

# GROUND WATER RECHARGING



## IN THE MANESAR AREA

PROPOSED BY

AMINA SHERVANI

Gen.Sec. Womans Action Forum  
Exec. Mem. Manesar Industries Welfare Association  
Vice President - Peoples Voice

# THE PRESENT LAYOUT OF THE AREA WITH FEATURES

30 KM



The renewable ground water area from traps in the hills could extend 25 kms in a circle as indicated in blue on the satellite image from 35KM altitude. The hills run in an L shaped path for approximately 7 KM and have an altitude ranging from 200 to 300 feet above the manesar area which lies approximately 750 feet above sea level..

The coverage could extend to more than 15 villages with their fields, an industrial area and housing colonies in the vicinity. The benefit of this increased ground water advantage could extend to more than 400,000 citizens.

Use of traditional trap and shallow bore systems can be cost effective and cover numerous rainwater run-off points along these hills. We receive most of our rainfall in just 100 to 200 hours out of a total of 8,760 hours in the year.

This area classified as semi-arid in terms of rainfall collection receives approximately 400 to 500 mm of rainfall. In this scenario, one hectare - 10,000 sq meters can conserve 5 million liters of rain water, if we organise and implement rain water harvesting solutions.



# RECHARGING UTILISING HILL TRAP AND BORE SYSTEM



As a first step we have a untapped resource in the nearby hills as indicated in the satellite image from 15,000 feet altitude.

The hills provide an approximate area of 1,400 hectares and can conserve 5 to 7 billion litres of rain water. This resource can benefit approximately 4 lakh people for their yearly requirements of water at 15,000 litres per year per person.

A simple trap and shallow bore system at numerous locations across these hills will garner most of this rainwater, most of which is otherwise lost to evaporation, flooding, drain run-off and mixing with sewage.



# ILLUSTRATION THROUGH EXAMPLE AREA



The example area is approximately 800 meters across imaged from an altitude of 3200 feet. The blue arrows indicate possible rain water flow paths, we have a flow descent of approximately 160 feet. We have envisaged a requirement of approximately 30 shallow bore holes and about 500 Meters of check walls

Check dams and shallow bores have been indicated , a more detailed drawing is illustrated below.

Materials for construction should be natural and locally available, we want to ensure minimum contamination of the rain water as it is moved to recharge the ground water base.

