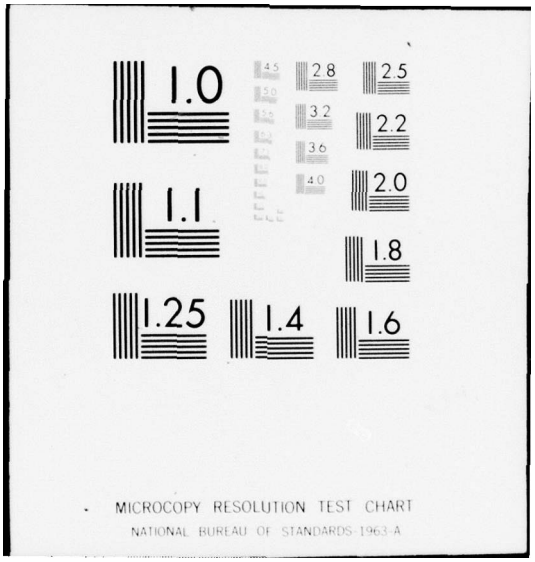
AD-A043 937 MISSOURI BASIN INTER-AGENCY COMMITTEE F/G 8/6
COMPREHENSIVE FRAMEWORK STUDY MISSOURI RIVER BASIN. VOLUME 3. A--ETC(U)
JUN 69

UNCLASSIFIED NL

1 OF 3
ADA043937




1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

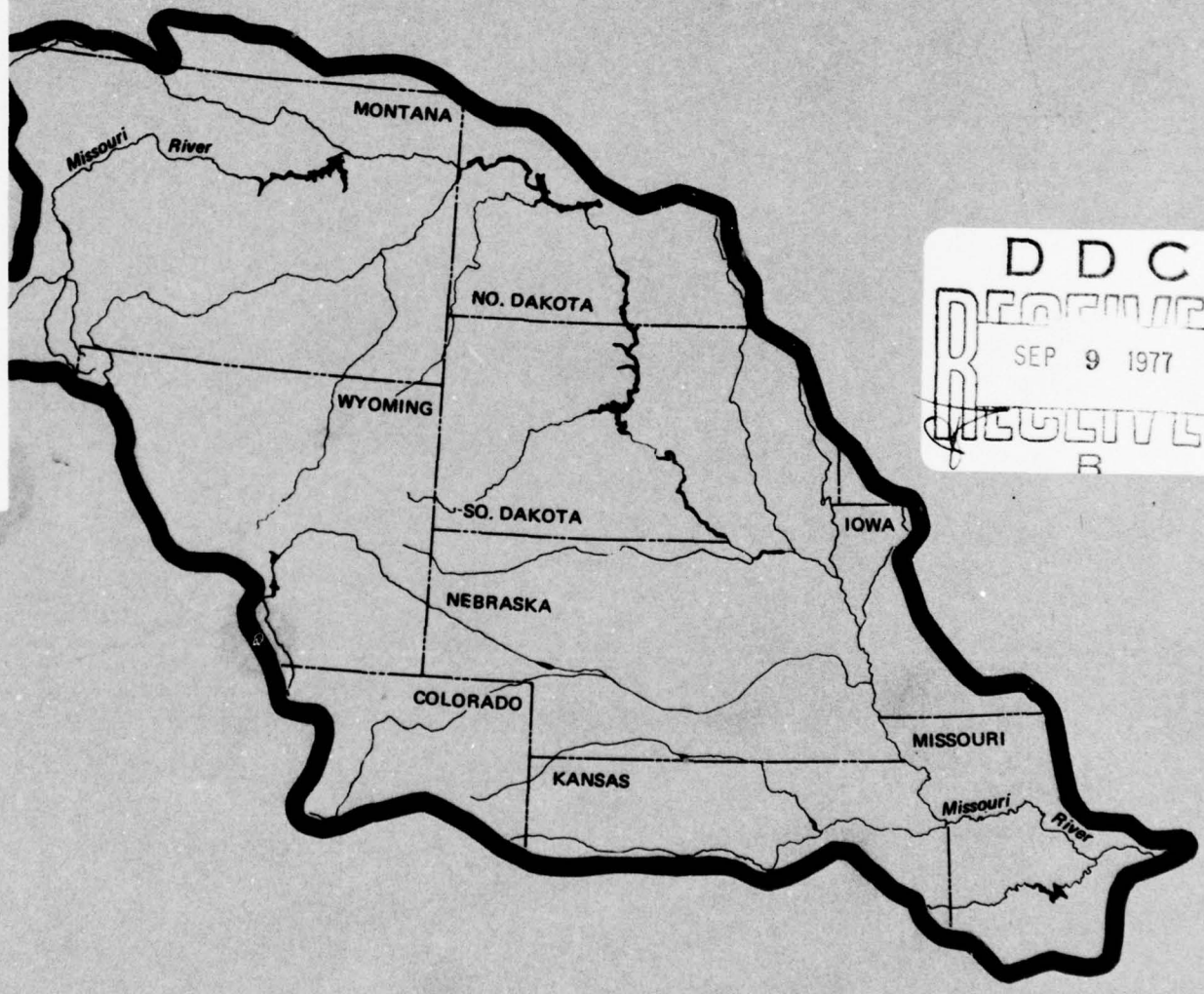
Vol 3

The Missouri River Basin Comprehensive Framework Study

• Laws, Policies and Administration

Volume 3 Appendix

AD A043937



DDC RECEIVED SEP 9 1977 B

DDC FILE COPY

The Missouri River Basin

Missouri Basin Inter-Agency Committee
Standing Committee
June 1969

Published December 1971

COMPREHENSIVE FRAMEWORK STUDY MISSOURI RIVER BASIN.

VOLUME 3

APPENDIX

LAWS, POLICIES, AND ADMINISTRATION RELATED TO WATER RESOURCES DEVELOPMENT.

DDC
RECEIVED
SEP 9 1977
B

MISSOURI BASIN INTER-AGENCY COMMITTEE

June 1969

ORIGINAL CONTAINS COLOR PLATES: ALL DDC REPRODUCTIONS WILL BE IN BLACK AND WHITE

COMPREHENSIVE FRAMEWORK STUDY

MISSOURI RIVER BASIN

REPORT

Volume 1 – Comprehensive Framework Study

APPENDICES

Volume 2 – Historical Perspective of the Missouri River Basin

History of the Framework Study

Existing Water and Land Resources Development

* Volume 3 – Laws, Policies, and Administration Related to Water Resources Development

Volume 4 – Economic Analysis and Projections

Volume 5 – Present and Future Needs

Volume 6 – Land Resources Availability

Hydrologic Analyses and Projections

Volume 7 – Plan of Development and Management of Water and Related Land Resources

*Covered in this Volume

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C., 20402 – Price $2.25
Stock Number 5233-0001

CONTENTS

Page

CHAPTER 1 – INTRODUCTION 1

CHAPTER 2 – STATE WATER LAWS, POLICIES, AND ADMINISTRATION 5
- STATE OF COLORADO 5
- STATE OF IOWA 13
- STATE OF KANSAS 44
- STATE OF MINNESOTA 101
- STATE OF MISSOURI 136
- STATE OF MONTANA 175
- STATE OF NEBRASKA 182
- STATE OF NORTH DAKOTA 195
- STATE OF SOUTH DAKOTA 199
- STATE OF WYOMING 206

CHAPTER 3 – FEDERAL WATER LAWS AND POLICIES 219

CHAPTER 4 – PROBLEMS IN FUTURE WATER RESOURCES DEVELOPMENT 249

FIGURES

Number *Page*

1 States and River Systems, International Waterways Treaty, and Interstate Water Compacts *and Supreme Court* Decrees, Missouri River Basin iv

PHOTOGRAPHS

The photographs included in this appendix were furnished by:

Source *Page*

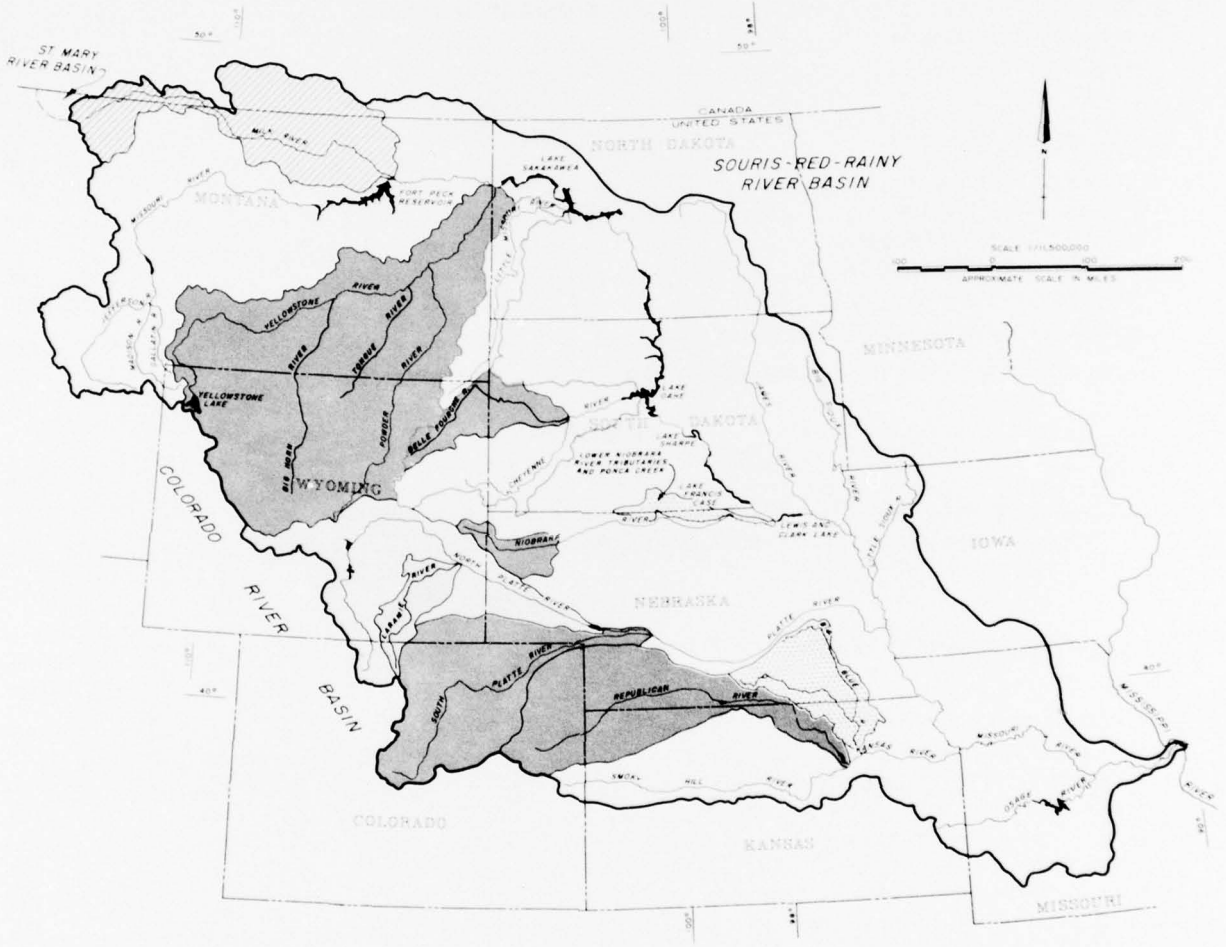
Colorado Department of Public Relations 5
Iowa Natural Resources Council 13
Kansas Department of Economic Development 44
Minnesota Historical Society 101
Missouri – Walker-Missouri Tourism 136
Montana Water Resources Board 175
Nebraska – USDA Soil Conservation Service 182
North Dakota State Water Commission 195
South Dakota Water Resources Commission 199
Wyoming Travel Commission 206

ACCESSION for
NTIS White Section ✓
DDC Buff Section ☐
UNANNOUNCED ☐
JUSTIFICATION
BY
DISTRIBUTION/AVAILABILITY CODES
Dist. A/or SPECIAL
A 24

FIGURE 1

STATES AND RIVER SYSTEMS, INTERNATIONAL WATERWAYS TREATY, AND INTERSTATE WATER COMPACTS AND SUPREME COURT DECREES

MISSOURI RIVER BASIN



LEGEND

INTERNATIONAL TREATY	
EXISTING INTERSTATE WATER COMPACT	
PENDING INTERSTATE WATER COMPACT	
ACTIVE NEGOTIATION	
INACTIVE NEGOTIATION	
UNITED STATES SUPREME COURT DECREE	
MISSOURI RIVER BASIN BOUNDARY	

CHAPTER 1

INTRODUCTION

PURPOSE

The basic objective of the Type I framework study is to provide a broad guide to the best use, or combination of uses, of water and related land resources of the Missouri River Basin to meet foreseeable short- and long-term needs. Among the important considerations in formulating the framework plan is the need to examine (1) the existing legal, policy, and institutional framework applicable in this field, (2) the constraints therein that may limit the satisfaction of future resource development needs, and (3) desirable potential changes in law, policy, or institutional structure to aid in implementing the framework plan of future resource development.

The purpose of this appendix is to summarize the legal and policy framework under which planning and development for the control, use, and management of water and related land resources have progressed and can proceed for the 10 States in whole or in part comprising the Missouri River Basin. The primary objective is to convey a general understanding of water laws, policies, and administration in each of the 10 States, the applicable laws and policies in the Federal Government, and to highlight their interrelations. Where the Missouri River Basin is affected thereby, brief attention is focused on legal arrangements for water import or export and for the use and accountability of international waters.

Recognizing the many variations among the 10 basin states, and even the complexities within each, obviously it is impossible to accurately summarize their laws, policies, and administration in the field of water resources. The coverage is sufficient to provide only a general orientation and understanding of the legal, policy, and administrative framework. Numerous legal references are made in the text materials and concluding the summary for each State in Chapter 2 and for the Federal coverage in Chapter 3. Specific water right problems and in-depth water policy issues must be explored with legal counsel or by contact with State officials thoroughly conversant with water laws and their many ramifications.

HISTORICAL BACKGROUND

The development and use of water resources long has been recognized as a responsibility of both the States and the Federal Government in the Missouri Basin, as in the Nation. Their resource objectives and programs are largely complementary, as are their water laws and policies, though there are some areas of uncertainty and challenge. The laws have evolved gradually, stemming initially from the State and Federal constitutions, then from statutory action, and from many judicial decisions. Many of the national laws stemmed from pressing issues in the Missouri Basin and the West generally. From all of these have come important elements of State and Federal policy, and particularly at the State level, the practical means for water administration. Variations in climate, water availability, and water uses gave rise early to some differences in water law and policy among the States of the basin, although there are many similarities.

For parts of the Nation, early use of the water resources for navigation and later for mining resulted in legislation in these fields. Particularly after the Civil War, attention in the arid west and Missouri River Basin increasingly was focused on the development and use of water resources. This gave rise to legislation and suitable programs, and to mounting water usage for economic development in the form of mining and mineral processing, irrigated agriculture, hydroelectric power generation, and--with the economic growth--increased uses for rural and urban domestic and industrial purposes. More recently, public interest together with legislative and development action programs have resulted in increased attention to matters of restoring and sustaining water quality, and for water to sustain and enhance recreation, fish, and wildlife, and the general environment.

In the general field of water law in the basin, two fundamental but opposing doctrines are found. The common-law doctrine of riparian rights is based on ownership of lands contiguous to a stream without regard to the uses, if any, to which the water is put, and with no concern for time of such uses. On the other hand, the doctrine of prior appropriation disregards the ownership of riparian lands. Rather, this doctrine is concerned with the uses to which water is put, the time at which such uses first were undertaken, and the diligence with which water utilization has continued.

Under the riparian rights doctrine, the owner of land contiguous to a natural stream or natural lake may use

the waters for such purposes and in such quantities as he chooses, so long as his use does not appreciably diminish the flow or impair the quality of water for downstream uses. The riparian owners right is the same as all others on that stream. Thus, his right is not acquired by actual use of the water and is not lost by failure to use it.

Under the appropriation rights doctrine, the beneficial use of water is the basis, the measure, and the limit of the water right. Therefore, the first beneficial appropriation in time is prior in right. A right is perfected only by actual use and is subject to loss if the use is discontinued or abandoned. Appropriated water may be used either on lands contiguous to a stream or on lands or for other purposes at some distance removed.

In the Missouri Basin two states, Minnesota and Missouri, continue to recognize primarily the riparian doctrine, while Colorado, Montana, and Wyoming have specifically repudiated it and have established the doctrine of appropriation rights. The Iowa water rights law makes substantially all uses of water in the state subject to permit and administrative regulation as to diversion, storage, or withdrawal over some period of time not to exceed 10 years. The states of Kansas, Nebraska, and North and South Dakota depend on the appropriation rights doctrine, but recognize the riparian doctrine in varying degrees in relation to the statutory rights. In these four states a riparian landowner could claim a water right to the extent of his reasonable use, but all waters in excess thereof remained subject to appropriation. However, Kansas passed legislation in 1945 and North and South Dakota in 1955 which provided that thereafter riparian landowners were to be governed by the same laws and would be obliged to follow the same appropriation procedures as non-riparian landowners. This legislation did not apply to landowners who were exercising or developing their riparian water rights at the time the legislation was enacted. It is significant that in the two exclusively riparian states, and the one water-permit state, precipitation is reasonably heavy and surface water supplies still are relatively plentiful. By contrast, in substantial portions of the other seven states precipitation is relatively light, and the supplies of surface water are comparatively limited. Under such natural conditions and high potential water usage, the reliance of these seven states, in whole or in part, on the appropriation doctrine is understandable. Clearly the irrigation of vast areas of land and many other industrial developments, some removed many miles from existing natural streams, would have been difficult if not impracticable under the common-law riparian doctrine.

Of the seven states in the basin that recognize the appropriation rights doctrine, all except Montana have provided a central state agency for the administration of surface water rights, and for some the administration of groundwaters. This agency is directly responsible for receiving and processing applications or filings for water rights. Further, it polices the streams and diversion works as necessary to guard against violations of water rights that have been granted and put into active use. In Montana, provision for the administration of surface water rights is a responsibility of the district courts, but the groundwater code is administered by the Water Resources Board.

