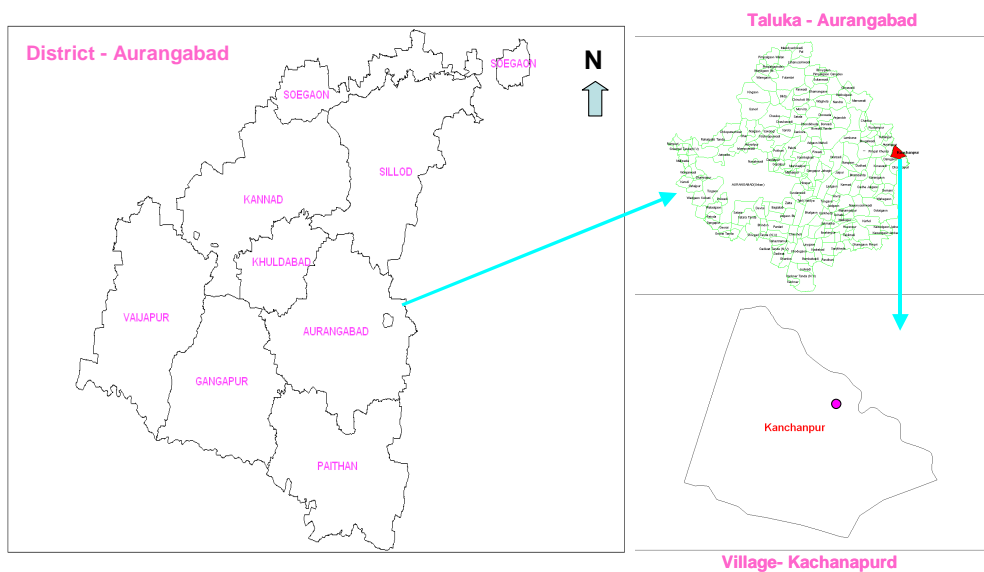


**Use of unconventional measures like
Bore Blast Technique (B.B.T.) / Well Jacketing
Developed by G.S.D.A. to Strengthen Drinking Water Source of
Village – Kanchanapur, Taluka & District – Aurangabad
A Success Story**

Introduction :

Village Kanchanapur comes under Hard rock terrain area. Main river in the village is Dudhna which is flowing in South–East direction. Due to irregular topography and lack of ground water management, village Kanchanapur faces lot of drinking water scarcity problems every summer. So detailed hydro geological survey was carried out by G.S.D.A. at village Kanchanapur to strengthen drinking water source (PWS well) by implementing unconventional measures developed by

Location Map of Village – Kachanapur, Taluka & District - Aurangabad



G.S.D.A. like Bore Blast Technique (BBT) / Well Jacketing.

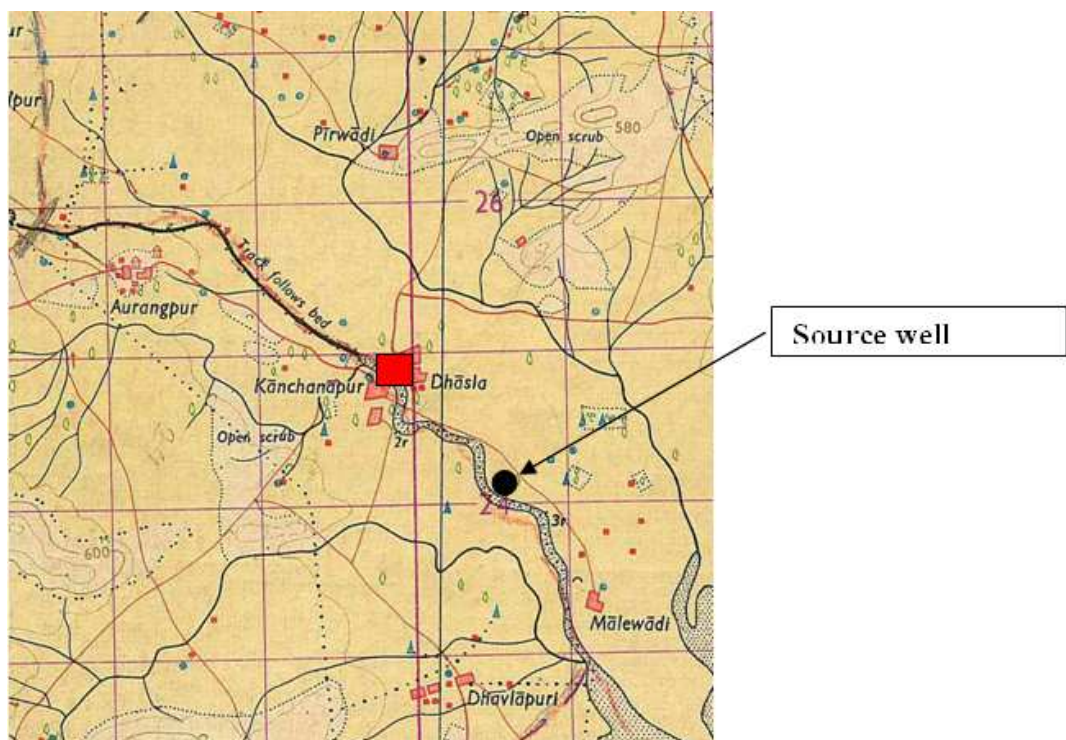
Salient Features :

