

APPENDIX B

INDIVIDUAL WATER SYSTEM PLANS

In the following Appendix, Table B-1 lists water systems in Island County which are either:

1. Class 1
2. Municipal or Special District
3. Expanding (see Section VI, 1., Regional Supplement)

The Table provides columns which identify the water system planning requirements (see Section II) and dates of approval by the County and DOH. This Appendix is intended to be updated by the County as new systems are eligible for preparation of water system plans, and as plans are submitted and approved.

Also included in this Appendix are guidelines adopted in this Regional Supplement for the content of:

1. Water System Plans (Checklist only - utilities are referred to DOH, Drinking Water Program, which will supply a complete guidelines booklet on request)
2. Abbreviated Water System Plan
3. Planning Questionnaire

APPENDIX TABLE B-1
ISLAND COUNTY CWSP
STATUS OF WATER SYSTEM PLANNING OF PARTICIPATING PURVEYORS

I.D. Number	Purveyor	Class	Plan Requirement	Date of Plan Submittal	Date of Plan Approval					
					County	DSHS				
MAJOR SYSTEMS, EXPANDING OR NON-EXPANDING										
Cities										
155509	Town of Coupeville	1	AWSP							
45950W	City of Langley	1	AWSP							
62650C	City of Oak Harbor	1	WSP							
Districts										
04950P	Bayview Beach Water Dist.	2	Q							
107483	Camano Vista Water Dist.	2	Q							
13900C	Clinton Water District	1	AWSP							
162562	Crockett Lake Water Dist.	1	AWSP							
264508	Freeland Water District	1	AWSP							
435508	Lagoon Point Water Dist.	1	AWSP							
46650K	Ledgewood Beach W.D.	2	Q							
480205	Long Beach Water Dist.	2	Q							
669501	Penn Cove Water District	1	AWSP							
72150R	Rhodena Beach Water Dist.	2	Q							
76470X	Scatchet Head Water Dist.	1	AWSP							
96042Q	Swantown Water Dist.	2	Q							
Other Class 2 Systems										
00410R	Admiral's Cove, Inc.	1	AWSP							
10580Q	Camaloch Association	1	AWSP							
10600T	Camano Co-op Water & Power	1	AWSP							
SP130F	Camano Island State Park	1	--							
107507	Camano Water Association	1	AWSP							
37680C	Chateau St. Michelle	1	--							
16274J	Crosswoods Water Co.	1	AWSP							
20250L	Dugualla Community, Inc.	1	AWSP							
SP285T	Fort Eby State Park	1	--							
SP2757	Fort Casey State Park	1	--							
33150P	Hillcrest Village Water Co.	1	AWSP							
499547	Madrona Beach Community Water System	1	AWSP							
034207	NAS Whidbey Island	1	WSP							
592000	New Utsalady Water System	1	Q							
61750E	Northgate Terrace	1	AWSP							
662187	Parkwood Manor MHP	1	AWSP							
74000F	Rolling Hills Glencairn Community	1	AWSP							

TABLE B-1 continued

I.D. Number	Purveyor	Class	Plan Requirement	Date of Plan Submittal	Date of Plan Approval	
					County	DSHS
76050W	Sandy Hook Yacht Club Est.	1	AWSP			
763000	Saratoga Water, Inc.	1	AWSP			
771486	Sea View Water Co.	1	AWSP			
789759	Sierra Country Club, Inc.	1	AWSP			
SP8204	S. Whidbey State Park	1	--			
466703	W. B. Waterworks No. 1	1	AWSP			
363146	Whidbey West Water System	1	AWSP			
<u>OTHER WATER SYSTEMS EXPANDING</u>						
<u>North Whidbey (Class 2)</u>						
	Fircrest Water Association	2	Q			
	Harris Custer Estates Water Association	2	Q			
	Indian Ridge Water Co.	2	Q			
	Shirona Water System	2	--			
	Wildwood Water System	2	--			
<u>North Whidbey (Class 3 and 4)</u>						
	Cliff View Water Coop.	4	Q			
	Strawberry Pt. Water Assn.	4	Q			
<u>Central Whidbey (Class 3 and 4)</u>						
	Fort Casey Inn	3	Q			
<u>South Whidbey (Class 2)</u>						
	Inglewood Park Water Sys.	2	Q			
	Skyline West Comm. Club	2	Q			
	Useless Bay Shores	2	Q			
	Windmill Heights Community	2	Q			
<u>South Whidbey (Class 3 and 4)</u>						
	Beverly Beach Division #3	4	Q			
	Groom, J. D.	4	Q			
<u>Camano Island (Class 2)</u>						
	Camano City Comm. Club	2	Q			

