DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Prepared in cooperation with the
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

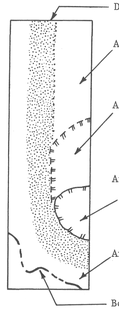
MISCELLANEOUS FIELD STUDIES
MF 432 (SHEET 1 OF 3)

MAP EXPLANATION

SYMBOLS

- Location where nitrate concentration in ground water has exceeded 45 mg/l; water may be injurious to infants and harmful to certain industrial processes.
- Location where boron concentration in ground water has exceeded 1.0 mg/l; water may be injurious to trees, plants, and crops.
- Location where dissolved solids concentration in ground water has exceeded 2,000 mg/l; water may be unpalatable to humans, unsuitable for certain industrial processes, and hazardous to agriculture.
- Location where boron and nitrate concentrations in ground water have exceeded 1.0 mg/l and 45 mg/l, respectively.
- Location where nitrate and dissolved solids concentrations in ground water have exceeded 45 mg/l and 2,000 mg/l, respectively.
- Location where boron and dissolved solids concentrations in ground water have exceeded 1.0 mg/l and 2,000 mg/l, respectively.
- Location where boron, nitrate, and dissolved solids concentrations in ground water have exceeded 1.0 mg/l, 45 mg/l, and 2,000 mg/l respectively.

Data boundary; bay and ocean also constitute data boundaries.



Area where maximum concentration of dissolved solids in ground water has not been found to exceed 500 mg/l in the majority of wells sampled during period of record.

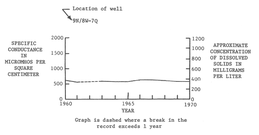
Area where maximum concentration of dissolved solids in ground water has been found to range between 500 and 1,000 mg/l in the majority of wells sampled during period of record; queried where data are absent.

Area where maximum concentration of dissolved solids in ground water has been found to exceed 1,000 mg/l in the majority of wells sampled during period of record; queried where data are absent.

Area for which chemical-quality data of ground water are either lacking or insufficient to categorize.

Boundary of area included in this report.

GRAPHS



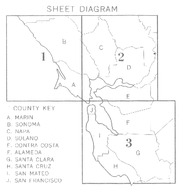
Graph is dashed where a break in the record exceeds 1 year

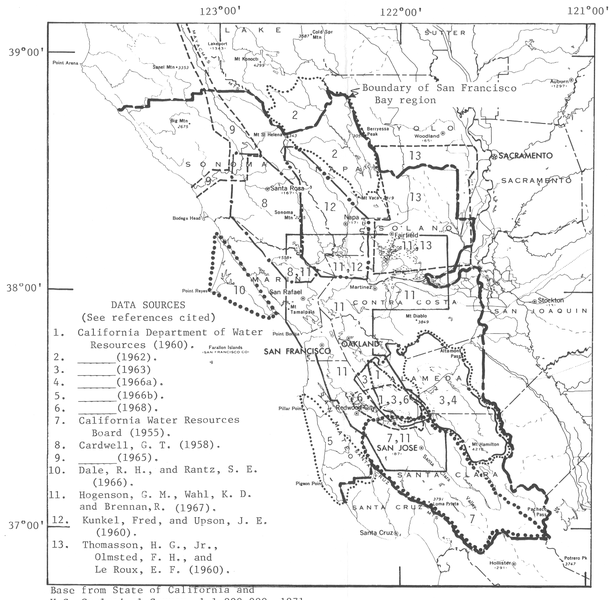
WELL LOCATIONS

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Well locations are indicated by symbols that follow the rectangular grid system of the public-land surveys. The first symbol designates the township north or south of the Mt. Diablo Base Line; the second symbol, the range east or west of the Mt. Diablo Meridian; the third symbol, the section within that township; and the fourth symbol, the subdivision of the section by 40-acre tracts, as shown in the diagram. Thus, well 9N/8W-7Q, for example, is located in Township 9N., Range 8W., section 7, SW¼SE¼.

SHEET DIAGRAM





DATA SOURCES
(See references cited)

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3. _____(1963)
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6. _____(1968).
7. California Water Resources Board (1955).
8. Cardwell, G. T. (1958).
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11. Hogenson, G. M., Wahl, K. D. and Brennan, R. (1967).
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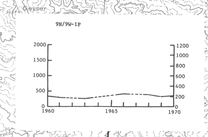
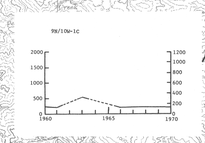
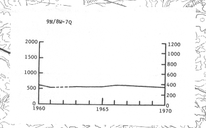
13. Thomasson, H. G., Jr., Olmsted, F. H., and Le Roux, E. F. (1960).

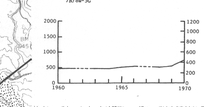
Base from State of California and U.S. Geological Survey, 1:1,000,000, 1971

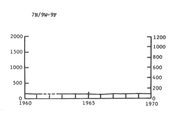
Index map showing principal ground-water data sources. The dotted, broken, and solid lines outline areas covered by various reports.

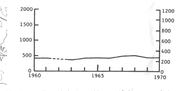


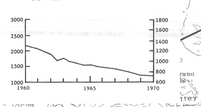












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SCALE 1:125 000

MAPS SHOWING AREAS IN THE SAN FRANCISCO BAY REGION WHERE NITRATE, BORON, AND DISSOLVED SOLIDS IN GROUND WATER MAY INFLUENCE LOCAL OR REGIONAL DEVELOPMENT

BY
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1972