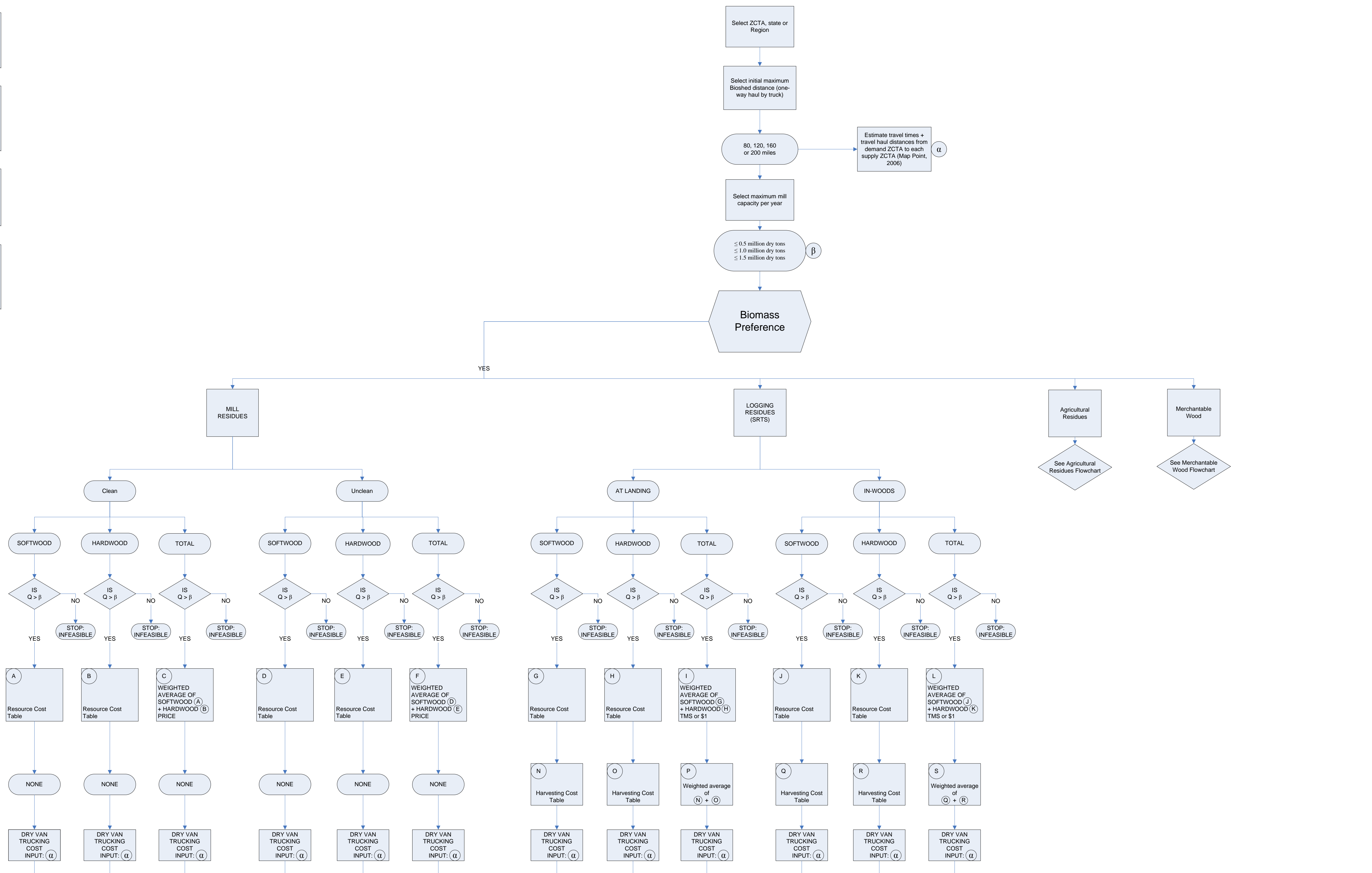


I. BIOMASS QUANTITY:  
Resolution = ZCTA  
Unit of measure = dry tons  
Source: FIA data

II. BIOMASS RESOURCE COSTS:  
Resolution = State  
Unit of measure = \$ / dry ton  
Source: Regional and State Reports

III. HARVESTING COSTS:  
Resolution = ZCTA  
Unit of measure = \$ / dry ton  
Source: FRCS model

IV. TRANSPORTATION COSTS:  
Resolution = Miles - ZCTA to ZCTA  
Unit of measure = \$ / dry ton  
Source: BioSAT Trucking model



**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 Maginal 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	\$ 23.10 / ton
11113	90	\$23.50 / ton
.	.	.
.	.	.
22222	1,000,000	\$ 101.10 / ton

\* Ignore STEP 4 if forest residue retains ZCTA #