TABLE B-1 continued

I.D. Number	Purveyor	Class	Plan Requirement	Date of Plan Submittal	Date of Plan Approval	
					County	DSHS

TABLE B-1 continued

I.D. Number	Purveyor	Class	Plan Requirement	Date of Plan Submittal	Date of Plan Approval	
					County	DSHS

AWSP - Abbreviated Water System Plan

WSP - Water System Plan

Q - Planning Questionnaire

CONTENT GUIDELINES FOR
WATER SYSTEM PLANS

(Checklist Only)

From:

**Planning Handbook
August, 1985
Department of Health**

INTRODUCTION

OBJECTIVE

Planning is a critical management activity of all water utilities. The principal goal of water system planning is to make efficient use of available resources. This is accomplished by making decisions about water system capital improvements and operations which are in accordance with overall system policies and direction expressed in a utility's water system plan.

Another reason for developing a water system plan is to assure orderly growth of the system while maintaining reliable delivery of high quality water. The plan, then, is intended to guide water utility actions in a manner consistent with other activities taking place within the community. If considerable growth or change is occurring in the community, the water system plan will undoubtedly be fairly comprehensive and complex since it deals with the implications of that growth or change. Conversely, a water system plan for an area not undergoing significant growth or change should be fairly simple and straightforward.

The planning handbook has been written to provide assistance to utilities preparing water system plans. The purpose of the planning handbook is to systematically present information needed to develop a good water system plan. It is intended to be used as a guide by those persons responsible for preparing water system plans. The handbook explains the detail needed to thoroughly cover each planning topic.

Hopefully, the educational material presented herein will result in well-conceived and clearly-stated water system plans. The ultimate effect will be improved quality of water service to the public water consumers of Washington State.

SYSTEMS REQUIRED TO HAVE PLANS

The following systems are required to have water system plans approved by the Department of Social and Health Services (DSHS):

1. Systems with 1000 or more services.
2. Systems with 100 to 999 services when specifically requested by DSHS.
3. Systems in areas utilizing the Public Water System Coordination Act, Chapter 70.116 RCW.

Requirements pertaining to water system planning are identified in WAC 248-54-065. The requirements list general topics which must be addressed in the water system plan. This handbook provides a more thorough, specific description of how each topic should be discussed.

In areas utilizing the Public Water System Coordination Act, the water system plan should closely relate to the Regional Supplement required under that program. Page 4 provides a checklist of subjects required in the Regional Supplement which should also be covered in the water system plan.

HANDBOOK ORGANIZATION

The planning handbook is organized into five major chapters. Each chapter represents a basic water system plan component. The five chapters are:

- Chapter 1. Basic Planning Data
- Chapter 2. System Analysis
- Chapter 3. Improvements
- Chapter 4. Operations Program
- Chapter 5. Supportive Documents

Each chapter is divided into several sections to address specific topics in detail. For each section, the handbook describes the Objective (why the subject needs to be addressed), Plan Content (how the subject is expected to be addressed) and Information Sources (where information about the subject may be obtained).

Page 5 presents a checklist which may be used to assure that each subject discussed in this handbook has been addressed.

