CHAPTER V

SUMMARY AND CONCLUSIONS
CHAPTER V

SUMMARY AND CONCLUSIONS

Water is the most vital and essential substance on earth next to air. It is a life generating and life sustaining element. Every living being must have water to survive and there can be no life without water. Every living thing consists of water and more specifically man uses water for a variety of purposes.

Water has been the element responsible for the construction of human settlements and history reveals the fact that water is the fountain head of various human civilisations in the world.

Water is the most abundant and widely distributed substance in nature which forms oceans, rivers, lakes etc. It is available in one form or the other and the understanding of the hydrological cycle reveals that water is distributed unevenly in different parts of the universe.

The uses of water are competitive in nature and it is used for domestic purposes like drinking, cooking, washing and cleaning. It is also used as
input in agriculture and industry. Besides, it has commercial and recreational uses to man.

Safe water is the prerequisite of human survival and it provides the necessary strength, stamina and conviction to man to take part in the economic development of the nation.

Safe water has more significance particularly in the rural areas of the country where there are less health and medical facilities. Hence, it is important to provide safe water to the people living in rural areas.

Unfortunately, majority of the people in the world have no reasonable access to safe water. Compared to urban population, larger percentage of rural population in the world have no access to drink water. The problem in South-East Asia seems to be more serious as women folk in rural areas of Burma and India are fetching their drinking water every day from a walking distance of nearly 15 Km.

Inspite the efforts made by the Governments in several countries, the water problem remains
enigmatic and it is a common feature to note that restrictions have been imposed on the use of water even in the developed countries like U.S.A.

Thus, water problem has been assuming the position of burning problem in the present day world. Further, the private enterprise does not shoulder the responsibility of supplying drinking water to the community. Hence, there is an immediate need for the welfare Governments to bestow their attention on the provision of drinking water in the villages.

National Rural Water Supply Scheme (1937-38) was formulated by the Government of India to provide water supply in the villages. It was followed by a five year Rural Water Supply Scheme in 1947-48. All these efforts could not achieve the desired success and the problem remained unsolved.

Later on Rural Water Supply Schemes were executed by the Central Government and also by the State Governments. Panchayat Raj Department has been placed in charge of rural water supply schemes in the State and schemes were implemented by the States during the Five Year Plan periods.
Andhra Pradesh, geographically the fifth largest State and the fourth most populous State in India, has a density of 157 persons per Sq. Km. compared to 182 persons per Sq. Km in India. There are 23 districts, 225 towns and cities, and 63,081 inhabited villages.

The average annual rainfall of the State is 90 Cm, which is unevenly distributed in time and place. The estimated ground water potential of the State is 3.3 million hectare meters. However, only a third of it is being exploited at present.

Besides the rivers like the Godawari, Krishna and Tungabhadra, there are 38 other medium and minor rivers in Andhra Pradesh. However, due to its peculiar drought conditions, the State has been experiencing acute scarcity of drinking water.

Water supply programmes were designed and inhibited in the rural and urban areas of Andhra Pradesh during the First Five Year Plan. The modest beginning made in the First Five Year Plan has been continued in the next five year plan with an expenditure
of ₹.1.18 lakhs and 786 villages were provided with water supply.

Greater attention was paid to the rural water supply programmes during the Third Five Year Plan. A survey was conducted to estimate the number of problem villages in the State and it was identified that there are 31,873 villages and hamlets without reasonable access to safe water. Another survey was made and it noted that 84 per cent of the total villages in the State had no source of water.

During the Fourth Five Year Plan it was attempted to provide drinking water to 10,500 villages and bore wells were drilled by the rigs supplied by UNICEF. The important event in the Fourth Five Year Plan is the introduction of Centrally sponsored Accelerated Rural Water Supply Scheme in 1972-73. During the Fourth Five Year Plan period 31,996 villages and hamlets were provided with water supply.

Planners and the Government were very much concerned about the health problems caused by flouride and other hazards, to the rural people during the Fifth
Five Year Plan and attention was paid to overcome these difficulties. Further, Minimum Needs Programme was introduced to provide drinking water to all the villages. However, 4,063 villages were provided with water supply with an outlay of Rs. 25.00 crores.

