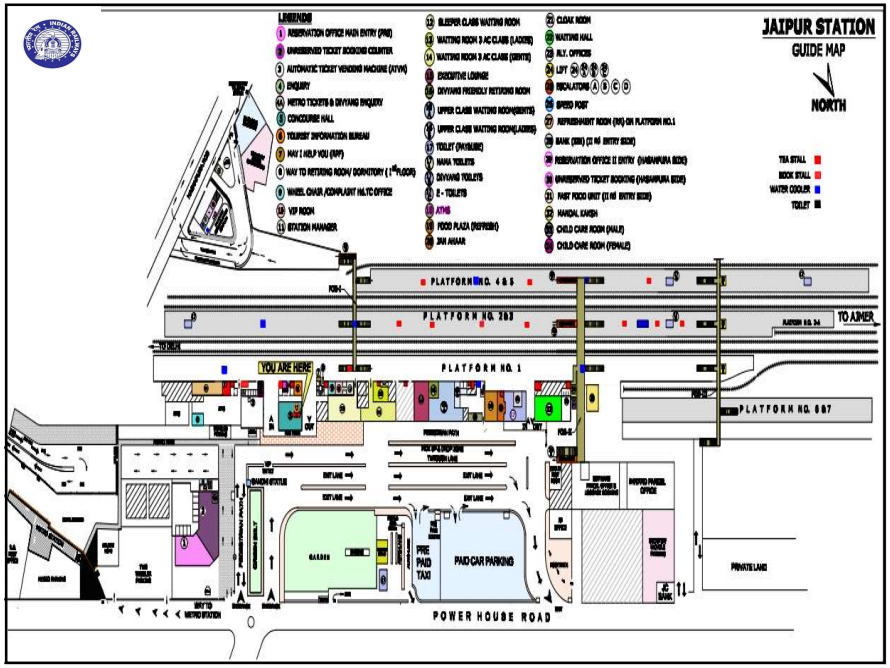
JAIPUR DIVISION

North West Railway

Improved Water Efficiency by

educe-Recharge-Recycle-Reuse



Water Harvesting

Economics:

- Reduces water bills.
- Reduced water demand - water supply utility saves money on treatment and pumping.
- Reduces cost of infrastructure necessary for water supply

Water Harvesting

Environment:

- Energy saved – no pumping of water to our homes.
- Water is hard, adding soft rainwater improves water quality.
- Improves groundwater situation.
- Reduces demand for water at

Water Harvesting

Other:

- Simple, cost-effective, easy to construct and maintain.
- Viable in urban and rural areas, slums, low income housing, apartments.
- Can offset the need for multipurpose river projects.

How ?

The concept is simple:

- Reduce
- Recharge
- Recycle
- Reuse

JAIPUR STATION- एक संक्षिप्त विवरण

- Jaipur Station is A-1 Cat. (NSG-2) station with IGBC platinum rating.
- **PF.1** (538 m + **83 m**), **PF 2 &3** (644m), 4&5 (588 m), **PF-2A** (330m). **PF No**. **6 & 7 (714 M) are under GC.**
- Three FOBs connected with 6 escalators & 4 lifts having airport standard ill.
- Passenger footfall: Approx. 1.0 lac/ daily & Max. at any time: An approx -7500
- Originating trains: 24 (M/E-14, Pass.:10), Through trains : 55 (M/E-14, Pass.:10)
- Passenger Earning: Approx Rs. 460 Crs.
- Three main entries to the station and Big circulating area.
- Solar Power-1050 Kw (70%Self sufficient), 500 Kw is under installation.

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Water Consumption

SN	Item	Water Consumption as per water audit
1.	Passenger	303 KL
2.	Rly. Staff in offices	142 KL
3	Coach filling of trains	1805 KL
4.	Coach Washing	22 KL
5.	Platform washing	42 KL
6.	Apron washing	
7.	Other Requirement	30 KL
8.	Total	2344 KL

Water Saving: WRP-150 KL (81.73KL), STP-348 KL (Actual – 100 KL), RWH-16000 KL per annum i.e. 43.83 KL per day, Water efficient fixture= 230 KL

