
**केंद्रीय भूमि जल बोर्ड**

जल संसाधन, नदी विकास और गंगा संरक्षण

विभाग, जल शक्ति मंत्रालय

भारत सरकार

**Central Ground Water Board**

Department of Water Resources, River Development and Ganga Rejuvenation,

Ministry of Jal Shakti

Government of India

# AQUIFER MAPPING AND MANAGEMENT OF GROUND WATER RESOURCES

## MEDAK DISTRICT, TELANGANA

दक्षिणी क्षेत्र, हैदराबाद

Southern Region, Hyderabad

**REPORT ON**

# AQUIFER MAPPING FOR SUSTAINABLE MANAGEMENT OF GROUND WATER RESOURCES IN HARD ROCK AREAS OF MEDAK DISTRICT (ERSTWHILE), TELANGANA STATE

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**REPORT ON**
**AQUIFER MAPPING FOR SUSTAINABLE MANAGEMENT OF GROUND WATER RESOURCES IN MEDAK DISTRICT (ERSTWHILE), TELANGANA STATE**

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# REPORT ON
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## AT A GLANCE

| S.No. | Item | | Particulars |
|---|---|---|---|
| 1 | Districts | : | Medak (New districts: Medak, Sangareddy, Siddipet (part) |
| 2 | Revenue Mandals | : | 46 (New mandals:61) |
| 3 | Villages | : | 1267 Nos |
| 4 | Geographical area | : | 9699 $km^2$ |
| 5 | Mappable area | : | 9699 $km^2$ |
| 5 | Population (2011 Census) | : | 30.31 lakh |
| 6 | Density of population (2011 Census) | : | 313 persons/$km^2$. |
| 7 | Location | : | North latitude 17°25´-18°16´<br>East longitude 77°26-79°16" |
| 8 | Rainfall (Normal) | : | ~635-1035 mm (avg: 868 mm) (SW: 78 % & NE: 21 %) |
| 9 | Geomorphology | : | Pediplain (57 %), pediment (20 %), Dissected plateau (16%), Denudation hills (3 %). |
| 10 | Major Rivers | : | Manjeera |
| 11 | Watersheds | : | 53 nos |
| 12 | Land Utilization (Ha) (2017-18) | : | Forest occupies ~10 % of the total geographical area, barren and uncultivable land is 5.4%, land put to non-agricultural use is 7.3%, cultivable waste is 2%, current fallow lands are 17.8%. 23.4% area out of the cultivated area is under double cropping. |
| 13 | Soils | : | Sandy loams soils (55 %) and Clayey soils (44%) |
| 14 | Cropping Pattern (2017-18)<br>(Gross Area:416705 Ha) | : | Crops grown are Cotton (45%) followed by Paddy (19%) during khariff and (62%) during rabi season. Pulses are grown in (10%) during khariff and Sugarcane is grown in (3%) during khariff and (6%) during rabi. The other crops are Millets and oil seeds. |
| 15 | Irrigation | : | **Major project:** Singur project on Manjira (Registered ayacut:40000 ha, Mostly used for drinking water supply to Hyd.)<br>**Medium Projects:** Nallavagu project (ayacut: 6030 ha), Ghanpur Anicut (ayacut: 21625 ha),<br>**MI Tanks:** 582 (>100 Acres ayacut) and 5174 (<100 Acres ayacut) minor irrigation tanks |
| 16 | Prevailing Water | : | PT: 1202 and 964 check dams and 994 farm ponds |

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| | Conservation/Recharge Practices | | Under Mission Kakatiya (Phase 1 to4) total ~12.08 MCM of silt is removed. |
| 17 | Geology | : | Granites: 64 %, BGC: 13%, Basalts : 19%, Laterite :3%. |
| 18 | Hydrogeological data points | : | 329 hydrogeological data points (Exploration: 245(CGWB: 206 and SGWD: 39), VES: 84 (CGWB). |
| 19 | Number of ground water structures | : | As on 31/03/2017, CGWB drilled 206 bore wells<br><br>Irrigation Wells: 1.52 lakhs (DW:0.15 lakhs and BW: 1.36 lakhs Domestic Wells: 4401 wells |
| 20 | Ground water yield (lps) | : | 0.1 to 6 lps (Avg:1.2 lps)<br><br><0.1 to 6 lps (avg: 1.2 lps) in Granites and <0.1 to 4 lps (avg: 1.0 lps) in Basalts.<br><br>Deepest Fracture : 198 m at Chinnakondur in Chinnakondur mandal |
| 21 | Water Levels<br><br>Depth to water levels (m bgl) | :<br><br>: | 123 wells (CGWB:44, SGWD:79)<br><br>Water table elevations during pre-monsoon season vary from 326.5 - 628 m amsl and during post-monsoon season vary from 342.6 – 637 m amsl.<br><br>Pre-monsoon season: 4.3 to 69.3 m bgl (average: 24.26 m bgl) and majority are in the range of 20- 40 m bgl (70 % area) followed by 10-20 mbgl (24% area). Deep water levels (> 40 mbgl) occupy 4% of area.<br><br>Post-monsoon: 0.1 to 34.91 m bgl (average: 11.16) and majority are in the range of 10-20 m bgl (42% area) followed by 5-10 mbgl (35 % area) , shallow water levels < 5 mbgl (10 % area) and Deep water levels ( > 20 m.bgl) occupy 12% of area. |
| 22 | Water Level Fluctuations (May vs. November ) | : | -0.15 to 41.97 m.bgl. Only one well at Mulug village registered fall in water level |
| 23 | Long term water level trends (10yrs)<br><br>(84 wells) | : | **Pre-monsoon:** Falling trends: 58 wells ( -0.02 m/yr to -3.9 m/yr) Rising trends: 17 wells shows 0.01 to 1.22 m/yr.<br><br>**Post-monsoon:** Falling trends: 60 wells (-0.005 m/yr to -4.9 m/yr) Rising trends: 23 wells shows 0.05 to 4.12 m/yr. |
| 24 | Geophysical data (down to 200 m) | : | 84 VES<br><br>Weathered granite/Gneiss <100Ω m , Semi-weathered granite/Gneiss 60-350 Ω m, Fractured granite/Gneiss >350 Ω m. and < 250 ohm (Ω) m for the weathered Basalt, 300-1100 Ω m for underlying fractured Basalt and > 1200 Ω m for massive Basalt. |
| 25 | Hydrochemistry | : | Total 507 data<br><br>Pre-monsoon (CGWB:55 nos, SGWD:168 and RWS:103)<br><br>Post-monsoon (SGWD:129 and RWS:149) |
| 25.1 | Electrical Conductivity (µ Siemens/cm) | : | Pre-monsoon: 156-6629 µ Siemens/cm (avg:1168) in 83 % of the area area EC is within 1500 µ Siemens/cm. |

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| | | | Post-monsoon: 150 - 6091 µ Siemens/cm (avg:1229) in 83 % of the area EC is within 1500 µ Siemens/cm. | | |
| 25.2 | Fluoride mg/l | : | Pre-monsoon: 0.02- 4.75 mg/L, 7% of area are unfit for human consumptions.<br><br>Post-monsoon: 0.06- 3.06 mg/L, 8 % of area are unfit for human consumptions. | | |
| 25.3 | Nitrate mg/l | : | Pre-monsoon: BDL to 230 mg/l and found 15 % of samples are unfit for human consumption<br><br>Post-monsoon: BDL to 496 and 24% of samples are unfit for human consumption. | | |
| 26 | Conceptualization | | Weathered zone (~20 m). | Fractured zone( 20-198m.) | |
| 27 | Aquifer Characterization | : | Saprolite (~13 m) and lower sap rock (13-20)<br><br>10-20 m weathering occurs in 75% followed by < 10 m in 15% of area and deep weathering occurs in 10 % of area. | Majority of fractures ~77% occurs within 100 m depth in Granites and ~70% within 100 m depth in Basalts .<br><br>Deepest fracture at 198 m at Chinnakondur in Chinnakondur mandal. | |
| 27.1 | Aquifer wise Ground water yield | : | <0.1 to 3 lps. Lower yields (< 1 lps) occur in most of the area and moderate yields (1-3 lps) occur in central and eastern part and higher yields (> 3 lps) occur in southern and southwestern parts. | Yield varies from 0.01 to 6.7 lps.(avg: 1.2 lps) | |
| 27.2 | Transmissivity ($m^2$/day) | : | 1- 66 $m^2$/day and in majority of wells it is <20 $m^2$/day, | 1- 122 $m^2$/day and in majority of wells it is <30 $m^2$/day, | |
| 27.3 | Specific Yield | : | < 1 to 2 % | - | |
| 27.4 | Storativity | : | - | 0.00001 to 0.0001 | |
| 28 | Ground water Resources (2017) MCM (As per New Districts and New mandals) | : | **Command** | **Non-Command** | **Total** |
| 28.1 | Net Dynamic groundwater availability | : | 67.26 | 1019 | 1086 |
| 28.2 | Gross GW Draft | : | 16.95 | 792 | 809 |
| 28.3 | Provision for Domestic &Industrial (2025) | : | 9.01 | 112.6 | 121.6 |
| 28.4 | Average Stage of Ground water development (%) | | 25 | 77 | 74 |
| 28.5 | Net GW Availability for future irrigation | : | 48.8 | 171 | 220 |
| 28.6 | In storage GW Resources | : | 292.9 MCM (May)<br><br>Net recharge during monsoon season is 817.7 MCM | | |
| 28.7 | Categorization of mandals | | Mandal wise it varies from 29 % to 127%<br><br>(OE:11, C:7, SC: 24 and Safe:19) | | |

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| 29 | Major Ground Water Issues Identified | : | • Over-exploitation: ~2278 $Km^2$ (8% of area) covering 376 villages.<br>• Ground water Pollution: Geogenic:- Fluoride (10 % samples are unfit for human consumptions. Anthropogenic:- Nitrate 20 % samples are unfit for human consumptions).<br>• Deep water levels (> 20 m bgl) are observed during pre - monsoon season in 74 % of area and 12% in post-monsoon.<br>• Declining water levels: Out of 84 wells analyzed, 58wells shown falling trend in pre-monsoon and 60 during post-monsoon season.<br>• Low Sustainability: Low yield (<1 lps) occurs in ~54 % of area and reduction in yield over a period of time.<br>• Water marketing is present in almost all over the area.<br>Change in land use from agricultural land to residential purposes and cropping pattern from traditional crops to Paddy and cash crops (cotton and spices) is observed. |
| 30 | Management Strategies | : | **Supply side measures**<br>**Ongoing Projects**<br>**Mission Kakatiya: (**Phase-1 to 4): ~12 MCM of silt is removed from 85% of tanks contributing to ~ 4 MCM to groundwater and with this additional ~500 ha land can be brought under irrigated dry (ID) crops under tank ayacut.<br>**To be taken up**<br>~ remaining 826 tanks in next phases for de-silting.<br>**Mission Bhagiratha:**~110 MCM of water will be imported from surface sources this will save ~66 MCM of ground water and from this ~11000 ha of additional land can be brought under ID crops.<br>**To be taken up (Artificial Recharge Structure)**<br>**Priority-1:Over-exploited villages: 457(~2278 $km^2$)**<br>• 673 ARS (CD with recharge shafts: 220 and PT:453)<br>• Cost Rs ~123 Crores<br>**Priority-2:Other remaining villages:808 (~6531 $km^2$)**<br>• 2254 ARS (CD with recharge shafts:1006 and PT:1248)<br>• Cost Rs ~400 Crores.<br>**Water Conservation measures (WCM) Farm Ponds**<br>• The size of form ponds can be 10 x 10 x 3 m. Total 24306 farm ponds are recommended (20 in each village in 1257 villages) with total cost of **60.76** crores. this can create an |

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| | | | additional storage of 7.2 MCM<br><br>**Demand side measure**<br><br>**Ongoing work:** In the area till date a total ~40954 ha area is brought under micro-irrigation saving ~122 MCM of groundwater.<br><br>• **Proposed micro Irrigation:** ~62,850 ha of additional land that can be brought under micro-irrigation **Cost: 377** crores. With this ~188 MCM of ground water can be conserved over the traditional irrigation practices.<br><br>**Other Recommendations**<br><br>• Declaration of Minimum Support Price in advance (before start of season) and improved facilities at procurement centres.<br><br>• As a mandatory measure, every groundwater user should recharge rainwater through artificial recharge structures in proportionate to the extraction on OE blocks.<br><br>• Capacity building in power supply regulation (4 hour each in morning and evening) will increase the sustainability of wells<br><br>• A participatory groundwater management (PGWM) approach in sharing of groundwater and monitoring resources on a constant basis along with effective implementation of the existing 'Water, Land and Trees Act' of 2002 (WALTA-2002).<br><br>• Laser levelling of irrigated land.<br><br>• Subsidy/incentives on cost involved in sharing of groundwater may be given to the concerned farmers.<br><br>• In urban and rural areas the sewerage line should be constructed to arrest leaching of nitrate |
| 31 | Expected Results and Out come | : | With the above interventions costing Rs **961** crores (**excluding the cost involved in Mission Kakatiya and Mission Bhagiratha**), the likely benefit would be net saving of **257** MCM of ground water or net reduction of 17% in stage of ground water, i.e., from 74 % to 57 %<br>• One time cost will be ~3 paisa/litre (Rs 27 /$m^3$ of ground water). |

**ABBREVATIONS**

| | | |
|---|---|---|
| 2D | : | 2 Dimensional |
| 3D | : | 3 Dimensional |
| ARS | : | Artificial Recharge Structures |
| Avg | : | Average |
| BDL | : | Below Detection Level |
| BW | : | Bore Well |
| CD | : | Check dam |
| CGWB | : | Central Ground Water Board |
| Cr | : | Crore |
| DTW | : | Depth to water |
| DW | : | Dug well |
| EC | : | Electrical conductivity |
| EL | : | East Longitude |
| F | : | Fluoride |
| FP | : | Farm Pond |
| GEC | : | Ground Water Estimation committee |
| GW | : | Ground Water |
| Ha | : | Hectare |
| Ha.m | : | Hectare meter |
| ID | : | Irrigated dry |
| IMD | : | India Meteorological Department |
| $Km^2$ | : | square kilometre |
| LPS | : | Litres per second |
| M | : | meter |
| $M^3$ | : | Cubic meter |
| m bgl | : | Metres below ground level |
| MCM | : | Million cubic meter |
| Mg/l | : | Milligram per litre |
| MI | : | Micro irrigation |
| Min | : | Minimum |
| max | : | Maximum |
| MPT | : | Mini percolation tank |
| MSP | : | Minimum Support price |
| NL | : | North Latitude |
| $NO_3$ | : | Nitrate |
| OE | : | Over Exploited |
| PGWM | : | Participatory ground water management |
| PT | : | Percolation tank |
| SGWD | : | State Ground Water Department |
| S | : | Storativity |
| Sy | : | Specific Yield |
| T | : | Transmissivity |
| WCM | : | Water conservation measures |

# EXECUTIVE SUMMARY

Medak (erstwhile) district covering an area of 9699 $km^2$, receives an average annual normal rainfall of 868 mm of which SW monsoon 78 % and north-east monsoon contributes 21.5 %. During the year 2017-18, the district received 832 mm (4% less) rainfall than normal annual rainfall. Administratively, the area is governed by 46 revenue mandals with 1267 villages. The population of the district is ~ 30.31 lakhs (2011 census) with average density of 313 persons/$km^2$.

The area is underlain by Granites (64 %), Banded Gneissic Complex (13%), Basalt (19%). Pediplains are major geomorphic feature (57% of area), followed by pediment (20%), Dissected plateau (16%), Denudation hills (3 %). Most of the area is drained by rivers Manjeera, Maneru, Musi and their tributaries and are divided into 53 watersheds. The soils are sandy loamy (55%) and clayey soils (45%). The gross cropped area (2019-20) during khariff season is 505888 ha and during rabi season is 127035 ha (Total 632923 ha). The net cropped area is 541854 ha. Crops grown are Cotton (45%) followed by Paddy (19%) during khariff and (62%) during rabi season. Pulses are grown in (10%) during khariff and Sugarcane is grown in(3%) during khariff and (6%) during rabi. The other crops are Millets and oil seeds. Long term cropping pattern shows rising trend in Paddy and Cotton cropping areas and fall in Millets, Sugarcane and Pulses cropping areas Over all the cropping area of the district is increasing at a rate of 5374 Ha/Yr.

There is no major irrigation project in the district. Two medium projects namely Nallavagu project and Ghanpur Anicut, with irrigation potential of 6030 and 21625 acres are there in the district. The other minor projects in the district include Rachakattu reservoir, Pallavaram project, Gunduvagu anicut, SMC works and P.R tanks (>100 Acres ayacut) with 582 tanks and P.R tanks (<100 Acres ayacut) with 5174 tanks with combined irrigation potential of 237516 acres. During the year 2017-18, 91675 ha area was irrigated from surface water. Ground water contributes 78 % of irrigation and surface water 22 %. In the area there are ~1202 PT and 964 CD and ~40954 ha of land is brought under MI and ~12 MCM of silt is removed under Mission Kakatiya.

Exploratory results of CGWB (206 no.) wells are analysed of which 53 wells are drilled in Basaltic area and 153 wells in Granitic area. These comprise 01 well of shallow depth (30 m), 44 nos (30-60 m), 33 nos (60-100 m), 25 nos (100-150 m), 103 nos (150-200 m) depth**.** There

are ~1.65 lakh agricultural wells (Irrigation BW: 1.36 lakhs, Irrigation DW: 0.24 lakh and Domestic wells 4401). Ground water yield varies from <0.1 to 6 lps in Granite/Gneisses and <0.1 to 4 lps in Basalts. Majority of fractures occur within 100 m depth and deepest fracture is encountered at 198 m.bgl at Chinnakondur in Chinnakondur mandal.

Water levels are monitored through 123 Piezometer wells during pre and post-monsoon season. The DTW varies from 4.3 to 69.3 m bgl (average: 24.26) and 0.1 to 35.91 m bgl (average: 11.16) during pre and post-monsoon season respectively. During pre-monsoon season 20-40 m water level range is more predominant (70% of area) followed by 10-20 m (24 % of area), and > 40 m.bgl (4 % of area). During post-monsoon season 10-20 m water level is more predominant (42 % of area), followed by 5-10 m (35 % of area) and < 5 m (10 % of area). Water level fluctuation (Nov Vs. May) data indicates that out of 194 wells, only one well at Mulug village registered fall in water level. Water level fluctuations vary from -0.15 to 41.97 m with average rise of 13.19 m. Long-term water level trends from 84wells during pre-monsoon shows falling trends in 58 wells -0.02 m/yr to -3.5 m/yr (0 to 1 m: 35 wells, 1-2 m: 15 wells and > 2: 8 wells) and 17 wells shows a rising trend in the range of 0.01 to 4.12 m/yr. During post-monsoon season, 60 wells show falling trends in the range of -0.005 m/yr to -4.9 m/yr and 23 wells show rising trends in the range of 0.05 to 4.12 m/yr.

Geophysical data from 84 VES data (CGWB) reveals resistivity < 100 Ohm (Ω) m for the weathered granite, 60-350 Ω m for underlying semi weathered granite, between 180-350 Ω m for fractured granite and > 350 Ω m for massive granite. < 250 ohm (Ω) m for the weathered Basalt (1-20 m), 300-1100 Ω m for underlying fractured Basalt (70-100m) and > 1200 Ω m for massive Basalt.

Total 504 ground water samples (Pre-monsoon:326 and Post-monsoon:278) were analysed for knowing the suitability of ground water for drinking purposes. In 83% of area EC is in the range of < 1500 µ Siemens/cm during pre and post-monsoon seasons. During pre-monsoon season, concentration of $NO_3$ ranges from BDL to 230 mg/l and found that in 15 % samples beyond permissible limit of BIS (45 mg/l) and F concentration varies from 0.02 to 4.57 mg/l and found 90% of the samples with in permissible limits of BIS (< 1.5 mg/l). During post-monsoon season, concentration of $NO_3$ ranges from BDL to 496 mg/l and in 20 % of samples it is beyond maximum permissible limit of BIS (45 mg/l). The F concentration varies from 0.03 to 3.06 mg/l and in 22 samples (8%) it is beyond maximum permissible limit of BIS.

Based on 329 hydrogeological data points, aquifers from the area can be conceptualized in to 2 no.s namely 1) weathered zone (~20 m) and 2) fractured zone (20- 198 m). Weathered zone has gone dry in most of the area due to over-exploitation during pre-monsoon season. Weathered zone in the range of < 10 m occurs in 15 % of area, 10-20 m in 75 % of area, and deep weathering (> 20 m) in 10 % of area. Ground water yield of this zone varies from 0.1-3 lps, Transmissivity varies from 1 to 66 $m^2$/day in Granites and upto 14 $m^2$/day in Basalts. Fracturing zone varies from 20 to 198 m (deepest fracture at Chinnakondur mandal). In majority of area (65%) fractures occur within < 60 m depth in Granites and 48% in Basalts. It is observed that 60-100 m. fractures constitute 12 % in Granites and 22% in Basalts, while > 100 m. fractures comprise 23 % in Granites and 31% in Basalts. Ground water yield varies from 0.01 to 6 lps. Transmissivity (T) varies from 1 to 122 $m^2$/day in Granites and 0.1 to 90 $m^2$/day in Basalts.

Net dynamic replenishable ground water availability as on 2017 is 1086 MCM, gross ground water draft is 809 MCM, provision for drinking and industrial use for the year 2025 is 121 MCM and net available balance for future irrigation use is 220 MCM. The stage of ground water development varies from 29% to 127%. The in-storage ground water resources down to the maximum fractured depth (198 m) is 292.9 MCM.

Major issues identified are over-exploitation (2278 $km^2$ area covering 376 villages, geo-genic (F), deep water levels (> 20 m bgl) in 73 % of the area during pre-monsoon season and declining water levels in majority of hydrograph stations and sustainability in 54 % of the area. Other issues identified are water marketing, change in cropping pattern etc.

The management strategies mainly include both supply side and demand side. The supply side measure includes ongoing work under Mission Kakatiya where ~12 MCM of silt has been removed from existing 85 % tanks. This will contribute ~3MCM of ground water by recharge, with this additional ~500 ha land can be brought under irrigated dry (ID) crops in tank ayacut. Under Mission Bhagiratha, there is plan to import ~110 MCM of water for drinking purposes which will save the present ~66 MCM of water for drinking and domestic purposes and with this additional ~11000 ha of land can be brought under ID crops.

Construction of 673 ARS with ~123 crores in **priority-1** area (over-exploited 457 villages) and constructions of 2254 ARS with ~400 crores in **priority-2** area (other area) are recommended as supply side measures. Under Water conservation measures, construction of 24306 nos of farm ponds are proposed with a cost of 60.76 crores in all villages.

Demand side measure includes bringing ~62840 ha of land (from 1257 villages @50 ha/village)) under micro-irrigation with total cost of **377** crores. With this 188 MCM of ground water will be saved in both seasons by utilizing same units.

The ongoing Kaleshwaram project is proposed to create ~275784 Ha ayacut, which can irrigate ~55% of gross cropped area in the district.

Other measure includes providing good quality seeds, improved procurement facilities, providing Minimum Support Price, mandatory artificial recharge at every Govt and industrial units. Application of laser levelling technology in irrigated land, Subsidy on cost involved in sharing of ground water, providing proper sewerage system and participatory groundwater management (PGWM) are the other measures recommended.

With the above interventions costing Rs 961 crores (excluding the cost involved in Mission Kakatiya and Mission Bhagiratha), the likely benefit would be the net saving of 257 MCM of ground water. This will bring down the stage of ground water development by 17 % ( from 74 % to 57%).

**NUMBER OF DATA POINTS USED FOR PREPARATION OF VARIOUS MAPS/FIGS- MEDAK DISTRICT, TELANGANA STATE**

| S. No. | Data | Aquifer | Total Data Points | Source | | |
|---|---|---|---|---|---|---|
| | | | | CGWB | SGWD | Well Inventory |
| 1 | Panel Diagram (3-D) | Combine | 329 | Expl:206 VES:84 | 39 | - |
| 2 | Hydrogeological Sections | 4 no | 329 | Expl:206 VES:84 | 39 | - |
| 3 | Fence/panel Diagrams | 1 no | 329 | Expl:206 VES:84 | 39 | - |
| 4 | Depth of weathering | 1 no | 329 | Expl:206 VES:84 | 39 | - |
| 5 | Depth of fracturing | 1 no | 329 | Expl:206 VES:84 | 39 | - |
| 6 | Groundwater Yield | Weathered zone | 329 | 84 | 23 | 102 |
| | | Fractured zone | 245 | 125 | 21 | 56 |
| 7 | Transmissivity ($m^2$/day) | Weathered zone | 10 | 10 | 0 | 0 |
| | | Fractured zone | 52 | 52 | 0 | 0 |
| 8 | Depth to Water Level Maps | Combine | 123 | 84 | 108 | - |
| 9 | Water Level Fluctuation | Combine | 123 | 84 | 108 | - |
| 10 | Long term water level trends | Combine | 84 | 52 | 32 | 0 |
| 11 | Water quality<br>Pre<br>Post | Combine | 504<br>Pre:326<br><br><br><br>Post:278 | 55<br><br><br><br>0 | SGWD:168 and RWS : 103)<br><br>SGWD:129 and RWS : 149) | 0<br><br><br><br>0 |

# 1. INTRODUCTION

**Aquifer mapping** is a multidisciplinary and a holistic scientific approach wherein a combination of geologic, geophysical, hydrologic and chemical analysis is applied to characterize the quantity, quality and sustainability of ground water in aquifers. In recent past, there has been a paradigm shift from "**groundwater development**" to "**groundwater management**". As large parts of India particularly hard rocks have become water stressed due to rapid growth in demand for water due to population growth, irrigation, urbanization and changing life style. Therefore, in order to have an accurate and comprehensive micro-level picture of groundwater in India, aquifer mapping in different hydrogeological settings at the appropriate scale is devised and implemented, to enable robust groundwater management plans. This will help in achieving drinking water security, improved irrigation facility and sustainability in water resources development in large parts of rural and many parts of urban India. The aquifer mapping program is important for planning suitable adaptation strategies to meet climate change also. Thus the crux of National Aquifer Mapping (NAQUIM) is not merely mapping, but reaching the goal-that of ground water management through community participation.

Hard rocks (Granites/Gneisses) lack primary porosity, and groundwater occurrence is limited to secondary porosity developed by weathering and fracturing. Weathered zone is the potential recharge zone for deeper fractures and excessive withdrawal from this zone leads to drying up in places and reducing the sustainability of structures. Besides these quantitative aspects, groundwater quality also represents a major challenge which is threatened by both geogenic and anthropogenic pollution. In some places, the aquifers have high level of geogenic contaminants, such as fluoride, rendering them unsuitable for drinking purposes. High utilization of fertilizers for agricultural productions and improper development of sewage system in rural/urban areas lead to point source pollution viz., nitrate and chloride.

**1.1 Objectives:** In view of the above challenges, an integrated hydrogeological study was taken up to develop a reliable and comprehensive aquifer map and to suggest suitable groundwater management plan on 1: 50,000 scale.

**1.2 Scope of study:** The main scope of study is summerised below.

1. Compilation of existing data (exploration, geophysical, groundwater level and groundwater quality with geo-referencing information and identification of principal aquifer units.
2. Periodic long term monitoring of ground water regime (for water levels and water quality) for creation of time series data base and ground water resource estimation.
3. Quantification of groundwater availability and assessing its quality.
4. To delineate aquifer in 3-D along with their characterization on 1:50,000 scale.
5. To formulate groundwater management plans.

**1.3 Area Details:** The Medak district (Erstwhile) having geographical area of 9699 $km^2$, lies between north latitude 17°25´26"-18°16´46" and east longitude 77°26´49"-79°16´59". It is part of the river Godavari basin (**Fig.1.1**). Out of total area, the non-command area is 83 % and command area (17%) and hilly area is 9%. Administratively the district is governed by 46 revenue mandals (61 new mandals) with 1011 Panchayats and 1267 villages with a population of ~30.31 lakhs (2011 census), Population wise Regode Mandal has lowest population (33,056) and Siddipet mandal has highest population (152365).

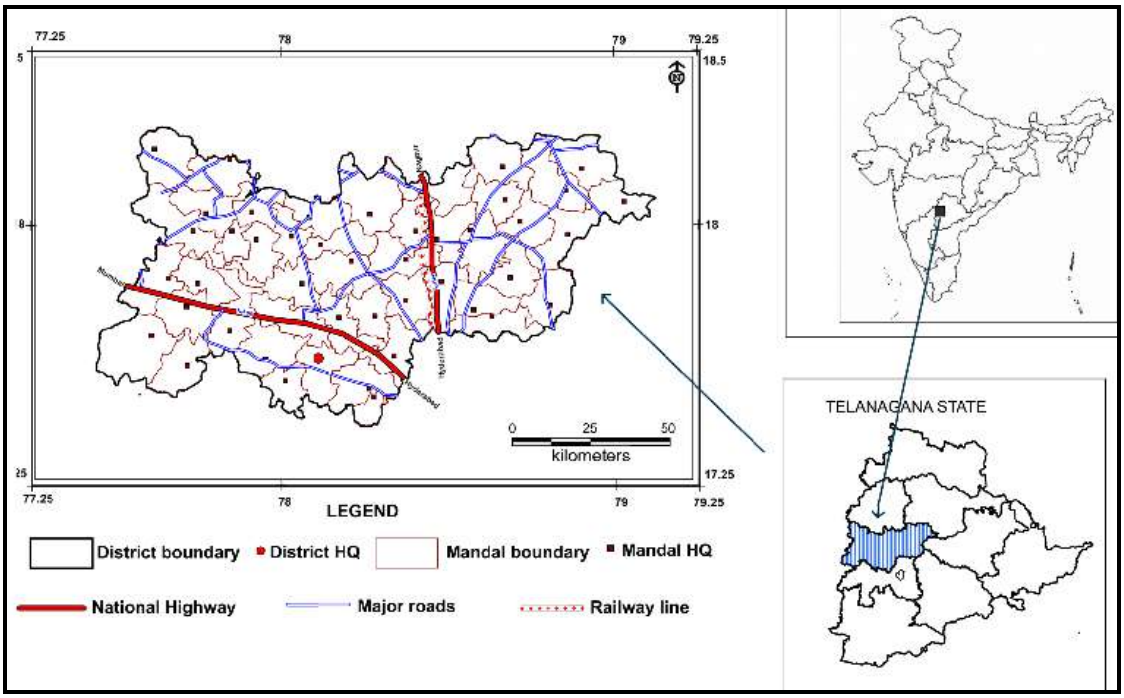


**Fig.1.1:** Location map of Medak district (Erstwhile).

**1.4 Climate and Rainfall:** The climate of the district is characterised by hot summer and generally dry weather except during S-W monsoon season.The normal mean daily minimum and maximum temperatures are 26 °C and 40 °C during May and 13°C and 28.2 °C during December. Normal annual rainfall varies between 635 mm (Kondapak) and 1035 mm (Medak) with average of 868 mm (**Fig. 1.2**). ~ SW monsoon contributes 78%, NE monsoon contributes 21.5% while the rest by winter and summer rainfall. Rainfall increses from west to central part and from east to central part and then decreases further south-east. As per the IMD rainfall data, during the year 2019, it received 832 mm of rainfall (-4% less than normal rainfall).

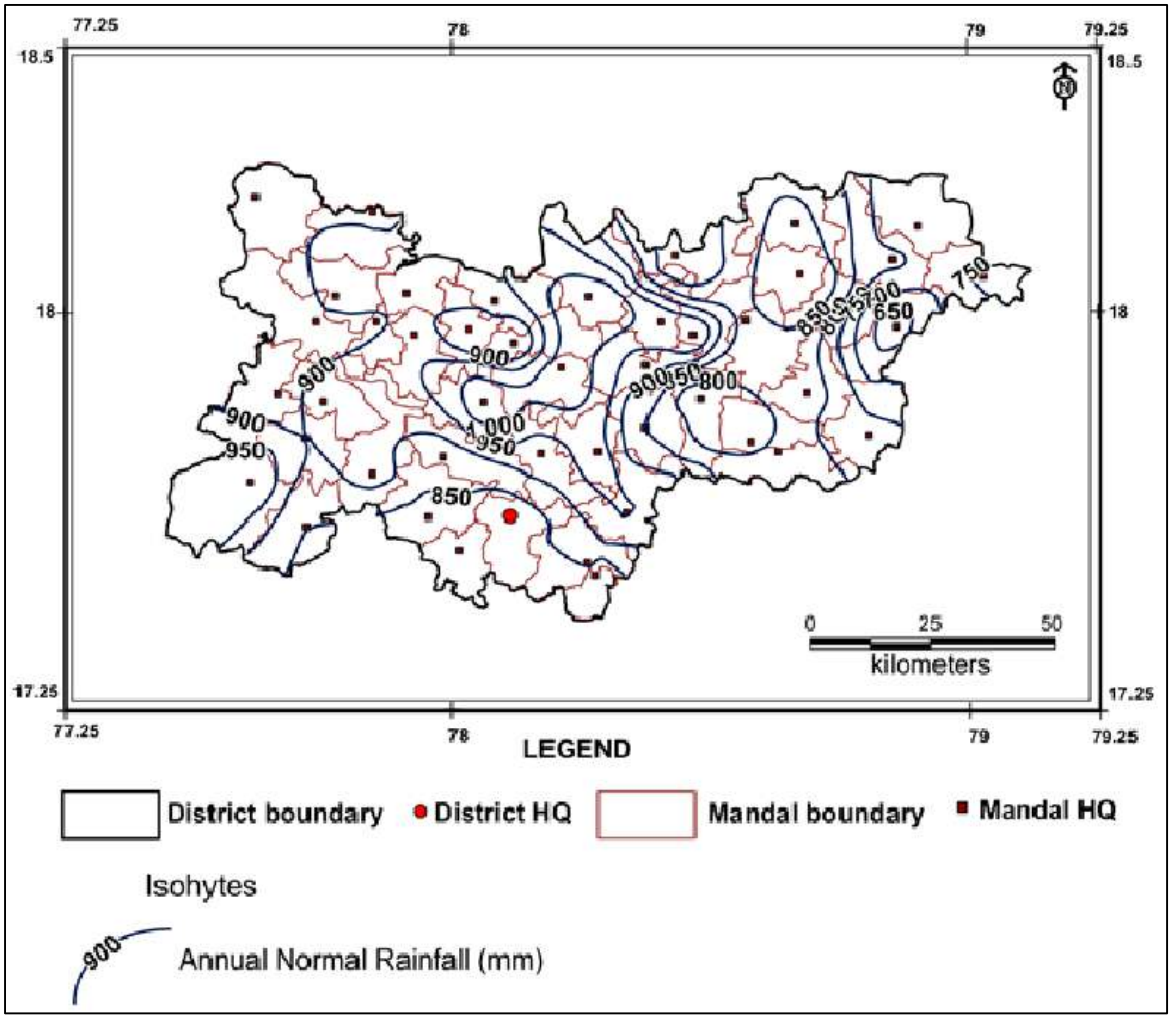


**Fig.1.2:** Isohyetal map of Medak district.

Analysis of long term rainfall data of 20 years shows very little change in annual rainfall, with rise of 3.8 mm/yr. The monthly rainfall trend shows major change in rainfall distribution, decline in rainfall trend is observed in monsoon months of July and August, upto

4 mm/year and rise in rainfall is observed in June, September, October and November months (**Fig-1.3a & 1.3b**).

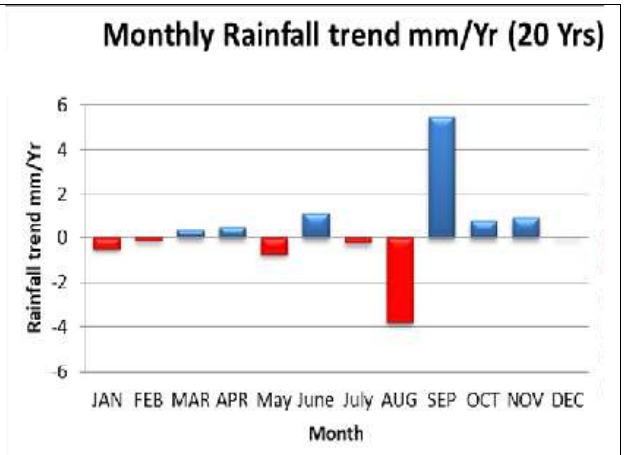


**Fig-1.3a**: Annual Rainfall trend

**Fig-1.3b**: Monthly Rainfall trend

**1.5 Geomorphological Set up:** Pediplain is the major landform covering about 5540 km$^2$ (57%) area. The other landforms observed are Pediment (20%), Dissected Plateau (16%), Denudation hills (03%), Flood plain, Residual hill, Channel fill, etc. (**Fig.1.3**).

