

Geologic Setting of Lake Merritt, the Bay Area's Strange Attraction

Andrew Alden

Author, *Deep Oakland: How Geology Shaped a City*

Session T22 Lake Merritt: Jewel of Oakland



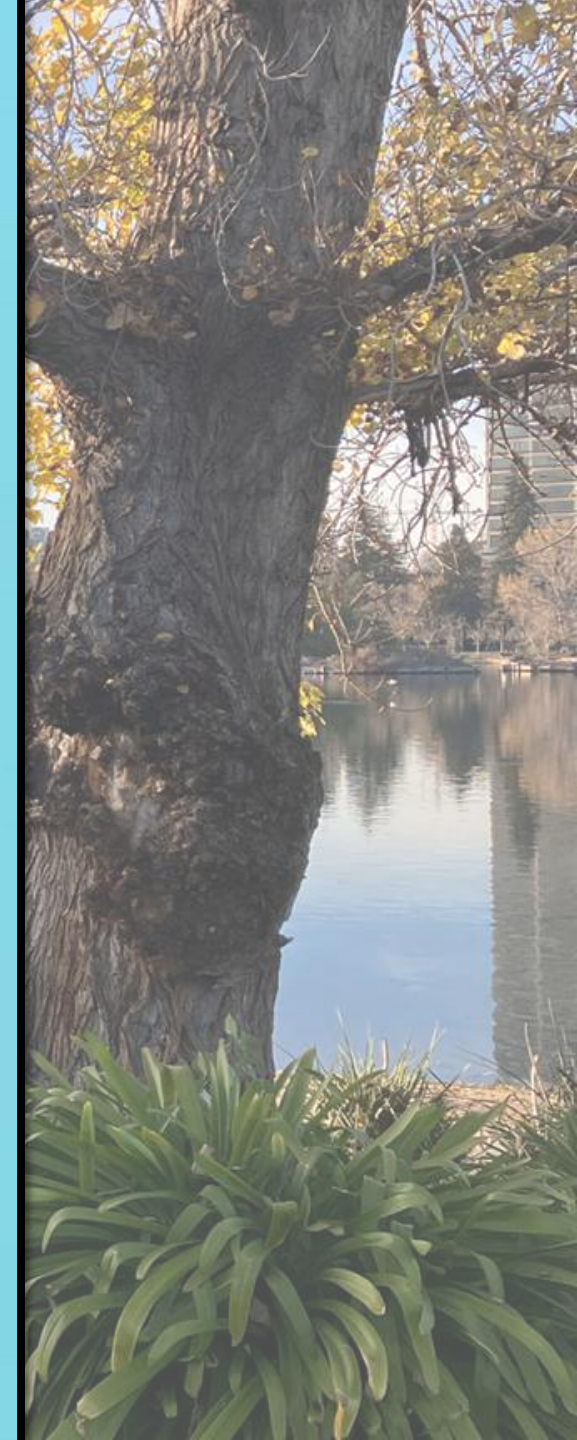
Northern
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THE
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CORDILLERAN
SECTION





@realbayareamemes





Berkeley

Piedmont

Emeryville

Oakland

Alameda

San Leandro



2025



1857

Hydrography by the Party
under the command of Comdr. JAMES ALDEN U.S.N. Assist.

Scale 10,000

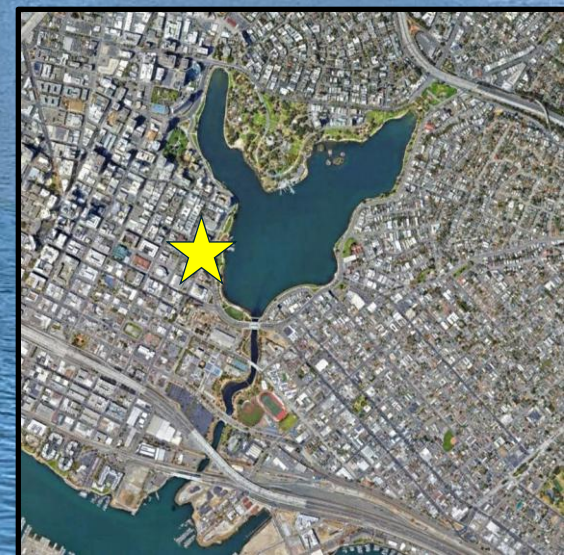
1857

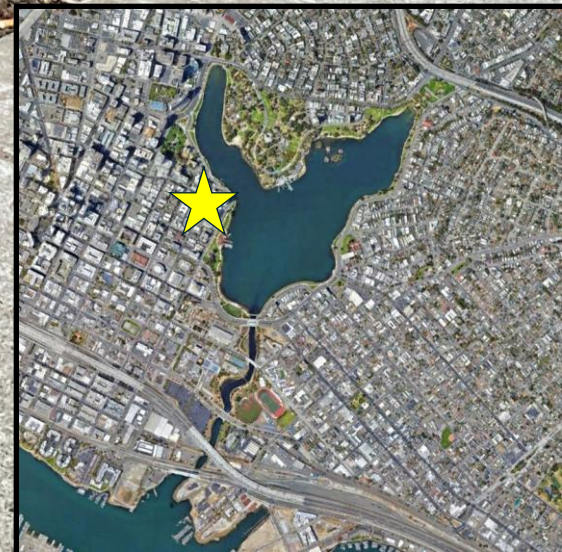
Abbreviations used in the bottoms
S. for Sand hrd. for hard
slt. " soft stk. " sticky



