

State Profile Ground Water Scenario of Punjab

Area (Sq.km)	50,362
Rainfall (mm)	780
Total Districts / Blocks	22 Districts

Hydrogeology

The Punjab State is mainly underlain by Quaternary alluvium of considerable thickness, which abuts against the rocks of Siwalik system towards North-East. The alluvial deposits in general act as a single ground water body except locally as buried channels. Sufficient thickness of saturated permeable granular horizons occurs in the flood plains of rivers which are capable of sustaining heavy duty tubewells.

Dynamic Ground Water Resources (2011)	
Annual Replenishable Ground water Resource	22.53 BCM
Net Annual Ground Water Availability	20.32 BCM
Annual Ground Water Draft	34.88 BCM
Stage of Ground Water Development	172 %
Ground Water Development & Management	
Over Exploited	110 Blocks
Critical	4 Blocks
Semi- critical	2 Blocks
Artificial Recharge to Ground Water (AR)	<ul style="list-style-type: none"> ▪ Area identified for AR: 43340 sq km ▪ Volume of water to be harnessed: 1201 MCM ▪ Volume of water to be harnessed through RTRWH: 187 MCM ▪ Feasible AR structures: <ul style="list-style-type: none"> ❖ Recharge shaft – 79839 ❖ Check Dams - 85 ❖ RTRWH (H) – 300000 ❖ RTRWH (G& I) - 75000
Ground Water Quality Problems	
Contaminants	Districts affected (in part)
Salinity (EC > 3000µS/cm at 250C)	Bhatinda, Ferozepur, Faridkot, Muktsar, Mansa
Fluoride (>1.5mg/l)	Bathinda, Faridkot, Ferozepur, Mansa, Muktsar and Ropar
Arsenic (above 0.05mg/l)	Amritsar, Tarantaran, Kapurthala, Ropar, Mansa
Iron (>1.0mg/l)	Amritsar, Bhatinda, Gurdaspur, Hoshiarpur, Jalandhar, Kapurthala, Ludhiana, Mansa, Nawanshahr, Patiala, Ropar and Sangrur
Nitrate (>45 mg/l)	Bhatinda, Ferozepur, Faridkot, Gurdaspur, Jalandhar, Ludhiana, Mansa, Muktsar, Patiala and SAS Nagar
Heavy metals:	Lead: Amritsa, Bathinda, Fatehgarh Sahib, Faridkot, Ferozepur, Gurdaspur, Hoshiarpur, Jalandhar, Kapurthala, Ludhiana, Mansa, Nawanshahr, Patiala, Ropar, Sangrur and Muktsar
Lead (above 0.01 mg/l)	
Cadmium (Above 0.003mg/l)	Cadmium: Amritsar, Fatehgarh Sahib, Ludhiana, Nawanshahr, Ropar and Sangrur
Chromium (above 0.05 mg/l)	Chromium: Amritsar, Gurdaspur, Mansa, Ropar, Sangrur

Central Ground Water Authority

Areas Notified for Regulation of ground water development	<ul style="list-style-type: none"> ▪ Ludhiana city, Ludhiana District. ▪ Moga –I Block of Moga District ▪ Moga –II Block of Moga District ▪ Sangrur Block of Sangrur District ▪ Mahal Kalan Block of Sangrur District
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- Ahmedgarh Block of Sangrur District.
- Nakodar Block of Jalandhar District
- Shahkot Block of Jalandhar District
- Lohian Block of Jalandhar District
- Pattran Block of Patiala District
- Phagwara Block of Kapurthala District
- Nihalsinghwala Block of Moga District
- Dhuri Block of Sangrur District
- Sunam Block of Sangrur District
- Barnala Block of Sangrur District
- Sherpur Block of Sangrur District
- Malerkotla Block of Sangrur District
- Khanna Block of Ludhiana District
- Ajnala Block of Amritsar District
- Patti Block of Taran taran District
- Tarn Taran Block of Tarn Taran District
- Amlon Block of Fatehgarh Sahib District
- Khamano Block of Fatehgarh Sahib District
- Khera Fatehgarh Sahib District
- Tanda Block of Hoshiarpur District
- Bhogpur Block of Jalandhar District
- Goraya/Rurka kalan Block of Jalandhar District
- Jalandhar east Block of Jalandhar District
- Jalandhar west Block of Jalandhar District
- Nurmahal Block of Jalandhar District
- Phillaur Block of Jalandhar District
- Bholath/Nadala Block of Kapurthala District
- Dhillwan Block of Kapurthala District
- Kapurthala Block of Kapurthala District
- Sultanpur Block of Kapurthala District
- Pakhowal Block of Ludhiana District
- Bhikhi Block of Mansa District
- Budhlada Block of Mansa District
- Sardulgarh Block of Mansa District
- Aur Block of Nawan Shahr District
- Banga Block of Nawan Shahr District
- Patiala Block of Patiala District
- Sanaur Block of Patiala District
- Morinda Block of Ropar District
- Bhawaniagarh Block of Sangrur District