

CONTENTS



ACKNOWLEDGEMENT	i
PREFACE	vii
ABSTRACT	x
NOTATIONS	xii
LIST OF MAPS	xvii
LIST OF TABLES	xviii
LIST OF FIGURES	lx

CHAPTER NO.	TOPIC	PAGE NO.
1	INTRODUCTION	1
	1.1 General	1
	1.2 The Objectives and Advantages of Conjunctive Use	3
	1.3 The Principles of Conjunctive Use in Water Resources Planning and Management	6
	1.4 Constraints Involved in Conjunctive Use Planning	10
	1.5 Objectives of Present Study	14
	1.6 Detailing the Conjunctive Use Plan	14
	1.7 Linear Programming	16
	1.8 Fuzzy Linear Programming	18
2	CONJUNCTIVE USE	19
	2.1 General	19
	2.2 Development of Conjunctive Use Planning in India	19
	2.3 Deciding the Quantum of Conjunctive Use	22
	2.4 Economic Analysis of Projects With Conjunctive Use	28
3	LITERATURE REVIEW	31
	3.1 General	31
	3.2 Literature Study	31

7	RESULTS, ANALYSIS, CONCLUSIONS AND RECOMMENDATIONS	102
	7.1 Introduction	102
	7.2 Computer Runs	102
	7.3 Results	103
	7.4 Analysis	247
	7.5 Conclusions	265
	7.6 Recommendations	268
	APPENDIX I	269
	I.1 General	269
	I.2 Geology of the Area	269
	I.3 Drainage	269
	I.4 Climate	270
	I.5 Land Use and Agriculture Practice for Navsari Branch Canal	270
	I.6 Survey and Investigation	270
	I.7 Details of Wells in Navsari Branch Canal Command	271
	I.8 Actual Area of Crops Grown in the Navsari Branch Canal Command	273
	I.9 Change in Reference Evapotranspiration, E_t_o	275
	APPENDIX II	276
	II.1 General	276
	II.2 Methodology	276
	APPENDIX III	282
	III.1 General	282
	III.2 Methodology	282
	APPENDIX IV	288
	IV.1 What is MATLAB?	288
	IV.2 Development Environment	289
	IV.3 Starting and Quitting MATLAB	289
	IV.4 How to Run a Program in MATLAB?	290
	REFERENCES	291