The proposals of the Sixth Five Year regarding the Rural Water Supply Programme were revised with a view to cover all the uncovered villages with protected water supply. Amounts were released to Zilla-parishads and expenditure was incurred under Accelerated Rural Water Supply Programme. Drinking water was provided either fully or partially and thus the objective was achieved to a large extent.

The number of problem villages increased during the Seventh Five Year Plan period because of continuous drought conditions in the State. A Master Plan has been prepared to solve the drinking water problem in all the villages. However, there is a shortfall in the achievements of the Seventh Five Year Plan by 30 per cent and hence much needs to be done during the Eighth Five Year Plan for improving water supply position in rural areas of the State.
Andhra Pradesh consists of three natural divisions namely Coastal Andhra, Telangana and Rayalaseema. Rayalaseema has four districts notorious for severe droughts and famines. Anantapur, one of the four districts of Rayalaseema is one of the six drought prone districts in the country identified by the World Bank team.

Anantapur, a district formed for the purpose of administrative convenience consists of 63 revenue mandals. The district has been divided into three revenue divisions namely Anantapur division with 20 mandals, Dharmavaram division with 17 mandals and Penukonda division with 26 mandals.

Pennar is the only important river in the district in addition to other rivers such as Jayamangala, Chitravathi, Hagari etc. There is Tungabhadra major irrigation project and upper pennar, Bhairavani Thippa and Chennarayagudi medium irrigation projects in the district.

Anantapur is the driest part of the State with 520.4 mm. annual rainfall. Because of its
unfortunate location the district fails to attract both the monsoons and hence experiences shortage of rainfall and scarcity of water supply.

According to 1981 census the district extends over an area of 19130.0 Sq. Kms. with a population of 25,48,012 persons. The rural population of the district showed a decline of 3 per cent between 1971 and 1981. This might be due to migration of rural people for want of employment opportunities to urban areas.

Protected water supply systems were started in 1961-62 in some villages of Penukonda division. Later on they were extended to other villages in almost all the mandals of the district. 26 villages were covered under National Rural Water Supply scheme by 1978-79.

After a brief interval of one year, what supply schemes were executed continuously and 48 more villages were covered during 1980-84. During 1960-80 only 129 schemes were sanctioned of which only 90 were completed. The village water supply schemes received greater attention during the present decade and the completion of the schemes was intensified during 1986-88.
During 1983-85 the number of schemes sanctioned were more or less the same and on an average 30 schemes were completed every year. Nearly 47 per cent of the total number of schemes were completed during 1986-88. Thus, 1985-85 period recorded a significant progress in providing drinking water to villages in Anantapur district.

The water supply schemes executed in the villages of Anantapur district are under the programmes like Drought Relief, Central Assistance, Accelerated Rural Water Supply, Normal and 'others' that include Minimum Needs, Rayalaseema Development Board, Comprehensive Protected Water Supply, Scheduled Caste Component etc.

A total of 313 schemes were executed in Anantapur district rural areas and the data on 61 other villages is not available. Nearly one quarter of these total schemes were completed before 1980 and the remaining during the present decade, of the schemes completed during 1980-89, more than 46 per cent were completed during 1986-88.
Large number of schemes covered during 1985-87 were with the funds received under drought relief works. Among the schemes executed 17 per cent were under the Central Assistance Programme while only 6 per cent were under Accelerated Rural Water Supply Scheme. More than 37 per cent of the schemes were covered under various 'other' programmes.

Only 11 per cent of the total cost of the schemes was incurred before 1980 while more than one half of the total expenditure was incurred during 1986-88, highest expenditure being in 1988. An analysis of variance test revealed that the cost of village water supply schemes increased at an annual rate of Rs.2.02 lakhs during 1980-89.

The cost of schemes implemented under Central Assistance Programme works out to 30 per cent of the total expenditure followed by Drought Relief works and Accelerated Rural Water Supply Schemes each with 16 per cent.