While the general adequacy of water supplies permitted more liberal laws and policies during the early development periods in the 10 states of the basin, time has brought reasonably full water utilization in some areas. This has imposed the need and mounting stringency in the provisions and administration of water laws and policies. Also, as surface water supplies approached fuller utilization, and especially for areas not having access to them, greater and greater attention has been given to groundwater availability and utilization and to laws and techniques of management governing its use for many purposes. Currently there is growing evidence of the interrelationships in occurrence and usage of surface and groundwaters; further, there is a growing body of state law and pending legislation to cope with problems or rights thereto and conflicts in surface and groundwater usage and of overall water right administration.

Mounting water usage has led to within-state and interstate litigation, and to many agreements, interstate compacts, and court decrees affecting larger water-use areas and affected states of the basin, as illustrated by figure 1. Within the Missouri River Basin, Colorado and Wyoming are parties to two compacts and two water adjudications, and Wyoming became party with Nebraska to the Upper Niobrara River Compact with its approval by the Congress in 1969. Nebraska is involved in three operating compacts, in two pending compacts, and in one supreme court adjudication. South Dakota, Kansas, Montana, and North Dakota are involved in one compact each, and Kansas and South Dakota with other compacts now in negotiation with Nebraska. All of these interstate compacts and court adjudications to be discussed later in the State summaries are concerned with allocations of direct diversions and of the storage of surface waters. The existing Upper Niobrara and pending Big Blue River interstate compacts are concerned with both surface and groundwater usage. Interstate compacts affecting the diversion and use of Colorado River Basin waters also apply to and affect certain existing and projected diversions for use in the North and South Platte river areas of the Missouri Basin. An international treaty of long standing apportions the waters of the St. Mary and Milk rivers between the United States and Canada.

SCOPE

Aside from a brief historical background, the treatment of water laws, policies, and administration in this

appendix is for the present situation. In this there is recognition for the more recent and projected trends to multiple-purpose structures and, most often, for their integrated operation in meeting several functional needs. Also, for the broadening emphasis on regional and basinwide water resource planning and development within each State and for the subbasins and Missouri River Basin as a whole. These trends and the actions, both interstate and intrastate, make the legal and organizational problems more complex. Further, this requires the interworking of many elements of Federal and State laws and policies at all stages of resource development and management. While holding largely to the current situation, where existing legal or institutional constraints are pointed up in chapters 3 and 4 this begins to indicate opportunities or needs for consideration of adjustments in the future. The needs and general nature of such adjustments are pointed up also in the Appendix on "Plan of Development and Management of Water and Related Land Resources." However, detailed studies are required as the basis for adjustments.

This appendix briefly summarizes in chapter 2 each State's major provisions of water law and current organizational structure in the field of water resource planning, development, and administration. In many respects these impinge on matters of related land resource planning and development, and such relationships are covered as appropriate. The summaries were prepared by the respective State water resource agencies. Similarly the appendix then summarizes in chapter 3 the Federal water laws and policies, and relates them generally to those of the states. This summary was prepared by a special task force designated by the Standing Committee on Comprehensive Basin Planning. Finally, in chapter 4 there are summarized briefly problems in future water resources development. As stated under "PURPOSE" it is impossible to accomplish in the brief treatment herein a fully accurate understanding of the many elements and workings of law, policy, and administrative provisions in the field of water resources. Thus, beyond the brief orientation and general understanding to be gained from the following chapters, specific water right problems and related policy issues should be explored with legal counsel and state officials thoroughly versed in this field.

The material in this appendix is a collection of statements on the law which outlines the particular organization's function in the water and related land resources development field. It was expected that each reporting agency would lend its "color tone" to the statement submitted, just as such agency does in the actual day-to-day functioning in its operations. With this in mind, it should be recognized by all that none of these statements of law should be considered binding upon any other organization which has contributed material for this appendix. This caveat should suffice to serve as protection, if indeed this is needed, to those who may disagree with a particular presentation, yet have not objected.



CHAPTER 2

STATE WATER LAWS, POLICIES, AND ADMINISTRATION

The following summaries were prepared by the respective state water resource agencies, briefly outlining their more important water and related land laws and policies, and the administration of such laws. Also included are brief resumes of the organizational framework for resource planning and development programs in general. While the summaries cover only the highlights in these respects, each of the states has published a complete documentation of its water laws. In many instances these and other publications include, also, treatment of the organizational and administrative structure in greater depth than is reflected in this appendix. Figure 1 illustrates the major stream systems for each state and as between them, both within and where appropriate for areas contiguous to the Missouri River Basin.

Where important changes in state water law were accomplished in the 1969 legislative sessions, the highlights are reflected in the summaries.

STATE OF COLORADO



INTRODUCTION

Sweeping changes were made in the Colorado water law by the 1969 session of the Colorado General Assembly in the method of acquisition and changes of water rights, adjudication procedures, administration of water rights and provision for river basin authorities. None of the provisions has yet been interpreted by the Courts.

The policy of the State of Colorado in the field of water management is succinctly stated in the "Water Right Determination and Administration Act of 1969:"

"(1) It is hereby declared to be the policy of the state of Colorado that all waters originating in or flowing into this state, whether found on the surface or underground, have always been and are hereby declared to be the property of the public, dedicated to the use of the people of the state, subject to appropriation and use in accordance with law. As incident thereto, it shall be the policy of this state to integrate the appropriation, use and administration of underground water tributary to a stream with the use of surface water, in such a way as to maximize the beneficial use of all of the waters of this state.

(2) Recognizing that previous and existing laws have given inadequate attention to the development and use of underground waters of the state, that the use of underground waters as an independent source or in conjunction with surface waters is necessary to the present and future welfare of the people of this state, and that the future welfare of the state depends upon a sound and flexible integrated use of all waters of the state, it is hereby declared to be the further policy of the state of Colorado that in the determination of water rights, uses and administration of water the following principles shall apply:

(a) Water rights and uses heretofore vested in any person by virtue of previous or existing laws, including an appropriation from a well, shall be protected subject to the provisions of this article.

(b) The existing use of ground water, either independently or in conjunction with surface rights, shall be recognized to the fullest extent possible, subject to the preservation of other existing vested rights, provided however, at his own point of diversion on a natural water course, each diverter must establish some reasonable means of effectuating his diversion. He is not entitled to command the whole flow of the stream merely to facilitate his taking the fraction of the whole flow to which he is entitled.

(c) The use of ground water may be considered as an alternate or supplemental source of supply for surface decrees heretofore entered, taking into consideration both previous usage and the necessity to protect the vested rights of others.

(d) No reduction of any lawful diversion because of the operation of the priority system shall be permitted unless such reduction would increase the amount of water available to and required by water rights having senior priorities."[2]

ACQUISITION OF WATER RIGHTS

The Colorado Doctrine of Prior Appropriation was adopted in the State of Colorado in the very early irrigation days.[3] In the case of **Coffin** vs. **Left Hand Ditch Company**, 6 Colo. 443 (1882), the Colorado Supreme Court said:

"We conclude, then, that the common law doctrine giving the riparian owner a right to the flow of water in its natural channel upon and over his lands, even though he makes no beneficial use thereof, is inapplicable to Colorado. Imperative necessity, unknown to the countries which gave it birth, compels the recognition of another doctrine in conflict therewith."

The Colorado Doctrine, as set forth in the Constitution adopted in 1876 and in judicial decisions, states that: (1) Water in its natural course is the property of the public, and is not subject to private ownership; (2) a vested right to use the water may be acquired by appropriation and application to beneficial use; (3) the person first in time to use the water is first in right; and (4) beneficial use is the basis, the measure and the limit of the right.[4]

An appropriation is accomplished by the actual diversion of water from a natural water course, followed within a reasonable time thereafter by an application of such water to a beneficial use.[5] An important condition of the rule is that the initiation of the appropriation must be followed by the diligent construction of the necessary works and the application of the water to beneficial use. If due diligence is proven, the date of priority goes back to the initiation of the work, usually the date of the making of the initial survey.[6]

The Colorado Constitution sets up an order of preferential use which is (1) domestic, (2) irrigation, and (3) industrial.[7] This preference for certain uses must not be confused with priorities. A preferred use does not thereby automatically obtain a senior priority. The only practical effect of the preference is to give a preferred use the right to condemn a subordinate use.[8] For example, on occasions municipalities have obtained water rights covered by irrigation priorities through the use of the power of eminent domain.

DETERMINATION OF WATER RIGHTS

The General Assembly enacted legislation in 1969 which changes the procedure for determination of water rights and changes in and transfers of water rights, and provides for plans of augmentation. It is not applicable to designated ground water basins hereafter covered, nor to wells solely for stock watering, domestic or other purposes, not exceeding fifty gallons per minute of flow.[9] Determination of water rights should be more efficient, less expensive, faster and more accurate under the new legislation. In the interest of brevity, the procedures will be summarized in general terms.

A water judge and water clerk are appointed for each of the seven water divisions in the state. All water matters shall be handled only by the water judge, assisted by the water clerk. The water judge appoints one or more

water referees who make original rulings on all requests or he may perform those duties himself if he so desires.[10]

Any person who desires a determination of a water right or conditional water right, and the amount and priority thereof, including a determination that a conditional water right has become a water right by reason of completion of the appropriation, or changes in water rights, or plans for augmentation or biennial findings of reasonable diligence, shall make verified application to the water clerk. Those opposing the application may file a statement of opposition. After publication of the application and investigation, the referee may rule on it without conducting a formal hearing, or may refer it to the water judge for his decision.[11] Protests of the referee's ruling, as well as referrals above mentioned, will be heard by the water judge in accordance with trial practice and procedure. The water judge shall either confirm, modify, reverse or reverse and remand the ruling of the referee, and his judgment and decree shall contain all pertinent information necessary.[12]

A two-year period for reconsideration of injury to the vested rights of others is provided for with regard to changes of water rights and plans for augmentation. Clerical mistakes may be corrected. One who asserts that he will be damaged by the referee's ruling may apply for an order to show cause why the ruling should not be stayed until the water judge can review the ruling. Appellate review of the judgment and decree of the water judge is allowed.[13] Full or partial abandonment may be considered in all proceedings for a change of water right or approval of reasonable diligence.[14]

Standards with respect to rulings of the referee and decisions of the water judge are: (a) The priority date is the date of initiation of the appropriation if the appropriation was completed with reasonable diligence; and if not, the date when reasonable diligence started; (b) a particular means or point of diversion of a water right may also serve as a point or means of diversion for other rights; (c) a change of water right or plan for augmentation shall be approved if the change or plan will not injuriously affect prior appropriators. The applicant or protester shall have opportunity to propose terms or conditions, including a limitation on the use of the water which is subject to the change, a relinquishment of part of the applicant's decree or other decrees, a time limitation on the diversion, or such other conditions as may be necessary to protect the vested rights of others; and (d) for plans for augmentation including exchange, the supplier may take an equivalent amount of water at his points of diversion or storage if it is available without impairing the rights of others. Substituted water shall be of historic quantity and quality, and shall be accepted by the senior appropriator in lieu of his decreed rights.[15]

Plans for augmentation are programs designed to increase the water supply available for beneficial use by development of new or alternate means or points of diversion, pooling of water resources, water exchange projects, substituted water, etc.[16] Persons alone or in concert may make plans for augmentation including water exchange projects. Water conservancy districts, ditch and reservoir companies and others may make plans for augmentation for the benefit of all water users within their boundaries.[17] Special procedures are outlined for plans for augmentation.[18]

Junior rights are protected against injury resulting from change in point of diversion or in place or character of use. The recognized rule is that a junior is entitled to have continued and maintained the conditions which existed on the stream at the time when he made his appropriation.[19] A common objection is that the change will result in depriving certain users of return flows which they had previously diverted to satisfy their appropriations.

One cannot transfer more than has been beneficially used.[20] This point is of ever-increasing importance in connection with the acquisition of agricultural rights for municipal and industrial use.

Water may be stored either in channel or off-channel reservoirs for future beneficial use. Decrees covering such storage rights may be awarded as for other means of diversion. The storage of water must be followed by application to beneficial use which term by statute also includes impoundment for recreational purposes, fishery and wildlife.[21] The quantity of water to be stored must be defined, and, in the case of off-channel reservoirs, the capacity of the inlet works must be described in the same manner as that used for direct diversion canals. A reservoir decree permits taking and storing water in the order of its priority. Direct flow uses having priority dates junior to a reservoir may not take water when the reservoir right is unsatisfied.[22] Under each reservoir decree ordinarily there may be but one filling of the reservoir per year unless there is free water in the stream not demanded by other appropriators. A reservoir can secure decrees permitting more than one filling under some conditions, but such decrees must take their proper places in the priority schedule. If a change of place of storage can be accomplished without injury to vested rights, it may be granted in an appropriate transfer proceeding. By statute, a reservoir owner is made the virtual insurer against loss or damage occasioned by failure of the reservoir.[23] The problem of the passage of direct flow water through a reservoir has caused some controversy. The state engineer may order releases equal to net evaporation from an on-stream reservoir for other appropriators.[24] Direct flow water may be passed through a reservoir system if it is not actually stored therein.

When water which has been diverted or stored returns to the stream after being put to beneficial use, it belongs to the stream and is available to satisfy downstream appropriation rights.[25] The effort to intercept and use return flows before they reach the stream has resulted in

litigation. Generally, it may be said that such return flows may be intercepted and used if no rights thereto have attached.[26] Thus, if the holder of the direct flow or storage decree has affirmed an intent to capture such return flow before it reaches the stream, he has the best right to the same. On the other hand, if a right has attached to such return after it has reached the stream, there may be no future interception and use which would injure the vested use of the return.[27] A new statute enables an appropriator to reuse water imported from a different stream system to make a succession of uses, if it can be distinguished from the stream to which it is introduced, provided that vested rights are protected.[28]

ADMINISTRATION OF WATER RIGHTS

In 1969, the General Assembly enacted legislation which solidifies the statutory duties and powers of the Division of Water Resources and its executive officer, the state engineer. Each of seven water divisions of the state is in charge of a division engineer and his assistants.[29] Water districts within the divisions have been abolished.

Except in matters of water pollution control, only the state engineer and the division engineers shall administer, distribute and regulate the waters of the state in accordance with the state constitution, state laws and written orders and instructions of the state engineer.[30]

The state engineer or division engineers shall issue to water rights owners and users orders necessary to administer, distribute and regulate the waters of the state. Each division engineer shall order the discontinuance of any diversion to the extent the water is not necessary for application to a beneficial use or is required by senior appropriators. Standards are listed for discontinuance. A well approved as an alternate means of diversion for a decreed surface right must be utilized to the extent feasible and permissible before diversions under junior rights are ordered discontinued. The division engineer shall order the release under proper conditions of any water improperly or illegally stored. The administrative officers shall administer the movement of water involved in any plan for augmentation or water use project, and issue orders and utilize funds, public and private, or any other resources available to them. They shall have the authority to order water right owners or users to install and maintain at their expense measuring devices and to report the readings of such at reasonable times. The administrative officers shall have the authority and duty to enter upon private property to inspect the facilities and read the measuring devices. Administrative officers may apply to the water judge for an injunction enjoining the continuation of a violation of a state official's order. Any person damaged by violation of an order, properly enjoined, may recover triple damages and the cost of suit, including reasonable attorney fees.[31]

The administrative officers shall be governed by the priorities for water rights and conditional water rights.[32] Provision is made for tabulations of water rights by the respective division engineers, with opportunity for objection by any person, corrections and hearings. Starting in 1974, the priority list will be updated every two years with those water rights not listed deemed to be abandoned. However, there is provision and opportunity for protest, hearings and appellate review. Procedure is made for determining priorities among water rights in different water subbasins deriving their supply from the same common source; there had previously been no statutory guidelines for those determinations.[33]

TRIBUTARY GROUND WATER

Underground waters for many years have been used in Colorado without being properly within the priority system. Much effort was made by the General Assembly with the help of engineers and attorneys during the 1969 session to remedy the situation. General policies relating to integration of tributary ground water into the priority system are contained in the introduction.

In determining and administering the use of water, judicial and administrative officers shall be governed by the following: (a) If an appropriator uses a well he may charge that diversion to its own appropriation or, if he also has a surface right taking from the same stream system, he may, by using the proper procedure, have the well as an alternate point of diversion for his surface decree; (b) the widest possible discretion to permit the use of wells shall prevail (lowering of the water table will be allowed if it later can be recharged so as to prevent injury to senior appropriators); and (c) as in other parts of the new legislation, provision is made for the interim period until procedures and paper work can be finalized.[34]

It should be kept in mind that procedures for determination and administration of water rights covered herein are to cover tributary ground water as well as surface rights as a common unit.

DESIGNATED GROUND WATER BASINS

There are some areas of the state where considerable quantities of ground water can be found which do not contribute adjudicated surface rights. Specific examples are the Closed Basin of the Rio Grande and the Republican River drainage in the High Plains area. Wells in these areas, if in sufficient number, will compete with each other as surely as do ditches from surface streams.

Designated ground water is subject to appropriation and is defined in the law as follows:

1. That ground water which in its natural course would not be available to and required for the fulfillment of decreed surface rights.
2. Ground water in areas not adjacent to a continuously flowing natural stream, wherein ground water withdrawals have constituted the principal water usage for at least 15 years preceding January 1, 1965.[35]

The law provides for a ground water commission which has the authority to establish designated ground water basins in accordance with the definition of designated ground water as above set forth. The procedure for establishing such ground water basins is set forth in the legislation which includes public hearings and publication.

After having designated a ground water basin, the commission, through the state engineer, will issue permits for the use of ground water and establish a priority date and number for each well in accordance with the doctrine of prior appropriation. However, if the commission finds that the issuance of any future permit would unreasonably impair any existing use or would result in the unreasonable lowering of the water table, then a permit may be denied. The procedure for hearing and publication on all future permits is provided for in the legislation. The priority date of future wells is the date of filing the request for permit with the state engineer.

