

CBI was asked to re-run the fisher home range PCA (which used variables derived from both EVEG and GNN datasets) to update the fisher habitat suitability grid. Unfortunately, the GNN data have not yet been updated (expected spring 2017), and the EVEG data have only been updated to reflect recent tree mortality on Sequoia National Forest. These data limitations make the **draft results highly uncertain; and we do not advise applying them** until vegetation layers are more comprehensively updated, and a more refined and justified analysis can be performed.

We obtained updated EVEG data for Sequoia NF (Region 5 Remote Sensing Lab, December 2016). These data reflect recent changes in forest structure due mostly to drought-related tree mortality. We reran the fisher habitat suitability PCA using updated EVEG for the Sequoia National Forest but pre-mortality EVEG data for other areas and for GNN (2012 data). This revised EVEG-GNN PCA was then projected to evaluate changes in fisher habitat suitability. Results suggest that tree mortality has greatly reduced the amount of suitable habitat on Sequoia NF, but **this result should be interpreted with great caution**. The mixture of the 4 updated variables from EVEG (PLAND, PLADJ, TTCFA_GE70, TTCFA_LT40) with 4 pre-tree mortality event variables from GNN (BA_MN, QUKE_BA, SNAG_DENS, DDI) **may be creating novel and unrealistic combinations of forest structure attributes and not accurately reflecting actual fisher habitat conditions. Additionally, how fishers are actually responding to these recent changes in forest structure is currently unknown, as field data from fishers using such a post-mortality landscape are as of yet unavailable.**

The fisher suitability grid will again be updated as soon as planned updates to GNN incorporating 2015 data are released. The FTT is also investigating alternatives to the PCA approach, such as CART and EEMS, which avoid some problematic assumptions with the PCA algorithm. Ideally, fisher field data collected over the next several years will reduce uncertainties about how fishers are using the post-mortality landscape.