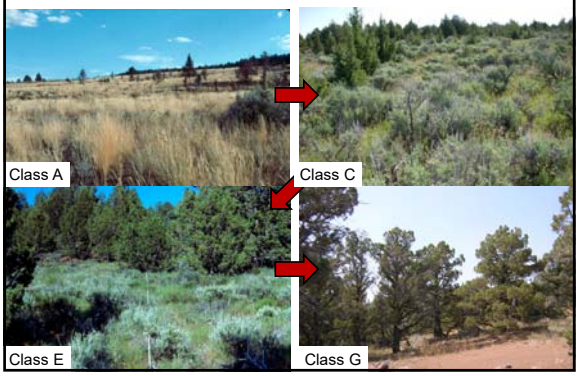
Quiz

Lab 3: Use of Landscape Proportional Model- VDDT

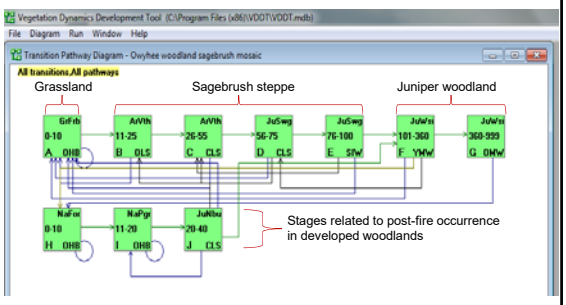
The objective of the next two labs is to illustrate the use of a proportional landscape model [**Vegetation Dynamics Development Tool** (VDDT)] to predict landscape composition into the future. You will apply management treatments (prescribed fire and woodland tree cutting) to achieve specific land management goals.

We will use an ecosystem dominated by mountain big sagebrush and western juniper as a case study in this exercise.

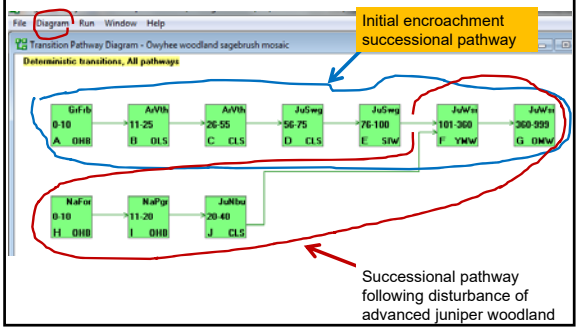
Successional stages within the sagebrush steppe/western juniper woodland mosaic



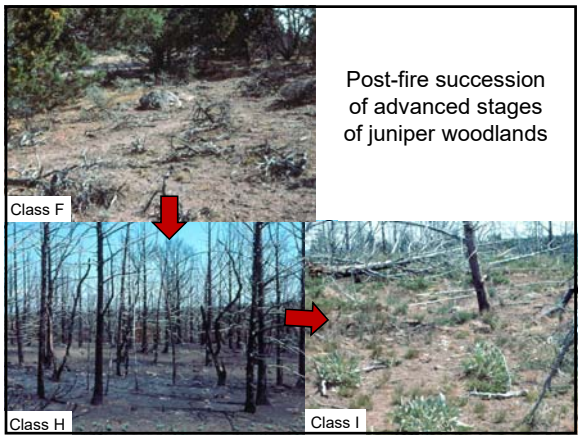
VDDT model for western juniper/mountain big sagebrush steppe- All pathways



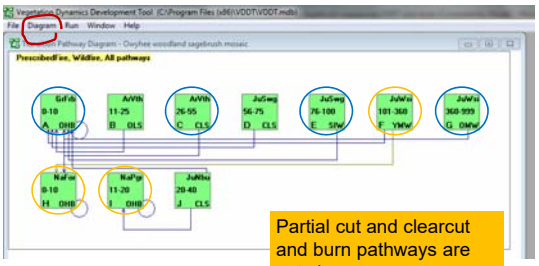
VDDT model for western juniper/mountain big sagebrush steppe- Successional pathways



Post-fire succession of advanced stages of juniper woodlands

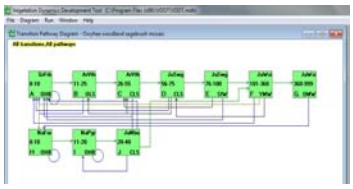


VDDT model for western juniper/mountain big sagebrush steppe- Wildfire and prescribed fire disturbance pathways

