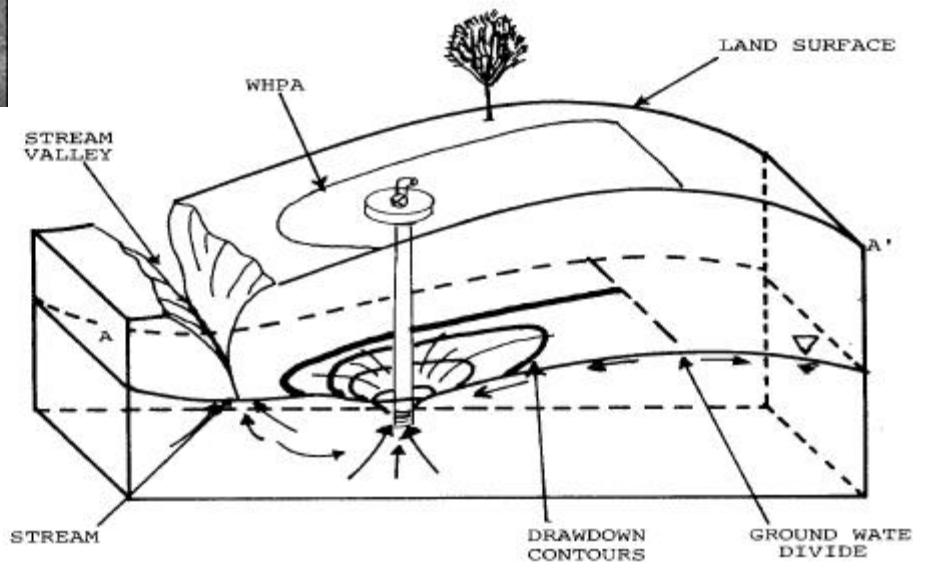
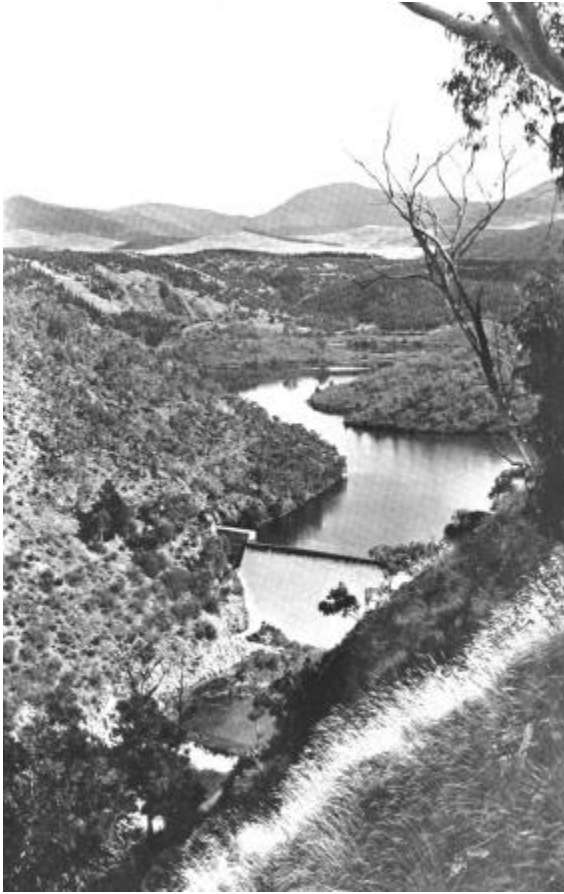


# NORTH CAROLINA'S SOURCE WATER ASSESSMENT PROGRAM PLAN



NORTH CAROLINA DEPARTMENT OF ENVIRONMENT & NATURAL  
RESOURCES

Division of Environmental Health - Public Water Supply Section

October 21, 1999

## Table of Contents

### Chapter 1 North Carolina's Source Water Assessment Program

	Page No.
1.1 Introduction .....	1
1.2 Safe Drinking Water Act Amendments of 1996.....	1
1.3 Source Water Assessment Program Requirements.....	1
1.4 North Carolina's Water Supply Watershed Protection Program.....	2
1.5 North Carolina's Wellhead Protection Program.....	3
1.6 Coordination of Source Water Assessment with Existing Protection Programs.....	4
1.7 Expected Benefits of Source Water Assessments.....	5