The ground water commission is given rather broad powers to conserve the ground water resources of the designated basins and to protect vested rights of other appropriators. The state engineer is the enforcing officer for the commission.

Within areas determined as designated ground water basins by the ground water commission, local ground water management districts may be formed. Formation is through a vote of the local people. If a district is formed, then the district itself has broad general powers of management over the ground water resources of the designated area. Decisions of local districts may be appealed to the commission. The powers and functions of the ground water district are quite comprehensive and are fully set forth in the legislation.

WATER CONSERVANCY DISTRICTS AND RIVER BASIN AUTHORITIES

The Colorado Water Conservancy Act, enacted in 1937, authorizes the formation of conservancy districts whose boards of directors have the power, among others, to acquire water rights; construct and operate facilities; condemn private property; contract with the federal government for construction, operation and maintenance of diversion and storage facilities; and to adopt plans and specifications for the works for which the district was organized.[37] A district may collect a general ad valorem tax on all lands within its boundaries to defray the costs of operating the district, which tax was upheld as being a tax "for a public purpose" and constitutional.[38] There are thirty-five[39] water conservancy district boards in Colorado that are planning for projects or have entered into contracts with the United States for repayment of the non-federal participation costs.

Recent legislation authorizes the formation of fourteen river basin authorities with the power to construct and operate facilities and structures for the diversion and transport of water and the power to tax according to the benefits received by the water users.[40] These authorities would bring benefits to those within a basin not within the boundaries of a water conservancy district.

COMPACTS AND COURT DECISIONS

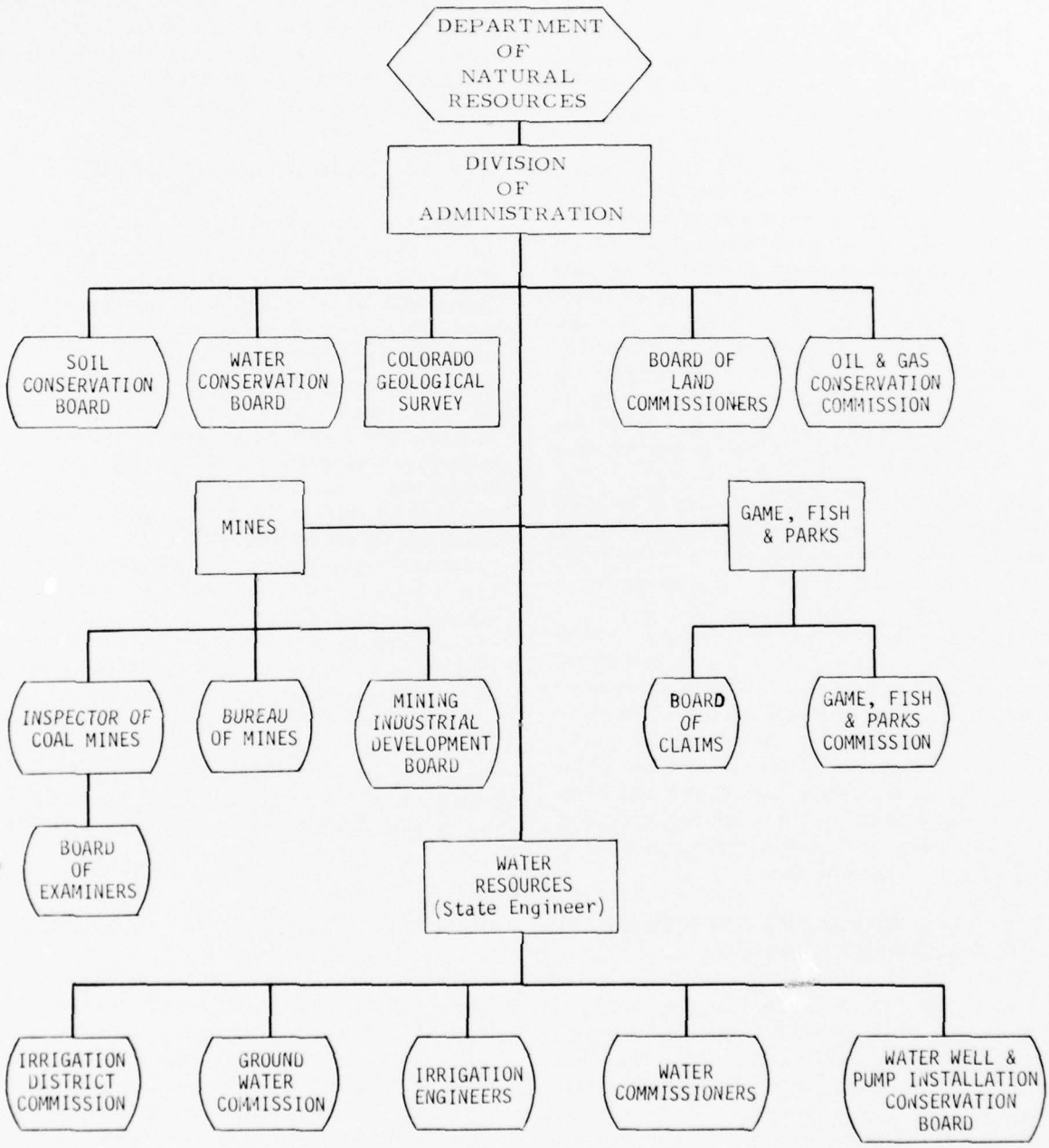
While the Constitution says that the water of every natural stream is dedicated to the use of the people of the state, this provision is subject to the qualification that under decisions of the United States Supreme Court there must be equitable apportionment of the benefits arising from the flow of an interstate stream.[41] As a result, Colorado may not use and control all the water of the many streams originating within its borders. There must be a division of the water of all interstate streams before the states know how much each has for use. This division may be accomplished either by decree of the United States Supreme Court or by interstate compact consented to by the Congress.[42]

Colorado has by decree or compact secured a definition of its rights to the use of the water of every major interstate stream. Affecting the Missouri River Basin are compacts and decrees covering the South Platte River, Colorado River, Upper Colorado River Basin, North Platte River, and Laramie River. Colorado law applies to govern the acquisition, disposition, control and administration of rights to the use of water falling within the share allotted to Colorado. A water user in Colorado cannot under Colorado law secure any right to the use of any water allotted by compact or decree to another state.

DEPARTMENT OF NATURAL RESOURCES

The Department of Natural Resources, headed by an executive director, was created in order to place under one head those state agencies involved in the natural resources of the state. The general purpose of the Department is to administer the natural resources policy of the state and to encourage the full development and utilization of the state's natural resources to the benefit of all citizens of Colorado. An organization chart of the Department with a brief description of the duties of the state agencies follows:

DEPARTMENT OF NATURAL RESOURCES
PRESENT ORGANIZATION



1. The **State Soil Conservation Board** provides constructive methods of land use which will result in the conservation and preservation of natural resources, the control of wind and water erosion and reduction of damage resulting from floods. The Board is the designated state agency in approving feasible projects for detailed study by the Soil Conservation Service on projects submitted under Public Law 566. They assist the State Soil Conservation Districts in their formation, management and operations related to soil conservation.
2. The **Colorado Water Conservation Board** was created by the General Assembly in 1937 to aid in the protection and development of the waters of the state for the benefit of its present and future inhabitants. The Board has the power to: (1) Foster and encourage and to assist in the financing of, without making the state responsible therefor, various types of districts, mutual companies and other agencies formed by federal or state laws; (2) gather information and to formulate plans and cooperate with the federal government and others regarding plans and projects; (3) formulate and prepare drafts of federal and state legislation; (4) investigate plans and activities of the federal government and other states which might affect interstate waters of Colorado; (5) confer and appear before agencies and officers of the federal government or other states in order to protect Colorado's interests in the interstate waters of Colorado; (6) acquire real property for flood prevention or flood control with respect to federally authorized projects for such, including easements for access thereto, and to lease such property to the federal or state government or subdivisions thereof for the construction, operation and maintenance of flood control or prevention facilities; and (7) incidental powers to promote the conservation of the waters of the state in order to secure the greatest utilization of such waters and the utmost prevention of floods.[36]

   The Board is authorized to make a continuous study of the water resources and present and potential uses thereof for best development of waters for beneficial use, and to make written reports of the studies. The state has assented to the Federal Water Resources Planning Act, and the Board has the power to conduct a state water planning program, which is presently under way.
3. The **Division of Water Resources**, Office of State Engineer, has the general supervisory and administrative control of the public waters of the state. There has been presented in the foregoing paragraphs a summary of Colorado's state water laws and a general description of the duties of the various branches of the Water Resources Division in administering these laws. Pursuant to provisions of the law, the Division exercises supervisory control over design, construction and maintenance of all dams over 10 feet in height and control over storage behind such dams, as well as about 35,000 or more small stock water storage reservoirs; maintains the official depository of plans and specifications covering the construction of storage reservoir dams; and also maintains the official records of stream diversions for beneficial uses.
4. The **Colorado Game, Fish and Parks Department** was created to provide a working system for establishment, management and augmentation and regulation of game and fish populations and park and recreation facilities in the state.

   The activities of the Department are directed by a Commission which is composed of an appointed commissioner from each of the eight districts of the state and two members at large. The governor is an ex-officio member. The Commission determines the policies by which the Department operates; promulgates regulations for hunting and fishing, regulates boating procedures and safety regulations; acquires land for wildlife, parks and recreation management; authorizes the Department's annual budget for submission to the Legislature; recommends to the Legislature any changes or revisions needed in the statutes to improve Game, Fish and Parks operations; and instructs the Director regarding all matters of Department administration. The Department has been acquiring lands in recent years and leasing existing reservoirs and lands to improve the hunting, fishing and recreation opportunities in the state.
5. The **Colorado Geological Survey** was created for the purpose of coordinating and encouraging, by use of appropriate means, the full development of the state's natural resources, as the same are related to the geological processes that affect realistic development of human and mineral utilization and conservation practices and needs of the state. The Survey assists, consults and advises state and local governmental agencies on geological problems, promotes economic development of the mineral resources, collects basic data on the mineral resources, and prepares and disseminates reports, maps and bulletins thereon.
6. The **Board of Land Commissioners** is comprised of three appointed full time members, one of whom must be a civil engineer. The general duties of the Commission are to handle all leases, sales, rentals, etc., of state-owned grant lands, including the minerals acquired with these lands, and directions as to investment of school funds. These duties include the selection, location, protection, management and sale of all lands granted to the state; leasing

lands for grazing and agriculture, or other purposes, and leasing mineral rights for exploration and mining; the investment of the public school permanent fund in securities permitted by law and in loans on Colorado farm lands and operating ranches; and, the disposal of timber on state-owned lands.

7. The **Oil and Gas Commission** is composed of five members appointed by the governor, one member to be appointed from each of the four congressional districts and one to be appointed from the state-at-large. The general purpose of the Commission is to prevent the waste of oil and gas, either on the surface or underground, by means of rules and regulations promulgated by the Commission. The Commission has broad regulatory powers for the prevention of wastes and contamination of surface and underground waters and the protection of correlative rights. The Commission may sue or be sued in its administration of the authorizing act in any State or Federal Court in the State of Colorado having jurisdiction of the parties or subject matter.
8. The **Division of Mines** is divided into three sections in accordance with their primary functions. The Bureau of Mines limits its activities to the metal mining industry, with the primary function of safety education and inspection of metal mines in the State. The Chief Inspector of Coal Mines confines his activities to safety regulations and inspection of coal mines in the state. The Mining Industrial Development Board, as its name implies, is involved in prospecting, buying, transporting, selling, treating and reducing metalliferous ores, as well as other technical and economic conditions related to continued development of the mining industry of Colorado.

REFERENCES

1. Original by Donald H. Hamburg, Legal Counsel, (1968); revised by Loren L. Swick (1969) Water Resource Analyst, Colorado Department of Natural Resources, Water Resources Division.
2. Colo. Rev. Stat. § 148-21-2 (1969 Supp.)
3. Yunker v. Nichols, 1 Colo. 551 (1872).
4. Colo. Const. Art. XVI, § 5 and 6; Hutchins, **Selected Problems in the Law of Water Rights in the West**, Misc. Pub. No. 418, U. S. Department of Agriculture, note 3 at p. 30.
5. Windsor R. & C. Co. v. Lake S. D. Co., 44 Colo. 214, 217, 98 Pac. 729 (1908).
6. Taussig v. Moffat Tunnel Co., 106 Colo. 384, 390, 106 P.2d 363 (1940).
7. Colo. Const. Art. XVI, § 6.
8. Strickler v. Colorado Springs, 16 Colo. 61, 72-74, 26 Pac. 313 (1891).
9. Colo. Rev. Stat. § 148-21-45 (1969 Supp.).
10. Colo. Rev. Stat. § 148-21-10 and 11 (1969 Supp.).
11. Colo. Rev. Stat. § 148-21-18 and 19 (1969 Supp.).
12. Colo. Rev. Stat. § 148-21-20 (1969 Supp.).
13. **Ibid.**
14. Colo. Rev. Stat. § 148-21-17 (1969 Supp.).
15. Colo. Rev. Stat. § 148-21-21 (1969 Supp.).
16. Colo. Rev. Stat. § 148-21-3 (1969 Supp.).
17. Colo. Rev. Stat. § 148-21-18 (1969 Supp.).
18. Colo. Rev. Stat. § 148-21-23 (1969 Supp.).
19. Comstock v. Ramsay, 55 Colo. 244, 133 Pac. 1107 (1913).
20. Green v. Chaffee Ditch Co., 150 Colo. 91, 371 P.2d 775 (1962).
21. Colo. Rev. Stat. § 148-21-3 (1969 Supp.).
22. People **ex rel.** v. Hinderlider, 98 Colo. 505, 7 P.2d 894 (1936).
23. Colo. Rev. Stat. § 148-5-13 (1963).
24. Colo. Rev. Stat. § 148-7-17 (1965 Supp.).
25. Comstock v. Ramsay, 55 Colo. 244, 253, 133 Pac. 1107 (1913); Fort Morgan Co. v. McCune, 71 Colo. 256, 258-261, 206 Pac. 393 (1922).
26. Olney Springs Dist. v. Aackland, 83 Colo. 510, 267 Pac. 605 (1928).
27. Nevius v. Smith, 86 Colo. 178, 181, 279 Pac. 44 (1929).
28. Colo. Rev. Stat. § 148-2-6 (1969 Supp.).
29. Colo. Rev. Stat. § 148-21-7 (1969 Supp.).
30. Colo. Rev. Stat. § 148-21-34 (1969 Supp.).
31. Colo. Rev. Stat. § 148-21-35, 36, 37 (1969 Supp.).
32. Colo. Rev. Stat. § 148-21-17 (1969 Supp.).
33. Colo. Rev. Stat. § 148-21-27 & 28 (1969 Supp.).
34. Colo. Rev. Stat. § 148-21-17 (1969 Supp.).
35. Colo. Rev. Stat. § 148-18-1 to § 148-18-41 (1965 and 1967 Supp.).
36. Colo. Rev. Stat. § 149-1-11 (1967 Supp.).
37. Colo. Rev. Stat. § 150-5-16 (1963).
38. People **ex rel.** Rogers v. Letford, 102 Colo. 284, 79 P.2d 274 (1938).
39. See **Water Conservation Agencies of the State of Colorado**, Fourth Ed. (1968).
40. S. 258, 47th Gen. Assy., 1st Sess. (1969).
41. Kansas v. Colorado, 206, U. S. 46, 97 (1906); Colorado v. Kansas, 320 U. S. 383, 385 (1943); Wyoming v. Colorado, 259 U. S. 419, 464-465 (1921).
42. Hinderlider v. La Plata Co., 304 U. S. 92, 104-105 (1937). See Frankfurter and Landis **The Compact Clause of the Constitution, a Study in Interstate Adjustments**, 34 Yale L. J. 685 (1925).

STATE OF IOWA



STATE LAW

General

A comprehensive water rights law was enacted by the Iowa legislature in 1957. The law established a water use permit system administered by a state agency, the Iowa Natural Resources Council. With a few exceptions, all uses of water in amounts in excess of 5,000 gallons per day are regulated under the law.

Historically, water use in Iowa has been governed by rules of common law enunciated by the courts. These rules have been supplemented periodically in fragmentary fashion by legislation designed to accomplish a particular purpose or phase of water use. Typically, such legislation relates to specific state departments to political subdivisions of the state, or to the formation and management of special purpose districts.

Many aspects of water use and water rights have not been before the courts for decision as to the current state of water use law. This is particularly true of the comprehensive water rights law enacted in 1957.

State Constitution

Although no general water policy for the state is established by the Iowa State Constitution, state and local governmental programs in the field of water resources in Iowa are subject to the usual constitutional restrictions embodied in the concepts of due process of law, equal protection and uniform application of the laws, and just compensation for the taking of private property for public use (Iowa Const. Art. 1, sec. 6, 9, 18; Art. III, sec. 30). A 1908 amendment authorized the General Assembly to pass laws permitting the construction of drains and levees across the lands of others, to vest proper authorities with power to construct and maintain such drains and levees, to finance same by special assessment of the specially benefited property, and to provide for condemnation of such lands as are necessary to the construction and maintenance thereof (Iowa Const. Art. 1, sec. 18).

Article VII of the Iowa Constitution limits the ability of the State to contract indebtedness. Credit of the State may not be loaned to or in aid of any individual or corporation nor may the State become responsible for the

debts or liabilities thereof unless incurred in time of war. The State may contract debts to supply casual deficits or failures in revenues or to meet expenses not otherwise provided for only to an aggregate maximum of $250,000. All losses to the permanent, School or University fund of the state occasioned by the defalcation, mismanagement or fraud of the agents or officers in control of the fund, shall be a permanent debt against the State as shall debts contracted to repel invasion, suppress insurrection, or defend the State in war.

No other debts may be contracted by or on behalf of State unless authorized by some law for some single work or object, which law has been submitted to and approved by the voters at a general election. The law must provide for a direct annual tax sufficient to pay interest as it falls due and to discharge the principal of such debt within twenty years.

Statutes

1. General

Significant Iowa statutes relating to water and related land resources including the following:

The long standing laws providing for protection of public water supplies and review of water supply plans by the Department of Health;

The 1965 law creating the Iowa Water Pollution Control Commission;

Fish and game laws, state parks and preserve laws, water navigation regulations and recreational planning programs administered by the State Conservation Commission;

Laws providing for basic data collection, interpretation and reporting by the Iowa Geological Survey;

The milldam law;

Laws creating the State Soil Conservation Committee and providing for Soil Conservation Districts;

The 1949 law creating the Iowa Natural Resources Council, 1957 amendments incorporating the Iowa Water Rights Law, and 1965 amendments dealing with comprehensive planning and flood plain regulation;

The public utility regulation laws, insofar as they affect water service;

The eminent domain laws insofar as they affect condemnation for water supplies, sewer systems, water power generation, flood control works and related water resources interests;

The authorization for cities and towns to provide water and sewerage services and to finance these improvements by various means;

The authorization for cities and towns to construct, maintain and operate flood control systems and to finance same and to establish water recreational areas;

Laws authorizing formation of benefited water districts and sanitary districts within counties; and

The levee and drainage district enabling law and other drainage laws.

This maze of overlapping and sometimes conflicting areas of authority between competing interests and purposes presents a real challenge to coordination and cooperation.

An indication of the water policy of the State may be derived from the policy statements and assignment of powers and duties contained in the statutes.

For example, the following declaration of policy is contained in Chapter 455A, Iowa Code 1966 (enacted 1949 and amended 1957), which assigns to the INRC general responsibility for the control, utilization and protection of the water resources of the state:

"455A.2 Declaration of policy. It is hereby recognized that the protection of life and property from floods, the prevention of damage to lands therefrom and the orderly development, wise use, protection and conservation of the water resources of the state by the considered and proper use thereof, is of paramount importance to the welfare and prosperity of the people of the state, and, to realize these objectives it is hereby declared to be the policy of the state to correlate and vest the powers of the state in a single agency, the Iowa natural resources council, with the duty and authority to establish and enforce an appropriate comprehensive state-wide program for the control, utilization and protection of the surface and ground-water resources of the state. It is hereby declared that the general welfare of the people of the state of Iowa requires that the water resources of the state be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use, or unreasonable methods of use, of water be prevented, and that the conservation of such water be exercised with the view to the reasonable and beneficial use thereof in the interest of the people, and that the public and private funds for the promotion and expansion of the beneficial use of water resources shall be invested to the end that the best interests and welfare of the people are served.

"Water occurring in any basin or in any watercourse, or other natural body of water of the state, is hereby declared to be public waters and public wealth of the people of the state of

Iowa and subject to use in accordance with the provisions of this chapter, and the control and development and use of water for all beneficial purposes shall be in the state, which, in the exercise of its police powers, shall take such measures as shall effectuate full utilization and protection of the water resources of the state of Iowa."

The Oil and Gas Conservation Law enacted in 1963 (Iowa Laws, 60 G.A., ch. 84) contained the following policy statement pertaining to water resources:

"It is hereby further declared that the general welfare of the people requires that the underground and surface water of the state be protected from pollution and conserved in the best interests of the people of the state."

The following statement of policy is contained in the Iowa Water Pollution law (Iowa Code 1966, ch. 455B) enacted in 1965:

"455B.1 Statement of policy. Whereas the pollution of the waters of this state constitutes a menace to public health and welfare, creates public nuisances, is harmful to wildlife, fish and aquatic life, and impairs domestic, agricultural, industrial, recreational and other legitimate beneficial uses of water, and whereas the problem of water pollution in this state is closely related to the problem of water pollution in adjoining states, it is hereby declared to be the public policy of this state to conserve the waters of the state and to protect, maintain and improve the quality thereof for public water supplies, for the propagation of wildlife, fish and aquatic life, and for domestic, agricultural, industrial, recreational and other legitimate (beneficial) uses; to provide that no waste be discharged into any waters of the state without first being given the degree of treatment necessary to protect the legitimate (beneficial) uses of such waters; to provide for the prevention, abatement and control of new, increasing, potential, or existing water pollution; and to co-operate with other agencies of the state, agencies of other states and the federal government in carrying out these objectives."

The Iowa Soil Conservation Districts Law (Iowa Code 1966, ch. 467A) contains the following declaration of policy:

"It is hereby declared to be the policy of the legislature to provide for the restoration and conservation of the soil and soil resources of this state and for the control and prevention of soil erosion and for the prevention of erosion, floodwater, and sediment damages, and thereby to preserve natural resources, control floods, prevent impairment of dams and reservoirs, assist and maintain the navigability of rivers and harbors, preserve wild life, protect the tax base, protect public lands and promote the health, safety and public welfare of the people of this state."

Duties legislatively assigned to state agencies include the following statements reflecting the water resources policy of the state:

State Conservation Commission

Section 111.3, Iowa Code 1966

"It shall be the duty of the commission, under the supervision and direction of the executive council, to establish, maintain, improve, and beautify public parks and preserves upon the shores of lakes, streams, or other waters, or at other places within the state which have become historical or which are of scientific interest or which by reason of their natural scenic beauty or location are adapted therefor. The commission shall have the power under such supervision and direction, to maintain, improve or beautify state-owned bodies of water, and to provide proper public access thereto. The commission shall have the power to provide and operate facilities for the proper public use of the areas above described."

State Conservation Commission

Section 107.24, Iowa Code 1966

"Specific powers. The commission is hereby authorized and empowered to:

***

"2. Acquire by purchase, condemnation, lease, agreement, gift and devise lands or waters suitable for the purposes hereinafter enumerated, and rights of way thereto, and to maintain the same for the following purposes, to wit:

a. Public hunting, fishing and trapping grounds and waters to provide areas in which any person may hunt, fish, or trap in accordance with the provisions of the law and the regulations of the commission;

b. Fish hatcheries, fish nurseries, game farms and fish, game, fur-bearing animal and protected bird refuges.

"3. Extend and consolidate lands or waters suitable for the above purposes by exchange for other lands or waters and to purchase, erect and maintain buildings necessary to the work of the commission."

County Conservation Boards

Section 111A.1, Iowa Code 1966

"The purposes of this chapter are to create a county conservation board and to authorize

counties to acquire, develop, maintain, and make available to the inhabitants of the county, public parks, preserves, parkways, playgrounds, recreational centers, county forests, wildlife and other conservation areas, and to promote and preserve the health and general welfare of the people and to encourage the orderly development and conservation of natural resources, and to cultivate good citizenship by providing adequate programs of public recreation."

State Department of Health

Section 135.11, Iowa Code 1966

"Powers and duties. The commissioner of public health shall be the head of the 'State Department of Health', which shall:

"1. Exercise general supervision over the public health, promote public hygiene and sanitation, and, unless otherwise provided, enforce the laws relating to the same.

***

"7. Make inspections of the public water supplies, sewer systems, sewage treatment plants, and garbage and refuse disposal plants throughout the state, and direct the method of installation and operation of the same."

2. The Iowa Water Rights Law

As a result of widespread drought conditions in the early and mid-1950's and the nationwide attention focused on water shortages, the 1957 Iowa Legislature established an Iowa water use permit system and assigned its administration to the Iowa Natural Resources Council.

The law declares that water occurring in any underground basin, watercourse, or any other natural body of water, is public water and public wealth of the people of the state and is subject to use in accordance with the principles and policies of beneficial use declared in the law. With a few exceptions as to the kind and amount of use and the source of water (use for ordinary household purposes, for poultry, livestock, and domestic animals; certain existing uses; any beneficial use of less than 5,000 gallons per day; and any beneficial use of surface flow from border rivers or use of groundwater on an island or former island in border river) a permit must be obtained from the State Water Commissioner for the diversion, storage, or withdrawal of water and for the diversion of water or other material from the surface directly into any underground watercourse or basin. Public hearing with due notice thereof is required for each initial application and for renewals where problems or controversy exist. The determination of the Water Commissioner may be appealed to the Resources Council and then to the courts.

The "policies and principles of beneficial use" is the standard for the determination on applications for permits. The law provides for the consideration of applications in the order received except that priority is to be afforded as of the actual date of diversion or withdrawal occurring prior to the effective date of the law. Use of the water for ordinary household purposes, for poultry, livestock, and domestic animals, shall have priority over other uses and any person with an existing irrigation system in use prior to the effective date of the law must be issued a permit to continue unless some other riparian user is thereby damaged. Nothing in the law shall impair the vested rights of any person. Permits may not be granted which (1) will be detrimental to the public interests or to the interests of property owners with prior or superior rights who might be affected, (2) will impair the effect of pollution control laws, (3) will impair the navigability of any navigable watercourse, (4) will adversely affect the control, development, protection, allocation, or utilization of the water resources of the state, or (5) will adversely affect or interfere with the state comprehensive plan for water resources or an approved local water resources plan. Permits may be granted for a maximum period of ten years.

Beneficial use is defined as "the application of water to a useful purpose which inures to the benefit of the water user and subject to his dominion and control, but does not include the waste or pollution of water."

Waste is defined as "(a) permitting ground water or surface water to flow, taking it or using it in any manner so that it is not put to its full beneficial use, (b) transporting ground water from its source to its place of use in such a manner that there is an excessive loss in transit, (c) permitting or causing the pollution of a water bearing strata through any act which will cause salt water, highly mineralized water, or otherwise contaminated water to enter it".

Under policy adopted by the Resources Council to supplement the statute, most permits now are granted for the maximum legal period of ten years. Withdrawals from surface sources for irrigation are limited to a maximum period of seven years.

Permits for supplemental irrigation of general farm crops generally authorize withdrawals in quantities sufficient to apply a maximum of 15-acre inches per acre except in the dryer western part of the state where a maximum of 18-acre inches per acre may be authorized. Greater quantities may be authorized for irrigation purposes

where special need is demonstrated as for truck gardens, nurseries, sod farms, etc. Although no specific criteria have been adopted for other uses, the applicant in each case must demonstrate his need for water in the quantity requested and that his use is generally consistent with standard practice for the requested use.

Protected flows have been established for all Iowa streams at the regular gaging point in Iowa nearest the mouth of the stream. Comparable flows are determined for upstream withdrawal points and artificial reduction below the protected flow is not permitted. The protected flow for each stream is based on information obtained from continuing studies of the low flow characteristics of Iowa streams and is designed to provide adequate protection to the supply of water for ordinary household, poultry, livestock, and domestic animal uses, for fish and wildlife, for recreational and aesthetic uses of the stream, for pollution control and dilution of wastes, and for other uses of a public nature.

Under existing policy, no permit is required for the impoundment of water in permanent storage in amounts not exceeding 18 acre-feet except where a municipal or industrial water supply may be affected by the impoundment.

Test pumping of sources of water to determine the adequacy of the source and the effects of the withdrawals may be authorized by the Water Commissioner (without formal application, notice and hearing) with the concurrence and technical assistance of the Iowa Geological Survey and other appropriate agencies, provided such supervision of the testing operations is maintained as may be deemed adequate by the Water Commissioner.

The effect of the water use permit system on the riparian rights-reasonable use doctrine judicially established in Iowa has not been tested in the Iowa courts on any basis, the constitutionality of such regulations generally, the adequacy of the particular statute, or the reasonableness and necessity of a particular administrative act or order.

3. Comprehensive Planning

The Iowa Natural Resources Council has primary responsibility for comprehensive planning of water resources without, however, limiting or supplanting the responsibility of other state and local agencies and institutions with regard to planning of water-associated projects within the particular area of responsibility of such agency or institution.

The State Coordinating Group for Water and Related Land Resources Planning was formed in 1963 on initiation of the Resources Council. All State agencies and institutions with administrative responsibilities in area of water are represented. Committees have been formed and are at work on specific aspects of a comprehensive plan. Various members of this group also serve on committees involved in the federal planning of water resources in the Upper Mississippi and Missouri River Basins.

4. Flood Plain Regulations

The flood plain management program administered by the Resources Council is a relatively new concept in flood damage prevention. Historically, man has tried to reduce flood damages through the **exercise of control over the river** in time of flood. Dams and reservoirs, levees, dikes, flood walls, and channel improvements have been constructed at great cost, principally by Federal, State and local governments. The steady increase in flood hazards and damages despite the expenditure of billions of dollars in tax funds has led to a new approach to the reduction of these hazards and damages, the **exercise of control over the land** adjacent to the river through the planned management and development of flood hazard areas.

Table 1 – USE, SOURCE, AND AMOUNT OF WATER AUTHORIZED BY PERMITS IN FORCE JUNE 30, 1966[1]

Type of Use	STREAMS		WELLS[2]		RESERVOIRS[3]	
	Acre-feet Annually	Number of Permits	Acre-feet Annually	Number of Permits	Acre-feet Annually	Number of Permits
Highway	845	113	-	-	-	-
Industrial	1,459,376	100	118,848	108	267,697	225
Irrigation[4]	23,752	214	49,822	297	4,457	42
Municipal	13,615	5	98,719	121	4,988	7
Recreation	3,846	13	3,397	15	-	-

[1] Not included in this table are the 625 permits that have been granted for the storage of 64,001 acre-feet of water. A water permit is required for the storage of more than 18 acre-feet of water in permanent storage.
[2] Included in well sources are 13 permits authorizing reservoirs as alternate sources, 42 permits authorizing streams as alternate sources, and 6 permits authorizing both reservoirs and streams as alternate sources.
[3] Included in reservoir sources are 118 permits authorizing streams as alternate sources.
[4] Streams are the primary source of water to irrigate 31,450 acres, wells for 47,532 acres and reservoirs for 6,406 acres.

Regulation of flood plain use can be carried out by a variety of means - - encroachment lines, zoning ordinances, subdivision regulations, and modifications or additions to building codes. Park and open space development, evacuations, urban renewal, flood proofing, tax reduction, and warning signs are other methods which may be helpful in minimizing flood damages, particularly in special localized areas.

Flood plain regulation involves the establishment of legal tools with which to control the extent and type of development which will be allowed to take place on the flood plains. There are two basic objectives of such regulation. The first is to assure the retention of an adequate floodway for the river, floodway being defined as the channel and those portions of the adjoining flood plains which are reasonably required to carry and discharge flood flows without unduly raising upstream water surface elevations. The second objective of regulation is to encourage sound land use consistent with the flood hazard and the community land use needs.

Zoning is the legal tool used by cities, towns and counties to control and direct the use and development of land and property. The zoning ordinance is used to implement and enforce the comprehensive plan which has no legal status. Flood plain zoning is not a special type of ordinance but merely another set of provisions which can be incorporated into the comprehensive zoning ordinance so that flood damage can be minimized.

These considerations led the 1965 Iowa Legislature to enact the new flood plain regulation Act. (Iowa Code 1966, sec. 455A.35) Under the Act, the Council may establish and enforce regulations for the orderly development and wise use of the flood plains of any river or stream within the State, and alter, change or revoke the same. The Council shall determine the characteristics of floods which reasonably may be expected to occur and may by order establish encroachment limits, protection methods, and minimum protection levels appropriate to the flooding characteristics of the stream and to reasonable use of the flood plains. The Council may cooperate with and assist local units of government in the establishment of encroachment limits, flood plain regulations and zoning ordinances relating to flood plain areas within their jurisdiction.

Flood plain information studies are completed or underway for several areas of the State. Reports have been prepared and published by the U. S. Corps of Engineers for streams at Cedar Rapids, Davenport and Ames. A study of the Iowa River at Iowa City was made by the Resources Council in 1960 and regulations based on the study and governing use of the floodway and flood plains were adopted in 1962 by the City as part of its comprehensive zoning ordinance (See Plate 1, Iowa City Flood Plain Regulation). The ordinance permits only open-type uses in the floodway area and, in those flood plain areas not needed for conveyance, permits development consistent with the adjoining use district provided the area is filled to a specified elevation.

Case Law

Prior to the establishment of the Iowa water use permit system in 1957, the water law of the state was contained in decisions of the Iowa Supreme Court. The court has used the common law as the rule of decision in water resources cases. Although many provisions of the water rights law appear to have been drafted to preserve the common law, the effect of the water rights statute on the common law riparian doctrine has not been judicially established. Rules of law taken from leading court decisions rendered prior to enactment of the water rights law may therefore be useful in predicting the attitude of the Iowa court, particularly in those areas where the statute may be ambiguous or where the existence of a 'vested right' to a particular use is asserted.

The doctrine of riparian rights has always prevailed in Iowa, attaching to any natural watercourse, a term which has been defined very broadly by the Iowa Supreme Court. Where water naturally and habitually follows a certain general path, within reasonable limits as to width, the line of flow is a natural watercourse (**Hinkle** v. **Avery**, 88 Iowa 47). It need not have a definite channel or banks, a swale may be a natural watercourse (**Hunt** v. **Smith**, 238 Iowa 543, 28 N.W. 2d 213; **Stouder** v. **Dashner**, 242 Iowa 1340, 49 N.W. 2d 859). It need not be entirely natural but may be aided by the hand of man, (**Falcon** v. **Boyer**, 157 Iowa 745, 142 N.W. 427) as by deepening or straightening in a swale or stream (**Logsdon** v. **Anderson**, 239 Iowa 585, 30 N.W. 2d 787). An artificial ditch, as a drainage ditch, may become a natural watercourse by lapse of time (10 years) as between private individuals on principles similar to the creation of an easement by prescription (**Nixon** v. **Welch**, 238 Iowa 34, 24 N.W. 2d 476) but such rights may not be urged against the public (**Droegmiller** v. **Olson**, 241 Iowa 456, 40 N.W. 2d 292).

On many occasions, the Iowa court has recognized the right of a riparian owner to have the water in a stream flow by or through his property in its natural state subject only to the equal right of other riparian owners to make reasonable use of the water (**Harp** v. **Iowa Falls Electric Co.**, 196 Iowa 317, 191 N.W. 520; **Watt** v. **Robbins**, 160 Iowa 587, 142 N.W. 387; **Gibson & Kloppenstein** v. **Fischer & Orton**, 68 Iowa 29, 25 N.W. 914;

law by the 1969 session of the Colorado General Assem-

the provisions has yet been interpreted by the Courts.

Decorah Woolen Mill Co. v. **Greer**, 49 Iowa 490). In determining whether a particular use is reasonable the Iowa court has enumerated several criteria - what the use is for; its extent, duration, necessity, and its application; the nature and size of the stream, and the several uses to which it is put; the extent of the injury to the one proprietor, and of the benefit to the other; climatic conditions; the uses and customs of the neighborhood; convenience in doing business; and indispensable public necessity of cities and villages for drainage, and all other facts which may bear upon the reasonableness of the use (**Gehlen Brothers** v. **Knorr**, 101 Iowa 700, 70 N.W. 757).

Generally, riparian rights accrue only to the smallest abutting tract held under one chain of title leading to the present owner. The Iowa court has stated that a riparian owner is one "whose land abuts upon a river" (**Peck** v. **Olsen Construction Co.**, 216 Iowa 519, 245 N.W. 131). Owners of land riparian to a navigable or meandered stream own only to the ordinary high water mark, the State retaining title to the bed and banks (**Shortell** v. **Des Moines Electric Co.**, 186 Iowa 469, 172 N.W. 649). The court has defined the ordinary high water mark as the limit of the bed which the water occupies sufficiently long and continuously to wrest it from vegetation and destroy its value for agricultural purposes (**Merrill** v. **Bd. of Supvr's of Cerro Gordo County**, 146 Iowa 325, 125 N.W. 222; **Solomon** v. **City of Sioux City**, 243 Iowa 633, 51 N.W. 2d 420; **Wilcox** v. **Pinney**, 250 Iowa 1378, 98 N.W. 2d 720).

Although the Iowa court has experienced little difficulty in enunciating and applying the classic riparian doctrines regarding uses of water which do not diminish supplies or impair quality, consumptive uses of water create more problems and doctrine concerning such uses is much less certain. The court has in such cases distinguished between "natural" and "artificial" uses.

Natural uses have been defined by the court as use for domestic purposes, including household uses, such as cleansing and washing, and supplying an ordinary number of horses or stock with water. A riparian owner may take all of the water needed for these purposes even if all of the water in the stream is thereby consumed. All other uses of water are "artificial" and are always subordinate to the natural use. Any riparian owner putting water to an artificial use must do so in such manner as not to unreasonably interfere with its lawful use by others above or below him on the same stream. The rights of all proprietors on the stream to use water for "artificial" purposes are equal. Use of water for irrigation has been described by the Iowa court as an "artificial" use as has the distribution and sale of water by a municipality (**Willis** v. **City of Perry**, 92 Iowa 297, 60 N.W. 727).

"Surface water" is defined by the Iowa Supreme Court as water of a vagrant or temporary character arising by precipitation or snow melt and not yet part of a stream or watercourse (**Hunt** v. **Smith**, 238 Iowa 543, 28 N.W. 2d 213). An owner of land has an absolute right to such water on his land and may use it as he wishes. Note the following definitions contained in the Iowa Water Rights Law (Section 455A.1, Iowa Code 1966):

> "Surface water" means the water occurring on the surface of the ground.
>
> "Ground water" means that water occurring beneath the surface of the ground.
>
> "Diffused waters" means waters arising by precipitation and snowmelt, and not yet a part of any watercourse or basin and shall include capillary soil water.

Riparian rights are appurtenant to the land to which they attach, passing with the land from owner to owner without specific mention in the deeds. Such rights can be condemned and can be severed from the land by express conveyance. They are not lost by mere non-user but can be lost by prescription or adverse user (**Fennema** v. **Menninga**, 236 Iowa 543, 19 N.W. 2d 689.

In general, riparian rights attach to underground streams which flow in a well-defined channel capable of being distinctly traced the same as if they were flowing on the surface (**Willis** v. **City of Perry**, 92 Iowa 297, 60 N.W. 727; **Burroughs** v. **Saterlee**, 67 Iowa 396, 25 N.W. 808). Principal exceptions to the surface stream rule arise due to the difficulty of returning water underground. Consistent with generally accepted knowledge and theories regarding such phenomena, however, ground water is presumed to be percolating water until it is proved that the water is flowing in a definite channel (**Barclay** v. **Abraham**, 121 Iowa 619, 96 N.W. 1080). Apparently the only restriction on the landowners right to divert percolating water is that he not waste it if such diversion and waste injures another and prevents the latter from devoting the water to a beneficial use (**DeBok** v. **Doak**, 188 Iowa 597, 176 N.W. 631; **Barclay** v. **Abraham**, 121 Iowa 619, 96 N.W. 1080; **Hougan** v. **Milwaukee & St. Paul Ry.**, 35 Iowa 558).

One may not embank against the natural flow of a stream when the effect is to cast increased water on the lands of others to their substantial injury (**Allely** v. **Fickel**, 243 Iowa 105, 49 N.W. 2d 544; **Falcon** v. **Boyer**, 157 Iowa 745, 142 N.W. 427; **Keck** v. **Venghause**, 127 Iowa 529, 103 N.W. 773; **Downey** v. **Phelps**, 201 Iowa 826, 208 N.W. 499).

As well as being a criminal offense under statute law (Iowa Code ch. 657), pollution of the water of a stream is also an interference with private riparian rights actionable in damages (**Vogt** v. **City of Grinnell**, 133 Iowa 363, 110 N.W. 603; **Ferguson** v. **Firmenich Mfg. Co.**, 77 Iowa 576, 42 N.W. 448) and sometimes to injunctive relief (**Newton** v. **City of Grundy Center**, 246 Iowa 916, 70 N.W. 2d 162; **Spence** v. **McDonough**, 77 Iowa 460, 42 N.W. 37). Pollution of percolating water is an interference with the private right of the owner of the overlying land and is actionable in a lawsuit for damages or in equity for injunctive relief (**Iverson** v. **Vint**, 243 Iowa

949, 54 N.W. 2d 494; **Payne** v. **Town of Wayland**, 131 Iowa 659, 109 N.W. 203).

Attorney General's Opinions of Special Importance

In a 1960 letter opinion, the Attorney General of Iowa construed that portion of the Iowa Water Rights Law defining as nonregulated ". . . the use of water for ordinary household purposes, use of water for poultry, livestock and domestic animals. . ." to exempt from regulation only "ordinary" use of water for such purposes. Whether a particular use is ordinary or extraordinary is a matter for determination by the Iowa Natural Resources Council.

WATER RIGHTS

Doctrine

As in many of the humid eastern states, there are two substantially separate bodies of the common law relating to water rights in Iowa -- the law pertaining to water flowing in a defined channel (natural watercourses) and the law of percolating ground water. Disputes and problems concerning surface waters (as defined by the court) generally arise between and affect only adjoining landowners. Generally, the riparian owner along a stream has a right to "reasonable use" of the water of a surface stream which flows past or across his land and to underground water in a defined channel. The landowner may use percolating water as he wishes if his use does not constitute waste which injures another in his use for beneficial purposes.

As stated in a preceding section, the Iowa water rights law purports to make substantially all uses of water in the state subject to administrative regulation whether the source be surface or underground.

Natural Watercourses

In **Willis** v. **City of Perry**, 92 Iowa 297, 60 N.W. 727 (1894), the Iowa Court enunciated the broad principles of Iowa water rights under the common law. A riparian owner (one whose land abuts the stream) may use as much of the water in a natural watercourse as is needed for "natural" uses (use for domestic purposes, including household uses, such as cleansing and washing, and supplying an ordinary number of horses or stock with water) even to using the entire flow. All other uses of water are "artificial" and are always subordinate to natural uses. Water may be used for "artificial" purposes provided such use does not unreasonably affect the rights of other riparian proprietors. Use of water for irrigation and the distribution and sale of water by a municipality are "artificial" uses under Iowa decisions. In determining whether a particular use is reasonable, the Iowa Court had enumerated several criteria: what the use is for; its extent, duration, necessity, and its application; the nature and size of the stream, and the several uses to which it is put; the extent of the injury to one proprietor, and of benefit to the other; climatic conditions; the uses and customs of the neighborhood; convenience in doing business; the indispensable public necessity of cities and villages for drainage; and all other facts which may bear upon the reasonableness of the use.

Ground Water

The Iowa Court has held that riparian rights attach to underground streams which flow in well-defined channels capable of being distinctly traced in the same manner as surface watercourses, with necessary exceptions due to the difficulty of returning water underground. Underground water is presumed to be percolating water until it is proved that the water is flowing in a definite channel. Apparently the only judicially imposed restriction on the landowners right to use percolating water is that he not waste it if such diversion and waste injures another and prevents the latter from devoting the water to a beneficial use.

Access to Lakes and Streams

Private owners of land along navigable streams own only to the ordinary high water mark, the State retaining title to the bed and banks. The Court has defined the ordinary high water mark as the limit of the bed which the water occupies sufficiently long and continuously to wrest it from vegetation and destroy its value for agricultural purposes. The Iowa Court held that, for the purpose of fixing title to stream beds and banks, streams or portions thereof meandered in the original government survey are navigable streams. The owner of land fronting on a navigable stream or lake has a right of access to the navigable part of the stream or lake from the front of his land subject to the paramount right of the state to construct or to authorize the construction of improvements in aid of navigation (**Peck** v. **Olson Construction Co.**, 216 Iowa 519, 245 N.W. 131). The general public has no right to cross private property in getting to a navigable stream or lake.

Diversion Between Basins

No rule has been enunciated by the Iowa Court regarding the diversion of water out of the basin in which it occurs. Logically, the diversion of water to another

basin might be considered an "artificial" use, permissible to the extent that it does not unreasonably affect the rights of riparian owners but this has not been before the Iowa Court.

Eminent Domain

State powers of eminent domain are set forth in the Iowa Constitution, Article 1, Section 18, as follows:

> "Private property shall not be taken for public use without just compensation first being made, or secured to be made to the owner thereof, as soon as the damages shall be assessed by a jury, who shall not take into consideration any advantages that may result to said owner on account of the improvement for which it is taken."

Amendment of 1908

> "The general assembly, however, may pass laws permitting the owners of lands to construct drains, ditches, and levees for agricultural, sanitary or mining purposes across the lands of others, and provide for the organization of drainage districts, vest the proper authorities with power to construct and maintain levees, drains and ditches and to keep in repair all drains, ditches, and levees heretofore constructed under the laws of the state, by special assessments upon the property benefited thereby. The General Assembly may provide by law for the condemnation of such real estate as shall be necessary for the construction and maintenance of such drains, ditches and levees, and prescribe the method of making such condemnation."

The procedure to be followed in exercising the power of eminent domain is set forth in detail in Chapter 472, Iowa Code 1966.

The broad powers of the State to acquire property through condemnation for purposes of water management and development of related land resources have been delegated by statute to various districts and governmental units with limitations peculiar to each. These include cities and towns, townships, counties, levee and drainage districts, subdistricts of soil conservation districts, water districts, sanitary districts, water recreational areas and the various state agencies concerned with water and related land resources.

REGULATORY AUTHORITY

Permits or Approvals Required

1. For Drilling or Abandoning Wells

There presently is no general state regulation of the drilling or abandoning of water wells in the state. The water rights law purports only to regulate withdrawals of water. The construction and operation of wells serving as public water supplies is regulated by the State Department of Health and all phases of drilling, operating and abandoning oil and gas wells are closely regulated under the provisions of the oil and gas conservation law enacted in 1963 and administered by the Iowa Natural Resources Council through the office of the State Geologist.

The Iowa Geological Survey maintains an extensive file of well logs obtained primarily through the voluntary cooperation of water well drillers over the state.

2. For Impoundments

Approval of the Iowa Natural Resources Council is required for the construction, operation and maintenance of any dam or like structure. All applicants must submit verified written applications, plans and specifications and other such information as may be required to the Resources Council for review before an approval order is issued. Such orders are subject to standard conditions requiring completion with a specified period of time -- normally three years -- and making the applicant responsible for acquiring all lands, easements and rights of way required for the project.

Unless special problems exist, approval of the Resources Council is not required under existing policy for structures which impound less than 25 acre-feet of water in both temporary and permanent storage.

In addition to Resources Council approval of plans for the impounding structure, a permit must be obtained from the State Water Commissioner for the permanent storage of water thereby effected. Under existing policy, no permit is required for the permanent storage of not more than 18 acre-feet of water.

3. For Channel Encroachments

Approval of the Iowa Natural Resources Council is required to construct, operate or maintain any structure, dam, obstruction, deposit or excavation in or on the floodway or flood plains of any river or stream in the state. An application, plans and specifications and other such information as may be required must be submitted to the Resources Council for review and approval prior to undertaking construction of any such project. The statute is all-inclusive, applying to any "person" undertaking such construction whether natural person, firm, partnership, association, corporation, state of Iowa or agency thereof, municipal corpo-

ration, political subdivision of the State of Iowa, drainage district, levee district, public body or other legal entity. Under existing policy, no review is required for some classes of projects on minor streams and submission of an application and plans for formal review and approval may be waived by the Director of the Resources Council with regard to minor projects on larger streams. Application of these administrative limits is fully described in a Procedural Guide published by the Iowa Natural Resources Council.

For information regarding unauthorized projects, the Council relies generally on complaints of affected persons. Compliance with the law generally is obtained through discussion and persuasion but the Council also may invoke its powers of injunction and condemnation. Most complaints are made with regard to unauthorized filling and levee construction.

Municipalities, counties, townships and certain special-purpose districts also have some powers to prevent or remove channel encroachments or obstructions.

4. Development in Flood Plains (Zoning)

Municipalities and counties in Iowa now have specific statutory authority to zone with respect to flood hazard. Flood plain ordinances proposed by local governing bodies must be approved by the Iowa Natural Resources Council prior to adoption. Regulations controlling flood plain developments also may be established by order of the Resources Council independently of any action by local governing bodies. The Resources Council may cooperate with and assist local units of government in the establishment of encroachment limits, flood plain regulations and zoning ordinances. It is anticipated that all or nearly all flood plain regulations will result from cooperative efforts and action by the local communities and the Resources Council.

A study of the Iowa River and local tributaries at Iowa City was made by the Resources Council in 1960 and regulations based thereon were adopted by the City in 1962 as part of its comprehensive zoning ordinance. The ordinance permits only open-type uses in the channel and overbank areas needed for conveyance of a flood of selected magnitude and, in those flood plain areas not needed for conveyance, permits development consistent with the adjoining use district provided the area is filled to a specified elevation corresponding to the water surface elevation of the design flood.

Flood plain information studies are completed or underway for several other areas of the state and it is anticipated that additional flood plain zoning ordinances will be approved and adopted as the technical bases therefor become available.

5. Discharge of Wastes

The Iowa Water Pollution Control Commission was created in 1965 with the power and duty to supervise administration and enforcement of all laws relating to water pollution; to develop comprehensive plans and programs for the prevention, control and abatement of new, increasing, potential, or existing pollution of waters of the state; to cause investigations to be conducted regarding alleged pollution; to adopt, modify or repeal reasonable quality standards for waters of the state; to require the submission of plans and specifications for disposal systems; and to direct the State Department of Health to issue, revoke, modify, or deny permits for the discharge of sewage, industrial waste or other wastes or for the installation or operation of disposal systems or parts thereof. Systems that receive only domestic or sanitary sewage from a building occupied by fifteen persons or less are not regulated under this permit system.

The Commission has thus succeeded to the duties formerly assigned to the Health Department under the Stream and Lake Pollution division of Code Chapter 135 and has been delegated much broader jurisdiction and authority. Activities of the new Commission and the Health Department in the area of water pollution will have to be closely coordinated since the Commission will function as a policy making body with all field work conducted by personnel of the Health Department. This operating relationship is provided for in the statutes and in appropriations to the two agencies. The Division of Water Pollution Control within the Department of Health provides the services of Technical Secretary to the Iowa Water Pollution Control Commission and conducts investigations and studies under the Water Pollution Control Law.

The Commission formulated proposed water quality criteria and held public hearings thereon in November - December, 1966. The criteria were modified somewhat and adopted in February, 1967 by the Commission with the concurrence of the Natural Resources Council. The criteria generally follow the format of the Ohio River Sanitation Commission regulations with some adaptation to Iowa conditions. The criteria adopted, transcripts of the public hearings thereon, and the implementation plan will be forwarded to the Federal Water Pollution Control Administration for review as required by the federal Water Quality Act of 1965.

The Commission is continuing its studies of the

quality criteria, particularly in the area of agricultural pollution and its investigations of specific instances of water pollution.

6. Construction of Public Water Supply Facilities

The State Department of Health is charged with the duty to ". . . make inspections of the public water supplies . . . and direct the method of installation and operation of the same."

The Department reviews plans for any public water supply or quasi-public surface water supply and specific rules have been adopted with regard to quasi-public ground water supplies. A public water supply is defined as any water supply serving a municipality or water district, whether publicly or privately owned. Quasi-public water supplies include all water supplies not coming under the definition of public water supplies which are used for drinking, culinary, and ablutionary purposes by

Figure III. Zoning Ordinance for Iowa City
Adopted July 26, 1962
ARTICLE VI. Valley Channel and Valley Plain Zone Use Regulations

Section 1. Premises in the Valley Channel Zone shall not be filled with any material nor shall any structure be built that will cause an obstruction to the conveyance of a flow of 25,000 cfs in the Iowa River measured at the Iowa City Gaging Station.

Section 2. Premises in the Valley Channel Zone shall be used for the following purposes only:

1. Farms, truck gardens and nurseries, provided that no farm shall be operated publicly or privately for the feeding or disposal of garbage, rubbish, or offal.
2. Parks, playgrounds, golf courses, and commercial or private recreational areas.
3. Preserves and reservations.
4. Other similar open uses.

Section 3. The Valley Plain Zone shall include premises which are subject to inundation at or below an elevation for a particular area as shown on the zoning map of Iowa City, Iowa, said inundation being due to a flow of 25,000 cfs in the Iowa River measured at the Iowa City Gaging Station.

