

Oakland Geology: Answers and Questions

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I researched and wrote *Deep Oakland: How Geology Shaped a City* to explore the relationship between the city's geology and its sequence of human inhabitants. Along the way I learned this: Oakland's landscape represents the combined effects of Quaternary orbital cyclicity and tectonic action on the diffuse North America–Pacific plate boundary. Its bedrock represents the accretionary wedge, ophiolitic complex and foreland basin of a westward-stepping Mesozoic subduction regime and succeeding Tertiary foreland sediments on a foundered slab wedge, dissected by ongoing transcurrent wrench faulting with eastward dextral transpression. I will show how I turned that into everyday language and then present some outstanding problems in Oakland's geology that perhaps we can brainstorm.

Biography: Andrew Alden earned a BA in Earth Science from the University of New Hampshire in 1974, then began serving as a scientific copyeditor and occasional field hand at the U.S. Geological Survey in Menlo Park. He left the Survey in 1984 to work as a freelance editor and, other than a ten-year stint at technical firms, pursued this career until retiring in 2023. He has been writing and speaking on geological topics for global and local audiences since 1997. He began his ongoing "Oakland Geology" blog (deepoakland.com) in 2007. *Deep Oakland: How Geology Shaped a City* (Heyday, 2023) is his first book.