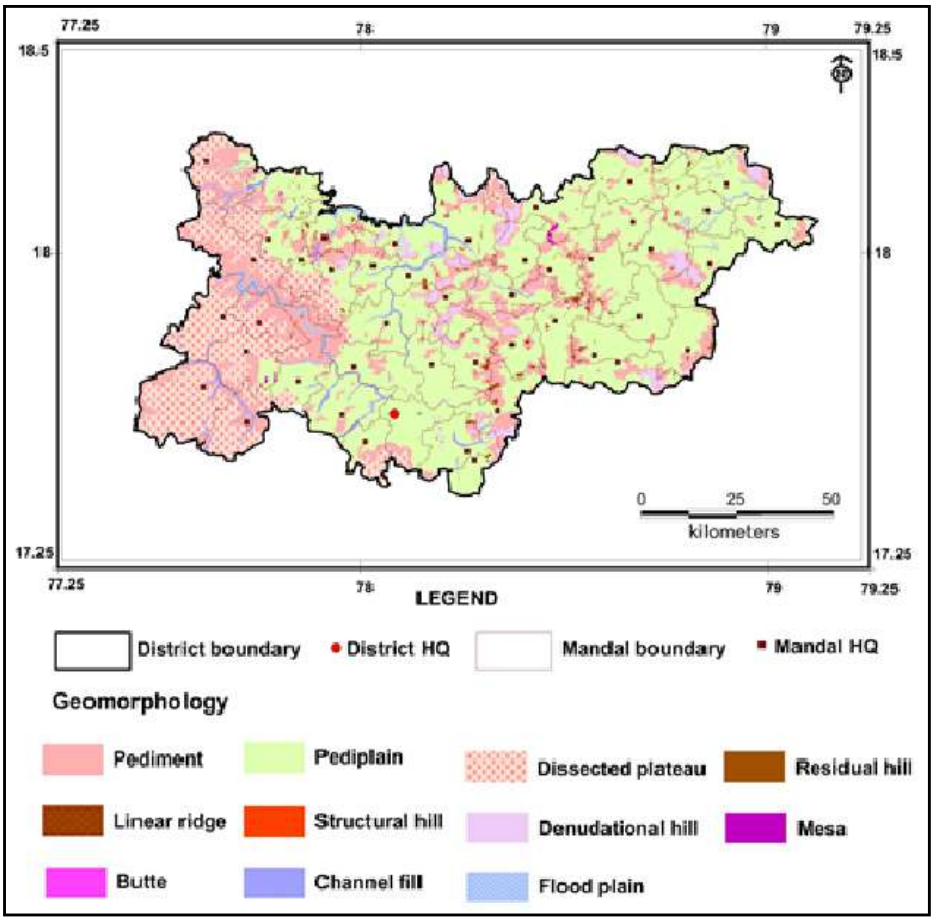


**Fig.1.3:** Geomorphology of Medak district.

**1.6 Drainage and Structures:** Major part of the district falls under Godavari basin. The District is divided into two major drainage basins namely Godavari & Krishna and sub basins of major rivers with their tributaries, Majeera, Maneru and Musi. These sub basins are further sub divided into 53 groundwater watersheds. No major rivers are flowing across the district. But, the "Manjeera", tributary of Godavari river, originates in Bidar district and enters Medak district in the southeastern direction. It flows for about 96 Km. in the western and northwestern mandals of Narayankhed, Zaheerabad, Sangareddy, Narsapur and Medak. Other small rivers like Haldi Vagu, Nalla Vagu, Naranja Vagu and Kudleru Vagu flows through the district. Lineaments trend along E-W, NE-SW, N-S and NW-SE directions. Map depicting drainage, water bodies, lineaments and watershed boundaries is presented in **Fig.1.4**.

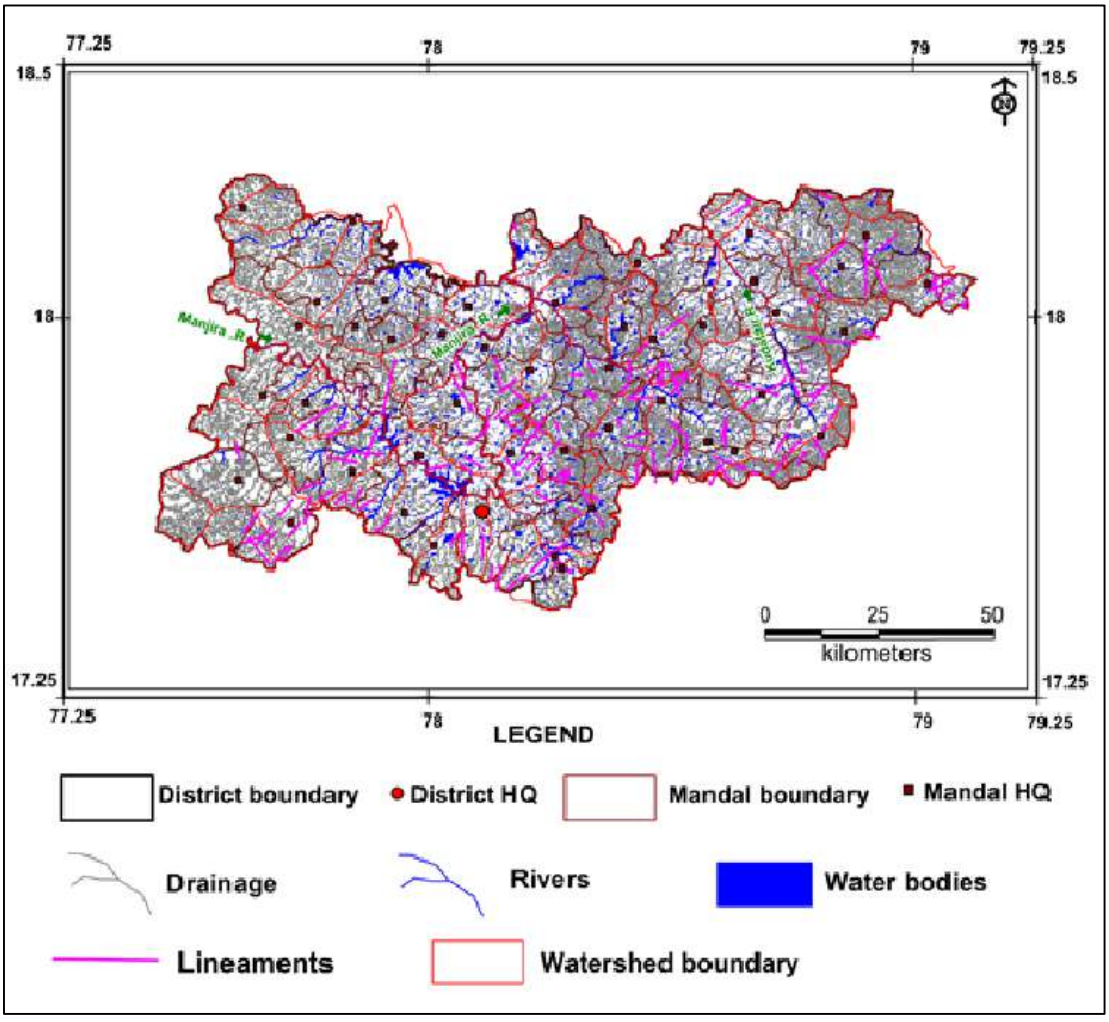


**Fig.1.4:** Drainage, lineaments and watershed boundaries.

**1.7 Land use and cropping pattern (2019-20):** In the area, the land use can be grouped into 11 classes (**Fig.1.5**). Forest occupies ~10 % of the total geographical area, barren and uncultivable land is 5.4%, land put to non-agricultural use is 7.3%, cultivable waste is 2%,

current fallow lands are 17.8%. Nearly 4.23 lakh hectare is under cultivation, while 23.4% (1.00 lakh hectares) area out of the cultivated area is under double cropping.

The gross cropped area (2019-20) during khariff season is 505888 ha and during rabi season is 127035 ha (Total 632923 ha). The net cropped area is 541854 ha. Main crops grown are Cotton 227801 ha (45%) followed by Paddy 97778 ha (19%) during khariff and 78442 ha (62%) during rabi season. Pulses are grown in 52212 ha (10%) during khariff and Sugarcane is grown in 14355 (3%) during khariff and 7404 ha (6%) during rabi. The other crops are Millets and oil seeds. Season wise cropping pattern is given in **Fig.1.6a** and **Fig.1.6b.**

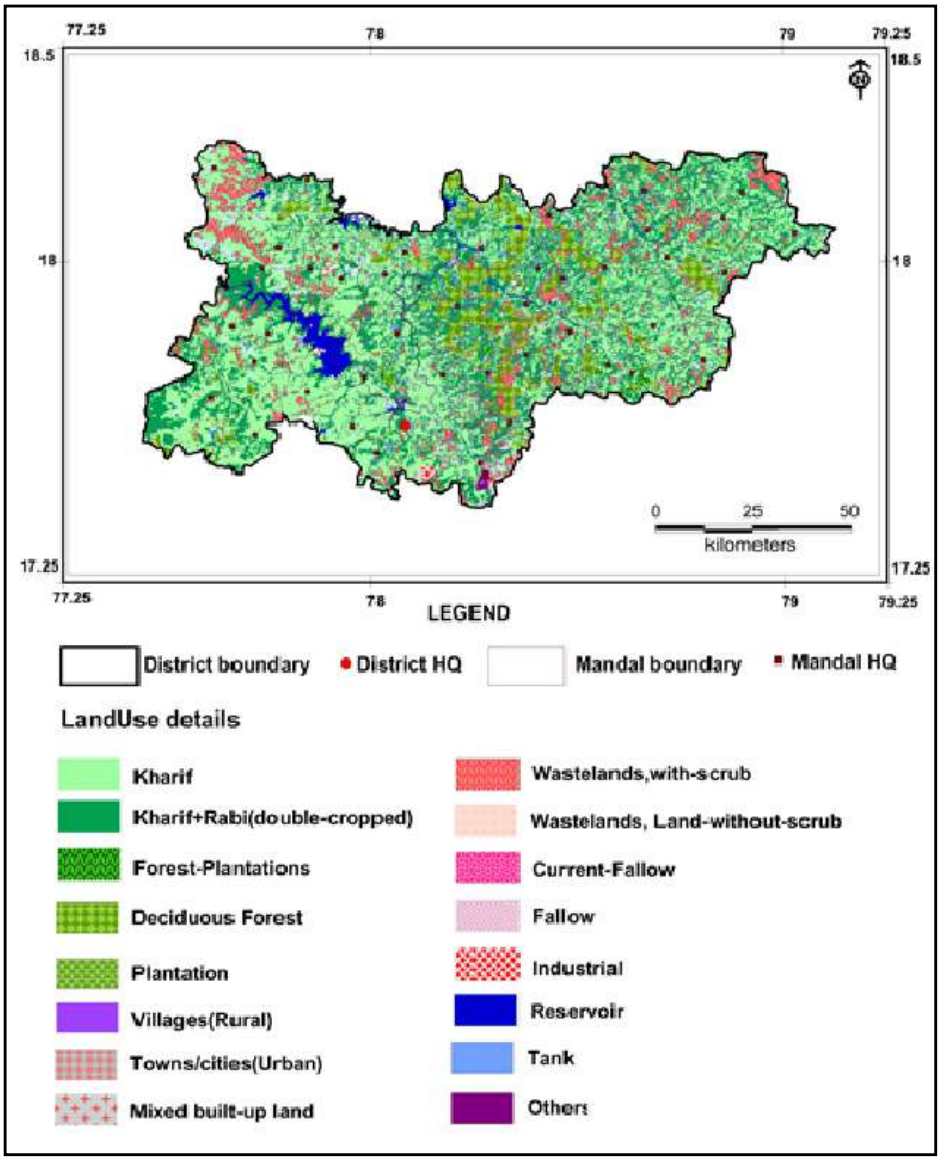


**Fig.1.5:** Land use and land cover of Medak district.

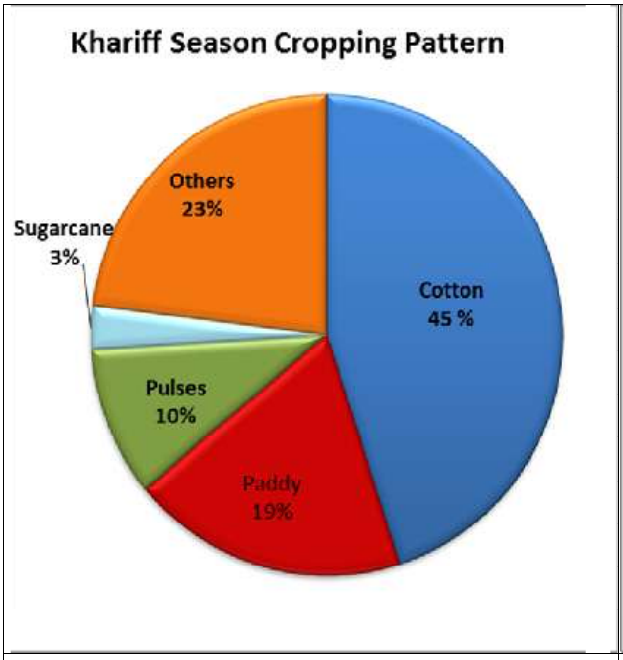


**Fig.1.6a**: Cropping pattern in Khariff

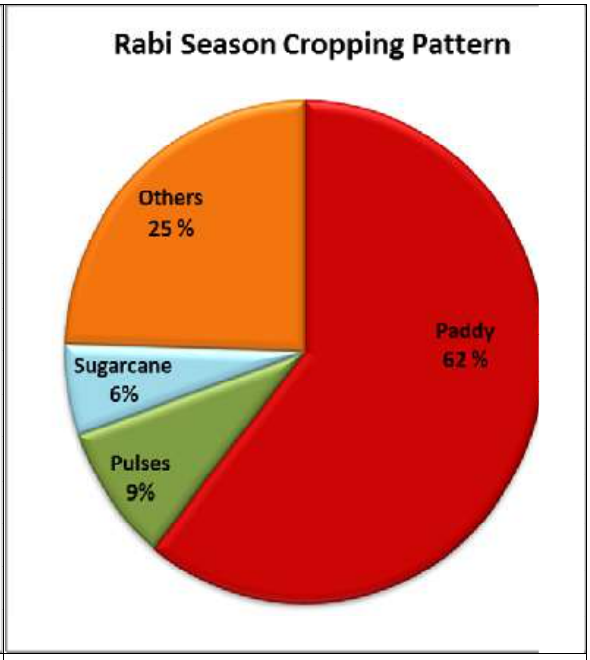


**Fig.1.6b**: Cropping pattern in Rabi

### 1.8 Cropping Pattern trend:

To understand the long term cropping pattern changes, 20 years data of cropping pattern is analysed. It is observed from the cropping area trend (**Table- 1.1**) that the cropping areas of Paddy and Cotton are rising and the cropping areas of Millets, Sugarcane and Pulses are falling. Over all the cropping area of the district is increasing at a rate of 5374 Ha/Yr.The plots for cropping area trends is given in **Fig-1.7**.

**Table-1.1** : Cropping area trend

| **Crop** | **Trend Ha/Yr** |
|---|---|
| Paddy | 3331 |
| Cotton | 11175 |
| Millets | -4062 |
| Sugarcane | -358 |
| Pulses | -5241 |
| **Total** | **5374** |

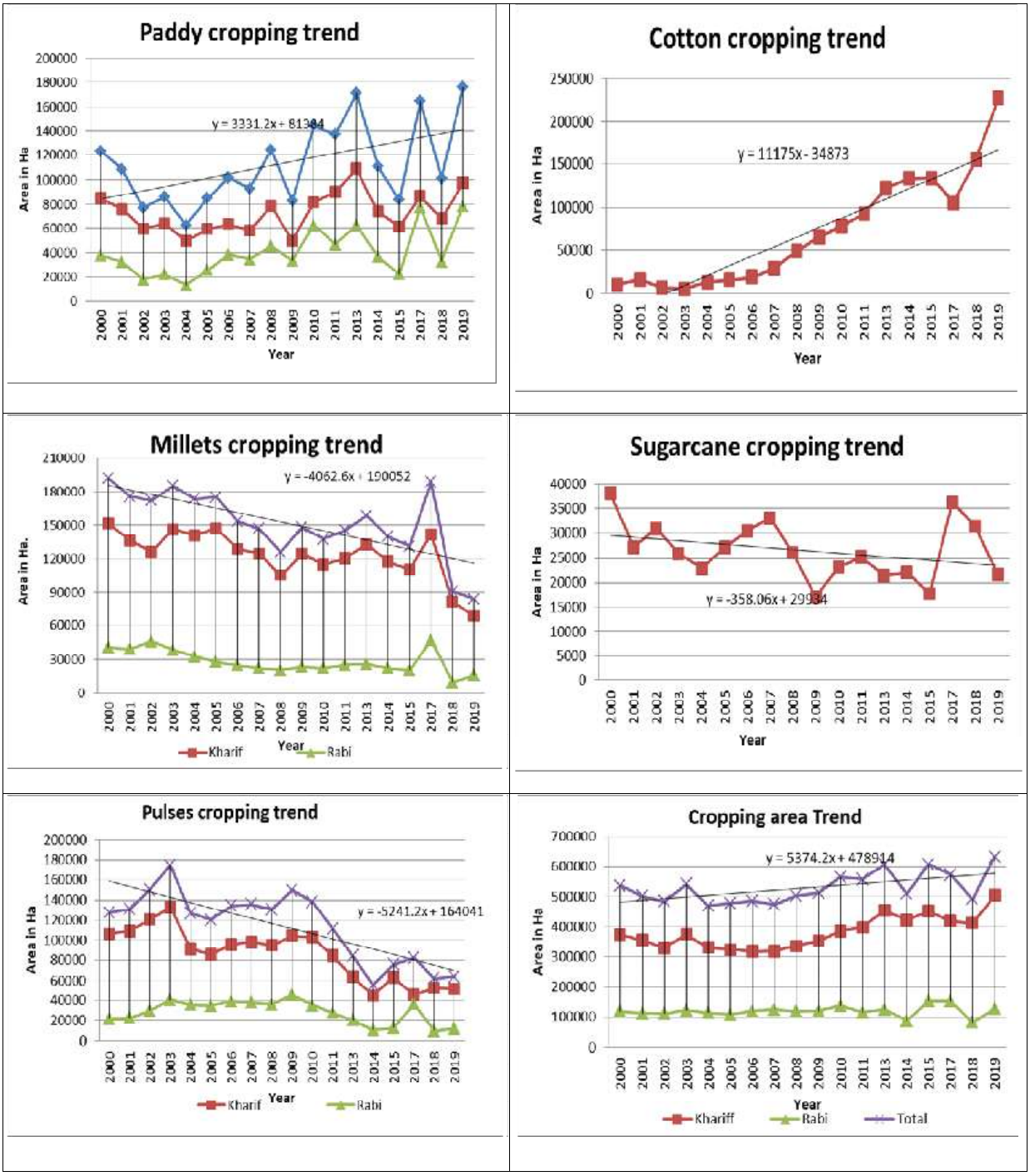


**Fig-1.7:** Cropping area trend plots

The observations made from the analysis are given below.

- There is a gradual change in cropping pattern in the past 20 years.
- The extent of Paddy and Cotton in gross cropped area is increasing for past 20 years where as the extent of Millets and Pulses is decreasing during the same period.

The cropping trend data for paddy indicate irrigation requirement of 36.64 MCM/Yr (~3% of Dynamic ground water resources available in the district), which is mostly met by the ground

water in the district. The ID crops such as Millets and Pulses are showing falling trend. If the Paddy growth rate is reduced to zero, 36.64 MCM/Yr water can be saved.

**1.9 Soils:** The area is mainly occupied by Sandy loams (55%), (red and sandy soils, which are shallow with low water holding capacity), Clayey soils (44 %) (deep, gravelly clay with low avaialable water content (AWC)) and laterite (1%). Red laterite soil is predominant in Zahirabad and Kohir mandals. Black cotton soils, comprising of clay loams, clay and silt clay, are found in Sangareddy, Sadasivapet, Kondapoor, Munipally, Pulkal, Shankarampet (A), Alladurg, Jogipet, Regode, Narayankhed, Manoor, Kangti , Kalher , Narsapur, Kowdipally, Shivampet , Hathnoora and Jinnaram mandals. (**Fig.1.8**).

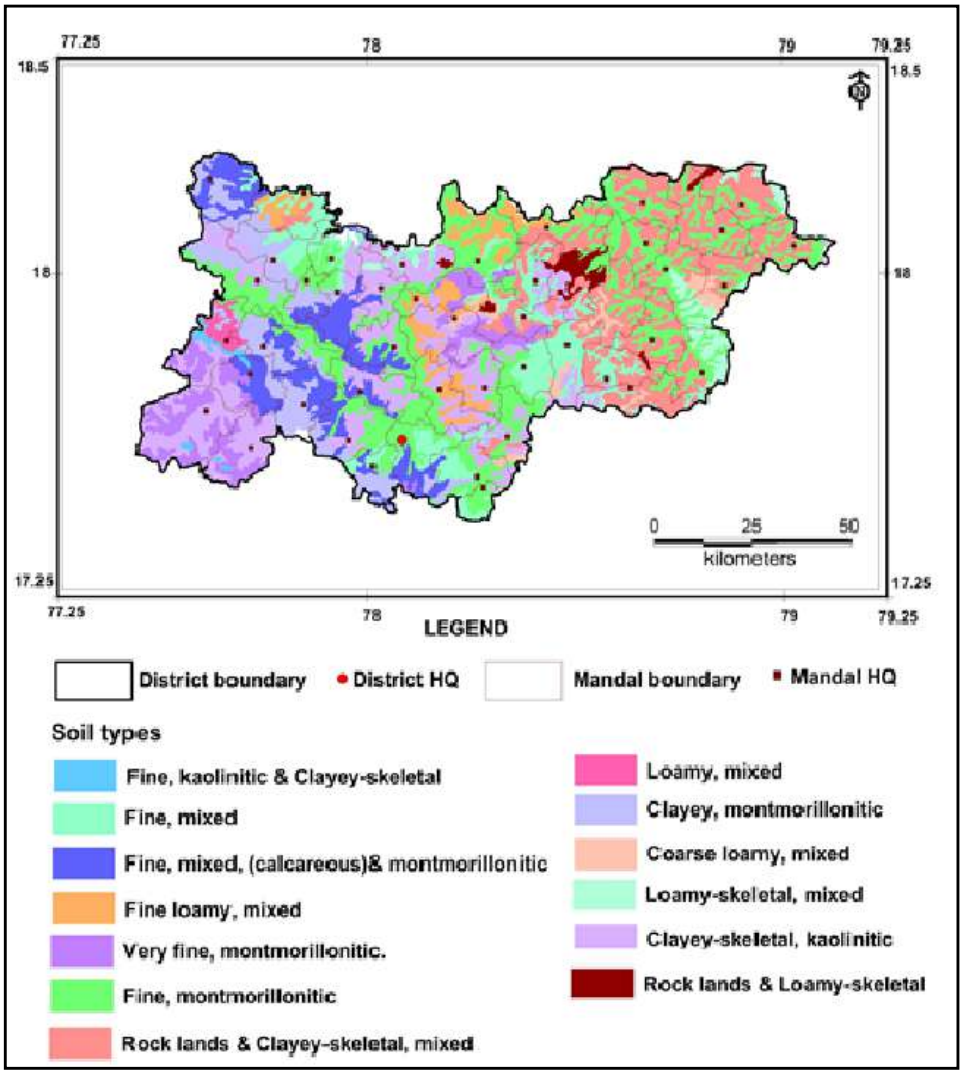


**Fig.1.8:** Soil map of Medak district.

## 1.10 Irrigation:

River Manjeera a tributary to the River Godavari, originates in Bidar district and enters Medak district in the southeastern direction, It flows for about 96 Km. in the western and north-western mandals. Other small Rivers like Haldi Vagu, Nalla Vagu, Naranja Vagu and Kudleru Vagu passes through the district. There is no major irrigation project in the district. One major project, Singur project on Manjira River at Singur village is dedicated to drinking water supply to Hyderabad city. Two medium projects namely Nallavagu project and Ghanpur Anicut, with irrigation potential of 6030 and 21625 acres respectively in the district. The other minor projects in the district include Rachakattu reservoir, Pallavaram project, Gunduvagu anicut, SMC works and 582 P.R tanks (>100 Acres ayacut) and 5174 P.R tanks (<100 Acres ayacut) with combined irrigation potential of 237516 acres. Irrigation projects location with command area is given in **Fig.1.9**. There are 138943 bore wells and 9416 dugwells with an average command area of only 0.4 ha for each borewell and dugwell.

During the year 2017-18, 91675 Ha area was irrigated from surface water (22%) while ground water contributes 78% of irrigation.

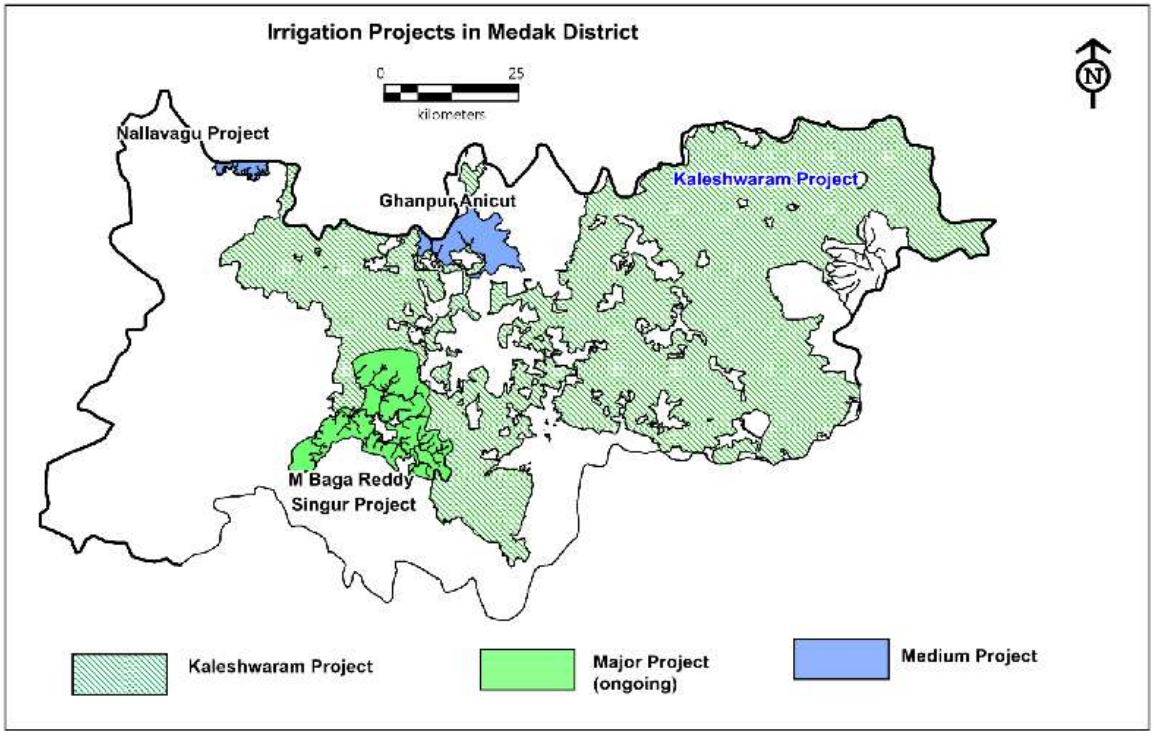


**Fig.1.9 :** Irrigation projects with command areas in Medak district
*(Source: Major & Medium Irrigation projects, I&CAD)*

**1.11 Prevailing Water Conservation/Recharge Practices:** In the district there are ~1202 percolation tanks, 964 Check dams and 994 farm ponds with gross storage of 99 MCM. Under Mission Kakatiya (Phase 1 to 4) 4930 tanks have been undertaken under RRR (Repairs, restoration and Rejuvenation) schemes.

**1.12 Geology:** The area is underlain by crystalline rocks, namely Granites (64%), Banded Gneissic Complex (13%), of Archaean to Proterozoic age and volcanic Basalt rocks (Deccan Traps) (19 %) of late Cretaceous to early Eocene age. (**Fig1.10**). The Deccan Trap formations occur in the northwestern part of the district. They are mostly remnants of huge lava flows that poured out from extensive fissures. They form flat-topped hills with step-like trappean topography, the common rock is Basalt. Seven Deccan Trap flows with unweathered outcrops and two completely lateritised flows have been differentiated. The laterites occur in the southwestern and southern part of the district.

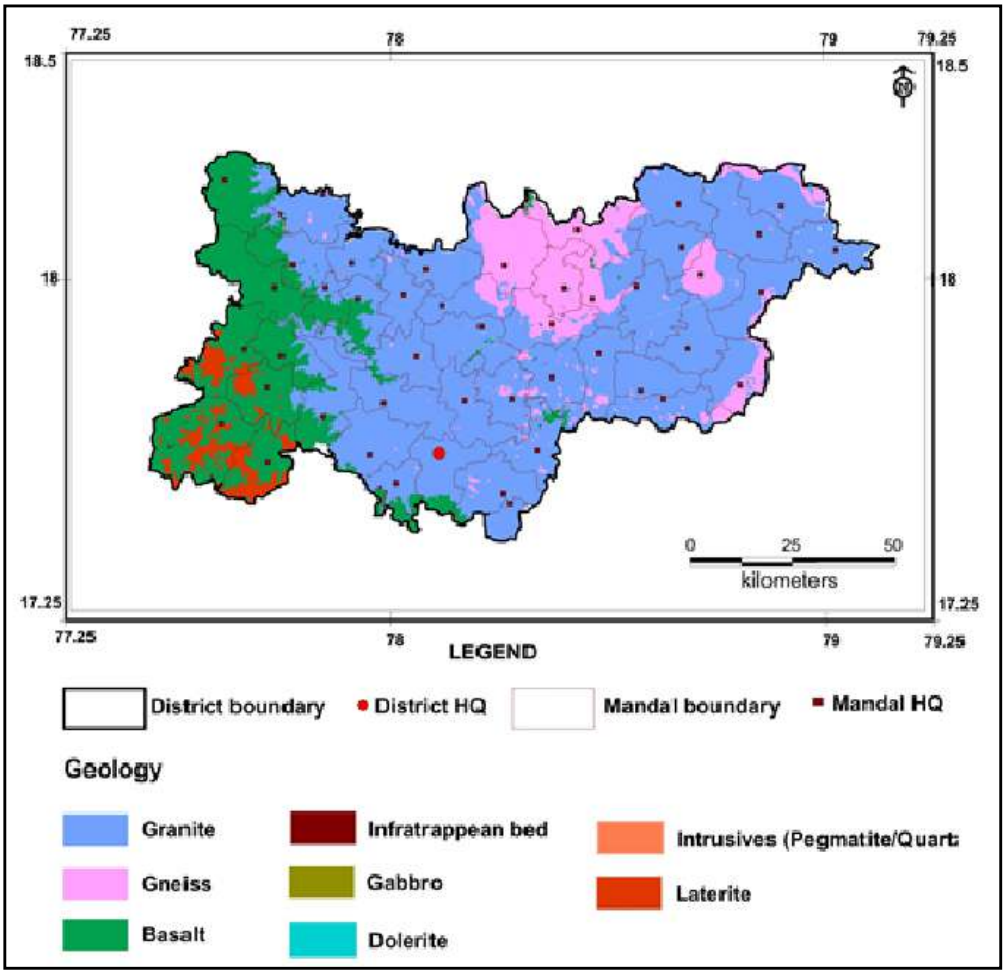


**Fig.1.10:** Geology of Medak district.

# 2. DATA COLLECTION AND GENERATION

Collection and compilation of data for aquifer mapping studies is carried out in conformity with Expenditure Finance Committee (EFC) document of XII plan of CGWB encompassing various data generation activities **(Table-2.1)**.

**Table-2.1:** Brief activities showing data compilation and generations.

| S. No. | Activity | Sub-activity | Task |
|---|---|---|---|
| 1 | Compilation of existing data/<br><br>Identification of Principal Aquifer Units and Data Gap | Compilation of Existing data on groundwater | Preparation of base map and various thematic layers, compilation of information on Hydrology, Geology, Geophysics, Hydrogeology, Geochemical etc. Creation of data base of Exploration Wells, delineation of Principal aquifers (vertical and lateral) and compilation of Aquifer wise water level and draft data etc. |
| | | Identification of Data Gap | Data gap in thematic layers, sub-surface information and aquifer parameters, information on hydrology, geology, geophysics, hydrogeology, geochemical, in aquifer delineation (vertical and lateral) and gap in aquifer wise water level and draft data etc. |
| 2. | Generation of Data | Generation of geological layers (1:50,000) | Preparation of sub-surface geology, geomorphologic analysis, analysis of land use pattern. |
| | | Surface and sub-surface geo-electrical and gravity data generation | Vertical Electrical Sounding (VES), bore-hole logging, 2-D imaging etc. |
| | | Hydrological Parameters on groundwater recharge | Soil infiltration studies, rainfall data analysis, canal flow and recharge structures. |
| | | Preparation of Hydrogeological map (1:50, 000 scale) | Water level monitoring, exploratory drilling, pumping tests, preparation of sub-surface hydrogeological sections. |
| | | Generation of additional water quality parameters | Analysis of groundwater for general parameters including fluoride. |
| 3. | Aquifer Map Preparation<br><br>(1:50,000 scale) | Analysis of data and preparation of GIS layers and preparation of aquifer maps | Integration of Hydrogeological, Geophysical, Geological and Hydro-chemical data. |
| 4. | Aquifer Management Plan | Preparation of aquifer management plan | Information on aquifer through training to administrators, NGO's, progressive farmers and stakeholders etc. and putting in public domain. |

## 2.1 Hydrogeological Studies

Hydrogeology is concerned primarily with mode of occurrence, distribution, movement and chemistry of ground water occurring in the subsurface in relation to the geological environment. The occurrence and movement of water in the subsurface is broadly governed by geological frameworks i.e., nature of rock formations including their porosity (primary and secondary) and permeability. The principal aquifers in the area are granites, gneisses and basalts and the occurrence and movement of ground water in these rocks is controlled by the degree of interconnection of secondary pores/voids developed by fracturing and weathering. Based on 329 hydrogeological data points (**Fig.2.1)** hydrogeological map is prepared. The depth of contact between Basalts and Granites varies from 42 m.bgl (Nagwar) to 146 m.bgl (Buchanhally). The Infra-trappeans are noticed upto a maximum depth of 164 m.bgl at Govindpur. Laterites are mostly found in Zaheerabad mandal and its surroundings.

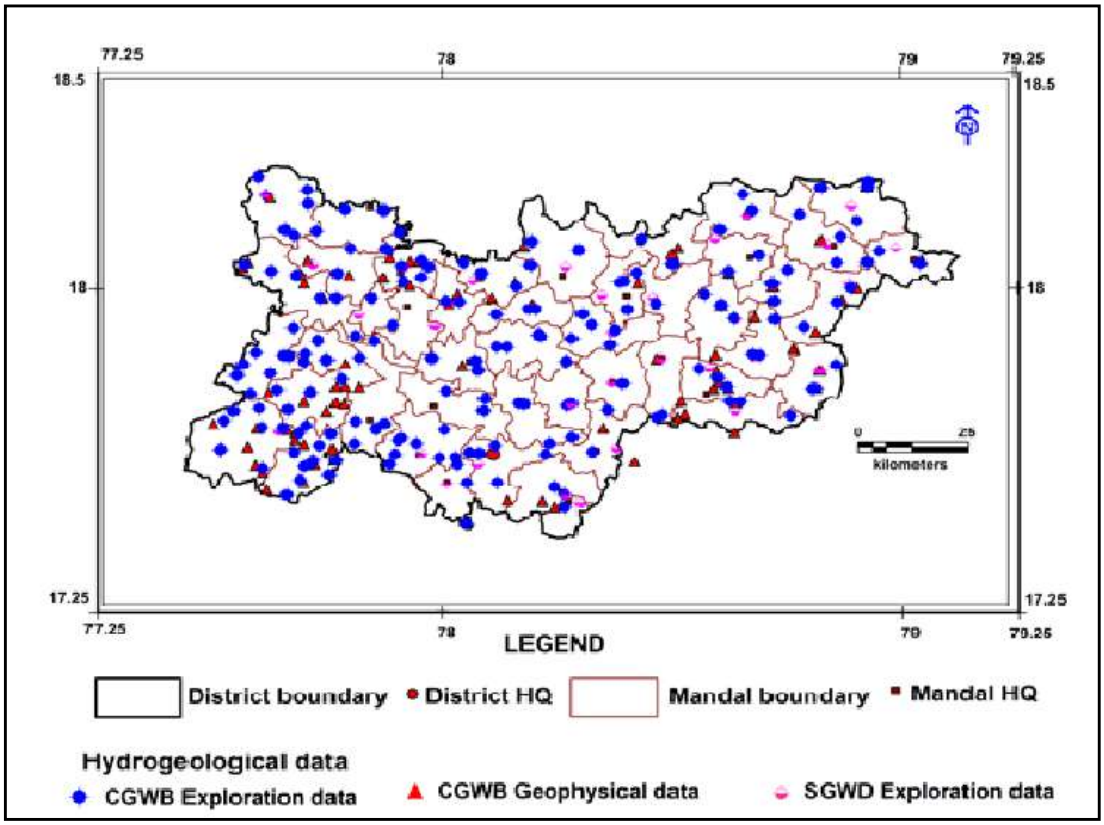


**Fig. 2.1:** Hydrogeological data availability.

**2.1.1 Ground water occurrences and movement**: Ground water occurs under unconfined and semi-confined/confined conditions and flows downward from the weathered zone into the fracture zone. The main aquifers constitute the weathered zone at the top, followed by a discrete anisotropic fractured/fissured zone at the bottom, generally extending down to 200 m

depth. The storage in Granitic rocks is primarily confined to the weathered zone and its overexploitation, mainly for irrigation purpose, has resulted in desaturation of weathered zone at many places. In Basaltic terrain, vesicular basalt is the main aquifer, in all 53 borewells were drilled in the area with maximum drilled depth of 193.5 m.bgl. At present, extraction is mainly through boreholes of 60-100 m depth, with yield between <0.2 and 7 litres/second (lps). ~ 96 % of fractures occur within 100 m depth and the deepest fracture is encountered in Granites at a depth of 198 m.bgl (Chinnakondur) and in basalts at a depth of 164 m depth (Govindapur). The hydrogeological map of the area is presented in **Fig. 2.2**.

