**SQL QUERIES FOR DATA ANALYSIS**

**Query to retrieve water sources with high contamination**:

SELECT ws.source\_name, wqm.contaminant\_level

FROM Water\_Quality\_Measurements wqm

JOIN Water\_Sources ws ON ws.source\_id = wqm.source\_id

WHERE wqm.contaminant\_level > 10.0

ORDER BY wqm.contaminant\_level DESC;

**Query to calculate average pH for a region**:

SELECT r.region\_name, AVG(wqm.pH) as avg\_pH

FROM Water\_Quality\_Measurements wqm

JOIN Water\_Sources ws ON ws.source\_id = wqm.source\_id

JOIN Regions r ON r.region\_id = ws.region\_id

WHERE r.region\_name = 'Region A'

GROUP BY r.region\_name;

**Query to find regions with poor water quality**:

SELECT r.region\_name, COUNT(wqm.measurement\_id) as bad\_measurements

FROM Water\_Quality\_Measurements wqm

JOIN Water\_Sources ws ON ws.source\_id = wqm.source\_id

JOIN Regions r ON r.region\_id = ws.region\_id

WHERE wqm.contaminant\_level > 5.0 OR wqm.pH < 6.5 OR wqm.pH > 8.5

GROUP BY r.region\_name;