Stand Dynamics, Forest Regeneration & Growing Space Effects – Fri 13 April 2018
Field Trip Summary Questions

Please provide short responses to the following challenges.

1. Which stages of stand development are exhibited along the Managed Forest Trail at Pack Forest? Describe the distinguishing features of each stage, based on your observations while on site.

2. Why do you think mean DBH was greatest in the Clearcut & replant regeneration unit, midrange in the Seed-Tree regeneration unit, and smallest in the Shelterwood regeneration unit? Describe how structure (DBH heterogeneity / DBH coefficient of variation / DBH range) differed among the regeneration units and explain why.

3. Explain (describe) two different situations (goals) that would lead you to choose two different regeneration methods (among the three) over the others.

4. The stands in the King Creek Spacing Trial are 32 years old, and ranged in density from fairly open (~100 Trees per acre, i.e., TPA) to fairly dense (~ 1000 TPA). Describe how stand density can affect onset & duration of the early stages of stand development. Does thinning play a role in it? If so, what?

5. Is there a tradeoff between individual tree size and *per acre* yield in volume as density is varied? To answer, study the tables in the field trip handout. Explain why you think there is or is not a tradeoff (Hint: think about how trees allocate the carbohydrates they produce through photosynthesis.)

6. True/False (circle one):
   a) T / F Pruning some trees in a stand can increase structural diversity.
   b) T / F Initial (or planting) density (number of trees per acre) can impact the onset and the duration of the stem exclusion stage of development.
   c) T / F Current Live Crown Ratio (LCR) is a good indicator of growing conditions a tree had during its life.
   d) T / F The stand planted to ~200 TPA in the King Creek Spacing trial will produce higher quality wood in terms of knot size than the stand planted to ~680 TPA.
   e) T / F The weather was sunny, warm and clear all day Friday 13 April 2018 at Pack Forest.