Criterion 4

Role in global ecological cycles
(Carbon focused)

PAG Meeting
February 14, 2012

Carbon – mandatory discussion

- CSA Z809:2008: The public participation process shall include, but not be limited to, discussion of the following topic: *"Carbon emissions from fossil fuels used in forest operations"*

- McGill University grad students produced discussion paper to assist Public and CSA users:
  - *From Carbon Source to Carbon Sink: How Forestry can Help Mitigate Climate Change*

Discussion paper - *points*

- Forests play a key role in slowing climate change.
- The difference between forest uptake of CO_2 (by photosynthesis) and release of CO_2 (by respiration) is the carbon balance of the forest.
- Forests are acting as carbon sinks or sources (natural disturbance, forest age, structure, history, etc.)

Discussion paper - *points*

- Forest operations affect the carbon balance of forests and contribute to carbon emissions
  - Foresters can use many strategies to increase carbon storage and reduce emissions from forest operations.
    - Afforestation
    - Stand Management
    - Harvesting
    - Processing

Discussion paper - *points*

- Afforestation
  - Establishing new forests on non-forested land
  - Afforestation is usually only of interest to forest companies with access to private marginal land

Discussion paper - *points*

- Stand Management
  - After harvesting, forested sites can remain a carbon source for up to 10 years (increase in CO_2 release)
  - Ensuring prompt regeneration on cut sites is vital to minimize the amount of time a forest remains in a carbon source state.
  - Change harvest rotation
  - Forest protection … *complications may occur*.
  - Young forests … less carbon on site but ⬆ rate CO_2 accumulation
  - Mature forests … more carbon on site but ⬇ rate CO_2 accumulation

Discussion paper - *points*

- Harvesting
  - Very energy intensive and may lead to unnecessary emissions of carbon dioxide. *(…if not well planned)*
  - Structured harvesting plan helps reduce avoidable carbon emissions. *Examples:*
    - Minimize road network
    - Match road design with harvesting method
    - Maximize payloads
    - Minimize handling
  - Slash piling and burning
    - Benefit of leaving maximum # of wildlife piles

Discussion paper - *points*

- Processing – Log to Lumber
  - *Energy efficiency*
    - (energy monitoring, new motors, online tracking, etc)
  - *Change in processes*
    - (TL to CTL)
  - *Minimize waste*
    - (maximize lumber recovery)
  - *Energy conversion of waste*
    - (options are being assessed)

Carbon emissions ….

- Further discussion and Questions