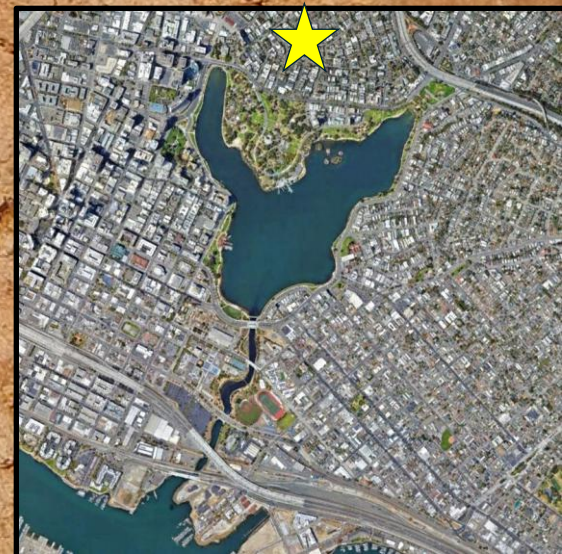






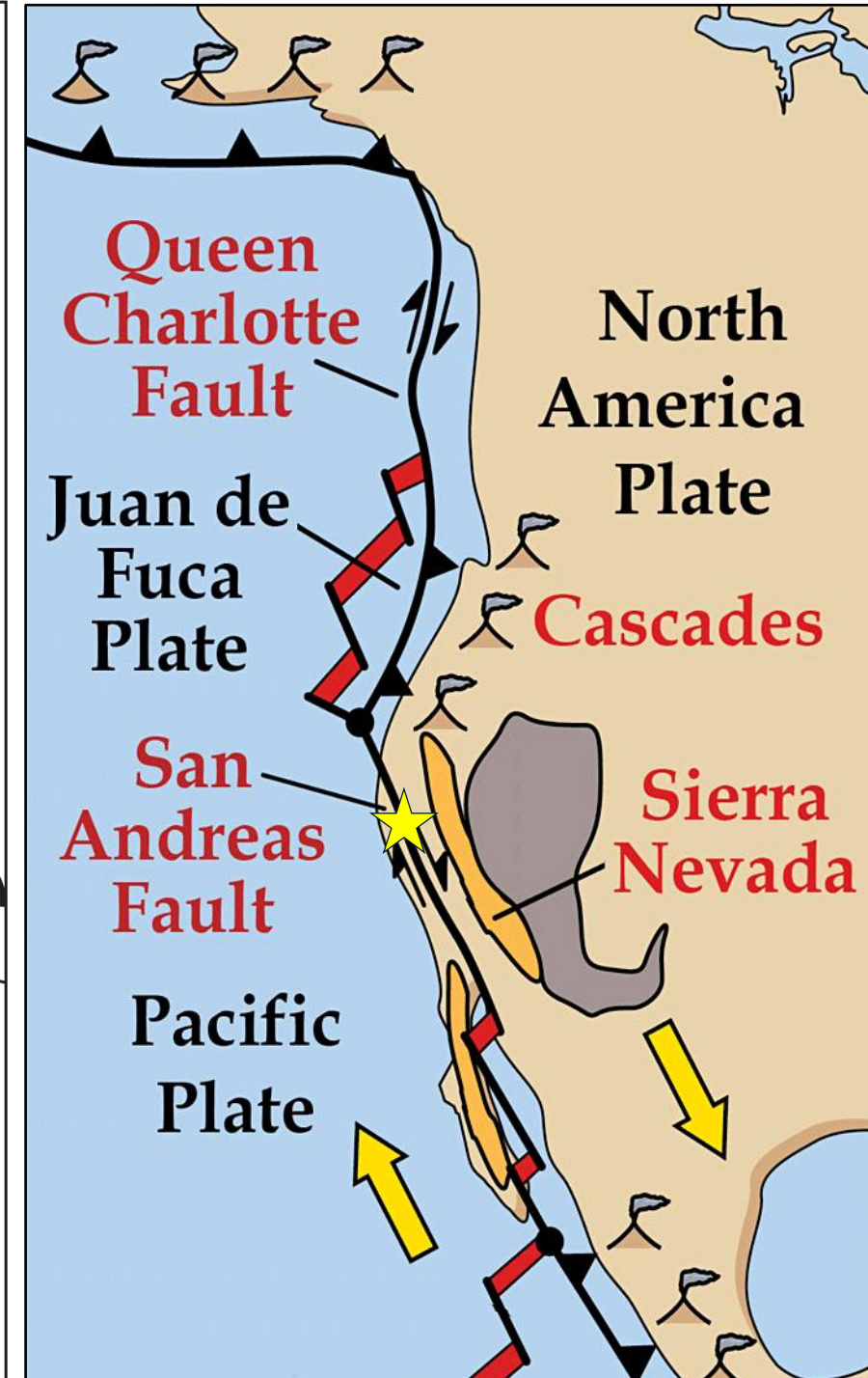
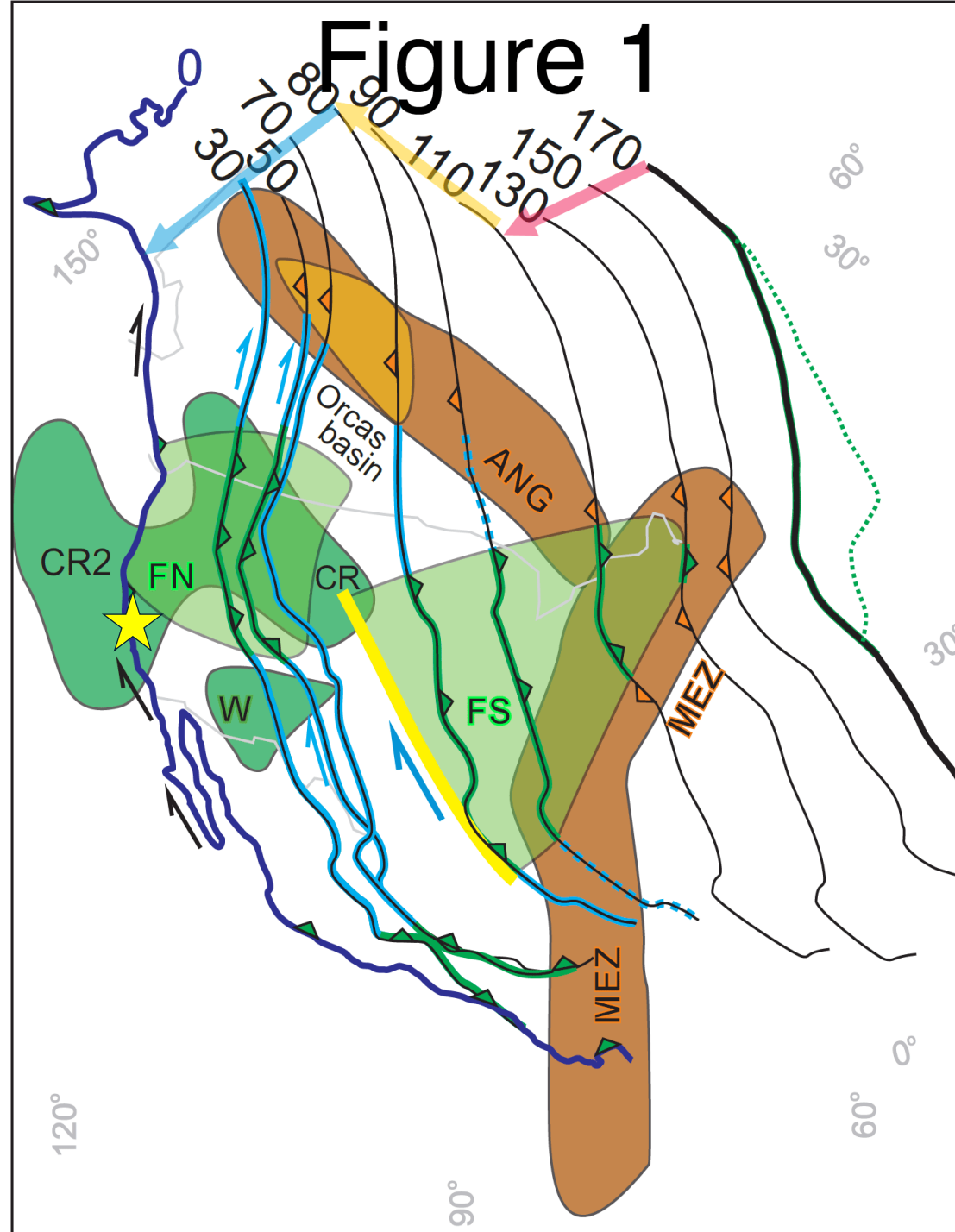


