

WDSC 422 Lab 9 – Assignment
Logging System Analysis
Harvesting Forest Products/Fall Semester

One of our most promising independent contractors in West Virginia is considering some changes to his operations (Triple W Logging Co., Inc.). He currently uses a feller-buncher, one grapple skidder, and a knuckle-boom loader. He contracts for all hauling with ABC Log Hauling.

We are also evaluating how Triple W fits within our procurement strategy. We should examine how we assign Triple W to appropriate tracts and how we set a fair rate to keep his services. We need answers to the questions on the attached sheet. It seems to me that we can use our adaptation of the Auburn Harvesting Analyzer to examine these questions quickly and accurately.

Please provide me a 1-page typed summary report with answers to these questions by the beginning of lab next week.

Questions concerning Triple W Logging Co., Inc.:

- (1) Suggest a "balanced" system configuration for our average tract. For this balanced system, give the cost per ton, tons per week, limiting factor, and the time in days to cut the tract. Use this as a base case to compare against in each of the following questions.
- (2) If we pay Triple W \$11.50/ton to cut and haul this tract, what will be their weekly and annual projected revenue, cost, and profit/loss?
- (3) If Triple W is placed on a 1400 ton per week quota, how will this affect their delivered cost per ton and weekly profit/loss?
- (4) Graphically determine the minimum quota that Triple W can receive without incurring an operating loss. Graph revenue per ton (his cut and haul rate) and total cost per ton over weekly production levels to show this relationship and the breakeven point. Use production levels of 1200 to 2400 tons/week in increments of 200 tons/week.
- (5) Congress passes health care reform legislation that forces the owner of Triple W to participate in Federal health insurance at 15% of base wages. What effect would this 15% labor cost increase have on his cost per ton when not on quota and on our average tract?
- (6) Land use patterns are changing in your wood procurement area in WV. You are seeing timber sale sizes decrease over time. Examine the cost per ton on tract sizes of 40, 80, 120, 160, 200, and 250 acres. On what size tract will Triple W break even and how many days will they be there?