THE PLANNING HORIZON

Water system plans are intended to look ahead at least ten years into the future. A longer planning period may be appropriate to coincide with comprehensive or land use plans which typically look ahead twenty years. Some utilities look ahead fifty years to coincide with the life expectancy of some of their facilities.

The first five-year planning interval should be readily predictable for most water utilities. Thus, a definite improvement schedule and financial program is expected for at least the first five years of the water system plan. The second five-year interval is often less predictable, so a more conceptual approach to improvements and financing is expected. The water system plan should continually provide adequate guidance to decision makers, since it must be updated at least every five years.

PLAN DEVELOPMENT AND REVIEW

Most utilities find it helpful to enlist a consultant to prepare their water system plans. Some accomplish the planning requirement through use of "in-house" staff. DSHS encourages a partnership approach that involves the utility manager, utility operator, city and/or county planner, engineering consultant, financial consultant and the utility owner/decision makers.

The planning needs of a particular water system should be satisfied by its water system plan. Because planning needs are specific for individual systems, the length and complexity of plans will vary from utility to utility. These guidelines have been developed to provide adequate coverage of topics for the state's larger, more complex water systems. Therefore, they may be more detailed than necessary for smaller, less complex water systems.

Although public involvement is not required, some systems utilize an advisory committee to assist in plan development. DSHS recommends that the utility conduct public meetings or hearings to educate the public about the water system's future and to receive valuable input which may influence the plan. Decision makers should be kept well-informed about the plan throughout its development. Other agencies or entities may have specific requirements affecting preparation of the water system plan. Thus, it may be appropriate to contact them at the onset of plan development.

WATER SYSTEM PLAN APPROVAL

This handbook will also serve as a guide for the DSHS review of water system plans. A water system plan will be approved by DSHS when each topic identified herein has been adequately addressed. Once approved, DSHS considers a utilities' plan to be a commitment to implement the actions identified in the improvement schedule. The utility will be expected to make decisions in accordance with its plan. The specific process for plan development and review is identified on page 8. The process is designed so the utility, DSHS and the county may work together to achieve the most useful planning document possible.

TABLE 1

REGIONAL SUPPLEMENT CHECKLIST

The following checklist identifies elements of the Regional Supplement which need to be addressed in the text of the water system plan. This checklist should only be used if the utility is involved with the Public Water System Coordination Act (Chapter 70.116 RCW).

Regional Supplement Element	*Covered in Water System Plan?
Map of Future Service Area	<input type="checkbox"/>
Signed Service Area Agreement	<input type="checkbox"/>
Population and Water Demand Projections	<input type="checkbox"/>
Design Standards	<input type="checkbox"/>
Implementation of Minor Regional Projects	<input type="checkbox"/>
Implementation of Major Regional Projects	<input type="checkbox"/>
Implementation of Water Utility Service Review Procedure	<input type="checkbox"/>
Implementation of Satellite System Management Program	<input type="checkbox"/>
Water Reservation Conservation Program	<input type="checkbox"/>

*These items should be addressed in their appropriate section of the plan as opposed to a special chapter or appendix.

TABLE 2

PLAN CONTENT CHECKLIST

The following checklist summarizes the topics which are discussed in each section of this handbook. It is intended to function as a checklist for the utility, assuring that key topics are in the draft water system plan. DSHS will use this checklist during the plan review process. Another copy of this checklist is included at the end of the handbook so it can be torn out for easy reference.

