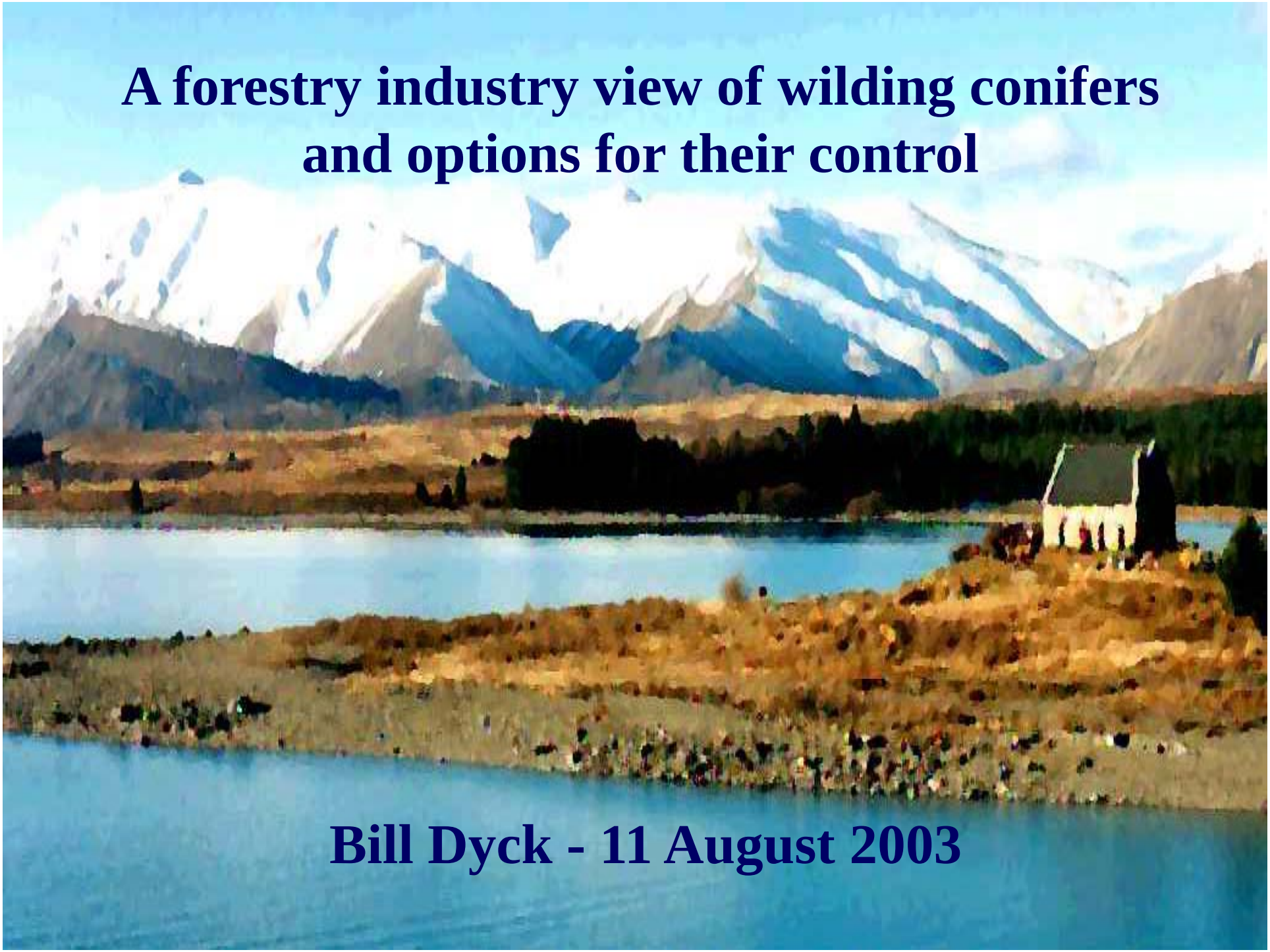
A forestry industry view of wilding conifers and options for their control



Bill Dyck - 11 August 2003

Objective:

To provide the forest industry's perspective on wilding conifers from an ecological, social, and economic perspective and views on options for their control.

