VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"JNANA SANGAMA", BELAGAVI-590018

NSS ACTIVITY REPORT [BNSK359]

on

"WASTE MANAGEMENT"

Submitted in partial fulfillment of the requirement for
the award of the Degree of

Bachelor of Engineering

in

Infromation Science and Engiineering

Submitted By

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[1AT23IS157]

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(An Autonomous Institution)

Bangalore- 560024

CERTIFICATE

Certified that the NSS activity work entitled “Waste Management” carried out by Shreenidhi [1AT23IS157) bonafide students of Department of and Computer Science and Engineering, Atria Institute Of Technology, Bengaluru, in partial fulfilment for the award of Degree of Bachelor of Engineering in Computer Science & Design of Visvesvaraya Technological University, Belagavi, during the academic year 2024-2025. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The NSS activity report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

Prof.Vinoth Kumar S Guide National Service Scheme Atria I.T.	**Prof.Vinod Kumar S** Programme Officer National Service Scheme Atria I.T.	**Dr.Deepak Kumar N R** HOD Department of ISE Atria I.T.	Dr.Rajesha kumar S Principal Atria I.T.

ACKNOWLEDGEMENT

I, Shreenifhi student of 3rd semester Bachelor of Engineering, Department of Information Science and Engineering, Atria Institute of Technology, Bengaluru, would hereby declare that the NSS activity report entitled with “Waste Management” has been carried out by me at Atria Institute of Technology, Bengaluru, and submitted in partial fulfilment of the course requirement for the award of degree of Bachelor of Engineering in Computer Science and Design of Visvesvaraya Technological University, Belagavi, during the academic year 2024-25.

We further declare that, to the best of our knowledge and belief, the work embodied in this report has not been submitted to any other university or institution for the award of any other degree.

Place:
Bengaluru
Date:19-12-2024

Shreenidhi
1AT23IS157

DECLARATION

We are grateful to our institution, Atria Institute of Technology, for having provided us with the facilities to successfully complete the NSS Activity on Waste Management.

We thank Dr. Rajesha S , Principal and Deepak kumar , HOD, ISE for providing us all the necessary facilities for the successful completion of our mini-project. Deadlines play a very important role in the successful completion of the academic NSS activity on time, efficiently and effectively.

We take this opportunity to express our deep sense of gratitude to our guide and coordinators Prof. Vinoth Kumar S, Asst. Professor Department of ISE for his valuable guidance and help throughout the course of the activity. He has always been patient with us and helped immensely in completing the task on hand. We also thank them for their immense support, guidance, specifications & ideas without which seminar would have been completed without full merit.

Last but not least from the Department of Information Science and Engineering, teaching and non-teaching staffs for their constant encouragement, support, patience, and endurance shown during the preparation of this report were remarkable. We also thank the management.

Finally, we thank our parents and friends for their motivation, morale and material support.

ABSTRACT

The NSS team from Atria Institute of Technology, Department of Computer Science and Engineering, conducted an SCR Waste Management activity through a visit to the BWSSB Water Treatment Plant, Bengaluru. The objective was to provide practical exposure to water treatment processes and waste management techniques. The visit offered valuable insights into water filtration, purification, and resource management, connecting theoretical knowledge with real-world applications. Participants observed the systematic processes involved in ensuring clean water supply and efficient waste disposal, highlighting the importance of sustainable solutions in addressing environmental challenges. The visit also underscored the critical role of advanced water treatment facilities in promoting public health and ecological balance. This experiential activity emphasized the need for community-driven initiatives and technological innovation in resource management. It fostered awareness about environmental responsibility and social wellness, encouraging participants to adopt sustainable practices in their daily lives. The activity was conducted safely and successfully, ensuring a productive and enriching learning experience.