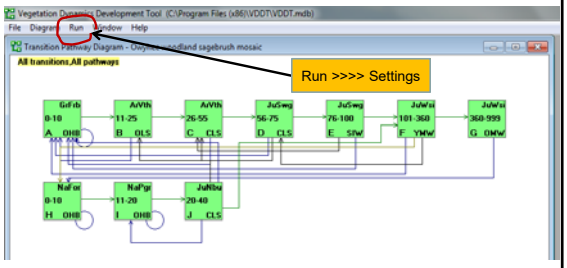


To access VDDT program and Owyhee database

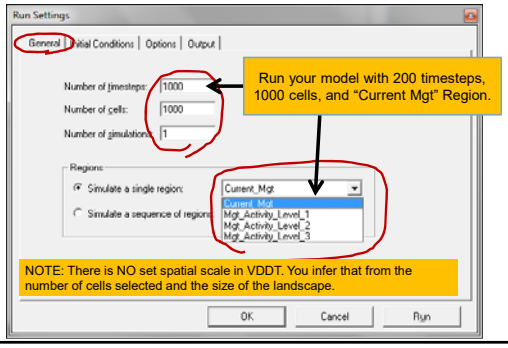
- Download the database titled "Owyhee REM 429 class file" from BbLearn.
- Go to 'All Programs' > 'CNR GIS Lab' > 'VDDT' folder > 'VDDT' icon
- 'File' > 'Open' > 'Owyhee REM 429 database' > 'Open'
- A State &Transition Model diagram should open.



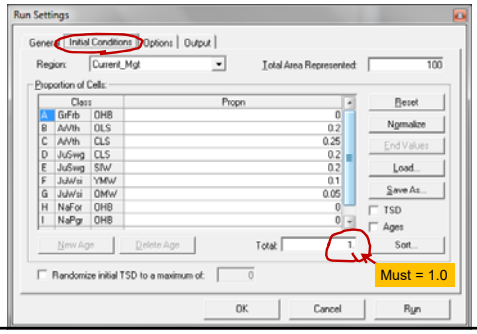
VDDT model for western juniper/mountain big sagebrush steppe- Running the program



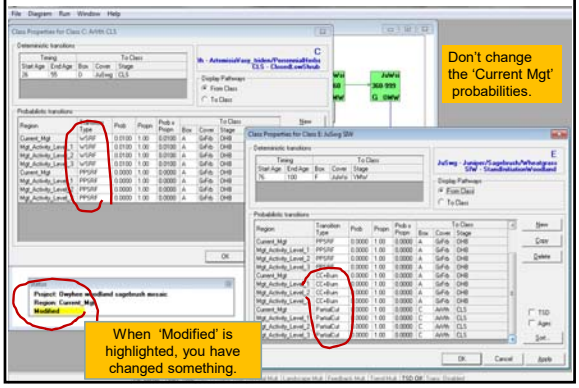
VDDT model for western juniper/mountain big sagebrush steppe- general settings

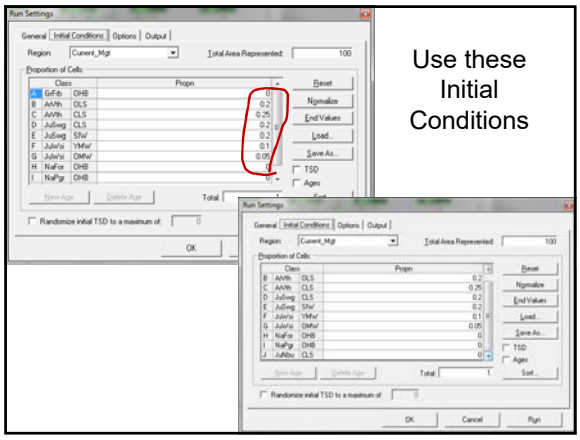


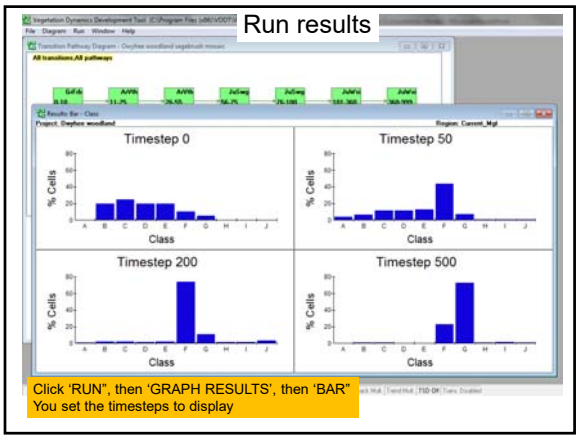
VDDT model for western juniper/mountain big sagebrush steppe- initial conditions