Outline:

- **Perceptions**
- **Considerations**
- **Control options**
- **Conclusions**

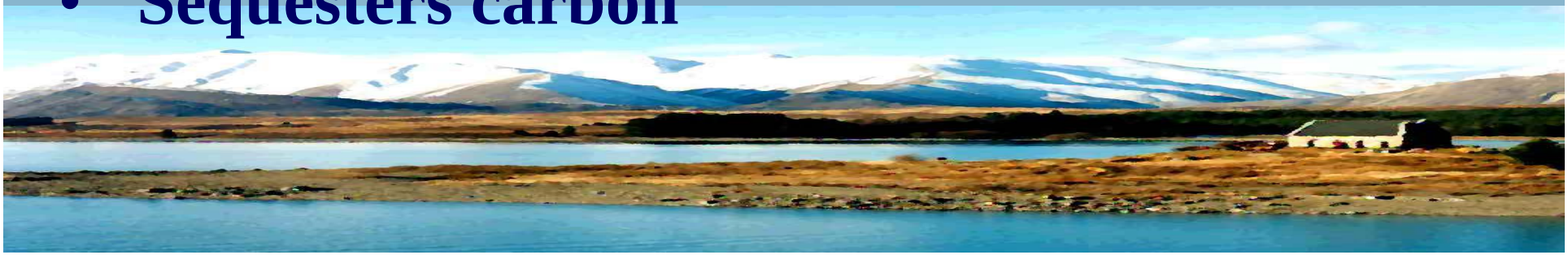
Industry Perception of Wildings:

- Not only pines, but other genera – also agricultural species
- Historical reasons for wildings: - Forest Service, farmers, DOC, Army etc
- Generally a Sth Island problem, but NI too
- Can provide benefits
- Some responsibility for control – but also "national good" factor

Degraded land most susceptible!

Ecological Aspects - Perception

- Colonises/improves degraded soil
- Enhances native understorey
- Provides habitat – especially vs pasture
- But, invades tussock land and high elevations
- Not a serious problem under natives
- Sequesters carbon

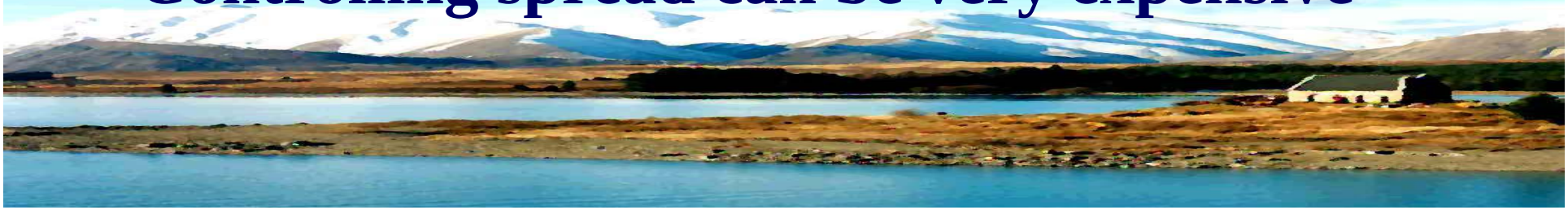


Social Aspects - Perception

- **Looks nice in postcards**
- **Tourists likely to appreciate much more than local ENGOS**
- **“Problem” increased by land degradation, including “weed” invasion (e.g., Hieracium) and also by reduced grazing**

Economic Aspects - Perception

- Some wilding stands have provided reasonable revenue – but exception
- Managing wildings would provide a better return – but not recommended
- Carbon sequestration opportunity
- Can improve soil condition
- Controlling spread can be very expensive



Considerations:

1. **Principles for Plantation Management**
2. **Regional Pest Management Strategy**
3. **Resource consent conditions**
4. **Interim FSC standards**
5. **Draft National Plantation Forest Management Standard**

Principles for Plantation Management :

- Signed by FOA and FFA in December 1995
- Requires managers to “prevent, to the best of their ability the spread of wilding trees from within their plantation forest boundaries, while recognising the property rights of adjacent land owners”

Regional Pest Management Strategy :

- Varies by Region
- Contorta the main tree pest
- Land owners have the ultimate responsibility to manage their own land – e.g., Bay of Plenty, Southland

Resource Consent Conditions:

- Varies by region and district
- Some districts require commitments for search and control, and agreement with neighbours to undertake this action

Interim FSC standards:

- Varies by company
- Will be replaced with National Standard when finalised and endorsed by FSC

Draft National Plantation Management Standard

- Draft 2 being developed
- Over two years in process
- Requires: risk assessment at planting and, if not in RPMS, removal of wildings from adjoining properties where owner agreeable if wildings came from certified forest, and wilding spread occurred after – (date to be decided)

Wilding Control Options

1. Conventional management
2. Genetic engineering
3. Biological control

Conventional Management - Wilding Control

- Planting options – species, location, borders etc
- Monitoring wildings &periodic chemical and manual control
- Grazing
- Improving soil quality – fertilization – improving grass cover
- Clonal forestry option – selecting near-sterile varieties

Genetic Engineering - Wilding Control

- Now possible to produce sterile trees
- Possibly with enhanced properties – e.g., disease resistance
- Little interest in NZ in herbicide resistance
- Need for considerably more research before any operational release considered

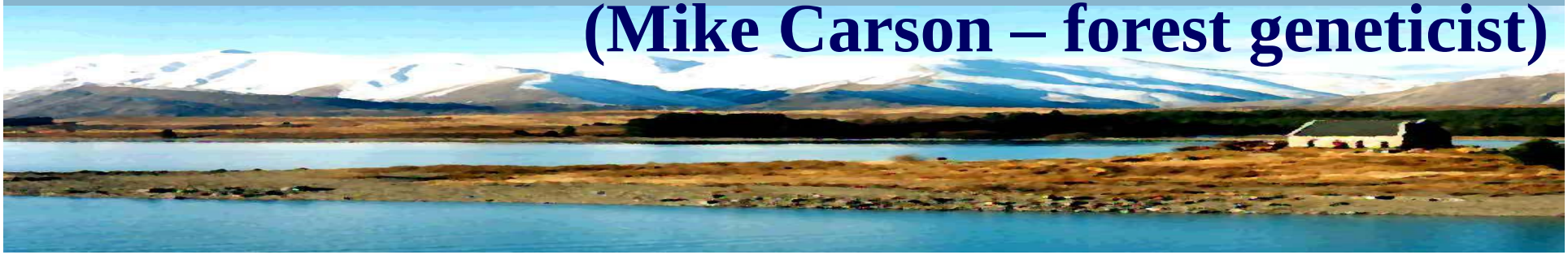
Biological Control - Wilding Control

- Not seen as an option by forest managers – but a good option for insect control
- Concern about seed orchards
- Concern about use of natural regeneration
- Concern about spread of fungi – especially Pine Pitch Canker
- But animal grazing encouraged

Reasons against Seed Insects

- **Biological control on a very large scale and across a range of species -seldom successful**
- **Pine seed producers would go out of business**
- **High risks of other forms of damage to pines**
- **Hasn't N.Z. more than enough exotic species?**
- **Other forms of control are already available**

(Mike Carson – forest geneticist)



Conclusions – Industry View:

- Wilding conifers are an ecological and social problem in some regions- especially South Island tussock – but also Tongariro area
- Mainly pines, and particularly contorta, but also D-fir
- Control options are available
- Biological control with seed-eating insects is not considered a viable option


Thank you