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CHAPTER 1 INTRODUCTION TO NSS

1.1 About NSS

The National Service Scheme (NSS) stands as a beacon of social responsibility and community engagement, empowering youth across India to actively participate in nation- building endeavors. Established in 1969, NSS operates under the Ministry of Youth Affairs and Sports, Government of India, with the primary objective of instilling the values of service, empathy, and civic consciousness among students.

At its core, NSS embodies the ethos of volunteerism and collective action, providing a platform for students to channel their energy and enthusiasm towards addressing societal challenges. Through a diverse array of activities encompassing community service, environmental conservation, health awareness, and literacy campaigns, NSS fosters holistic development while nurturing a spirit of compassion and social justice.

Atria Institute of Technology's engagement with NSS exemplifies its commitment to nurturing socially responsible citizens and contributing to the greater good. By integrating NSS activities into its academic framework, the institution empowers students to transcend the boundaries of the classroom and actively engage with pressing issues affecting their communities.

The initiation of Waste management. under the auspices of NSS underscores Atria Institute of Technology's dedication to sustainable development and environmental stewardship. By leveraging the collective efforts of students, faculty, and community stakeholders, the organic farm project not only promotes ecological sustainability but also serves as a platform for experiential learning and community empowerment.

In this context, the organic farm project at Atria Institute of Technology symbolizes the synergy between academic excellence and social responsibility, epitomizing the transformative potential of NSS in shaping conscientious leaders and change agents. As we embark on this journey of organic farming, guided by the principles of sustainability and inclusivity, we reaffirm our commitment to realizing a brighter, more equitable future for generations to come.

1.2OBJECTIVES OF NSS

The main objectives of National Service Scheme (NSS) are :

i. understand the community in which they work

ii. understand themselves in relation to their community

iii. identify the needs and problems of the community and involve them in problem-solving

iv. develop among themselves a sense of social and civic responsibility

v. utilise their knowledge in finding practical solutions to individual and community problems

vi. develop competence required for group-living and sharing of responsibilities

vii. gain skills in mobilising community participation

viii. acquire leadership qualities and democratic attitudes

ix. develop capacity to meet emergencies and natural disasters and

x. practise national integration and social harmony

1.3 Motto of NSS

Not me but you

1.4 GOAL OF NSS

Education through community Service and community Service through Education

1.5 NSS FOUNDATION DAY

It has been decided that 24th September every year would be observed as the NSS Day by all universities / colleges when special programs would be organised suiting local needs and priorities.

1.6 NSS PLEDGE

I solemnly pledge to work with dedication to serve & strengthen freedom & integrity of the nation.I further affirm that, I shall never resort to violence and that all differences and disputes relating to religion, language, region, political & economic grievances would be settled by peaceful and constitutional means.

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Fig 1.1 NSS LOGO

1.7 LIST OF NSS ACTIVITIES PRESCRIBED

1. Organic farming, Indian Agriculture (Past, Present and Future) Connectivity for marketing.
2. Waste management– Public, Private and Govt organization, 5 R's.
3. Setting of the information imparting club for women leading to contribution in social and economic issues.
4. Water conservation techniques – Role of different stakeholders– Implementation.
5. Preparing an actionable business proposal for enhancing the village income and approach for implementation.
6. Helping local schools to achieve good results and enhance their enrolment in Higher/ technical/ vocational education.
7. Developing Sustainable Water management system for rural areas and implementation approaches.
8. Contribution to any national level initiative of Government of India. Foreg. Digital India, Skill India, Swachh Bharat, Atmanirbhar Bharath,Make in India, Mudra scheme, Skill development programs etc.
9. Spreading public awareness under rural outreach programs.(minimum5 programs).
10. Social connect and responsibilities.
11. Plantation and adoption of plants. Know your plants.
12. Organize National integration and social harmony events /workshops /seminars. (Minimum 02 programs).
13. Govt. school Rejuvenation and helping them to achieve good infrastructure

CHAPTER 2

OBJECTIVE

The primary objectives of our visit to the BWSSB Water Treatment Plant were multifaceted and aimed at providing a holistic educational experience. These objectives included:

- Understanding Water Treatment Processes:
  - To gain practical knowledge of the various stages involved in water purification and treatment. This included observing filtration, sedimentation, and chemical treatment processes that ensure the supply of clean and safe water for public use

- Promoting Environmental Awareness:
  - To emphasize the importance of sustainable water management and resource conservation. By witnessing large-scale water treatment operations, the aim was to highlight the role of such facilities in addressing environmental challenges and promoting ecological balance

- Connecting Theory to Practice:
  - To bridge the gap between academic concepts and real-world applications by exposing participants to advanced technologies and processes used in water treatment plants. This practical exposure aimed to enhance understanding of waste management and sustainability principles.

- Encouraging Social Responsibility:
  - To foster a sense of responsibility toward the environment and community. The visit aimed to inspire participants to adopt sustainable practices in their daily lives and contribute to resource conservation efforts within their communities.

- Building Awareness of Waste Management Techniques:
  - To develop a deeper understanding of waste management strategies, including the proper treatment and disposal of wastewater. This knowledge reinforces the importance of efficient systems in maintaining public health and environmental safety.

CHAPTER 3

ACTIVITY

3.1 DETAILED TIMELINE OF OUR ACTIVITY

Gathering and Planning

- The NSS team assembled at Atria Institute of Technology for a briefing session. During this initial meeting, we discussed the objectives of our visit to the BWSSB Water Treatment Plant and outlined the agenda for the day.
- Each team member was assigned specific roles and responsibilities to ensure a smooth and organized experience. Tasks included managing logistics, coordinating transportation, and preparing for on-site observations and interactions.

Arrival at the Water Treatment Plant

- We reached the BWSSB Water Treatment Plant located at Bengaluru. Upon arrival, we were welcomed by the plant officials, who provided us with an overview of the facility. After a brief interaction and safety instructions, we were guided through the plant premises.
- The warm reception and professional introduction set a positive tone for the day.

Introduction and Overview

- The visit began with an introductory session conducted by the BWSSB officials. They provided an insightful overview of the plant's operations, its role in supplying treated water to the city, and the importance of water management.
- The officials explained the critical role of such facilities in maintaining public health and environmental sustainability. This session helped us understand the objectives of the visit and prepared us for the detailed tour of the facility.

Activities and Engagement

Tour of Water Treatment Processes:

- We were taken on a guided tour of the plant, where we observed each stage of the water treatment process. The officials explained in detail the procedures involved, such as coagulation, sedimentation, filtration, and chlorination.

- This hands-on exposure allowed us to witness the real-time operation of advanced machinery and technologies.

Wastewater Management Systems:Interactive Discussion:

- The team also explored the wastewater treatment section, where we observed methods used for treating and managing wastewater. The officials demonstrated processes like sludge removal, biological treatment, and chemical purification, highlighting their role in ensuring clean and reusable water. The importance of
- efficient wastewater management in reducing pollution and conserving resources was emphasized throughout the session.

Interactive Discussion:

- Following the tour, we engaged in a Q&A session with the plant officials. Questions ranged from technical aspects of the treatment process to the challenges faced in water resource management. The discussion helped clarify concepts and provided deeper insights into the role of government agencies and communities in promoting sustainable practices.

Reflection and Concluding Session:

- As the visit came to an end, the team gathered for a brief reflection session. Each member shared their observations and learnings, emphasizing the significance of water conservation and waste management. The plant officials encouraged us to spread awareness about water sustainability and adopt responsible practices in our daily lives.

Before leaving, we expressed our gratitude to the plant staff for their time and effort in sharing their knowledge with us. We captured group photos as a token of the enriching experience and lasting memories of the day. The visit not only deepened our understanding of waste and water management systems but also instilled a sense of responsibility toward sustainable resource utilization.
As we departed the valuable insights gained from this visit left us inspired and motivated to contribute toward environmental conservation, making it a truly impactful and educational experience for the entire NSS team.

