

UBA NIT WARANGAL TEAM VISIT THE ROBUST DRAINAGE SYSTEM VISIT ON 10-11-2024

The experts from water and environment division visited Shambudevunipally village on 10-11-2024 as a part of Unnat Bharat Abhyan Programme. A field survey was conducted by the experts and the following observations and suggestions has been provided has been provided.

Observations

1. The village has a very old drainage system which was constructed a few decades ago and drainage waters spills on to the streets covers most of the village streets.
2. The drains are choked due to the presence of mud and other debris.
3. The dimensions of the drain are not sufficient to cater for current demands.
4. The terrain of the village is uneven with a ridge in the middle and slopes on either side.
5. Currently the sewage is untreated and it flows out of the village from two outlets on either side of the village
6. It has also been observed that the slope of the existing drains is improper due to lack of maintenance and other factors like encroachment of drains due to the presence of roots of trees etc.
7. The village sewerage network map is not available and it may be needed for improving the drainage system.
8. Currently, some water is flowing into a water body untreated and some of the water is flowing into an agricultural field. Both options are not environment friendly and hence urgent interventions are needed to address the issue.

Recommendations

1. A drone survey by GIS experts is needed to develop the network map and understand the spatial coverage of the village.
2. A field survey by Environmental Engineering students is also needed to estimate future sewage demand, align the slope of the drain and look into other technical aspects.
3. Since the sewage is flowing into two outlets, the two outlets may be connected to a single outlet by designing a drainage network which converges at a single location and the total cost of revamping the drainage system has to be estimated accurately.
4. Considering the future expansion of the village, the dimensions of the village drains need to be calculated to accommodate present needs and demand
5. Based on the quantity of the wastewater generated, a sewerage treatment plant is to be designed and the cost for installation has to be estimated.

Pictures of the visit



Picture 1: Main road of the village



Picture 2: Stagnation due to rough bottom surface



Picture 3: Stagnation of water due to blockage and poor design



Picture 4- Blocakage of drain due to accumulation of silt and poor gradient design