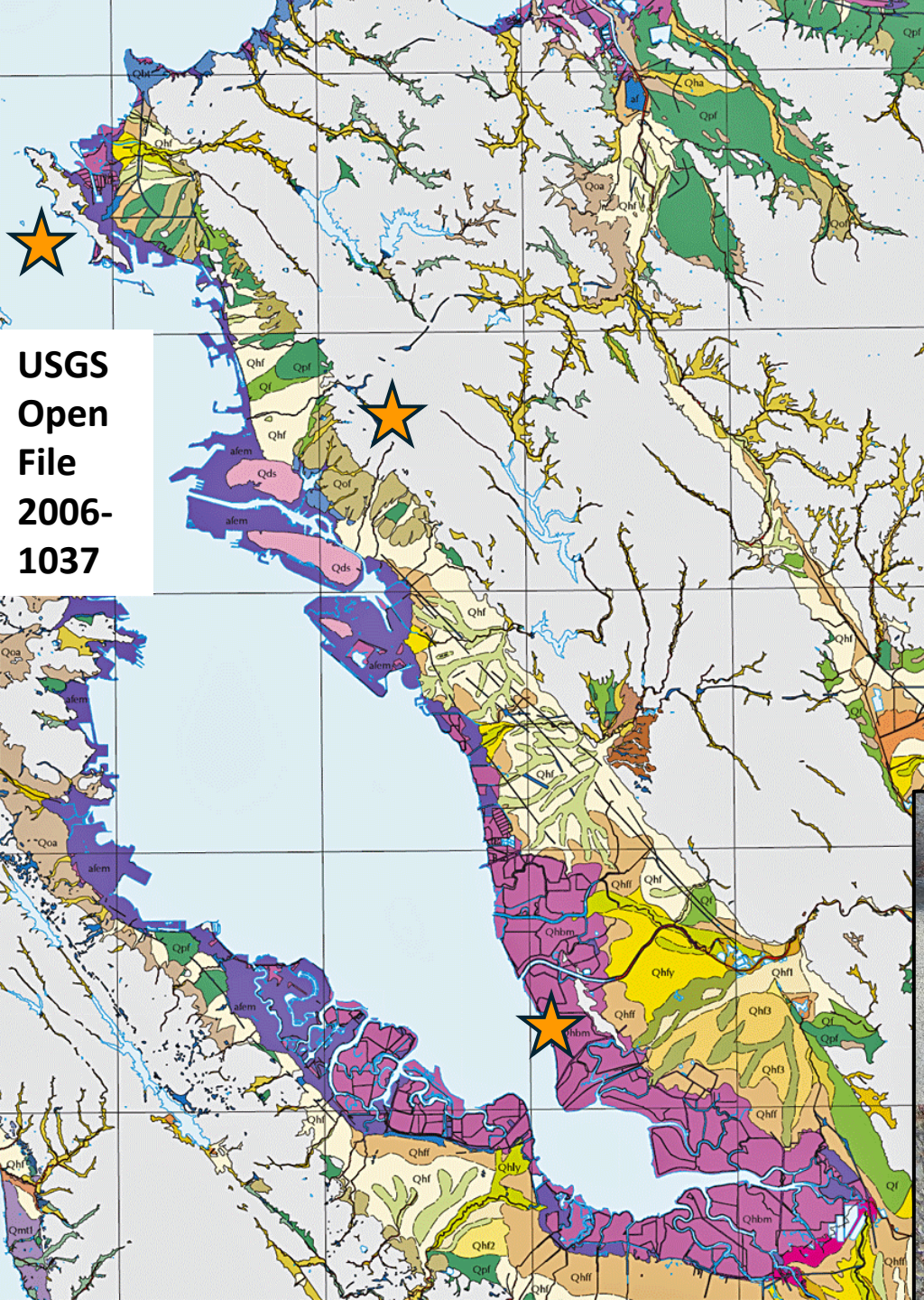




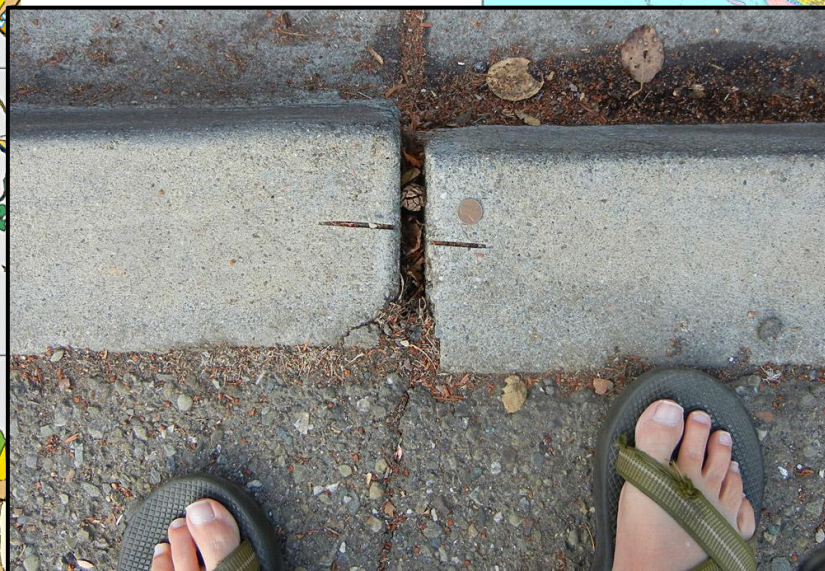
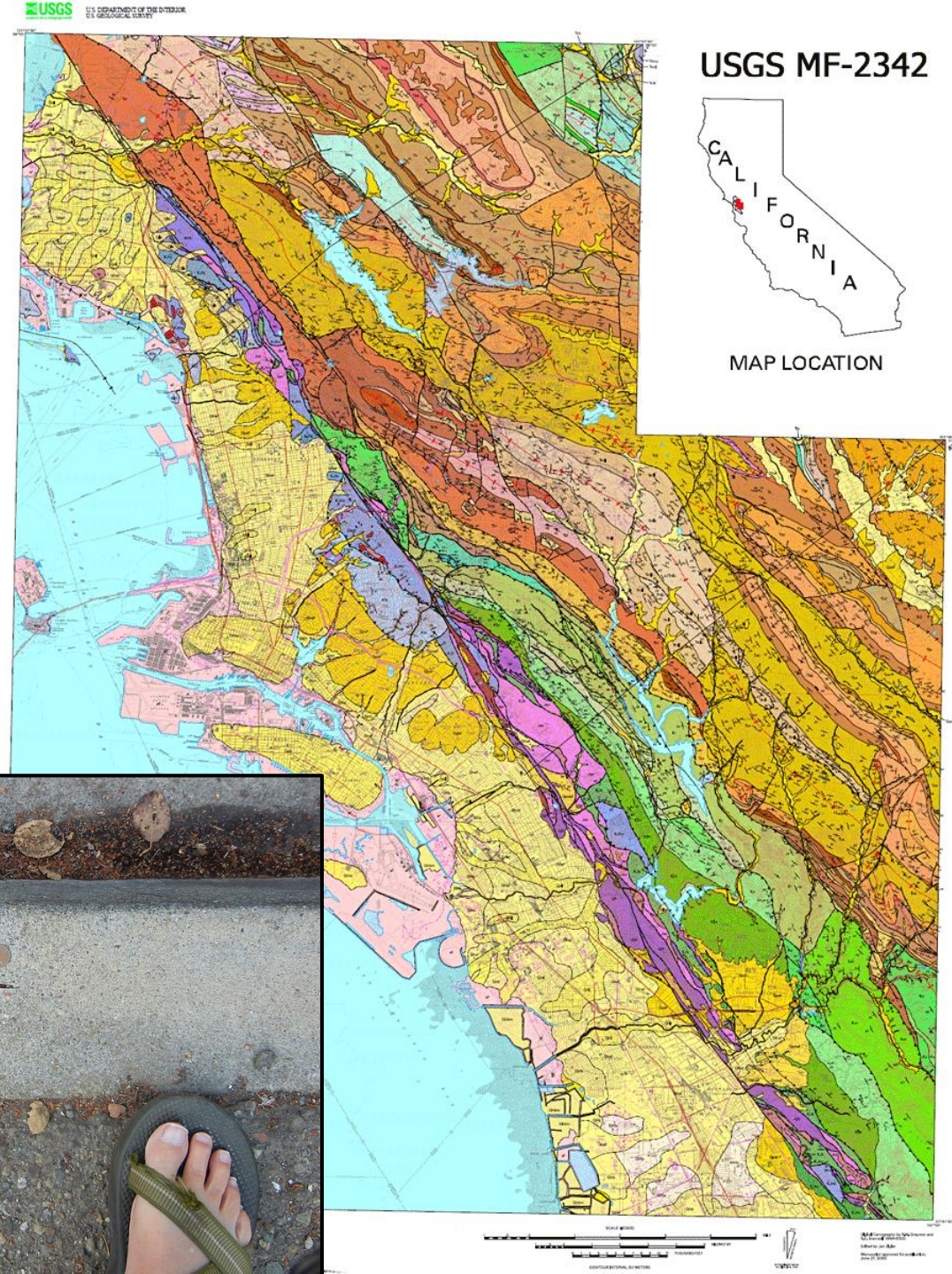
North America plate margin, 170 Ma to today: mixed subduction and translation

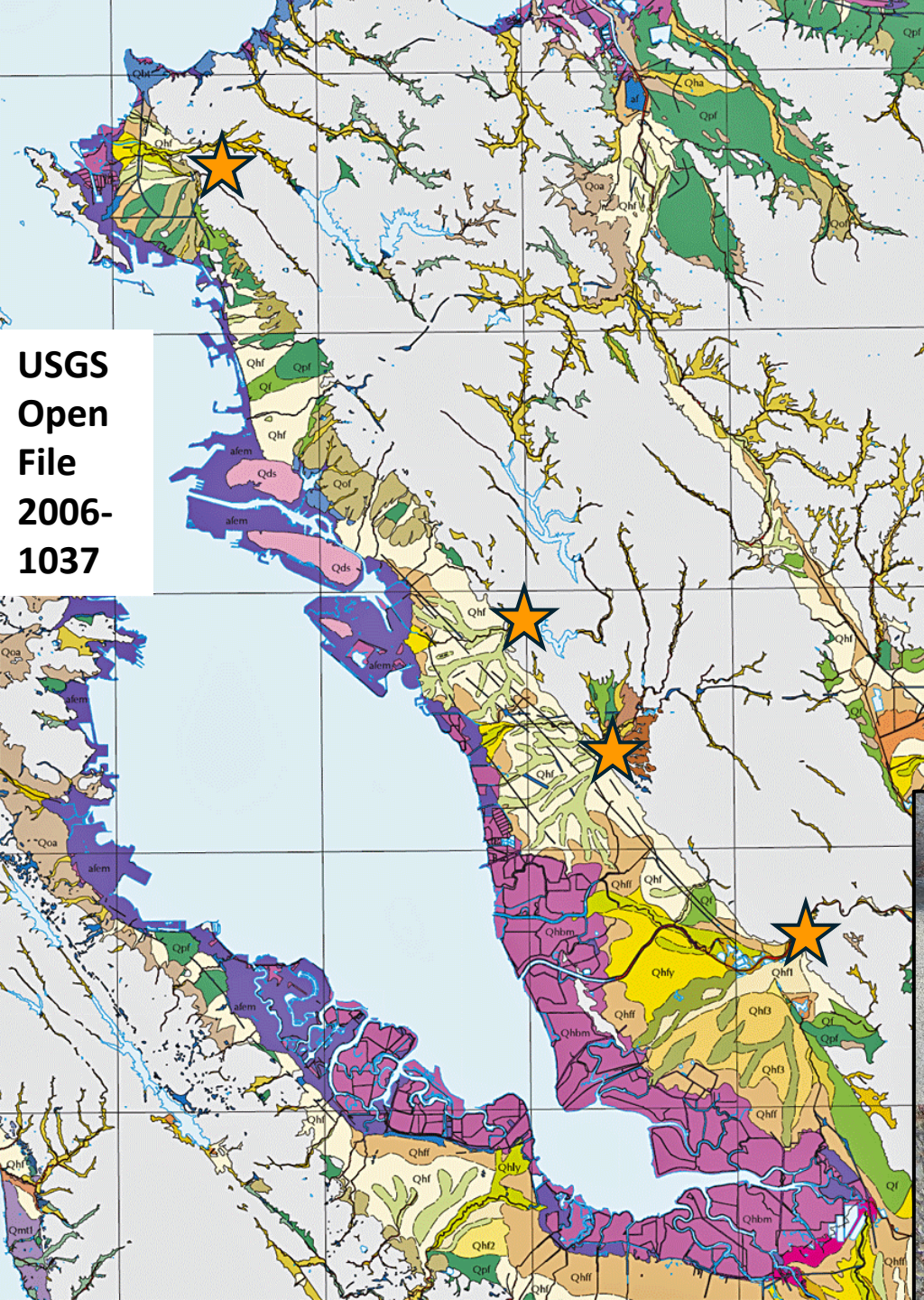
From Sigloch & Mihalynuk,
in review, "Tomotectonics of
Cordilleran North America
since Jurassic times: Double-
sided subduction, archipelago
collisions, and Baja-BC
translation"
[eartharxiv.org/repository/
view/7460/](https://eartharxiv.org/repository/view/7460/)



