



Shri Shivaji Education Society, Amravati's  
**SCIENCE COLLEGE**

Congress Nagar, Nagpur - 440 012 (M.S.) INDIA

'A+' Grade with 3.51 CGPA in 3<sup>rd</sup> Cycle  
College with Potential for Excellence  
Recognised Centre for Higher Learning & Research  
Institutional Member of APQN  
A Mentor College under UGC PARAMARSH Scheme  
An ISO 21001:2018 Certified Institution  
NIRF 2024 Rank-band : 201-300



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4<sup>th</sup> Cycle  
Assessment & Accreditation by NAAC

## CRITERIA- VII

### Key Indicator - 7.1 Institutional Values and Social Responsibilities (50)

#### 7.1.2: QnM The institutional has facilities and initiatives for (20)

1. Alternate sources of energy and energy conservation measures
2. Management of the various types of degradable and non-degradable waste
3. Water conservation
4. Green campus initiatives
5. Disabled-friendly, barrier free environment

*Content:*

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| 3) Management of the various types of degradable and non-degradable waste through waste segregation, incinerator.         | 11-17           |

**1. Water conservation through bunds and tanks water distribution system, Rain water harvesting.**



**Water Harvesting Pipes Connection**



Latitude: 21.12826  
 Longitude: 79.082166  
 Altitude: 270.5±3 m  
 Accuracy: 10.2 m  
 Time: 13-09-2024 15:33

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**Rain water harvesting: Soak Pit**

**Shri Shivaji Education Society Amravati's**  
**Science College**  
 Congress Nagar, Nagpur  
**Rain Water Harvesting**

**PERCOLATION PIT**

**RECHARGE PIT / TRENCH**

- Brick Wall with Plastering on Outer Surface with 1:3 cement mortar
- Splash Pad
- 10% - Open
- 15% - Coarse Sand
- 25% - 20 mm Me
- 50% - 40mm A

**Soak Pit/ Percolation Pit**

- To deliver rainwater into an aquifer.
- The percolation pit is covered with a perforated concrete slab.
- The pit is filled with gravel/pebbles followed by river sand for better percolation.
- The top layer of sand must be cleaned and replaced at least once in two years to remove settled silt for improving the percolation

Latitude: 21.12834  
 Longitude: 79.082125  
 Elevation: 336.8±7 m  
 Accuracy: 15.3 m  
 Time: 28-09-2024 12:35

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**Standard Operating Procedure (SOP) for Soak Pit**

**Bore well /Open well recharge**



**Dug Well/ Open Well Recharge**

Shri Shri Education Society Amravati's  
**Science College**  
 Congress Nagar, Nagpur  
**Rain Water Harvesting**

**Information of Campus well:**  
 Near 80 ft. wide road, a recharge well of 4 ft. diameter and 15 ft. depth is dug. It can take 3000 Liters of water per hour. Such recharge wells are built with 1.5 meters concrete rings with or without pores to allow percolation.  
 In these well, rainwater percolates quickly to the sub-soil aquifers through the porous bottom layer of the well and through the pores along the entire walls of the well.  
 Well lining is done till 4 meters.  
 Good quality water is obtained in the summer months because of the aquifer's good level.  
 These will does not overflow during rain of about 4cm/day.  
 Well, is regularly maintenance to ensure water quality and structural integrity.

Di: 3-4 ft  
 Holes on the top slab  
 Depth: 10-15'  
 Rings: 1ft X 3-4' 1/2"  
 Pores on the side wall of the rings

Latitude: 21.129105  
 Longitude: 79.082339  
 Elevation: 334.06±7 m  
 Accuracy: 18.6 m  
 Time: 28-09-2024 12:42