Section	Topic
<input type="checkbox"/> Future Service Area	
Map of Existing Service Area	
Criteria for Future Service Area	
Map of Future Service Area	
Explanation of Boundaries Shown on Map	
<input type="checkbox"/> Service Area Characteristics	
History of Growth and Water Service	
Inventory and Summary of Related Plans	
Geography of the Service Area	
Other Items Affecting the Service Area	
<input type="checkbox"/> Service Area Policies	
Summary of Applicable Policies	
Discussion on Effect of Applicable Policies	
<input type="checkbox"/> Future Growth	
Existing Land Use Patterns	
Map of Future Land Use Patterns	
Methodology and/or Source of Land Use	
Projections	
Population Forecasts	
Methodology and/or Source of Population	
Forecasts	
Map of Future Population Distribution	
<input type="checkbox"/> Future Water Demand	
Amount of Water Used by Category	
Evaluation of Existing Water Use	
Conservation	
Assumptions for Future Water Demand	
Calculations	

Future Water Demand Projections
Justification of Future Water Demand
Map Showing High Demand Areas

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Performance and Design Criteria

List of Applicable Criteria
How Criteria will be Applied

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Inventory of Existing System

List of Facilities in Each Grouping
Functions and Relationships of Facilities
Evaluation of Effectiveness of Facilities
Relationship of Groupings
Evaluation of Recent Improvements
Map of Facilities and Pressure Zones

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Fireflow

Identification of Standards
Source of Fireflow Standards
Map of Development Classifications (or the
Utility's Own Categories)
Summary of Future Fireflow Needs

Hydraulic Analysis

Methodology and/or Description of Program
Pressure Limitations and Justification
Description of Scenarios
How Input Data was Derived
Summary of Results

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Water Resources

Description and Evaluation of Existing
Source
Inventory and Summary of Water Resource
Studies
Evaluation of Potential for Contamination
Water Rights Assessment (Chart)

Water Quality

Assessment of Source Water Quality
Assessment of Distribution System
Water Quality
How Identified Problems will be Addressed

Summary of System Deficiencies

List of Documented Deficiencies
Discussion of Deficiencies not Previously
Documented

<input type="checkbox"/>	Identification of Improvements	
	List of Alternative Packages	
	Evaluation Criteria	
	Assessment of Alternatives	
	Description and Justification of Selected Alternatives	
	Map of Improvements	
<input type="checkbox"/>	Scheduling of Improvements	
	Five-Year Definite Schedule	
	Schedule for Remaining System Needs	
	Improvement Program (Chart)	
<input type="checkbox"/>	Financial Program	
	Past and Present Financial Status	
	Available Revenue Sources	
	Allocation of Revenue Sources	
	Ability to Secure Needed Revenue	
	Assessment of Impact Upon Rates	
<input type="checkbox"/>	Operations Program	
	Organizational Chart	
	Responsibilities of Positions	
	Certification Status	
	Identification of System Components	
	Routine Operation	
	Preventive Maintenance Program	
	Inventory of Chemicals, Equipment and Supplies	
	Sampling Procedure	
	Violation Response Procedure	
	Emergency Call-up List	
	Vulnerability Analysis	
	Contingency Plans	
	Cross-Connection Control Program	
<input type="checkbox"/>	Miscellaneous Supportive Documents	
	Environmental Impact Statement or Determination of Non-Significance	
	Satellite System Management Program	
	Text of Appropriate Agreements	
	Response from Affected Entities	
	Standard Construction Specifications (Chart)	
	Watershed Control Program	

TABLE 3

THE PLANNING PROCESS

The following chart briefly identifies the activities involved in developing and approving a water system plan. The chart also lists which entity is responsible for fulfilling each activity. As can be seen, a partnership approach is utilized throughout.

Activity	Responsible Entity(ies)		
	DSHS	Utility or Consultant	*County
1. Arrange Pre-Plan Meeting		X	
2. Attend Pre-Plan Meeting	X	X	X
3. Prepare Plan		X	X
4. Submit Draft Plan		X	
5. Review Plan (30 days)	X		X
6. Arrange Comment Meeting	X		
7. Attend Comment Meeting	X	X	X
8. Prepare Written Response	X		
9. Revise Plan		X	
10. Submit Final Plan		X	
11. Review Final Plan (May result in returning to 6)	X		
12. Approve Plan	X		
13. Adopt Plan		X	X

*DSHS has a working agreement with some counties for development and review of water system plans. Thus, county actions identified in the chart may not be applicable.