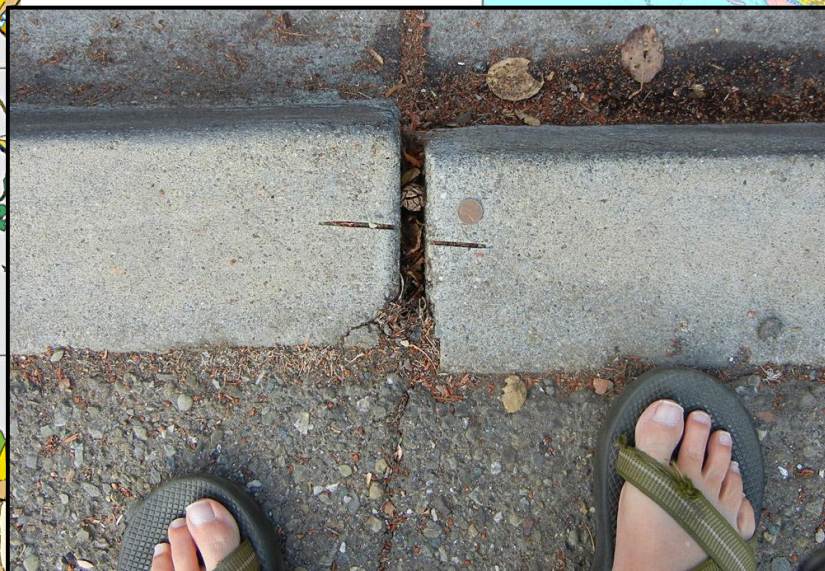


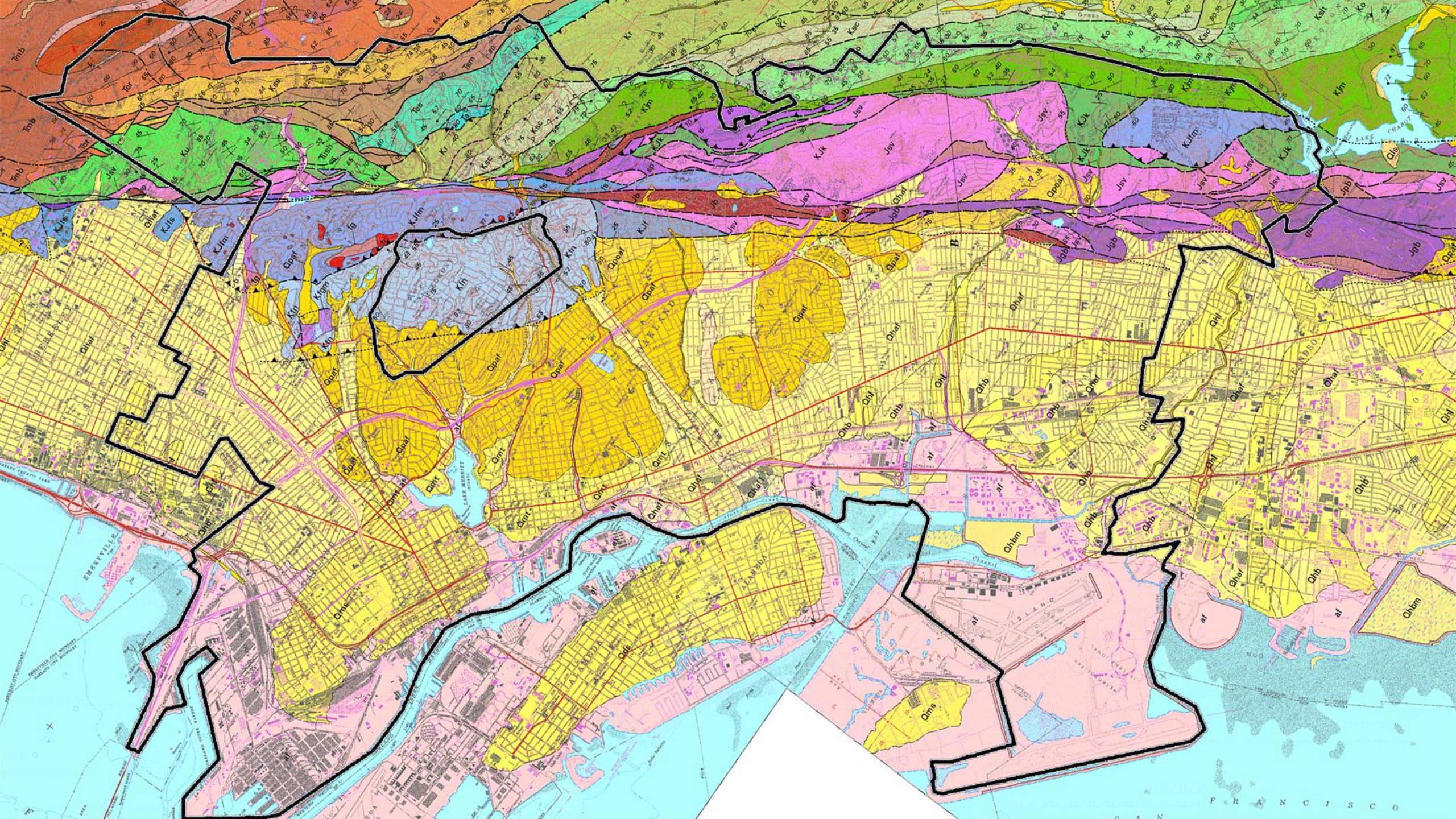
Hayward fault
~10 mm/yr =
~200 m since
LGM

