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Aqua Warriors

KRISHNANAGAR APARTMENT



Aqua Scholars Project Report

Water Conservation & Consumption Study by KNA Aqua Warriors

Introduction

Water is an increasingly scarce resource, particularly in fast-growing urban areas like Bengaluru. Apartment complexes such as **Krishnanagar Apartments**, which consists of **240 flats**, play a major role in both consumption and conservation. Effective water management here is not just essential for reducing costs but is also critical for long-term sustainability. This report outlines the existing water usage, initiatives, and further opportunities as part of the **Aqua Scholars program**—a student-led campaign to promote responsible water use.

Our Team

This project is a combined effort by:

- KNAOA Management Committee Oversight, coordination, and policy implementation.
- Maintenance Team Monitoring and infrastructure handling.

- Residents and **KNA Aqua Warriors** – Participation, feedback, and awareness campaigns. Special appreciation to our **KNA Aqua Warriors**, who have taken the initiative to conduct a detailed survey under the Aqua Scholars banner.

Approach Taken

- 1. Data Collection From tanker logs, borewell meters, and RO waste collection.
- 2. Water Audit Identification of loss points and inefficiencies.
- 3. Resident Surveys Inputs gathered via Google Form

[https://forms.gle/S4jn1t8rk3g5LNn19].

4. Initiative Review - Impact assessment of existing conservation practices.

Sources of Water

- Tanker Water Major source, accounting for a large share of maintenance costs.
- Borewells Supplementary source with limited yield.
- RO Wastewater Being reused for mopping and garden areas.
- Rainwater Harvesting (RWH) Implemented across the complex.

Water Usage Patterns

- Individual Flats (~70-85%):
 - Showers, flushing, washing, and cooking.
 - RO systems produce wastewater, which is being reused consciously.
- Common Areas (~15-30%):
- Landscaping, car wash points, common toilets, and cleaning.

Conservation Initiatives by KNAOA

Infrastructure Initiatives

- RO wastewater reuse project implemented.
- Rainwater harvesting with multiple recharge pits.
- Dual piping for STP-treated water use in flushing.
- Use of low-flow faucets in common areas.

Operational Measures

- Leak monitoring and repair drives.
- Timed watering for landscaped areas.
- Community cleaning using treated water.

Awareness Campaigns

- Posters, newsletters, and resident WhatsApp group updates.
- Kids-led Survey (Aqua Scholars initiative).
- Demonstrations on efficient water use practices.

Domestic-Level Practices

Residents have been encouraged to:

- Turn off taps while brushing.
- Use buckets for bathing and car washing.
- Reuse RO water for cleaning purposes.
- Run washing machines and dishwashers only on full loads.

Opportunities for Future Improvement

- Greywater Recycling for internal reuse.
- Smart Metering to enable consumption-based billing.
- Landscape Optimization with drip irrigation.
- Behavioral Incentives via gamification or rewards.
- Education Drives led by KNA Aqua Warriors for sustained awareness.

Conclusion

Krishnanagar Apartments has shown strong intent and participation in reducing water dependency, especially on costly tanker water. Our **KNA Aqua Warriors**, through the Aqua Scholars project, have added fresh energy to this mission. We sincerely thank all residents who supported the survey and continue to make conservation a way of life.

Together, let's create a model apartment for water sustainability in Bangalore.

Prepared by: Krishnanagar Apartment Owners' Association (KNAOA) Date: 29th April 2025 Location: Bangalore

Resident Survey Insights (Aqua Scholars Initiative)

As part of the Aqua Scholars project, **KNA Aqua Warriors** visited multiple flats and gathered valuable feedback from residents through a structured questionnaire. This section summarizes the key findings from the responses:

Key Findings:

- Water Sources Used:

- Tap water, borewell water, tanker water, and building pipeline are used in various combinations.

- Some households rely on packaged drinking water cans (e.g., 3 per week).

- RO Water Reuse:

- Most respondents reuse RO reject water for mopping, balcony washing, and pre-rinsing utensils.

- Leakage Handling:

- Residents typically manage by closing the main tap or using temporary fixes like cloth wrapping.

- Plumbers usually attend leaks on a priority basis.

- Water-Saving Habits:

- Use of aerators and spray nozzles.
- Avoiding long showers; use of bucket and mug for bathing.
- Turning off taps while brushing or scrubbing dishes.

- Cleaner Practices:

- Many residents guide maids to use RO waste water for cleaning.

- Educating Maids:

- Suggestions include:
- Conducting workshops within the building.
- Sharing personal guidance on conservation habits.
- Encouraging reuse and avoiding continuous tap flow.

- Ideas to Save Water at the Society Level:

- Strengthen Rainwater Harvesting.
- Track usage and implement consumption-based billing.
- Reuse terrace runoff and improve STP efficiency.

- On Role of Plants in Water Conservation:

- Overwhelmingly, residents believe plants help by:
- Reducing ambient temperature
- Maintaining soil moisture
- Promoting a cooler microclimate

Visual Suggestion: Water Source Usage Chart

Title: Water Source Usage by Residents

Data Sample:

Water Source	Percentage (Approx.)
Tap Water / Building Pipeline	40%
Borewell	20%
Tanker Water	20%
Drinking Cans (Additional Use)	20%





