

INTRODUCTION

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Earthquakes have been an integral part of the Bay Area's development for millions of years. During the last 150 years the Bay Area's population has escalated, creating considerable environmental problems. With growth Bay Area residents have altered the flow of natural streams, dirtied the air, polluted the Bay, changed the physical landscape, and created a seismic safety problem.

Bay Area residents have responded to the developmental changes by establishing rules, regulations, and standards with which to control environmental abuse and degradation. Special groups and governmental agencies, such as the Save San Francisco Bay Association, the Association of Bay Area Governments, the Bay Area Air Quality Management District, the Regional Water Quality Control Board, and the Bay Conservation and Development Commission have been created to preserve and improve the Bay Area's environment. These organizations and many others have been working to halt further environmental degradation, and have improved the Bay Area's water and air quality.

One environmental factor which has not been dealt with responsibly by Berkeley and much of the Bay Area is earthquakes. Seismic safety problems have been created by inappropriate land use along fault zones. Homes, schools, streets, industries, and commercial buildings have been built throughout Berkeley with little concern for potential activity on the Hayward Fault. At present, potential danger from building collapse, falling parapets, landslides, flying glass, falling objects, and other hazards is unacceptably high.

Despite the clear and present danger to human life and property, few individuals or organizations have taken the responsibility to be informed about seismic safety. This attitude must change! Berkeley cannot wait for the next great earthquake to take action to reduce potential seismic hazards. At a recent lecture on the occasion of Earthquake Awareness Day on the University of California campus at Berkeley, Dr. Bruce Bolt, Professor of Seismology and Director of the Seismographic Station, noted that there is a 50% probability of a great earthquake occurring within the next 10 years on one of the major faults that run through California. A major earthquake such as the one he predicts could kill thousands of people and produce up to 30 billion dollars worth of damage if it occurs in the Bay Area.

This Environmental Studies Senior Seminar recognizes the seismic safety problems that Berkeley faces and feels the issues can no longer be ignored. A large earthquake will one day strike Berkeley, but the amount of death and damage that accompanies it is, in part, a matter of public

choice. Many planning, engineering, and political responses to reduce seismic hazards are available for current use. We realize that all the hazards cannot be eliminated, but hope this paper will outline some of the problems and possible solutions on which people can begin to work.

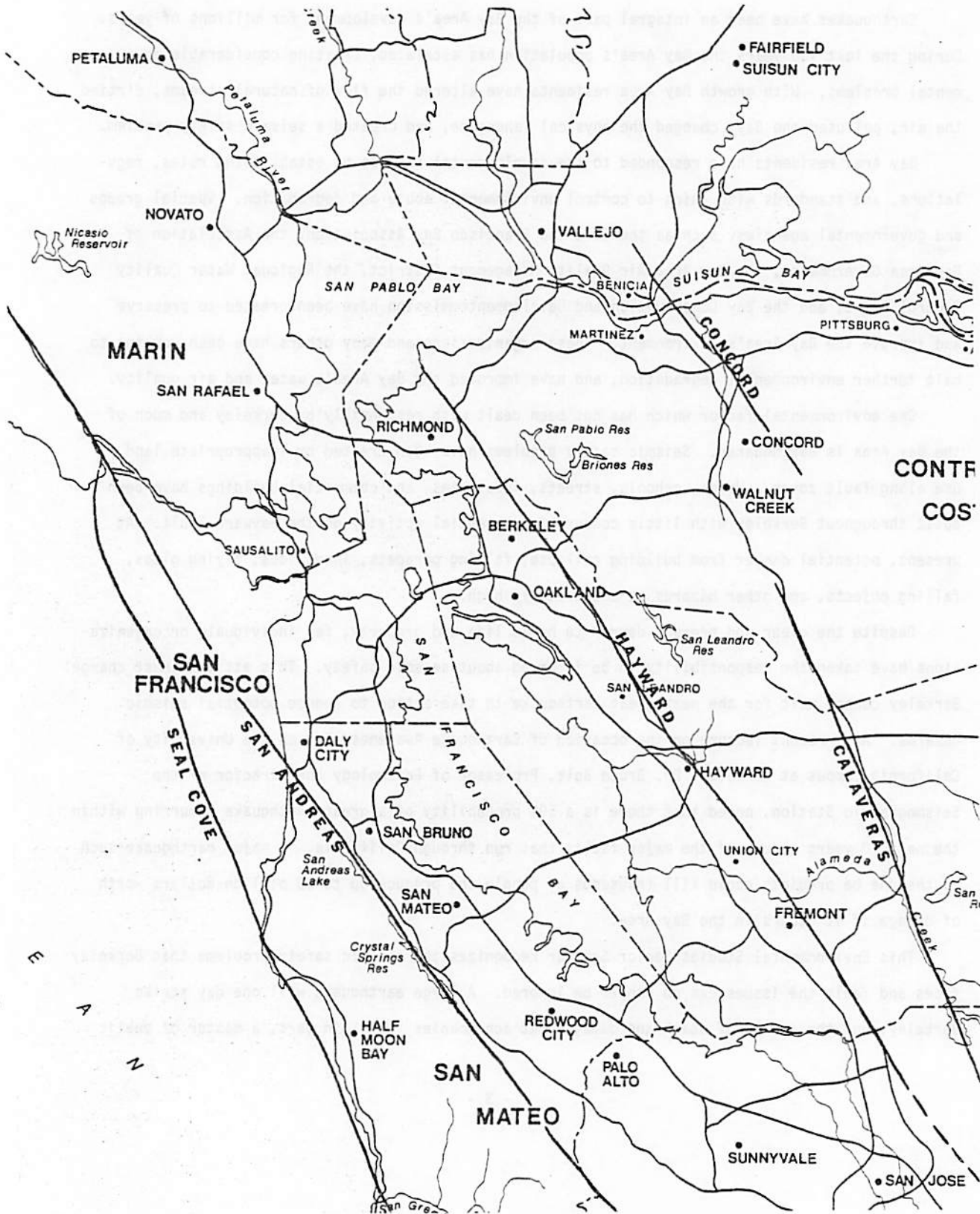


FIGURE 1. Map of Portion of Bay Area Showing Major Faults
 BASE MAP: Association of Bay Area Governments, 1976