

## Forecasting the Future of Coast Live Oak Forests in the Face of SOD

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Little is known about the potential short and long-term impacts of sudden oak death (SOD) on forest structure and composition. This study began in 2002 to evaluate the effects of SOD on *Quercus agrifolia* (coast live oak)- *Umbellularia californica* (bay laurel) forest communities over a gradient of SOD infection. Our eight study sites (1 hectare in size) are located throughout the San Francisco Bay Area, CA. In order to evaluate changes in stand composition and structure, we present mortality data from three time periods: recent past, present (2002-2004), and future (next 5 years), using tree mortality data collected in 2002-2004 and stand reconstruction techniques to establish pre-SOD reference stand structure. Future stand composition was forecasted assuming that currently seeping *Q. agrifolia* stems will senesce and current rates of infection will continue. Our results so far indicate tree mortality rates vary from 4% (in a low infection site) to over 50% (in a high infection site), in terms of *Q. agrifolia* basal area, from pre-SOD conditions to 2004, and that higher amounts of mortality will occur within the next five years. These estimates are greater than previously shown in the literature.