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WASTE WATER MANAGEMENT & AUDITS - CASE STUDIES

AUTOMATION AND MAINTENANCE MANAGEMENT SYSTEMS

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FLOW MONITORING SPECIALIST

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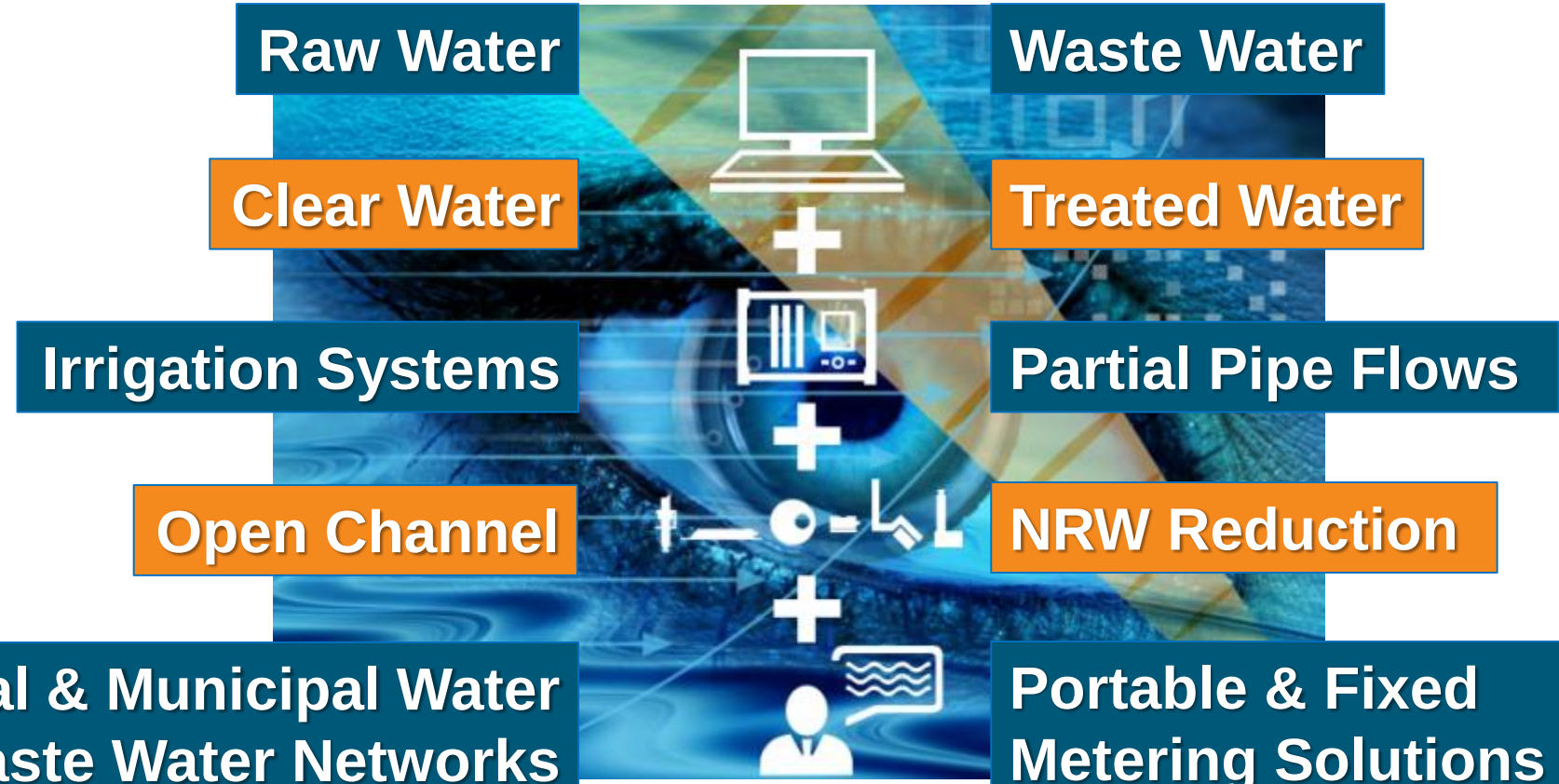
We measure WATER !!



