

?] My Field Exposure Journey as a TULIP Intern under Swachh Bharat Mission

(21–31 January Field Visit Series)

As a TULIP Intern under the Swachh Bharat Mission, I got the opportunity to step beyond theoretical understanding and witness how urban sanitation systems actually function on the ground. From residential areas to sewage treatment plants and 5R centers, each visit gave me practical insights into how India's cleanliness mission operates at multiple levels.

This blog documents my field exposure journey and the real-world learnings I gained from interacting with municipal authorities, facility managers, and citizens.

TULIP Interns Field Exposure Schedule (21–31 January)							
Date	Zone	Facility	Time	Area Name	Full Address	Learnings to be Done (Swachh Survekshan Focus)	Concerned Authority
21-01-2026	South-West Zone	Residential Area	10.00 AM	Ashirwad Bunglow, Piplod	Opp. Iscon Mall, Piplod	Door-to-door waste collection system, source segregation practices, citizen participation, no littering & no open dumping indicators	Dr. Ketan Garasiya
22-01-2026	South-West Zone	Bulk Waste Generator (BWG)	10.00 AM	Hotel Marriott	Ambika Niketan	Segregation at source, on-site waste processing, compliance of BWG norms, documentation as per Swachh Survekshan	Dr. Ketan Garasiya
23-01-2026	West Zone	STP	10.00 AM	BHESAN	near club 100 cricket ground, bhesan main road [Bhesan Sewage Treatment Plant]	Dry waste sorting process, recyclables recovery, worker safety, cleanliness, recovery efficiency as per Swachh Survekshan	Dr. Rikita Patel
27-01-2026	South-West Zone	Solid Waste Processing Facility	10.00 AM	Bhatar	Beside Bhatar Sewage Treatment Plant, Gokulnagar, Bhatar [Ecovision Environmental Resources LLP]	Plastic waste segregation, processing methods, plastic ban enforcement, EPR understanding, Swachh Survekshan plastic waste indicators	Dr. Ketan Garasiya
28-01-2026	South-West Zone	Public Toilet (CT/PT)	10.00 AM	Below Parle Point Bridge, Citylight	Opp. Citylight Ward Office	O&M practices, cleaning frequency, availability of water & electricity, signage, staff deployment, Swachh Survekshan parameters for CT/PT cleanliness & functionality	Dr. Ketan Garasiya
29-01-2026	South Zone A	School	10.00 AM	Mary Matha school	Near V T Poddar college, Pramukh Park, Pandesara	Eco-club formation, IEC activities, plastic-free campus, student participation under Swachh Survekshan	Dr. Kinjal Patel
30-01-2026	South-East Zone	Sewage Treatment Plant	10.00 AM	Dindoli STP Plant	KhodiyarNagar Road, Opp. Balajinagar, Dindoli	Wastewater treatment process, treated water reuse, environmental compliance, STP performance indicators under Swachh Survekshan	Dr. Nirmesh Desai
31-01-2026	West Zone	5R Center	10.00 AM	5R CENTER GALAXY CIRCLE PAL	5R CENTER GALAXY CIRCLE PAL	Understanding Refuse, Reduce, Reuse, Recycle & Repair practices, role of 5R centers in waste reduction, consolidation of field learnings linked to Swachh Survekshan	Dr. Rikita Patel

▣ Day 1 – Residential Area Visit

▣ **Date:** 21-01-2026

▣ **Facility:** Residential Area

▣ **Location:** Ashirwad Bungalow, Piplod (Opp. Iscon Mall, Piplod)

▣ **Zone:** South-West Zone

▣ **Focus Area (Swachh Survekshan):**

- Door-to-door waste collection system
- Source segregation practices
- Citizen participation
- No littering & no open dumping indicators

▣**Concerned Authority:** Dr. Ketan Garasiya



Our first visit was to a residential locality in Piplod. This visit helped me understand the backbone of the Swachh Bharat Mission — door-to-door waste collection and source segregation.

❑ Key Observations:

- **100% door-to-door waste collection system implemented.**
- **Households were encouraged to segregate waste into:**
 - **Wet waste**
 - **Dry waste**
 - **Domestic hazardous waste**
- **Collection vehicles operated on scheduled timing (10:00 AM onwards).**
- **No visible open dumping spots in the locality.**
- **Awareness among residents regarding cleanliness ranking under Swachh Survekshan.**
- **Sanitation workers were equipped with proper collection tools.**

❑ What I Learned:

- **Source segregation is the foundation of effective waste management.**
- **Citizen awareness directly influences city cleanliness performance.**
- **Monitoring litter-free areas is essential for Swachh Survekshan scoring.**
- **Community participation makes sanitation systems sustainable.**

☒ Day 2 – Bulk Waste Generator (Hotel Marriott)

☒ Date: 22-01-2026

☒ Facility: Bulk Waste Generator (BWG)

☒ Location: Hotel Marriott, Ambika Niketan

☒ Zone: South-West Zone

☒ Focus Area (Swachh Survekshan):

- Segregation at source
- On-site waste processing
- Compliance of BWG norms
- Documentation as per Swachh Survekshan

☒ Concerned Authority: Dr. Ketan Garasiya





The second visit was to Hotel Marriott, categorized as a Bulk Waste Generator (BWG).