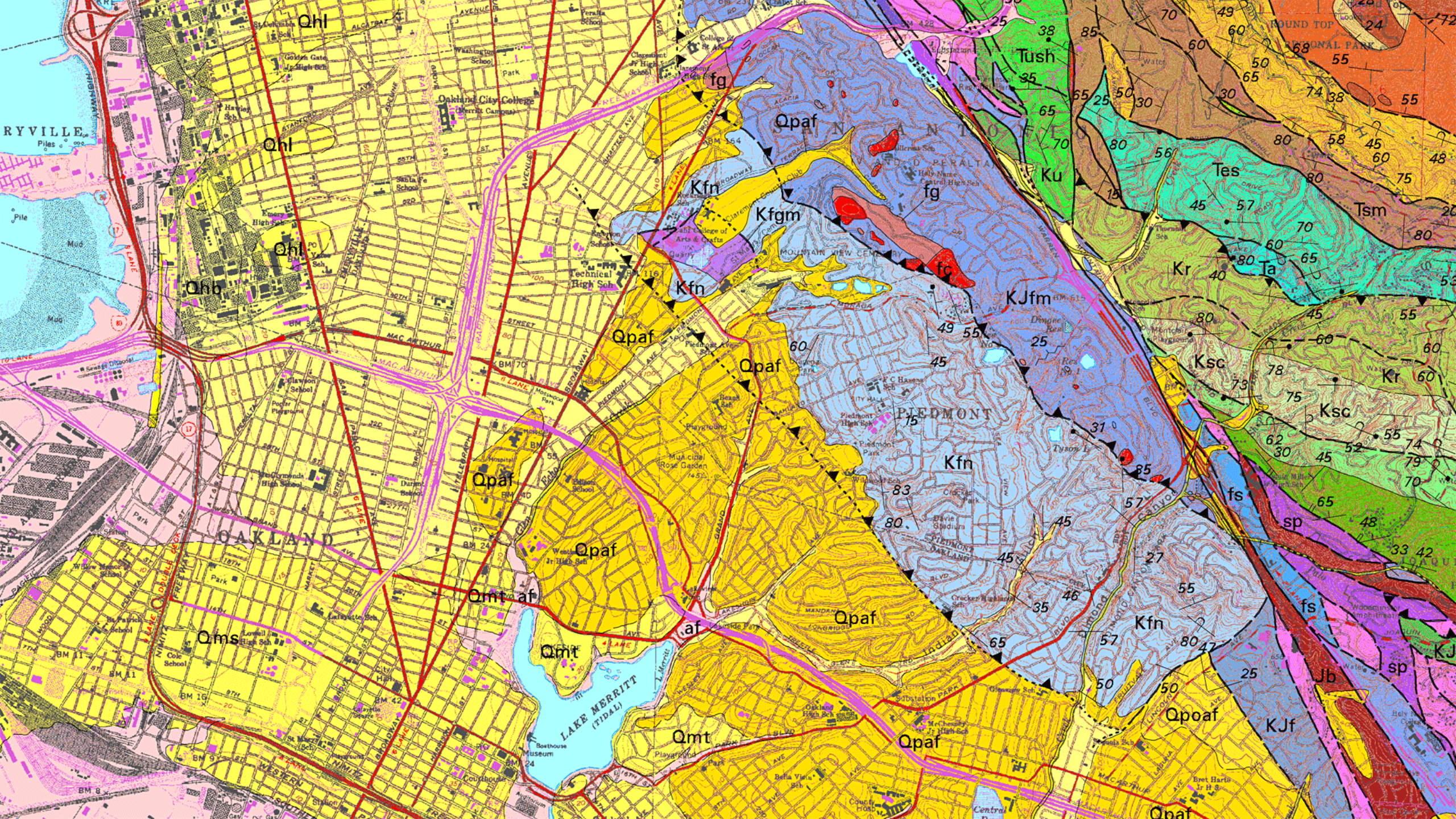




Hayward fault
~10 mm/yr =
~200 m since
LGM









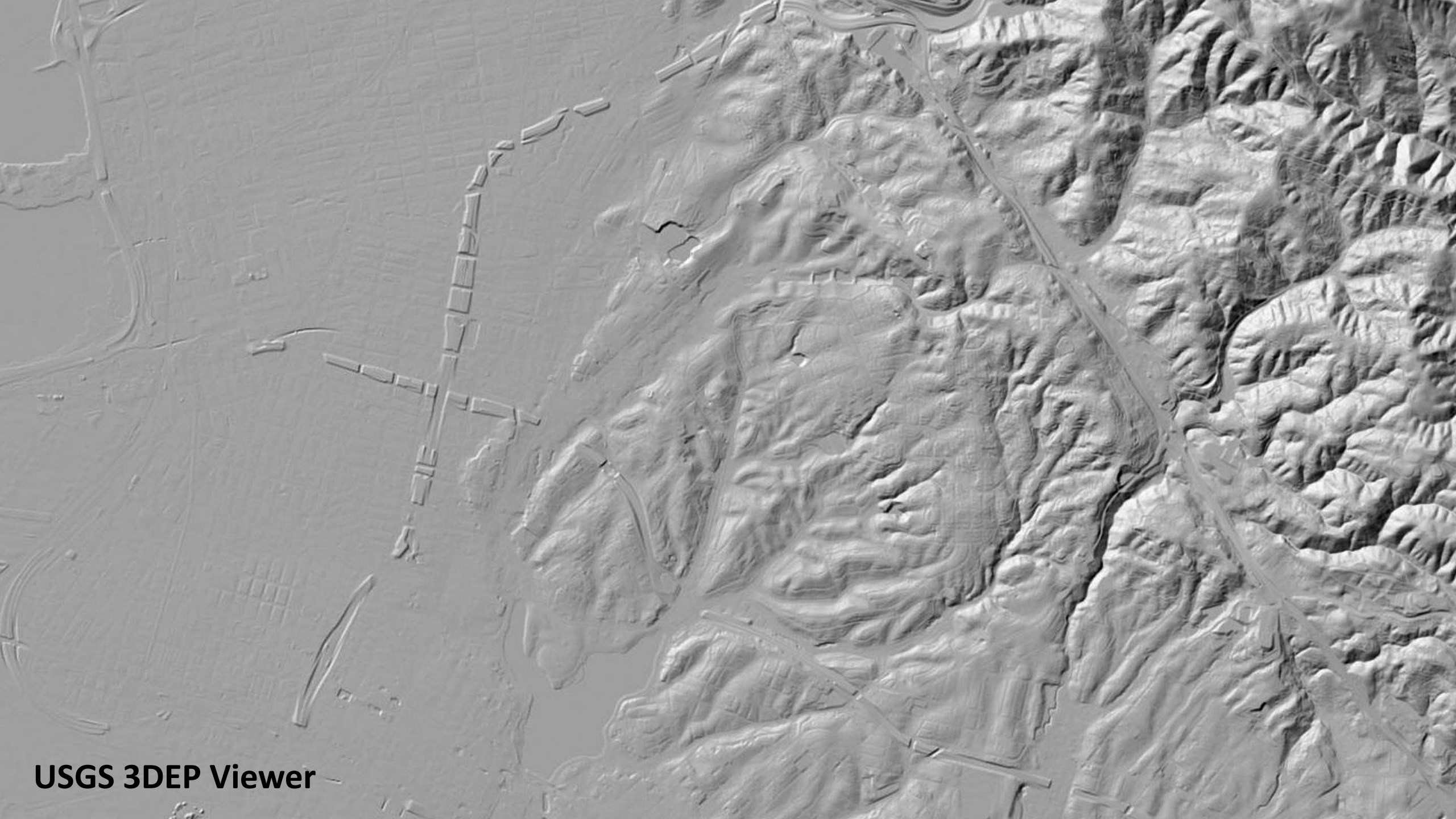


EMILY M.
WINSLOW
DIED
AUGUST 4, 1919
NATIVE OF
WATERVILLE, MAINE
AGED 82 YEARS

EMILY M.
WINSLOW
Born Feb. 20, 1837