- Raw Water
- Waste Water
- Clear Water
- Treated Water
- Irrigation Systems
- Partial Pipe Flows
- Open Channel
- NRW Reduction
- Industrial & Municipal Water & Waste Water Networks
- Portable & Fixed Metering Solutions

“Measure Better to Manage Better”

NOTABLE REFERENCES

1. **145 no.s** of sewage discharge measurements at outfalls to Badi Nadi & Chhoti Nadi in Punjab for Tata Projects Limited.
2. Measurements at old trunk sewer lines in Varanasi for Shriram EPC.
3. Discharge flow measurements at 15 points, in and around Agra STP, for VA Tech Wabag Limited.
4. Assessment of wastewater and treated water discharges for **15 days continuously** with **11 concurrent measurement points** for Indian Institute of Science (IISc), Bangalore.
5. **24 hours of wastewater measurement** for municipalities in Tamilnadu like Kangayam, Dharapuram, Pallavaram etc.

WASTE WATER MANAGEMENT & AUDITS

CASE STUDY 1 @ *Patiala, Punjab*

PURPOSE

- Open Channel as well as Partial Pipe Sewage Discharge Measurement for Badi Nadi & Choti Nadi Outfalls, Punjab.

ACTIONS TAKEN

- Sewage flow measurement for a duration of 72 hours at 10 locations and 24 hours at 115 locations over a period of 3 weeks.
- Flowrates, flow velocities and levels were tabulated.

Sewage discharge monitoring @ Badi Nadi & Choti Nadi, Punjab

RESULTS

- Recorded per day Outfall on to Choti Nadi & Badi Nadi in m^3.

CASE STUDY 2 @ *Varanasi, UP*

PURPOSE

- Flow Measurement of Old Trunk Sewer (OTS) lines by using open Channel and Clamp-On Flow Meters in Uttar Pradesh.

ACTIONS TAKEN

- Sewage flow measurement at waste water discharges through pipes / channels for a duration of 24 hours at 7 locations.
- Flowrates, flow velocities and levels were tabulated.

Sewer discharge monitoring in Old Trunk Sewer Lines @ Varanasi, UP

RESULTS

- Total Cumulative Flow at all locations were recorded in m^3.