☒ Key Observations:

- Waste was segregated within hotel premises.
- Biodegradable waste processed on-site (composting system). Dry waste stored separately and sent to authorized recyclers.
- Proper documentation maintained as per Solid Waste Management Rules, 2016.
- Regular municipal inspection ensures compliance.
- Kitchen waste management was systematic and hygienic.

☒ What I Learned:

- Bulk Waste Generators are responsible for managing their own waste.
- Decentralized waste processing reduces burden on municipal systems. Documentation and compliance monitoring strengthen accountability. Commercial establishments play a major role in urban cleanliness.

☒ Day 3 – Sewage Treatment Plant (Bhesan STP)

☒ Date: 23-01-2026

☒ Facility: STP

☒ Location: Near Club 100 Cricket Ground, Bhesan Main Road (Bhesan Sewage Treatment Plant)

☒ Zone: West Zone

☒ Focus Area (Swachh Survekshan):

- Dry waste sorting process
- Recyclables recovery
- Worker safety
- Cleanliness standards
- Recovery efficiency as per Swachh Survekshan

☒ Concerned Authority: Dr. Rikita Patel



At Bhesan Sewage Treatment Plant, I witnessed how wastewater is scientifically treated before being released or reused.

Key Observations:

- The STP follows a structured multi-stage wastewater treatment process:
Screening → Grit Removal → Primary Clarification → Aeration → Secondary Clarification → Filtration → Disinfection.
- Aeration tanks use biological microorganisms to break down organic matter efficiently. Significant
- reduction in pollution levels:
 - Raw sewage BOD: 200–300 mg/L
 - Treated water BOD: < 20 mg/L
- Treated water meets environmental discharge standards prescribed by CPCB.
- Sludge generated is collected and processed through drying beds.
- Worker safety measures such as protective gear and monitoring systems are implemented. Cleanliness and operational efficiency are evaluated under Swachh Survekshan performance indicators.
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💡 What I Learned:

- Wastewater treatment is essential for preventing environmental contamination and protecting public health.
- Biological treatment plays a major role in reducing organic pollution.
- Performance efficiency directly impacts city sanitation rankings under Swachh Survekshan.
- STPs are not just treatment units — they are critical infrastructure for sustainable urban development.
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💡 Day 4 – Solid Waste Processing Facility – Bhatar

💡 Date: 27-01-2026

💡 Facility: Solid Waste Processing Facility

💡 Location: Beside Bhatar Sewage Treatment Plant, Gokulnagar, Bhatar (Ecovision Environmental Resources LLP)

💡 Zone: South-West Zone

💡 Focus Area (Swachh Survekshan):

- Plastic waste segregation
- Processing methods
- Plastic ban enforcement
- Extended Producer Responsibility (EPR)
- Plastic waste indicators

💡 Concerned Authority: Dr. Ketan Garasiya





Here, I observed the segregation and processing of plastic waste.

-Key Observations:

- Dry waste sorted using conveyor-based segregation systems.
- Plastic waste categorized by type for recycling.
- Awareness regarding single-use plastic ban.
- EPR framework ensures producers take responsibility for plastic waste.
- Recyclables such as plastic, paper, and metal recovered efficiently. Facility
- cleanliness and worker safety protocols maintained.

-What I Learned:

- Waste has economic value when properly segregated.
- EPR policy strengthens accountability in plastic waste management.
- Material Recovery Facilities support circular economy models.
- Plastic waste indicators are important for Swachh Survekshan scoring.

⊕ Day 5 – Public Toilet Inspection (CT/PT)

⊕ **Date:** 28-01-2026

⊕ **Facility:** Public Toilet (Community/ Public Toilet – CT/PT)

⊕ **Location:** Below Parle Point Bridge, Citylight (Opp. Citylight Ward Office)

⊕ **Zone:** South-West Zone

⊕ **Focus Area (Swachh Survekshan):**

- O&M practices
- Cleaning frequency
- Availability of water & electricity
- Signage
- Staff deployment
- CT/PT cleanliness & functionality parameters

⊕⊕ **Concerned Authority:** Dr. Ketan Garasiya





This visit emphasized hygiene management in public sanitation facilities.

❑ Key Observations:

- Cleaning schedule displayed and maintained regularly.
- Continuous water supply available.
- Electricity and ventilation functioning properly.
- Clear signage and gender-specific sections.
- Staff deployed for monitoring and maintenance.
- Feedback mechanisms available for public complaints.

❑ What I Learned:

- Infrastructure alone is insufficient without proper maintenance.
- Regular inspection ensures hygiene standards.
- Public toilets significantly impact Swachh Survekshan rankings. O&M practices
- determine sustainability of sanitation facilities.

