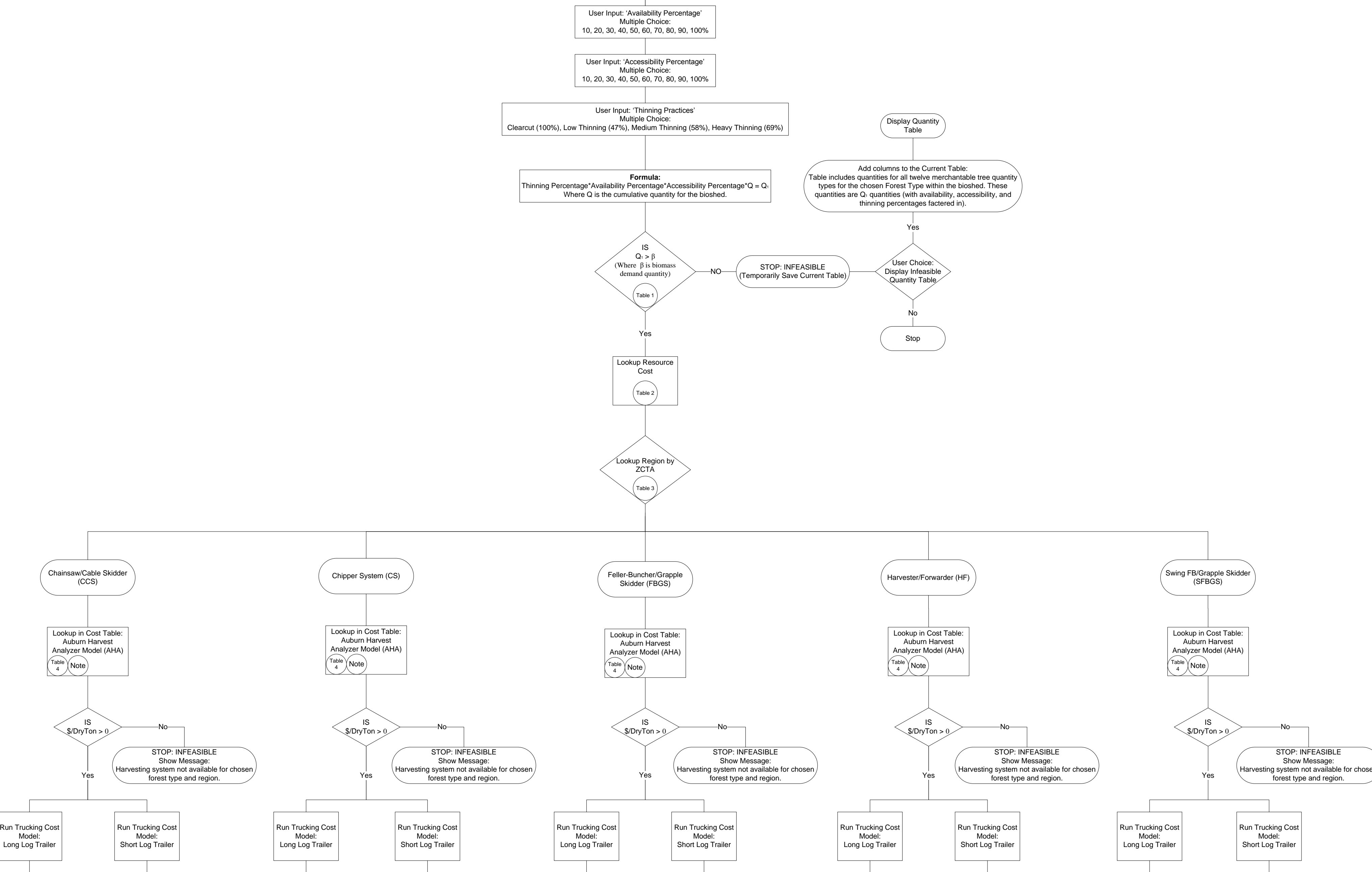
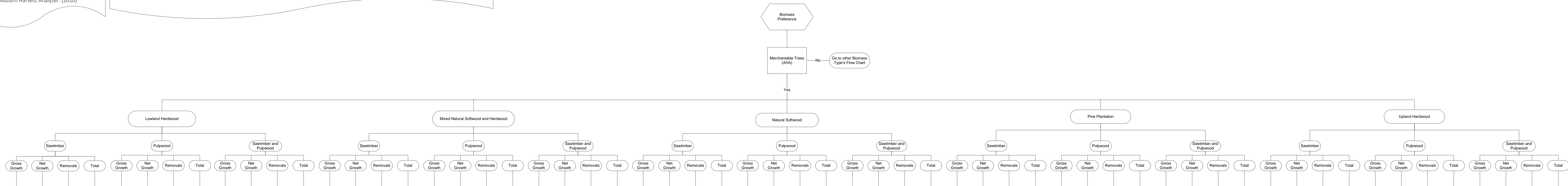


