

State Profile Ground Water Scenario of Rajasthan

Area (Sq.km)	3,42,239
Rainfall (mm)	504
Total Districts / Blocks	33 Districts

Hydrogeology

The State can be divided into three hydrogeological units namely, unconsolidated sediments, semi-consolidated sediments and consolidated rocks. The unconsolidated sediments are of two types- alluvial sediments and aeoline deposits. The Alluvial deposits are confined to Barmer, Jalore and Jodhpur District, consisting of sand, clay, gravel and cobbles. Valley fills have been reported from Jhunjhunu, Ajmer, Bhilwara and Udaipur District. The Aeoline sediments constitute one of the major aquifers east of major fault, east of Bikaner. It occupies an area of 1400 sq.km. The aquifer thickness is 40 to 80 m. The yield of wells ranges from 100 to 150 m³/hr. Semi-consolidated formations include sandstones, limestones and Aur beds, covering Jaisalmer and Barmer Districts. The dugwells in Jaisalmer limestones yield 13 to 68 m³/day. The yield of wells in Lathi sandstone varies from 50-150 m³/hr. The consolidated rocks includes gneiss, granites, schist, phyllites, marble and Vindhyan sandstones, limestone, quartzite and basaltic flows, mostly restricted to eastern part of the State. The yield prospect is limited unless the well is located near major lineaments or any other weak planes. The ground water quality is in general poor (brackish to saline) at deeper levels.

Dynamic Ground Water Resources (2011)	
Annual Replenishable Ground water Resource	11.94 BCM
Net Annual Ground Water Availability	10.83 BCM
Annual Ground Water Draft	14.84 BCM
Stage of Ground Water Development	137 %
Ground Water Development & Management	
Over Exploited	172 Blocks
Critical	24 Blocks
Semi- critical	20 Blocks
Artificial Recharge to Ground Water (AR)	<ul style="list-style-type: none"> ▪ Area identified for AR: 160589 sq km ▪ Volume of water to be harnessed: 860 MCM ▪ Volume of water to be harnessed through RTRWH: 47.42 MCM ▪ Feasible AR structures: <ul style="list-style-type: none"> ❖ Percolation tank-3010 ❖ Anicut - 860 ❖ Recharge shaft - 5733 ❖ RTRWH (H) - 475000 ❖ RTRWH (G& I) - 25000
Ground Water Quality Problems	
Contaminants	Districts affected (in part)
Salinity (EC > 3000 µS/cm at 25 ° C)	Ajmer, Alwar, Baran, Barmer, Bharatpur, Bhilwara, Bikaner, Bundi, Chittorgarh, Churu, Dausa, Dhaulpur, Dungarpur, Ganganagar, Hanumangarh, Jaipur, Jaisalmer, Jalore, Jhalawar, Jodhpur, Karauli, Kota, Nagaur, Pali, Rajasamand, Sawai-Madhupur, Sikar, Sirohi, Tonk, Udaipur
Fluoride (>1.5 mg/l)	Ajmer, Alwar, Banswara, ,Baran,Barmer, Bharatpur, Bhilwara, Bikaner, Churu, Dausa, Dhaulpur, Dungarpur, Ganganagar, Hanumangarh, Jaipur, Jaisalmer, Jalore, Jodhpur, Karauli, Kota, Nagaur, Pali, ,Pratapgarh, Rajsamand, Sirohi, Sikar, Sawai Madhopur, Tonk, Udaipur
Iron (>1.0 mg/l)	Ajmer, Alwar, Banswara, Baran, Barmer, Bharatpur, Bhilwara, Bikaner, Bundi, Chittaurgarh, Churu, Dausa, Dhaulpur, Dungarpur, Ganganagar, Hanumangarh, Jaipur, Jaisalmer, Jalore, Jhalawar, Jhunjhunu, Jodhpur, Karauli, Kota, Nagaur, Pali, Pratapgarh, Rajsamand, Sikar, SawaiMadhopur, Sirohi, Tonk, Udaipur
Nitrate (>45 mg/l)	Ajmer, Alwar, Banswara, Baran, Barmer, Bharatpur, Bhilwara, Bikaner, Bundi, Chittaurgarh, Churu, Dausa, Dhaulpur, Dungarpur, Ganganagar, Hanumangarh, Jaipur, Jaisalmer, Jalore, Jhalawar, Jhunjhunu, Jodhpur, Karauli, Kota, Nagaur, Pali, Pratapgarh, Rajsamand, Sikar, SawaiMadhopur, Sirohi, Tonk, Udaipur
Heavy metals:	
Lead(>0.01mg/l)	<p>Khetri Copper area in Jhunjhunu District; Pali urban area in Pali district; Sambhar Lake and Sanganer area of Jaipur district; Bhiwadi industrial area of Alwar district; Basni & Mandore areas of Jodhpur Urban</p> <p style="text-align: center;">Bhiwadi industrial area of Alwar district; Pali urban area</p>

Cadmium(>0.003mg/l)	in Pali district; Sanganer area of Jaipur
Chromium(>0.05mg/l)	Bhiwadi industrial area of Alwar district; Pali urban area in Pali district,
Nickle(> 0.02mg/l)	Bhiwadi industrial area of Alwar district
Copper(>1.50mg/l)	Basni & Mandore industrial areas of Jodhpur Urban

Central Ground Water Authority

Areas Notified for Regulation of ground water development	<ul style="list-style-type: none"> ▪ Jhotwara Block of Jaipur District ▪ Pushkar Valley of Ajmer District ▪ Jalore Block of Jalore District ▪ Raniwara Block of Jalore District ▪ Budhana Block of Jhunjunu District ▪ Chirawa Block of Jhunjunu District ▪ Mundwa Block of Nagaur District ▪ Behror Block of Alwar District ▪ Bhinmal Block of Jalore District ▪ Surajgarh Block of Jhunjunu District ▪ Dhod Block of Sikar District ▪ Shri Madhopur Block of Sikar District ▪ Rajgarh Block of Churu District ▪ Osian Block of Jodhpur District ▪ Bhopalgarh Block of Jodhpur District ▪ Bilara Block of Jodhpur District ▪ Merta Block of Nagaur District ▪ Baetu Block of Barmer District ▪ Sambher Block of Jaipur District ▪ Govindgarh Block of Jaipur District ▪ Sanganer Block of Jaipur District ▪ Bassi Block of Jaipur District ▪ Amer Block of Jaipur District ▪ Shahpura Block of Jaipur District ▪ Mandore Block of Jodhpur District ▪ Sayala Block of Jalore District ▪ Sanchore Block of Jalore District ▪ Nawalgarh Block of Jhunjunu District ▪ Udaipurwati Block of Jhunjunu District ▪ Jhunjunu Block of Jhunjunu District ▪ Todabhim Block of Karauli District ▪ Pisangan Block of Ajmer District ▪ Chhitorgarh Block of Chhitorgarh District ▪ Nimbahera Block of Chhitorgarh ▪ Kuchaman Block of Nagaur
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