



# SAARTHI - सारथी

करियर मार्गदर्शन पोर्टल · Career Guidance Portal

"सही मार्गदर्शन, उज्ज्वल भविष्य।"

करियर शीट · CAREER SHEET

## जल संसाधन इंजीनियर

Water resource engineers manage water - designing dams, canals, water supply, irrigation and flood control. It is a vital field in a drought-prone state like Rajasthan.



### Scan for everything on this career

Salary, exams, colleges, the routes in and the steps after — all on the portal.

[career.gsssjethantri.in/#/career/eng-4662](https://career.gsssjethantri.in/#/career/eng-4662)

### राजकीय उच्च माध्यमिक विद्यालय, जेठन्तरी

Govt. Sr. Sec. School, Jethantri · ब्लॉक समदड़ी · बालोतरा (Block Samdari · Balotra)

[www.gsssjethantri.in](https://www.gsssjethantri.in) · [career.gsssjethantri.in](https://career.gsssjethantri.in)



#### सुशील कुमार शर्मा

प्रधानाचार्य, रा.उ.मा.वि. जेठन्तरी · मास्टर ट्रेनर  
Principal, GSSS Jethantri · Master Trainer



#### श्री चेनाराम चौधरी

प्रधानाचार्य, डाइट बाड़मेर  
Principal, DIET Barmer



#### श्रीमती संघमित्रा

वरिष्ठ व्याख्याता, डाइट बाड़मेर (सहयोग)  
Sr. Lecturer, DIET Barmer (Support)



#### भरत चौधरी

अभिकल्पना व विकास · व्याख्याता (इतिहास)  
Designed & developed · Lecturer (History)

### विशेष धन्यवाद · SPECIAL THANKS



#### सुरेन्द्र सिंह राठौड़

व्याख्याता (इतिहास) · रा.उ.मा.वि. कानाना



#### सुरेश कुमार सैन

व्याख्याता (भूगोल) · रा.उ.मा.वि. रामसीन मूंगड़ा



#### वनिता कुमारी

व्याख्याता (इतिहास) · रा.उ.मा.वि. रामसीन मूंगड़ा



#### कमलेश चौधरी

व्याख्याता (राजनीति विज्ञान) · रा.उ.मा.वि. टापरा

करियर मार्गदर्शन कार्यशाला, डाइट बाड़मेर (14-17 जुलाई 2026) में विकसित व लोकार्पित  
Developed & unveiled at the Career Guidance Workshop, DIET Barmer (14-17 July 2026)

यह एक स्वतंत्र परियोजना है, जो सरकार की आधिकारिक करियर-मार्गदर्शन सामग्री पर आधारित है। · An independent project based on the Government's official career-guidance content.

## 1 About this career

Water resource engineers manage water - designing dams, canals, water supply, irrigation and flood control. It is a vital field in a drought-prone state like Rajasthan.

## 2 At a glance

|                       |                                                   |
|-----------------------|---------------------------------------------------|
| Minimum qualification | 12th PCM + B.Tech/B.E. in Civil/Water Resources   |
| Work mode             | Field and office; occasional overtime             |
| Demand                | Good - in irrigation, water supply and government |
| Top earning           | Senior/executive engineer: Rs 1.2-1.7 lakh+/month |

## 3 What you need

### INTERESTS

- Curiosity about how things work
- Analysing problems and situations
- Interest in science and maths

### ABILITIES

- Analytical, problem-solving thinking
- Attention to detail and planning
- Ability to work under pressure

### KEY SKILLS

- Hydraulics and hydrology
- Surveying and GIS
- Project and site management
- Water structure design (dams, canals)
- Design software (AutoCAD etc.)
- Reporting and teamwork

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## 4 How to get there

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- 1 Pass 10+2 with Physics, Chemistry, Maths.
- 2 Clear JEE/REAP for B.Tech/B.E. in Water Resources/Civil Engineering.
- 3 Build experience via site and lab internships.
- 4 Specialise with M.Tech in Water Resources.
- 5 Choose state water/irrigation dept exams or GATE for PSU.

