

The Long Run:

Long-term implications of carbon management practices

Thanks to participants and facilitators: Jennifer and Pennie

How do the short- and long-term implications (I.e. consequences and opportunities) of different reclamation practices impact sustainability?

↪ **Temporal scale varies by frame of reference**

- *energy company ~ 20 yrs*
- *forest products company ~ 50 yrs*
- *soil carbon changes > 100 yrs*
- * specify specific time periods for future brainstorming

↪ **Choices and implications highly site-specific**

- From one part of state to another
- Even N vs S facing slopes
- * opportunities and responses need to be flexible

↪ **Site preparation decisions have major short & long-term implications**

- Tree growth
- Alternate landuses (e.g. development potential)
- Environmental metrics (erosion, water)

What are the tradeoffs in managing reclamation sites for carbon sequestration (economic, environmental, social)?

↳ Quantification abilities are key

- What needs to be quantified?
 - ✓ *Value of sequestration in \$/ton*
 - ✓ *Value of the full effect of the management change you've made (including biodiversity, erosion control, water quality, reduction of sediment levels in streams, etc).*
- *Full accounting approach, including site carbon, storage in products*
- *Need C sequestration 'supply curves'*

↳ Social factors important

- *Age and perspective of land owner*
- *Landowner culture is (sometimes) predisposed to making the land flat rather than leaving rough for reforestation*

↳ Environmental

- *(NGOs) may find it attractive to invest in a project due to other values like native species, biodiversity, increase habitat. May make otherwise uneconomical treatments possible.*

What about the big picture?

- ↪ **Leakage, permanence, biodiversity, etc.**
 - **In general, leakage and permanence less of a problem for reclaimed lands**
 - *C sequestering practices will build soil fertility, improve environmental quality – but optimum CS may not optimize environmental benefits*

- ↪ *How can we change the culture to be more open to CS options?*
 - *Incentives*
 - *Education*
 - *Economic analysis*

- ↪ *All parties need to be “progressive thinkers” to see the big picture of benefits preserving biodiversity, permanence, etc.*