CASE STUDY 3 @ *Dharapuram, Kangeyam & Palladam Municipalities, Tamil Nadu*

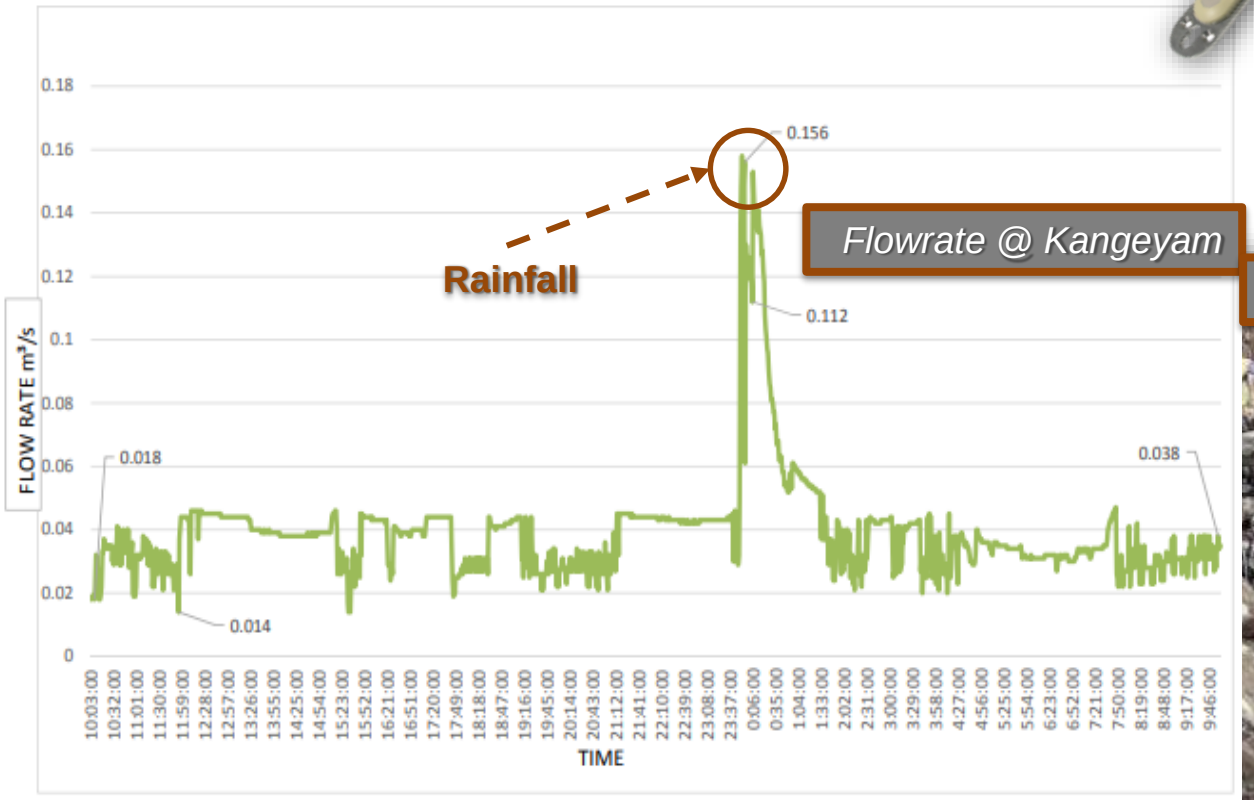
PURPOSE

- Flow Monitoring in Sewage Water at Dharapuram, Kangeyam and Palladam Municipalities, Tamil Nadu.

ACTIONS TAKEN

- Carried out sewage flow monitoring at Dharapuram, Kangeyam and Palladam municipalities for 72 hours, 24 hours and 5 days.
- Flowrates, flow velocities and levels were tabulated.

Sewage flow monitoring @ Dharapuram, Kangeyam, Palladam Municipalities



RESULTS

- At Dharapuram, Kangeyam and Palladam Municipalities, the Total Flow were recorded.
- Observed particularly high Flowrate around midnight.

