

Why the 1991 Firestorm Was So Devastating

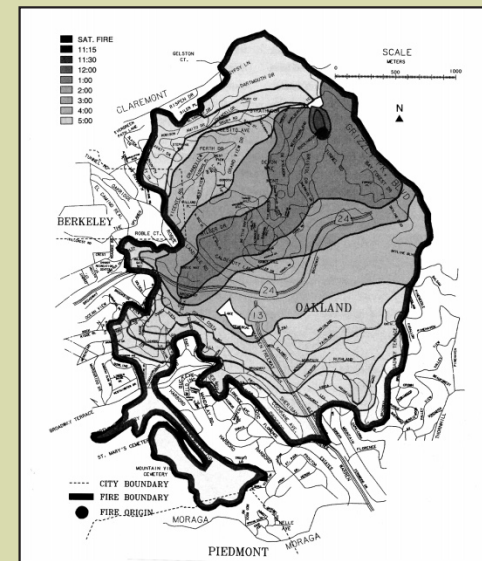
Weather

- Strong Diablo winds of 35–65 mph were blowing toward East Bay communities. During the fire, winds created convection columns of air that soared thousands of feet, carrying flaming debris.
- High temperatures (90 degrees by 10:30 am) with low humidity (16%)
- Five years of drought resulted in abundant fuel with low moisture content.

Geography

- Steep hillsides and canyons, particularly slopes with western and southern exposure, fanned flames. Canyons acted as chimneys, trapping heat and intensifying combustion.

Progression of the 1991 Fire



Source: *Firestorm! The Story of the 1991 East Bay Fire in Berkeley*, by Margaret Sullivan; published by The City of Berkeley.

Diablo winds—hot, dry gusts from the east—have caused most of the major fires in the hills. Since 1923, 11 Diablo driven fires in the East Bay Hills have burned almost 10,000 acres, destroyed 3,642 homes, taken 25 lives, with over \$1.6 billion in financial loss. Diablo fires typically begin in the morning and are brought under control only when the wind calms. West-wind fires have done a fraction of the damage and killed no one.



PHOTO: PATRICIA YABLONSKI

Adding to the Danger

- Many shake roofs and wood decks
- Closely spaced houses and condominiums, on narrow streets
- Failure of electrical power stations shut down five water pumping stations and limited fire fighting capability.
- Lack of training in “urban-wildland” mix fires by urban firefighters
- Lack of coordination among firefighting entities