

Video 3 of 5: Introduce a new disturbance

Randy Swaty

7/8/2020

Contents

Welcome and goals	1
Introduce a new disturbance (Sasquatch)	1

Welcome and goals

Hi everyone, Randy Swaty here hoping to get you started with modifying a LANDFIRE Biophysical Settings model in a way that better represents current conditions. In this the 3rd of 5 videos in the “Modify your Model” series we will work through our trusty Sage Steppe model as an example, learning how to add and parameterize a new disturbance in one state.

Introduce a new disturbance (Sasquatch)

There is an unintended consequence of suppressing all fires: Sasquatch moves in (or would that be “Sasquatches?”). It turns out that this cryptic zooid hates replacement fires. We need to capture this in our model.

1. Copy, paste and rename the “Zero replacement fire” scenario. I named this new scenario “Sasq hates replacement fires”.
2. Through our research we know that Sasquatches like to wallow in the shrubland or “Late1:CLS” state. This wallowing causes a transition to the Early1:ALL state, almost like a replacement fire. Describe this in the Description box.
3. To implement this novel transition open the transitions table for the Late1:CLS state by double clicking.
4. You need to parameterize the bottom row:
 - Class = Late1:CLS
 - To Class = Early1: ALL
 - Transition Type = Wind or Weather or Stress (not perfect-make sure to document! Can you think of how you would add a “Cryptic Zooid” Transition Type to the dropdown list?). We should document this—see description.
 - Probability = 0.01 (i.e., each pixel is wallowed in/on every 100 years on average, $1/.01 = 100$)
 - Age Reset = Yes
 - TST min = 0
 - ALSO, these mammals do not like super old pixels of this class. Right click on the header of the table (any column name), then select “Age Max” to add that column. Set the Age Max to 100.

5. You're getting faster! Done with parameterizing. Now run the model and look at your results, making sure to check out the transition results, particularly the Wind or Weather or Stress transition. Sasquatch really doesn't do enough damage to worry about, at least at current levels.