Forecasts for the 2004 fire season indicate low area burned in most of the western United States. High area burned is forecast for the Chihuahuan desert and Arizona – New Mexico mountains in the extreme southwest, and mid – to – high area burned for Pacific lowland forests in the Northwest. Forecasts indicate average area burned for the Sierra Nevada Mountains and the Coast and Cascade ranges in northern California, and for the Northern Rockies, but forecasts for average area burned have shown little skill for those areas in the past.

Figure 1: May - October area burned forecasts for the western United States, by ecosystem province, using monthly climate division PDSI values from August 2 years prior to, March and August 1 year prior to, and December and March immediately prior to the forecast period. The SST forecast of area burned uses northern Pacific sea surface temperatures to forecast March PDSI. PST forecast uses persistence of February PDSI to forecast March PDSI. OBS forecast uses observed March PDSI. Bottom tercile forecasts (based on a 1980 – 2000 reference period) are shaded green, middle tercile forecasts yellow, and top tercile forecasts red. White areas indicate forecasts with no skill.
Bailey’s ecosystem provinces projected onto a 1 x 1 degree grid (Bailey et al. 1994).
Figure 3: Frequency of observed outcomes, conditional on the current forecast, by ecosystem province and forecast type. SST, PST and OBS indicate forecast type. The forecast region named in each panel is mapped on the left. The color-coded bars on the right show the frequency of outcomes for the given forecast category for 1980-2000. So, for example, the upper left panel shows a bottom-tercile (green) area burned forecast for the California Dry Steppe province. Years with bottom-tercile forecasts in this province subsequently experienced a bottom-tercile area burned about two-thirds of the time during the 1980 – 2000 reference period. The alphanumeric code in the extreme upper right corner of each panel references a Bailey’s ecosystem province described the legend in Figure 2. Forecasts are only displayed for a province if they show more skill than random chance.
Figure 3 continued
Figure 3 continued
Figure 3 continued
Figure 3 continued
Figure 3 continued
Figure 4: Annual area burned (black lines and points) plotted against local PDSI values (red lines) for: May one year prior to the fire season in the western Great Basin and Mojave Desert, August two years prior to the fire season in southeastern Arizona, and July one year prior to the fire season minus March immediately prior to the fire season in the Sierra Nevada. PDSI values in western Great Basin, Mojave, and southeastern Arizona all indicate a lower than average area burned for the 2004 fire season, while in the Sierra Nevada PDSI values indicate average area burned for the 2004 fire season.