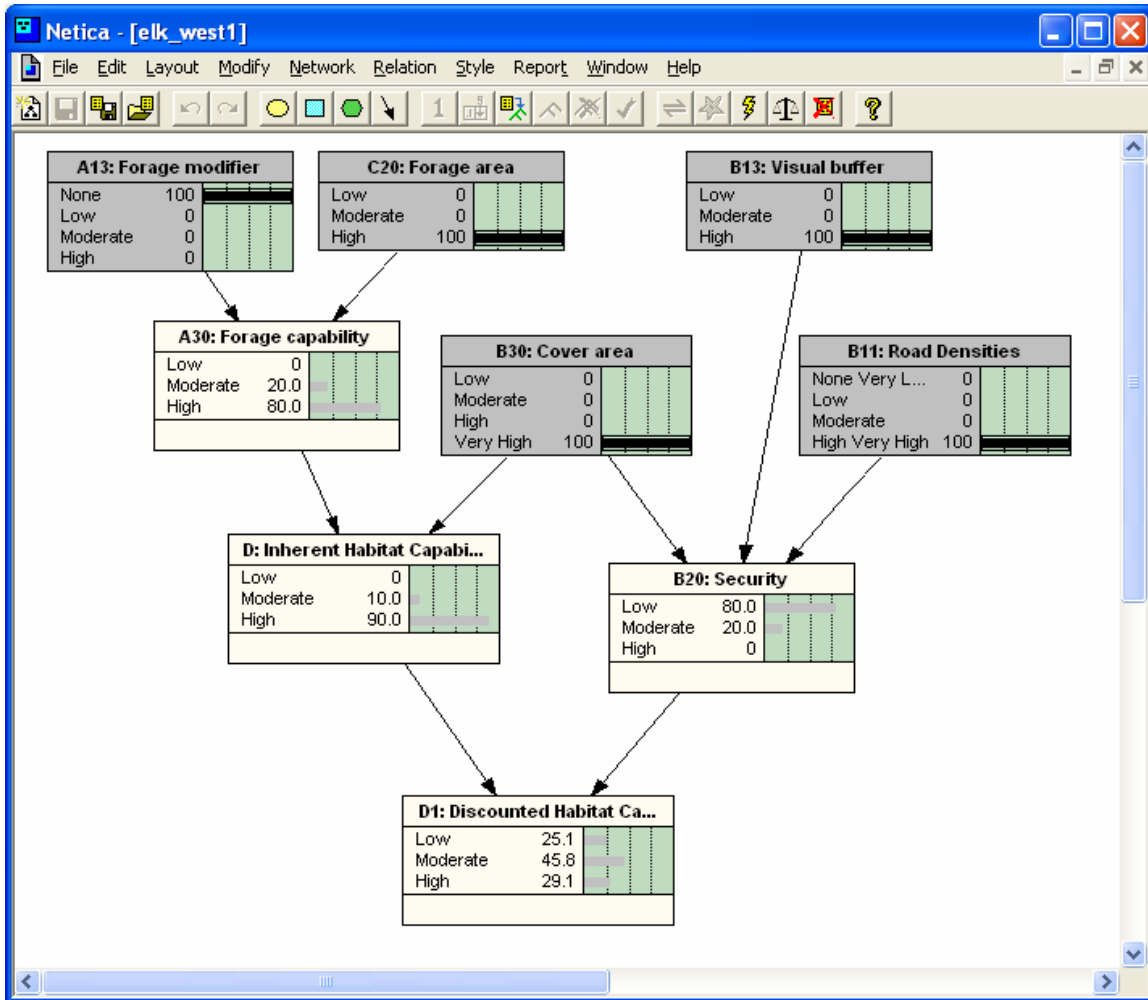


WDFW Elk Model



A13--Forage enhancement variable. A proxy variable defined from GIS database to be a surrogate for the quality of forage present beyond "typical" conditions. The input is defined as the percentage of forage area in actively managed forage types (wildlife openings, fertilized cuts, and other areas actively managed for nutritional quality beyond natural revegetation):

NONE = 0%; LOW = <5%; MODERATE = 5 - 25%;
HIGH = >25%

C20--Forage habitat area calculated as a percentage of each subwatershed or other evaluation area. Forage habitat was estimated by summing the percentage of terrestrial community types used as forage in each evaluation unit. Terrestrial community types were defined by grouping veg cover type and structural stage combinations. Forage habitat definitions vary for elk and deer.

Categories were defined as: LOW = <25%; MODERATE = 26 - 50%; HIGH = >50%.

B13--Vegetative screening or topographical screening variable. The proportion of open roads adjacent to unstocked or shrub/sapling stands/plantings with a vegetative screening or physical obstruction sufficient to break up the sight profile.

Low = <25%

Moderate = 25-50%

High = >50%

A30--Forage habitat capability as a function of forage area (quantity) and the qualitative effects of forage enhancing practices.

B30--Cover habitat area calculated as a percentage of each evaluation unit.

Cover habitat was estimated by summing the percentage of terrestrial community types used as cover in each evaluation unit. Terrestrial community types were defined by grouping vegetation cover type and structural stage combinations.

Cover habitat definitions vary for elk & deer.

Categories were defined as: LOW = <25%; MODERATE = 26 - 50%; HIGH = 51 - 75%; VERY HIGH = >75%.

The amount of cover influences the Inherent Habitat Capability and Security (from human disturbance) nodes in the model differently. See descriptions of those nodes for an explanation.

B11--Road Density Classes summarized from road density index, provided by the Landscape Team as follows:

None_Very_Low = <0.1 mi/sq mi

Low = 0.1-0.7 mi/sq mi

Moderate = 0.7-1.7 mi/sq mi

D--Inherent habitat capability for the analysis unit as a function of forage capability and cover area. Forage capability was generally weighted much greater than cover area. Cover was considered in terms of its security from predation value; security from human disturbance is modeled in the "Security" branch of the model.

In general, at low forage levels increasing cover had little influence. At moderate forage levels increasing cover increased habitat capability about 10% with each increment in cover. With high forage capability, cover had relatively little influence on habitat capability; habitat capability increased only with high to very high cover levels.

B20--Security from human disturbance. Cover area, open road density, and terrain complexity interact to determine the relative security of ungulates in a watershed from human disturbance, primarily vulnerability to and harassment from hunters. Increasing open road density was considered negative. Increasing cover and terrain complexity negated the effects of roads by increasing security in the presence of roads.

D1--Habitat capability as a function of inherent habitat capability and the relative security of elk from human disturbance within the watershed.