FILTRATION ANALYSIS OF FOUR DIFFERENT FILTER FABRICS

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TABLE OF CONTENTS

Introduction 1

Purpose of Study 4

Review of Literature 5

Water Clarification Methods 5

Filter Fabric Theory 10

Selection of Filter Medium 14

Rating of the Filter Medium 17

Materials and Methods 18

Equipment 18

Test Materials 25

Procedure 30

Results and Discussion 34

Summary and Conclusions 66

Suggestions for Future Research 70

Acknowledgements 71

References 72

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INTRODUCTION

Today the growing population and the advancement in agricultural technology has resulted in a greatly diminished supply of potable water. In many agricultural areas of the West and Midwest the groundwater level is declining each year due mainly to the increased use for irrigation. In the coastal areas the lowering water table allows the intrusion of salt water into heretofore fresh water aquifers. The reason the water table is being lowered is that the increased use has surpassed the capacity of natural recharge resulting in the "mining" of water.

Surface reservoirs have been built to store irrigation water. These artificial detention structures increase the amount of groundwater recharge and are able to supply water for a limited amount of irrigation. However, storage reservoirs often cover some of the best agricultural soils in the area and have a large loss of water to evaporation. A loss of water occurs in transporting it through canal systems from the storage reservoir to the irrigated area. Surplus water is dumped into major streams and transported out of the area, thus losing its economical value to the area.

The last twenty-five years has brought about what could be the answer to the groundwater problem--artificial recharge of surplus water into the groundwater reservoir. This eliminates evaporation losses, allows the Earth's surface to be used for other purposes, and maintains most of the water in the area because the rate of flow in the groundwater reservoir is less than one-half mile per year.