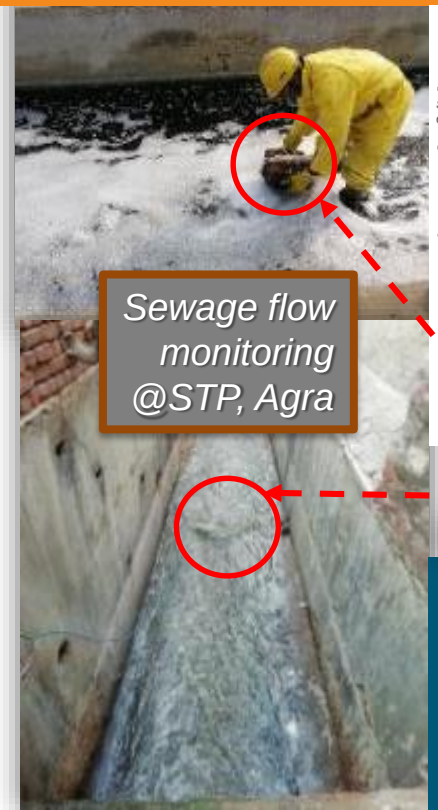
CASE STUDY 4 @ *STP, Agra*

PURPOSE

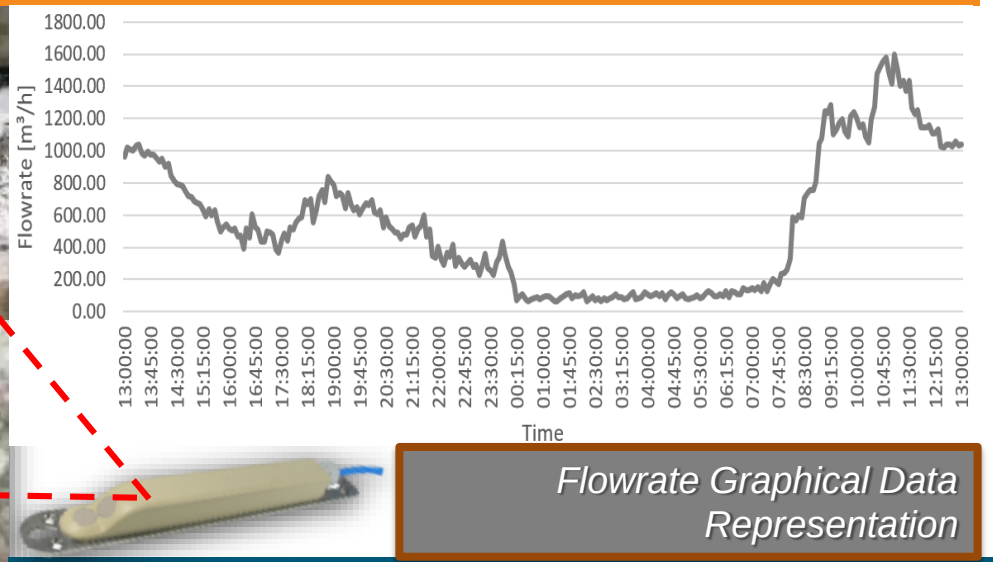
- Sewage Flow Monitoring at the inlets of Sewage Treatment Plant (STP) in the city of Agra.

ACTIONS TAKEN

- Carried out sewage flow measurement at waste water discharges through various channels in STP in Agra for a duration of 24 hours at 10 locations.
- Flowrates, flow velocities and levels were tabulated.
- Compared measured values with the existing V-notch method used at the facility.



Sewage flow monitoring @STP, Agra



Flowrate Graphical Data Representation

RESULTS

- Total Cumulative Flow at all locations were recorded in MLD.
- Determined the measurement error in the V-notch method at the inlet of STP which was more than 15%.