### MAIN EXAMS

- JEE Main / JEE Advanced
- REAP (Rajasthan)
- GATE (Civil)
- Rajasthan Water Resources AE/JE recruitment

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## 5 Where to study

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### GOVERNMENT INSTITUTES

- MBM University (ME) — Jodhpur, Rajasthan
- MNIT Jaipur (ME) — Jaipur, Rajasthan (<https://www.mnit.ac.in>)
- CTAE (MPUAT) — Udaipur, Rajasthan
- IIT Bombay — Mumbai
- IIT Roorkee — Roorkee

### PRIVATE INSTITUTES

- Jaipur National University — Jaipur, Rajasthan
- Manipal University Jaipur — Jaipur, Rajasthan
- Hindustan Institute of Technology & Science — Chennai

### ONLINE

- NPTEL/SWAYAM (Water Resources) — Online (<https://nptel.ac.in>)
- Udemy (Water & Environmental Engineering) — Online

### FEES

Course fees are about Rs 1.5-10 lakh (full course); varies by institute.

**SCHOLARSHIPS**

- National Scholarship Portal (<https://scholarships.gov.in>)
- Vidya Lakshmi Education Loan Portal (<https://www.vidyalakshmi.co.in>)
- Buddy4Study (<https://www.buddy4study.com>)
- SJE Rajasthan Scholarships (<https://sje.rajasthan.gov.in>)

**6 What the work is like**

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**WHERE YOU WORK**

Construction units, Central Ground Water Board, water resources/irrigation departments, RPSC and private water-management firms.

**WORK CULTURE**

This is a field job; usually 5-6 days, 8-9 hours, occasional overtime and shifts. Opportunities exist for persons with disabilities.

**WHO HIRES**

- |                                                    |                                        |
|----------------------------------------------------|----------------------------------------|
| • State water resources and irrigation departments | • Central Ground Water Board           |
| • Jal Jeevan Mission and PHED                      | • L&T and construction companies       |
| • Consultancy and infra firms                      | • Water utilities and municipal bodies |

**DEMAND (2026)**

Demand for water resource engineers is rising in 2026 with Jal Jeevan Mission, irrigation expansion and climate-adaptation projects, especially in Rajasthan.

**7 Career growth**

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- 1 Associate Engineer
- 2 Water Resource Engineer
- 3 Executive Engineer
- 4 Senior Engineer

## EARNINGS

|              |                     |
|--------------|---------------------|
| Starting     | ₹25,000-40,000      |
| Mid level    | ₹50,000-95,000      |
| Senior level | ₹1,20,000-1,70,000+ |

Monthly pay; varies by government/private and experience. 2026 levels, indicative.

## 8 The good parts · The challenges

### The good parts

- Socially important work
- Good government job opportunities
- Special relevance in Rajasthan

### The challenges

- Field and remote-site work
- Weather-dependent and overtime
- Government processes can be slow

## 9 Real-life journeys

### Sonam Wangchuk

Engineer-innovator, creator of 'ice stupa' water storage

Ladakh engineer Sonam Wangchuk created 'ice stupas' (artificial glaciers) to store winter water for spring irrigation - a simple, original solution in water resource management.

Wikipedia · [https://en.wikipedia.org/wiki/Sonam\\_Wangchuk](https://en.wikipedia.org/wiki/Sonam_Wangchuk)

### Kalpana Ramesh

Water conservationist, rainwater harvesting and lake revival

Starting by solving her own home's water crisis, Kalpana Ramesh taught hundreds of Hyderabad families rainwater harvesting and revived lakes and ponds; she is called a 'water warrior'.

The Better India · <https://thebetterindia.com/148881/harvesting-water-saving-lakes-hyderabad/>

## 10 Sources & further reading

1. Rajasthan Career Guidance: Water Resource Engineer — <https://cg.rajasthan.gov.in/careerguidance/hi/career/%e0%a4%9c%e0%a4%b2-%e0%a4%b8%e0%a4%82%e0%a4%b8%e0%a4%be%e0%a4%a7%e0%a4%a8-%e0%a4%87%e0%a4%82%e0%a4%9c%e0%a5%80%e0%a4%a8%e0%a4%bf%e0%a4%af%e0%a4%b0%e0%a4%b5%e0%a4%be%e0%a4%9f%e0%a4%b0-%e0%a4%b0/>
2. AICTE — <https://www.aicte-india.org>
3. NPTEL (free online courses) — <https://nptel.ac.in>
4. National Career Service (NCS) — <https://www.ncs.gov.in>



### And 770+ more careers — the whole portal

Interest and aptitude tests, government jobs, skill courses and a CV builder — free, no login, and it works offline.

[career.gsssjethantri.in](https://career.gsssjethantri.in)