CONTENT GUIDELINES FOR
ABBREVIATED WATER SYSTEM PLANS

(Island County)

ABBREVIATED WATER SYSTEM PLAN

An abbreviated water system plan is required from water systems between 100 and 1,000 services which are located within a Critical Water Supply Service Area. Some systems may be exempted from this requirement, so be sure to check with the Department of Health prior to beginning the plan.

The abbreviated water system plan is intended to be less detailed than a water system plan. In general, the larger the water system, the more effort and detail should go into plan preparation. For more complete information about topics identified in this outline, please refer to the DOH Planning Handbook for Water System Plans.

1. BASIC PLANNING DATA

- A. Future service area map and agreement(s).
- B. History of water system development.
- C. Existing population and land use.
- D. Future population and land use projections for at least the next 10 years.
- E. Existing water consumption and future water demand for at least the next 10 years.

2. SYSTEM ANALYSIS

- A. Inventory of existing facilities, including map of facilities and pressure zones.
- B. Evaluation of existing system, including:
 - (1) Hydraulics
 - (2) Fireflow
 - (3) Water Quality
 - (4) Water Rights
 - (5) Adequacy of Source
 - (6) Potential for Sea Water Intrusion

3. IMPROVEMENTS

- A. Identify improvements which will be needed in the next 10 years.
- B. Improvement schedule (definite for at least the first 5 years).
- C. Cost of scheduled improvements, and how each will be financed.

4. OPERATIONS PROGRAM

- A. Name, phone numbers, and responsibilities of person(s) involved in water system operations. (Identify who is certified and at what level.)
- B. Routine operation procedures.
- C. Preventive maintenance procedures.
- D. Sampling procedure, including response when sample results exceed state standards.
- E. Sampling requirements addressed in the Sea Water Intrusion Policy as indicated by the Island County Health Department.
- F. Response to emergencies.

5. RELATIONSHIP WITH OTHER PLANS

- A. Compatibility with Regional Supplement.
- B. Compatibility with other related plans, including water system, land use, and water resource planning efforts.

6. COMPLIANCE WITH SEPA REQUIREMENTS

CONTENT GUIDELINES FOR
PLANNING QUESTIONNAIRE

(Island County)

PLANNING QUESTIONNAIRE

To aid in the development of water systems located within designated Critical Water Supply Service Areas, purveyors are required to develop a water system plan. This questionnaire is to be filled out by water purveyors which have less than 100 services.

PART 1 - FACILITIES

1. Describe how your existing system works.

2. Has your system had any water quality problems? If so, how have they been corrected?

3. (A) How many existing services does your system have?

- (B) How many services do you expect to have 10 years from now? How did you arrive at that number?

4. Does your system have adequate water rights? If not, explain the situation. Attach a copy of your existing water rights.

5. What improvements will your system need in the next 5 years? Describe why each will be needed.

6. (A) How much will each improvement cost?
(B) How will each improvement be financed?

7. Attach a copy of your service area map and agreement(s).

8. (A) Are you interested in sharing facilities or intertying with another water system?
(B) Are you interested in having another entity operate and maintain your system?

PART 2 - OPERATIONS PROGRAM

1. List name and phone number of person(s) responsible for your water system.

2. What are procedures for turning your system on and off, and for routine operation?

3. (A) Who do you call when an operational problem arises?

(B) How do they respond to emergencies?

4. List procedures for cleaning your system (tanks, mains, etc.)

5. (A) What is your sampling frequency and procedure?

(B) How do you respond when results of samples exceed state standards?

6. Indicate how your system will incorporate the Sea Water Intrusion Policy requirements as indicated by the Island County Health Department?

7. Other items unique to your system:
