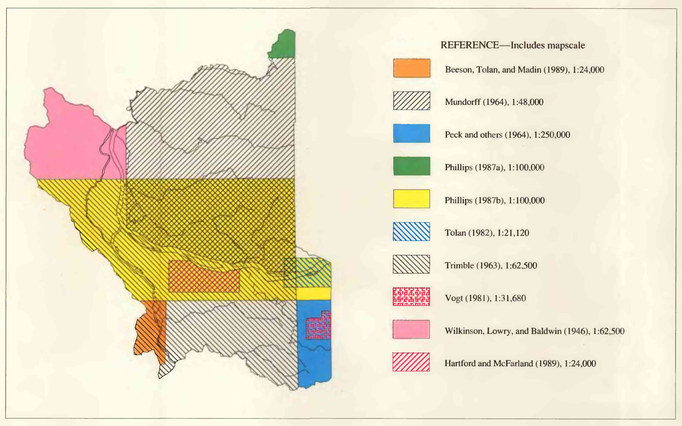
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

Prepared in cooperation with the
CITY OF PORTLAND BUREAU OF WATER WORKS,
INTERGOVERNMENTAL RESOURCE CENTER, AND
OREGON WATER RESOURCES DEPARTMENT

WATER-RESOURCES INVESTIGATIONS REPORT 90-4196
PLATE 1

GEOLOGIC MAPPING INDEX



SUBSYSTEM	SYMBOL	HYDROGEOLOGIC UNIT	DESCRIPTION
UPPER SEDIMENTARY (Quaternary and Pliocene)	US	UNCONSOLIDATED SEDIMENTARY AQUIFER	Alluvium along major rivers and Pleistocene catastrophic flood deposits that mantle much of the basin.
	TG	TROUTDALE GRAVEL AQUIFER	Cemented sand and gravel deposits of the Troutdale Formation. Also includes Cascadian volcanic conglomerates (Gresham, Springwater, and Walters Hill Formations), Pleistocene terrace gravel locally along rivers, Boring Lava and High Cascade volcanics.
LOWER SEDIMENTARY (Pliocene)	UNDIFFERENTIATED FINE-GRAINED UNIT: UF	CONFINING UNIT 1	Mudstone, siltstone, and claystone with some vitric sandstone. Considered Troutdale Formation; however, where the Troutdale sandstone aquifer is not present, it cannot be distinguished from Sandy River Mudstone.
	DIFFERENTIATED UNITS: TS	TROUTDALE SANDSTONE AQUIFER	Vitric sandstone and conglomerate. Correlative with Troutdale Formation.
	DIFFERENTIATED UNITS: C2	CONFINING UNIT 2	Mudstone, siltstone, and claystone mapped as Sandy River Mudstone.
	DIFFERENTIATED UNITS: SG	SAND AND GRAVEL AQUIFER	Silty to gravelly sand within Sandy River Mudstone.
OLDER ROCKS (Miocene–Eocene)	OR	OLDER ROCKS	Includes Skamania Volcanics, Goble Volcanics, marine sediments of the Pittsburg Bluff and Scappoose Formations, basalts of Waverly Heights, Columbia River Basalt Group and volcanic rocks of the Rhododendron Formation.

EXPLANATION

- CONTACT—Approximately located
- FAULT—Dashed where approximately located. Dotted where inferred. D, downthrown side. U, upthrown side.
- STRIKE-SLIP FAULT—Arrows show direction of relative movement
- THRUST FAULT—Sawteeth on upper plate
- ANTICLINAL FOLD—Dashed where approximately located. Dotted where inferred. Arrows show direction of plunge.
- SYNCLINAL FOLD—Dashed where approximately located. Dotted where inferred. Arrows show direction of plunge.
- A—A' LINE OF HYDROGEOLOGIC SECTION—Sections shown on plate 2
- BORING LAVA OR HIGH CASCADE VOLCANICS VENT AREA

Base modified from U.S. Geological Survey 1:100,000 topographic quadrangles, 1978–84.

Hydrogeology modified from sources shown on geologic mapping index.

Swanson, R.D., McFarland, W.D., Gonthier, J.B., and Wilkinson, J.M., 1992, A description of hydrogeologic units in the Portland basin, Oregon and Washington: U.S. Geological Survey Water-Resources Investigations Report 90-4196

HYDROGEOLOGIC UNITS IN THE PORTLAND BASIN

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