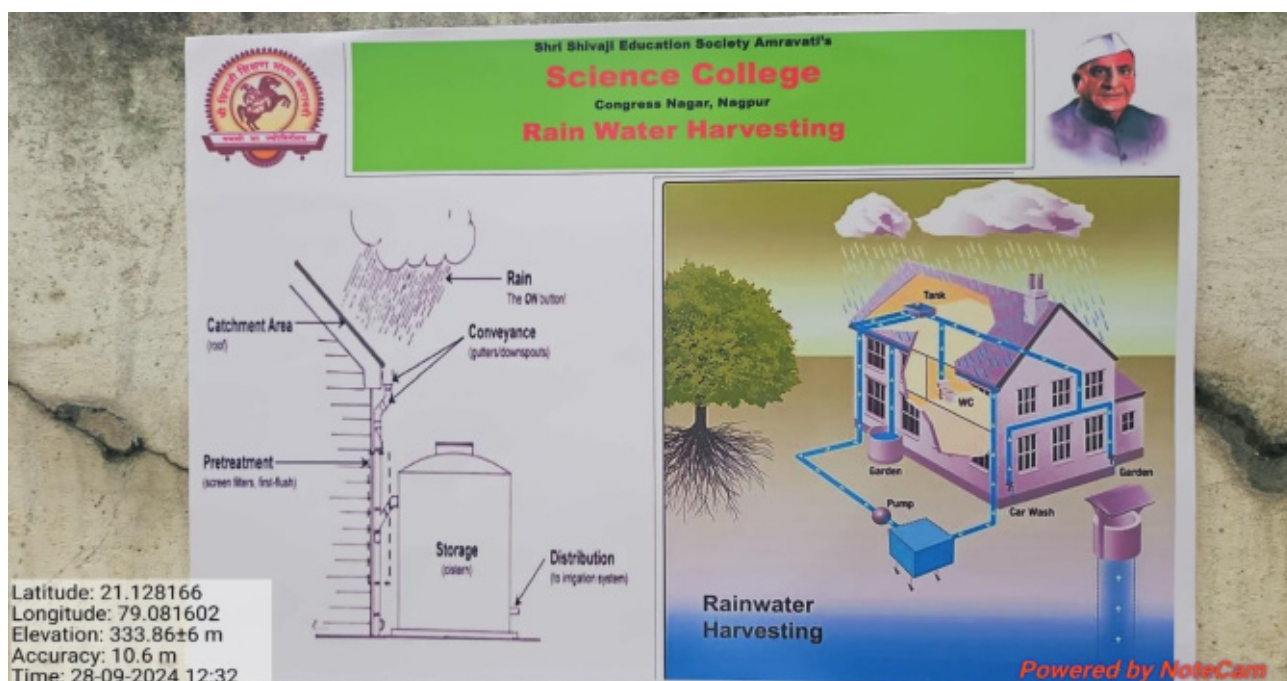
Powered by NoteCam

**Standard Operating Procedure (SOP) for Rain Water Harvesting in Dug well system**

### Construction of tanks



### Construction of Tanks



**Standard Operating Procedure for Rain Water Harvesting in Bunds and Tanks**

**Maintenance of water bodies and distribution system in the campus**



**Maintenance of water bodies and distribution system in campus**



**Rain water harvested in plants**



**Maintenance of water bodies and water distribution system in campus**





**Maintenance of water bodies and water distribution system in campus**

2. Disabled friendly providing washrooms as required by Divyangjan for their use (geotagged photos with date and caption)



Washroom for Divyangjan



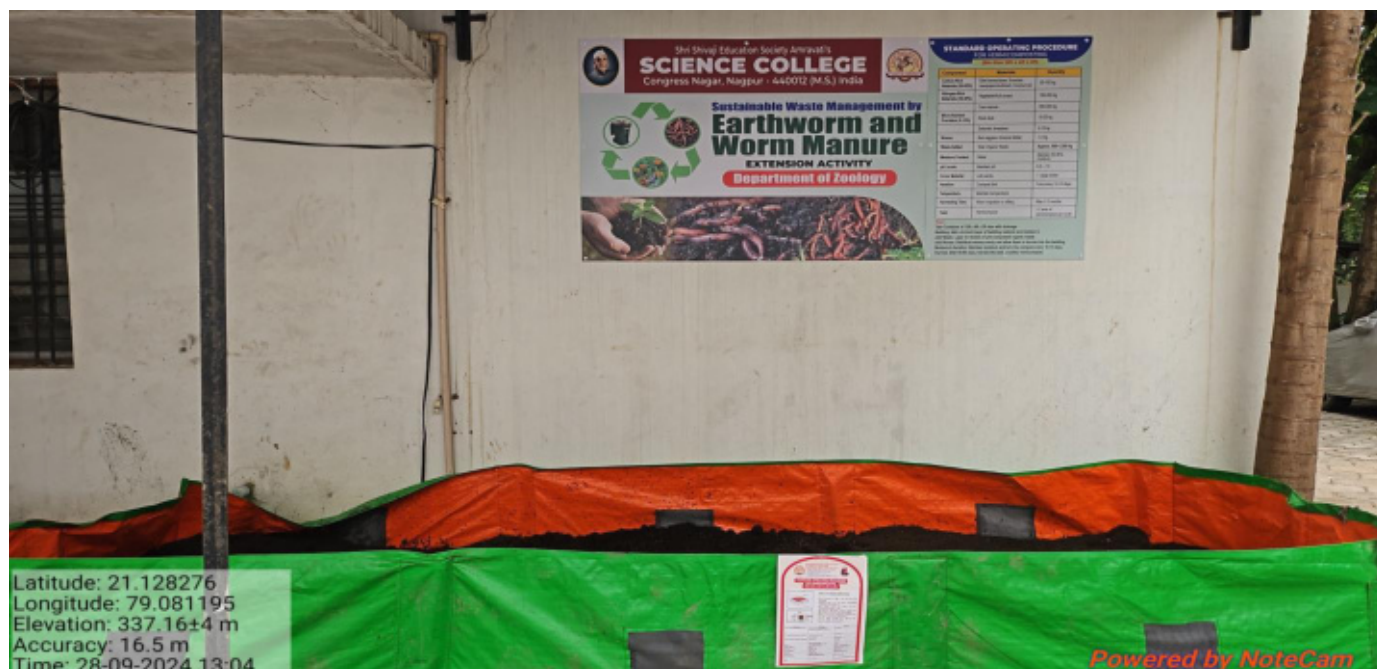
Washroom for Divyangjan

### 3. Management of the various types of degradable and non- degradable waste through waste segregation, incinerator.

#### Solid waste management and Liquid waste management



Solid garbage collected by NMC



Vermicomposting Bed

**Shri Shivaji Education Society Amravati's**  
**SCIENCE COLLEGE**  
 Congress Nagar, Nagpur - 440012 (M.S.) India

**STANDARD OPERATING PROCEDURE FOR VERMICOMPOSTING**  
 (Bin Size: 12ft x 4ft x 2ft)

| Component                        | Materials  | Quantity                           |
|----------------------------------|--|------------------------------------|
| Carbon-Rich Materials (50-65%)   | Dried leaves/straw, Shredded newspaper/cardboard, Coconut coir | 50-100 kg                          |
| Nitrogen-Rich Materials (30-40%) | Vegetable/fruit scraps   | 100-200 kg                         |
|                                  | Cow manure   | 200-300 kg                         |
| Micro-Nutrient Providers (5-10%) | Rock dust  | 10-20 kg                           |
|                                  | Dolomitic limestone  | 5-10 kg                            |
| Worms                            | Red wigglers (Eisenia fetida)                                  | 1-2 kg                             |
| Waste Added                      | Total Organic Waste  | Approx. 800-1,200 kg               |
| Moisture Content                 | Water  | Maintain 60-80% moisture           |
| pH Levels                        | Maintain pH  | 6.5-7.5                            |
| Cover Material                   | Jute sacks   | 1 Large sheet                      |
| Aeration                         | Compost fork   | Turn every 10-15 days              |
| Temperature                      | Maintain temperature   |                                    |
| Harvesting Time                  | Worm migration or sifting                                      | After 2-3 months                   |
| Yield                            | Vermicompost   | 1-2 tons of vermicompost per cycle |

**Steps:**  
 1. Take Container of 12ft x 4ft x 2ft size with drainage.  
 2. Bedding: Add a 4-6 inch layer of bedding material and moisten it.  
 3. Add Waste: Layer 2-4 inches of pre-composted organic waste.  
 4. Add Worms: Distribute worms evenly and allow them to burrow into the bedding.  
 5. Moisture & Aeration: Maintain moisture and turn the compost every 10-15 days.  
 6. Harvest: After 60-90 days, harvest the dark, crumbly vermicompost.