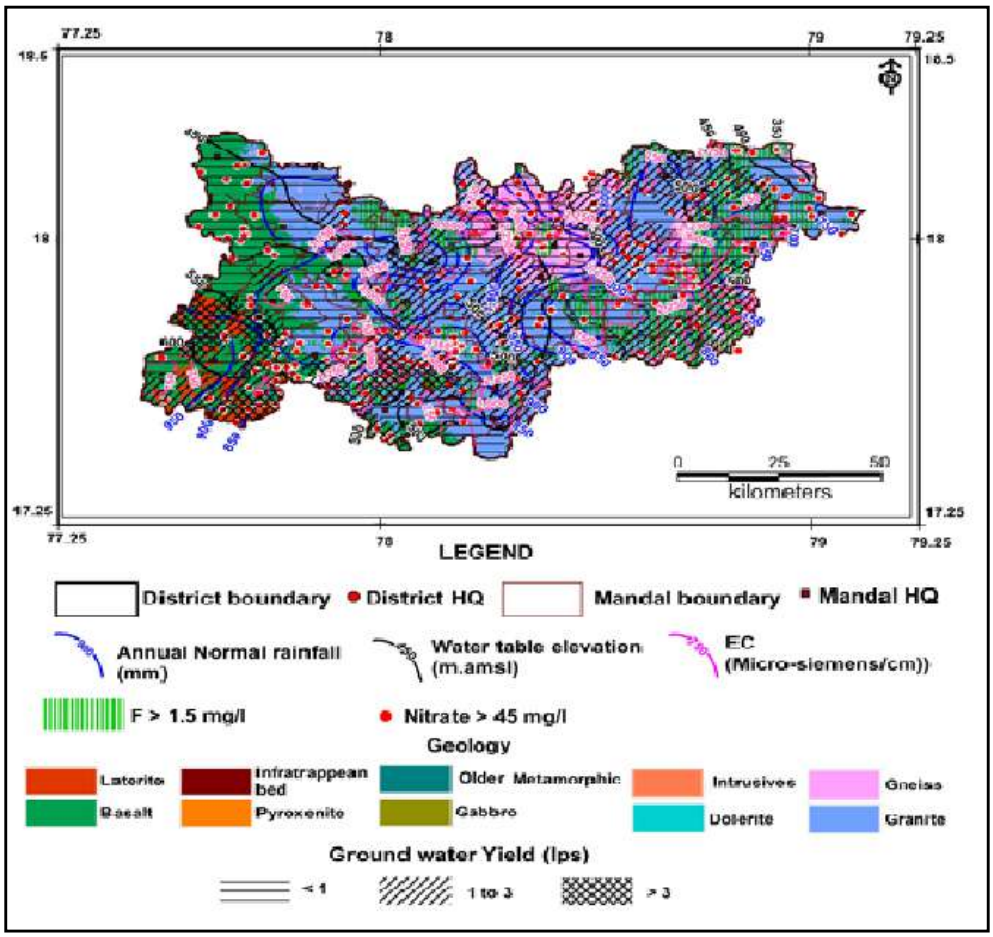


**Fig.2.2:** Hydrogeological map of Medak district.

**2.1.2 Exploratory Drilling:** As on 31/03/2018, CGWB drilled 206 bore wells (exploratory, observation and piezometers), 53 wells in basaltic area and 153 wells in granitic area and SGWD drilled 39 wells in the district. Data analysed from CGWB wells indicates, 01 well of shallow depth (30 m), 44 wells of 30-60 m depth, 33 wells of 60-100 m depth, 25 wells of 100-150 m depth and 103 wells of 150-200m depth. Deepest fracture encountered at 198 m.bgl at Chinnakondur in Chinnakondur mandal.In the district, there are 1,65,384

existing wells (Irrigation: 1,60,983 wells (DW: 24,420 and BW:1,36,563) and domestic: 4401 wells (HP: 2792 and BW with PP: 1609).

**2.1.3 Ground water Yield:** Ground water yield of Granitic aquifers varies from <0.1 to 6 lps (avg: 1.2 lps) and Basaltic aquifers varies from <0.1 to 4 lps (avg: 1.0 lps). Wells located in the command area have higher yield (1-3 lps) and sustain for more hours of pumping as compared to non-command area where yields are relatively low with sustainability for 2-3 hrs (**Fig.2.2).**

**2.2 Water Levels:** Ground water levels from 123 piezometers (CGWB:44 and SGWD: 79 were analyzed for pre-monsoon and 113 piezometers (CGWB:44 and SGWD: 69) for post-monsoon seasons respectively.

**2.2.1 Water Table Elevations:** During pre-monsoon and post-monsoon season (May and November), the water-table elevation ranges from 326.5 - 628 and 342.6-637 meter above mean sea level (m amsl) respectively and general ground flow is towards river Manjira andtowards river Godavari from southwest to north-east part of district (**Fig.2.3**).

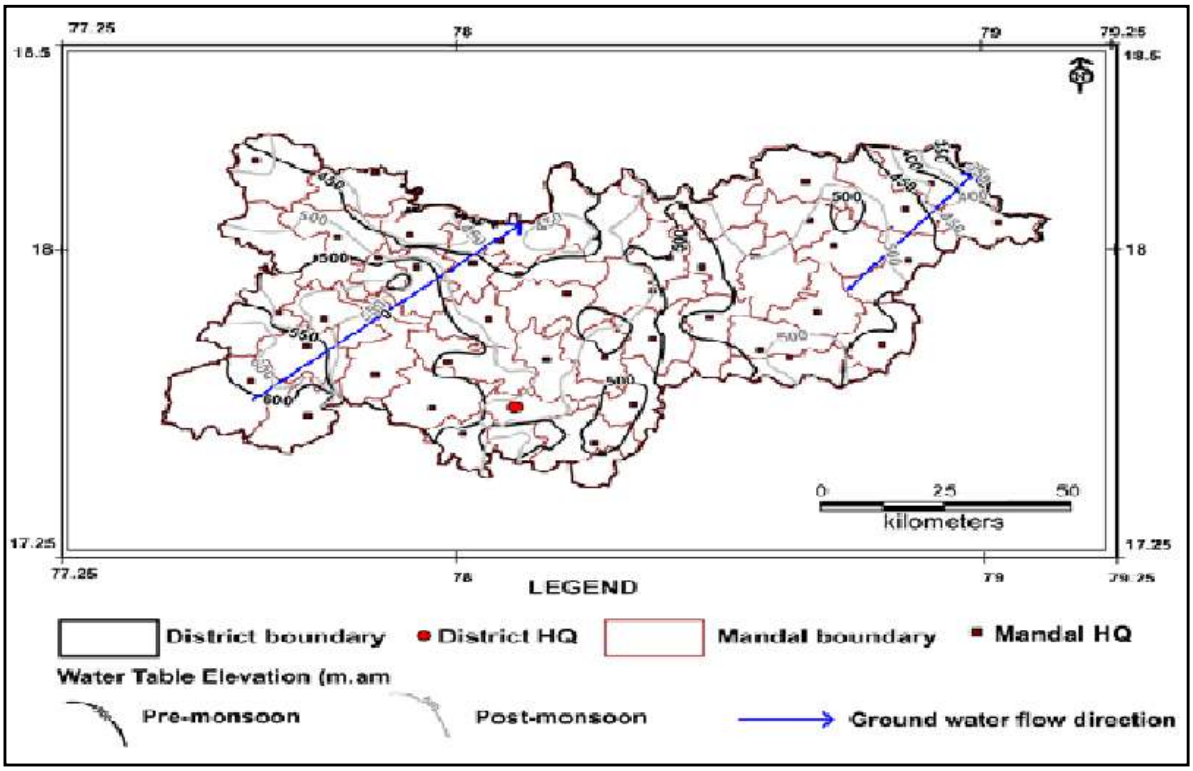


**Fig.2.3:** Water table elevations (m amsl) during pre and post-monsoon season

**2.2.2 Depth to Water Levels (DTW):** The DTW varies from 4.3 to 69.3 meter below ground level (m bgl) (average: 24.26 m bgl) and 0.1 - 35.91 m bgl (average: 11.16) during pre-monsoon and post-monsoon season respectively.

**Pre-monsoon season:** Majority of the water levels during this season are in the range of 20-40 m covering 70 % of the area, followed by 10-20 m bgl (24%). Deep water levels in the range of > 40 m bgl occupy about 4% of the area falling in parts of Danur, Doultabad, Kulcharam, Medak, Narayankhed and Raikod mandals (**Fig.2.4**). Shallow water levels (< 10 mbgl) occupy about 2% of the area in Alladurg, Shankarampet and Zahirabad mandals.

**Post-monsoon season:** Majority of the water levels during this season are in the range of 10-20 m bgl, covering 42 % of the area, followed by 5 to 10 m.bgl water levels with 35% of the area. Shallow water levels < 5m.bgl cover 10% of the area and Deep water levels (> 20 m) cover 12% of the area spreading in parts of Doultabad, Gajwel, Kowdipalli, Kulcharam, Medak, Narsapur, Sangareddy, Wargal and Zahirabad mandals (**Fig.2.5**).

**2.2.3 Water Level Fluctuations (May vs. November):** The water level fluctuations vary from -0.15 to 41.97 m with average rise of 13.19 m (**Fig.2.6**). Only one well at Mulug village registered fall in water level and remaining all wells show rise in water levels. Rise in water levels in the range of 10 to 20 m. cover 56% of area followed by 5 to 10 m, covering 26% of area. Water level rise of < 5 m. is observed in Jinnaram, Mulug, Pulkal and Regode mandals.

**2.2.4 Long term water level trends:** Trend analysis for the last 10 years is studied from 84 hydrograph stations of CGWB and SGWD. It is observed that during pre-monsoon season, 58 wells show falling trend (0-1:35, 1-2: 15 and >2 m: 8 wells) (max fall: 3.95 m/yr) and 17 wells shows rising trend (0-1.22 m/yr). During post-monsoon season 60 wells show falling trend (0-1m.:46, 1-2 m: 9 and >2 m: 5 wells) (maximum fall: 4.99 m/Yr) and 23 wells shows rising trends (0-4.12 m/yr). The graphical representation of fall and rise is shown in **Fig 2.7** and spatial distribution of long term water level trend shown in **Fig 2.8**.

**2.3 Geophysical Studies:** A total of 84 VES data is interpreted, which reveals resistivity < 100 ohm (Ω) m for the weathered granite (1-30 m), 60-350 Ω m for underlying fractured granite with maximum thickness of 84 m and > 350 Ω m for massive granite.It also reveals resistivity < 250 ohm (Ω) m for the weathered Basalt (1-20 m), 300-1100 Ω m for underlying fractured Basalt (70-100m) and > 1200 Ω m for massive Basalt.

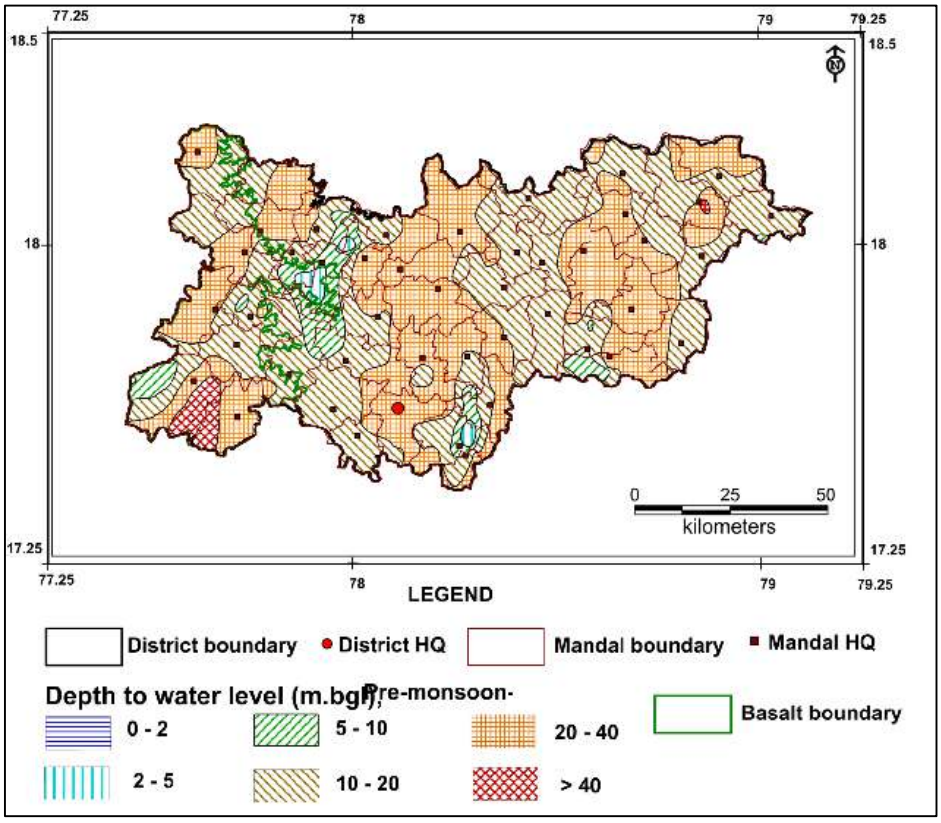


**Fig.2.4:** Depth to water levels Pre-monsoon

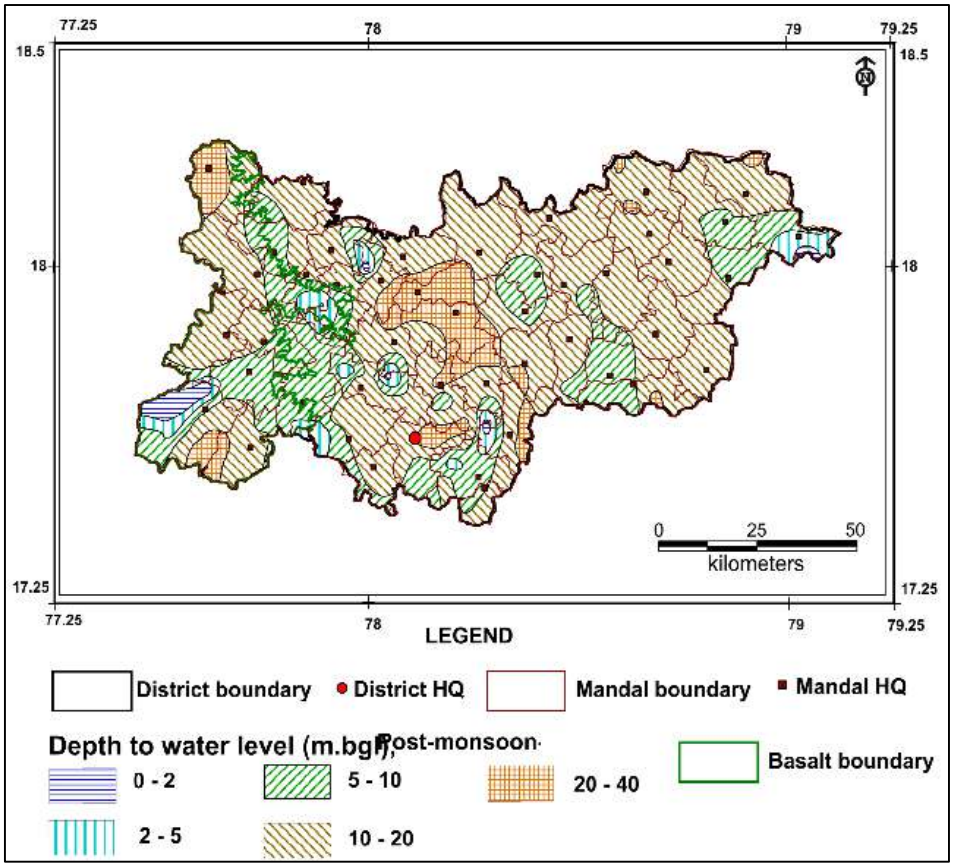


**Fig.2.5:** Depth to water levels Post-monsoon.

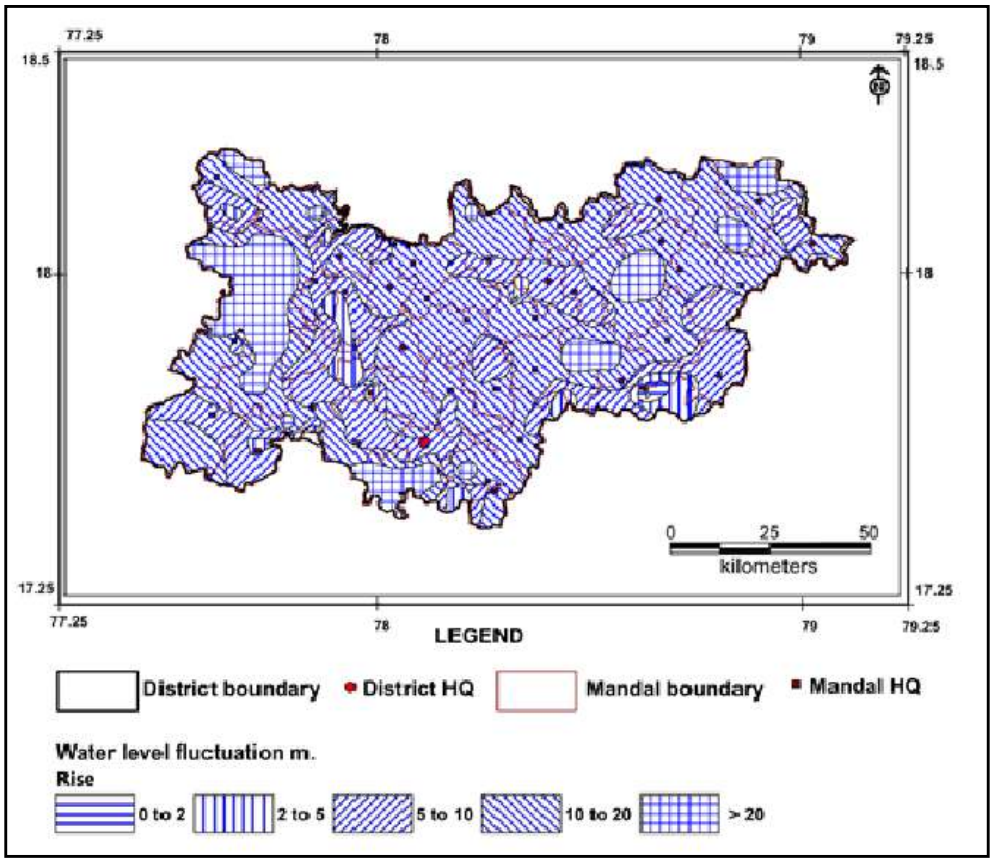


**Fig.2.6:** Water Level Fluctuations (m) (Nov with respect to May).

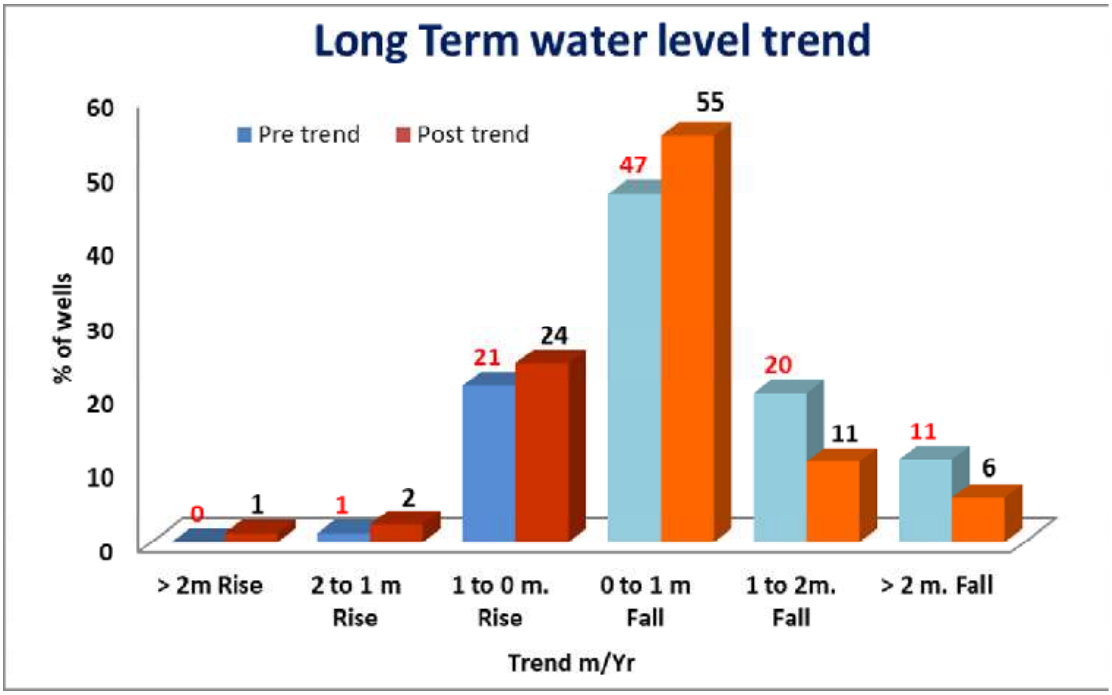


**Fig. 2.7:** Graphical representation of water level trends

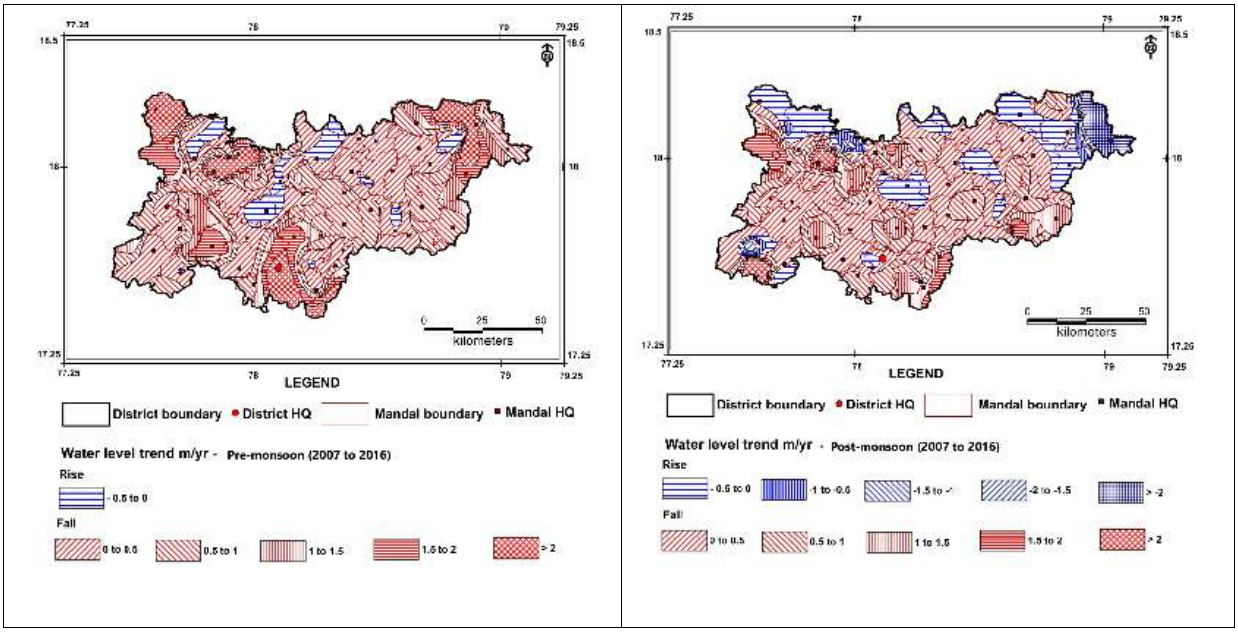


**Fig. 2.8:** Long-term water level trends

## 2.4 Hydro chemical Studies

To understand chemical nature of groundwater, total 504 data is utilized from ground water monitoring wells of CGWB, SGWD and RWS wells (Pre-monsoon:326 and post-monsoon:278) (mostly tapping combined aquifers Aq-1 and aq-2) during the pre-monsoon and post-monsoon season. Parameters namely pH, EC (in µS/cm at 25° C), TH, Ca, Mg, Na, K, $CO_3$, $HCO_3$, Cl, $SO_4$, $NO_3$ and F were analyzed.

### 2.4.1 Pre-monsoon (May)

Groundwater is mildly alkaline to alkaline in nature with pH in the range of 6.48-8.94 (Avg: 7.65). Electrical conductivity varies from 156-6629 (avg: 1168) µ Siemens/cm**.** In 83% of area EC is within 1500 µ Siemens/cm, in 13% area, it is 1500-3000 µ Siemens/cm and in 04% area, it is > 3000 µ Siemens/cm (**Fig.2.9).** Average concentration of TDS is 728 mg/L and $NO_3$ ranges from 1-230 mg/L. Nitate concentration in 15% of samples is beyond permissible limits of 45 mg/L (**Fig.2.10**). Fluoride concentration varies from 0.02-4.57 mg/L (**Fig 2.11**) and 90% of samples it is within permissible limits of BIS and rest is beyond permissible limit of 1.5 mg/L. High fluoride concentration is observed mostly in Mulug, Sadasivpet mandal and in most of the eastern part and scattered parts in central and northern aprts of the district.

### 2.4.2 Post-monsoon (November)

Groundwater from the area is mildly alkaline to alkaline in nature with pH in the range of 6.6-9.19 (Avg: 7.54). Electrical conductivity varies from 150-6091 (avg: 1229) µ

Siemens/cm. In 83% of area EC is within 1500 µ Siemens/cm, in 16% of area EC is 1500 to 3000 µ Siemens/cm and in 1% area it is > 3000 µ Siemens/cm falling in command area mostly in Wargal and Sadasivpet mandals(**Fig.2.12).** Average concentration of TDS is 787 mg/L. $NO_3$ ranges from <1-496 mg/L. and in 24% of samples it is beyond permissible limit of 45 mg/L (**Fig.2.13**). Fluoride concentration varies from 0.06-3.06 mg/L (**Fig 2.14**) and 92% of area is within permissible limit of BIS and rest is beyond permissible limit of 1.5 mg/L. High fluoride concentration is observed in 8 % of samples. Over all 66% of samples are unfit for human consumption from the district.

