

Some Landscape Simulation Modeling Alternatives

Model and Contact	Class	Typical operational scale	Pros	Cons
FVS (Forest Vegetation Simulator) Forest Service Management Center http://www.fs.fed.us/fmsc/fvs/	Individual- tree-based, stand or multi-stand	One stand to thousands of spatially discrete stands	<ul style="list-style-type: none"> • Links to FIA • Excellent support • High detail • Excellent auxiliary software and output viewers 	<ul style="list-style-type: none"> • Limited spatial interaction. • Demanding of data for large landscapes
LMS (Landscape Management System) http://lms.cfr.washington.edu/	Multi-stand, spatially contiguous	At least 100,000 ha	<ul style="list-style-type: none"> • Implements FVS internally • Excellent visualization tools 	<ul style="list-style-type: none"> • Demanding of data for large landscapes
TELSA and VDDT (Tool for Exploratory Landscape Scenario Analysis and Vegetation Dynamics Design Tool) http://www.essa.com/downloads/telsa/index.htm	Polygon based with discrete vegetation classes, spatially contiguous	At least 250,000 ha	<ul style="list-style-type: none"> • Designed for large landscapes. • Modest data requirements 	<ul style="list-style-type: none"> • Resolution limited to polygon (stand) scale. • Significant effort to design vegetation classes and transition probabilities
HARVEST http://ncrs.fs.fed.us/4153/Harvest/harvhome.asp	Raster based with user-defined pixel size, spatially contiguous	At least 1,000,000 ha, depending on pixel resolution	<ul style="list-style-type: none"> • Fast, focused, modest initial data requirements • Excellent for modeling harvest effects 	<ul style="list-style-type: none"> • Operates primarily on age classes • Limited capacity to model vegetation succession • Excludes natural disturbances
LANDIS http://www.missouri.edu/~umcsnrlandis/ http://www.ramas.com/landsc.htm	Raster based with user-defined pixel size, spatially contiguous	At least 1,000,000 ha, depending on pixel resolution	<ul style="list-style-type: none"> • Comprehensive modeling of veg succession, fire, harvest, wind disturbance • Tracks age and spp of trees • Numerous options 	<ul style="list-style-type: none"> • Complex program to calibrate and implement • Computationally intensive

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