Quantifying the Link Between Climate and Fire In Alaska
Statistical Model

Response
• Annual Hectares Burned

Explanatory Variables
• Monthly temperature and precipitation
• Monthly indices of Eastern Pacific teleconnection intensity
• Monthly SST from Niño 3.4 region
Eastern Pacific Teleconnection

• Positive phases a deeper than normal trough is located in the vicinity of the Gulf of Alaska

• Negative phases increased zonal flow and strengthened westerlies in the Eastern North Pacific
Intra-annual variability in SST changes in years preceding ENSO events
Conclusions

• Ocean-atmosphere interactions influence fire regime through impacts on monthly climate

• Statistical model can be used to forecast resource needs for upcoming fire season