Died Sept. 3, 1919
Aged 82 years
CATHERINE
HIS WIFE
Born Feb. 23, 1837
Died Sept. 3, 1919
Aged 82 years

WATERVILLE
MAINE
DIED
AUGUST 4, 1919
AGED 82 YEARS

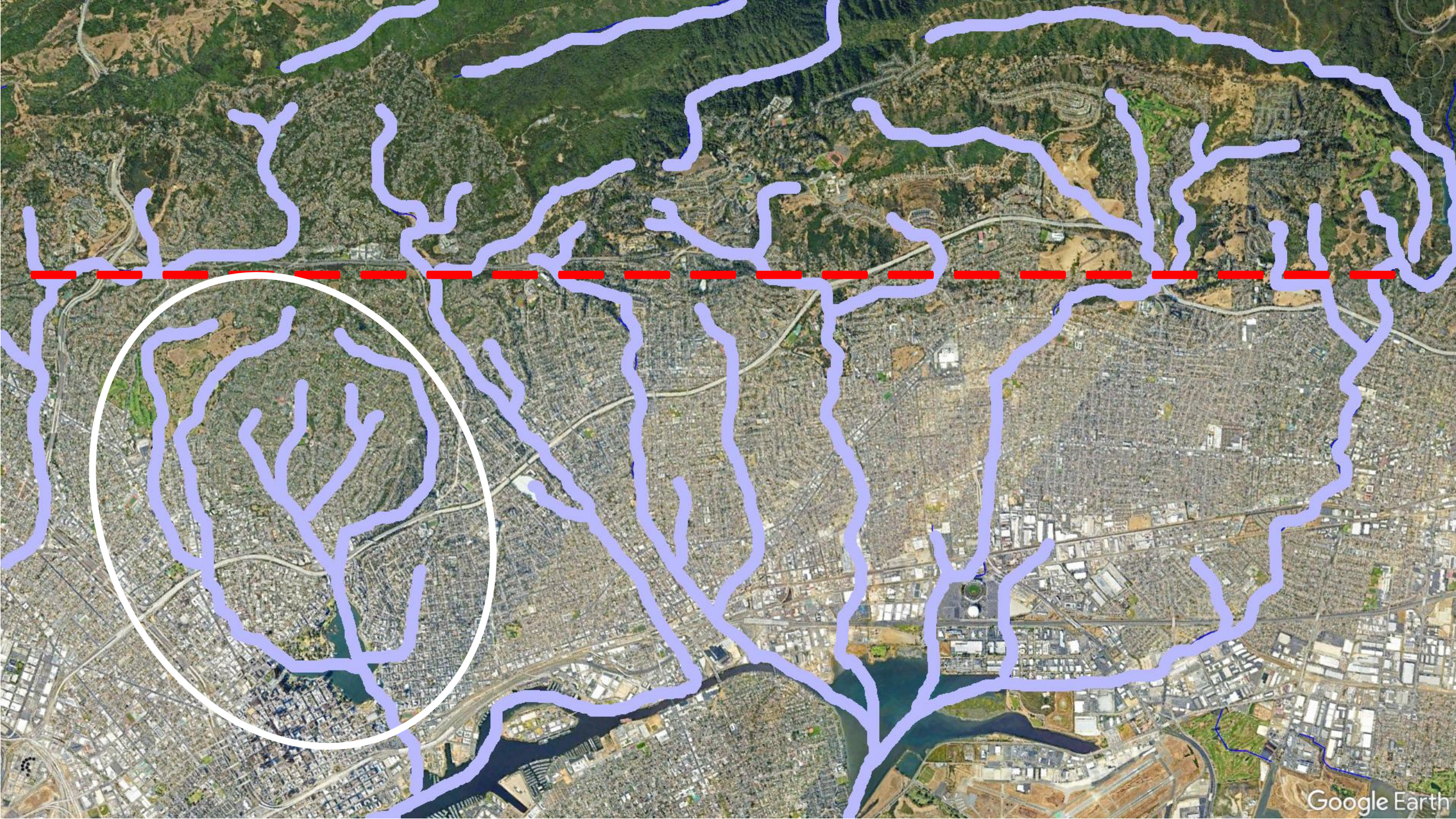
MOTHER
DIED
AUGUST 4, 1919
AGED 82 YEARS