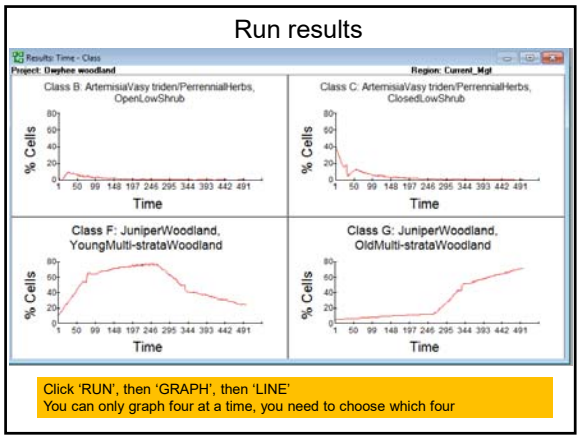


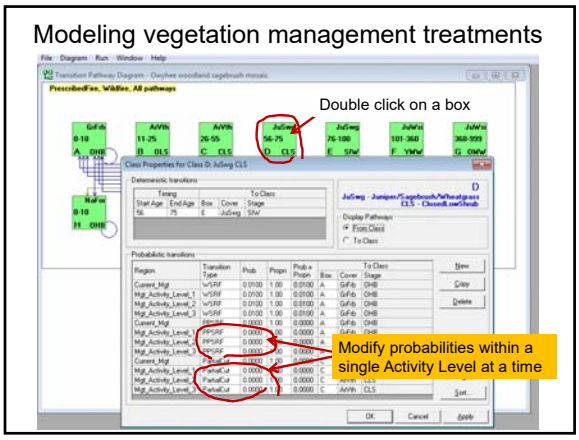
Potential vegetation management treatments

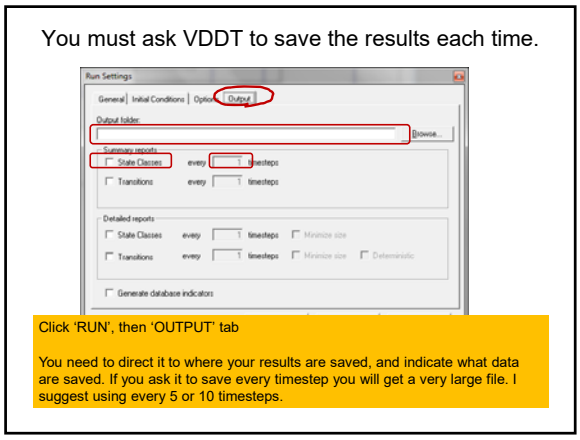


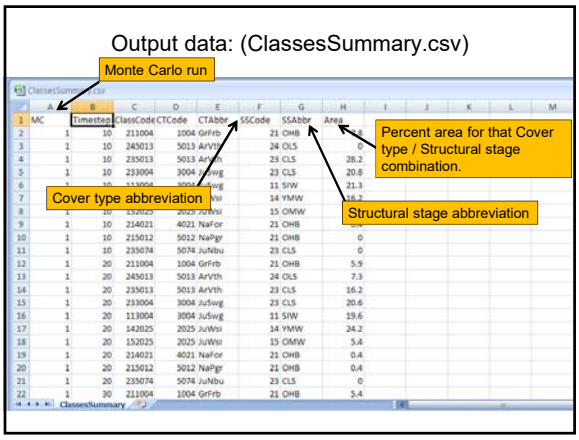

Use these Initial Conditions


Run results
Timestep 0
Timestep 50
Timestep 200
Timestep 500
% Cells
Class
Click 'RUN", then 'GRAPH RESULTS', then 'BAR"
You set the timesteps to display


Run results
Class B: ArtemisiaVasy tridenPerrennialHerbs, OpenLowShrub
Class C: ArtemisiaVasy tridenPerrennialHerbs, ClosedLowShrub
Class F: JuniperWoodland, YoungMulti-strataWoodland
Class G: JuniperWoodland, OldMulti-strataWoodland
% Cells
Time
Click 'RUN', then 'GRAPH', then 'LINE'
You can only graph four at a time, you need to choose which four


Modeling vegetation management treatments
Double click on a box
Modify probabilities within a single Activity Level at a time


You must ask VDDT to save the results each time.
Click 'RUN', then 'OUTPUT' tab
You need to direct it to where your results are saved, and indicate what data are saved. If you ask it to save every timestep you will get a very large file. I suggest using every 5 or 10 timesteps.


Output data: (ClassesSummary.csv)
Monte Carlo run
Percent area for that Cover type / Structural stage combination.
Cover type abbreviation
Structural stage abbreviation