ACKNOWLEDGEMENT

An endeavor over a long period can be successful only with the advice and guidance of well wishers. I take this opportunity to express my deep sense of gratitude and heartfelt thanks to several key personalities whose constant support and encouragement have helped me to transfer my effort into the completion of this thesis work.

I express my deep sense of gratitude to the University Authorities for permitting me to do research and the facilities provided to complete the thesis successfully.

I am greatly indebted to Dr. S. Poongothai, Professor, Department of Civil Engineering, for her precious support and help in every needed sphere throughout the period of my doctoral programme. Without her vision and versatility, this project would not have been feasible. She took keen interest in my thesis and rendered every possible help necessary for the successful completion.

I wish to express my sincere thanks to Dr. A. Murugappan, Professor and Head, Department of Civil Engineering, Annamalai University for permitting me to take up this thesis work.

My heartfelt thanks are due to Prof. B. Palaniappan, Former Dean, and Dr. S. Velusami, Dean, Faculty of Engineering and Technology, Annamalai University for their constant encouragement and support.

I also thank Dr. M. Ramalingam, Director, Institute of Remote Sensing and the Staff members of Anna University, Chennai and the Staff members of State Ground and Surface Water Resources Data Centre, WRO, PWD, Chennai for providing necessary maps and reports to strengthening of my database.

I whole heartedly thank to Dr. K. Sridhar, Hydro-geologist, TWAD Board, Chennai and the Staff members of TWAD board, Chennai for providing adequate and essential data. The author would like to extend his thanks to Mr. T.S. Badrinarayanan, Hydro-geologist/Consultant, Kollicidam and
Dr. S. Ramesh, Research Scholar, Department of Geography, Madras University, Chennai, for his timely help and rendered every possible help necessary for the successful completion.

I desire to convey my sincere thanks to Mr. K. Sambandam, Retired Revenue Inspector and his colleagues, VAO’s for field data collection and the Staff members, Centre for Yoga Studies for conducting field survey in geophysical and socio-economic questionnaire survey of their valuable help to complete this work successfully. I wish to express my gratitude to all my colleagues in the department and the supporting staff of the department for their munificent help and support during my period of research.

Finally, I express my heartfelt thanks to my beloved Parents, my wife N. Gayathri, my daughter N. Harine and my son N. Prashannavenkatesh, who patiently and generously spared their rightful time in allowing me to continue this research. Their love, patience, sacrifices provided me the affable environ for the completion of the thesis work. I would like to express my gratitude cousins R. Sriram and R. Vignesh and my brother N. Radhakrishnan and his wife N. Anuradha who spared their time, wishes and prayers which led to the successful completion of this research work.

I wish to record my sincere thanks to my brothers and family members, my brother-in-law N. Venkatraman and his family members for their moral support during the period of my research. My truthful thanks are due to all kind hearted souls who directly or indirectly contributed their part to the progress of this research.

I am sincerely grateful to my aunt late. Mrs. S. Malathy, blessings her and her son S. Anandasabesan, her daughter S. Archana, who helped me to reach this destination.

The thesis, exclusively, is dedicated to my father Thiru. C.S. Natarajan and my mother Mrs. N. Thillaiammal and my family members.

Nagarajan, N