Section 4. Premises in the Valley Plain Zone shall be used for the following purposes only:

1. For the uses and purposes set forth in Article VI, Section 2.
2. Premises in the Valley Plain Zone also may be used for the purposes specified for the residential, commercial, or industrial district in the particular zone. . . .
3. The uses permitted in Section 4, subsection 2 of this article are subject to the following:

a. No building or structure or any portion thereof shall be erected unless the finished surface of the ground is higher than, or is raised by filling, to the elevation shown for the particular area on the zoning map.

b. No first floor or a basement floor, nor a cellar floor or any dwelling or other building shall be constructed at an elevation lower than the elevation shown for the particular area on the zoning map.

Section 5. All regulations of the ordinance as regards performance standards, additional use regulations, height, yard, area, offstreet parking, accessory use and fence regulations, shall apply to the particular zone of the Valley Plain Zone as they are identified in Section 4, subsection 2 of this Article.

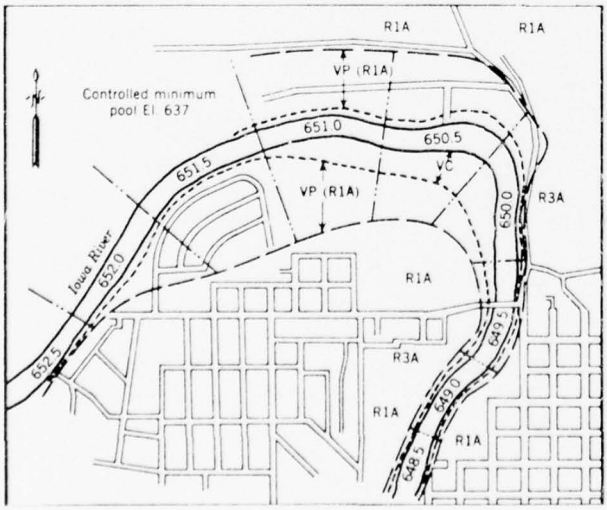


Fig. 1. Flood-plain zoning permits use of areas along the Iowa River. Truck gardening, playgrounds and the like are permitted in the Valley Channel (VC) area but no structures. Structures are permitted in the Valley Plain (VP) area but no basements or floors lower than the elevations shown. Normal low-water pool, formed by a dam at the Iowa Institute of Hydraulic Research, is at El. 637. R1A denotes single-family homes; R3A, multiple housing. The "A" refers to lot size.

persons other than the owner or lessee of property upon which such water supply is located. Public water supplies are inspected routinely and samples are taken and analyzed.

WATER QUALITY

The Iowa Water Pollution Control Commission was created in 1965 with the duty and authority to control, prevent and abate the pollution of the waters of the state. The Commission thus succeeded to duties and authority previously generally assigned to the Department of Health and was delegated much broader authority, including specific authority to adopt, modify or repeal reasonable water quality standards. The Health Department serves as the administrative and technical arm of the new Commission.

1. Waste Treatment

A permit must be obtained from the Department of Health (as required by the Pollution Control Commission) for the disposal of all sewage, industrial waste, or other wastes which are or may be discharged into the waters of the state. Specifically exempted from this requirement are disposal systems that receive only domestic or sanitary sewage from a building housing or occupied by fifteen persons or less.

2. Flow Regulation

The Iowa Natural Resources Council has general statutory power to regulate dams and the operation thereof with respect to flood flows and low flows. Operation of flood gates, installation and removal of flashboards, and operational releases are regulated by conditions imposed in the Council Order approving construction plans and/or in the water permit granted for the storage of water.

Table 2 – IOWA STATUTE REFERENCES ON WATER

(References are to Iowa Code 1966)

Chapter Title	Chapter Number
Agricultural Experiment Station	266
Agriculture, Department of	159
Cities and Towns, General Powers	368
Commerce Commission, Iowa State	474
Conservation Boards, County	111A
Conservation Commission, State	107
Cooperative Extension Service	266
County Boards of Supervisors, General Powers	332
Drainage Improvements, Individual	465
Engineering Experiment Station	266
Flood Control Systems (Municipal)	395
Flood Plain Regulations	455A
Floodway Encroachment & Flood Plain Development	455A
Geological Survey	305
Health, State Department of	135
Highway Commission, State	307
Levee and Drainage Districts	455
Milldams and Races	469
Natural Resources Council, Iowa	455A
Nuisances	657
Parks:	
County	111,111A
Municipal	111,368,370
State	111
Park Commissions, Municipal	370
Regents, State Board of	262
University of Iowa	263
Iowa State University	266
Refuse in lake or stream, deposit prohibited	732
River-front Improvement Commissions	372
Sanitary Districts (County)	358
Sewer Systems (Municipal)	368
Soil Conservation Committee, State	467A
Soil Conservation Districts	467A
Soil Conservation and Flood Control Districts	467C
Water Districts (County)	357
Water Pollution Control Commission, Iowa	455B
Water Recreational Areas	111.59 - .78
Water Systems:	
County	357
Municipal	368,391,391A, 397,398,398A, 399,420
Zoning:	
County	358A
Municipal	414

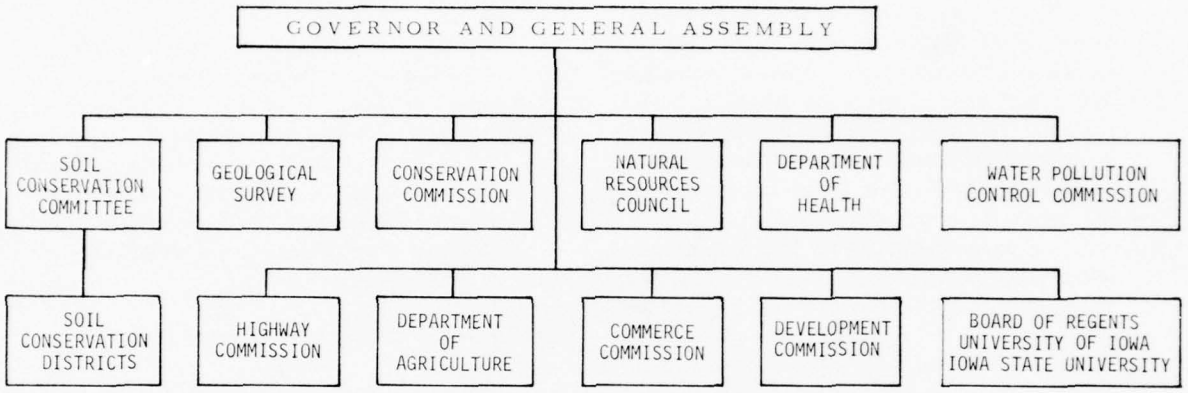
STATE ADMINISTRATIVE STRUCTURE

Interstate Agencies

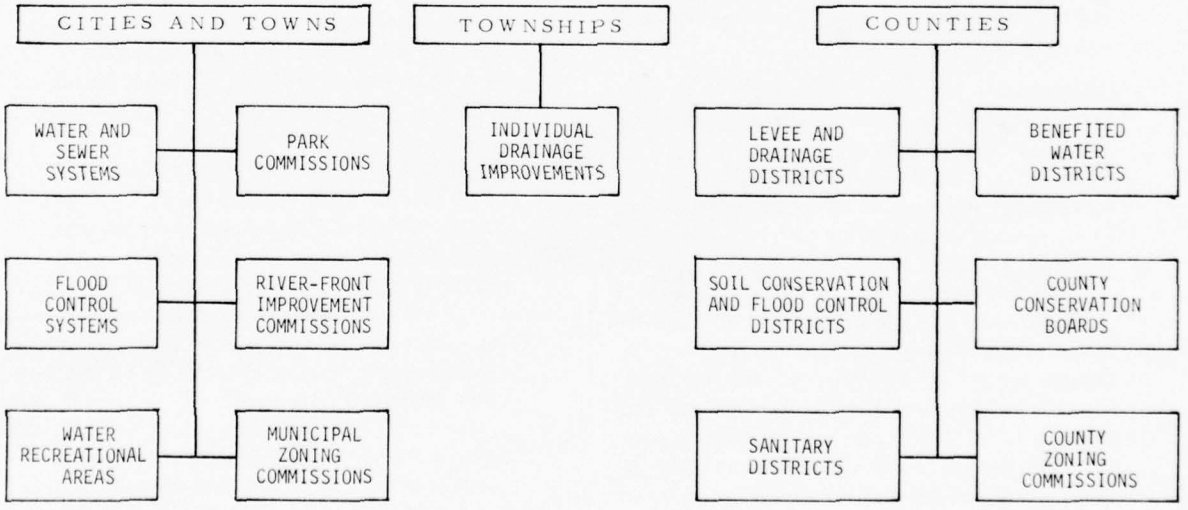
There are no interstate compacts known to be in effect in Iowa other than compacts relating to boundaries.

State Departments and Agencies

State departments directly concerned with the administration of a statute or statutes pertaining to water and related land resources are the Iowa Geological Survey, State Conservation Commission, State Soil Conservation Committee, State Department of Health, the new Iowa Water Pollution Control Commission and the Iowa Natural Resources Council. Less directly concerned are the Commerce Commission, the Highway Commission, the Department of Agriculture, and the Development Commission. The two state universities are also concerned with water resources, Iowa State University through the Engineering and Agricultural Experiment Stations and the Cooperative Extension Service, the University of Iowa through its Agricultural Law Center, and both institutions through their general research functions and their cooperative administration of the Iowa State Water Resources Research Institute founded and funded through



LOCAL GOVERNMENT



the Federal Water Resources Research Act. Both universities are also represented on the State Coordinating Group for Water and Related Land Resources Planning. Further details regarding the specific functions of each department in the area of water and related land resources are set out below.

1. Natural Resources Council

Authority– Declaring it to be the policy of the State to correlate and vest in a single agency the powers of the State with regard to flood control and the orderly development, wise use, protection and conservation of the water resources of the State, the 1949 Iowa Legislature created the Natural Resources Council with the duty and authority to establish and enforce an appropriate comprehensive state-wide plan for the control, utilization, and protection of the surface and ground water resources of the State. A water use permit system was established by the legislature in 1957 and administration thereof was assigned to the Council. An oil and gas conservation law also designed to conserve and protect the State's water resources was enacted by the 1963 legislature with administration thereof by the Council through the office of the State Geologist. The 1965 legislature clarified certain comprehensive planning functions of the Council and enacted a flood plain regulation Act authorizing the Council to establish and enforce regulations for the orderly development and wise use of the flood plains of any river or stream within the State.

Organization– The nine members of the Council are appointed by the Governor with the consent of the Senate and serve six-year overlapping terms on a part-time per diem basis. The statute specifically provides for selection of Council members from ". . . the state at large solely with regard to their qualifications and fitness to discharge the duties of office without regard to their political affiliation."

The Council appoints a director to serve as executive officer having charge of the work of the Council subject to its orders and direction. The Council also appoints a water commissioner and deputies to administer the water permit system. The director and water commissioners must be qualified by training and experience and serve at the pleasure of the Council. The director, with the approval of the Council, employs such technical, clerical, stenographic and other employees as are required.

Programs and Activities– The Council reviews applications, plans, and specifications for projects in or on the flood plains or floodways of rivers or streams within the State including construction of mill dams and races and annual inspection and licensing thereof, reviews and makes official comments on Federal water resources projects affecting the State, administers the water use permit system and the oil and gas conservation Act, and formulates flood plain management programs and a comprehensive state-wide water resources plan.

In addition, the Director of the Resources Council is involved in a number of water related activities, including serving as an ex officio member of the Iowa Water Pollution Control Commission, serving as chairman of the State Coordinating Group for Water and Related Land Resources Planning, serving on the Watershed Advisory Council, assisting in state coordination with the Federal Office of Emergency Planning with regard to flood and other disasters, and serving on the State Natural Beauty Committee.

2. State Conservation Commission

Authority– In addition to its duties with regard to fish and wildlife, the Commission has jurisdiction over the bed and banks of meandered streams, administers statutes and programs relating to state waters, state parks and forests and forestry preserves, stream and lake access areas, state-owned artificial lakes and natural lakes, water navigation regulations, and has primary responsibility for formulating and implementing state plans for recreational developments, including the supervision of County Conservation Boards and Water Recreation Areas.

Organization– The commission consists of ". . . seven citizens of the state who are interested in and have substantial knowledge of the subjects. . ." under its jurisdiction. The members are appointed by the Governor with the approval of the Senate to six-year overlapping terms and serve on a part-time per diem basis. Not more than four of the members shall, when appointed, be of the same political party.

The Commission appoints a director who is administrative head of the department, serving at the pleasure of the Commission. The department functions through three divisions, fish and game, lands and waters, and administration, each headed by a division chief responsible to the director.

Programs and Activities– The Commission administers 90 state parks and preserves totaling more than 30,000 acres; 209 fish and wildlife areas totaling more than 75,000 acres; 7 state forest areas

and 1 forest nursery totaling more than 20,000 acres; 72 natural lakes and 24 artificial lakes totaling 46,386 acres; 900 miles of inland meandered streams and 600 miles of boundary streams; nine fish hatcheries; and a wildlife exhibit area. The Commission reviews plans for Water Recreational Areas, supervises activities of County Conservation Boards, formulates comprehensive plans and is authorized to accept funds from and cooperate with agencies of the Federal Government for recreational purposes.

3. State Department of Health

Authority– Under Iowa law, the Department of Health makes inspections of public water supplies, sewer systems, sewage treatment plants, and garbage and refuse disposal plants throughout the state and directs the method of installation and operation thereof, administers the new state law requiring certification of operators of water and sewage treatment plants; and serves as the technical arm implementing orders and programs of the Water Pollution Control Commission.

Organization– Functions relating to water have been delegated to Environmental Hygiene and Engineering Services where they are handled through the water supply division and the water pollution control division. The director of the pollution control division also serves as technical secretary to the new Water Pollution Control Commission.

Programs and Activities– The Water Supply Division reviews detailed plans for public water supply improvements and inspects public water supplies. Samples are taken and analyzed by departmental laboratories on a routine basis.

The Pollution Control Division supervises all municipal and other public sewage systems. Plans for all industrial waste water treatment systems are reviewed, and inadequate facilities are investigated. Applications to the Water Pollution Control Commission are processed by this division with recommendations to the Commission.

The department participates in training and certification of operators for both water and sewage treatment plants.

4. Iowa Water Pollution Control Commission

Authority– This Commission was created in 1965 with the power and duty to supervise the administration and enforcement of all laws relating to water pollution; to develop comprehensive plans and programs for the prevention, control and abatement of new, increasing, potential, or existing pollution; to cause investigations to be conducted regarding alleged pollution; to adopt, modify or repeal reasonable water quality standards; to require the submission of plans and specifications for disposal systems; and to direct the State Department of Health to issue, revoke, modify, or deny permits for the discharge of sewage, industrial waste or other wastes or for the installation or operation of disposal systems or parts thereof.

Organization– The Commission is composed of nine members, four ex officio members (Commissioner of Public Health, Secretary of Agriculture, and the Directors of the Natural Resources Council and the State Conservation Commission) and five members appointed by the Governor to overlapping six year terms. Of the five appointive members, one is a member from the staff of one of the universities or colleges of the state with an appropriate technical background, one represents industry, one represents municipal government, one is an owner-operator farmer, and one represents the public at large.

Activities of the Commission and the Department of Health in the area of water pollution control will have to be closely coordinated since the Commission will function as the policy making body with all field work conducted by personnel of the Department of Health. This operating relationship is provided for in the statutes and in appropriations to the two agencies.

Programs and Activities– The Commission is presently involved in investigations, hearings and orders pertaining to specific instances of water pollution over the state and in continued study of water quality standards, particularly criteria connected with agricultural pollution.

Early in 1966, the Commission adopted a departmental rule requiring all municipalities, as a minimum degree of waste treatment, to provide for the effective removal of settleable and floatable solids. As a matter of policy, the Commission requires the submission of records of operation for all sewage and waste treatment plants.

Water quality criteria in the format of those adopted by the Ohio River Sanitation Commission were adopted by the Iowa Commission as amendments to its administrative rules with the concurrence of the Iowa Natural Resources Council. The criteria, the transcripts of public hearings thereon, and implementation plans are being prepared for submission to the Federal Water Pollution Control Administration for review in compliance with the

Federal Water Pollution Control Act. (See Appendix A, Water Quality Standards).

5. State Soil Conservation Committee

Authority– The Committee was created in 1939 to direct the organization of soil conservation districts. With Iowa now completely organized into 100 districts the principal duties of the Committee are to assist district commissioners in carrying out their programs, to maintain liaison and coordinate programs between districts, to maintain liaison with other state agencies and U. S. Soil Conservation Service, to secure cooperation and assistance from federal, state, and local agencies, to render certain financial aid to districts, and to represent the governor and state with regard to Public Law 566 watershed applications.

Organization– The Committee has seven members; the Director of the State Agricultural Extension Service, the Secretary of Agriculture or a member designated by him, and five members appointed to overlapping six-year terms by the Governor with the approval of the Senate. The appointive members must be bona fide farmers living on farms. The Committee may invite the U. S. Secretary of Agriculture to appoint one person to serve with the Committee in an advisory capacity. In practice, the State Conservationist of the U. S. Soil Conservation Service is appointed to advise the Committee.

The Committee employs a full-time director and such other employees (usually five or six persons) as are required to discharge its responsibilities.

Programs and Activities– The Committee maintains continuing programs to perform the information, coordination, liaison, and advisory functions assigned by law, and represents the Governor and State in reviewing applications for small watershed programs under Public Law 566. Conservation practices have been installed on about one-third of the land in the state with more than one-half of the farmers in the state having executed agreements to cooperate in the soil conservation program.

6. Iowa Geological Survey

Authority– In general, the purpose of the Iowa Geological Survey is to collect, study, interpret information on geology, soils, timber, streams, mineral and other natural resources and to make such data available.

Organization– The Geological Survey is under the direction of the Geological Board composed of the Governor, the State Auditor, and the Presidents of (1) the University of Iowa, (2) Iowa State University, and (3) the Iowa Academy of Science. The Board appoints the State Geologist who acts as director of the survey.