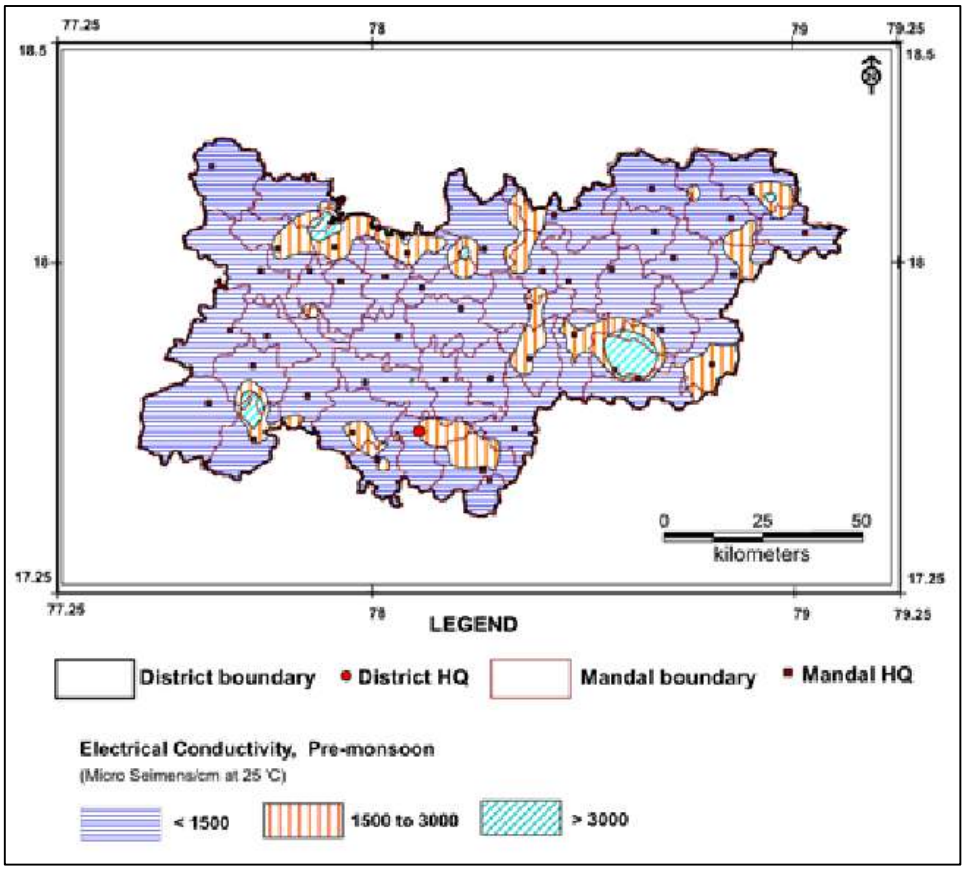


**Fig.2.9:** Distribution of Electrical conductivity (Pre-monsoon).

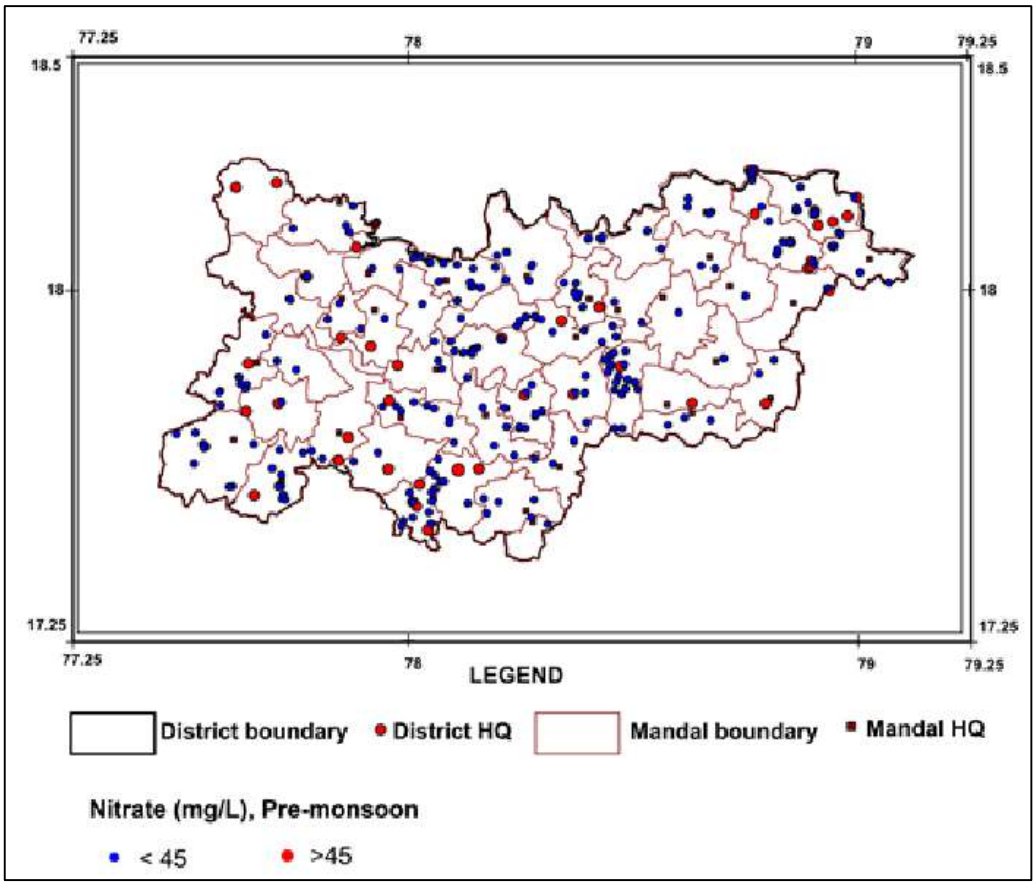


**Fig.2.10:** Distribution of Nitrate (Pre-monsoon).

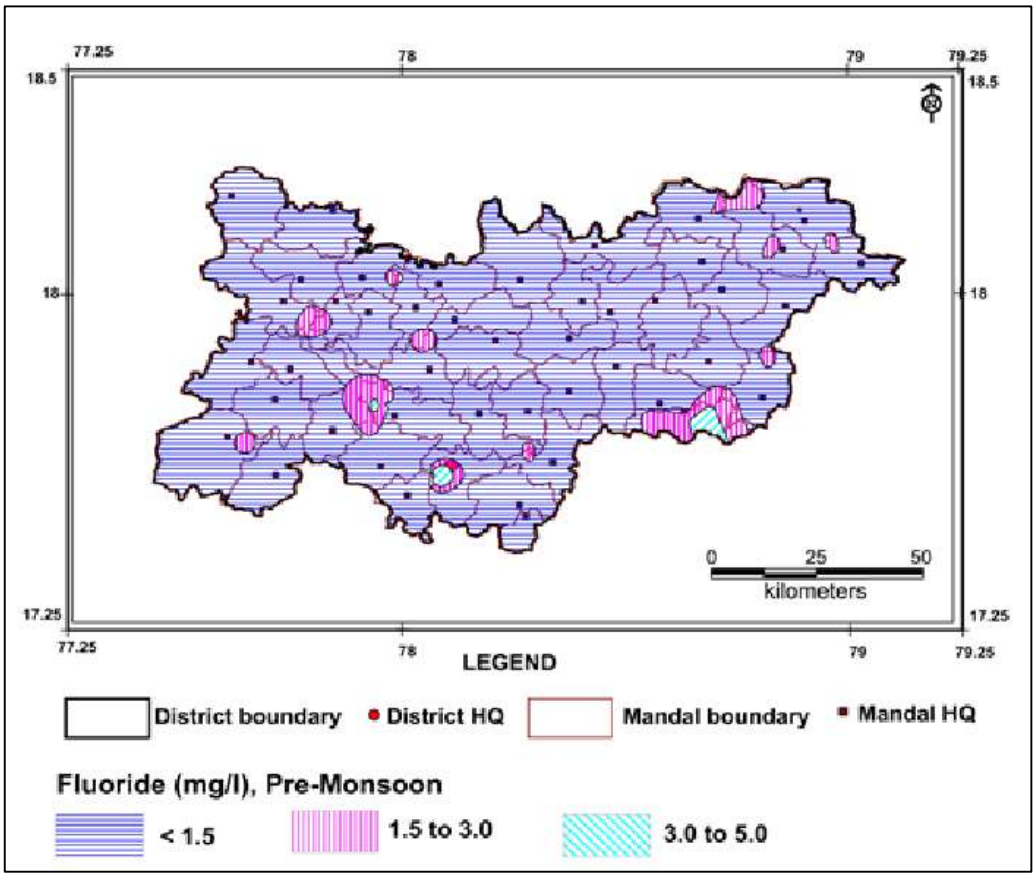


**Fig.2.11:** Distribution of Fluoride (Pre-monsoon).

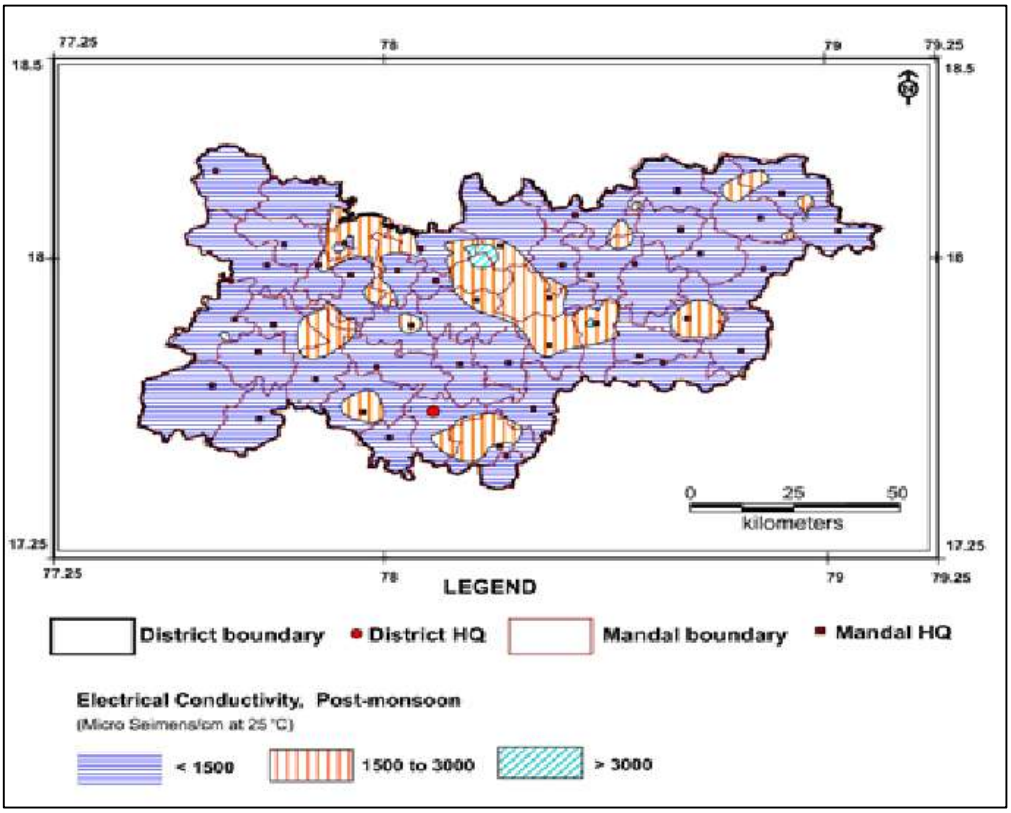


**Fig.2.12:** Distribution of Electrical conductivity (Post-monsoon).

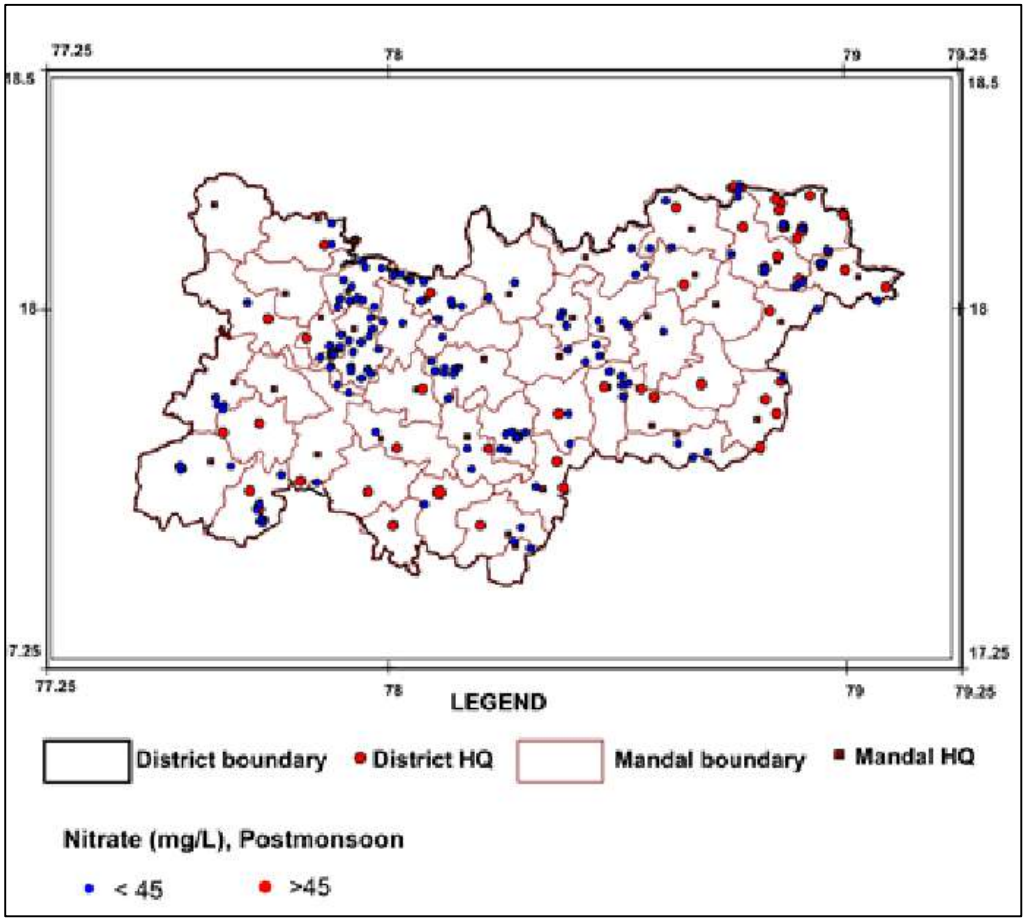


**Fig.2.13:** Distribution of Nitrate (Post-monsoon).

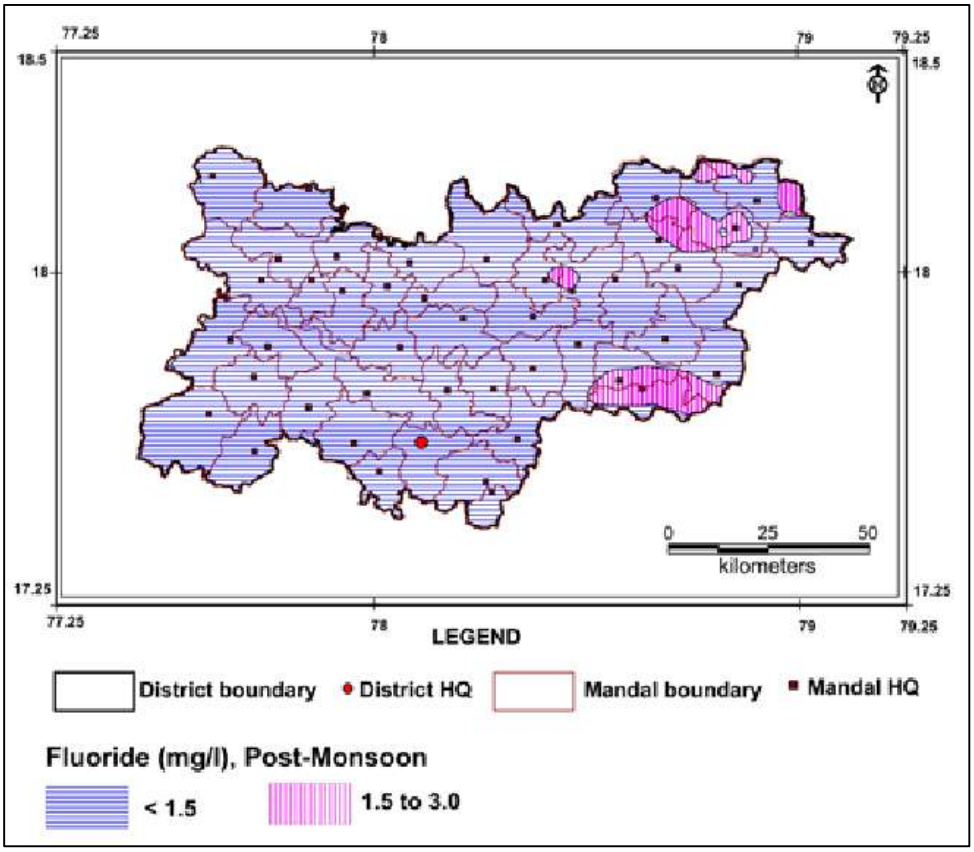


**Fig.2.14:** Distribution of Fluoride (Post-monsoon).

## 3. DATA INTERPRETATION, INTEGRATION AND AQUIFER MAPPING

Conceptualization of 3-D hydrogeological model was carried out by interpreting and integrating representative 329 data points (both hydrogeological and geophysical down to 200 m) for preparation of 3-D map, panel diagram and hydrogeological sections. The data (**Fig.2.1**) is calibrated for elevations with Shuttle Radar Topography Mission (SRTM) data. The lithological information was generated by using the RockWorks-16 software and generated 3-D map for Medak district (**Fig.3.1)** and hydrogeological sections.

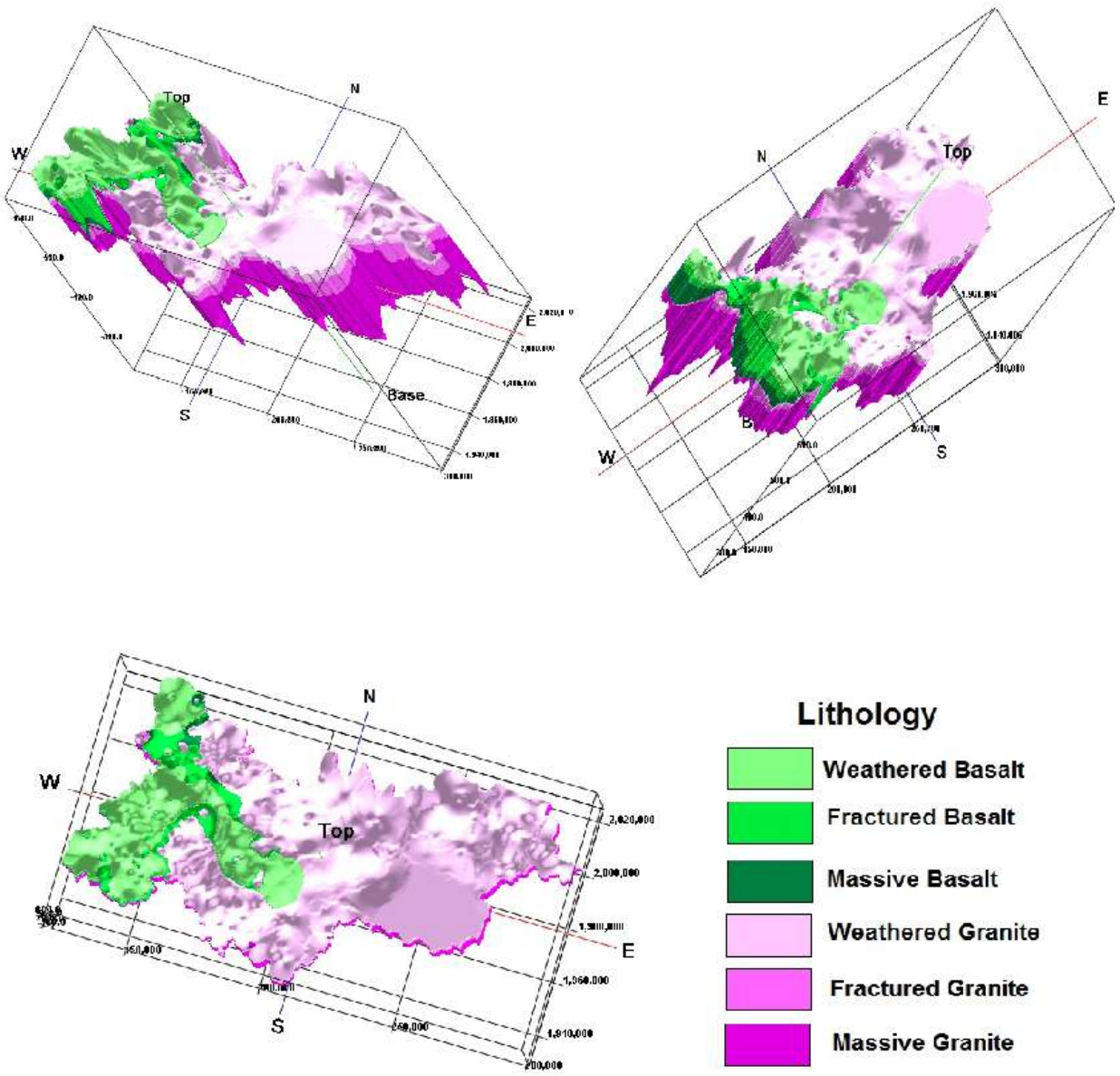


**Fig.-3.1:** 3-D Model for study area.

### 3.1 Conceptualization of aquifer system in 3D

Aquifers were characterized in terms of potential and quality based on integrated hydrogeological data and various thematic maps. Weathered zone is considered up to the maximum depth of weathering and first fracture encountered (below weathered depth) generally down to ~20 m depth and the fractured zone (fractured granite) is considered up to the depth of deepest fracture below weathered zone (~20-198 m).

### 3.2 Hydrogeological Sections

Hydrogeological sections are prepared in NW-SE, SW-NE and W-E directions (**Fig. 3.2**).

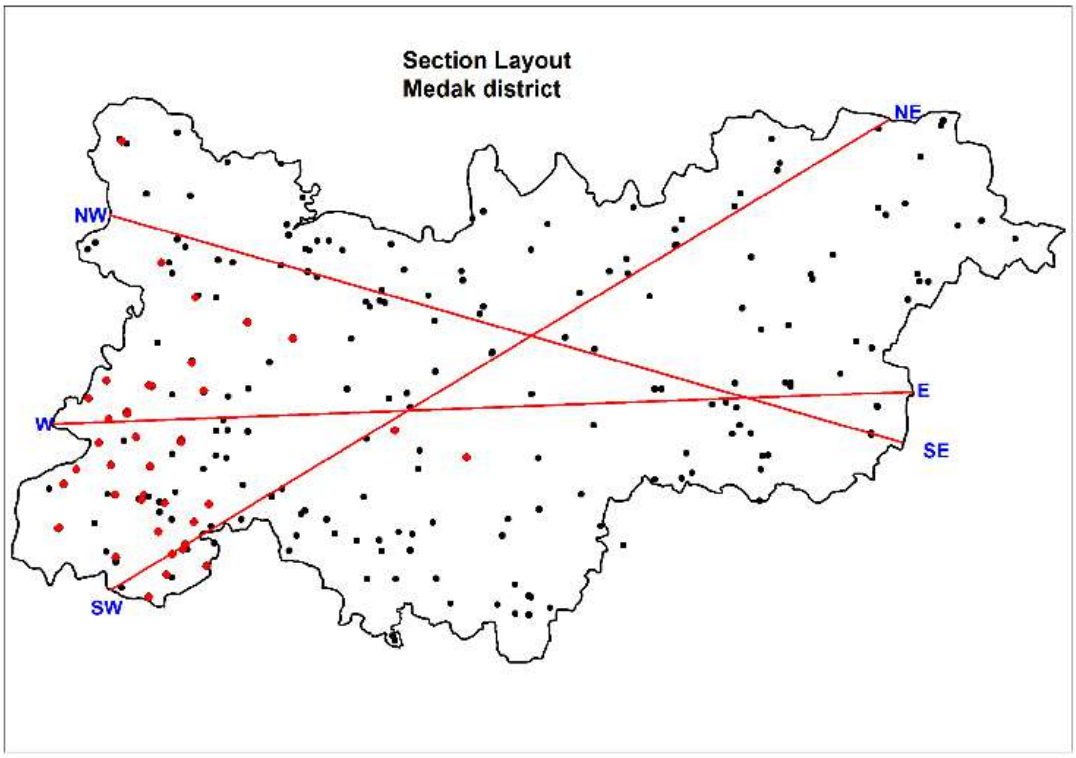


**Fig.-3.2:** Map showing orientation of hydrogeological Sections

**3.2.1 North-West and South-East Section:** The section is drawn along the NW-SE direction covering distance of ~140 kms (**Fig.3.3a**). It depicts thick weathered zone and fractured zone in south-eastern part and thick fractured zone in north-western part adjacent to Basalt. Basalts extend upto ~15 km into the district from NW boundary and the depth of Basalt occurence gradually decreases from NW –SE direction.

**3.2.2 South-West and North-East Section:** The section is drawn along the SW-NE parts covering distance of ~155 kms (**Fig.3.3b**). It depicts thick weathered zone in the central part and thin fracture zones in the central part with thick fractured zone on both sides. Basalts extend upto ~25 km into the district from SW boundary and thin isolated Basalt layers are observed in central part.

**3.2.3 West-East Section:** The section drawn horizontally along the West-East direction covering distance of ~145 kms (**Fig.3.3c**), depicts thick weathered zone in eastern and western part and thin fracture zones in the central part with thick fractured zone on both sides. Basalts extend upto ~22 km into the district from SW boundary and thin isolated basalt layers are observed in central part.Thick fractured basalt zone is observed in the western part.

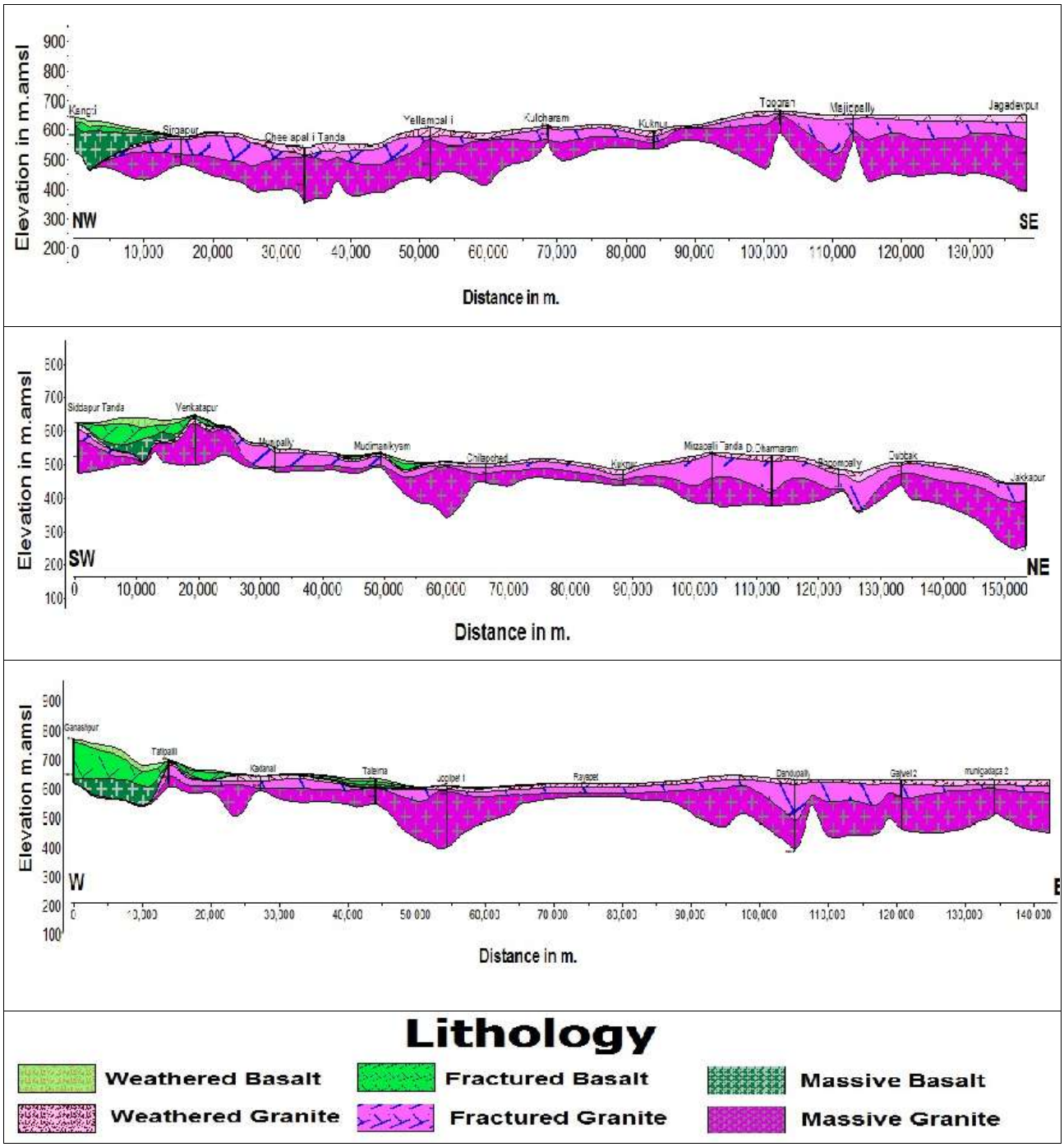


**Fig.3.3 (a-c):** Hydrogeological profile in different directions in Medak district.

### 3.3 Aquifer Characterization

**3.3.1 Weathered zone:** The Weathered zone (~25 m) varies from meagre to 20 m.bgl in Granitic formation and meagre to 25 m. in Basalts. It has gone dry in considerable part due to over-exploitation (excluding command area). Dug wells, which were in existence, have now

become defunct and presently located only in command area with water column. Spatial distribution of weathering depth zone map is given in **Fig.3.4**. Thickness of weathered zone is in the range of 10-20 m in most part of area covering 49% of area. Shallow weathering (< 10 m) occurs in 37% of the area and deep weathering (> 20 m) occurs in rest of the area (**Fig.3.5**).

Ground water yield from weathered granite/gneiss aquifer varies from <0.1 to 3 lps (avg: 0.6 lps) in granites and from 0.01 to 2 lps (avg: 0.4 lps) in basalt aquifer. The transmissivity varies from 1 to 14 $m^2$/day in basalts and upto 66 $m^2$/day in weathered granite/gneiss aquifer.

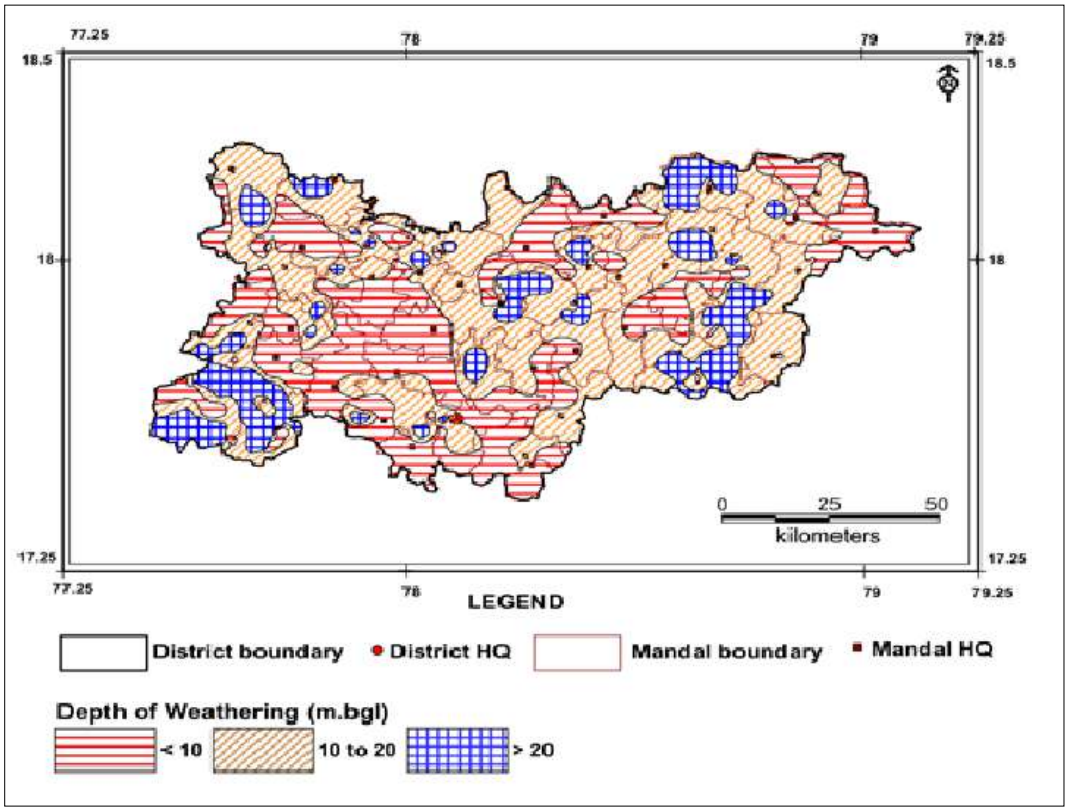


**Fig.3.4:** Thickness of Weathered zone - Medak district.

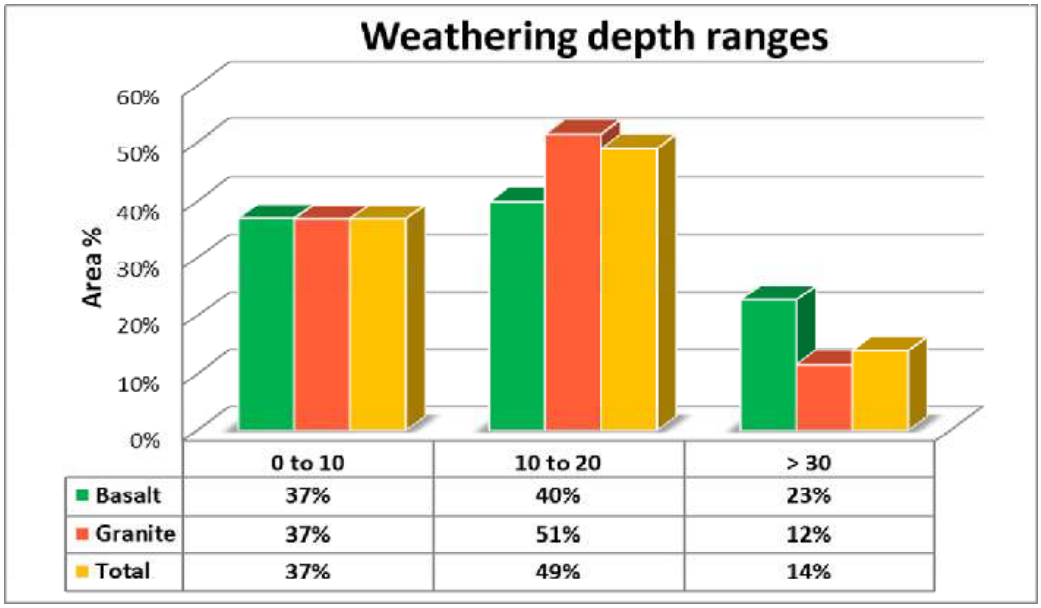


**Fig.3.5:** Depth wise weathered zone distribution

**3.3.2 Fractured zone:** Ground water is extracted mainly through bore wells of 20 to 100 m depth from fractured zone (~20 to 198 m). Based on CGWB data, it is inferred that fractures in the range of < 60 m depth are more predominant (76 % of the area), 60-100 and 100-150 fractures occur in 18 % and 6% of area respectively and deep fractures in the range of 150-198 m occur in Narayankhed, Nayalkal and Kondapaka mandals (**Fig.3.6**). Analysis of occurence of fractures (446 nos from 320 wells) reveal that majority of fractures (~75 %) occur within 100 m depth (**Fig. 3.7**).

In fractured granite/gneiss yield varies from 0.01 to 6.7 lps (avg: 1.2 lps). Wells located in the command area have higher yield (1-3 lps) and sustains for more hours of pumping as compared to non-command area where yields are relatively low and sustains for 2-3 hrs. The deepest fracture encountered is at 198 m.bgl. The transmissivity varies from 1-122 $m^2$/day. Stotativity of the fracture zone varies from 0.0001 to 0.00001. In Basaltic terrain, yield varies from 0.01 to 4.4 lps (avg: 1 lps). The deepest fracture encountered is at 164 m.bgl. Transmissivity varies from 0.1 to 90 $m^2$/day.

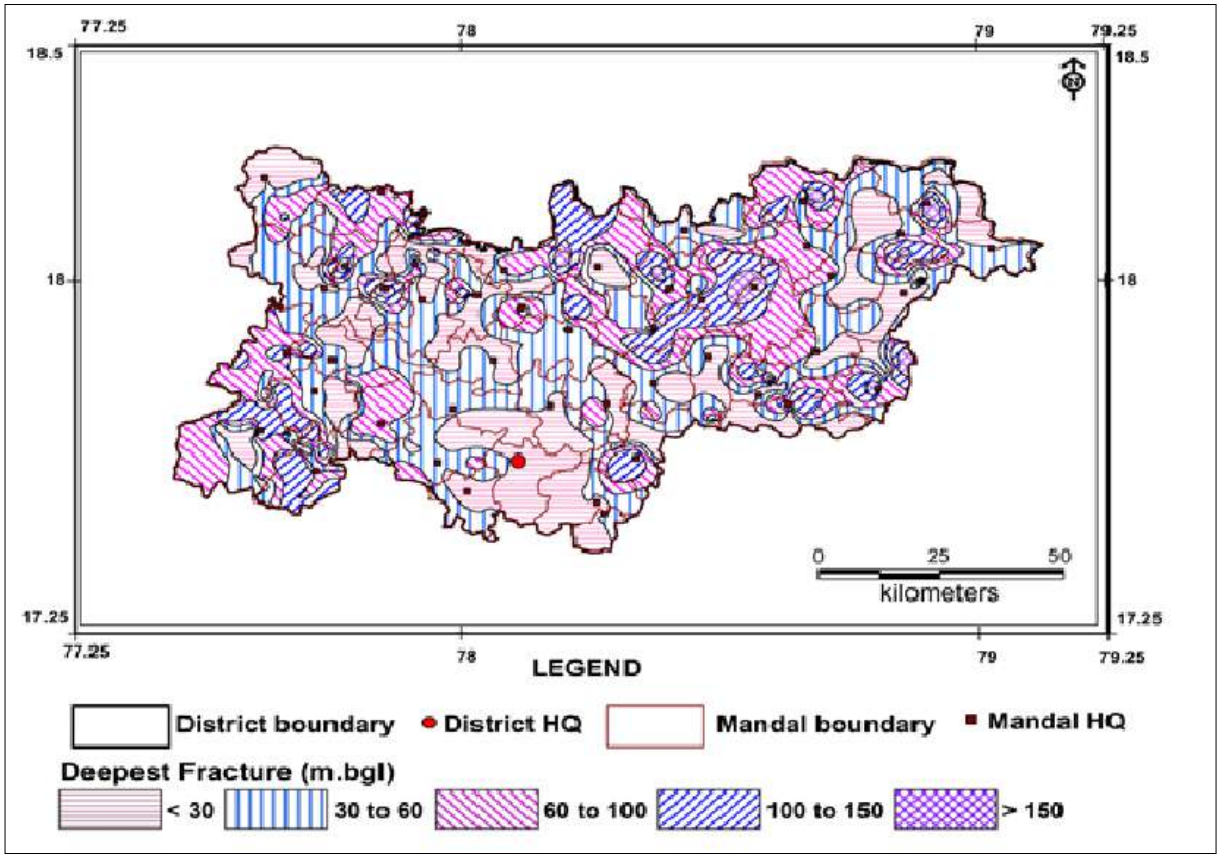


**Fig.-3.6:** Depth of Fractured zone (Maximum depth) (m bgl).

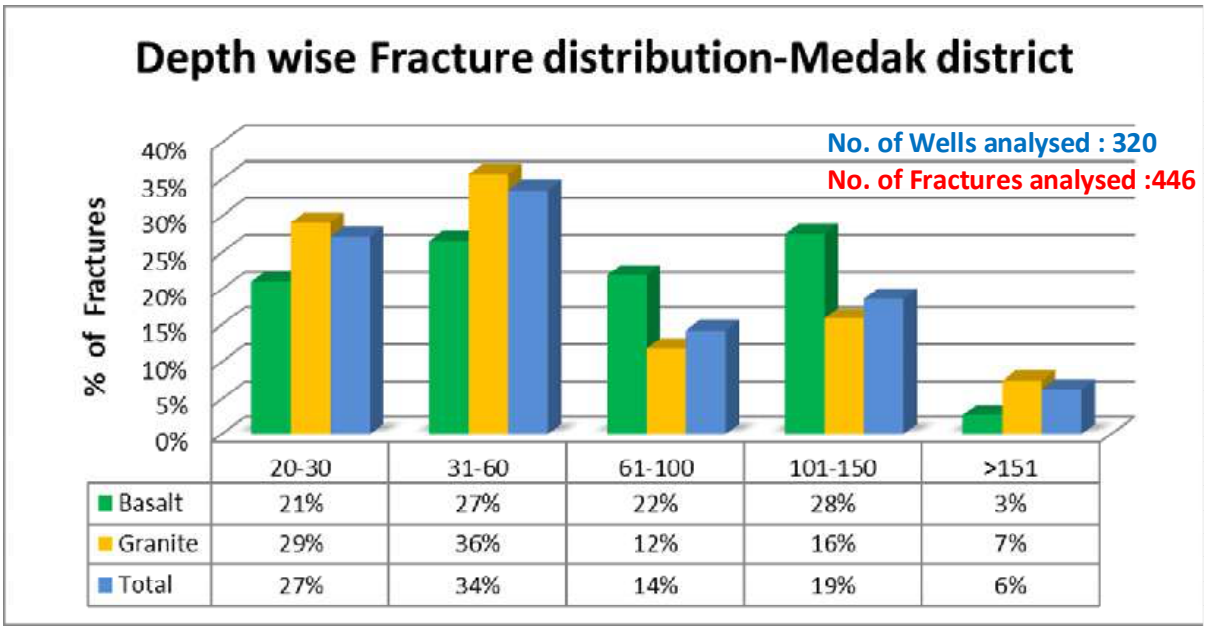


**Fig.-3.7:** Depth wise distribution of fractures.

# 4. GROUND WATER RESOURCES (2017)

In hard rocks, for practical purpose it is very difficult to compute zone wise (aquifer wise) ground water resources, because the weathered zone (WZ) and fractured zone (FZ) are inter-connected with fractures/joints and fractured zone gets recharged through weathered zone. Therefore it is very difficult to demarcate the boundary between two aquifers; hence the resources are estimated considering entire area as a single aquifer system. Village wise dynamic and in-storage ground water resources are computed as per the guidelines laid down in GEC methodology.

While computing the in-storage resources, the general depth of deepest fractures in the area, pre-monsoon water levels and 2 % of granular zone (depth below pre-monsoon water level and down to deepest fracture depth in the village) is considered. Summarized command/ non-command area and mandal wise resources are given in ***Table-4.1***.

As per 2017 GEC report, the net dynamic replenishable groundwater availability is 1086 MCM, gross ground water draft for all uses 809 MCM, provision for drinking and industrial use for the year 2025 is 121 MCM and net annual ground water potential available for future irrigation needs is 220 MCM. 11 mandals (Ameenpur, Jarasangam, Nyalkal, Patancheru, Zaheerabad, Kondapak, Markook, Mirdoddi,Mulugu, Nanganur, Wargal) falls in over-exploited category, 7 (Nizampet, Kelher, Doulthabad, Dubbak, Jagdevpur, Raipole, Siddipet Urban) in critical category, 24 mandals fall in semi critical category and remaining 19 mandals fall in safe category. Mandal wise stage of ground water development varies from 29% (Singapoor mandal) to 127% (Nyalkal mandal) with average of 74%. Based on 2017 resources, village wise utilizable ground water resource map is prepared and presented in **Fig. 4.1.**

The instorage was calculated for saturated weathered zone and the saturated fractured zone to the depth of deepest fracture encountered. The total instorage groundwater resources estimated for Medak district is 292.9 MCM, 31.85 MCM is from command area and 261 MCM from non-command area.

**Table-4.1:** Computed Dynamic, In-storage ground water resources, Medak district.

| Parameters | Command | Non-command | Total |
|---|---|---|---|
| **As per GEC 2017** | MCM | MCM | MCM |
| **Dynamic (Net GWR Availability)** | **67.26** | **1019** | **1086** |
| • Monsoon recharge from rainfall | 13.11 | 685.7 | 688.8 |
| • Monsoon recharge from other sources | 17.91 | 111 | 128.9 |
| • Non-Monsoon recharge from rainfall | 0.8 | 140 | 141 |
| • Non-monsoon recharge from other sources | 42.9 | 194.4 | 237.3 |
| **Gross GW Draft** | **16.95** | **792** | **809** |
| • Irrigation | 16.64 | 720 | 737 |
| • Domestic and Industrial use | 0.3 | 71.5 | 71.8 |
| Provision for Drinking and Industrial use for the year 2025 | 9.01 | 112.6 | 121.6 |
| Net GW availability for future irrigation | 48.8 | 171 | 220 |
| Stage of GW development (%) | 25% | 77% | 74% |
| Mandal wise it varies from 29 % (Singapoor) to 127 % (Nyalkal) | | | |
| **In-storage GW Resources (down to the maximum depth of fractures)** | 31.85 | 261.1 | 292.9 |

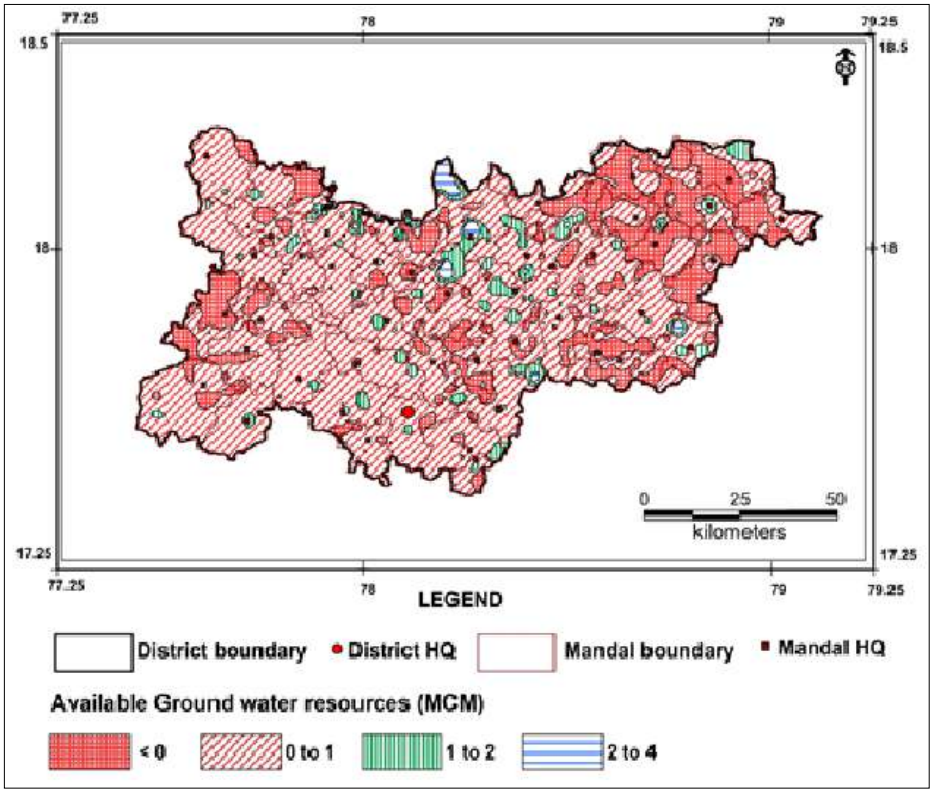


**Fig.4.1:** Utilizable ground water resources (2017).

## 5. GROUND WATER RELATED ISSUES AND REASONS FOR ISSUES

### 5.1 Issues

**Over-exploitation**

- ~2278 $Km^2$ area covering 376 villages are categorized as over-exploited where ground water balance for future irrigation is zero or negative.