**Sustainable Waste Management by Earthworm and Worm Manure**  
 EXTENSION ACTIVITY  
 Department of Zoology

Latitude: 21.128296  
 Longitude: 79.081179  
 Elevation: 337.16±4 m  
 Accuracy: 17.8 m  
 Time: 28-09-2024 13:05

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**Standard Operating Procedure (SOP) for Vermicomposting**



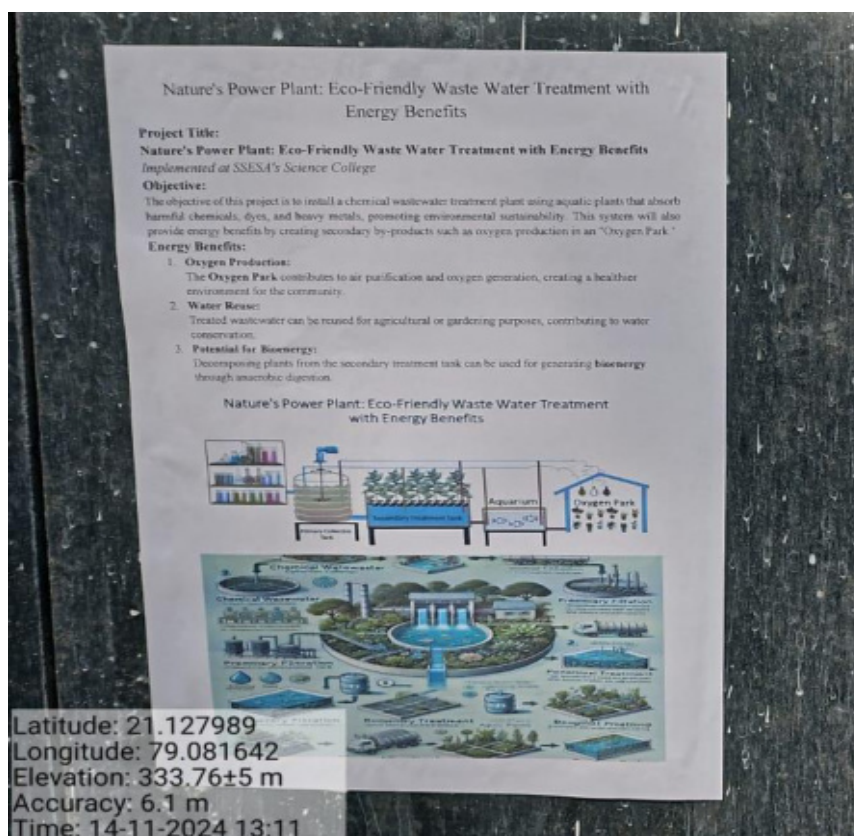
**Waste chemical pipes connected with the chemical basins**



**Chemical basins in Chemistry Lab**



**Chemicals from various department collected here in the separate tank and properly treated**



## Standard Operating Procedure (SOP) for Waste Water Treatment

### Biomedical waste management



## Proper disposal of Biomedical waste

### E-waste management



E-waste management



E- Waste Pick Up Truck



Latitude: 21.128348  
 Longitude: 79.082142  
 Elevation: 339.21±4 m  
 Accuracy: 24.9 m  
 Time: 28-09-2024 13:20

**E- Waste Pick Up Truck**

| Certificate             | E-waste                 |
|-------------------------|-------------------------|
| Date of E-waste Receipt | 25/09/2024              |
| Quantity                | E-waste: 1200 Kg.       |
| Location                | Congress Nagar, Nagpur. |

**SURITEX PRIVATE LTD.**  
 E-Waste Management Company

**Certificate of E-Waste Recycling**  
 This is to Certify that E-waste received for recycling from  
**SHRI SHIVAJI SCIENCE COLLEGE, NAGPUR**  
 Has been safely disposed at our registered facility in an environment friendly manner.

For Suritex Pvt. Ltd.

- E-waste Management
- Secured Data Destruction
- Lamp Recycling

Authorized Signatory

Reg. No. MPCB/RO(HQ)/HSM/D/Author/2021/EW-28 Dtd.28/02/2026  
 Website: www.suritex.co.in

Plant : B-111, MIDC Butibori, Nagpur  
 Office : 5 & 6 Zal Complex , Residency Road , Sadar , Nagpur 440001  
 Mobile no. : 9049981347 , 9960627347

**Certificate of E-Waste Recycling SURITEX PRIVATE LTD.**





Incinerator in girl's washroom

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