

CHAPTER 11

Legal, Administrative and Institutional Arrangements

While the development of resource use plans can proceed under a variety of laws, rules, rights and customs, the implementation of any specific course of public action must conform to law. It must be carried out by administrative bodies created under, and whose actions are bound by, a particular structure of laws and regulations. Before any decisions on the future management of a resource can be made therefore, it is necessary to establish the scope and effect of the existing legal and institutional system on future management options. Assessments can then be made of what changes are desirable and are likely to be acceptable. While some aspects of the legal and administrative system can be changed to suit resource use plans, there are certain fundamental matters that are so basic to our way of life, that, as a matter of practice they cannot be changed.

Although essentially an individual may do what he likes with his own property, in the interest of peaceful enjoyment of life, governments have been given the power to modify, to the extent it is within their jurisdiction to do so, this freedom for the benefit of the community as a whole.

In Canada, the British North America Act, 1867 delineates the areas of responsibility of the Federal & Provincial Governments, that is, their jurisdiction (Figure 11.1). In some cases the delineation is clear; in others it is not. Consultation and joint agreement may be one method to effectively clarify and resolve jurisdictional questions where they are unclear.

Within the Province of British Columbia provincial powers can be and have been delegated to various levels and types of local government. These local governments cannot override the provincial government and have no powers except those given them by or under a provincial statute. Questions of what a local government can do or over what geographical area it has authority are also matters of jurisdiction.

Most of the institutional and legal problems concerning water resource management spring from either the basic property rights of the individual or from questions of jurisdiction.

Under the BNA Act, 1867, the federal government has exclusive legislative jurisdiction over fisheries, navigation, Indians and lands reserved for Indians. and certain Federal lands including National Parks, and international water

THE LEGAL AND ADMINISTRATIVE FRAMEWORK AFFECTING WATER RESOURCE MANAGEMENT IN THE OKANAGAN BASIN

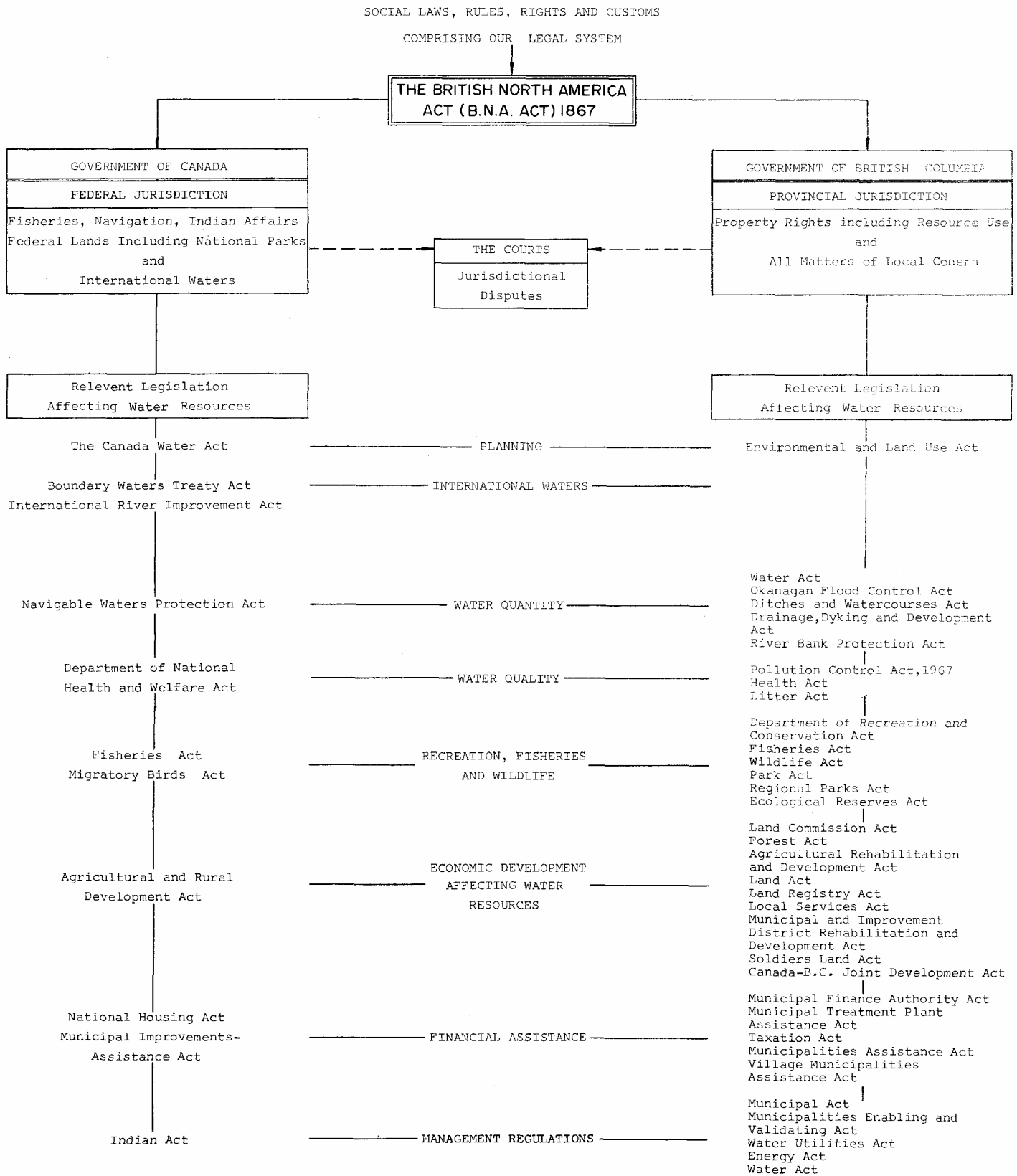


Figure II.1

matters. It shares jurisdiction in agriculture with the provinces.