- List of Tables:**
- Table 1: Merchantable Trees Quantities by ZCTA  
USDA Forest Service. (2010)
  - Table 2: Stumpage Price by County  
Timber Mart-South (Q2 2010)
  - Table 3: ZCTA by Forest Region  
USDA Forest Service. (2010)
  - Table 4: Merchantable Trees Harvesting Cost Table  
Auburn Harvest Analyzer. (2010)
- Notes:**
- Lookup costs in Merchantable Trees Harvesting Cost table using the following variables:
- Region (Appalachian Mountains, Delta, Eastern Broadleaf, Gulf Coastal Plain, Lake States, Northeast)
  - Forest Type (Lowland Hardwood, Mixed Natural Softwood and Hardwood, Natural Softwood, Pine Plantation, Upland Hardwood)
  - Harvesting System (Chainsaw/Cable Skidder, Chipper Systems, Feller-Buncher/Grapple Skidder, Harvester/Forwarder, Swing FB/Grapple System)
  - Harvesting Method (Clearcut (100%), Low Thinning (47%), Medium Thinning (58%), Heavy Thinning (69%))



**ESTIMATE TOTAL COSTS, ATC, MC, DISPLAY MC (SUPPLY) CURVE; DISPLAY BIOSHED**

- 1 Estimate „BIOMASS QTY“ for each ZCTA
- 2 Estimate „CUMULATIVE QTY“ for all ZCTAs in Bioshed (Retain Cumulative Q, for each ZCTA)
- 3 Estimate „RESOURCE COST“ for each ZCTA (\$ / dry ton \* dry tons in STEP )
- 4 Estimate „HARVESTING COST“ for each ZCTA (\$ / dry ton \* dry tons in STEP )
- 5 Estimate „TRUCKING COST“ from each ZCTA in STEP to the demand ZCTA (\$ / dry ton \* dry tons \* # of hauls)
- 6 Estimate „TOTAL COST“ for each ZCTA
- 7 Estimate cumulative „TOTAL COST“ for each ZCTA (e.g., ZCTA 11111 + ZCTA 11112 + ..... + ZCTA 22222)
- 7a Estimate „AVERAGE TOTAL COST“ (ATC) for each ZCTA (retain value for Display)
- 8 Sort ZCTAs in STEP in ascending order
- 9 Estimate ΔQ (change in quantity between cumulative quantities) + ΔTC (change in total cost STEP)
- 10 Estimate Marginal Cost Curve = Producers Supply Curve, e.g.,
- 11 Plot MC Curve
- 12 Display Table of Costs + Quantities by ZCTA
- 13 Display Picture of Bioshed

ZCTA	Q	ATC
11111	50	\$ 23 / ton
11112	65	\$ 23.50 / ton
11113	90	\$ 23.50 / ton
.....	.....	.....
22222	1,000,000	\$ 101.10 / ton

\* Ignore STEP 9 if forest residue retains ZCTA #

