

CHAPTER 20

Monitoring The Framework Plan

20.1 INTRODUCTION

The comprehensive framework plan presented in Chapter 19 provides for the logical development and management of water and water related resources in the Okanagan Basin over the next fifty years, in keeping with the expressed desires of the public for a particular life style. The monitoring of these resources to determine how they respond to the various management measures implemented, and where necessary to make suitable adjustments to ensure that the plan continues to meet the social and economic goals of the valley community, is considered to be an integral part of the framework plan.

This chapter outlines the overall monitoring objectives that should be met based on knowledge and experience gained by the Board during the tenure of the Okanagan Basin Study. These objectives apply particularly to the immediate future and the full review to be undertaken by 1980. The actual development of a monitoring program to meet these objectives, including consultation with appropriate technical groups, is considered to be a function of the 'Implementation Task Force.'

20.2 MONITORING OBJECTIVES

The planning objectives of the four management components comprising the comprehensive plan were outlined in Chapter 12, Section 12.5. Data obtained during the study and used as a basis for developing alternatives to meet these objectives, represents the best information presently available. However, as new records are obtained, new floods and droughts experienced and new or improved waste management programs implemented, the data base prepared under this study will become obsolete.

To ensure that an up-to-date data base is available on which management can found both short and long term decisions regarding the plan, the following objectives are set out for the establishment of a suitable monitoring program. Examples of monitoring requirements to meet various planning objectives are also shown in Table 20.1.

1. To provide current data for the day to day management of water and water related resources on such aspects as reservoir storage levels, runoff potential, diversions, water quality for consumptive use and water-based recreation, etc.

TABLE 20.1

EXAMPLES OF MONITORING REQUIREMENTS TO MEET PLANNING OBJECTIVES

PLANNING OBJECTIVE	EXAMPLES OF MONITORING REQUIREMENTS
<p>(a) <u>Water Quantity Management</u></p> <p>(i) to supply water for all consumptive water requirements for agriculture, residential, commercial and industrial purposes</p>	<ol style="list-style-type: none"> 1. Current data on reservoir storage levels, diversions, water demands, etc. 2. Continuous monitoring of selected tributaries to improve estimates of firm water supplies and runoff forecasts.
<p>(ii) to supply water for all non-consumptive water requirements for fisheries, wildlife, recreation and aesthetic resources.</p>	<ol style="list-style-type: none"> 1. Same as for (i) above 2. Short term study on effects of reduced flows on fisheries down Okanagan River during drought cycles. 3. Short term study on effect of storage and modified operation on flows for fisheries (Mission, Equesis and Trepanier Creeks).
<p>(iii) to minimize conflicts between existing and potential uses of water.</p>	<ol style="list-style-type: none"> 1. Same as for (ii) above
<p>(b) <u>Water Quality Management</u></p> <p>(i) to protect the health of Okanagan residents</p>	<ol style="list-style-type: none"> 1. Current data on water quality for consumptive use, water based recreation and waste treatment effluents
<p>(ii) to provide water quality compatible with agriculture, municipal, domestic and industrial use.</p>	<ol style="list-style-type: none"> 1. Same as for (i) above
<p>(iii) to provide a water quality compatible with recreation, sport fisheries and other non-consumptive uses of water.</p>	<ol style="list-style-type: none"> 1. Short term monitoring of lake water quality at periodic intervals (limnological). 2. Current data on water quality for beach oriented recreation.
<p>(c) <u>Fishery Management</u></p> <p>(i) to preserve, enhance and manage environments suitable for sport fishery development</p>	<ol style="list-style-type: none"> 1. Current data on fish stocks, spawning escapements, and angler participation, with emphasis on Mission, Equesis and Trepanier Creeks for Okanagan Lake
<p>(ii) to maintain and protect the environment for Sockeye salmon stocks in the Okanagan River.</p>	<ol style="list-style-type: none"> 1. Current data on spawning escapement of Sockeye salmon.
<p>(d) <u>Water Based Recreation Management</u></p> <p>(i) to provide opportunities for a full range of water based recreation opportunities.</p>	<ol style="list-style-type: none"> 1. Current data on use and demand of existing facilities.
<p>(ii) to protect and enhance the aesthetic qualities of the Okanagan Valley</p>	<ol style="list-style-type: none"> 1. Current data on land use planning and development.

2. To provide continuous records of a sufficient time base for the long term improvement of water management in the Basin - e.g. to establish the extent of firm water supplies in the Basin for water licencing purposes, particularly in the tributary streams; to improve runoff forecasts in drought and flood years, etc.
3. To provide a measure of the response of water and water related resources to specific measures implemented under the plan - e.g. the response of the lakes to new or improved waste management programs, the effect of improved spawning facilities on fishery potentials, the effect of increased drawdowns on Okanagan Lake in drought periods on recreation and fisheries, etc.

Some of the above objectives require continuous monitoring while others may best be achieved through concentrated short term programs at periodic intervals. In many cases monitoring programs already exist that will meet the requirements of the first two objectives. These should however, be coordinated into an overall program along with any additional monitoring required to meet the third objective. It should also be recognized that many of the monitoring needs of individual components of the plan may be similar, and therefore close liason will be required between different disciplines and agencies during the development of this program.

One additional component not included in the above objectives is that of economic growth. The economic projections provided in this report should be compared to actual growth rates following the next federal census in 1981. This is required to orient the plan in time with respect to actual growth, water demands, waste loadings, etc; to compare the data obtained from the 1980 review with actual growth conditions; and to modify the plan as required based on improved forecasts over the next decade.