**Deep water levels**

- Deep water levels (> 20 m bgl) are observed during pre and post-monsoon season in 73 % and 12 % of the area respectively.
- Out of 84 wells analysed, 58 wells during pre-monsoon 60 wells during post-monsoon shown falling trend in the last 10 years (@-0.02 to -2.98 m/yr and -0.04 to -2.05 m/yr) respectively.

**Low Sustainability**

- Low yield (<1 lps) occurs in ~54% of area covering entire district. The yield from bore wells have reduced over a period of time and some bore wells which used to yield sufficient quantity of water have gone dry due to low rainfall.

**Pollution (Geogenic and Anthropogenic)**

- Few mandals are fluorosis endemic where fluoride (geogenic) as high as 4.57 mg/L during pre-monsoon and 3.06 mg/L during post-monsoon season is found in groundwater. The high fluoride concentration (>1.5 mg/L) occur in 7% and 6% of the area during pre-monsoon and post-monsoon season respectively.
- High nitrate (> 45 mg/L) due to anthropogenic activities is observed in 43 samples (15%) and 65 samples (24%) during pre-monsoon and post-monsoon season covering command and urban areas.

**Water Marketing and other Issues**

- Water marketing is present in almost all over the area and people are buying bottled water from the market for drinking purposes as there is no sufficient supply of surface water.
- Change in land use from agricultural land to residential purposes and cropping pattern from traditional crops to cash crops (spices, cotton) is observed.
- Based on ground water paddy is grown during rabi season in non-command area leading to heavy withdrawal of ground water during non-monsoon period.

**5.2 Reasons for Issues**

**Over-exploitation and Deep water levels**

- Over-extraction, paddy cultivation during rabi season (62% to total crops) ground water mining, limited artificial recharge measures etc.

**Low Sustainability**

- Absence of primary porosity, negligible development of secondary porosity, low rainfall, desaturation of weathered zone and urbanization.

**Geo-genic pollution (Fluoride)**

- Higher concentration of fluoride in ground water is attributed due to source rock, rock water interaction where acid-soluble fluoride bearing minerals (fluorite, fluoro-apatite) gets dissolved under alkaline conditions.
- Higher residence time of ground water in deeper aquifer.

**Anthropogenic pollution (Nitrate)**

- Higher concentration is due to unscientific sewage disposal of treated and untreated effluents in urban and rural areas.Use of NPK fertilizers and nitrogen fixation by leguminous crops.

# 6. MANAGEMENT STRATEGIES

High dependence on groundwater coupled with absence of augmentation measures has led to a steady fall in water levels and desaturation of weathered zone in some parts, raising questions on sustainability of existing groundwater structures, food and drinking water security. The occurrence of fractures is very limited in extent, as the compression in the rock reduces the opening of fractures at depth and the majority of fractures occur within 100 m depth (75%) (**Fig.3.7**). Higher $NO_3^-$ concentrations (> 45 mg/L) in weathered zone is due to sewage contamination and higher concentration of $F^-$ (>1.5 mg/L) in weathered zone and fractured zone is due to local geology (granite/gneiss rock), high weathering, longer residence time and alkaline nature of groundwater.

## 6.1 Management plan

The uneven distribution of groundwater availability and its utilization indicates that a single management strategy cannot be adopted and requires integrated hydrogeological aspects along with socio-economic conditions to develop appropriate management strategy.

In the district 72789 MCM of unstaturated volume (below the depth of 5 m) is avaialable during post-monsoon season having 1455 MCM of recharge potential (2%). This can be utilized for implementing management strategy.

The study suggests notable measures for sustainable groundwater management, which involves a combination of various measures given below. State Governments initiatives in groundwater recharge were also considered.

1. Supply side measures
2. Demand side measures
3. Regulatory measures
4. Institutional measures

### 6.1.1 Supply side measures:

**Ongoing Projects**

#### 6.1.1.1 Repair Renovation and Restoration of existing tanks (Mission Kakatiya):

- De-silting of existing minor tanks (4930 no) was taken under state Govt. sponsored Mission Kaktiya-Phase-1, Phase-2, Phase-3 and Phase-4 to remove 12.08 MCM of silt and this has created additional surface storage. This will contribute ~ 4 MCM to

groundwater and with this additional ~500 ha land can be brought under irrigated dry (ID) crops in tank ayacut.

- There is need to take remaining tanks (~826 MI tanks) in next phases for de-silting, this will greatly help in stabilisation of tank ayacut and ground water augmentation.

#### 6.1.1.2 Mission Bhagiratha:

- Under Telangana Drinking Water Supply Project (TDWSP) also known as Mission Bhagiratha, all the villages and towns are proposed to be covered from the water grid with intake from Manjira river at Singur (Segment-8, 9 and 10A) covering entire district to provide protected water from surface reservoirs. The scheme is to enhance the existing drinking water scheme and to provide 100, 135 and 150 lpd/person of water in rural, municipal and municipal corporation respectively.

- The total water requirement as per 2011 census is 110 MCM and this imported water from surface sources will reduce the present utilized ~66 MCM of ground water (considering 60 lpcd). This can be effectively utilized to irrigate ~11000 ha of additional land under ID crops.

#### 6.1.1.3 Artificial Recharge structures:

Construction of 2927 artificial recharge structures (ARS) 673 in priority-1 (over-exploited) and 2254 in priority-2 (other areas) are suggested by following standard methodology.

While formulating the village wise groundwater management plan, the unsaturated volume of aquifer is estimated by multiplying the area with specific yield and unsaturated thickness (post-monsoon water levels below 5 m). Initially village wise dynamic groundwater resources of 2017 are considered (**Fig.4.1**). Potential surface run off is estimated by following standard procedures. On conservative side 20% run off yield is considered as non-committed yield for recommending artificial recharge structures in intermittent areas 50% of yield is considered and remaining 50% is recommended for implementing water conservation measures in recharge areas through MGNREGS.

The pre-monsoon groundwater quality is considered for categorising contaminated area (F >1.5 mg/l & EC >3000 µ S/cm). Nitrate is not considered here because it is point source pollution and localized. Based on above criteria, the area is prioritized into **Priority-1 (over-exploited)** which needs immediate intervention and **Priority-2**. Based on

hydrogeological characteristics, the area is further sub-divided into following 8 categories (**Table-6.1**).

**Table-6.1:** Hydrogeological characteristics of area.

| Category | Hydrogeologic characterizations |
|---|---|
| 1 | High EC with additional scope for artificial recharge. |
| 2 | High EC with no additional scope for artificial recharge. |
| 3 | High F with additional scope for artificial recharge. |
| 4 | High F with no additional scope for artificial recharge. |
| 5 | High EC and F with additional scope for artificial recharge. |
| 6 | High EC and F with no additional scope for artificial recharge. |
| 7 | Groundwater quality within permissible limits for drinking and irrigation with scope for artificial recharge. |
| 8 | Groundwater quality within permissible limits for drinking and irrigation with no scope for artificial recharge. |

**Priority-1 (Area where groundwater development > 100 %)**

Area consisting of 457 villages covering ~2580 $Km^2$ (**Fig.6.1**) is considered as Priority-1 where 373 MCM recharge potential and 95 MCM utilizable yield is avaialable. This requires immediate intervention as the stage of groundwater development is > 100%. For sustainable development and management of the groundwater resources the following recommendations are made and summarised in **Annexure-1**.

- 1076 artificial recharge structures (557 CD's and 519 mini PT's) exist in the area.
- In addition to the existing structures, 673 artificial recharge structures (220 CD's with shafts and 453 mini PT's with shafts) with a total cost of **123** crores (@ 15 Lakh/CD and 20 Lakh/PT) can be taken up.
- After effective utilization of this yield, there will be 14 MCM of ground water recharge with new structures.
- All existing artificial recharge structures are to be desilted and maintained properly.

- Roof top rainwater harvesting structures should be made mandatory to all Government buildings (new and existing).

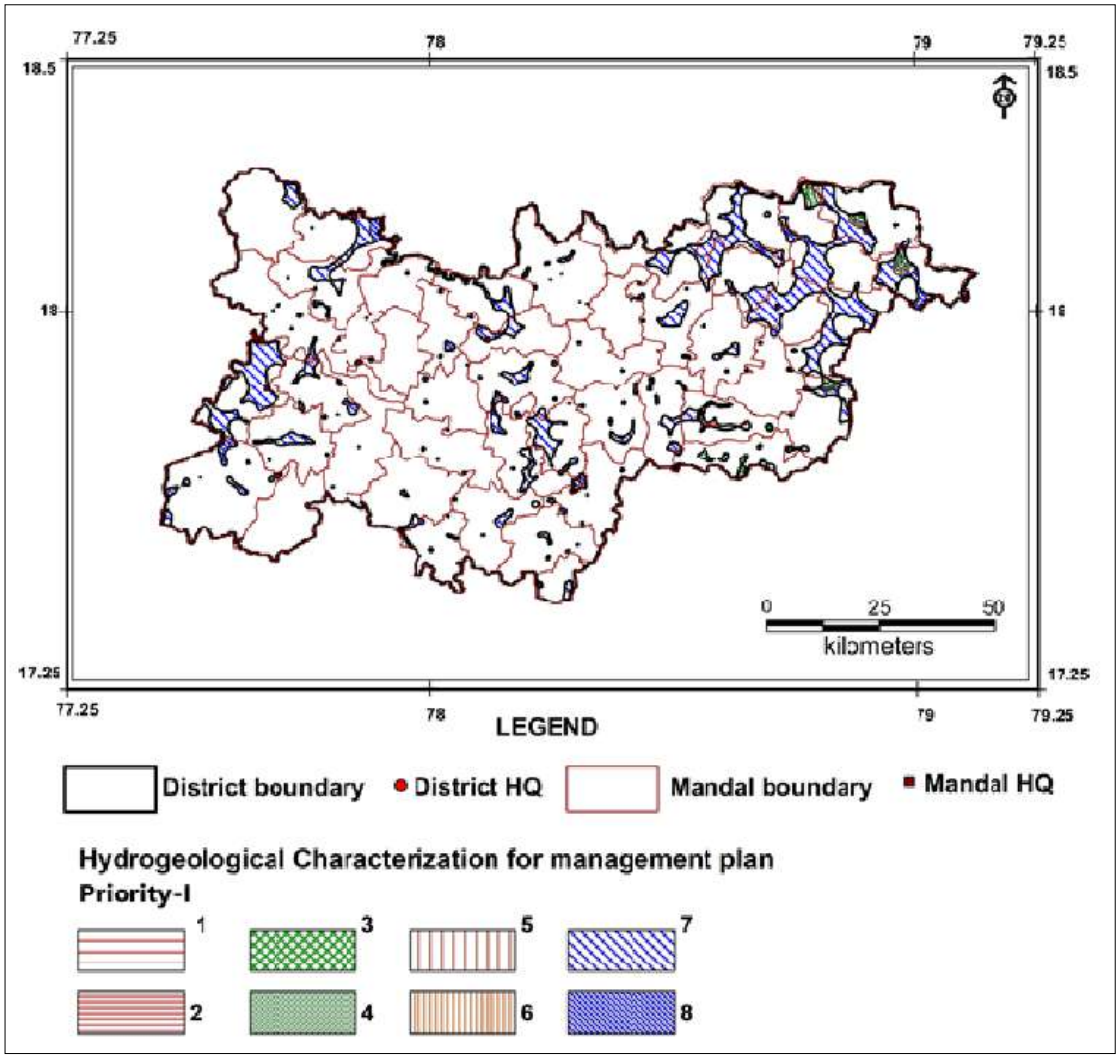


**Fig.6.1:** Priority-1 area (Over-exploited)

**Priority-2** (**Area where groundwater development <100 %)**

Area consisting of 808 villages with ~6531 $Km^2$ rechargable area (**Fig.6.2**) is considered as Priority-2, where 1083 MCM recharge potential and 289 MCM utilizable yield is avaialable. For sustainable development and management of groundwater resources, the recommendations are made and summarised in **Annexure-II**.

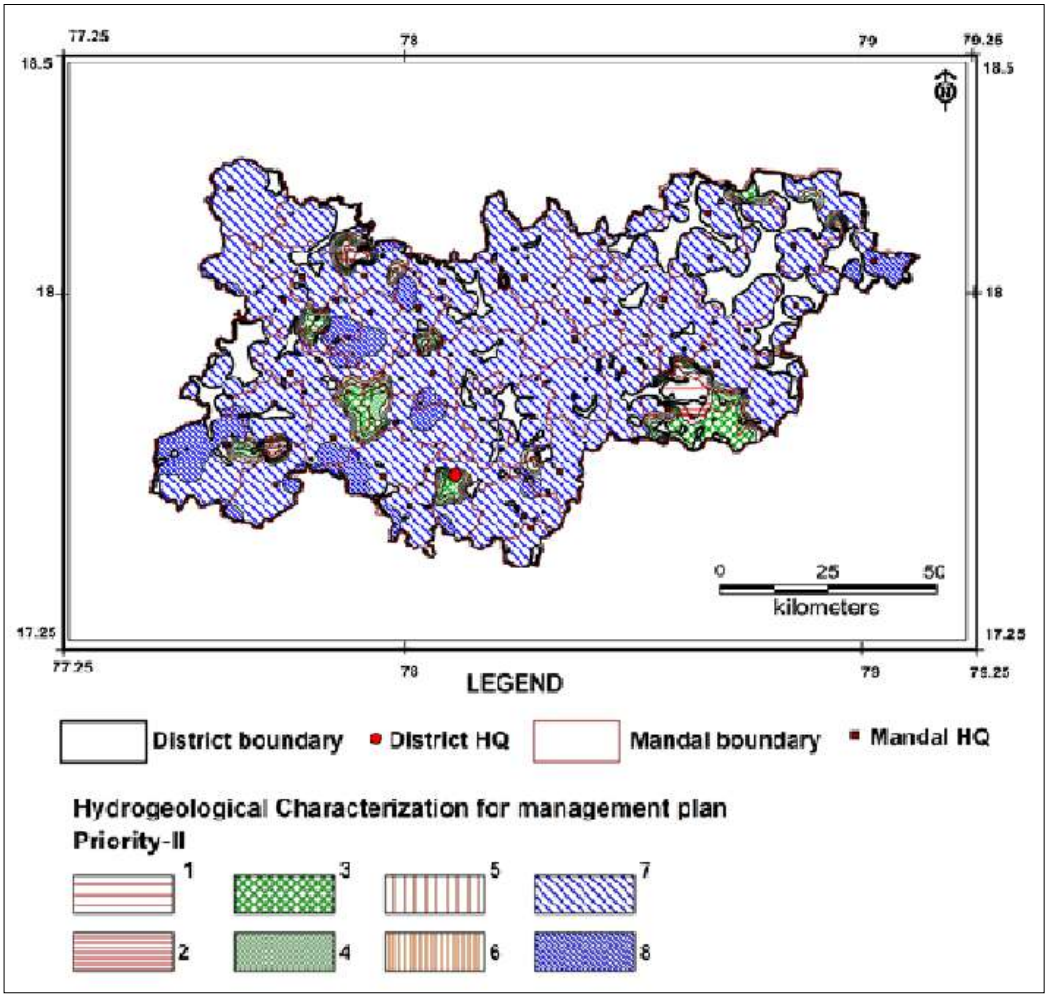


**Fig.6.2:** Priority-2 area.

- 1098 artificial recharge structures (670 CD's and 428 mini PT's) exist in the area.
- In addition to the existing structures, 2254 artificial recharge structures (ARS) (1006 CD's with shafts and 1248 mini PT's with shafts) can be taken up with a cost estimate of **400** crores.
- After effective utilization of this yield, there will be 55 MCM of ground water recharge with new structures.
- All existing artificial recharge structures are to be desilted and maintained properly.
- Roof top rainwater harvesting structures should be made mandatory to all Government buildings.

#### 6.1.1.4 Other supply side measures:

- Existing ARS like percolation tanks and check dams and dried dug wells can be de-silted involving people's participation through the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) (NREGA 2005). This will also help in sustainable management of groundwater resources.

- Some of de-silted tanks along river Manjira and river Godavari may be filled up with river water during lean monsoon period.

#### 6.1.1.5 Water Conservation Measures (WCM) (Farm Ponds):

- The farm ponds are the ideal water conservation structures, which are constructed in the low lying areas of the farm. The size of form ponds can be 10 x 10 x 3 m. In the district total 994 farm ponds exist in 197 villages and additional **24306** farm ponds are recommended (20 in each village in 1257 villages) with total cost of **60.76** crores.

**6.1.2 Demand side measures:** In order to manage the available resources more effectively the following measures are recommended.

6.1.2.1 Ongoing Work

- In the area till date drip and sprinklers are sanctioned for ~40954 ha under ID crops saving ~122 MCM of groundwater from the basin.

6.1.2.2 Proposed Work

- ~62,850 ha of additional land that can be brought under micro-irrigation (@50 ha/village in 1257 villages) costing about 377 crores (considering 1 unit/ha @0.6 lakh/ha). With this 188 MCM of ground water can be conserved over the traditional irrigation practices (considering 0.003 MCM/ha for ID crops against 0.006 MCM/ha).

- Change in cropping pattern from water intensive paddy/spices (turmeric) to irrigated dry crops like pulses and oil seeds are recommended, particularly in water stress/Over-exploited/Critical areas. If necessary some regulatory rules may be framed and implemented.

- Paddy cropping area is to be reduced as it is increasing by 3331 Ha/Yr, creating additional stress of 36.6 MCM/Yr on ground water.

- To avoid the interference of cone of depression between the productive wells, intermittent pumping of bore wells is recommended through regulatory mechanism.
- Power supply should be regulated by giving power in 4 hour spells two times a day in the morning and evening by the concerned department so that pumping of the bore well is carried out in phased manner to allow recuperations of the aquifer and increase sustainability of the bore wells.
- As a mandatory measure, every groundwater user should recharge rainwater through artificial recharge structures in proportionate to the extraction.

**6.1.3 Impact of Kaleshwaram Project:** The Kaleshwaram project command area covers 7 districts with 95 mandals covering 1581 villages, to create an additional ayacut of 18.25 lakh acres of land in Telangana state. Medak district will be highly benifited as most of the area in the district fall under command area.

The ongoing Kaleshwaram project is proposed to create ~275784 Ha ayacut, which can irrigate ~55% of cropped area in the district.

- With the implementation of proposed project, additional ground water recharge will take place due to infiltration form tank storage, canal seepage and return irrigation.
- The proposed project will also help in reducing stress on ground water and increasing the water table wherever they are deep.
- The Kaleshwaram project, apart from directly irrigating 2.75 lakh Ha, aims to recharge groundwater by filling tanks, and other water bodies.
- Continuous supply of water to willage tanks and other water bodies will replenish the ground water significantly.
- Strict implementation of Conjunctive use of surface and ground water is needed to reduce the stress on ground water.

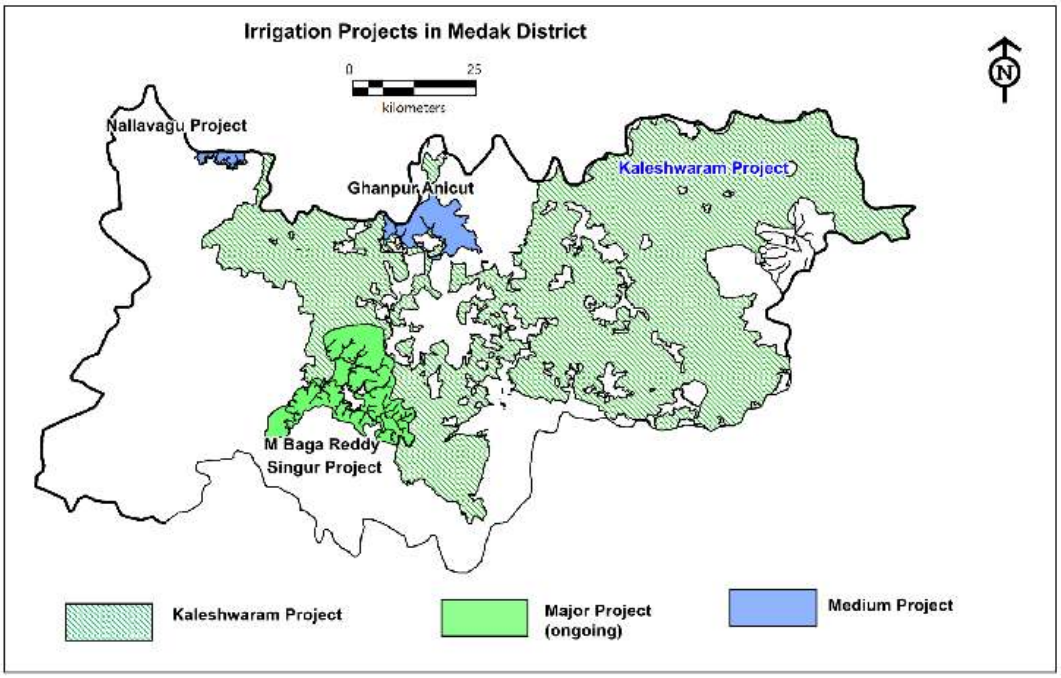


**Fig- 6.3:** Kaleshwaram Project proposed command area

***If 55% of the paddy cropped area of the district is irrigated by Kaleshwaram project water, it can substitute ~557 MCM of irrigation requirements and similarly reduce stress on groundwater.The impact of Kaleshwaram project will be more than the proposed interventions for ground water management.***

### 6.1.4 Other measures

- Declaration of Minimum Support Price in advance (before start of season) and improved facilities at procurement centres.
- Subsidy/incentives on cost involved in sharing of groundwater may be given to the concerned farmers.
- A participatory groundwater management (PGWM) approach in sharing of groundwater resources and monitoring on a constant basis along with effective implementation of the existing 'Water, Land and Trees Act' of 2002 (WALTA-2002) are the other measures suggested. Subsidy/incentives on cost involved in sharing of groundwater may be given to the farmers involved.
- In urban and rural areas the sewerage line should be constructed to arrest leaching of nitrate.

### 6.2 Expected Results and Out come

With the above interventions costing Rs 961 crores (excluding the cost involved in Mission Kakatiya and Mission Bhagiratha), the likely benefit would be the net saving of 327 MCM of ground water. This will bring down the stage of ground water development by 17% (from 74% to 57%). The other benefits will be more distribution of income among farmers. The onetime cost will be ~3paisa/litre (Rs 27 /$m^3$ of ground water).

**Acknowledgment**

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**Proposed supply side interventions in Priority–I area** **Annexure-I**

| S.No | Mandal | Village | Area [Sq.Km] | EC Microsiemens / cm | F mg/L | Volume of Runoff considered for Recharge MCM | Proposed CDs | Proposed PTs | Total Cost (Lakh Rs) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Andole | Brahampally | 2.08 | 1050 | 0.8 | 0.030 | 0 | 3 | 60 |
| 2 | Andole | Kansanpally | 4.46 | 1075 | 1 | 0.065 | 1 | 2 | 55 |
| 3 | Andole | Rollapahad | 3.14 | 675 | 1.6 | 0.046 | 1 | 0 | 15 |
| 4 | Andole | S.R.M.Pally | 2.58 | 1075 | 1 | 0.038 | 0 | 3 | 60 |
| 5 | Chegunta | Ananthsagar | 4.84 | 800 | 1.5 | 0.066 | 0 | 2 | 40 |
| 6 | Chegunta | Ibrahimpur | 20.70 | 1000 | 1 | 0.281 | 3 | 0 | 45 |
| 7 | Chegunta | Kasanpally | 3.65 | 675 | 1.2 | 0.050 | 0 | 1 | 20 |
| 8 | Chegunta | Polampally | 3.74 | 875 | 1.4 | 0.051 | 1 | 1 | 35 |
| 9 | Chegunta | Pothampally | 5.27 | 625 | 1.3 | 0.072 | 0 | 3 | 60 |
| 10 | Chegunta | Rampur | 9.02 | 750 | 1.3 | 0.122 | 1 | 4 | 95 |
| 11 | Chegunta | Reddipally | 4.43 | 850 | 1.5 | 0.060 | 0 | 2 | 40 |
| 12 | Chegunta | Rukmapur | 3.92 | 850 | 1.4 | 0.053 | 0 | 1 | 20 |
| 13 | Chegunta | UlliThimmaipally | 2.54 | 825 | 1.5 | 0.034 | 0 | 3 | 60 |
| 14 | Chegunta | Valbbhapur | 4.69 | 900 | 1.2 | 0.064 | 1 | 2 | 55 |
| 15 | Chinnakodur | Gangapur | 7.05 | 875 | 0.8 | 0.038 | 0 | 1 | 20 |
| 16 | Chinnakodur | Jakkapur | 22.69 | 700 | 1.1 | 0.122 | 1 | 2 | 55 |
| 17 | Doulthabad | Arepally (S.J) | 3.38 | 775 | 0.8 | 0.031 | 0 | 1 | 20 |
| 18 | Doulthabad | ChinnaMasanpally | 2.19 | 600 | 0.8 | 0.020 | 0 | 2 | 40 |
| 19 | Dubbak | Cheekode | 23.29 | 1450 | 0.6 | 0.211 | 2 | 2 | 70 |
| 20 | Dubbak | Habisipur | 9.97 | 800 | 1 | 0.090 | 1 | 0 | 15 |
| 21 | Dubbak | Hasan Mirapur | 3.21 | 1350 | 1 | 0.029 | 0 | 1 | 20 |
| 22 | Dubbak | Pothareddypet | 18.65 | 1125 | 1 | 0.169 | 2 | 0 | 30 |
| 23 | Dubbak | Rajakkapet | 4.25 | 1175 | 1.5 | 0.038 | 0 | 1 | 20 |
| 24 | Hathnura | Chanadapur | 4.11 | 550 | 1.2 | 0.052 | 1 | 0 | 15 |
| 25 | Hathnura | Cheekmaddur | 4.48 | 1000 | 0.9 | 0.057 | 1 | 2 | 55 |
| 26 | Hathnura | Devulapalli | 3.37 | 825 | 1.5 | 0.042 | 1 | 0 | 15 |
| 27 | Hathnura | Gundlamachanur | 8.49 | 1325 | 1.1 | 0.107 | 0 | 3 | 60 |
| 28 | Hathnura | Kodapak | 5.07 | 950 | 1.4 | 0.064 | 0 | 2 | 40 |
| 29 | Hathnura | Konyal | 8.29 | 1050 | 1.1 | 0.104 | 2 | 2 | 70 |
| 30 | Hathnura | Lingapur | 4.57 | 925 | 0.9 | 0.058 | 1 | 2 | 55 |
| 31 | Hathnura | Madhura | 3.61 | 950 | 1.4 | 0.046 | 1 | 0 | 15 |
| 32 | Hathnura | Malkapur | 1.87 | 525 | 1.3 | 0.024 | 0 | 2 | 40 |
| 33 | Hathnura | Nasthipur | 3.33 | 750 | 1.4 | 0.042 | 1 | 0 | 15 |
| 34 | Hathnura | Reddykhanapur | 7.13 | 525 | 1.3 | 0.090 | 2 | 1 | 50 |
| 35 | Hathnura | Royyapalli | 1.74 | 675 | 1.4 | 0.022 | 0 | 2 | 40 |
| 36 | Hathnura | Taherkhanpet | 0.91 | 700 | 1.2 | 0.011 | 0 | 1 | 20 |
| 37 | Jagdevpur | AngadiKistapur | 4.61 | 975 | 1.2 | 0.028 | 0 | 1 | 20 |
| 38 | Jagdevpur | Kondapur | 2.70 | 1875 | 1.2 | 0.016 | 0 | 1 | 20 |
| 39 | Jagdevpur | Rayavaram | 4.96 | 750 | 1.1 | 0.030 | 0 | 1 | 20 |
| 40 | Jagdevpur | Vardarajpur | 5.44 | 2250 | 1.2 | 0.033 | 0 | 1 | 20 |

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|---|---|---|---|---|---|---|---|---|---|
| 41 | Jagdevpur | Wattipally | 5.83 | 1475 | 1.4 | 0.035 | 0 | 3 | 60 |
| 42 | Jharasangam | Bardipur | 4.11 | 950 | 0.3 | 0.041 | 1 | 0 | 15 |
| 43 | Jharasangam | Bopanpalle | 4.31 | 975 | 0.4 | 0.043 | 1 | 0 | 15 |
| 44 | Jharasangam | Boregaon | 5.94 | 950 | 0.4 | 0.059 | 1 | 2 | 55 |
| 45 | Jharasangam | Islampur | 2.88 | 875 | 0.5 | 0.028 | 0 | 3 | 60 |
| 46 | Jharasangam | Jharsangam | 6.02 | 1000 | 0.3 | 0.059 | 1 | 2 | 55 |
| 47 | Jharasangam | Krishnapur | 3.19 | 950 | 1.1 | 0.032 | 0 | 3 | 60 |
| 48 | Jharasangam | Kuppanagar | 10.64 | 1050 | 0.3 | 0.105 | 2 | 2 | 70 |
| 49 | Jharasangam | Medpalle | 5.95 | 1125 | 0.3 | 0.059 | 1 | 2 | 55 |
| 50 | Jharasangam | Pyarawaram | 2.62 | 1025 | 0.4 | 0.026 | 0 | 2 | 40 |
| 51 | Jinnaram | Amdoor | 7.84 | 1375 | 0.6 | 0.099 | 1 | 2 | 55 |
| 52 | Jinnaram | Anantharam | 4.26 | 950 | 0.5 | 0.054 | 1 | 1 | 35 |
| 53 | Jinnaram | Madhavaram | 4.36 | 1225 | 1.1 | 0.055 | 1 | 1 | 35 |
| 54 | Jinnaram | Palem | 1.24 | 1025 | 1.2 | 0.016 | 0 | 1 | 20 |
| 55 | Jinnaram | Puttuguda | 2.79 | 1325 | 1 | 0.035 | 0 | 3 | 60 |
| 56 | Kalher | Bachepally | 15.77 | 1375 | 1.3 | 0.169 | 4 | 1 | 80 |
| 57 | Kalher | Gosaipally | 0.88 | 875 | 0.7 | 0.009 | 0 | 1 | 20 |
| 58 | Kalher | Kalher | 12.70 | 850 | 1.5 | 0.136 | 3 | 1 | 65 |
| 59 | Kalher | Malharpur | 0.90 | 1875 | 0.5 | 0.010 | 0 | 1 | 20 |
| 60 | Kalher | Mardi | 11.73 | 900 | 1.2 | 0.126 | 2 | 4 | 110 |
| 61 | Kalher | Masanpally | 4.48 | 825 | 1.5 | 0.048 | 1 | 1 | 35 |
| 62 | Kalher | Meerkhanpet | 4.80 | 1050 | 0.9 | 0.051 | 1 | 1 | 35 |
| 63 | Kalher | Nagdhar | 23.03 | 1575 | 0.8 | 0.247 | 5 | 4 | 155 |
| 64 | Kalher | Raparthy | 12.23 | 1050 | 0.9 | 0.131 | 3 | 1 | 65 |
| 65 | Kangti | Banswada | 6.06 | 1150 | 0.5 | 0.060 | 1 | 0 | 15 |
| 66 | Kangti | Jumgi.B. | 7.09 | 1175 | 0.4 | 0.070 | 1 | 0 | 15 |
| 67 | Kangti | Jumgi.K | 4.37 | 1175 | 0.4 | 0.043 | 1 | 0 | 15 |
| 68 | Kangti | Tadkal, | 10.94 | 1200 | 0.4 | 0.108 | 2 | 3 | 90 |
| 69 | Kangti | Valmoor | 3.71 | 1175 | 0.4 | 0.037 | 0 | 3 | 60 |
| 70 | Kondapak | Mangole | 8.26 | 1075 | 1.4 | 0.035 | 0 | 1 | 20 |
| 71 | Kondapak | Marpadga | 29.89 | 1550 | 1.1 | 0.126 | 0 | 2 | 40 |
| 72 | Kondapak | Mathpalle | 4.70 | 1100 | 1.4 | 0.020 | 0 | 1 | 20 |
| 73 | Kondapak | Singaram | 4.65 | 925 | 1.1 | 0.020 | 0 | 1 | 20 |
| 74 | Kondapur | Garakurthy | 5.01 | 1775 | 0.7 | 0.037 | 0 | 3 | 60 |
| 75 | Kondapur | Girmapur | 1.83 | 1400 | 0.7 | 0.014 | 0 | 1 | 20 |
| 76 | Kondapur | Gopularam | 1.87 | 1350 | 0.6 | 0.014 | 0 | 1 | 20 |
| 77 | Kondapur | Haridaspur | 3.27 | 800 | 0.7 | 0.024 | 0 | 2 | 40 |
| 78 | Kondapur | Mallepally | 5.37 | 1075 | 0.8 | 0.040 | 1 | 0 | 15 |
| 79 | Kowdipally | Antharam | 3.36 | 1075 | 0.6 | 0.052 | 1 | 1 | 35 |
| 80 | Kowdipally | Chandur | 7.61 | 1075 | 1 | 0.119 | 2 | 3 | 90 |
| 81 | Kowdipally | Gangavaram | 3.74 | 925 | 0.7 | 0.058 | 1 | 2 | 55 |
| 82 | Kowdipally | Jaggampet | 4.13 | 975 | 0.7 | 0.064 | 1 | 2 | 55 |
| 83 | Kowdipally | Kanchanpalli | 10.62 | 700 | 1 | 0.166 | 0 | 4 | 80 |
| 84 | Kowdipally | Kannaram | 5.73 | 1125 | 0.5 | 0.089 | 2 | 1 | 50 |
| 85 | Kowdipally | Kowdipally | 2.01 | 1125 | 0.5 | 0.031 | 0 | 3 | 60 |