Programs and Activities– Programs are geared to locate, identify, measure and evaluate mineral resources and geologic formations. Field parties are assigned to map areas that may involve a county or quadrangle or a specific rock formation such as limestone or sandstone formation. Samples and cuttings are collected for chemical and mineralogical analysis. Programs include mapping occurrence of bedrock and glacial materials, coal and other mineral deposits and the collection of driller's logs, geophysical logs and cores and cuttings of wells drilled for water, oil or gas. The Survey publishes many reports giving basic data on all phases of its programs, and furnishes data and advice for water supplies and the identification of occurrence of mineral resources and geological formations.

Statewide stream flow records and records of ground water levels are collected in cooperation with the U. S. Geological Survey. Drilling records are collected and maintained on wells for water, oil or gas. For many years, driller's logs and cuttings on water wells have been collected through the voluntary cooperation of drillers. Since enactment of the oil and gas conservation law in 1963, logs, cores, and cuttings have been required for wells drilled for oil or gas. The reports now on file are consulted by engineers, hydrologists, drillers, industries, and householders seeking underground supplies of water.

7. State Board of Regents

The Board of Regents exercises general supervision over the activities of the State University of Iowa and Iowa State University of Science and Technology.

Iowa State University

Water and related land resource programs at this land grant school are functions of the Agriculture and Home Economics Experiment Station, Engineering Research Institute, and the Cooperative Extension Service in Agriculture and Home Economics.

Agriculture and Home Economics Experiment Station

Authority– Agricultural research at Iowa State traces its history to the beginning of the University in the 1860's when the original farm provided an opportunity for experiments with livestock, crops and horticultural material. The Hatch Act, passed by Congress in 1887, gave federal support to agricultural investigations, and the formal beginning of the Agricultural and Home Economics Experiment Station dates from that time. Additional federal, state and private support has enabled the Station to reach its present program of both basic and applied research.

Organization– The Dean of Agriculture also serves as Director of the Agriculture and Home Economics Experiment Station. Much of the administrative responsibility is delegated to the associate director and to assistant directors. Research is conducted on the Iowa State University campus and nearby facilities as well as at a number of outlying farms and in fields of dozens of farmer cooperators throughout the state. These experimental areas have been selected so that special problems can be studied on a local basis. Cooperative work is done with federal and state agencies and with other experiment stations in the United States.

Programs and Activities– Several hundred projects are currently part of the research program and cover both basic and applied research. Most faculty members are involved in the research program, and they have the assistance of trained technicians and other supporting personnel. In the general area of soil and land, inclusive of water, watersheds, river basins, air and climate (inclusive of resource conservation, development and management) the station currently employs 13.1 people. This is on a full-time equivalent basis, and actually involves many more individuals since fractions of time and salary are included. Among projects are: Erosion Control and Water Conservation Investigations; Water Infiltration into Soils; Tillage Requirements for Crop Growth, and Soil and Water Conservation, and Their Relationship to Tillage Machinery; Quantitative Description of Watershed Parameters and Their Relationship to Runoff; Effect of Alternative Land Use Systems Upon the Properties and Productivity of the Major Soils of Iowa; Vegetative Reclamation of Iowa Coal-Strip-Mine Banks; Physical and Economic Analysis of Watersheds as Related to Soil and Water Conservation; Crop Yielding Capacity of Iowa Soil Types Under Different Soil Management and Fertility Levels; The Statistical and Economic Analysis for Long-Term (Rotational) Agronomic Experiments; Surface drainage-fertility experiment on corn, Davis County Experimental Farm; Tile drainage-fertility experiment on corn, Davis County Experimental Farm; Water table frequencies for tiled land; Tile hydraulics; Drainability of Davis County alluvial soils; Measurements on Ankeny tile spacing experiments; Study of gully growth relationships in Steer and Thompson Creeks; Reservoir sedimentation; Model study at Steer Creek gaging station; Water balance studies at Castana Watersheds; Development of mathematical model relating runoff and watershed parameters; Development of runoff relationships for watershed with much storage (pothole country); Study comparing measured and predicted storm runoff from agricultural watersheds; and miscellaneous projects related to land use and soil conservation, watershed development, water rights, allocation and development.

Engineering Research Institute

Authority– The Engineering Research Institute was established in 1904 as the research organization within the College of Engineering at Iowa State University.

Organization– The Director of the Engineering Research Institute is responsible to the Dean of Engineering. Staff consists of most members of the Engineering faculty, who devote a portion of their time to research, plus trained technicians.

Activities– An important area of research within the Institute is in Sanitary Engineering. This research can be divided into four categories: (1) water supply, (2) water pollution control, (3) hydrology and (4) water resources. Within these four areas of research, projects are sponsored by the National Institutes of Health, the National Animal Disease Laboratory (U.S.D.A.), the State of Iowa, and private industry.

Facilities include nearly 4,000 square feet of laboratory space for teaching and research.

Recent research has included the following subjects: Predicting runoff from rainfall records for several Iowa watersheds; Flood potentiality of the Des Moines River basin above Des Moines, Iowa; Hydraulics of circular settling tanks determined by model-prototype comparisons; Tank detention time efficiency in the chlorination of small water supplies; Iron removal from natural and synthetic water using diatomite filters; Iron removal vs. depth in a sand filter; Effect of rate disturbances on the

qualities of filtered water; Design of municipal diatomite filters for iron removal; Selection of optimum filtration rates for sand filters; Properties and treatment of pond water supplies; Filtration and chlorination of small water supplies.

Cooperative Extension Service in Agricultural and Home Economics

Authority– Federal and state laws authorize the off-campus educational programs of the Iowa State University Cooperative Extension Service. Agricultural production, management and natural resource development, marketing, home economics, 4-H and youth, and community development and public affairs are the broad areas of program emphasis authorized. Staff members of Cooperative Extension are both on the faculty of Iowa State University--the Land-grant university--and representatives of the U. S. Department of Agriculture. The Board of Regents of the University is designated as responsible for administration of the service, which is cooperatively financed by federal (Smith-Lever Act) and state and county funds (County Agricultural Extension Act).

Organization– Extension specialists in the various areas of program emphasis are part of respective departments in the colleges of Agriculture, Home Economics and Veterinary Medicine. State leaders of the projects, along with the Extension Service and University administration, coordinate the programs and resources of the extension organization. County and area extension workers carry the educational and organizational phases of the work into all areas of the state. Many departments work with some areas of natural resource development--agricultural engineering, agronomy, entomology and zoology, economics, and sociology in particular.

Programs and Activities– Nearly all program activities of Cooperative Extension Service have connotations of efforts to develop resources of Iowa--both human and natural resources. Where resource development and use are leading program objectives, the following may be cited: One agricultural engineer devotes the major portion of his work to the engineering phases of soil and water use and management; an agronomist serves a full time role in working in liaison with the Soil Conservation Service and in conservation education with public school teachers and students; another agronomist works with land use in relation to zoning and recreational development; one staff member devotes major time to work on wildlife conservation and biology; a forester works with programs on land use. The 4-H program includes special interest project work in conservation, and a state conservation camp is held annually. Many county home economics programs include programs on soil and water conservation and resource development and management (the latter particularly for women landowners). Public policies related to resource development and use are part of educational efforts of specialists working in community development and public affairs.

Iowa State University also provides six members of the Iowa State Water Resources Institute founded and funded under the provisions of the Federal Water Resources Research Act, and is represented on the State Coordinating Group for Water and related Land Resources Planning.

The University of Iowa

Water and related land resource programs of the University of Iowa include general and specific studies conducted by the College of Engineering (particularly studies undertaken by the Hydraulic Laboratory and the Department of Hydraulics and Fluid Mechanics), the Agricultural Law Center of the College of Law, and by other divisions of the University with regard to related activities of particular disciplines (economics, political science, medicine, etc.). The University provides three members of the nine-member Iowa State Water Resources Research Institute and is represented on the State Coordinating Group for Water and Related Land Resources Planning.

8. Iowa State Commerce Commission

The three member appointive Commission regulates the underground storage of gas and construction, operation, and maintenance of pipe lines for the transmission of gas, gasoline, oils or motor fuels and/or inflammable fluids so as to protect the public safety and welfare in the use of any waters or streams of any kind within the state. It also regulates rates and service of water utilities pursuant to provisions of a 1963 public utilities law.

9. The Iowa Development Commission

The planning, development, research and promotional functions of the Commission are continuously working to improve the utilization of Iowa resources. These include such resources as power and water, transportation facilities, labor force, banking and financing, preservation of historical and scenic sites, recreation, industrial and other land uses.

The Commission administers the Urban Planning Assistance Program authorized under the Federal Housing Act of 1954, as amended.

10. Department of Agriculture

The general object of this department headed by an elected Secretary is to encourage, promote and advance the interests of agriculture which include water and related land resources. The department also has regulatory functions with regard to food service establishments and certain processing and marketing activities.

11. State Highway Commission

The Commission has jurisdiction and control over primary roads in the state and has general supervision of secondary road programs. Highway construction may not obstruct drains or turn the natural drainage of surface water which must be drained in its natural channel. Plans for bridge improvements and new road construction across floodways or flood plains are submitted to the Iowa Natural Resources Council for review with regard to their effect on the efficiency and capacity of the floodway.

Special Purpose Districts

1. Levee and Drainage Districts

Authority– Levee and drainage districts may be formed to construct improvements for the drainage of surface waters or the protection of land from overflow in conformity with an official plan filed with the county auditor and approved by the county board of supervisors. Districts may be formed by petition with notice and hearing thereon or by mutual agreement. Authorized improvements include the construction of levees, bank protection structures, ditches, drains, or watercourses or settling basins in connection therewith, or the straightening, widening, deepening or changing of any natural watercourse. Sub-drainage districts may be established to gain access to the principal ditch or watercourse. Related statutes authorize formation of drainage districts for specific situations-highway drainage districts, inter-county and interstate districts, districts with pumping stations, etc.

Organization– In the district formed by petition, the county board appoints an engineer and other employees needed to prepare an engineering report and plans. If the board finds that the improvement will materially benefit included lands and will be conducive to the public health, convenience, welfare, benefit or utility, it appoints three appraisers to assess damages. If the board finds that the cost and expense is not excessive, it finally locates and establishes the district and improvement. Thereafter, three commissioners are appointed to assess benefits and classify lands affected by the improvement.

In mutual agreement districts, a copy of the unanimous agreement of all owners of affected lands is filed with the county auditor and the district is located and established by the board. The board thereafter carries out the purpose of the agreement, constructing improvements and levying drainage taxes and assessments as in petition districts.

Any levee or drainage district in which the original construction has been completed and paid for may be placed (petition of majority of landowners) under the control and management of a three-man board of trustees elected by owners of land in the district.

Programs and Activities– There have been literally thousands of drainage districts established in Iowa, principally in the central and north-central part of the state. One county reportedly has more than 350 drainage districts. A great many of these districts have been completely inactive since completion of the original construction; others have maintained continuing programs. There presently is no state agency to regulate, coordinate, or record activities of drainage districts.

2. Soil Conservation Districts

Authority– Since enactment of enabling legislation in 1939, Soil Conservation Districts have been organized in each of Iowa's 99 counties (two districts formed in Pottawattamie County) by referendum vote of landowners. The districts have the usual authority to make surveys and investigations, develop plans, carry out control measures, and cooperate with landowners for conservation of soil and water resources. Participation in programs of the districts is entirely voluntary as the districts have no authority to enforce land use regulations.

In 1955 the legislature authorized the establishment of subdistricts, the boundaries of which follow those of the watershed in which it is located. The subdistrict is governed by the commissioners of the soil conservation districts involved with the aid of three trustees living within the subdistrict.

Organization– The districts are governed by three commissioners elected for six-year overlapping

terms by the landowners and farm operators of the district. The districts receive administrative guidance from the State Soil Conservation Committee and the U. S. Soil Conservation Service assigns a work unit conservationist and technicians to assist in developing farm plans and group effort.

Programs and Activities– Water management practices are installed to conserve soil and water resources through development and implementation of complete soil and water conservation farm plans, including such needed conservation practices as sound crop rotation, contouring, terracing, waterways, ponds, structures, and tile drains.

The State provides financial assistance to districts through biennial appropriations administered by the State Soil Conservation Committee to pay the administrative, personnel and equipment costs of the districts. Also, a quarter-mill tax may be levied by the County Board of Supervisors on all agricultural lands within the county to be used by the districts for the maintenance of projects on land under the control or jurisdiction of the county.

Financing of subdistricts is accomplished by means of an annual tax not to exceed four mills on all agricultural lands within the subdistrict. Four-mill funds may be used to pay expenses incurred to organize the subdistrict, to acquire land or rights or interests therein, and to repair, alter, maintain, and operate present and future works in the subdistricts. Alternatively, subdistricts may be financed by means of a special benefit assessment. Funds collected in this manner may be used for the purpose of organization, construction, repair, alteration, enlargement, extension and operation of present and future works of improvement within the subdistrict.

3. Sanitary Districts

Authority– Sanitary districts are established by petition to the county board of supervisors and favorable vote of qualified voters residing within the district. Districts may construct, operate and maintain systems for the disposal of sewage. In so doing, the districts may acquire necessary property by purchase, condemnation or otherwise; may sell or otherwise dispose of unneeded property; may establish service rates and charges; may borrow money and issue revenue or general obligation bonds provided aggregate district indebtedness does not exceed five per cent of the value of taxable property within the district; and may levy an annual tax of not more than two mills on district property for the purpose of paying administrative costs.

Organization– Each district is managed by a three-man board of trustees elected by voters of the district to six-year overlapping terms. Where the state owns at least 400 acres of land contiguous to lakes in the district, two additional trustees are appointed by the Iowa Natural Resources Council. The trustees may employ such assistants as are necessary to carry out the functions and duties of the district.

Programs and Activities– Major districts now in operation collect and treat sewage from areas around the Iowa Great Lakes (Okoboji, Spirit, etc.) and Clear Lake. The State legislature appropriated a major portion of the funds needed for initial construction of each of these systems. The statutory limits on district indebtedness, assessments, tax levies and the value of properties involved restrict significant new construction.

4. Benefited Water Districts

Authority– Benefited water districts are established by petition to the county board of supervisors and favorable vote of legal voters residing within the district. Districts may construct, operate and maintain systems for the production or distribution of water. Initial construction is financed by special assessment on benefited lands and maintenance and operation is financed through revenues from sale of water and an optional tax levy of not more than one-half mill on all property within the district. Where the district is wholly within a city or town, petition is made to and affairs of district are managed by the governing body of the city or town.

Organization– Upon completion of initial construction, operation and management of the district automatically goes to a three-man board of trustees appointed by the county board of supervisors. The trustees may purchase material, employ labor, fix water rates and make all contracts necessary to operate and maintain the district.

Programs and Activities– These districts usually are formed to finance a distribution system where the source of water is without the district and not under its control. However, where the development of a source of supply is within the means of the district, it may install wells and other equipment necessary to operate a source of supply.

5. Soil Conservation and Flood Control Districts (Conservancy Districts)

Authority– Conservancy districts may construct improvements and facilities for soil conservation, flood control and drainage, singly or in combination.

Organization– Districts are organized, operated and financed in the same manner as levee and drainage districts. Such districts may be established only with the approval of any soil conservation district within the proposed conservancy district, the State Conservation Commission, and the Iowa Natural Resources Council.

Programs and Activities– Only two conservancy districts have been established in the state, none in recent years. Although the conservancy district possesses a wider range of functions (soil conservation, flood control and drainage) than other local districts concerned with water and related land resources, it does not possess any significant powers with regard to a particular function not available to other local districts.

Political Subdivisions

1. Counties

Counties may acquire, develop, and maintain public parks, preserves, parkways, playgrounds, recreational centers, county forests, wildlife and other conservation areas and make same available to inhabitants of the county. Management of such areas shall be vested in a five-member County Conservation Board created by favorable vote of the people of the county and appointed by the Board of Supervisors to five-year overlapping terms. The approval of the State Conservation Commission must be obtained for the acquisition of land and all general development plans and programs prior to execution thereof. Expenses may be paid from funds appropriated by the Board of Supervisors from the general fund or the Board of Supervisors may cause the levy of a special annual tax of not more than one mill on the assessed valuation of all real and personal property in the county to be collected and paid into a separate and distinct county conservation fund. Bonds may be issued in anticipation of the annual tax. The bond issue must be approved by at least sixty per cent of the vote on the specific proposition at a special election thereon. The bonds must mature in not more than 20 years, may bear interest at a rate not exceeding five per cent, must be payable as to both principal and interest from the special one-mill tax levy, and the aggregate amount of bonds issued may not exceed one million dollars in any single county. As of January 1, 1967, conservation boards had been established in 91 of Iowa's 99 counties and a multitude of projects, some quite ambitious, were underway.

Counties may regulate use of land and structures thereon within the county and outside the corporate limits of cities or towns. The enabling law was amended in 1965 to specifically include safety from floods as a proper objective of zoning and to make any flood plain regulation apply to farm land and buildings.

2. Townships

The township trustees, on application and after notice and hearing thereon, may authorize one or more landowners to construct levees or drainage facilities on or across the lands of others on payment of damages therefor as fixed by the trustees in their determination authorizing and locating such facilities.

3. Municipalities

General powers delegated by the legislature to cities and towns include authority to provide drainage systems for flood and other surface waters, sewer systems and disposal plants and to require and regulate connection thereto and authority to establish, purchase, maintain and regulate the use of parks, playgrounds and recreational facilities.

Other statutes grant specific power to cities and towns to establish water and sewer systems, flood control systems, park commissions, river-front improvement commissions, and municipal zoning commissions.

Cities and towns may regulate use of land and structures thereon including use of flood plains with respect to flood hazard. Water recreational areas may be established by municipalities (or corporations organized for that purpose only), on petition to and approval of the State Conservation Commission and the Iowa Natural Resources Council.

