

Concluding Notes

1. Dhamari is a drought area in Tahsil - Shirur, District – Pune, where, according to the rainfall data average rainfall is about less than 500 mm per year. For that the harvesting of rainwater is important in that area. Therefore, one of farmer Mr. Siddhesh Sakore is living in Dhamari he has his own land over there, he came to Vigyan Ashram and he wants to construct water harvesting structure i.e., farm pond according to his land.
2. For construction of any harvesting structure, we required some primary data like slope of land, soil type, contour lines and flow of water. For calculating this data there two methods are available. First one is conventional and second is digital method. By using square by square method of contouring we manually measured the contour lines on site. For this method we used dumpy level, hydro marker, leveling staff, etc. But this is a conventional method of surveying, as we see the environmental errors, human error, instrumental errors, etc. there will be another method largely used now a days which is digital method. There is different software which are based on GIS mapping and for those purposes I am using Arc GIS 10.7.1 and Quik Grid software. So, by using this software methods of mapping can save lot of time and it gives more accuracy as compared to conventional method.
3. By mapping I got appropriate catchment area and runoff flow for farm land of Mr. Siddhesh Sakore. According to their land area which is about 14.25 acres and slope is about 5 %. From this slope we proposed farm pond as a water harvesting structure.
4. On the basis of catchment area, I give a size of farm pond which is of Dimensions about $30\text{ m} \times 30\text{ m} \times 4.5\text{ m}$ collects about 45,00,000 litres of water. The suggested cost estimation of farm pond is about Rs. 3,52, 223.