❑ Day 6 – School Visit – Eco Club Awareness

❑ Date: 29-01-2026

❑ Facility: School

❑ Location: Near V.T. Poddar College, Pramukh Park, Pandesara

❑ Zone: South Zone A

❑ Focus Area (Swachh Survekshan):

- Eco-club formation
- IEC activities
- Plastic-free campus
- Student participation

❑ Concerned Authority: Dr. Kinjal Patel





This visit showed how awareness starts from students.

-Key Observations:

- Eco-clubs actively promoting cleanliness awareness.
- Students involved in campus cleanliness drives.
- Awareness sessions conducted on waste segregation.
- Plastic-free initiatives implemented within school premises. Posters and IEC
- materials displayed for behavioral change.

-What I Learned:

- Behavioral change begins at school level.
- Students can act as ambassadors of Swachh Bharat.
- IEC activities are powerful tools for awareness.
- Long-term sanitation success depends on youth engagement.

⊕ Day 7 – Dindoli STP – Advanced Wastewater Treatment

⊕ **Date:** 30-01-2026

⊕ **Facility:** Sewage Treatment Plant

⊕ **Location:** Khodiyar Nagar Road, Opp. Balajinagar, Dindoli

⊕ **Zone:** South-East Zone

⊕ **Focus Area (Swachh Survekshan):**

- Wastewater treatment process
- Treated water reuse
- Environmental compliance
- STP performance indicators under Swachh Survekshan

⊕⊕ **Concerned Authority:** Dr. Nimesh Desai





-Key Observations:

- The STP follows a multi-stage treatment process:
Screening → Grit Removal → Primary Sedimentation → Aeration (Biological Treatment) → Secondary
- Clarification → Filtration → Disinfection → Treated Water Discharge/Reuse. The plant primarily uses the Activated Sludge Process (ASP) for biological treatment, achieving approximately 85–95% BOD removal efficiency.
- - Continuous monitoring of key water quality parameters such as:
 - BOD (Biochemical Oxygen Demand)
 - COD (Chemical Oxygen Demand) TSS
 - (Total Suspended Solids) pH level is carried out as per CPCB norms.
- Raw sewage typically contains:
 - BOD: 200–300 mg/L
 - TSS: 250–350 mg/L

After treatment, levels are reduced to:

 - BOD: < 10–20 mg/L
 - TSS: < 10–20 mg/L
- Aeration tanks play a critical role by supplying oxygen to microorganisms that break down organic pollutants.
- Sludge generated during treatment is:
 - Thickened
 - Digested
 - Dewatered using sludge drying beds or mechanical systems.
- Some advanced facilities support biogas generation from sludge digestion, which can be reused for energy.
- Treated water is reused for:
 - Gardening and landscaping
 - Industrial cooling
 - Construction activities
 - Lake or groundwater recharge (where applicable)
- The plant maintains compliance documentation under State Pollution Control Board regulations. Automation systems such as SCADA-based monitoring help regulate aeration, flow rates, and energy consumption.

💡 What I Learned:

- Wastewater treatment is a scientific and technology-driven environmental protection system, not just a disposal mechanism.
- Microorganisms are the backbone of biological treatment — without proper aeration and environmental control, efficiency drops significantly.
- Aeration consumes the highest energy in STPs; therefore, optimized oxygen supply is crucial for both performance and cost control.
- Sludge is not waste — it is a resource that can generate biogas or be converted into compost after stabilization.
- Advanced treatment ensures that treated water can safely be reused, supporting water conservation and sustainable urban development.
- Monitoring and regulatory compliance are as important as infrastructure itself.
- Modern STPs represent a shift from “waste disposal” to a circular water economy model under Swachh Bharat Mission (Urban) 2.0.

💡 Day 8 – 5R Center Visit – West Zone

📅 Date: 31-01-2026

📍 Facility: 5R Center

📍 Location: 5R Center Galaxy Circle Pal

📍 Zone: West Zone

📍 Focus Area (Swachh Survekshan):

- Understanding Refuse, Reduce, Reuse, Recycle & Repair
- Role of 5R centers in waste reduction
- Consolidation of field learnings

👤 Concerned Authority: Dr. Rikita Patel





This was the most impactful visit where I understood the philosophy of:

Refuse, Reduce, Reuse, Recycle & Repair

-Key Observations:

- Community-level waste collection and sorting.
- Promotion of reusable and repairable goods.
- Awareness programs on reducing waste generation.
- Support for recycling ecosystem.
- Encouragement of sustainable consumption habits.

-What I Learned:

- 5R principle promotes circular economy.
- Refusing unnecessary waste is the first step toward sustainability.
- Repair culture reduces landfill dependency.
- Swachh Bharat Mission now focuses on resource efficiency, not just cleanliness.

?] Final Reflection

This field exposure helped me understand that Swachh Bharat Mission is not just about cleaning streets — it is a structured system involving:

- Policy implementation
- Citizen participation
- Technological processing
- Environmental sustainability
- Monitoring under Swachh Survekshan

As a TULIP Intern, I realized that real impact happens when administration, institutions, and citizens work together.

Blog Link - <https://sbm-blog.vercel.app/>



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