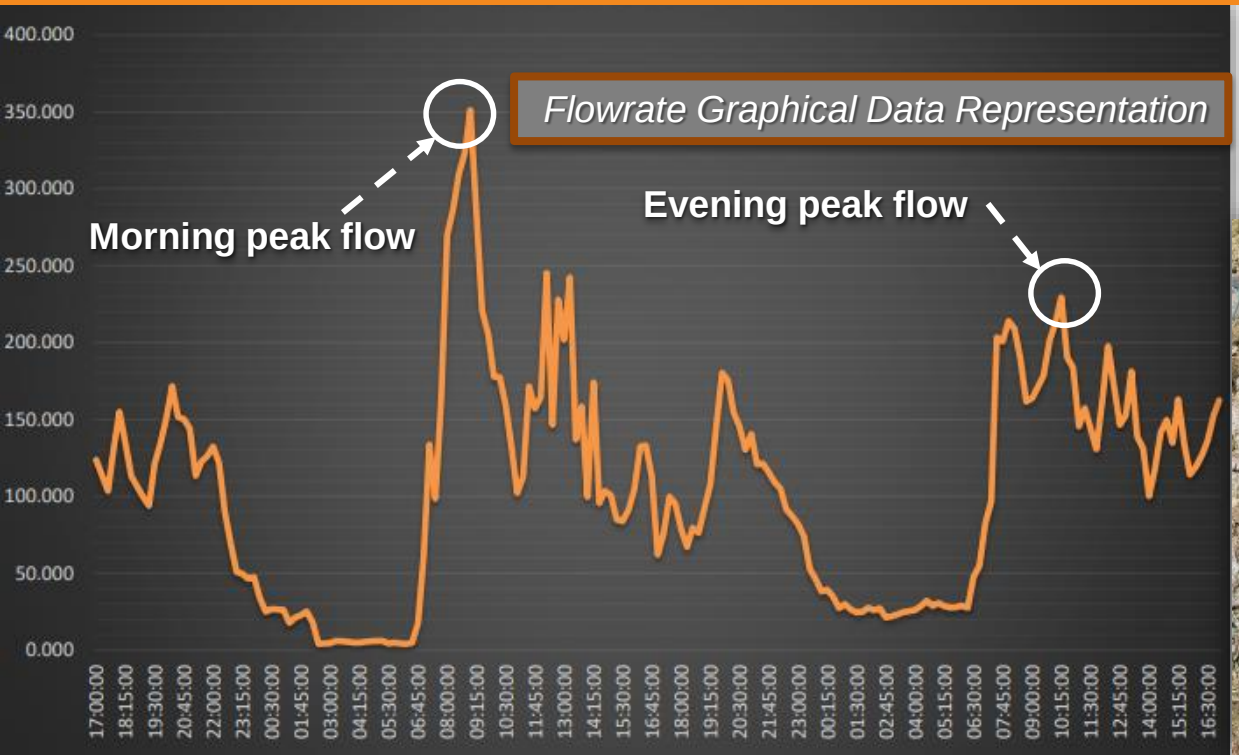
CASE STUDY 5 @ *Dwarka, Delhi*

PURPOSE

- Sewage Flow Measurement in three drains in Dwarka, Delhi, by using open channel flow meters to ascertain total flow over the period of measurement.

ACTIONS TAKEN

- Carried out flow measurements on waste water discharges through pipes / channels in Dwarka, Delhi to measure for a duration of 48 hours at 3 locations.
- Flowrates, flow velocities and levels were tabulated.



Flowrate Graphical Data Representation

Open channel flow measurement @ Dwarka, Delhi

RESULTS

- Total Cumulative Flow at all three locations were recorded in m^3.

CASE STUDY 6 @ *4 STP's, Karnataka*

PURPOSE

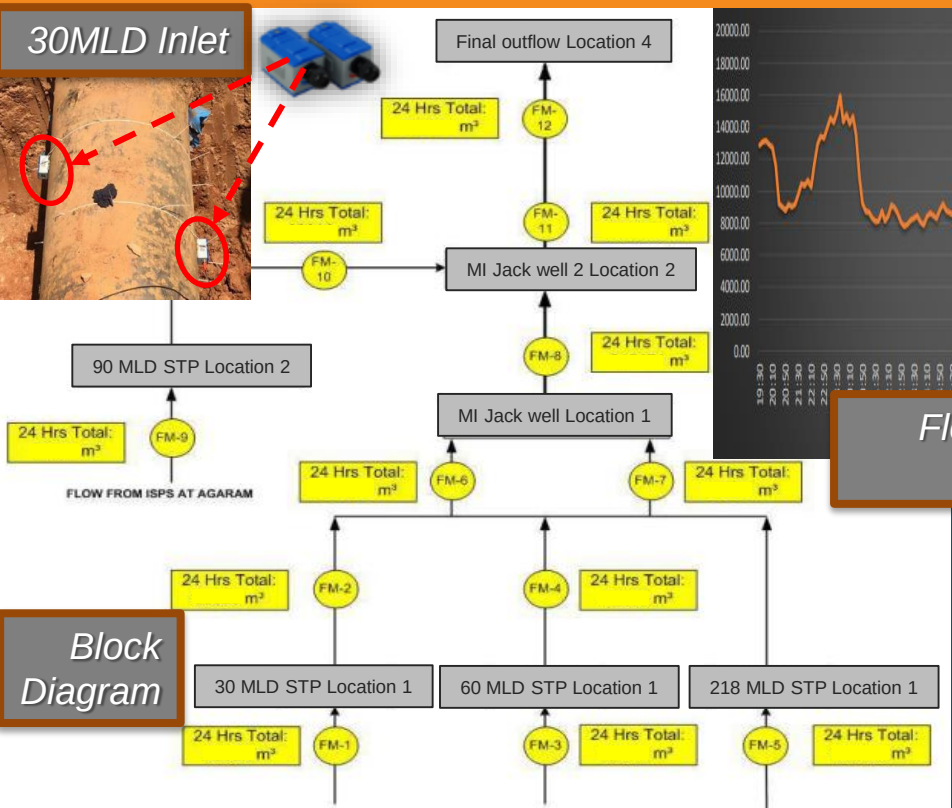
- Temporary Flow Measurements of Waste Water at 30, 60, 90 & 218 MLD Sewage Treatment Plants.