### Chapter 2 Source Water Assessments

2.1 SWAP Plan Content.....	6
2.2 Description of North Carolina's SWAP Approach .....	6
2.3 Scope of North Carolina's SWAP Efforts .....	6
2.3.1 Inventory of Public Water Supply Systems.....	7
2.4 North Carolina's Drinking Water State Revolving Fund Intended use Plan Phase I: Set-Aside Accounts.....	7
2.5 Source Water Delineation.....	7
2.5.1 Surface Water Sources .....	8
2.5.2 Ground Water Sources .....	9
2.5.2.a Delineation of Recharge Areas Not Adjacent to Ground Water Intakes .....	12
2.5.2.b Conjunctive Delineation for Source Water Assessments.....	12
2.6 Inventory of Significant Potential Contaminant Sources .....	13
2.7 Susceptibility Determination - North Carolina's Overall Approach.....	14
2.7.1 Ground Water Intake Susceptibility Determination Procedure.....	15
2.7.2 Surface Water Intake Susceptibility Determination Procedure.....	23

### Chapter 3 Contaminant Inventory And Data Management

3.1 Introduction.....	34
3.2 Contaminants of Concern .....	34
3.3 Significant Potential Contaminant Sources.....	34
3.4 Geographic Information System Use and Data Acquisition.....	34
3.4.1 Potential Contaminant Source Inventory .....	35
3.4.2 Field Acquisition of Data.....	36
3.5 Data Quality-Limitations and Assumptions .....	37

## Chapter 4 Swap Public Participation Component

<b>4.1</b>	Public Participation - North Carolina's Approach .....	38
<b>4.1.1</b>	Agency Steering Committee.....	38
<b>4.1.2</b>	Technical and Citizens Advisory Committee.....	38
<b>4.1.2.a</b>	Technical and Citizens Advisory Committee Meeting Summaries .....	39
<b>4.1.2.b</b>	Additional Public Comments Received From Technical and Citizens Advisory Committee Participants.....	39
<b>4.1.3</b>	Statewide Source Water Assessment Program Informational Public Meetings.....	39
<b>4.2</b>	Distribution of Source Water Assessment Results.....	40

## Chapter 5 Program Implementation

<b>5.1</b>	Source Water Protection Guidance .....	43
<b>5.2</b>	Technical Assistance to PWS System Owners.....	43
<b>5.3</b>	Coordination With Other State SWAP Efforts.....	43
<b>5.4</b>	Proposed Schedule of Completion for SWAP Activities.....	44
<b>5.5</b>	SWAP Development and Implementation Progress Reporting.....	44
<b>5.6</b>	Source Water Petition Program in North Carolina .....	45

### List of Tables

<b>Table 1.</b>	Aquifer Rating Based on Water Transmitting Characteristics.....	16
<b>Table 2.</b>	Inherent Vulnerability Rating of Ground Water Public Water Supply Intakes....	17
<b>Table 3.</b>	Databases Containing Information about Known Potential Contaminant Sources... ..	18
<b>Table 4.</b>	Phase I Determination of Contaminant Rating for Ground Water Public Water Supply Intakes.....	19
<b>Table 5.</b>	Susceptibility Rating for Ground Water Sources of Public Water Supply by Combining the Inherent Vulnerability and Contaminant Ratings.....	20
<b>Table 6.</b>	Examples of Potential Contaminant Sources Separated into Relative Risk Categories.....	23
<b>Table 7.</b>	Inherent Vulnerability of Surface Water Intakes.....	25
<b>Table 8.</b>	Databases Containing Information about Known Potential Contaminant Sources .....	26
<b>Table 9.</b>	Phase I Determination of Contaminant Rating for WS- I, II, III Watershed Public Water Supply Intakes .....	28
<b>Table 10.</b>	Phase I Determination of Contaminant Rating for WS- IV and V Watershed Public Water Supply Intakes... ..	29
<b>Table 11.</b>	Phase I Susceptibility Rating for Surface Water Sources of Public Water Supply by Combining the Inherent Vulnerability and Contaminant Ratings. ....	30

## **List of Appendices**

- Appendix A** Ground Water in North Carolina
- Appendix B** Lists of Potential Sources of Contamination by Risk Category
- Appendix C** Technical and Citizens Advisory Committee Meeting Agendas and Summaries
- Appendix D** Technical and Citizens Advisory Committee Meeting Information
  - D-1** Advisory Committee Invitation Letter and Mailing List
  - D-2** Technical and Citizens Advisory Committee Written Comments
  - D-3** List of Technical and Citizens Advisory Committee Members
- Appendix E** Notice of Public Meetings for North Carolina Source Water Assessment Program
- Appendix F** Potential Contaminant Source Databases
- Appendix G** List of Acronyms
- Appendix H** Glossary of Terms
- Appendix I** Figures