In water matters it is the Provinces which have principal jurisdiction; such jurisdiction is derived from the exclusive right to legislate in respect of property within the Province, local works and undertakings and generally all matters of a local nature. In addition to such legislative jurisdiction, the Province owns all the natural resources, including water, within its boundaries.

The Provincial government has delegated certain of its functions to local governments to exercise within their defined boundaries.

Most of the statutes which affect water resource management are single purpose in scope. Generally they authorize a particular course of action for a particular purpose. Since water resource management and environmental matters involve a complex of interrelated physical factors, single purpose laws are often insufficient as a basis for comprehensive action. Also there is little provision for the resolution of diverse resource use interests, each governed by different statutes.

All of these aspects are examined below under the headings:

1. Laws Affecting the Use and Management of Water and Water Related Resources.
2. Administration of Water Resources.
3. Discussion of Institutional Arrangements Affecting the Okanagan Basin.

LAWS AFFECTING THE USE AND MANAGEMENT OF WATER AND WATER RELATED RESOURCES

The nature of water is such that, except in artificial containers, it is rarely still; it is always flowing by gravity, falling as precipitation or rising as evaporation. Under Provincial Statute the property in, and right to the use and flow of all the water at any time in any natural water course and any lake, river, creek or spring in the Province are for all purposes vested in the Province. The individual's right to use water is governed by a system of licensing under the B.C. Water Act. The user of the water must have regard to legislation respecting navigation and fisheries, which are under federal jurisdiction. Federal and provincial legislation respecting the use of and management of water, and water related resources is shown in Figure 11.2.

.1 Planning Legislation

The Canada Water Act and the B.C. Environment and Land Use Act are recent statutes which allow for a broad approach to resource planning. Both acts refer to the need for studies and research to provide a better knowledge of our resources. Although differing in emphasis these Acts both recognize the

SUMMARY OF LEGISLATION AFFECTING WATER RESOURCE MANAGEMENT IN BRITISH COLUMBIA

(Note: Descriptions intended as general information only - Reader should obtain copy of Statute itself for interpretation purposes.)		
NAME OF ACT	GOVERNMENT	DESCRIPTION OF ACT
RESOURCE PLANNING		
1. The Canada Water Act	Canada	To provide for the management of the water resources of Canada including research, and the planning and implementation of programs relating to the conservation, and utilization of water resources. It is intended to provide for a greater knowledge of the water resources of Canada, to provide for pollution control and to cooperate with provincial governments in the management of these resources.
2. Environmental and Land Use Act	British Columbia	To provide for broad environmental and land use policies and undertake major land and resource allocation studies in British Columbia. The act authorizes the establishment of an Environment and Land Use Committee with its membership limited to Cabinet Ministers.
INTERNATIONAL WATERS		
1. International Boundary Waters Treaty Act	Canada	This act sets out regulations concerning the use or management of waters on or flowing across the boundary between Canada and the United States, and provides the means for settling differences concerning such boundary waters. Osoyoos Lake falls within the provisions of this Act.
2. International River Improvements Act	Canada	This Act imposes Federal control on International River Improvements in addition to any controls imposed by the Provinces. A special licence from the Federal Government is required before changes can be made in the flow of an International River at the border. The Act expressly does not apply to projects for domestic, sanitary or irrigation purposes.
WATER QUANTITY		
1. Water Act	British Columbia	This is the prime statute governing the use of water in British Columbia and covers the obtaining and exercise of rights to the use of water, the administration and enforcement of the Act, and the establishment of communal organizations for the use of water.
2. Navigable Waters Protection Act	Canada	The purpose of this act is to prevent obstructions to navigable waters. It provides that no one may place wires, pipes, bridges, or other obstructions in or under a navigable water without permission from the Federal Government.
3. Okanagan Flood Control Act	British Columbia	This Statute authorizes the Province, with or without agreement with Canada, to carry out flood protection measures in the Okanagan Basin in Canada.
4. Ditches and Water Courses Act	British Columbia	This Act provides a summary and economical method of procedure to enable a landowner to drain his land by constructing ditches over the lands of others. The act has no application to bringing water to lands.
5. Drainage Dyking and Development Act	British Columbia	This Act is designed to permit the establishment of districts to plan, construct, and operate drainage or dyking works.
6. River Bank Protection Act	British Columbia	This Act provides a procedure whereby landowners may apply for government assistance in river bank work to protect their properties.
WATER QUALITY		
1. Pollution Control Act	British Columbia	This Act provides the means for the control of pollution including water, air and to some extent ground pollution. The Act requires that no person shall discharge sewage or other waste materials on, in, or under any land or into any water, or discharge or emit contaminants into the atmosphere without a permit from the Director. The Act exempts certain minor wastes and operations leaving them subject to control under the legislation.
2. Health Act	British Columbia	The Act is a general on covering the provision and control of health services in the Province.
3. Litter Act	British Columbia	Regulations concerning the use and disposal of containers for beverages, discard and disposal of litter, and discharge of sewage and other waste materials from trailers, campers, and boats.
4. Department of National Health & Welfare Act	Canada	This Act is concerned with the promotion or preservation of the health, social security, and social welfare of the people of Canada over which Canada has jurisdiction. In conjunction with the Indian Act it provides for the inspection of premises and provision of sanitary conditions on reserves. The Act also includes the enforcement of any rules or regulations made by the International Joint Commission on boundary waters as they relate to public health.
RECREATION, FISHERIES & WILDLIFE		
1. Department of Recreation & Conservation Act	British Columbia	This Act is concerned with the management of all matters relating to parks, fisheries, game, community programmes and recreational facilities. The above includes the stimulation and aid of tourist traffic under the B.C. Government Travel Bureau.
2. Park Act	British Columbia	This Act covers all matters pertaining to parks and recreational areas in British Columbia.
3. Ecological Reserves Act	British Columbia	This Act provides for the establishment of ecological reserves on Crown Lands. Once established the area is withdrawn from any disposition of any right under different statutes including the Water Act. A reserve may be cancelled by Order in Council.
4. Regional Parks Act	British Columbia	This Act permits Regional Districts to combine into a Regional Park District for the purpose of establishing parks.

SUMMARY OF LEGISLATION AFFECTING WATER RESOURCE MANAGEMENT IN BRITISH COLUMBIA

NAME OF ACT	GOVERNMENT	DESCRIPTION OF ACT
5. Fisheries Act	Canada	This Act governs matters relating to fish and only to fish including both fresh-water and salt water fish. The administration of sport fishing under this Act (by agreement) has been carried out by the B.C. Fish and Wildlife Branch since 1930. The Act includes regulations concerning pollutants harmful to fish, obstructions which hinder the free passage of fish, and the maintenance of flows required for the safe passage of fish and preservation of spawning grounds.
6. Fisheries Act	British Columbia	This Act deals primarily with the licencing of fishermen and fish processing plants.
7. Wildlife Act	British Columbia	This Act deals primarily with regulations concerning game conservation, and the licencing for all forms of hunting.
8. Migratory Birds Convention Act	Canada	This Act describes the regulations concerning the protection of migratory birds that inhabit Canada during the whole or any part of the year.
ECONOMIC DEVELOPMENT		
1. Land Commission Act	British Columbia	This Act provides the means for the preservation of agricultural land for farm use, the preservation of green-belt land in and around urban areas, and the preservation of park land for recreational use. This Act was passed after the major portion of the Okanagan Basin Study had been completed in detail in this report.
2. Agriculture and Rural Development Act (A.R.D.A.)	Canada	This Act authorizes joint projects between Canada and the Province. It provides for joint undertakings or for contributions to projects for rural development, projects to develop rural income and employment opportunities, and soil and water conservation projects.
3. Agricultural Rehabilitation and Development Act	British Columbia	This Act provides the Minister of Agriculture with the means to enter into and carry out agreements with the Federal Government under A.R.D.A.
4. Land Act	British Columbia	This Statute covers the rules and procedures for obtaining rights to Crown Land.
5. Local Services Act	British Columbia	This Act is to provide for the establishment of unorganized territory into local areas for certain specific purposes such as community plans and recreation.
6. Municipal & Improvement District Rehabilitation & Development Act	British Columbia	This Act is intended to prevent speculation in lands in areas rehabilitated with government funds. A diminishing charge is assessed on an average basis on all land within the area rehabilitated.
7. Soldiers Land Act	British Columbia	This Act permits the government to acquire or to set aside lands for the purpose of settling ex-servicemen and their widows.
8. Canada - B.C. Joint Development Act	British Columbia	This Act provides the means for any Minister to make an agreement with a Federal Minister or authority respecting water and land development, highway construction or improvement, flood control - and other matters in the Province and to implement such agreements.
FINANCIAL ASSISTANCE		
1. National Housing Act	Canada	Part VIII of the National Housing Act provides for loans to a province or a municipality for the purpose of constructing or expanding sewage treatment projects.
2. Municipal Improvements Assistance Act	Canada	This Act authorizes federal loans to almost any level of municipal government to assist in the construction of self-liquidating works including a waterworks system and "other municipal projects".
3. Municipal Finance Authority	British Columbia	This Act establishes an authority to borrow money for water, sewer, and pollution control facilities for Regional Districts and municipalities.
4. Municipal Treatment Plant Assistance Act	British Columbia	This Act provides assistance to a municipality which has borrowed money for a treatment plant as therein defined.
5. Municipalities Assistance Act	British Columbia	This Act authorizes the government to guarantee Municipal Bonds with the Provincial Guarantee.
6. Village Municipalities Assistance Act	British Columbia	The Act provides for a village to obtain a Provincial Guarantee on bonds issued for water or sewer purposes or for hospital purposes.
ADMINISTRATION		
1. Municipal Act	British Columbia	This Act sets out the responsibilities, powers, duties, and restrictions of municipal organizations, including Cities, Towns, Villages, Regional Districts and Improvement Districts. These regulations include numerous sections pertaining to water resource management.
2. Municipalities Enabling and Validating Act	British Columbia	This Act was passed to remove anomalies created by the repeal of the old Municipal Act in 1957 and the enactment of a new one. It contains specific sections dealing with different municipalities including Penticton, Spallumcheen, and Summerland.
3. Water Utilities Act	British Columbia	This Statute is intended to regulate, in the public interest, the provision of services which are likely to be monopolistic, such as water supply. Approval is required to construct, operate, extend or close down a public utility and to approve the rates charged to the public for the services offered.
4. Indian Act	Canada	This Act is concerned with the administration of all matters pertaining to native Indians and Indian reserves.

Figure II.2

(cont'd)

basic concept of the need for comprehensive resource planning outlined in Chapter 12 of this report, and these two acts are among the first to do so.

11.1.2 International Waters

Osoyoos Lake straddles the international border at Osoyoos and the Okanagan River flows into Osoyoos Lake on the Canadian side and out of Osoyoos Lake on the American side. While it is not specifically a boundary water, certain provisions of the Canada-U.S. Boundary Waters Treaty of 1909 and the International Rivers Improvement Act may apply. The Boundary Waters Treaty provides a means for resolving trans-boundary water conflicts arising from diversions or obstructions in one country which raise water levels or flows in the other. The Treaty created the International Joint Commission which has among its responsibilities the task of advising the two governments and, in certain situations, issuing binding orders. The Treaty also contains a section on water quality in which it is agreed that boundary waters and water flowing across the boundary shall not be polluted on either side to the injury of health or property on the other. The International River Improvements Act requires the permission of the Federal Government for projects which materially alter the flow of an international river at the border. However, the Act expressly does not apply to diversions for "domestic, sanitary or irrigation purposes or other similar consumptive uses". The Act therefore is unlikely to be significant in respect to the Okanagan Basin, except perhaps for flood control.

11.1.3 Water Quantity (a) Water Act

The fundamental law affecting water use in the Okanagan Basin, as in all British Columbia, is the British Columbia Water Act. The present Act has evolved from water laws and ordinances going back to 1859. The key to the law is contained in Section 3. This section reads:

"The property in and the right to the use and flow of all the water at any time in any stream in the Province are for all purposes vested in the Crown in the right of the Province, except only in so far as private rights therein have been established under licenses issued or approvals given under this or some former Act. No right to divert or use water may be acquired by prescription."

The term "in any stream" includes, by definition lakes, sources of natural water supply, whether normally containing water or not, and groundwater. Actual use for however long a period or for whatever purpose gives no rights whatever nor priority in the obtaining of a license. Priority in use is determined by the date of application for a license, whether conditional or final.

The effect is to retain in the Crown all rights to water except in so far as the Crown may have granted these rights to some person. The right to use water is granted by and described in a Water Licence issued by an official called the Comptroller of Water Rights. A licence will only be issued for a particular purpose, from a particular source of water and, where applicable, for a specified quantity. This is designed to prevent a license having any intrinsic value; it only has value as a part of some kind of undertaking which makes use of the water. On the transfer of the land, mine or undertaking to which the licence is appurtenant, the licence is automatically transferred.

b) Navigable Waters Protection Act

In most parts of the world, the right to navigate on water is a public right totally separate from any right to use the water for other purposes. In Canada, where much of the early exploration and development depended on the use of water for navigation, the right to navigate is only the right to use what is there: there is no obligation to anyone, Crown or otherwise, to maintain a waterway in a navigable condition. The Courts have held that any water capable of floating logs commercially is navigable.

The Federal Act in this regard is the Navigable waters Protection Act. It provides that no one may place wires, pipes, bridges or other obstructions over, in or under a navigable water without permission from the Federal Cabinet. A permit will not relieve the obstructor of liability for any loss he causes.

c) Other

The other acts listed under water quantity are primarily arrangements or procedures for the construction and/or administration of specific works. The most important of these with respect to the Okanagan is the B.C. Okanagan Flood Control Act which provided for the construction, and subsequently the maintenance and operation of certain structures and channel improvement between the outlet of Okanagan Lake and Osoyoos Lake. While the name implies a single purpose objective, a 1960 agreement for the operation of the project provides not only for flood control, but also for water conservation, irrigation, fisheries and other affected interests. The Act is administered by the B.C. Minister of Lands, Forests and Water Resources.

1.1.4 Water Quality

(a) Pollution Control Act, 1967

Prior to 1956, control over pollution in B.C. consisted of certain controls under the Water Act, the Health Act, and the common law right of a property owner to sue in court for damages and/or an injunction, any person who damaged his property through pollution. Clearly it was very difficult for an individual to prove damage from pollution and usually even harder to prove who was responsible.

In 1956, the first of British Columbia's Pollution Control Acts was passed. The Present Act (1967) covers pollution to air, water and land. This Act reads in part "on from and after the first day of January 1970, no person shall, directly or indirectly, discharge or cause or permit the discharge of sewage or other waste material on, in, or under any land or into any water without a permit or approval from the Director".

The Act exempts certain minor wastes and operations, leaving them subject to control under other legislation. This act is administered by the Pollution Control Branch under the Director of Pollution Control, who has local representatives throughout the Province. The discharge of pollutants is regulated by issuance of permits to applicants by the Director. No person shall discharge such materials without a permit.

(b) Health Act (British Columbia)

The B.C. Health Act is a general one regulating, among other things sewage disposal systems discharging less than 5,000 gallons per day. Prior approve is required for the construction and maintenance of all sewage disposal systems; and this is required before a municipality may put a borrowing by-law before the electors.

The general powers of the Minister are exercised through local or Union Boards of Health, but only the Minister can approve a sewage disposal plan.

(c) Department of National Health and Welfare Act (Canada)

This Act covers all aspects of health and sanitary conditions on lands under Federal jurisdiction including Indian Reserves. The Act also includes a section covering boundary waters, as they relate to public health, and the enforcement of any rules or regulations made by the International Joint Commission. This section is administered by the Minister of the Environment.

11.1.5 Recreation, Fisheries, and Wildlife

(a) Fisheries Act (Canada)

The major statute affecting fisheries is the Federal Fisheries Act under which the federal government can manage and control the fish resource in any body of water. This includes such matters as the control and prevention of depositing in waters frequented by fish, substances deleterious to fish. The Act also provides for the development of fish stocks. By an understanding in the 1930's the federal government transferred to the B.C. Fish and Wildlife Branch, the administration of the Federal Act in so far as freshwater sport fishing in British Columbia is concerned,

The Act also provides that the Federal Minister may demand plans and specifications of proposed plants which might discharge deleterious substances into water habited by fish. Persons operating plants must provide information and samples when required.

These provisions may be enforced in the courts through fines and imprisonment for violations. The Act also permits Minister to prevent any such discharge.

In addition, the Minister of Environment can require a person to release sufficient water for the safety of fish and for the preservation of spawning grounds.

(b) Other

The Provincial Park Act, the Wildlife Act and the federal Migratory Birds Convention Act are other statutes affecting Recreation and Wildlife. These are all administered under the B.C. Department of Recreation and Conservation. The other acts concerned with recreation, fisheries and wildlife provide for the establishment of ecological reserves and regional parks, and for the licencing of fishermen and fish processing plants. The latter Acts are primarily administrative arrangements and do not affect water resources directly. One exception to this concerns ecological reserves of Provincial Crown land which are withdrawn from any disposition of any right under different statutes including the B.C. Water Act.

11.1.6 Land Development

There are some eight different statutes which are concerned with land and its development in British Columbia. Seven of these statutes are provincial and one is Federal. These are important in water resource management because of the effect of land use on both water quantity and quality. Land use also has an effect on the aesthetic and ecological quality of the Valley in the context that agricultural and forested areas increase the attractiveness of the Valley, both as a residential and recreational area.

The Environment and Land Use Act, is probably the most far reaching in terms of the power in Cabinet relating to the Environment and use of land and other natural resources.

11.1.7 Financial Assistance Statutes

Two federal and four provincial statutes have been passed to assist in financing the development and construction of water resource projects including sewage collection and treatment plants, waterworks systems, and other municipal projects.

The two most important Acts with respect to financing water quality management are considered to be the Federal National Housing Act and the Provincial Municipal Treatment Plant Assistance Act. Both authorize loans to a municipality for trunk collectors and sewage treatment plants. The National Housing Act will provide loans for up to 2/3 of the cost of such a project for 50 years, repayable on terms agreed to by the borrower and the Central Mortgage and Housing Corporation (CMHC). Under certain conditions CMHC may forgive 25% of the principal, and 25% of the interest accruing during construction.

The Municipal Treatment Plant Assistance Act provides assistance on the basis of a 20 year amortization period, and the government will then contribute 75% of the amount by which the annual cost exceeds a two mill levy on all taxable land and improvements.

Other statutes provide a basis for Federal - Provincial financing of water and related resource including the Canada Water Act (planning), A.R.D.A., and other programs administered by D.R.E.E., etc. The federal Income Tax Act provides for accelerated depreciation of the capital costs of industrial pollution control equipment. Similarly the B.C. Taxation Act grants exemption from sales tax on pollution control abatement equipment.

11.1.8 Local Government Functions

The provincial government has delegated certain of its functions to local governments. The Municipal Act sets out the responsibilities, powers, duties, and restrictions of such local governments including cities, towns, villages, regional districts and improvement districts. These include the construction and operation of water resource projects subject to such statutes as the Water Act and Pollution Control Act, 1967. Improvement districts incorporated under the Water Act primarily for waterworks, irrigation, dyking and drainage and land improvement purposes, generally have the same responsibilities in unorganized areas as municipalities with respect to these purposes.

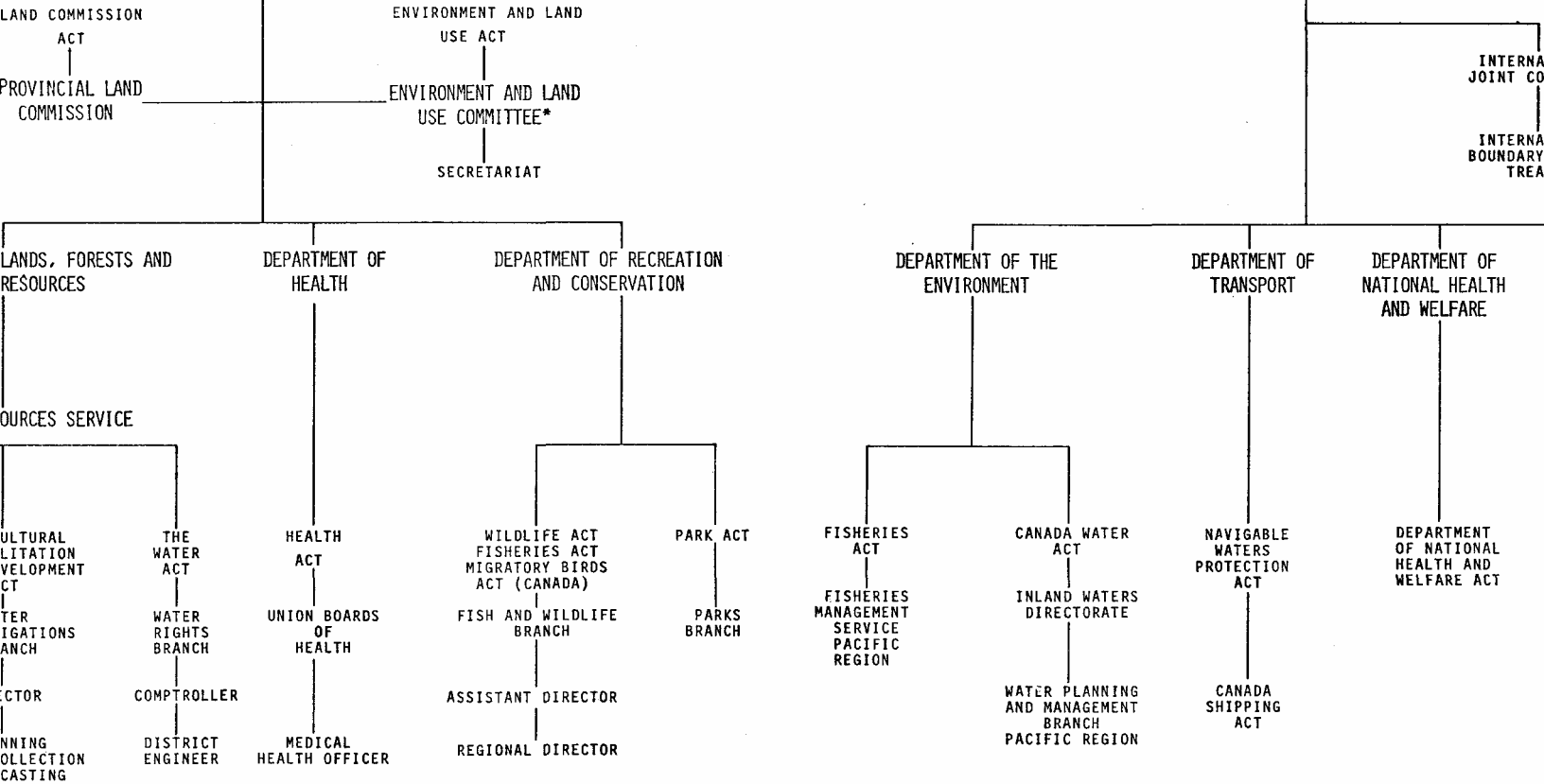
The B.C. Energy Acts and Water Utilities Act are intended to regulate, in the public interest, the provision of services which are likely, to be monopolistic, such as water supply. Approval of all plans (with the exception of projects within an Improvement District or other management authority as covered in the Water Act) to construct, operate, extend or close down a public utility and the rates charged to the public for the services offered is required. A public utility is defined to include the diverting, developing, pumping, impounding, distributing, or furnishing of water to or for five or more persons or any corporation for compensation. Sewage disposal systems do not appear to be included in the definition of a public utility.

11.2 ADMINISTRATION OF WATER RESOURCES

The major statutes affecting water resources in the Okanagan Basin are administered by the Water Resources Service, Department of Lands, Forests and Water Resources, and Fish and Wildlife Branch of the Department of Recreation and Conservation, British Columbia, and by the Department of the Environment, Canada (Figure 11.3). These include the Water Act, Pollution Control Act, Okanagan Flood Control Act, Fisheries Act, and the Canada Water Act. A number of other Departments are involved in water related resources, and the Environment and Land Use Committee comprised of Ministers from various departments coordinates multi-discipline resource policies within the Province. Only the administration of the major statutes affecting water resources are discussed below.

GOVERNMENT OF BRITISH COLUMBIA

GOVERNMENT OF CANADA



The Land Use Committee is comprised of the Minister of Lands, Forests and Mines and Petroleum Resources, Agriculture, Municipal Affairs, Health, Recreation and Conservation.

ADMINISTRATION FLOW CHART OF WATER AND WATER RELATED RESOURCES

11.2.1 Water Act (British Columbia)

The Water Act is administered by the Comptroller of Water Rights, a senior official in the Water Resources Service. The Comptroller of Water Rights is concerned primarily with water quantity and the safety of structures used to impound or divert water. To assist him there are District Engineers with statutory executive authority. The District Engineer in Kelowna has jurisdiction over the Okanagan Basin.

Applications for Water Licences go to the Water Recorder of the area, usually the Government Agent. A copy of the application is posted publicly and objectors qualified under the Act have an opportunity to intervene. The District Engineer is called on for a report on the quantity of water available to the applicant and on the engineering aspects of the application. He also investigates and reports on all objections. The District Engineer also reviews the exercise of the rights of existing licensees and investigates complaints under the Act.

11.2.2 Pollution Control Act, 1967 (British Columbia)

The Pollution Control Branch, under the Director of Pollution Control is responsible for the administration of the Pollution Control Act. The Director has power to determine what constitutes a polluted condition of water, land or air; to prescribe standards of effluent which may be emitted to water, land or air; to conduct tests and surveys to determine the extent of pollution; to examine existing and proposed means of disposal of sewage and contaminants and to approve plans for such undertakings and to issue permits for discharges of contaminants on such terms and conditions as he shall prescribe.

Applications for permits are made to the Director. He has a District Engineer and staff in Vernon who report on the technical aspects of applications in the Okanagan Valley and monitor discharges covered by permits to ensure that the permittee is carrying out the terms of the permit.

11.2.3 Water Resource Planning and Development (British Columbia)

Statutes which are directly concerned with water resource management and planning are administered by the Water Investigations Branch of the Water Resources Service. This includes the administration of the Okanagan Flood Control Act and the Agricultural Rehabilitation and Development Act (ARDA). Seven separate divisions have been set up within the Branch to carry out these functions including those of groundwater, hydrology and the ARDA Construction Division. One of the studies being undertaken by this branch is the water management study of the Kalamalka-Wood Lake watershed which arose as a result of preliminary findings from the Okanagan Basin Study.

One of the important functions of this Branch (Hydrology Division) is to forecast runoff conditions in each of the major watersheds in British Columbia.

Six snow survey Bulletins are issued each year, which include forecasts of the expected spring runoff from the major drainage basins in the Province. These forecasts form the basic information used in controlling the level of Okanagan Lake which may be lowered in the early spring to allow for high runoff conditions, or maintained at a higher level to conserve water in low runoff years.

11.2.4 Water Resource Planning and Development (Canada)

Federal water resource planning and administration lies within the Department of the Environment, and is the responsibility of the Inland Waters Directorate of the Environmental Management Service. This directorate contains four major branches, Water Quality, Water Resources, the Canada Center for Inland Waters, and Water Planning and Management. The first three are mainly concerned with data collection and research in their particular fields, while the Water Planning and Management Branch is concerned with planning, administration of the Canada Water Act and research in various forms.

11.2.5 Fisheries Act (Canada)

Federal administration of fisheries is exercised by the Fisheries and Marine, and Environmental Protection Services within the Department of the Environment. Investigations, monitoring, and control of salmon in the lower Okanagan River are carried out from the Pacific Region offices of the Fisheries and Marine Service, Department of the Environment.

The administration of certain freshwater fisheries in British Columbia is carried out by the B.C. Fish and Wildlife Branch. This branch has a District Office and Regional Director in Penticton whose jurisdiction includes the Okanagan Basin. The function of the Branch is to administer delegated responsibilities of the Fisheries Act (Canada) and Regulations, to carry out investigations, and to advise the appropriate Provincial authority on the probable effects of operations to be licenced under the Water Act and Pollution Control Act, 1967.

11.3 DISCUSSION OF INSTITUTIONAL ARRANGEMENTS AFFECTING WATER RESOURCE MANAGEMENT IN THE OKANAGAN BASIN

11.3.1 General Problems

Water resource management does not fit into any one category of activity, but has an impact on almost every facet of life. Generally, existing legislation has four basic weaknesses which pose limitations in the overall planning for water resource management.

1. Most statutes are single purpose in scope in that they authorize a particular course of action for a particular purpose. This leads to conflicts in the use of a resource which sometimes can be settled only by the courts. At other times such conflicts are irreconcilable unless co-operation and compromise is realized.

2. Many Statutory provisions outline the constraints on a particular course of action, but provide no positive approach to planning or development. Government officials are cast in the role of policing such provision and the initiative for development must normally come from others. While such officials may approve or disallow a proposal, very rarely can they go further. More-over the government cannot issue orders except to someone who has applied for a licence or permit, or who is doing some activity recognized by the Statute to require control.

3. There is little or no provision for the equitable financing of projects which have multi-purpose benefits. There is no power to compel any person except the licensee to contribute to the cost of a multipurpose water resource development, however much that other person may be benefited. Alternatively, there is no obligation on any municipal organization to install a common water supply or sewage collection or treatment system which may be required for acceptable water quality standards to be realized. While a municipal organization may wish to participate in such a plan, it is limited in its financial capability to construct such works.

4. The multiplicity of laws and statutes and numerous governments and agencies involved in their administration makes comprehensive planning both difficult and frustrating. In addition communication problems exist at all levels of government service and between government agencies and the public. Such problems have increased in recent years due to an expanding population and the need for appropriate governmental activity joint activities such as that under the Okanagan Basin Agreement, which provides for public involvement, and formal and informal co-operation among governments and agencies are helping to overcome these problems.

Within the Okanagan Basin more specific problems are evident. These are discussed below under the headings of water quantity, water quality, recreational values and fisheries and wildlife. It should be recognized there are strong interrelationships among these areas of study.

11.3.2 Specific Problems Within the Okanagan Basin

(a) Water Quantity

Osoyoos Lake is an international water subject to an order by the I.J.C. which created the International Osoyoos Lake Board of Control to supervise the operation of the lake's control dam. This structure is located in the United States and its operation has, from time to time, been the subject of dissatisfaction in both countries.

Two other problems concern flooding and fisheries. In high runoff years the waters of the Similkameen River, which joins Okanagan River just below the

International Boundary, cause a backup of water into Osoyoos Lake and consequent flooding. There does not appear to be any simple solution to this problem, especially for Canada acting alone. This matter could be referred to the International Joint Commission for review.

The second problem concerns a run of Columbia River salmon from the United States which spawn in the Okanagan River in Canada. Significant releases of water in Canada which can have a detrimental effect on the water budget particularly in drought years, are required to maintain this run.

Some conflict has developed between water users and fisheries in the right to use water in the tributaries of the lake system. The Water Act is primarily concerned with meeting human consumptive needs for water and places less emphasis on meeting other uses such as fisheries. Applications for new licenses under the Water Act are referred to the provincial Fish and Wildlife Branch and its recommendations are considered in the determination of the application. However, streams can be fully alienated under this system of licensing, in perpetuity, without a sufficient reservation to maintain the fisheries. The Fisheries Act (Canada) may provide an alternative solution. The Department of the Environment has not attempted to invoke this provision although in some parts of the province licencees have been persuaded to release water for fishery purposes. Studies reported in Chapter 8 indicated a definite need for maintaining minimum flows for fish reproduction and in-channel fisheries in certain tributaries, if present and future sport fishing demands in the main valley lakes are to be met. The maintenance of minimal water levels in some of the headwater storage reservoirs would also be beneficial to the sport fishing sector.

There is also the problem that licencees taking water from a stream have no control over other aspects of watershed management under existing legislation. Logging practices may affect the run-off characteristics of the stream which in turn may affect the adequacy and safety of storage and diversion structures. Erosion may be increased causing turbidity in the water and perhaps necessitate expensive clean-out operations in diversion ponds, or screening, before the water can be used. There are no regulations or requirements by which the B.C. Forest Service has to consult with licencees or to control these effects. Neither has provincial legislation been involved to regulate such land use practices.

The termination of barge traffic on Okanagan Lake by the C.N.R. and C.P.R. in 1971 and 1972 has removed some of the problems relating to navigation and the variation of lake levels as maintained under the Okanagan Flood Control Act, though the Okanagan is still a navigable water. Problems may still be encountered with the Kelowna Floating Bridge during prolonged drought periods which result in extreme low water levels. Experience has indicated however,

that temporary and economical adjustments can be made to the bridge particularly during high water stages, to allow for most fluctuations beyond the normal operating range.

(b) Water Quality

The control of a number of sources of pollution in the Okanagan Basin does not appear to be adequately accomplished at the present time. This is due in part to exemptions within the acts, the lack of coordination between government organizations administering the acts, and also to the fact that knowledge of the extent and effect of some sources of pollution - groundwater sources particularly - is still very meager.

Presently uncontrolled sources of pollution include lands under federal jurisdiction such as Indian Reserves. Range cattle and agriculture generally, logging practices and septic tank effluents may also affect the quality of stream and lake waters and groundwater.

Indian reserve lands and other lands under federal jurisdiction may not be required to comply with provincial statutes and local by-laws regulating land use. However, this does not rule out the application of provincial statutes generally, including the Pollution Control Act, in so far as their applicability cannot be characterized as regulating land use. Moreover, the Pollution Control Branch may be able to act where land use of reserves has adverse effects on other lands.

Indian reserve lands are used for various purposes including small industries and summer cottages which are managed by non-Indians. Even where there are valid leases from the Department of Indian Affairs, the local municipality and the Provincial Government have no jurisdiction over the use of such lands. If there is not a health hazard on the reserve itself, the federal Health authorities do not intervene.

While the effect of pollutants from lands under federal jurisdiction may be small in the overall picture, this contribution may pose significant problems to local stream and lake areas, particularly if these are recreationally oriented.

The Pollution Control Act, 1967, in its latest regulations exempts from the Act, "all discharges of plant and animal wastes emanating from traditional farming operation". This exemption makes any control of farming operation extremely difficult, where they may be termed "traditional". Animal wastes, particularly from winter feeding areas along water courses, may contribute significant amount of nutrients directly to a stream or lake. The measurement of such loadings is difficult, if not impractical to determine.

Over half the population of the valley is serviced by septic tanks for residential homes. These discharges, generally under 5,000 imperial gallons per day, are exempted from the Pollution Control Act and are in turn regulated under the Health Act. The Health Act is chiefly concerned with the transport of disease-bearing organisms from such units. In rural areas where septic tanks are sparse and considerably above the ground-water table there is no apparent problem. However, there has been an increasing trend to develop housing areas outside of urban centres serviced by septic tank disposal systems, and these developments are usually in low-lying areas where septic tanks are close to or below the ground-water table. In such cases, nutrient contributions of both phosphorus and nitrogen to the lake system become significant. Apart from the health aspects, there is no obligation to protect fisheries or recreational values in such cases.

Cattle grazing under lease on Crown Land may foul local water supplies, as well as adding nutrients to the tributary systems. Logging practices may increase the contribution of soil and nutrients by reason of erosion and faster spring run-offs. Grazing leases and forestry practices are under the control of the Provincial Forest Service. There are no regulations or requirements that the Forest Service has to consult with water users concerning the management of the watershed area.

(c) Recreation, Fisheries, and Wildlife

Except for the anomalies noted previously, provisions of the Fisheries Act (Canada) appear adequate in respect to the protection of the Okanagan Basin.

The Park Act (British Columbia) is administered by the Department of Recreation and Conservation which is responsible for all matters concerning parks and recreational areas. Some question appears to exist concerning the management of water in a Park as opposed to management of water under the Water Act. Administrative procedures have prevented any conflict to date. Of more concern in recreational enjoyment, is the right of access to water and the problem that waterfront property creates in this respect.

The Land Act (British Columbia) sets out what rights the Crown has over disposition of Crown Lands. It provides that the Crown cannot sell its interest in the beds of rivers and lakes. The effect of this amendment has been to ensure that persons cannot acquire ownership of land below the normal high water mark.

Where the Crown owns the bed of the lake, it is a trespass for anyone to put a mooring wharf, fill, or other construction without the Crown's consent. However, an individual wishing to make use of such Crown Land may apply for a use permit, for which a user fee is payable. Such a permit provides the individual with the right to prevent other people using his facility, whatever it may be, unless the permit requires him to share it with others.

It does not matter that the trespass has been enjoyed without question for a long period of time. It always was and remains an unlawful use of the Crown's property.

Clearly, existing statutes do not provide for the preservation of water-front property for the enjoyment of the general public. Crown waterfront property should be regarded as property reserved to the use of the general public rather than the individual.

As more and more people come to the Okanagan, the existing access to the waterfront except in established sites, will become increasingly difficult to find, unless measures are taken to increase such access. At present in the case of new sub-divisions, waterfront access is required to be given.

The Department of Recreation and Conservation also administers the provincial Wildlife Act and, by agreement, the Federal Migratory Birds Convention Act. Present and proposed management of the basin's water resource does not appear to have a significant effect on wildlife, except possibly in some of the oxbows along Okanagan River, and these are local problems that may be resolved within the existing legislative framework.