

Ground-Water Basin Boundary Criteria

Richter (in DWR, 1972 and UC Davis, 1974)

Lateral Physical Boundaries

- Bedrock contact (no appreciable flow \Rightarrow preferable boundary)
- Zone of low permeability (no appreciable flow \Rightarrow preferable boundary)
- Fault (no appreciable flow \Rightarrow preferable boundary)
- Syncline rim (no appreciable flow \Rightarrow preferable boundary)
- Buried bedrock ridge
- Constriction in permeable materials
- Deep underflow constrictions
- Aquifer contacts
- Crest of anticline
- Alluvial embayment
- Topographic ridge or divide

Lateral Hydraulic Boundaries

- Ground water divide
- Limit of pressure area
- Shoreline of ocean or lake
- Center of river or stream
- Unlined canal and reservoir

Lateral Political Boundaries

- State
- County
- City
- Irrigation District
- Federal Installation
- Park District

Vertical Boundaries

- Unconfined Aquifers
 - water table
 - base of water bearing materials
 - base of fresh ground water
- Confined Aquifer
 - upper, intermediate and lower confining beds
 - base of water bearing materials
 - base of fresh ground water

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Impermeable Bedrock - Impermeable bedrock consists of rocks of low water yielding capacity. These include rocks of marine origin and crystalline/or metamorphic rock.

Constrictions in Permeable Materials - A narrow gap impermeable material, even though filled with permeable stream channel materials, generally forms a basin boundary due to groundwater flow constriction in these areas.

Fault - A fault that crosses permeable materials generally forms a barrier to groundwater movement. This is usually indicated by noticeable difference in water levels and/or flow patterns on either site of the fault.

Low Permeability Zone - Areas of clay or other fine-grained material that have significant areal or vertical extent generally forms a barrier to groundwater movement.

Groundwater Divide - A groundwater divide generally forms a barrier to groundwater movement. Groundwater divides have noticeably divergent groundwater flow directions on either side of the divide with the water table sloping away from the divide.

Adjudicated Basin Boundaries - The basin boundaries established by court order were used for all adjudicated basins.

