MANITOBA-MINNESOTA TRANSMISSION PROJECT

Clean Environment Commission Hearing

Manitoba Hydro

- Introduction & Project Description
- Engagement
- Routing
- Construction, Operations & Property
- Methods
- EMF
- Socio-Economic Environment
- Biophysical Environment
- Environmental Protection Program & Conclusion

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Goals of IVM
IVM planning
Treatment methods
Herbicide use
Results

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Goals of Integrated Vegetation Management (IVM)

- Provide access and maintain the integrity of the transmission system against outages from vegetation
- Public safety – reduce fire risk
- Respect traditional land uses and practices
- Encourage a stable low growing plant community
- Minimize environmental effects of IVM activities

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Primary methods of IVM

- Selective control
  - Target tall growing vegetation
- Compatible use
  - Agriculture, recreational
- No clearing required
  - No removal of vegetation that does not impede access or "limits of approach"
- Altering existing vegetation
  - Pruning and trimming

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IVM planning

- Annual patrol
  - Visually assess tree height, density and proximity to limits of approach
  - Imminent threats (dead, dying, leaning trees)
  - Width of ROW (narrowing or encroachments)
  - Terrain
  - Environmental conditions (flooding, nests)
  - Relative priority of work
  - Efficacy of treatments

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Criteria for treatment selection

- Target species
  - height, density
- Treatment timing
- Site accessibility
- Design criteria and limits of approach
- Resource availability
  - Staff and budget

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Criteria for treatment selection

Access and terrain

Terrain – steep slopes, rocky terrain increases safety concerns with machinery

Access – wet areas, remote locations requiring helicopter, seasonal constraints

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Criteria for treatment selection

Land use

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Setbacks

- 30m waterbodies
- 15m sensitive plants (rare plants gathering areas)

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Manual treatment methods

Manual cutting (brush saw, chainsaw, girdling, brush axes)

Brush saw

Girdling

Chainsaw

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Mechanical treatment methods

Feller buncher

Mulcher

Shear blade

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Chemical treatment methods

Hose and handgun

Wetblading

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Cultural treatment methods

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Mechanical

	Mechanical	Chemical
Cycle	• Typically occurs in the winter to reduce environmental impact, can occur in warmer months depending on region • Mechanical maintenance cycle is continuous, will always be a need to remove vegetation on ROW	• Typically occurs between June and October • Cycle period increases with each application • Over time it allows for less and less chemical and more selective treatments
Safety	• Increased risk of spills or releases of hydrocarbons • Safety to public increases during winter months on trails and access roads with machinery • Increased risk of injury to workers	• Lesser risk for spills or releases of hydrocarbons • Risk of concentrated pesticide spill or exposure
Wildlife	• Wildlife is displaced for longer period of time. • Increased habitat loss for wildlife	• Wildlife and grazing animals may be displaced on a short term basis
Vegetation & Traditional Use Plants	• Continually cutting vegetation creates re-sprouting of vegetation which increases the frequency of maintenance required • Increased re-vegetation with none selective removal methods • Decreases diversity of ROW due to early successional species dominating regrowth • Increased risk of invasive species spread due to less competition for resources • Increased risk of rutting and soil erosion	• Greater diversity of vegetation species within ROW as undesirable dominate tree species is managed • Chemical control targets fast growing trees, taller shrubs, broadleaf plants but not grasses

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Mowing

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Shear-blade

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Results

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Results

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Chemical

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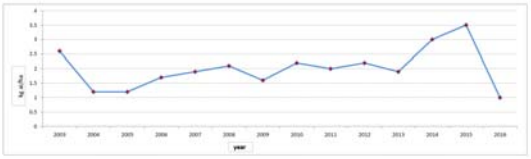
Herbicide use

Tree Control Herbicide Programs
(Transmission & Distribution Lines Combined)
Active Ingredient Use 2003 - 2016



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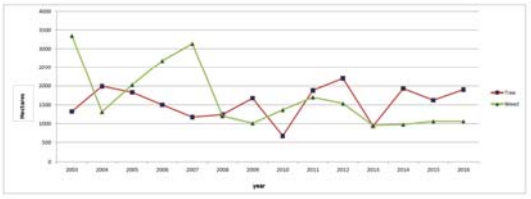
Herbicide use

Tree & Weed Control Herbicide Program
(Transmission & Distribution Lines Combined)
Area Treated 2003 - 2016



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Results

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Results

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Results

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Results

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