The three divisions of the district are located in three important towns namely Anantapur, Dharmavaram
and Penukonda. Of the total 866 Panchayats, 24 per cent were found in Dharmavaram division while the remaining were distributed between the other divisions.

More than one quarter of the total schemes were grounded in Dharmavaram, the smallest division in the district. In other words, 38 per cent of the villages in this division have protected water supply systems. The number of schemes covered under Drought Relief Works were more less same in Dharmavaram and Penukonda division.

The schemes covered under Accelerated Rural Water Supply Programmes were lowest in Dharmavaram division. However, Central Assistance Programme emerged as the single largest programme under which many water supply schemes were covered in rural areas of the district.

The expenditure incurred on the schemes implemented in Dharmavaram villages accounted for 39 per cent of the total expenditure on the schemes in the district. It is also noted that bigger schemes were executed under Accelerated Rural Water Supply Scheme with a wider coverage of population.
All the mandals in Dharmavaram division have protected water supply schemes in some villages. 90 per cent of the villages in Kanaganipalli and Bathalapalli mandals are extended with these facilities while BrahmaSamudram mandal has the lowest coverage with 6 per cent of its villages.

Major portion of the population in Bathalapalli mandal and only 6 per cent of the population in three other mandals in Dharmavaram division were covered under protected water supply schemes. In all only 30 per cent of the population in this division has access to water supply.

Among the schemes implemented in Dharmavaram division 8 are found to be defunct. The only reason for this is said to be the failure of the source to supply water. In one village motor repair and bore maintenance is believed to be the reason for defunct. There are instances of plastic distribution line breakage causing serious hurdle to supply water.

Damages to pumping main, poor maintenance are also the causes for the failure of the schemes.
Further, there are villages to which water is transported during summer every year.

The survey of the selected villages revealed that all most all the systems depend upon the ground water sources. Motors of different Horse Power are erected at these sources and water is distributed to the villages from over head service reservoirs of varying capacities. On an average each motor is estimated to work for 8 hours to lift water from the source.

The number of public taps vary from village to village and there are public taps in the localities of weaker sections in the villages. The estimated number of people dependent on each public tap varies from 130 in Kambadur to 350 in Golla. It is the highest at 700 people in Yerragudi.

Bore wells are also distributed in weaker section localities but are found to be inadequate. Frequent failure of motors is reported in all most all the villages and the repair expenses range from Rs. 4,000 in Yerragudi to Rs. 26,000 in Kambadur.
All villages have been depending upon open wells for their drinking water requirements prior to the establishment of protected water supply schemes. However, these villages used to suffer from guinnea worm and flouride problems in Ankampalli and Kundurpi areas respectively.

There are instances of water being transported to some of the villages with rocky soils. The starting of protected water supply systems relieved the problem of drinking water in the district.

Even these schemes are not free from problems like source failure due to droughts. The horse power of motors is found to be inadequate to lift adequate quantity of water. Further, the capacity of service reservoirs and the size of the distribution pipe line are found highly inadequate in the villages like Golla, Kanekal and Kambadur.

The break-down of plastic pipe lines and delay in attending to the repairs works of the systems and bore wells intensified the gravity of water problem.
In view of these problems the following steps have been suggested to improve the drinking water supply position in Anantapur district.

Open wells in the villages are to be converted into draw wells and delay in completing the schemes is to be avoided. Wherever necessary bore wells are to be sunk to reduce the pressure on the water supply system.

Additional motor pump sets are to be provided to all villages to ensure adequate water supply. Plastic pipe line is to be replaced by G.I. or R.C.C. pipe line and construction of additional service reservoirs may be thought of.

Depending up on the supply position additional number of public taps may be sanctioned in the villages. Arrangements are to be made to reduce salinity and flouride content in water with minimum possible cost.

Above all greater care is to be taken to maintain the systems properly. Awareness is to be created regarding the problem of drinking water in villages and use of bore well water may be encouraged for domestic purposes in the worst affected areas of Anantapur district.