CHAPTER 4

REFLECTION NOTES

Positive Experiences:

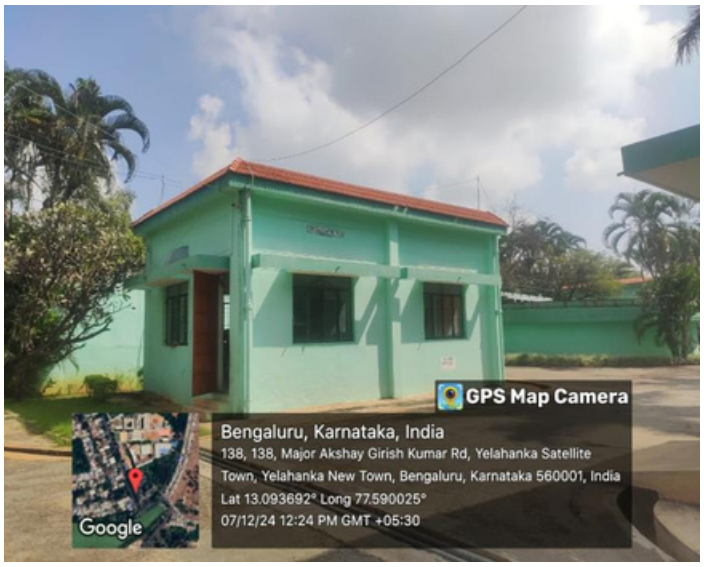
- Student Engagement:
  - The visit to the BWSSB Water Treatment Plant in Yelahanka was met with great interest and curiosity from the students. Their active participation in discussions and eagerness to ask questions demonstrated a strong desire to understand the intricacies of water management.
- Interactive Learning:
  - The hands-on tour of the treatment plant, coupled with explanations from the staff, proved highly effective. This interactive approach made complex processes like sedimentation, filtration, and chlorination more accessible and engaging for the students.
- Insight into Student Aspirations:
  - The students' questions and comments reflected their growing awareness of environmental challenges. Understanding their perspectives will help us design future activities that deepen their knowledge of sustainable practices.
- Memorable Moments:
  - The opportunity to witness the water treatment process in action was a highlight. Capturing these moments through photos underscored the impact of this experiential learning opportunity, strengthening the connection between theory and practice.

Areas for Improvement:

- Time Management:
  - While the visit was enriching, certain segments, like the Q&A session, extended longer than planned. Improved time allocation will ensure all parts of the tour are covered without rushing or missing key insights.
- Activity Diversity:
  - Although the tour was informative, incorporating complementary activities, such as a short workshop on water conservation or a group project on sustainable practices, could enhance the learning experience and cater to div erse learning preferences.

CHAPTER 5

IMAGES




GPS Map Camera
Bengaluru, Karnataka, India
10, Chola Nagar, Anandnagar, Hebbal, Bengaluru, Karnataka 560032, India
Lat 13.03414° Long 77.593632°
26/12/24 10:08 AM GMT +05:30
Google

CONCLUSION

The visit to the BWSSB Water Treatment Plant in Yelahanka was a highly rewarding and educational experience for both the students and our team. The students' keen interest and active engagement highlighted the effectiveness of hands-on and interactive learning opportunities. The knowledge they gained about water management processes and environmental sustainability will be pivotal in shaping their perspectives on responsible resource usage.

While there were areas for improvement, such as better time management during the tour and the addition of complementary activities to diversify the experience, the visit underscored the value of experiential learning in fostering awareness and curiosity. The meaningful interactions and real-world exposure provided a strong foundation for deepening environmental consciousness among students.

Moving forward, we are committed to organizing regular follow-up visits, incorporating diverse activities such as workshops or group projects, and collaborating closely with the plant staff to provide more immersive experiences. The insights and inspiration from this visit will guide our efforts in promoting environmental education and encouraging sustainable practices among young learners.