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|---|---|---|---|---|---|---|---|---|---|
| 86 | Kowdipally | Md. Nagar | 8.53 | 1150 | 0.5 | 0.133 | 3 | 1 | 65 |
| 87 | Kowdipally | Mutturajpally | 5.80 | 850 | 0.7 | 0.090 | 2 | 1 | 50 |
| 88 | Kowdipally | Seri Faizabad | 1.04 | 1000 | 0.6 | 0.016 | 0 | 1 | 20 |
| 89 | Kowdipally | Tunki | 10.96 | 1125 | 0.8 | 0.171 | 0 | 1 | 20 |
| 90 | Kulcharam | Appajipally | 0.84 | 1400 | 0.9 | 0.009 | 0 | 1 | 20 |
| 91 | Kulcharam | Ch.Ghanapur | 14.29 | 1125 | 1 | 0.153 | 3 | 3 | 105 |
| 92 | Kulcharam | Paithra | 7.88 | 1075 | 0.8 | 0.085 | 2 | 0 | 30 |
| 93 | Kulcharam | Rangampet | 8.19 | 725 | 0.8 | 0.088 | 2 | 1 | 50 |
| 94 | Kulcharam | Thukkapur | 2.17 | 1175 | 0.8 | 0.023 | 0 | 2 | 40 |
| 95 | Kulcharam | Tummaipally | 1.76 | 625 | 1.2 | 0.019 | 0 | 2 | 40 |
| 96 | Manoor | Dawoor | 6.39 | 400 | 0.5 | 0.063 | 1 | 2 | 55 |
| 97 | Manoor | Dosapally | 4.40 | 400 | 0.5 | 0.043 | 1 | 0 | 15 |
| 98 | Manoor | Keshwar | 4.82 | 550 | 0.5 | 0.048 | 1 | 1 | 35 |
| 99 | Manoor | Maqudumpur | 5.10 | 525 | 1.3 | 0.050 | 1 | 1 | 35 |
| 100 | Manoor | Pusalpad | 5.97 | 525 | 0.5 | 0.059 | 1 | 2 | 55 |
| 101 | Manoor | Thumnoor | 3.48 | 500 | 1.3 | 0.034 | 0 | 3 | 60 |
| 102 | Medak | Aurangabad | 4.03 | 900 | 0.9 | 0.063 | 1 | 2 | 55 |
| 103 | Medak | Byathole | 4.75 | 1275 | 0.9 | 0.074 | 0 | 3 | 60 |
| 104 | Medak | Fareedpur | 4.69 | 675 | 1 | 0.073 | 0 | 3 | 60 |
| 105 | Medak | Komtoor | 2.52 | 1375 | 1.2 | 0.039 | 1 | 0 | 15 |
| 106 | Medak | Lingasanpally | 4.23 | 1175 | 0.9 | 0.066 | 0 | 2 | 40 |
| 107 | Medak | Maddulwai | 1.99 | 875 | 0.9 | 0.031 | 0 | 3 | 60 |
| 108 | Medak | Maqdumpur | 4.05 | 2150 | 0.7 | 0.063 | 0 | 2 | 40 |
| 109 | Medak | Pashapur | 1.75 | 1750 | 1.4 | 0.027 | 0 | 2 | 40 |
| 110 | Medak | Shalipet | 2.70 | 925 | 0.9 | 0.042 | 1 | 0 | 15 |
| 111 | Mirdoddi | Chepial | 12.89 | 1200 | 0.8 | 0.127 | 0 | 2 | 40 |
| 112 | Mulugu | Achaipally | 2.44 | 575 | 2.3 | 0.018 | 0 | 2 | 40 |
| 113 | Mulugu | Bahilampur | 4.71 | 575 | 3.3 | 0.035 | 0 | 1 | 20 |
| 114 | Mulugu | Bandamailaram | 5.44 | 450 | 0.8 | 0.041 | 1 | 0 | 15 |
| 115 | Mulugu | Cheelasagar | 15.75 | 475 | 2.9 | 0.118 | 0 | 3 | 60 |
| 116 | Mulugu | ChinnaThimmapur | 2.84 | 575 | 2.5 | 0.021 | 0 | 2 | 40 |
| 117 | Mulugu | Kothur | 4.74 | 500 | 1.3 | 0.035 | 0 | 3 | 60 |
| 118 | Mulugu | Laxmakkapally | 2.89 | 700 | 2.2 | 0.022 | 0 | 2 | 40 |
| 119 | Mulugu | Narsapur | 1.94 | 600 | 2.2 | 0.015 | 0 | 1 | 20 |
| 120 | Mulugu | Singannaguda | 2.65 | 550 | 2 | 0.020 | 0 | 2 | 40 |
| 121 | Mulugu | Srirampur | 1.74 | 575 | 2.2 | 0.013 | 0 | 1 | 20 |
| 122 | Munipally | Magdempally | 1.40 | 1450 | 0.5 | 0.014 | 0 | 1 | 20 |
| 123 | Munipally | Takkadpally | 2.47 | 750 | 1.1 | 0.024 | 0 | 2 | 40 |
| 124 | Nanganur | Palamukula | 11.99 | 1425 | 1.7 | 0.081 | 1 | 0 | 15 |
| 125 | Narayankhed | Allapur | 2.58 | 650 | 0.6 | 0.028 | 0 | 2 | 40 |
| 126 | Narayankhed | Anthwar | 2.26 | 1500 | 0.5 | 0.024 | 0 | 2 | 40 |
| 127 | Narayankhed | Bhanapur | 0.89 | 1625 | 0.4 | 0.010 | 0 | 1 | 20 |
| 128 | Narayankhed | Gangapur | 10.60 | 1025 | 0.6 | 0.114 | 2 | 3 | 90 |
| 129 | Narayankhed | Jagannathpur | 1.85 | 1250 | 0.4 | 0.020 | 0 | 2 | 40 |
| 130 | Narayankhed | Jujalpur | 1.42 | 1300 | 0.4 | 0.015 | 0 | 1 | 20 |

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|---|---|---|---|---|---|---|---|---|---|
| 131 | Narayankhed | Kondapur | 4.62 | 1600 | 0.5 | 0.050 | 1 | 1 | 35 |
| 132 | Narayankhed | Mansurpur | 2.61 | 1500 | 0.5 | 0.028 | 0 | 2 | 40 |
| 133 | Narayankhed | Narsapur | 3.67 | 2175 | 0.5 | 0.039 | 1 | 0 | 15 |
| 134 | Narayankhed | Paidipally | 3.59 | 1150 | 0.8 | 0.039 | 0 | 3 | 60 |
| 135 | Narayankhed | Ryakal | 1.51 | 1125 | 0.6 | 0.016 | 0 | 1 | 20 |
| 136 | Narayankhed | Sanjeevanraopet | 12.57 | 1600 | 0.6 | 0.135 | 3 | 1 | 65 |
| 137 | Narayankhed | Venkatapur | 2.27 | 1800 | 0.5 | 0.024 | 0 | 2 | 40 |
| 138 | Narsapur | Admapur | 6.58 | 1200 | 1 | 0.089 | 2 | 1 | 50 |
| 139 | Narsapur | Awancha | 3.27 | 1050 | 0.8 | 0.044 | 1 | 0 | 15 |
| 140 | Narsapur | CC.Kunta | 5.87 | 975 | 0.7 | 0.080 | 2 | 0 | 30 |
| 141 | Narsapur | Chippalthurthi | 6.08 | 1300 | 1 | 0.082 | 2 | 0 | 30 |
| 142 | Narsapur | Gollapally | 1.76 | 925 | 0.7 | 0.024 | 0 | 2 | 40 |
| 143 | Narsapur | Ibrahimabad | 7.98 | 1025 | 1 | 0.108 | 2 | 3 | 90 |
| 144 | Narsapur | Jakkapally | 3.34 | 1300 | 1 | 0.045 | 1 | 0 | 15 |
| 145 | Narsapur | K.Maddur | 4.78 | 1000 | 1.4 | 0.065 | 0 | 2 | 40 |
| 146 | Narsapur | Kondapur | 2.00 | 975 | 0.9 | 0.027 | 0 | 2 | 40 |
| 147 | Narsapur | Mohammadabad | 4.09 | 1300 | 1 | 0.056 | 1 | 1 | 35 |
| 148 | Narsapur | Moosapet | 6.31 | 1200 | 0.9 | 0.086 | 2 | 0 | 30 |
| 149 | Narsapur | Nagulapally | 4.67 | 1225 | 0.9 | 0.063 | 0 | 1 | 20 |
| 150 | Narsapur | R.C.Pur | 2.48 | 1075 | 0.8 | 0.034 | 0 | 1 | 20 |
| 151 | Narsapur | Reddypally | 4.00 | 1475 | 0.7 | 0.054 | 1 | 1 | 35 |
| 152 | Narsapur | Rustumpet | 6.34 | 1375 | 0.9 | 0.086 | 1 | 0 | 15 |
| 153 | Narsapur | Tujalpur | 6.70 | 750 | 0.8 | 0.091 | 2 | 1 | 50 |
| 154 | Narsapur | Tuljarampet | 1.03 | 1100 | 0.8 | 0.014 | 0 | 1 | 20 |
| 155 | Narsapur | Yellapur | 3.39 | 1150 | 0.9 | 0.046 | 0 | 1 | 20 |
| 156 | Nyalkal | Ameerabad | 4.13 | 575 | 0.4 | 0.041 | 1 | 0 | 15 |
| 157 | Nyalkal | Atnur | 4.80 | 925 | 0.8 | 0.047 | 1 | 1 | 35 |
| 158 | Nyalkal | Basanthpur | 2.90 | 350 | 0.3 | 0.029 | 0 | 3 | 60 |
| 159 | Nyalkal | Chalki | 8.23 | 500 | 0.4 | 0.081 | 2 | 0 | 30 |
| 160 | Nyalkal | Cheekurthi | 8.31 | 675 | 0.5 | 0.082 | 2 | 0 | 30 |
| 161 | Nyalkal | Chingepally | 6.75 | 900 | 0.7 | 0.067 | 1 | 2 | 55 |
| 162 | Nyalkal | Dappur | 11.04 | 750 | 0.6 | 0.109 | 2 | 3 | 90 |
| 163 | Nyalkal | Gangwar | 3.92 | 325 | 0.3 | 0.039 | 0 | 3 | 60 |
| 164 | Nyalkal | Ganjoti | 6.53 | 575 | 0.7 | 0.065 | 1 | 2 | 55 |
| 165 | Nyalkal | Humnapur | 2.97 | 500 | 0.4 | 0.029 | 0 | 3 | 60 |
| 166 | Nyalkal | Hussain nagar | 8.39 | 700 | 0.5 | 0.083 | 2 | 0 | 30 |
| 167 | Nyalkal | Kakaijanwada | 5.02 | 475 | 0.4 | 0.050 | 1 | 1 | 35 |
| 168 | Nyalkal | Khaleelpur.M | 3.84 | 425 | 0.3 | 0.038 | 0 | 3 | 60 |
| 169 | Nyalkal | Malgi | 7.20 | 675 | 0.5 | 0.071 | 1 | 3 | 75 |
| 170 | Nyalkal | Malkanpahad. | 1.42 | 350 | 0.4 | 0.014 | 0 | 1 | 20 |
| 171 | Nyalkal | Mamidgi | 10.04 | 350 | 0.4 | 0.099 | 2 | 2 | 70 |
| 172 | Nyalkal | Mariampur | 7.19 | 750 | 0.5 | 0.071 | 1 | 3 | 75 |
| 173 | Nyalkal | Metalkunta | 6.92 | 325 | 0.3 | 0.068 | 1 | 3 | 75 |
| 174 | Nyalkal | Mirzapur.B. | 3.51 | 400 | 0.3 | 0.035 | 0 | 3 | 60 |
| 175 | Nyalkal | Mirzapur-N | 3.65 | 1075 | 0.4 | 0.036 | 0 | 3 | 60 |

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|---|---|---|---|---|---|---|---|---|---|
| 176 | Nyalkal | Mungi | 8.47 | 700 | 0.4 | 0.084 | 2 | 0 | 30 |
| 177 | Nyalkal | Murthuzapur | 4.14 | 475 | 0.4 | 0.041 | 1 | 0 | 15 |
| 178 | Nyalkal | Naimatabad | 6.71 | 325 | 0.4 | 0.066 | 1 | 2 | 55 |
| 179 | Nyalkal | Nyalkal | 14.15 | 1025 | 0.8 | 0.140 | 3 | 2 | 85 |
| 180 | Nyalkal | Raghapur | 4.92 | 575 | 0.4 | 0.049 | 1 | 1 | 35 |
| 181 | Nyalkal | Rajola | 4.05 | 375 | 0.4 | 0.040 | 1 | 0 | 15 |
| 182 | Nyalkal | Ramtirth | 5.03 | 650 | 0.8 | 0.050 | 1 | 1 | 35 |
| 183 | Nyalkal | Ratnapur | 8.92 | 725 | 0.5 | 0.088 | 2 | 1 | 50 |
| 184 | Nyalkal | Rukmapur | 3.69 | 425 | 0.4 | 0.036 | 0 | 3 | 60 |
| 185 | Nyalkal | Shamshallapur | 4.74 | 525 | 0.5 | 0.047 | 1 | 1 | 35 |
| 186 | Papannapet | Ablapur | 2.72 | 1450 | 1.3 | 0.032 | 0 | 3 | 60 |
| 187 | Papannapet | Annaram | 5.93 | 1425 | 0.9 | 0.069 | 1 | 3 | 75 |
| 188 | Papannapet | Doulapur | 5.19 | 1725 | 1.2 | 0.060 | 1 | 2 | 55 |
| 189 | Papannapet | Ellapur | 4.34 | 2625 | 0.6 | 0.050 | 1 | 1 | 35 |
| 190 | Papannapet | Enkepally | 2.58 | 1325 | 0.8 | 0.030 | 0 | 3 | 60 |
| 191 | Papannapet | Kothapally | 3.61 | 1925 | 1.2 | 0.042 | 1 | 0 | 15 |
| 192 | Papannapet | Lingaipally | 9.53 | 1900 | 1.2 | 0.111 | 2 | 3 | 90 |
| 193 | Papannapet | Minpur | 4.26 | 1925 | 1.4 | 0.050 | 1 | 1 | 35 |
| 194 | Papannapet | Muddapur | 1.63 | 1400 | 1.1 | 0.019 | 0 | 2 | 40 |
| 195 | Papannapet | Nagsanpally | 13.25 | 1275 | 1 | 0.154 | 3 | 3 | 105 |
| 196 | Patancheru | Bachaguda | 2.31 | 2200 | 0.9 | 0.021 | 0 | 2 | 40 |
| 197 | Patancheru | Chitkul | 8.48 | 2225 | 1 | 0.077 | 2 | 0 | 30 |
| 198 | Patancheru | Chitkul | 8.48 | 2225 | 1 | 0.077 | 2 | 0 | 30 |
| 199 | Patancheru | Ilapur | 5.11 | 1125 | 1.1 | 0.046 | 1 | 1 | 35 |
| 200 | Patancheru | Kardanur | 3.93 | 800 | 1.1 | 0.036 | 0 | 3 | 60 |
| 201 | Patancheru | Pocharam | 5.12 | 1900 | 1 | 0.046 | 1 | 1 | 35 |
| 202 | Pulkal | Gangojipet | 3.01 | 650 | 0.7 | 0.030 | 0 | 3 | 60 |
| 203 | Pulkal | Kudur | 5.88 | 525 | 0.9 | 0.058 | 1 | 2 | 55 |
| 204 | Pulkal | Pulkal | 10.34 | 450 | 0.9 | 0.102 | 2 | 2 | 70 |
| 205 | Raikode | Chimnapur | 3.25 | 1075 | 0.3 | 0.035 | 0 | 3 | 60 |
| 206 | Raikode | Dharmapur | 6.01 | 925 | 0.3 | 0.065 | 1 | 2 | 55 |
| 207 | Raikode | Hasnabad | 9.93 | 925 | 0.8 | 0.107 | 2 | 3 | 90 |
| 208 | Raikode | Itkepally | 7.36 | 625 | 0.9 | 0.079 | 2 | 0 | 30 |
| 209 | Raikode | Jamalpur | 2.35 | 750 | 0.8 | 0.025 | 0 | 2 | 40 |
| 210 | Raikode | Khudavandapur | 5.86 | 925 | 0.9 | 0.063 | 1 | 2 | 55 |
| 211 | Raikode | Kodoor | 9.81 | 975 | 0.9 | 0.105 | 2 | 2 | 70 |
| 212 | Raikode | Madhapur | 1.42 | 850 | 0.6 | 0.015 | 0 | 1 | 20 |
| 213 | Raikode | Mahabhatpur | 2.80 | 800 | 0.7 | 0.030 | 0 | 3 | 60 |
| 214 | Raikode | Mamidipally | 4.98 | 1125 | 0.4 | 0.053 | 1 | 1 | 35 |
| 215 | Raikode | Moratga | 2.75 | 1125 | 0.4 | 0.029 | 0 | 3 | 60 |
| 216 | Raikode | Musthafapur | 2.36 | 1050 | 0.5 | 0.025 | 0 | 2 | 40 |
| 217 | Raikode | Naganpally | 6.54 | 975 | 0.5 | 0.070 | 1 | 3 | 75 |
| 218 | Raikode | Nagwar | 5.31 | 800 | 0.5 | 0.057 | 1 | 2 | 55 |
| 219 | Raikode | Pampad | 8.15 | 675 | 1.4 | 0.088 | 2 | 0 | 30 |
| 220 | Raikode | Shapur | 2.69 | 725 | 1.1 | 0.029 | 0 | 3 | 60 |

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|---|---|---|---|---|---|---|---|---|---|
| 221 | Raikode | Singitham | 16.49 | 825 | 0.4 | 0.177 | 4 | 1 | 80 |
| 222 | Raikode | Yenkepally | 2.95 | 875 | 0.5 | 0.032 | 0 | 3 | 60 |
| 223 | Raikode | Yousufpur | 5.62 | 875 | 0.3 | 0.060 | 1 | 2 | 55 |
| 224 | Ramayampet | Laxmapur | 4.51 | 1725 | 0.8 | 0.030 | 0 | 3 | 60 |
| 225 | Ramayampet | Nandigaon | 5.51 | 1400 | 0.9 | 0.037 | 0 | 1 | 20 |
| 226 | RC Puram | Bandalguda | 1.37 | 1225 | 1.1 | 0.011 | 0 | 1 | 20 |
| 227 | RC Puram | E.N.pally | 5.32 | 575 | 0.7 | 0.044 | 1 | 0 | 15 |
| 228 | RC Puram | Osman Nagar | 2.97 | 825 | 1.2 | 0.024 | 0 | 2 | 40 |
| 229 | RC Puram | Tellapur | 12.84 | 875 | 1.2 | 0.106 | 2 | 3 | 90 |
| 230 | Regode | M.Venkatapur | 2.26 | 750 | 0.9 | 0.022 | 0 | 2 | 40 |
| 231 | Regode | Sinddole | 0.97 | 625 | 2.4 | 0.010 | 0 | 1 | 20 |
| 232 | Sadasivpet | Enkepally | 3.49 | 1325 | 1.1 | 0.029 | 0 | 3 | 60 |
| 233 | Sadasivpet | Istritabad | 1.95 | 1625 | 0.9 | 0.016 | 0 | 1 | 20 |
| 234 | Sadasivpet | Kambalpally | 3.31 | 1100 | 0.7 | 0.027 | 0 | 1 | 20 |
| 235 | Sadasivpet | Rejintal | 4.12 | 1325 | 0.7 | 0.034 | 0 | 3 | 60 |
| 236 | Sadasivpet | Siddapur | 5.30 | 1800 | 0.8 | 0.044 | 1 | 0 | 15 |
| 237 | Sangareddy | Chiduruppa | 6.03 | 1775 | 0.6 | 0.045 | 1 | 0 | 15 |
| 238 | Sangareddy | Irrigipally | 2.48 | 750 | 0.9 | 0.019 | 0 | 2 | 40 |
| 239 | Sangareddy | Kashipur | 2.54 | 500 | 1.1 | 0.019 | 0 | 1 | 20 |
| 240 | Sangareddy | Mamidipally | 6.63 | 1600 | 1.4 | 0.050 | 1 | 1 | 35 |
| 241 | Shankarampet -A | Moosapeta | 1.79 | 1400 | 1.3 | 0.021 | 0 | 2 | 40 |
| 242 | Shankarampet -R | Kaslapur | 2.03 | 950 | 0.9 | 0.028 | 0 | 2 | 40 |
| 243 | Shankarampet -R | Siripally | 2.58 | 1075 | 1 | 0.035 | 0 | 3 | 60 |
| 244 | Shivampet | Bijilipur | 4.77 | 800 | 0.8 | 0.051 | 1 | 1 | 35 |
| 245 | Shivampet | Chennapur | 2.18 | 1650 | 0.8 | 0.023 | 0 | 2 | 40 |
| 246 | Shivampet | Gangaipally | 3.53 | 750 | 0.7 | 0.038 | 0 | 3 | 60 |
| 247 | Shivampet | Gomaram | 7.60 | 925 | 1.1 | 0.082 | 1 | 0 | 15 |
| 248 | Shivampet | Gundlapalli | 4.79 | 900 | 0.5 | 0.051 | 1 | 1 | 35 |
| 249 | Shivampet | Lingojigudam | 1.54 | 975 | 0.8 | 0.017 | 0 | 1 | 20 |
| 250 | Shivampet | PeddaGotimukla | 7.60 | 1350 | 0.9 | 0.082 | 2 | 0 | 30 |
| 251 | Shivampet | Shivampet | 8.11 | 1975 | 0.5 | 0.087 | 2 | 0 | 30 |
| 252 | Shivampet | Usrikapally | 5.65 | 1825 | 0.8 | 0.061 | 0 | 2 | 40 |
| 253 | Siddipet | Narayanraopet | 24.66 | 725 | 2.2 | 0.150 | 1 | 1 | 35 |
| 254 | Tekmal | Achannapally | 3.46 | 1450 | 0.9 | 0.031 | 0 | 3 | 60 |
| 255 | Tekmal | Malkapur | 1.76 | 625 | 1.5 | 0.016 | 0 | 1 | 20 |
| 256 | Thoguta | Lingapur | 8.52 | 725 | 0.8 | 0.064 | 1 | 0 | 15 |
| 257 | Thoguta | Zapthilingareddipally | 4.62 | 975 | 1 | 0.035 | 0 | 1 | 20 |
| 258 | Toopran | Dharmarajpally | 1.48 | 825 | 0.4 | 0.011 | 0 | 1 | 20 |
| 259 | Toopran | Gundareddypalli | 8.39 | 1375 | 1.1 | 0.063 | 1 | 2 | 55 |
| 260 | Toopran | Hussainpur | 1.27 | 2475 | 0.4 | 0.010 | 0 | 1 | 20 |
| 261 | Toopran | Imanpur | 2.39 | 1575 | 0.8 | 0.018 | 0 | 2 | 40 |
| 262 | Toopran | Konaipally (PT) | 1.92 | 850 | 0.4 | 0.014 | 0 | 1 | 20 |
| 263 | Toopran | Kondapur | 2.97 | 475 | 0.9 | 0.022 | 0 | 2 | 40 |

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|---|---|---|---|---|---|---|---|---|---|
| 264 | Toopran | Muppireddipally | 3.65 | 525 | 0.4 | 0.027 | 0 | 2 | 40 |
| 265 | Toopran | Nagulapally | 3.25 | 1625 | 0.6 | 0.024 | 0 | 2 | 40 |
| 266 | Toopran | Padalpally | 2.20 | 2350 | 0.7 | 0.016 | 0 | 1 | 20 |
| 267 | Toopran | Ramaipally | 2.03 | 1600 | 0.7 | 0.015 | 0 | 1 | 20 |
| 268 | Toopran | Ravelly | 4.78 | 1775 | 1.4 | 0.036 | 0 | 3 | 60 |
| 269 | Toopran | Venkatapally | 3.09 | 1975 | 0.9 | 0.023 | 0 | 2 | 40 |
| 270 | Toopran | Venkatapur | 8.70 | 600 | 0.5 | 0.065 | 1 | 2 | 55 |
| 271 | Wargal | Amberpet | 1.80 | 3925 | 0.7 | 0.012 | 0 | 1 | 20 |
| 272 | Wargal | Ananthagiripalle | 6.22 | 2300 | 0.6 | 0.042 | 1 | 0 | 15 |
| 273 | Wargal | Chandapur | 3.40 | 3825 | 0.6 | 0.023 | 0 | 2 | 40 |
| 274 | Wargal | Girmapur | 2.38 | 5175 | 0.7 | 0.016 | 0 | 1 | 20 |
| 275 | Wargal | Gouraram | 7.33 | 5300 | 1.1 | 0.050 | 1 | 1 | 35 |
| 276 | Wargal | Jabbapur | 3.04 | 4800 | 0.8 | 0.021 | 0 | 2 | 40 |
| 277 | Wargal | Majidpally | 6.32 | 4225 | 0.7 | 0.043 | 1 | 0 | 15 |
| 278 | Wargal | Nemtoor | 13.18 | 4875 | 0.7 | 0.089 | 2 | 1 | 50 |
| 279 | Wargal | Pamulaparthi | 21.41 | 1175 | 2.4 | 0.145 | 1 | 0 | 15 |
| 280 | Wargal | Ramachandrapur | 1.31 | 2125 | 0.5 | 0.009 | 0 | 1 | 20 |
| 281 | Wargal | Shakaram | 3.16 | 5250 | 0.7 | 0.021 | 0 | 2 | 40 |
| 282 | Wargal | Singaipalli | 1.68 | 5225 | 0.9 | 0.011 | 0 | 1 | 20 |
| 283 | Wargal | Sitarampalle | 1.31 | 3225 | 0.6 | 0.009 | 0 | 1 | 20 |
| 284 | Wargal | Veluru | 11.94 | 2675 | 0.5 | 0.081 | 2 | 0 | 30 |
| 285 | Wargal | Wargal | 26.65 | 6375 | 0.8 | 0.180 | 4 | 1 | 80 |
| 286 | Yeldurthy | Domararncha | 2.53 | 575 | 0.7 | 0.029 | 0 | 2 | 40 |
| 287 | Yeldurthy | Peddapur | 1.07 | 1650 | 0.8 | 0.012 | 0 | 1 | 20 |
| 288 | Zaheerabad | Auranganagar | 3.58 | 375 | 0.3 | 0.045 | 1 | 0 | 15 |
| 289 | Zaheerabad | Gousabad | 4.91 | 350 | 0.3 | 0.062 | 1 | 1 | 35 |
| 290 | Zaheerabad | Hothi - K | 13.37 | 400 | 1.1 | 0.168 | 3 | 4 | 125 |
| 291 | Zaheerabad | Huggelli | 13.84 | 975 | 1.7 | 0.174 | 4 | 1 | 80 |
| 292 | Zaheerabad | Hyderabad | 4.45 | 300 | 0.6 | 0.056 | 1 | 1 | 35 |
| 293 | Zaheerabad | Raipalle (PD) | 3.38 | 3675 | 0.8 | 0.043 | 1 | 0 | 15 |
| 294 | Zaheerabad | Tamadpalle | 2.55 | 600 | 1.1 | 0.032 | 0 | 3 | 60 |
| | | | | | | | 220 | 453 | 12360 |

**Proposed supply side interventions in Priority–II area** **Annexure-II**

| S.No | Mandal | Village | Area [Sq.Km] | EC Microsiemens/ cm | F mg/L | Volume of Runoff considered for Recharge MCM | Proposed CDs | Proposed PTs | Total Cost (Lakh Rs) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Alladurg | Alladurg | 9.51 | 775 | 0.9 | 0.11 | 2 | 3 | 90 |
| 2 | Alladurg | Appajipally | 5.63 | 825 | 1 | 0.07 | 1 | 2 | 55 |
| 3 | Alladurg | Bairandibba | 4.99 | 725 | 0.9 | 0.06 | 0 | 2 | 40 |
| 4 | Alladurg | Bijilipur | 4.42 | 1175 | 0.6 | 0.05 | 0 | 1 | 20 |
| 5 | Alladurg | Buddaipally | 1.92 | 1075 | 0.8 | 0.02 | 0 | 1 | 20 |
| 6 | Alladurg | Chevella | 5.48 | 725 | 0.8 | 0.06 | 0 | 2 | 40 |
| 7 | Alladurg | Chilver | 8.41 | 700 | 1 | 0.10 | 2 | 2 | 70 |
| 8 | Alladurg | G.Peddapur | 20.90 | 875 | 1 | 0.24 | 0 | 3 | 60 |
| 9 | Alladurg | Gowthapur | 3.70 | 1325 | 0.6 | 0.04 | 1 | 0 | 15 |
| 10 | Alladurg | Keroor | 4.69 | 1200 | 0.7 | 0.05 | 0 | 1 | 20 |
| 11 | Alladurg | Mahamamdapur | 5.75 | 700 | 1 | 0.07 | 1 | 3 | 75 |
| 12 | Alladurg | Marvelli | 7.12 | 1300 | 0.5 | 0.08 | 2 | 0 | 30 |
| 13 | Alladurg | Mupparam | 6.12 | 750 | 0.9 | 0.07 | 0 | 2 | 40 |
| 14 | Alladurg | Muslapur | 11.34 | 725 | 1 | 0.13 | 0 | 1 | 20 |
| 15 | Alladurg | Palwatla | 4.84 | 1350 | 0.3 | 0.06 | 1 | 1 | 35 |
| 16 | Andole | Aksanpally | 8.16 | 1075 | 1 | 0.12 | 2 | 3 | 90 |
| 17 | Andole | Almaipet | 10.38 | 1100 | 0.7 | 0.15 | 3 | 3 | 105 |
| 18 | Andole | Ananthasagar | 5.73 | 475 | 0.7 | 0.08 | 2 | 0 | 30 |
| 19 | Andole | Andole | 14.18 | 1250 | 1 | 0.21 | 4 | 4 | 140 |
| 20 | Andole | Chinthakunta | 7.89 | 525 | 1.5 | 0.11 | 2 | 3 | 90 |
| 21 | Andole | Dakoor | 19.89 | 875 | 0.9 | 0.29 | 6 | 4 | 170 |
| 22 | Andole | Danampally | 2.20 | 525 | 1.2 | 0.03 | 0 | 3 | 60 |
| 23 | Andole | Jogipet | 7.19 | 1100 | 1 | 0.10 | 2 | 2 | 70 |
| 24 | Andole | Kichannapally | 1.77 | 600 | 1.6 | 0.03 | 0 | 2 | 40 |
| 25 | Andole | Kodikal | 6.18 | 650 | 0.8 | 0.09 | 2 | 1 | 50 |
| 26 | Andole | Mansanpally | 4.37 | 575 | 1.8 | 0.06 | 1 | 2 | 55 |
| 27 | Andole | Mansanpally | 6.24 | 1175 | 1.1 | 0.09 | 2 | 1 | 50 |
| 28 | Andole | Nadlapur | 3.11 | 825 | 0.8 | 0.05 | 1 | 0 | 15 |
| 29 | Andole | Neradigunta | 6.68 | 1075 | 0.9 | 0.10 | 2 | 2 | 70 |
| 30 | Andole | Pasanipet | 6.01 | 875 | 0.9 | 0.09 | 2 | 0 | 30 |
| 31 | Andole | Ramsanipally | 6.32 | 750 | 1.4 | 0.09 | 0 | 1 | 20 |
| 32 | Andole | Saibanpet | 5.19 | 1075 | 0.8 | 0.08 | 1 | 3 | 75 |
| 33 | Andole | Sangupet | 5.71 | 1025 | 0.8 | 0.08 | 2 | 0 | 30 |
| 34 | Andole | Talelama | 9.61 | 1200 | 0.8 | 0.14 | 3 | 2 | 85 |
| 35 | Andole | Thadmanoor | 8.66 | 975 | 1.1 | 0.13 | 2 | 4 | 110 |
| 36 | Andole | Yerraram | 9.49 | 925 | 1 | 0.14 | 3 | 2 | 85 |
| 37 | Chegunta | Bheemraopally | 7.88 | 850 | 1.4 | 0.11 | 2 | 3 | 90 |
| 38 | Chegunta | Bonala | 10.13 | 1075 | 0.8 | 0.14 | 3 | 2 | 85 |
| 39 | Chegunta | Chandaipet | 8.28 | 625 | 1.3 | 0.11 | 0 | 3 | 60 |

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|---|---|---|---|---|---|---|---|---|---|
| 40 | Chegunta | Chegunta | 4.28 | 850 | 1.5 | 0.06 | 0 | 2 | 40 |
| 41 | Chegunta | Chetlathimmaipally | 9.27 | 525 | 1.3 | 0.13 | 0 | 4 | 80 |
| 42 | Chegunta | Chinnashivanoor | 7.73 | 650 | 1.2 | 0.10 | 0 | 2 | 40 |
| 43 | Chegunta | Gollapally | 5.19 | 675 | 1.3 | 0.07 | 0 | 3 | 60 |
| 44 | Chegunta | Makkarajpet | 11.84 | 625 | 1.3 | 0.16 | 2 | 3 | 90 |
| 45 | Chegunta | Narsampally | 7.60 | 900 | 1 | 0.10 | 2 | 2 | 70 |
| 46 | Chegunta | Narsingi | 10.89 | 975 | 1 | 0.15 | 3 | 2 | 85 |
| 47 | Chegunta | Peddashivanoor | 10.93 | 625 | 1.3 | 0.15 | 1 | 2 | 55 |
| 48 | Chegunta | Vallur | 5.11 | 850 | 1.5 | 0.07 | 1 | 3 | 75 |
| 49 | Chegunta | Wadiaram | 10.13 | 800 | 1.4 | 0.14 | 1 | 2 | 55 |
| 50 | Doulthabad | Appajipally | 20.59 | 2475 | 0.8 | 0.19 | 4 | 2 | 100 |
| 51 | Doulthabad | Begumpet | 6.10 | 2750 | 0.8 | 0.06 | 1 | 1 | 35 |
| 52 | Doulthabad | Godugupally | 7.69 | 600 | 1.2 | 0.07 | 0 | 3 | 60 |
| 53 | Doulthabad | Indupriyal | 11.74 | 625 | 1 | 0.11 | 0 | 1 | 20 |
| 54 | Doulthabad | Konapur | 3.16 | 550 | 0.9 | 0.03 | 0 | 1 | 20 |
| 55 | Doulthabad | Lingaaarajupally | 3.65 | 675 | 0.7 | 0.03 | 0 | 1 | 20 |
| 56 | Doulthabad | Lingareddypally | 3.42 | 675 | 0.8 | 0.03 | 0 | 1 | 20 |
| 57 | Doulthabad | Mubaraspur | 11.88 | 525 | 0.7 | 0.11 | 0 | 1 | 20 |
| 58 | Doulthabad | Narsampally(P.D) | 3.55 | 625 | 1.2 | 0.03 | 0 | 3 | 60 |
| 59 | Doulthabad | Rangumpet | 3.64 | 1450 | 0.8 | 0.03 | 0 | 3 | 60 |
| 60 | Doulthabad | Waddepally | 14.00 | 1550 | 0.9 | 0.13 | 2 | 4 | 110 |
| 61 | Doulthabad | Yelkal | 3.15 | 2950 | 0.8 | 0.03 | 0 | 3 | 60 |
| 62 | Dubbak | Dubbak | 24.97 | 750 | 1.4 | 0.23 | 1 | 0 | 15 |
| 63 | Gajwel | Bangal Venkatapur | 8.85 | 3050 | 0.8 | 0.07 | 1 | 2 | 55 |
| 64 | Gajwel | Dharamareddypally | 9.55 | 1925 | 0.8 | 0.07 | 0 | 1 | 20 |
| 65 | Gajwel | Kyasaram | 4.09 | 650 | 0.9 | 0.03 | 0 | 1 | 20 |
| 66 | Gajwel | M.Masanpally | 3.49 | 3900 | 0.8 | 0.03 | 0 | 2 | 40 |
| 67 | Gajwel | Sangapur | 5.13 | 3050 | 0.8 | 0.04 | 0 | 2 | 40 |
| 68 | Gajwel | Seripally | 4.14 | 750 | 0.9 | 0.03 | 0 | 1 | 20 |
| 69 | Hathnura | Borpatla | 10.81 | 575 | 1.3 | 0.14 | 3 | 1 | 65 |
| 70 | Hathnura | Chintalcheru | 16.35 | 1450 | 0.4 | 0.21 | 3 | 4 | 125 |
| 71 | Hathnura | Govindarajpalli | 5.32 | 950 | 1.1 | 0.07 | 1 | 3 | 75 |
| 72 | Hathnura | Hathnoora | 17.14 | 875 | 1.5 | 0.22 | 3 | 0 | 45 |
| 73 | Hathnura | Kasala | 14.82 | 675 | 1.4 | 0.19 | 4 | 2 | 100 |
| 74 | Hathnura | Mangapur | 10.13 | 875 | 1.3 | 0.13 | 2 | 4 | 110 |
| 75 | Hathnura | Naguladevpalli | 8.76 | 1050 | 1.1 | 0.11 | 2 | 3 | 90 |
| 76 | Hathnura | Palpanoor | 4.15 | 1000 | 1.2 | 0.05 | 1 | 1 | 35 |
| 77 | Hathnura | Panyal | 10.75 | 1200 | 1.1 | 0.14 | 3 | 1 | 65 |
| 78 | Hathnura | Sikindarpur | 10.81 | 1150 | 1.1 | 0.14 | 3 | 1 | 65 |
| 79 | Hathnura | Sirpuram | 19.94 | 925 | 0.7 | 0.25 | 5 | 4 | 155 |
| 80 | Hathnura | Turkalakhanapur | 7.18 | 625 | 1.2 | 0.09 | 1 | 1 | 35 |
| 81 | Hathnura | Yellammaguda | 8.03 | 1150 | 0.9 | 0.10 | 2 | 0 | 30 |
| 82 | Jagdevpur | Erravalli | 11.11 | 2025 | 1.4 | 0.07 | 0 | 2 | 40 |
| 83 | Jagdevpur | Gollapally | 7.01 | 1725 | 1.3 | 0.04 | 1 | 0 | 15 |
| 84 | Jagdevpur | Munigadapa | 16.21 | 1525 | 1.4 | 0.10 | 2 | 2 | 70 |

