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**APPENDIX: Methods of FIA data separation and preparation for hydrologic impact model**

**A.1**

**FIA variables and their critical values for interpretation**

Results of the harvest scenarios based on the FIA data are provided as a subset of the plot variables at the end of each 10-year period. The subset of variables used and their critical values are:

<u>Name</u>	<u>Type</u>	<u>Meaning and critical value interpretations</u>
EZONE	integer	Ecozone
EXPAREA	integer	Area in acres represented by the plot
FORTYPE	integer	Forest type class at FIA measurement
FORTYPE[p]	integer	Forest type class at period midpoint
		1 - 49 Conifers
		50 - 98 Hardwoods
CALCTYPE	integer	Forest type class at FIA measurement
CALCTYPE[p]	integer	Forest type class at period midpoint
		1 - 49 Conifers
		50 - 98 Hardwoods
		99 Unstocked
STDAGE	integer	Forest type class at FIA measurement
PHYCLS	integer	Physiographic class
		1 - 6 Uplands
		7 Wetlands
SLOPE	integer	average percent slope of 10 sample points on a plot
ASPECT	integer	Azimuth from north of drainage for a majority of sample points on a plot
BALIVE	real	Basal area of live trees at FIA measurement
BAL[p]	real	Basal area of live trees at period p midpoint
BAC[p]	real	Basal area of trees cut at period p midpoint
REGTIC1	integer	First period in which plot is clearcut
REGTIC2	integer	Second period in which plot is clearcut, if any

**A.2**

**Criteria for separating plots into wetlands vs. highlands**

*Wetlands are defined as those plots with hydric physiographic class.*  
 Wetlands, or bogs and fens, are not clearly identified in the database. In order to separate them, bogs and fens can be identified as having hydric physiographic type, but this is shared with frequently flooded bottomlands, which do not behave as wetlands do. They also have characteristic shrub vegetation, but winter time surveys do not include shrub layer vegetation, and most wetlands are surveyed in the winter. Since most of the cutting predicted in the scenarios will occur in the northern portion of the state, and since wetlands are so prevalent there, we will opt for the simple criteria of hydric physiographic class.

**A.3**

### **Criteria for separating plots into hardwoods and conifers**

*The entire plot will be taken as being of the primary forest type.*

Two estimates of primary forest type are included in the data set. The first, used in the economic model and given the name FORTYPE, assumes that there is no drift between forest types during the planning period. The second, given the name CALCTYPE, is based on a STEMS algorithm that does permit drift between forest types over time. Both give the covertime class at the middle of a period.

The CALCTYPE is given a value of 99 meaning unstocked immediately after harvest. For those plots cut in later periods, and having CALCTYPE = 99 through period 5, it is assumed that there is no conversion of type. Otherwise, the first CALCTYPE other than 99 is assumed to be the regeneration type.