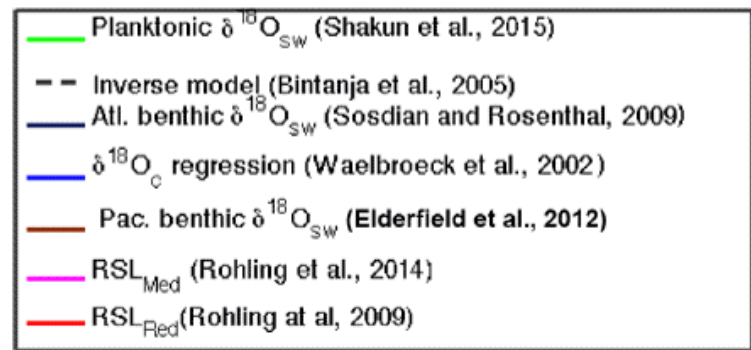
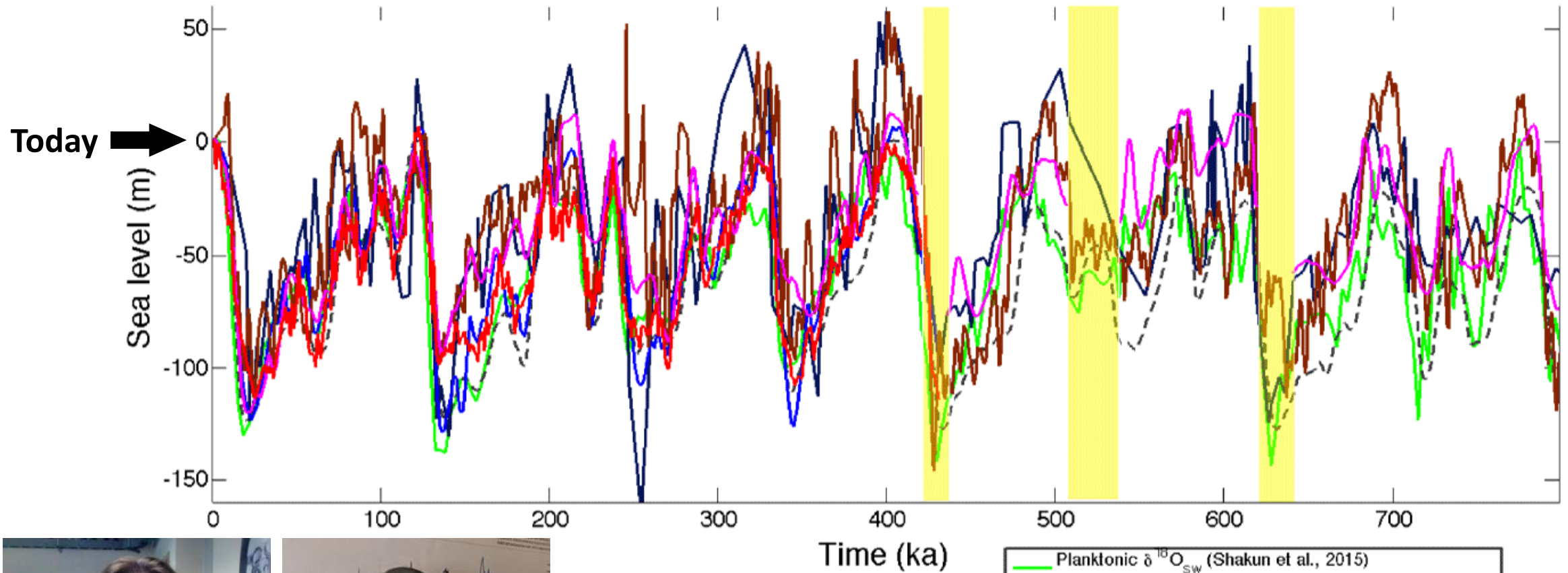








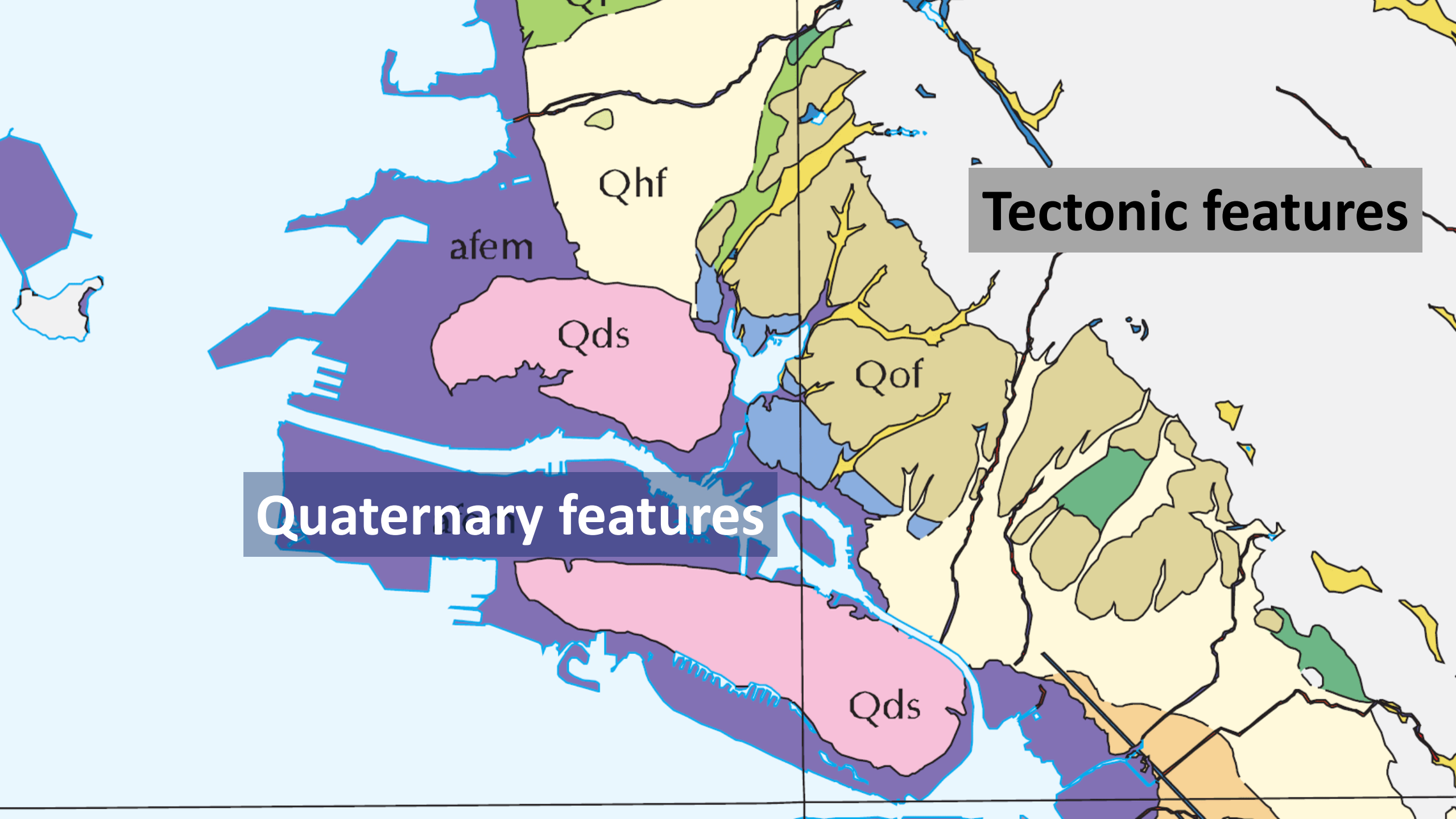




**Rachel Spratt &
Lorraine Lisiecki,
2016, Clim Past 12(4)**



Figure 1. Eustatic and relative sea level estimates for the seven records on the LR04 age model (Lisiecki and Raymo, 2005). Yellow bars mark the sapropel layers removed from the Mediterranean RSL record (Rohling et al., 2014).



Tectonic features

Quaternary features