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|---|---|---|---|---|---|---|---|---|---|
| 85 | Jagdevpur | Theegul | 35.59 | 500 | 0.7 | 0.22 | 2 | 0 | 30 |
| 86 | Jharasangam | Ananthasagar | 2.10 | 1325 | 0.5 | 0.02 | 0 | 2 | 40 |
| 87 | Jharasangam | Bidekanna | 12.54 | 2275 | 0.9 | 0.12 | 2 | 4 | 110 |
| 88 | Jharasangam | Chilemamidi | 7.03 | 1125 | 0.4 | 0.07 | 1 | 3 | 75 |
| 89 | Jharasangam | Chilkepalle | 6.81 | 3725 | 0.5 | 0.07 | 1 | 3 | 75 |
| 90 | Jharasangam | Chillepalle | 7.55 | 900 | 0.3 | 0.07 | 1 | 3 | 75 |
| 91 | Jharasangam | Devarampalle | 3.35 | 1050 | 0.4 | 0.03 | 0 | 3 | 60 |
| 92 | Jharasangam | Edakulapalle | 17.77 | 900 | 0.4 | 0.18 | 4 | 1 | 80 |
| 93 | Jharasangam | Edulapalle | 9.87 | 1775 | 0.4 | 0.10 | 2 | 2 | 70 |
| 94 | Jharasangam | Gangapur | 2.65 | 1100 | 0.3 | 0.03 | 0 | 2 | 40 |
| 95 | Jharasangam | Giniarpally | 4.64 | 1650 | 0.4 | 0.05 | 1 | 0 | 15 |
| 96 | Jharasangam | Guntamarpalle | 5.61 | 850 | 0.4 | 0.06 | 1 | 1 | 35 |
| 97 | Jharasangam | Jeerlapalle | 6.79 | 900 | 0.4 | 0.07 | 1 | 3 | 75 |
| 98 | Jharasangam | junegaon | 3.66 | 850 | 0.5 | 0.04 | 0 | 3 | 60 |
| 99 | Jharasangam | Kakkerwada | 6.53 | 1000 | 0.3 | 0.06 | 1 | 2 | 55 |
| 100 | Jharasangam | Kamalpalle | 3.31 | 875 | 0.4 | 0.03 | 0 | 3 | 60 |
| 101 | Jharasangam | Kappad | 4.13 | 850 | 0.4 | 0.04 | 1 | 0 | 15 |
| 102 | Jharasangam | Kollur | 6.30 | 975 | 0.3 | 0.06 | 1 | 2 | 55 |
| 103 | Jharasangam | Machnoor | 12.27 | 925 | 0.7 | 0.12 | 2 | 4 | 110 |
| 104 | Jharasangam | Narsapur | 2.74 | 950 | 0.4 | 0.03 | 0 | 2 | 40 |
| 105 | Jharasangam | Sangam-K | 2.48 | 975 | 0.4 | 0.02 | 0 | 2 | 40 |
| 106 | Jharasangam | Siddapur | 4.13 | 775 | 0.3 | 0.04 | 1 | 0 | 15 |
| 107 | Jharasangam | Tummanpalle | 3.97 | 900 | 0.4 | 0.04 | 1 | 0 | 15 |
| 108 | Jharasangam | Vanampalle | 5.66 | 925 | 0.3 | 0.06 | 1 | 1 | 35 |
| 109 | Jharasangam | Yelgoi | 14.35 | 600 | 0.3 | 0.14 | 3 | 2 | 85 |
| 110 | Jinnaram | Annaram | 7.82 | 875 | 0.8 | 0.10 | 2 | 2 | 70 |
| 111 | Jinnaram | Bollaram | 9.37 | 925 | 1.2 | 0.12 | 0 | 3 | 60 |
| 112 | Jinnaram | Bonthapally | 9.30 | 1000 | 0.5 | 0.12 | 2 | 3 | 90 |
| 113 | Jinnaram | Ch.Potharam | 2.55 | 900 | 1 | 0.03 | 0 | 3 | 60 |
| 114 | Jinnaram | Dacharam | 2.76 | 775 | 0.6 | 0.03 | 0 | 3 | 60 |
| 115 | Jinnaram | Domadugu | 5.20 | 950 | 0.6 | 0.07 | 1 | 2 | 55 |
| 116 | Jinnaram | Gaddapotharam | 2.44 | 900 | 1 | 0.03 | 0 | 3 | 60 |
| 117 | Jinnaram | Gummadidala | 13.12 | 875 | 0.4 | 0.17 | 3 | 4 | 125 |
| 118 | Jinnaram | Jinnaram | 14.18 | 1050 | 1.1 | 0.18 | 4 | 1 | 80 |
| 119 | Jinnaram | Kanukunta | 21.93 | 875 | 0.9 | 0.28 | 6 | 2 | 130 |
| 120 | Jinnaram | Khajipally | 4.95 | 950 | 1.1 | 0.06 | 1 | 2 | 55 |
| 121 | Jinnaram | Kistaipally | 3.68 | 950 | 1.1 | 0.05 | 1 | 1 | 35 |
| 122 | Jinnaram | Kodakanchi | 8.11 | 1350 | 1 | 0.10 | 2 | 2 | 70 |
| 123 | Jinnaram | Kothapally | 5.06 | 1050 | 0.8 | 0.06 | 0 | 2 | 40 |
| 124 | Jinnaram | Laxmapur | 4.29 | 875 | 0.7 | 0.05 | 1 | 1 | 35 |
| 125 | Jinnaram | Mambapur | 11.05 | 450 | 0.8 | 0.14 | 3 | 2 | 85 |
| 126 | Jinnaram | Mangampet | 3.75 | 925 | 1.3 | 0.05 | 1 | 1 | 35 |
| 127 | Jinnaram | Nallapally | 8.51 | 700 | 0.9 | 0.11 | 2 | 3 | 90 |
| 128 | Jinnaram | Nalthur | 8.43 | 1125 | 1.1 | 0.11 | 2 | 3 | 90 |
| 129 | Jinnaram | Ootla | 9.30 | 925 | 1.3 | 0.12 | 1 | 3 | 75 |

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|---|---|---|---|---|---|---|---|---|---|
| 130 | Jinnaram | Pyaranagar | 2.91 | 675 | 0.7 | 0.04 | 0 | 3 | 60 |
| 131 | Jinnaram | Wailal | 10.00 | 1000 | 1 | 0.13 | 2 | 4 | 110 |
| 132 | Kalher | Antergaon | 7.31 | 1000 | 0.7 | 0.08 | 2 | 0 | 30 |
| 133 | Kalher | Bibipet | 10.23 | 950 | 0.9 | 0.11 | 2 | 3 | 90 |
| 134 | Kalher | Bokkasagaon | 4.03 | 875 | 0.7 | 0.04 | 1 | 0 | 15 |
| 135 | Kalher | Fathepur | 3.52 | 950 | 1 | 0.04 | 0 | 3 | 60 |
| 136 | Kalher | Kadpal | 19.12 | 800 | 0.7 | 0.21 | 4 | 4 | 140 |
| 137 | Kalher | Khajapur | 5.86 | 800 | 0.8 | 0.06 | 1 | 2 | 55 |
| 138 | Kalher | Khanapur.K. | 3.25 | 900 | 1 | 0.03 | 0 | 3 | 60 |
| 139 | Kalher | Krishnapur | 9.47 | 900 | 1 | 0.10 | 2 | 2 | 70 |
| 140 | Kalher | Mungepally | 14.42 | 3575 | 0.9 | 0.15 | 0 | 3 | 60 |
| 141 | Kalher | Murbarakpur | 4.80 | 825 | 0.7 | 0.05 | 1 | 1 | 35 |
| 142 | Kalher | Pochapur | 4.96 | 950 | 0.8 | 0.05 | 1 | 1 | 35 |
| 143 | Kalher | Ramreddypet | 20.80 | 1525 | 1.4 | 0.22 | 5 | 2 | 115 |
| 144 | Kalher | Sirgapur | 21.08 | 750 | 0.7 | 0.23 | 5 | 2 | 115 |
| 145 | Kalher | Sultanabad | 3.52 | 825 | 0.7 | 0.04 | 0 | 3 | 60 |
| 146 | Kangti | Bheemra | 8.82 | 1025 | 0.7 | 0.09 | 1 | 0 | 15 |
| 147 | Kangti | Borgi.A | 14.12 | 1100 | 0.6 | 0.14 | 3 | 2 | 85 |
| 148 | Kangti | Chapta.B | 8.21 | 1175 | 0.5 | 0.08 | 2 | 0 | 30 |
| 149 | Kangti | Chapta.K. | 10.73 | 1125 | 0.5 | 0.11 | 2 | 1 | 50 |
| 150 | Kangti | Cheemalpad | 3.46 | 775 | 0.7 | 0.03 | 0 | 3 | 60 |
| 151 | Kangti | Chowkanpally | 14.75 | 1075 | 0.6 | 0.15 | 3 | 2 | 85 |
| 152 | Kangti | Damargidda P.M. | 8.21 | 1100 | 0.5 | 0.08 | 2 | 0 | 30 |
| 153 | Kangti | Degulwadi | 15.21 | 1050 | 0.7 | 0.15 | 3 | 3 | 105 |
| 154 | Kangti | Enkenmori | 9.74 | 925 | 0.7 | 0.10 | 2 | 2 | 70 |
| 155 | Kangti | Gajulpad | 8.33 | 975 | 0.6 | 0.08 | 1 | 0 | 15 |
| 156 | Kangti | Garidegaon | 3.20 | 775 | 0.7 | 0.03 | 0 | 3 | 60 |
| 157 | Kangti | Goudgaon.K. | 4.69 | 825 | 0.7 | 0.05 | 1 | 1 | 35 |
| 158 | Kangti | Kangti | 17.04 | 1050 | 0.7 | 0.17 | 3 | 4 | 125 |
| 159 | Kangti | Naganpally | 6.79 | 825 | 0.7 | 0.07 | 1 | 3 | 75 |
| 160 | Kangti | Nagoor.B. | 10.45 | 1000 | 0.7 | 0.10 | 2 | 2 | 70 |
| 161 | Kangti | Nagoor.K. | 5.88 | 1000 | 0.7 | 0.06 | 1 | 2 | 55 |
| 162 | Kangti | Potpally | 6.39 | 850 | 0.7 | 0.06 | 1 | 2 | 55 |
| 163 | Kangti | Ramtirth | 4.62 | 950 | 0.7 | 0.05 | 1 | 0 | 15 |
| 164 | Kangti | Rasole | 3.53 | 1025 | 0.6 | 0.03 | 0 | 3 | 60 |
| 165 | Kangti | Sangam. | 2.59 | 800 | 0.7 | 0.03 | 0 | 2 | 40 |
| 166 | Kangti | Sidhangarga | 9.98 | 925 | 0.7 | 0.10 | 2 | 2 | 70 |
| 167 | Kangti | Sukkaltirth | 9.57 | 1000 | 0.7 | 0.09 | 2 | 1 | 50 |
| 168 | Kangti | Turkwadgaon | 18.70 | 1000 | 0.7 | 0.18 | 4 | 0 | 60 |
| 169 | Kangti | Wangdhal | 9.37 | 850 | 0.7 | 0.09 | 2 | 1 | 50 |
| 170 | Kangti | Wasar | 14.87 | 875 | 0.7 | 0.15 | 3 | 2 | 85 |
| 171 | Koheer | Badampet | 12.76 | 875 | 0.5 | 0.12 | 2 | 3 | 90 |
| 172 | Koheer | Bilalpur | 15.38 | 675 | 0.5 | 0.14 | 3 | 2 | 85 |
| 173 | Koheer | Chinthalghat | 7.75 | 1450 | 0.9 | 0.07 | 1 | 3 | 75 |
| 174 | Koheer | Digwal | 11.93 | 5600 | 0.2 | 0.11 | 2 | 3 | 90 |

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|---|---|---|---|---|---|---|---|---|---|
| 175 | Koheer | Godgarpally Pattiiko | 4.95 | 775 | 0.5 | 0.04 | 1 | 0 | 15 |
| 176 | Koheer | Gurujwada | 7.46 | 1025 | 0.4 | 0.07 | 1 | 3 | 75 |
| 177 | Koheer | Kaveli | 12.74 | 2450 | 0.7 | 0.12 | 2 | 3 | 90 |
| 178 | Koheer | Khanapur | 4.73 | 750 | 0.4 | 0.04 | 1 | 0 | 15 |
| 179 | Koheer | Kohir | 26.86 | 1875 | 0.2 | 0.24 | 5 | 3 | 135 |
| 180 | Koheer | Kothur D | 4.72 | 900 | 1.4 | 0.04 | 1 | 0 | 15 |
| 181 | Koheer | Kothur K. | 4.68 | 750 | 0.4 | 0.04 | 1 | 0 | 15 |
| 182 | Koheer | Machireddypally | 6.26 | 850 | 0.4 | 0.06 | 1 | 2 | 55 |
| 183 | Koheer | Madri | 8.24 | 2200 | 0.5 | 0.07 | 1 | 3 | 75 |
| 184 | Koheer | Maniyarpally | 12.17 | 800 | 0.5 | 0.11 | 2 | 3 | 90 |
| 185 | Koheer | Nagireddypally | 6.39 | 500 | 0.5 | 0.06 | 1 | 2 | 55 |
| 186 | Koheer | Paidigammail | 17.39 | 500 | 0.5 | 0.16 | 3 | 3 | 105 |
| 187 | Koheer | Parsapally | 9.06 | 650 | 0.4 | 0.08 | 2 | 0 | 30 |
| 188 | Koheer | Pitcharagadi | 13.17 | 800 | 0.6 | 0.12 | 2 | 3 | 90 |
| 189 | Koheer | Rajnelli | 3.56 | 875 | 0.4 | 0.03 | 0 | 3 | 60 |
| 190 | Koheer | Sajjapur | 5.46 | 825 | 0.4 | 0.05 | 1 | 1 | 35 |
| 191 | Koheer | Venkatapur | 8.88 | 1600 | 1 | 0.08 | 2 | 0 | 30 |
| 192 | Kondapak | Kondapak | 28.90 | 1425 | 1.1 | 0.12 | 0 | 1 | 20 |
| 193 | Kondapak | Tipparam | 8.13 | 925 | 1.1 | 0.03 | 0 | 2 | 40 |
| 194 | Kondapur | Aliabad | 4.26 | 1675 | 0.6 | 0.03 | 0 | 3 | 60 |
| 195 | Kondapur | Anathasagar | 11.36 | 1125 | 0.7 | 0.08 | 2 | 0 | 30 |
| 196 | Kondapur | Ch. Konapur | 5.94 | 1325 | 0.6 | 0.04 | 1 | 0 | 15 |
| 197 | Kondapur | Gadi Malkapur | 3.27 | 1325 | 0.6 | 0.02 | 0 | 2 | 40 |
| 198 | Kondapur | Gangaram | 8.27 | 625 | 0.7 | 0.06 | 1 | 2 | 55 |
| 199 | Kondapur | Gollapally | 8.22 | 1025 | 0.8 | 0.06 | 1 | 2 | 55 |
| 200 | Kondapur | Gunthapally | 5.83 | 975 | 0.9 | 0.04 | 1 | 0 | 15 |
| 201 | Kondapur | Kondapur | 9.37 | 1275 | 0.7 | 0.07 | 1 | 3 | 75 |
| 202 | Kondapur | Malkapur | 12.14 | 1025 | 1.2 | 0.09 | 2 | 1 | 50 |
| 203 | Kondapur | Mansanpally | 5.98 | 1400 | 0.6 | 0.04 | 1 | 0 | 15 |
| 204 | Kondapur | Marepally | 11.10 | 1225 | 0.7 | 0.08 | 2 | 0 | 30 |
| 205 | Kondapur | Mohamdpur | 6.30 | 850 | 0.7 | 0.05 | 1 | 1 | 35 |
| 206 | Kondapur | Munidevunipally | 9.21 | 1425 | 0.6 | 0.07 | 1 | 3 | 75 |
| 207 | Kondapur | Qutubshapet | 1.83 | 1100 | 0.6 | 0.01 | 0 | 1 | 20 |
| 208 | Kondapur | Terpole | 10.93 | 1950 | 0.5 | 0.08 | 2 | 0 | 30 |
| 209 | Kondapur | Togarpally | 9.30 | 1550 | 0.5 | 0.07 | 1 | 3 | 75 |
| 210 | Kowdipally | Ajamari | 6.52 | 1025 | 0.8 | 0.10 | 2 | 2 | 70 |
| 211 | Kowdipally | Banda Pothigal | 4.32 | 1025 | 0.8 | 0.07 | 0 | 3 | 60 |
| 212 | Kowdipally | Bujrampet | 13.82 | 800 | 0.8 | 0.22 | 5 | 1 | 95 |
| 213 | Kowdipally | Chilipched | 8.14 | 1225 | 0.8 | 0.13 | 2 | 4 | 110 |
| 214 | Kowdipally | Chitkul | 8.35 | 1025 | 0.9 | 0.13 | 3 | 1 | 65 |
| 215 | Kowdipally | Devulapalli | 5.77 | 1025 | 0.6 | 0.09 | 2 | 1 | 50 |
| 216 | Kowdipally | Dharmasagar | 5.18 | 1075 | 0.6 | 0.08 | 2 | 0 | 30 |
| 217 | Kowdipally | Faizabad | 9.01 | 1050 | 0.7 | 0.14 | 3 | 2 | 85 |
| 218 | Kowdipally | Gowthapur | 9.89 | 1025 | 1.2 | 0.15 | 3 | 3 | 105 |

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|---|---|---|---|---|---|---|---|---|---|
| 219 | Kowdipally | Kukatpally | 8.45 | 950 | 0.7 | 0.13 | 3 | 1 | 65 |
| 220 | Kowdipally | Mangalparthi | 19.02 | 900 | 0.9 | 0.30 | 6 | 4 | 170 |
| 221 | Kowdipally | Nagsanpally | 4.20 | 1000 | 0.6 | 0.07 | 1 | 2 | 55 |
| 222 | Kowdipally | Raheemguda | 1.85 | 1025 | 0.6 | 0.03 | 0 | 3 | 60 |
| 223 | Kowdipally | Railapur | 11.04 | 1025 | 0.7 | 0.17 | 4 | 1 | 80 |
| 224 | Kowdipally | Rajpet | 8.47 | 775 | 0.8 | 0.13 | 3 | 1 | 65 |
| 225 | Kowdipally | Salabathpur | 12.73 | 1075 | 0.6 | 0.20 | 4 | 3 | 120 |
| 226 | Kowdipally | Sommakkapet | 6.85 | 1100 | 0.6 | 0.11 | 2 | 3 | 90 |
| 227 | Kowdipally | Timmapur | 7.79 | 925 | 0.7 | 0.12 | 2 | 4 | 110 |
| 228 | Kowdipally | Venkatapur - B | 5.50 | 800 | 0.8 | 0.09 | 2 | 0 | 30 |
| 229 | Kowdipally | Venkatapur - V | 5.50 | 725 | 0.8 | 0.09 | 2 | 0 | 30 |
| 230 | Kowdipally | Yelmakanna | 14.30 | 725 | 1 | 0.22 | 5 | 2 | 115 |
| 231 | Kulcharam | Amsanpally | 15.96 | 775 | 1.2 | 0.17 | 4 | 1 | 80 |
| 232 | Kulcharam | Kangode | 7.03 | 675 | 0.8 | 0.08 | 1 | 3 | 75 |
| 233 | Kulcharam | Kistapur | 2.28 | 2850 | 0.6 | 0.02 | 0 | 2 | 40 |
| 234 | Kulcharam | Konapur | 3.93 | 800 | 0.9 | 0.04 | 1 | 0 | 15 |
| 235 | Kulcharam | Kulcharam | 18.11 | 1175 | 0.9 | 0.19 | 4 | 3 | 120 |
| 236 | Kulcharam | N.Jalalpur | 8.21 | 625 | 0.9 | 0.09 | 2 | 1 | 50 |
| 237 | Kulcharam | Pothanshettypally | 9.58 | 1775 | 0.8 | 0.10 | 2 | 2 | 70 |
| 238 | Kulcharam | Pothireddypally | 3.86 | 725 | 1.3 | 0.04 | 1 | 0 | 15 |
| 239 | Kulcharam | Rampur | 9.21 | 2775 | 0.6 | 0.10 | 2 | 2 | 70 |
| 240 | Kulcharam | Warigunthem | 12.31 | 1025 | 0.8 | 0.13 | 3 | 1 | 65 |
| 241 | Kulcharam | Y.mahammadapur | 4.92 | 700 | 1.1 | 0.05 | 1 | 1 | 35 |
| 242 | Kulcharam | Yanigandla | 13.25 | 775 | 1.1 | 0.14 | 3 | 2 | 85 |
| 243 | Manoor | Athmial | 7.82 | 450 | 0.4 | 0.08 | 2 | 0 | 30 |
| 244 | Manoor | Audathpur | 7.01 | 850 | 0.6 | 0.07 | 1 | 3 | 75 |
| 245 | Manoor | Badalgaon | 4.66 | 425 | 0.5 | 0.05 | 1 | 1 | 35 |
| 246 | Manoor | Bellapur | 10.38 | 475 | 0.9 | 0.10 | 2 | 2 | 70 |
| 247 | Manoor | Borancha | 16.39 | 600 | 2 | 0.16 | 3 | 3 | 105 |
| 248 | Manoor | Dhanwar | 6.19 | 800 | 1.8 | 0.06 | 1 | 2 | 55 |
| 249 | Manoor | Doodgonda | 5.48 | 575 | 2 | 0.05 | 1 | 1 | 35 |
| 250 | Manoor | Enakpally | 8.11 | 800 | 0.6 | 0.08 | 2 | 0 | 30 |
| 251 | Manoor | Erakpally | 15.27 | 850 | 0.6 | 0.15 | 3 | 3 | 105 |
| 252 | Manoor | Gatlingampally | 4.17 | 775 | 1.4 | 0.04 | 1 | 0 | 15 |
| 253 | Manoor | Gondegam | 4.22 | 700 | 0.5 | 0.04 | 1 | 0 | 15 |
| 254 | Manoor | Gudoor | 5.43 | 600 | 0.5 | 0.05 | 1 | 1 | 35 |
| 255 | Manoor | Islampur | 2.45 | 1025 | 1.3 | 0.02 | 0 | 2 | 40 |
| 256 | Manoor | Kamalapur | 1.93 | 825 | 0.5 | 0.02 | 0 | 2 | 40 |
| 257 | Manoor | Karamungi | 15.89 | 775 | 0.6 | 0.16 | 3 | 3 | 105 |
| 258 | Manoor | Karasguthi | 13.70 | 800 | 0.6 | 0.14 | 3 | 1 | 65 |
| 259 | Manoor | Maikode | 7.19 | 450 | 0.9 | 0.07 | 1 | 3 | 75 |
| 260 | Manoor | Manoor | 8.43 | 400 | 0.5 | 0.08 | 2 | 0 | 30 |
| 261 | Manoor | Mavinhally | 9.64 | 725 | 0.6 | 0.10 | 2 | 2 | 70 |
| 262 | Manoor | Morgi | 8.13 | 675 | 0.5 | 0.08 | 2 | 0 | 30 |
| 263 | Manoor | Mukthapur | 6.01 | 475 | 0.5 | 0.06 | 1 | 2 | 55 |

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|---|---|---|---|---|---|---|---|---|---|
| 264 | Manoor | Nadigadda Hurkrana | 5.70 | 625 | 0.5 | 0.06 | 1 | 1 | 35 |
| 265 | Manoor | Nagalgidda | 7.42 | 575 | 0.5 | 0.07 | 1 | 3 | 75 |
| 266 | Manoor | Ootpally | 6.58 | 775 | 0.6 | 0.07 | 1 | 2 | 55 |
| 267 | Manoor | Pulkurthy | 8.89 | 450 | 0.4 | 0.09 | 2 | 0 | 30 |
| 268 | Manoor | Raipally | 4.85 | 1225 | 0.6 | 0.05 | 1 | 1 | 35 |
| 269 | Manoor | Ranapur | 5.56 | 475 | 1.2 | 0.05 | 1 | 1 | 35 |
| 270 | Manoor | Shaligira | 6.33 | 575 | 0.5 | 0.06 | 1 | 2 | 55 |
| 271 | Manoor | Sharidamargidda | 9.65 | 675 | 0.5 | 0.10 | 2 | 2 | 70 |
| 272 | Manoor | Shikarkhana | 5.97 | 825 | 0.6 | 0.06 | 1 | 2 | 55 |
| 273 | Manoor | Thimmapur | 3.01 | 650 | 0.5 | 0.03 | 0 | 3 | 60 |
| 274 | Manoor | Thornal | 7.19 | 550 | 0.5 | 0.07 | 1 | 3 | 75 |
| 275 | Manoor | Usrikpally | 5.77 | 1350 | 0.5 | 0.06 | 1 | 2 | 55 |
| 276 | Manoor | Vallor | 5.56 | 500 | 0.5 | 0.05 | 1 | 1 | 35 |
| 277 | Manoor | Yelgoi | 21.91 | 450 | 0.4 | 0.22 | 5 | 1 | 95 |
| 278 | Manoor | Yerraboguda | 3.84 | 625 | 0.5 | 0.04 | 0 | 3 | 60 |
| 279 | Manoor | Yesgi | 6.29 | 850 | 0.6 | 0.06 | 1 | 2 | 55 |
| 280 | Medak | Ananthasagar | 7.29 | 1325 | 0.9 | 0.11 | 0 | 3 | 60 |
| 281 | Medak | Ausulapally | 6.09 | 925 | 0.8 | 0.10 | 2 | 2 | 70 |
| 282 | Medak | B.Bhoopathpur | 7.24 | 925 | 0.9 | 0.11 | 0 | 3 | 60 |
| 283 | Medak | Balanagar | 5.21 | 700 | 0.8 | 0.08 | 2 | 0 | 30 |
| 284 | Medak | Burugpally | 30.13 | 975 | 0.9 | 0.47 | 10 | 5 | 250 |
| 285 | Medak | Chityal | 13.86 | 700 | 0.6 | 0.22 | 4 | 1 | 80 |
| 286 | Medak | Gangapur | 9.83 | 1525 | 0.8 | 0.15 | 3 | 3 | 105 |
| 287 | Medak | Haveli Ghanapur | 9.85 | 975 | 0.9 | 0.15 | 0 | 3 | 60 |
| 288 | Medak | Khajipally | 10.47 | 1525 | 1.3 | 0.16 | 3 | 3 | 105 |
| 289 | Medak | Kuchenpally | 5.26 | 1200 | 0.9 | 0.08 | 2 | 0 | 30 |
| 290 | Medak | M.Bhoopathpur | 5.35 | 1200 | 1 | 0.08 | 2 | 0 | 30 |
| 291 | Medak | Medak | 30.09 | 1000 | 1 | 0.47 | 10 | 5 | 250 |
| 292 | Medak | Mirugudpally | 2.47 | 925 | 0.9 | 0.04 | 0 | 3 | 60 |
| 293 | Medak | Muthaipally | 3.99 | 925 | 0.9 | 0.06 | 0 | 2 | 40 |
| 294 | Medak | Nagapur | 6.88 | 1050 | 0.9 | 0.11 | 0 | 2 | 40 |
| 295 | Medak | Pathur | 12.11 | 1400 | 0.8 | 0.19 | 4 | 2 | 100 |
| 296 | Medak | Peroor | 3.21 | 3275 | 0.5 | 0.05 | 0 | 1 | 20 |
| 297 | Medak | Rajpally | 7.11 | 925 | 0.9 | 0.11 | 2 | 3 | 90 |
| 298 | Medak | Rajpet | 25.84 | 975 | 0.9 | 0.40 | 5 | 5 | 175 |
| 299 | Medak | Rayalamadugu | 10.40 | 2725 | 0.6 | 0.16 | 3 | 3 | 105 |
| 300 | Medak | Rayanpally | 15.01 | 1525 | 0.9 | 0.23 | 5 | 2 | 115 |
| 301 | Medak | Sardhana | 15.93 | 800 | 1 | 0.25 | 4 | 4 | 140 |
| 302 | Medak | Shamnapur | 7.50 | 1475 | 0.8 | 0.12 | 2 | 3 | 90 |
| 303 | Medak | Thimmaipally | 5.60 | 1175 | 0.9 | 0.09 | 2 | 0 | 30 |
| 304 | Medak | Thogita | 11.54 | 875 | 0.9 | 0.18 | 1 | 1 | 35 |
| 305 | Medak | Venkatapur | 12.12 | 1400 | 1.2 | 0.19 | 4 | 2 | 100 |
| 306 | Mirdoddi | Mirdoddi | 30.41 | 1100 | 1 | 0.30 | 4 | 1 | 80 |
| 307 | Mirdoddi | Mothey | 11.42 | 1075 | 0.9 | 0.11 | 0 | 1 | 20 |

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|---|---|---|---|---|---|---|---|---|---|
| 308 | Mirdoddi | Rudraram | 12.72 | 1300 | 0.7 | 0.13 | 0 | 2 | 40 |
| 309 | Mulugu | Banda Thimmapur | 3.05 | 500 | 1.3 | 0.02 | 0 | 2 | 40 |
| 310 | Mulugu | Baswapur | 3.20 | 525 | 1.7 | 0.02 | 0 | 2 | 40 |
| 311 | Mulugu | Damarakunta | 17.31 | 1575 | 2 | 0.13 | 0 | 2 | 40 |
| 312 | Mulugu | Karkapartla | 10.83 | 700 | 3 | 0.08 | 1 | 0 | 15 |
| 313 | Mulugu | Kokkkonda | 10.83 | 550 | 1.8 | 0.08 | 2 | 0 | 30 |
| 314 | Mulugu | Mulugu | 19.24 | 3200 | 1.5 | 0.14 | 3 | 2 | 85 |
| 315 | Mulugu | Narsampally | 8.96 | 375 | 3.3 | 0.07 | 0 | 3 | 60 |
| 316 | Mulugu | Tanedarpally | 4.13 | 1225 | 2.9 | 0.03 | 0 | 1 | 20 |
| 317 | Mulugu | Tunki Bollaram | 11.75 | 1025 | 2.1 | 0.09 | 2 | 0 | 30 |
| 318 | Mulugu | Zapthi singaipally | 4.57 | 525 | 2.6 | 0.03 | 0 | 3 | 60 |
| 319 | Munipally | Allapur | 2.67 | 750 | 1.2 | 0.03 | 0 | 2 | 40 |
| 320 | Munipally | Antharam | 3.89 | 825 | 0.5 | 0.04 | 0 | 3 | 60 |
| 321 | Munipally | Beloor | 6.56 | 900 | 1.6 | 0.06 | 1 | 2 | 55 |
| 322 | Munipally | Bodepally | 4.47 | 775 | 0.9 | 0.04 | 1 | 0 | 15 |
| 323 | Munipally | Bodishettipally | 3.91 | 900 | 0.4 | 0.04 | 0 | 3 | 60 |
| 324 | Munipally | Busareddypally | 12.17 | 750 | 2.2 | 0.12 | 2 | 4 | 110 |
| 325 | Munipally | Chellapally | 7.17 | 850 | 1.6 | 0.07 | 1 | 3 | 75 |
| 326 | Munipally | Chelmedakurd | 8.80 | 825 | 0.5 | 0.09 | 2 | 0 | 30 |
| 327 | Munipally | Chinnachelmada | 11.29 | 775 | 0.8 | 0.11 | 2 | 3 | 90 |
| 328 | Munipally | Garilapally | 8.06 | 775 | 1.3 | 0.08 | 2 | 0 | 30 |
| 329 | Munipally | Hydlapur | 2.33 | 750 | 1 | 0.02 | 0 | 2 | 40 |
| 330 | Munipally | Kallepally | 6.58 | 875 | 1.6 | 0.06 | 1 | 2 | 55 |
| 331 | Munipally | Kamkole | 10.89 | 2150 | 0.8 | 0.11 | 2 | 3 | 90 |
| 332 | Munipally | Khamampally | 9.86 | 775 | 0.7 | 0.10 | 2 | 2 | 70 |
| 333 | Munipally | Lingampally | 8.95 | 900 | 0.3 | 0.09 | 2 | 0 | 30 |
| 334 | Munipally | Lonikalan | 7.09 | 800 | 0.8 | 0.07 | 1 | 3 | 75 |
| 335 | Munipally | Lonikud | 8.44 | 775 | 0.9 | 0.08 | 2 | 0 | 30 |
| 336 | Munipally | Maktyakysaram | 7.76 | 775 | 1.8 | 0.08 | 1 | 3 | 75 |
| 337 | Munipally | Mallikarjunpally | 7.71 | 750 | 1.4 | 0.08 | 1 | 3 | 75 |
| 338 | Munipally | Mansanpally | 4.66 | 800 | 0.6 | 0.05 | 1 | 1 | 35 |
| 339 | Munipally | Melasangam | 5.92 | 900 | 0.4 | 0.06 | 1 | 2 | 55 |
| 340 | Munipally | Munipally | 16.62 | 750 | 0.8 | 0.16 | 3 | 3 | 105 |
| 341 | Munipally | Polkampally | 3.84 | 800 | 0.7 | 0.04 | 0 | 3 | 60 |
| 342 | Munipally | Ramchandrapur(UT) | 4.34 | 750 | 2.7 | 0.04 | 1 | 0 | 15 |
| 343 | Munipally | Rekulpahad UT | 2.24 | 800 | 1.8 | 0.02 | 0 | 2 | 40 |
| 344 | Munipally | Thatpally | 6.60 | 825 | 0.6 | 0.07 | 1 | 2 | 55 |
| 345 | Narayankhed | Abbenda | 15.05 | 625 | 0.6 | 0.16 | 3 | 3 | 105 |
| 346 | Narayankhed | Ananthasagar | 12.89 | 1100 | 0.7 | 0.14 | 3 | 2 | 85 |
| 347 | Narayankhed | Chand Kanpally | 2.61 | 1675 | 0.4 | 0.03 | 0 | 2 | 40 |
| 348 | Narayankhed | Chandapur | 2.11 | 1450 | 0.6 | 0.02 | 0 | 2 | 40 |
| 349 | Narayankhed | Chaptka-K | 7.10 | 700 | 0.7 | 0.08 | 1 | 3 | 75 |
| 350 | Narayankhed | G.Hukarana | 3.71 | 925 | 0.5 | 0.04 | 1 | 0 | 15 |
| 351 | Narayankhed | Hangarga-B | 4.78 | 675 | 0.6 | 0.05 | 1 | 1 | 35 |

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|---|---|---|---|---|---|---|---|---|---|
| 352 | Narayankhed | Hangarga-K | 9.01 | 700 | 0.6 | 0.10 | 2 | 2 | 70 |
| 353 | Narayankhed | Hanmathraopet | 1.47 | 1875 | 0.6 | 0.02 | 0 | 1 | 20 |
| 354 | Narayankhed | Jukal | 9.55 | 1675 | 0.5 | 0.10 | 0 | 2 | 40 |
| 355 | Narayankhed | Kamjipur | 6.58 | 1900 | 0.5 | 0.07 | 1 | 3 | 75 |
| 356 | Narayankhed | Lingapur | 2.10 | 1725 | 0.5 | 0.02 | 0 | 2 | 40 |
| 357 | Narayankhed | Madhwar | 12.78 | 1750 | 0.6 | 0.14 | 3 | 1 | 65 |
| 358 | Narayankhed | Nagapur | 3.72 | 675 | 0.6 | 0.04 | 1 | 0 | 15 |
| 359 | Narayankhed | Namalimet | 5.34 | 2500 | 0.6 | 0.06 | 1 | 0 | 15 |
| 360 | Narayankhed | Narayankhed | 7.51 | 1700 | 0.4 | 0.08 | 2 | 0 | 30 |
| 361 | Narayankhed | Nizamapet | 20.98 | 4075 | 0.9 | 0.23 | 4 | 2 | 100 |
| 362 | Narayankhed | Panchagoan | 3.95 | 1200 | 0.6 | 0.04 | 1 | 0 | 15 |
| 363 | Narayankhed | Pipri | 3.65 | 950 | 0.5 | 0.04 | 1 | 0 | 15 |
| 364 | Narayankhed | Rudrar | 5.15 | 750 | 1.4 | 0.06 | 0 | 1 | 20 |
| 365 | Narayankhed | Sathagoan | 5.69 | 1225 | 0.7 | 0.06 | 1 | 0 | 15 |
| 366 | Narayankhed | Ujalampad | 6.07 | 750 | 0.7 | 0.07 | 1 | 2 | 55 |
| 367 | Narsapur | Achampet | 2.81 | 1100 | 0.6 | 0.04 | 0 | 3 | 60 |
| 368 | Narsapur | Ahmed Nagar | 9.36 | 1125 | 0.7 | 0.13 | 2 | 4 | 110 |
| 369 | Narsapur | Brahmanpally | 5.00 | 1025 | 0.7 | 0.07 | 1 | 3 | 75 |
| 370 | Narsapur | Hanumanthapur | 3.44 | 850 | 0.6 | 0.05 | 1 | 1 | 35 |
| 371 | Narsapur | Khazipet | 12.82 | 775 | 0.8 | 0.17 | 4 | 1 | 80 |
| 372 | Narsapur | Lingapur | 6.00 | 975 | 0.7 | 0.08 | 2 | 0 | 30 |
| 373 | Narsapur | Madapur | 4.20 | 1250 | 1.2 | 0.06 | 1 | 2 | 55 |
| 374 | Narsapur | Malparthi | 2.26 | 850 | 0.6 | 0.03 | 0 | 3 | 60 |
| 375 | Narsapur | Manthoor | 4.50 | 900 | 0.7 | 0.06 | 1 | 2 | 55 |
| 376 | Narsapur | Narayanpur | 3.50 | 875 | 0.6 | 0.05 | 1 | 1 | 35 |
| 377 | Narsapur | Narsapur | 22.64 | 1525 | 0.8 | 0.31 | 7 | 1 | 125 |
| 378 | Narsapur | Nathnaipally | 4.82 | 775 | 1.4 | 0.07 | 1 | 2 | 55 |
| 379 | Narsapur | P.C.Kunta | 5.50 | 1350 | 1.1 | 0.07 | 1 | 3 | 75 |
| 380 | Narsapur | Tirumalapur | 2.31 | 800 | 0.8 | 0.03 | 0 | 3 | 60 |
| 381 | Nyalkal | Ganeshpur | 4.94 | 400 | 0.4 | 0.05 | 1 | 1 | 35 |
| 382 | Nyalkal | Handnoor | 14.45 | 325 | 0.5 | 0.14 | 3 | 2 | 85 |
| 383 | Nyalkal | Husselli | 5.70 | 450 | 0.5 | 0.06 | 1 | 1 | 35 |
| 384 | Nyalkal | Ibrahimpur | 7.18 | 800 | 0.5 | 0.07 | 1 | 3 | 75 |
| 385 | Nyalkal | Kalbemula | 9.48 | 350 | 0.4 | 0.09 | 2 | 1 | 50 |
| 386 | Nyalkal | Rejintal | 15.81 | 575 | 0.3 | 0.16 | 3 | 3 | 105 |
| 387 | Nyalkal | Tatpally | 2.85 | 1175 | 0.3 | 0.03 | 0 | 3 | 60 |
| 388 | Nyalkal | Tekur | 4.32 | 1050 | 0.3 | 0.04 | 1 | 0 | 15 |
| 389 | Nyalkal | Waddi | 7.64 | 575 | 0.5 | 0.08 | 1 | 3 | 75 |
| 390 | Papannapet | Arkela | 8.71 | 1700 | 1.2 | 0.10 | 2 | 2 | 70 |
| 391 | Papannapet | Bacharam | 6.35 | 1600 | 1.1 | 0.07 | 1 | 3 | 75 |
| 392 | Papannapet | Cheekode | 5.94 | 2000 | 1.4 | 0.07 | 1 | 3 | 75 |
| 393 | Papannapet | Chitriyal | 7.64 | 1475 | 0.8 | 0.09 | 2 | 1 | 50 |
| 394 | Papannapet | Ellapur | 4.34 | 2625 | 0.6 | 0.05 | 1 | 1 | 35 |
| 395 | Papannapet | Gandarpally | 9.83 | 875 | 1 | 0.11 | 2 | 3 | 90 |
| 396 | Papannapet | Kodapak | 14.62 | 1100 | 1 | 0.17 | 4 | 1 | 80 |