Village	:	Kanchanapur
Grampanchayat	:	Pimpalkhuta
Taluka	:	Aurangabad
District	:	Aurangabad
Censes code	:	02371700
Toposheet No.	:	47M/9
Quadrant No	:	B-1

Latitude	:	19°05'52"
Longitude	:	75°03'50"
Altitude (MSL)	:	555 mt
Morpho zone	:	Bb
Population	:	271
Cattle	:	150
Area	:	280.85 Hec
Forest land	:	22.82 Hec
Area under Irrigation	:	216.21 Hec

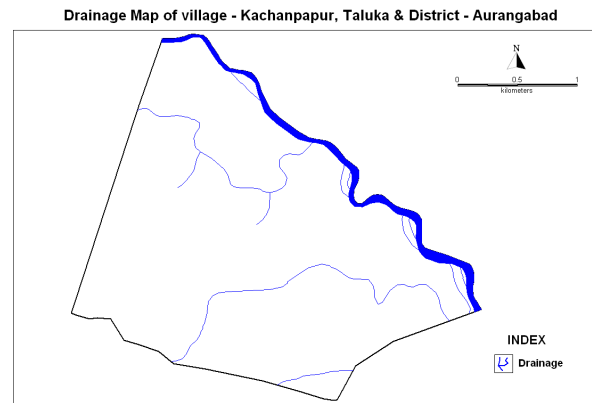
Village Kanchanapur comes under "GP-24 A" watershed of Godavari – Purna sub basin. Major slope is due south-east direction. Only 5% to 10 % part of the village comes under district Aurangabad and rest part comes under Jalna district. Altitude of village is 555 m. from mean sea level. Slope of village in terms of percentage is 0.5% to 1 %, which is showing comparatively less slopping area.

**Topo sheet No 47 M/9 Showing,
Village – Kanchanapur, Taluka & District - Aurangabad**



Physiography :

It is clear from the map that North-West and Western part of village is having high altitude and major slope is towards South-East direction. All small tributaries in the village are meeting to main river Dudhana. Village comes under “Storage Zone” category. Drainage pattern in the village is “Dendritic to sub-parallel”. All river and tributaries are seasonal and are found flowing upto the month of November every year.



Drinking water sources:

Total 4 bore wells are there in village, out of these 3 bore wells are seasonal and 1 bore well is not in use because of lack of ground water. 1 PWS well of 13 mt. depth and 5 mt diameter is there which is seasonal in use. SWL of well was 12 mt in summer before implementation of BBT project. Moderately jointed Basalt is acting as an aquifer in PWS well.

Drinking water problems:

PWS well of village is on the bank of Dudhana river. Earthen nala bund is there on the upstream side of well, for strengthening of well. Due to presence of impermeable rock in the area, ground water flows in different direction other than flowing towards PWS well. So this earthen nala bund is of no use for increasing ground water flow towards PWS well. As a result, village Kachanapur always comes under scarcity program for taking different scarcity solving measures

Measures suggested:

PWS well of village Kachanapur is on down stream of earthen nala bund at a distance of 20 meter. “Fractured Lineament” is observed at the center of PWS well and earthen nala bund. Water stored in earthen nala bund flows into fractured lineament. An impervious rock is present below fractured lineament and acting as “ground water barrier wall”. So at the time of survey it was observed that ground

water is not flowing further because of presence of this impervious rock, so this earthen nala bund is of no use for strengthening of PWS well of village.

Implementation of B.B.T. Project:

For the purpose of breaking of this “Ground water barrier wall” (i.e. impervious rock), 23 bore wells of 15 mt. depth was drilled under bore blast technique (B.B.T.). Blasting of all 23 bore wells was done at the same time. After blasting because of development of fractures, connection developed between PWS well and fractured lineament. So water level (SWL) of well gets increased up to 0.30 m within 15-20 minute of blasting and water scarcity problem of village is solved permanently.

Expenditure of Project:

This project is implemented through district planning and development committee (DPDC) fund in year 2008-2009. Project expenditure is total 1.80 lakh and the expenditure per capita (cost benefit ration) is Rs 64/- only.

Benefits of the project:

After blasting of 23 bore wells at a time, connections developed between PWS wells and fractured lineament. Because of this flow of ground water increased towards PWS well and water level (SWL) of PWS well increased in rainy season as compare to well condition before project imploration. There is no drinking water scarcity in village till now.. PWS well swl was 10.40 mt in the month of May – 2012, It shows that water column of 2.60 mt was there after implementation of project. Now it seems that village Kanchanapur will not face any drinking water scarcity in coming 10 years.