ACTIONS TAKEN

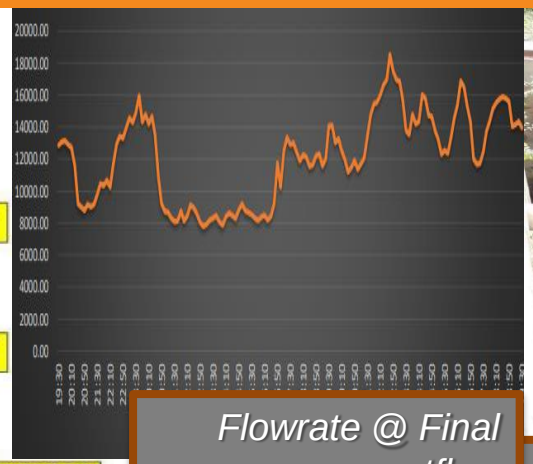
- Carried out flow measurements at waste water supply lines for a duration of 16days at identified points.
- Used Ultrasonic Clamp-on sensor for pipes and Ultrasonic Cross-Correlation Sensor for open channels.
- Flowrates & flow velocities were tabulated and graphically represented.
- Compared measured values with the existing method used at the facility.

Sub-contract for Indian Institute of Science, Bangalore

30MLD Inlet



Block Diagram



Flowrate @ Final outflow

MI Jack well 1 inlet

Final outflow

RESULTS

- Total Cumulative Flow on each day at identified locations were recorded in m^3.
- Determined the measurement error in the existing method at the facility for inlet and outlet of 30 & 218 MLD plant.
- Plant deficiency was identified.

CASE STUDY 7 @ *STP, Maraimalai Nagar, TN*

PURPOSE

- Sewage Flow Survey at Sewage Treatment Plant (STP) in Maraimalai Nagar.

ACTIONS TAKEN

- Sewage flow measurement for a duration 24 hours.
- Flowrates, flow velocities and levels were tabulated.

Sewage flow survey @STP, Maraimalai Nagar

RESULTS

- The Total Flow in MLD was recorded.
- The plant inflows were significantly higher than expected.

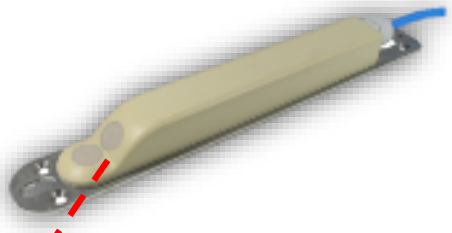
CASE STUDY 8 @ *Siruthuli, TN*

PURPOSE

- Sewage Flow Measurement in Open Channel in Siruthuli, Tamil Nadu.

ACTIONS TAKEN

- Sewage flow measurement for a duration 24 hours.
- Flowrates, flow velocities and levels were tabulated.



Sewage flow survey @ Siruthuli

Siruthuli
Clean Kovai, Green Kovai

Chairman
Dr. S V Balasubramaniam
Chairman,
Kamatchi Ammon Group of Companies

Managing Trustee
Smt Vanitha Mohan
Chairman,
Prozil

Trustees
Sri Ravi Sam
Director,
LMW Group of Companies

Sri Kanakalal Abhaichand
Partner
TV & Brothers

Sri N V Nagasubramaniam
Senior Advocate

Dr R V Ramani
Managing Trustee
Sankara Eye Society

Sri C R Swaminathan
President
RAAC

21st Sept 2019

To
Mr. Prakash Muthuswamy
Managing Partner
Automation and Maintenance Management Systems (AuM)
No. 6, Third Floor, Sri Ram Apartments,
Avinashi Road, Papanaikan Palayam,
Coimbatore - 37

Dear Sir,

Greetings from Siruthuli!

We would like to express our sincere gratitude towards your support in calibrating the flow of sewage in the Irugur channel. Your technical support has enabled us to have a better understanding to develop a suitable methodology for treatment of wastewater.

It is the magnanimity of people like you that has enabled Siruthuli to make a difference to the environment in Coimbatore region.

While thanking you once again we look forward to your continued support and guidance in carrying our eco message to as many people as possible in the times ahead.

Let's together make Mother Earth smile!

Green Regards,

Vanitha Mohan
Managing Trustee

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WATER CONSERVATION | ENHANCING TREE COVER | WASTE MANAGEMENT | SPREAD THE WORD

Appreciation Letter

RESULTS

- The Total Flow in MLD was recorded.

SITE PHOTOGRAPHS

THANK YOU FOR YOUR INTEREST