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|---|---|---|---|---|---|---|---|---|---|
| 397 | Papannapet | Kompally | 4.56 | 1950 | 0.5 | 0.05 | 1 | 1 | 35 |
| 398 | Papannapet | Kurtiwada | 19.36 | 1700 | 1.3 | 0.23 | 5 | 2 | 115 |
| 399 | Papannapet | Mallampet | 12.36 | 2800 | 0.8 | 0.14 | 3 | 2 | 85 |
| 400 | Papannapet | Namapur | 6.07 | 1550 | 0.9 | 0.07 | 1 | 3 | 75 |
| 401 | Papannapet | Narsingi | 6.30 | 1650 | 1.2 | 0.07 | 1 | 3 | 75 |
| 402 | Papannapet | Papannapet | 10.66 | 1700 | 1.3 | 0.12 | 2 | 4 | 110 |
| 403 | Papannapet | Podchanpally | 13.50 | 1350 | 0.9 | 0.16 | 3 | 3 | 105 |
| 404 | Papannapet | Ramthirtham | 5.29 | 1300 | 1.1 | 0.06 | 1 | 2 | 55 |
| 405 | Papannapet | Tammaipally | 4.31 | 1800 | 1.2 | 0.05 | 1 | 1 | 35 |
| 406 | Papannapet | Yousufpeta | 8.59 | 1925 | 1.2 | 0.10 | 2 | 2 | 70 |
| 407 | Patancheru | Ameenpur | 18.05 | 925 | 1.2 | 0.16 | 3 | 3 | 105 |
| 408 | Patancheru | Bhanoor | 14.12 | 450 | 0.5 | 0.13 | 2 | 4 | 110 |
| 409 | Patancheru | Chinnakanjarla | 10.85 | 1725 | 0.7 | 0.10 | 0 | 2 | 40 |
| 410 | Patancheru | Indresham | 7.90 | 2075 | 0.6 | 0.07 | 0 | 3 | 60 |
| 411 | Patancheru | Inole | 5.51 | 2050 | 0.7 | 0.05 | 1 | 1 | 35 |
| 412 | Patancheru | Isnapur | 9.02 | 1900 | 0.9 | 0.08 | 2 | 0 | 30 |
| 413 | Patancheru | Kistareddypet | 2.60 | 1475 | 0.9 | 0.02 | 0 | 2 | 40 |
| 414 | Patancheru | Kyasaram | 7.88 | 425 | 0.4 | 0.07 | 1 | 3 | 75 |
| 415 | Patancheru | Lakdaram | 17.10 | 2125 | 1 | 0.15 | 0 | 3 | 60 |
| 416 | Patancheru | Muthangi | 8.06 | 1800 | 1.1 | 0.07 | 1 | 3 | 75 |
| 417 | Patancheru | Nandigoun | 13.27 | 500 | 0.6 | 0.12 | 2 | 4 | 110 |
| 418 | Patancheru | Part Ghanpur | 12.37 | 600 | 0.8 | 0.11 | 2 | 3 | 90 |
| 419 | Patancheru | Pashamailaram | 8.45 | 500 | 0.5 | 0.08 | 1 | 3 | 75 |
| 420 | Patancheru | Patancheru | 15.42 | 1000 | 1.2 | 0.14 | 3 | 2 | 85 |
| 421 | Patancheru | Patelguda | 1.97 | 1775 | 0.7 | 0.02 | 0 | 2 | 40 |
| 422 | Patancheru | PeddaKanjarla | 11.63 | 1925 | 0.7 | 0.11 | 1 | 2 | 55 |
| 423 | Patancheru | Rameshwaranmbanda | 6.34 | 2025 | 0.5 | 0.06 | 1 | 2 | 55 |
| 424 | Patancheru | Rudraram | 16.85 | 650 | 0.6 | 0.15 | 3 | 3 | 105 |
| 425 | Patancheru | Sultanpur | 11.21 | 1150 | 1.1 | 0.10 | 2 | 2 | 70 |
| 426 | Patancheru | Wadakpally | 3.38 | 1600 | 0.8 | 0.03 | 0 | 3 | 60 |
| 427 | Pulkal | Baswapur | 11.41 | 325 | 1.2 | 0.11 | 2 | 3 | 90 |
| 428 | Pulkal | Chekriyal | 6.78 | 675 | 0.6 | 0.07 | 1 | 3 | 75 |
| 429 | Pulkal | Chowtkur | 25.08 | 1375 | 0.7 | 0.25 | 5 | 4 | 155 |
| 430 | Pulkal | Gongloor | 18.63 | 625 | 0.7 | 0.18 | 4 | 2 | 100 |
| 431 | Pulkal | Hunnapur | 5.41 | 775 | 2.8 | 0.05 | 1 | 1 | 35 |
| 432 | Pulkal | Isojipet | 7.08 | 600 | 0.8 | 0.07 | 1 | 3 | 75 |
| 433 | Pulkal | Korpole | 18.31 | 800 | 0.9 | 0.18 | 4 | 2 | 100 |
| 434 | Pulkal | Lingampally | 3.38 | 650 | 1.1 | 0.03 | 0 | 3 | 60 |
| 435 | Pulkal | Manthoor | 9.61 | 850 | 2.5 | 0.09 | 2 | 2 | 70 |
| 436 | Pulkal | Minpoor | 15.56 | 475 | 0.9 | 0.15 | 3 | 3 | 105 |
| 437 | Pulkal | Muddaipet | 5.18 | 500 | 1.3 | 0.05 | 1 | 1 | 35 |
| 438 | Pulkal | Mudimanik | 13.98 | 175 | 0.8 | 0.14 | 3 | 2 | 85 |
| 439 | Pulkal | Pocharam | 7.52 | 675 | 2.2 | 0.07 | 1 | 3 | 75 |
| 440 | Pulkal | Raipahad | 3.20 | 850 | 1.9 | 0.03 | 0 | 3 | 60 |
| 441 | Pulkal | S.Itikyal | 6.60 | 350 | 0.9 | 0.07 | 1 | 2 | 55 |

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|---|---|---|---|---|---|---|---|---|---|
| 442 | Pulkal | S.R.Guda | 1.44 | 650 | 0.6 | 0.01 | 0 | 1 | 20 |
| 443 | Pulkal | Sarefpally | 2.44 | 575 | 0.7 | 0.02 | 0 | 2 | 40 |
| 444 | Pulkal | Shivampet | 10.68 | 750 | 0.6 | 0.11 | 2 | 3 | 90 |
| 445 | Pulkal | Sulthanpur | 5.29 | 600 | 0.7 | 0.05 | 1 | 1 | 35 |
| 446 | Pulkal | Taddanpally | 3.60 | 600 | 0.6 | 0.04 | 0 | 3 | 60 |
| 447 | Pulkal | Vendikole | 8.45 | 950 | 0.8 | 0.08 | 2 | 0 | 30 |
| 448 | Pulkal | Venkata kistapur | 3.37 | 650 | 0.7 | 0.03 | 0 | 3 | 60 |
| 449 | Raikode | Allapur | 3.79 | 1075 | 0.3 | 0.04 | 1 | 0 | 15 |
| 450 | Raikode | Auranganagar | 6.71 | 875 | 0.6 | 0.07 | 1 | 3 | 75 |
| 451 | Raikode | Doultabad | 3.53 | 1100 | 0.5 | 0.04 | 0 | 3 | 60 |
| 452 | Raikode | Hulgera | 6.49 | 1150 | 0.4 | 0.07 | 1 | 3 | 75 |
| 453 | Raikode | Indoor | 12.37 | 1100 | 0.5 | 0.13 | 3 | 1 | 65 |
| 454 | Raikode | Jamge (K) | 6.08 | 825 | 0.4 | 0.07 | 1 | 2 | 55 |
| 455 | Raikode | Karchal | 5.41 | 1100 | 0.4 | 0.06 | 1 | 2 | 55 |
| 456 | Raikode | Khanjamalpur | 5.17 | 625 | 0.6 | 0.06 | 1 | 1 | 35 |
| 457 | Raikode | Kushnoor | 5.71 | 900 | 0.3 | 0.06 | 1 | 2 | 55 |
| 458 | Raikode | Matoor | 5.80 | 575 | 0.4 | 0.06 | 1 | 2 | 55 |
| 459 | Raikode | Mohammadapur | 3.60 | 825 | 0.3 | 0.04 | 0 | 3 | 60 |
| 460 | Raikode | Nallampally | 5.98 | 825 | 0.3 | 0.06 | 1 | 2 | 55 |
| 461 | Raikode | Peapalpally | 11.02 | 950 | 0.4 | 0.12 | 2 | 3 | 90 |
| 462 | Raikode | Raikode | 11.46 | 800 | 0.3 | 0.12 | 2 | 4 | 110 |
| 463 | Raikode | Raipally | 6.95 | 875 | 0.4 | 0.07 | 1 | 3 | 75 |
| 464 | Raikode | Sangapur | 6.50 | 825 | 0.5 | 0.07 | 1 | 3 | 75 |
| 465 | Raikode | Shamshuddinpdur | 4.35 | 1225 | 0.3 | 0.05 | 1 | 1 | 35 |
| 466 | Raikode | Sirur | 4.65 | 850 | 0.8 | 0.05 | 1 | 1 | 35 |
| 467 | Ramayampet | Akkannapet | 10.68 | 1875 | 0.8 | 0.07 | 1 | 3 | 75 |
| 468 | Ramayampet | Chelmeda | 17.71 | 1300 | 0.8 | 0.12 | 0 | 1 | 20 |
| 469 | Ramayampet | Danthepally | 6.05 | 1450 | 0.8 | 0.04 | 1 | 0 | 15 |
| 470 | Ramayampet | J.Lingapur | 9.05 | 1700 | 0.8 | 0.06 | 1 | 2 | 55 |
| 471 | Ramayampet | Katriyal | 8.27 | 1600 | 0.8 | 0.06 | 1 | 1 | 35 |
| 472 | Ramayampet | Parvathapur | 10.66 | 1425 | 0.9 | 0.07 | 1 | 3 | 75 |
| 473 | Ramayampet | Sadashivnagar | 2.34 | 1800 | 0.8 | 0.02 | 0 | 1 | 20 |
| 474 | Ramayampet | Tonigandla | 10.33 | 1825 | 0.8 | 0.07 | 1 | 3 | 75 |
| 475 | RC Puram | Kachireddypally. | 3.39 | 850 | 1.2 | 0.03 | 0 | 2 | 40 |
| 476 | RC Puram | Kolluru | 12.47 | 675 | 1 | 0.10 | 2 | 2 | 70 |
| 477 | RC Puram | Manmole | 13.90 | 850 | 1.2 | 0.11 | 2 | 3 | 90 |
| 478 | RC Puram | R.C.puram | 6.93 | 875 | 1.3 | 0.06 | 1 | 2 | 55 |
| 479 | RC Puram | Velmela | 11.77 | 650 | 0.9 | 0.10 | 2 | 2 | 70 |
| 480 | Regode | Buranwadi | 1.44 | 575 | 0.9 | 0.01 | 0 | 1 | 20 |
| 481 | Regode | Chowdarpally | 4.78 | 625 | 0.9 | 0.05 | 1 | 1 | 35 |
| 482 | Regode | Jangiryal | 3.68 | 650 | 0.8 | 0.04 | 0 | 3 | 60 |
| 483 | Regode | Khadirabad | 25.26 | 1150 | 1.3 | 0.25 | 5 | 4 | 155 |
| 484 | Regode | Kondapur | 3.74 | 600 | 0.9 | 0.04 | 0 | 3 | 60 |
| 485 | Regode | Kothwalpally | 4.84 | 825 | 0.8 | 0.05 | 1 | 1 | 35 |
| 486 | Regode | Marpally | 4.96 | 550 | 0.9 | 0.05 | 0 | 1 | 20 |

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|---|---|---|---|---|---|---|---|---|---|
| 487 | Regode | Nirjipla | 8.40 | 1300 | 0.8 | 0.08 | 2 | 0 | 30 |
| 488 | Regode | Paladgu | 4.79 | 1475 | 0.3 | 0.05 | 1 | 1 | 35 |
| 489 | Regode | Pocharam | 1.76 | 575 | 1.6 | 0.02 | 0 | 2 | 40 |
| 490 | Regode | Pyararam | 4.36 | 575 | 1.4 | 0.04 | 1 | 0 | 15 |
| 491 | Regode | Regode | 7.65 | 575 | 0.9 | 0.08 | 0 | 3 | 60 |
| 492 | Regode | T.Lingampally | 5.37 | 625 | 2.5 | 0.05 | 1 | 1 | 35 |
| 493 | Regode | Tatpally | 3.33 | 675 | 2.3 | 0.03 | 0 | 3 | 60 |
| 494 | Regode | Thimmapur | 4.84 | 1000 | 0.8 | 0.05 | 1 | 1 | 35 |
| 495 | Sadasivpet | Ankenpally | 6.02 | 625 | 0.9 | 0.05 | 1 | 0 | 15 |
| 496 | Sadasivpet | Atmakur | 13.79 | 850 | 1.4 | 0.11 | 2 | 3 | 90 |
| 497 | Sadasivpet | Babilgoan | 8.28 | 775 | 1.9 | 0.07 | 1 | 2 | 55 |
| 498 | Sadasivpet | Chandapur | 4.32 | 825 | 1.2 | 0.04 | 0 | 2 | 40 |
| 499 | Sadasivpet | Ettigaddasangam | 5.70 | 750 | 2.3 | 0.05 | 1 | 1 | 35 |
| 500 | Sadasivpet | Kolkur | 10.15 | 650 | 1 | 0.08 | 2 | 0 | 30 |
| 501 | Sadasivpet | Machireddipally | 8.24 | 850 | 1.1 | 0.07 | 1 | 3 | 75 |
| 502 | Sadasivpet | Maddikunta | 15.92 | 900 | 0.7 | 0.13 | 3 | 0 | 45 |
| 503 | Sadasivpet | Malaphad | 2.78 | 725 | 2.9 | 0.02 | 0 | 2 | 40 |
| 504 | Sadasivpet | Mubarakpur | 10.31 | 850 | 0.8 | 0.08 | 2 | 0 | 30 |
| 505 | Sadasivpet | Nagulapally | 7.69 | 675 | 1 | 0.06 | 1 | 1 | 35 |
| 506 | Sadasivpet | Nandikandi | 13.25 | 1700 | 0.8 | 0.11 | 2 | 3 | 90 |
| 507 | Sadasivpet | Nizampur | 16.66 | 750 | 0.9 | 0.14 | 3 | 1 | 65 |
| 508 | Sadasivpet | Peddapur | 13.74 | 1075 | 0.9 | 0.11 | 2 | 2 | 70 |
| 509 | Sadasivpet | Pottipally | 6.11 | 600 | 1.3 | 0.05 | 1 | 1 | 35 |
| 510 | Sadasivpet | Sadasivpet | 19.50 | 1875 | 0.8 | 0.16 | 3 | 3 | 105 |
| 511 | Sadasivpet | Veltoor | 18.43 | 1125 | 0.9 | 0.15 | 3 | 2 | 85 |
| 512 | Sadasivpet | Venkatapur | 8.33 | 1475 | 1 | 0.07 | 1 | 2 | 55 |
| 513 | Sadasivpet | Yawapur | 1.66 | 1550 | 0.7 | 0.01 | 0 | 1 | 20 |
| 514 | Sadasivpet | Yellaram | 4.97 | 850 | 1.3 | 0.04 | 1 | 0 | 15 |
| 515 | Sangareddy | Arutla | 9.81 | 1975 | 0.9 | 0.07 | 1 | 3 | 75 |
| 516 | Sangareddy | Byathole | 5.55 | 2075 | 0.9 | 0.04 | 1 | 0 | 15 |
| 517 | Sangareddy | Cheriyal | 12.31 | 400 | 0.6 | 0.09 | 2 | 1 | 50 |
| 518 | Sangareddy | Chinthalpally | 3.05 | 875 | 1 | 0.02 | 0 | 2 | 40 |
| 519 | Sangareddy | Eddumailaram | 6.21 | 625 | 0.5 | 0.05 | 1 | 1 | 35 |
| 520 | Sangareddy | Fasalwadi | 10.61 | 1825 | 1.1 | 0.08 | 2 | 0 | 30 |
| 521 | Sangareddy | Indrakaran | 17.22 | 425 | 0.4 | 0.13 | 2 | 4 | 110 |
| 522 | Sangareddy | Ismailkhanpet | 12.93 | 2375 | 1.1 | 0.10 | 2 | 2 | 70 |
| 523 | Sangareddy | Julkal | 11.26 | 750 | 0.5 | 0.08 | 2 | 0 | 30 |
| 524 | Sangareddy | Kalabgur | 11.62 | 675 | 0.8 | 0.09 | 2 | 0 | 30 |
| 525 | Sangareddy | Kalivemula | 11.87 | 500 | 0.7 | 0.09 | 2 | 0 | 30 |
| 526 | Sangareddy | Kalwakunta | 6.76 | 1125 | 3.7 | 0.05 | 1 | 0 | 15 |
| 527 | Sangareddy | Kandi | 17.90 | 775 | 2.6 | 0.13 | 3 | 0 | 45 |
| 528 | Sangareddy | Kothulapur | 9.08 | 850 | 2 | 0.07 | 1 | 2 | 55 |
| 529 | Sangareddy | Kulabgur | 5.75 | 1550 | 1.3 | 0.04 | 1 | 0 | 15 |
| 530 | Sangareddy | Maktha Alloor | 4.71 | 675 | 0.8 | 0.04 | 0 | 2 | 40 |
| 531 | Sangareddy | Nagapur | 2.55 | 1675 | 0.8 | 0.02 | 0 | 2 | 40 |

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|---|---|---|---|---|---|---|---|---|---|
| 532 | Sangareddy | Pothireddypally | 6.52 | 925 | 4.4 | 0.05 | 1 | 0 | 15 |
| 533 | Sangareddy | Sangareddy | 7.55 | 900 | 2.4 | 0.06 | 1 | 1 | 35 |
| 534 | Sangareddy | Tadlapally | 4.90 | 800 | 1.2 | 0.04 | 0 | 2 | 40 |
| 535 | Sangareddy | Uttarpally | 13.07 | 925 | 0.8 | 0.10 | 2 | 1 | 50 |
| 536 | Shankarampet -A | Baddaram | 3.61 | 1750 | 0.7 | 0.04 | 1 | 0 | 15 |
| 537 | Shankarampet -A | Burugupally | 8.34 | 1000 | 1.3 | 0.10 | 2 | 2 | 70 |
| 538 | Shankarampet -A | Ch. Laxmapur | 6.06 | 3325 | 0.7 | 0.07 | 1 | 3 | 75 |
| 539 | Shankarampet -A | Cheelapally | 7.37 | 3225 | 0.8 | 0.09 | 2 | 0 | 30 |
| 540 | Shankarampet -A | Danampally | 2.20 | 1450 | 1.3 | 0.03 | 0 | 2 | 40 |
| 541 | Shankarampet -A | Gottimukula | 8.37 | 1300 | 0.7 | 0.10 | 2 | 2 | 70 |
| 542 | Shankarampet -A | Jambikunta | 12.04 | 3625 | 0.8 | 0.14 | 3 | 2 | 85 |
| 543 | Shankarampet -A | Jukal | 13.97 | 1925 | 1.2 | 0.16 | 3 | 3 | 105 |
| 544 | Shankarampet -A | K.Venkatapur | 6.74 | 1800 | 0.6 | 0.08 | 2 | 0 | 30 |
| 545 | Shankarampet -A | Kamalapur | 2.38 | 2875 | 0.7 | 0.03 | 0 | 2 | 40 |
| 546 | Shankarampet -A | Kollapally | 3.63 | 1775 | 0.7 | 0.04 | 1 | 0 | 15 |
| 547 | Shankarampet -A | Kothapet | 2.98 | 2050 | 1.1 | 0.03 | 0 | 3 | 60 |
| 548 | Shankarampet -A | M. Laxmapur | 12.95 | 1500 | 0.9 | 0.15 | 3 | 3 | 105 |
| 549 | Shankarampet -A | Malkapur | 3.55 | 1725 | 0.7 | 0.04 | 1 | 0 | 15 |
| 550 | Shankarampet -A | Ramajpally | 3.57 | 1825 | 1.1 | 0.04 | 1 | 0 | 15 |
| 551 | Shankarampet -A | Shankarampet-A | 4.39 | 2175 | 0.6 | 0.05 | 1 | 1 | 35 |
| 552 | Shankarampet -A | Sivaipally | 1.77 | 1525 | 1.3 | 0.02 | 0 | 2 | 40 |
| 553 | Shankarampet -A | Tenkati | 12.04 | 3525 | 0.8 | 0.14 | 3 | 2 | 85 |
| 554 | Shankarampet -A | Tirmalapoor | 4.51 | 2275 | 0.6 | 0.05 | 1 | 1 | 35 |
| 555 | Shankarampet -A | Uthloor | 6.44 | 1975 | 1 | 0.07 | 1 | 3 | 75 |
| 556 | Shankarampet -A | Virojipally | 7.33 | 1900 | 0.9 | 0.09 | 2 | 0 | 30 |
| 557 | Shankarampet -R | Ambojipet | 2.57 | 925 | 1.2 | 0.03 | 0 | 3 | 60 |
| 558 | Shankarampet -R | Chandampet | 7.97 | 1000 | 0.9 | 0.11 | 2 | 3 | 90 |
| 559 | Shankarampet -R | Chandapur | 4.66 | 1225 | 0.6 | 0.06 | 1 | 2 | 55 |
| 560 | Shankarampet -R | Dharipally | 7.33 | 1900 | 0.8 | 0.10 | 2 | 2 | 70 |
| 561 | Shankarampet -R | Gajagatlapally | 6.58 | 1500 | 0.8 | 0.09 | 2 | 1 | 50 |
| 562 | Shankarampet -R | Gavvallapally | 8.26 | 1150 | 1.1 | 0.11 | 2 | 3 | 90 |

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|---|---|---|---|---|---|---|---|---|---|
| 563 | Shankarampet -R | Jangarai | 6.84 | 1300 | 0.7 | 0.09 | 2 | 1 | 50 |
| 564 | Shankarampet -R | Jangarai | 13.54 | 1300 | 0.7 | 0.18 | 4 | 2 | 100 |
| 565 | Shankarampet -R | Kamaram | 6.35 | 1025 | 1.1 | 0.09 | 2 | 0 | 30 |
| 566 | Shankarampet -R | Khajapur | 11.15 | 1550 | 0.8 | 0.15 | 3 | 3 | 105 |
| 567 | Shankarampet -R | Korvipally | 4.99 | 1900 | 0.5 | 0.07 | 1 | 3 | 75 |
| 568 | Shankarampet -R | Madur | 18.39 | 1300 | 0.9 | 0.25 | 5 | 4 | 155 |
| 569 | Shankarampet -R | Mirjapally | 6.89 | 1100 | 1 | 0.09 | 2 | 1 | 50 |
| 570 | Shankarampet -R | S.Kondapoor | 9.85 | 1675 | 1.1 | 0.13 | 3 | 1 | 65 |
| 571 | Shankarampet -R | Shankapur | 8.53 | 1225 | 0.8 | 0.12 | 2 | 3 | 90 |
| 572 | Shankarampet -R | Shankarampet-R | 9.00 | 975 | 1.1 | 0.12 | 2 | 4 | 110 |
| 573 | Shankarampet -R | Suraram | 16.49 | 1450 | 0.7 | 0.22 | 5 | 2 | 115 |
| 574 | Shankarampet -R | T.Mandapoor | 8.58 | 1875 | 1.5 | 0.12 | 2 | 3 | 90 |
| 575 | Shankarampet -R | Zaptishivnoor | 7.04 | 950 | 0.8 | 0.10 | 2 | 2 | 70 |
| 576 | Shivampet | Allipur | 7.26 | 950 | 0.9 | 0.08 | 2 | 0 | 30 |
| 577 | Shivampet | Chandi | 8.50 | 900 | 0.9 | 0.09 | 1 | 1 | 35 |
| 578 | Shivampet | Chinnagotimukla | 5.06 | 1750 | 0.7 | 0.05 | 1 | 1 | 35 |
| 579 | Shivampet | Donthi | 7.86 | 1200 | 0.6 | 0.08 | 1 | 0 | 15 |
| 580 | Shivampet | Edulapalli | 4.55 | 1850 | 0.7 | 0.05 | 0 | 1 | 20 |
| 581 | Shivampet | Kothapet | 11.36 | 1200 | 0.8 | 0.12 | 2 | 4 | 110 |
| 582 | Shivampet | Nawabpet | 14.14 | 925 | 1.2 | 0.15 | 2 | 3 | 90 |
| 583 | Shivampet | Pambanda | 12.15 | 1825 | 0.8 | 0.13 | 3 | 1 | 65 |
| 584 | Shivampet | Parkibanda | 11.76 | 775 | 0.6 | 0.13 | 2 | 4 | 110 |
| 585 | Shivampet | Pillutla | 8.37 | 1225 | 0.8 | 0.09 | 2 | 1 | 50 |
| 586 | Shivampet | Potharam | 3.61 | 600 | 0.3 | 0.04 | 0 | 3 | 60 |
| 587 | Shivampet | Pothulabguda | 4.48 | 1700 | 0.8 | 0.05 | 1 | 1 | 35 |
| 588 | Shivampet | Ratnapur | 11.46 | 1450 | 0.8 | 0.12 | 2 | 4 | 110 |
| 589 | Shivampet | Shabashpally | 6.08 | 775 | 0.5 | 0.07 | 0 | 2 | 40 |
| 590 | Shivampet | Sikindlapur | 9.30 | 850 | 1 | 0.10 | 1 | 2 | 55 |
| 591 | Shivampet | Timmapur | 3.37 | 1900 | 0.7 | 0.04 | 0 | 3 | 60 |
| 592 | Siddipet | Pullur | 19.76 | 650 | 1 | 0.12 | 0 | 1 | 20 |
| 593 | Siddipet | Raghavapur | 18.15 | 1400 | 0.9 | 0.11 | 0 | 1 | 20 |
| 594 | Tekmal | Bardipur | 7.84 | 650 | 1.1 | 0.07 | 1 | 3 | 75 |
| 595 | Tekmal | Bodmatpally | 4.62 | 675 | 1 | 0.04 | 1 | 0 | 15 |
| 596 | Tekmal | Dadaipally | 3.14 | 675 | 1.5 | 0.03 | 0 | 3 | 60 |
| 597 | Tekmal | Eklaspur | 2.91 | 700 | 0.8 | 0.03 | 0 | 2 | 40 |
| 598 | Tekmal | Elkurthi | 9.08 | 1050 | 0.7 | 0.08 | 2 | 0 | 30 |
| 599 | Tekmal | H.M. Pally | 5.04 | 1000 | 0.7 | 0.05 | 1 | 0 | 15 |
| 600 | Tekmal | Kadloor | 8.84 | 700 | 0.8 | 0.08 | 2 | 0 | 30 |

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|---|---|---|---|---|---|---|---|---|---|
| 601 | Tekmal | Korampally | 7.02 | 800 | 0.9 | 0.06 | 0 | 2 | 40 |
| 602 | Tekmal | Kusangi | 5.58 | 575 | 1.8 | 0.05 | 1 | 1 | 35 |
| 603 | Tekmal | Tekmal | 22.43 | 775 | 0.6 | 0.20 | 3 | 4 | 125 |
| 604 | Tekmal | Yallupet | 8.39 | 1250 | 1.4 | 0.08 | 1 | 3 | 75 |
| 605 | Tekmal | Yellampally | 6.13 | 825 | 0.7 | 0.06 | 1 | 0 | 15 |
| 606 | Thoguta | Palepahad | 9.59 | 1000 | 1.1 | 0.07 | 0 | 2 | 40 |
| 607 | Thoguta | Vemulghat | 22.56 | 975 | 1.1 | 0.17 | 1 | 0 | 15 |
| 608 | Toopran | Allapur | 6.52 | 2000 | 0.9 | 0.05 | 1 | 1 | 35 |
| 609 | Toopran | Brahamanpalli | 3.77 | 725 | 0.4 | 0.03 | 0 | 2 | 40 |
| 610 | Toopran | Chetla Gouraram | 3.74 | 675 | 0.4 | 0.03 | 0 | 2 | 40 |
| 611 | Toopran | Datarpally | 4.69 | 775 | 1.3 | 0.04 | 0 | 3 | 60 |
| 612 | Toopran | Datarpally | 4.69 | 775 | 1.3 | 0.04 | 0 | 3 | 60 |
| 613 | Toopran | Ghanpur | 9.97 | 2400 | 0.7 | 0.07 | 1 | 3 | 75 |
| 614 | Toopran | Islampur | 11.12 | 450 | 1.3 | 0.08 | 2 | 0 | 30 |
| 615 | Toopran | Jeedipaly | 6.04 | 950 | 0.6 | 0.05 | 1 | 0 | 15 |
| 616 | Toopran | Kallakal | 13.91 | 425 | 0.4 | 0.10 | 2 | 2 | 70 |
| 617 | Toopran | Kistapur | 2.78 | 1975 | 0.9 | 0.02 | 0 | 2 | 40 |
| 618 | Toopran | Konaipally (PB) | 4.43 | 1250 | 1 | 0.03 | 0 | 3 | 60 |
| 619 | Toopran | Kucharam | 7.30 | 800 | 0.7 | 0.05 | 1 | 1 | 35 |
| 620 | Toopran | Lingareddypet | 8.21 | 1675 | 0.9 | 0.06 | 1 | 2 | 55 |
| 621 | Toopran | Malkapur | 7.77 | 1675 | 1 | 0.06 | 1 | 2 | 55 |
| 622 | Toopran | Manoharabad | 10.62 | 1375 | 0.7 | 0.08 | 2 | 0 | 30 |
| 623 | Toopran | Palat | 4.64 | 575 | 0.2 | 0.03 | 0 | 3 | 60 |
| 624 | Toopran | Rangaipally | 4.84 | 625 | 0.5 | 0.04 | 0 | 3 | 60 |
| 625 | Toopran | Toopran | 14.06 | 2475 | 0.9 | 0.11 | 2 | 2 | 70 |
| 626 | Toopran | Vattur | 3.51 | 625 | 0.4 | 0.03 | 0 | 2 | 40 |
| 627 | Toopran | Venkatapur | 1.79 | 675 | 0.2 | 0.01 | 0 | 1 | 20 |
| 628 | Toopran | Yawapur | 6.69 | 2275 | 0.7 | 0.05 | 1 | 1 | 35 |
| 629 | Wargal | Govindapur | 2.79 | 5475 | 0.7 | 0.02 | 0 | 2 | 40 |
| 630 | Wargal | Kondaipally | 1.25 | 4275 | 0.9 | 0.01 | 0 | 1 | 20 |
| 631 | Wargal | Madharam | 4.64 | 4475 | 0.7 | 0.03 | 0 | 3 | 60 |
| 632 | Wargal | Mailaram | 9.34 | 5425 | 0.8 | 0.06 | 1 | 2 | 55 |
| 633 | Wargal | Meenjipeta | 10.22 | 1475 | 0.6 | 0.07 | 1 | 3 | 75 |
| 634 | Wargal | Nacharam | 6.73 | 2575 | 0.7 | 0.05 | 1 | 0 | 15 |
| 635 | Wargal | Narsampally | 6.74 | 2550 | 0.8 | 0.05 | 1 | 0 | 15 |
| 636 | Wargal | Tunkikhalasa | 16.77 | 2825 | 1 | 0.11 | 2 | 3 | 90 |
| 637 | Yeldurthy | Achampet | 7.22 | 1775 | 0.8 | 0.08 | 2 | 0 | 30 |
| 638 | Yeldurthy | Andugullapally | 8.14 | 550 | 1.1 | 0.09 | 0 | 1 | 20 |
| 639 | Yeldurthy | Bandaposanpally | 5.70 | 1050 | 1 | 0.07 | 1 | 2 | 55 |
| 640 | Yeldurthy | Dharmaram | 3.24 | 500 | 1.1 | 0.04 | 0 | 3 | 60 |
| 641 | Yeldurthy | Edullapally | 7.85 | 1225 | 1 | 0.09 | 0 | 1 | 20 |
| 642 | Yeldurthy | Hasthalpur | 12.32 | 1175 | 0.8 | 0.14 | 3 | 2 | 85 |
| 643 | Yeldurthy | Koppulapally | 4.61 | 475 | 0.8 | 0.05 | 1 | 0 | 15 |
| 644 | Yeldurthy | Kukunoor | 17.05 | 525 | 1.1 | 0.20 | 4 | 3 | 120 |
| 645 | Yeldurthy | Lingareddypally | 1.90 | 675 | 1.1 | 0.02 | 0 | 2 | 40 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 646 | Yeldurthy | M. Jalalpur | 7.89 | 500 | 1.1 | 0.09 | 0 | 1 | 20 |
| 647 | Yeldurthy | Manepally | 13.01 | 575 | 1 | 0.15 | 2 | 3 | 90 |
| 648 | Yeldurthy | Mangalparthy | 13.74 | 600 | 1 | 0.16 | 3 | 1 | 65 |
| 649 | Yeldurthy | Masaipet | 17.30 | 800 | 0.7 | 0.20 | 2 | 3 | 90 |
| 650 | Yeldurthy | Settipally(K) | 18.71 | 725 | 0.8 | 0.22 | 5 | 1 | 95 |
| 651 | Yeldurthy | Uppulingapur | 9.45 | 1525 | 0.9 | 0.11 | 2 | 3 | 90 |
| 652 | Yeldurthy | Yeldurthy | 29.27 | 1625 | 0.8 | 0.34 | 4 | 4 | 140 |
| 653 | Yeldurthy | Yeshwantharaopet | 8.70 | 650 | 1.1 | 0.10 | 2 | 1 | 50 |
| 654 | Zaheerabad | Allipur | 3.79 | 475 | 1.6 | 0.05 | 1 | 1 | 35 |
| 655 | Zaheerabad | Anegunta | 9.86 | 475 | 0.5 | 0.12 | 2 | 4 | 110 |
| 656 | Zaheerabad | Gudpalle | 29.63 | 375 | 0.3 | 0.37 | 8 | 2 | 160 |
| 657 | Zaheerabad | Hothi - B | 26.47 | 300 | 0.3 | 0.33 | 7 | 3 | 165 |
| 658 | Zaheerabad | Malchelma | 12.26 | 500 | 0.5 | 0.15 | 3 | 3 | 105 |
| 659 | Zaheerabad | Malkapur (JADI) | 8.77 | 500 | 0.5 | 0.11 | 2 | 3 | 90 |
| 660 | Zaheerabad | Mogdampalle | 42.42 | 325 | 0.2 | 0.53 | 11 | 9 | 345 |
| 661 | Zaheerabad | Parvathapur | 6.08 | 400 | 0.4 | 0.08 | 1 | 3 | 75 |
| 662 | Zaheerabad | Pastapur | 5.29 | 625 | 1.5 | 0.07 | 1 | 2 | 55 |
| 663 | Zaheerabad | Ranjole | 15.49 | 525 | 1.8 | 0.20 | 4 | 3 | 120 |
| 664 | Zaheerabad | Sarjaraopet | 8.12 | 425 | 0.4 | 0.10 | 2 | 2 | 70 |
| 665 | Zaheerabad | Shaikapur | 18.75 | 375 | 0.5 | 0.24 | 5 | 3 | 135 |
| 666 | Zaheerabad | Zahirabad - R | 21.27 | 400 | 1 | 0.27 | 6 | 1 | 110 |
| | | | | | | | **1006** | **1248** | **40050** |