Water Intake from 10 bore well : 2778KL , Actual Saving=456KL

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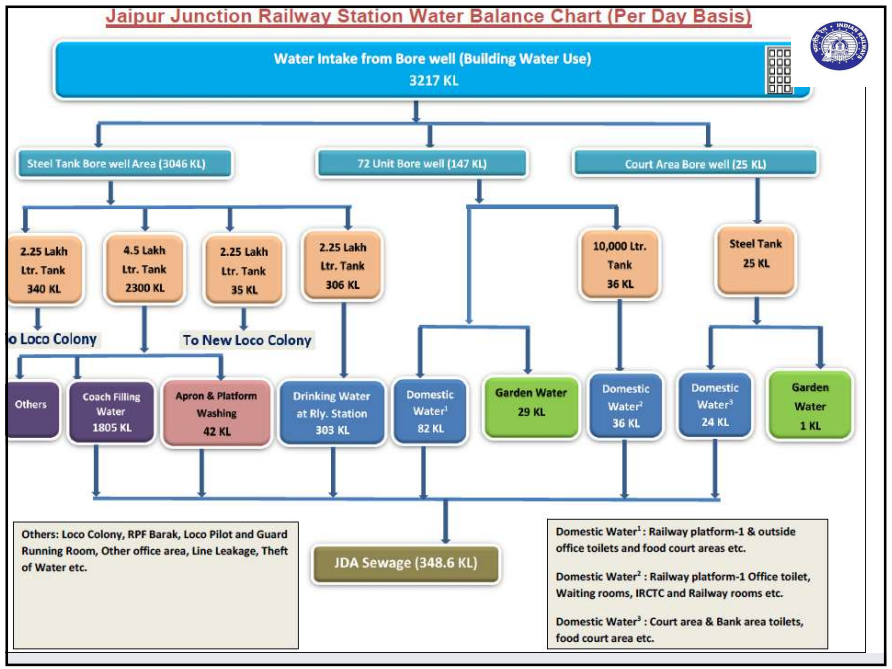
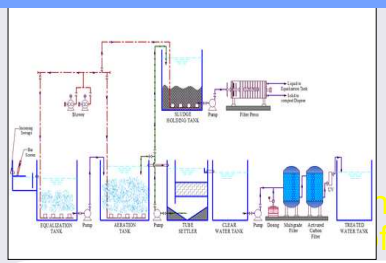
Jaipur Junction Railway Station Water Balance Chart (Per Day Basis)



0.5 MLD Water Treatment and Recycling plant



In this plant, waste water of coach washing and coach watering is treated and recycled by this plant.

Avg. 80-100 KLD water is treated & recycled again & again and used for coach washing which is saving of water.

Also pipe line laying work is under progress to use excess treated water of STP and WRP for washable apron cleaning at Jaipur station.

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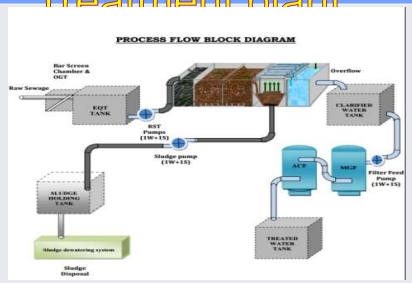
0.4 MLD Sewage Waste Treatment plant



0.4 MLD capacity STP plant was commissioned in Aug 2017 at Ganpati Nagar Railway Colony Jaipur.

In this plant, sewage waste water of Jaipur station, Residential Colony and Railways Central Hospital is treated.

The treated water is being used for gardening in Cricket Stadium and Ground.

It saves approx. 70-80 KL water daily.

Now,ipe line laying work is under progress to use excess treated water of STP and WRP for washable apron cleaning at Jaipur station

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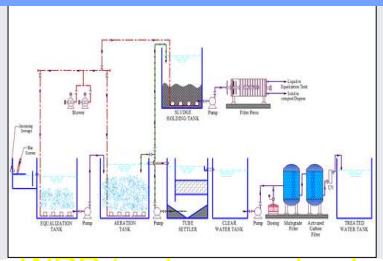
0.5 MLD Water Treatment and Recycling plant



WRP (water recycle plant) was commissioned in June 2017 at Pit Line of Coach care Complex.

In this plant, waste water of coach washing and coach watering is treated and recycled by this plant.

Avg. 80-100 KLD water is treated & recycled again & again and used for coach washing which is saving of water.

Also pipe line laying work is under progress to use excess treated water of STP and WRP for washable apron cleaning at Jaipur station.

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Rain Water Harvesting

Rain water Capture/Recharge: Earlier there was only single rainwater harvesting system was available for 2nd entry PRS building and it had percolation pit capacity 78.50 cubic meters. Now **Rain water harvesting system has been provided for main building and circulating area in which GLR (Ground Level Reservoir) for storage of rainwater is having capacity 100 KL** . Stored rain water is used for gardening purpose in steam Loco Park and excess water will go into dug well to recharge ground

Rain Water Harvesting

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Water Efficient Fixtures

<u>Water flow aerators on faucet fixtures</u>:

Water flow aerators have been installed on faucet fixtures which save approx. 24 KL water per day. More than 60% taps having aerators installed it.

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Water Efficient Fixtures

Water closets (Dual-Flush Cistern):

Dual flush (Full flush 6 ltr , half flush 3 litre) has been installed in toilets of platforms, waiting rooms, offices etc. which also save water. More than 50% dual flush have been installed.

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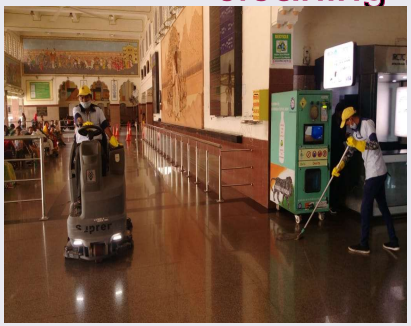
Mechanized cleaning



HP jet cleaning machine is used for the platform and washable apron washing, Ride On Scrubber is used for platform scrubbing and walk behind scrubber used for scrubbing of waiting hall floor. Earlier, conventional method of washing by pipe was used which take a huge amount of water.

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Water Metering

Approx. 76 water meter have been installed at all bore wells from where water is supplied, treated waste water supply from STP and major consumption sources i.e. WTE plant, IRCTC FOOD plaza, Jan-Aahar, stalls, coach washing, water filling in coaches, water supply in pay & use toilets, waiting halls, retiring rooms etc. for controlling & monitoring of water use.

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FUTURE PLANNING on Water Harvestin

- DFCCIL WC is passing through JP Division and having max. no of LHSs (low height subway), where having water logging problem, so planning water harvesting with deep bore well at each location.
- Water harvesting planning is under way at all A Cat Station where circulating area is sufficient, DRM office and Central Hospital at JAIPUR.
- JP Division has developed nurseries along the “B” route Railway track and water supply is through nearby bore well and with drip irrigation. Harvesting has been planned to re-charge the bore wells making these self sufficient for water supply.
- All residents are being educated for use waste water for gardening etc.

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ACHIEMENTS

OF

JAIPUR DIVISION

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Silver Rating in 2017

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Platinum Rating in 2017

22

5-S Certificate by QCFI in 2019

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IGBC 1st Water
Conservation award (2019)

24

ISO 14001 : 2015

Registered

CCPL

Registration Certificate

This is to certify that
The Management Systems of

JAIPUR JUNCTION RAILWAY STATION,
NORTH WESTERN RAILWAY

Carried out at following site:

NORTH WESTERN RAILWAY,
JAIPUR-302006, RAJASTHAN (INDIA)
(INDIA)

for their

ENVIRONMENTAL MANAGEMENT SYSTEM
ISO 14001:2015

Scope of Activities covered by this Certificate:

"TO PROVIDE PASSENGERS AMENITIES IN CLEAN & GREEN ENVIRONMENT THROUGHOUT THE ENTIRE RAILWAY STATION PREMISES WITH HIGH CLASS VIP LOUNGE, WAITING ROOMS (AC & NON AC), RETIRING ROOMS, REFRESHMENT AREA, FOOD COURTS AND SANITATION"

CERTIFICATE NO. : IAS/EMS/D1065
ISSUED ON : 26/04/2019 — 1ST SURVEILLANCE DUE ON: 26/03/2020
VALIDITY DATE : 25/04/2022 — 2ND SURVEILLANCE DUE ON: 26/03/2021

THE VALIDITY OF CERTIFICATE IS SUBJECT TO REGULAR SURVEILLANCE AUDIT ON OR BEFORE ABOVE MENTIONED DATES AND IT'S ONLY VALID AFTER SUCCESSFUL SURVEILLANCE WITH CONTINUATION LETTER ISSUED BY CCPL.

TO VERIFY THIS CERTIFICATE STATUS PLEASE VISIT AT http://ccpl.carecertification.com/

AUTHORISED BY
CHAIRMAN / DIRECTOR
CARE CERTIFICATION PRIVATE LIMITED

ACCREDITED

IAF

U.K. OFFICE : - KEMP HOUSE, 160 CITY ROAD, LONDON, EC1V2NX, UNITED KINGDOM
INDIA OFFICE : - 134 - A, 2ND FLOOR, TAIMOOR NAGAR, N.F.C., NEW DELHI - 110 065

CCPL is accredited by International Accreditation Service (IAS) United States of America

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राष्ट्रीय ऊर्जा संरक्षण पुरस्कार

यह प्रशस्ति प्रमाण–पत्र

मेसर्स जयपुर रेलवे स्टेशन

(जयपुर डिवीजन)

नॉर्थ वेस्टर्न रेलवे, जयपुर, राजस्थान को

वर्ष 2018 के लिए

रेलवे स्टेशन सेक्टर में

ऊर्जा संरक्षण के सराहनीय प्रयास के लिए

प्रदान किया जाता है।

विद्युत मंत्रालय
नई दिल्ली
14 दिसम्बर, 2018

सचिव,
भारत सरकार

Certification of merit Award by BEE

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सत्यमेव जयते

Rajasthan Energy Conservation Award

(RECA-2017)

Certificate

In appreciation of the efforts for Energy Conservation for the year 2016-17 Government of Rajasthan, Department of Energy is pleased to award First/~~Second~~ Prize to M/s. ~~Dir./Ms.~~ Jaipur Railway Station, North Western Railway .... (Commercial Building)

Department of Energy
Government of Rajasthan, Jaipur
14th December, 2017

Principal Secretary

RECA 1st Prize in
Under Commercial Building
Category

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We value the Heritage

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