POLICY

Centralization vs. Decentralization

Water management functions in Iowa are assigned primarily to a single state agency, the Iowa Natural Resources Council, which functions to coordinate water

and related land resources projects throughout the state. Coordination by the Council includes:

a. Administration of the water use permit system.
b. Responsibility for the establishment and enforcement of a comprehensive statewide plan for the control, utilization and protection of the water resources of the State.
c. Representing the state on all comprehensive water resources planning groups for which state participation is provided.
d. Representing the interests of the State in reviewing and commenting on Federal water resources projects affecting the state.
e. Entering into negotiations and agreements with the Federal government with regard to Federal water resources projects.
f. Representing the interests of the State on the coordinating committees for the two Federal comprehensive basin surveys underway in Iowa.
g. Responsibility for the establishment and enforcement of appropriate regulations governing flood plain developments.

Home Rule Concept

Local governmental units in Iowa have possessed only those powers expressly granted by State statute or necessarily implied to effectuate powers expressly delegated. However, a constitutional amendment providing a large measure of "home rule" with regard to local and internal affairs has passed two sessions of the Iowa General Assembly and now requires only a favorable vote of the people at the next general election. In the meantime, the Sixtieth General Assembly (1963) enacted a rule of construction amendment to the Municipal Powers statute (Ch. 368, Iowa Code 1966) requiring that a statute granting a specific power over local and internal affairs be liberally construed to confer broad and implied powers.

Even with final approval by the voters of the "home rule" amendment to the constitution, it appears that major responsibility for policy concerning water resources will remain centralized at the State level under specific reservations contained in existing law.

Financing

Cities and towns may finance the construction, operation, and maintenance of water supply, sewage and flood control systems by means of revenue bonds, general obligation bonds, special assessments on benefited property or a combination thereof. Maximum interest rates, periods of payment and assessments are prescribed by statute. Municipalities also may accept gifts and grants for such purposes. Levee and drainage districts, sanitary districts, and water districts (established by resolution of the county board of supervisors) can levy taxes, make special assessments and issue bonds under circumstances prescribed by statute. Soil conservation and flood control districts can finance improvements in the same manner and to the same extent as levee and drainage districts.

Subdistricts of soil conservation districts may, in effect, levy a tax not to exceed four mills on the assessed valuation of all land within the subdistrict or, alternatively, can make special assessments on benefited lands. Subdistricts can also issue bonds under circumstances and limitations prescribed by statute. Also, any county board of supervisors can annually levy a tax not to exceed one-quarter mill on all agricultural lands in the county for maintenance of flood and erosion control improvements on lands under the control or jurisdiction of the county.

Water resources programs and related activities of the various state agencies are financed by general and special appropriations on a biennial basis. Specific projects generally require specific authorization by the legislature.

Cooperation, Coordination and Cost Sharing

1. With Federal Programs

Consistent with the national trend, efforts to coordinate local, state and federal programs are being steadily expanded.

By statute and by designation of the Governor, the Iowa Natural Resources Council reviews proposals of the Corps of Engineers and the Bureau of Reclamation relating to flood control and water resources, coordinates and maintains liaison in such matters between State agencies, local governments and these federal agencies.

The Natural Resources Council is also the coordinating agency of the State in connection with "Flood Plain Information Studies" conducted by the Corps of Engineers under the provisions of Section 206, PL 86-645 (Flood Control Act of 1960).

The Resources Council is also authorized to enter into negotiations and agreements with the Federal government with regard to incremental storage in Federal reservoir projects. State funds to effectuate such agreements must be specifically appropriated by the legislature.

As the State agency responsible for comprehensive planning of water resources, the Resources Council receives matching funds from the Federal Water Resources Council under the provisions of the Federal Water Resources Planning Act.

The State Conservation Commission participates financially with the U. S. Soil Conservation Service

in diverting Commission funds to augment conservation features of small watershed impoundments. The Commission also is authorized to receive grants under programs administered by the U. S. Bureau of Outdoor Recreation.

The State Soil Conservation Committee participates with the U. S. Soil Conservation Service (to the extent of about $50,000 per year) in funding of watershed planning parties.

The Resources Council is authorized to enter into negotiations and agreements with the Federal government in connection with Federal flood control reservoirs but such agreements are not binding upon the State until enacted into law by the legislature.

2. Interstate

Other than interstate compacts resolving boundary disputes, Iowa is not involved in any interstate compacts involving water and related land resources.

3. With Political Subdivisions

State cooperation in water and related land resource projects of its political subdivisions generally is limited to furnishing technical and advisory services. Coordination generally is achieved by a statutory requirement for submission of project plans by the local unit of government to the appropriate state agency for review and approval prior to implementation.

4. Multipurpose Operations

Iowa is following the national trend with regard to multipurpose water resource projects. Perhaps "following" is an apt term since few projects involving multipurpose operations have actually been implemented in Iowa. To date, nearly all multipurpose operations in the State involve cooperation between the State Conservation Commission in connection with Federal water resource projects by combining various state recreational objectives with Federal objectives of erosion control, flood control or low flow augmentation. The Commission and the 1967 legislature are considering incremental funding of an alternative plan for construction of remedial works required in connection with construction of the Saylorville Dam and Reservoir on the Des Moines River near Des Moines. The subimpoundment formed by the alternative construction would provide the nucleus of a large recreational complex at a bargain price without materially affecting the flood control and low flow augmentation benefits derived from the principal federal project.

The Resources Council is authorized to enter into negotiations and agreements with the Federal government with regard to inclusion of conservation storage features for water supply in any authorized Federal project. No such agreement has yet been consummated but future cooperation in such projects seems desirable and logical, particularly in southern Iowa where adequate supplies of ground water often are not available and surface supplies are not dependable.

Authority Changes

The Sixty-first General Assembly of Iowa (1965) enacted several laws affecting water and related land resources. The more important of these laws are individually discussed below:

1. Iowa Water Pollution Control Act

The 1965 Iowa legislature created the Iowa Water Pollution Control Commission with the power and duty to prevent, control and abate the pollution of the waters of the State. The Commission thus succeeds to duties formerly assigned to the State Department of Health with regard to stream and lake pollution and has been delegated broader powers including the authority to establish and enforce water quality standards. The Commission establishes policy, reviews plans for waste treatment facilities, and enters appropriate orders with regard to specific instances of alleged pollution. The Health Department provides technical and administrative services to the Commission.

The Commission has adopted water quality criteria for the State, which criteria have been concurred in by the Natural Resources Council and are being submitted to the Federal Water Pollution Control Administration for review.

2. Certification of Operators of Public Water Supply and Waste Water Treatment Plants

Under the provisions of an Act of the Sixty-first General Assembly (Iowa Acts, 61 G.A., Ch. 162; Ch. 136A, Iowa Code 1966), the Commissioner of Public Health is required to classify all water treatment plants, water distribution systems, and wastewater treatment plants affecting the public welfare with regard to the degree of skill, knowledge, and experience that an operator must have to operate such facilities to protect the public health and prevent pollution. The Commissioner

appoints a five-member board which board conducts examinations leading to the required certification. Certificates must be renewed annually.

3. Flood Plain Regulations

Under the provisions of Chapter 374, Acts of the Sixty-first General Assembly of Iowa (Section 455A.35, Iowa Code 1966), the Iowa Natural Resources Council is authorized to establish and enforce regulations for the orderly development and wise use of the flood plains of any river or stream within the state. The Council is directed to determine the characteristics of floods which reasonably may be expected to occur and may by order establish encroachment limits, protection methods, and minimum protection levels appropriate to the flooding characteristics of the stream and to reasonable use of the flood plains. The Council may cooperate with and assist local units of government in the establishment of such regulations.

The Act amended the enabling statutes to specifically authorize cities, towns and counties to zone with respect to flood hazard. Any such ordinance or regulation must be approved by the Resources Council prior to adoption by the local governing body.

4. Comprehensive Planning of Water Resources

Iowa State law regarding comprehensive planning of its water resources was clarified and the duties of the Natural Resources Council with respect thereto were enlarged to include entering into negotiations and agreements with the Federal government with regard to inclusion of conservation storage features for water supply in authorized federal projects.

PROGRAMS

Programs of the State of Iowa with regard to its water and related land resources are described generally in previous sections of this report relating to Programs and Activities of specific state departments, political subdivisions, and special-purpose districts.

Research programs and programs of data collection and interpretation are carried on by various state agencies primarily in cooperation with federal agencies. In addition, the Iowa State Water Resources Research Institute administered cooperatively by the University of Iowa and Iowa State University has been designated as the participating institution under the federal Water Resources Research Act of 1964. Many research programs are carried out by various departments of the universities, often in cooperation with state or federal agencies.

Research

In addition to specific research projects carried on by various departments of the State Universities, research activities of the State include programs in the following areas:

a. Ground water research, including investigations to locate ground water supplies and to ascertain sources of ground water.
b. Statistical analyses of stream flow data.
c. Effects of herbicides, pesticides and fertilizer on fish and wildlife.
d. Economic factors in the establishment of water quality standards.
e. Moisture movement to vertical sinks in water unsaturated soils.
f. Recession characteristics of Iowa streams.
g. Competitive recreational uses of selected Iowa lakes.
h. Discharge valley form relationships of selected Iowa streams
i. Breakdown of organic pollutants by biological and chemical action.
j. Movement of radionuclides through soil formations.
k. Properties of tile drainage water.
l. Flow in river bends.
m. Reoxygenation of Iowa streams.

Data Collection and Interpretation

Iowa has maintained programs of hydrologic data collection since the inception of the Geological Survey in 1892. The Survey is the repository for all basic geologic data obtained in the State and, in cooperation with the U. S. Geological Survey, is responsible for the collection and dissemination of data on water wells, water levels, stream flow and sediment loads, lake levels and other hydrologic data. Programs of data collection include the following representative areas:

a. Continuous gaging through a statewide network of 121 stream gaging stations and 11 lake gaging stations.
b. Records of ground water levels in 124 observation wells throughout the state.
c. Collection of suspended sediment data on 11 selected streams.
d. Collection of chemical quality data.
e. Collection and interpretation of data with regard to research programs mentioned above.

The Survey also conducts topographic mapping of the State in cooperation with the Topographic Division of the Geological Survey, U. S. Department of the Interior. Modern topographic maps are of great value in many activities related to water resources, particularly in the establishment of flood plain management programs.

Inventory Studies

Inventories of programs and available information are accomplished periodically by the State water agencies and reported primarily by means of an annual or biennial report. There is no required central repository of programs or information and interagency exchange of information is informal and irregular. There is an obvious need for maintaining an up to date composite inventory of research and data collection programs both to prevent wasteful duplication and to guide future studies.

Planning

The Iowa Natural Resources Council has primary responsibility for comprehensive planning of the water resources of the State. The Council is charged with coordinating state planning with local and national planning and to undertake the resolution of any conflicts that may arise between the water resources policies, plans, and projects of the federal government and those of the state, its agencies or its people.

The Council must give consideration to the needs of agriculture, industry, health, fish and wildlife, recreation, pollution and allied matters as they relate to water resources. An informal organization including representatives of all State water resource agencies, the State Coordinating Group for Comprehensive Water Resources Planning, has been formed on invitation of the Resources Council to obtain the views of all interests and to prevent duplication of effort in the formulation of a comprehensive state plan for water and related land resources.

Construction and Development

1. Flood Control

As indicated in previous sections, the Iowa Natural Resources Council reviews applications, plans and specifications for flood control projects in the State and cooperates generally in survey and planning phases of such projects to be constructed by other State agencies and by local or federal agencies.

Although the Resources Council has statutory authority to construct flood control works or to cooperate therein, funding has never permitted any construction.

Many local organizations are also involved, presently or potentially, in flood control and related programs. These include soil conservation districts, subdistricts of soil conservation districts, soil and water conservation districts, levee and drainage districts, and municipalities.

2. Water Supply

In Iowa, water supply is primarily a responsibility of local government, principally municipalities and water districts (county systems).

The State has not initiated or financed a project for local water supply. The Iowa Natural Resources Council now has authority to enter into negotiations and agreements with the federal government with respect to incremental storage for water supply in federal projects. Any such agreement would not bind the State without specific enactment of the legislature.

3. Water Quality Control

Water quality control is the responsibility of the recently created Water Pollution Control Commission with the State Department of Health serving as its technical and administrative arm. These agencies have broad powers for controlling pollution of the waters of the State as discussed in prior sections.

Neither agency is directly involved in the construction of projects for water quality control except in the issuance of permits for such works. The Department of Health establishes priorities and coordinates federal grants for construction of waste treatment facilities.

4. Navigation

a. *Commercial*– The State of Iowa has two major navigation projects developed by the U. S. Corps of Engineers along its borders, the Upper Mississippi River canalization project on the east, and the Missouri River stabilization and navigation project on the west. Each project involves the establishment and maintenance of 9-foot navigation channels. The Mississippi River system has been in operation since 1940. The limiting depth of the Missouri River project has been increased to 7-1/2 feet with additional planning and construction underway.

b. *Recreational*– The State Conservation Commission administers the water navigation regulations of the State (extensively revised in 1961), which include requirements regarding the registration of motorboats and requirements applicable to the operation of all watercraft. Boat registration and inspection fees are placed in a special conservation fund to be used by the Commission solely for the

administration and enforcement of navigation laws and water safety. The Commission also has its own artificial lake construction program underway and is cooperating with the federal government in planning and providing boating and other recreational facilities at such sites as the Coralville, Red Rock, Rathbun, and Saylorville Reservoirs.

The Natural Resources Council makes official comments on federal reports on recreational navigation facilities and reviews State and local plans for any works to be constructed.

5. Hydro-Power

Thirteen hydro-power plants, not including the Union Electric Company plant on the Mississippi River at Keokuk, remain in operation in Iowa. Two of these are located on the Des Moines River at Fort Dodge and Ottumwa; the remainder are on streams in the east and east-central part of the State. Most of these plants are operated to provide power during peak demand periods.

Since hydro-power in Iowa is no longer competitive with either thermal or diesel-electric power, the operation of existing hydro-power plants for the production of electric power has been steadily declining in recent years. In some cases, the power company is maintaining the dam and impoundment as a source of cooling water for the thermal-power replacement unit. More often, however, the dam and appurtenant works are being transferred to local interests (municipality or county conservation board) for recreational purposes.

The Natural Resources Council and the State Commerce Commission have responsibilities with regard to hydro-power production and facilities. The Resources Council administers the State statute regulating mill dams and races, including the review of application and plans for any new structures and the annual inspection and licensing of existing structures. The Commerce Commission has jurisdiction over rates and other charges, services provided, and management of property. In addition, before any hydroelectric plant may be constructed, operated or maintained within the State, a certificate of public convenience and necessity must be obtained from the Executive Council of Iowa.

6. General Recreation

In February, 1966, the State of Iowa submitted to the U. S. Bureau of Outdoor Recreation the statewide comprehensive outdoor recreation plan for Iowa. The plan, entitled "Outdoor Recreation in Iowa", was prepared by the State Conservation Commission to provide a general framework to guide future recreational development in the State and to make Iowa eligible for monies from the federal Land and Water Conservation fund.

The plan outlines recreation needs and supplies and suggests specific programs for meeting these needs in the year 1966 to 1970. An up-dated plan is under preparation at the present time and will be submitted to the BOR within the next few months.

7. Fish and Wildlife

State programs for the preservation of fish and wildlife are the responsibility of the State Conservation Commission. Its Division of Fish and Game carries out numerous activities with respect to fish and wildlife resources, including management of nine fish hatcheries, 209 fish and wildlife areas, a wildlife exhibit area, and various fish and wildlife research and experimental projects.

A more complete description of the functions of the Conservation Commission is presented in the section on Administrative Structure.

Regulation

(State regulation with respect to water use, water quality, construction, well drilling, channel encroachments, and use of flood plains has been discussed in the sections on Regulatory Authority, State Laws, Water Rights and Authority Changes.)

1. Drainage

Although some of the drainage laws of Iowa date back to territorial days, drainage of the fertile lands of central and north-central Iowa was accomplished for the most part in the early 1900's by drainage districts. A 1908 amendment to the constitution authorized the General Assembly to pass laws permitting the owners of land to construct drains, ditches, and levees for agricultural, sanitary or mining purposes across the lands of others and provide for the organization of drainage districts with the power of condemnation. Appropriate statutes were enacted promptly governing the formation, operation, assessment of damages and benefits, etc., of drainage and levee districts.

The State Soil Conservation Committee coordinates the work of the 100 Soil Conservation Districts which, with technical assistance from the U. S. Soil Conservation Service, play a major role in Iowa's farm drainage program.

2. Irrigation

The use of water for irrigation in Iowa is regulated under the provisions of the Iowa Water Rights Law described in a previous section.

The availability of irrigation equipment and an adequate source of water provides insurance against short-term deficiencies in precipitation and permits supplemental irrigation to obtain optimum yields from high value crops.

Irrigation in Iowa has increased only slightly since enactment of the Water Rights Law in 1957. Permits now in force authorize irrigation of about 85,000 acres of the 25 million cropped acres in the State.

3. Control of Erosion and Sedimentation

Iowa programs to control erosion and sedimentation are administered by its Soil Conservation Districts and Subdistricts thereof with technical assistance from the U. S. Soil Conservation Service and financial assistance of the Agricultural Conservation Program. State financial assistance and other activities of the Districts are coordinated by the State Soil Conservation Committee.

The Soil Conservation Districts conduct a variety of functions relating to soil and water conservation and the control and prevention of erosion, flood water and sediment damages. Under the Iowa enabling law, participation in the program is "purely voluntary".

All farm land in the State is included in soil conservation districts, about one-half of the farmers have signed agreements to cooperate in the program, and conservation practices have been installed on about one-third of the agricultural land in the State.

4. Reservoir Sites

a. ***Reservation by Advance Acquisition***– Iowa has no official policy or program for advance acquisition of reservoir sites. Interests in lands necessary for construction of a particular project are acquired as the project is authorized and funded.

b. ***Reservation by Zoning***– The State of Iowa has no statutes specifically authorizing the reservation, by means of zoning, of sites for future construction of reservoirs.

PROJECTIONS

Policy and Program Trends

Studies underway by the Iowa Natural Resources Council and the State Coordinating Group for Water Resources Planning coordinating State planning with federal planning on the Upper Mississippi River Basin and the Missouri River Basin will provide the general guidelines for the future development of water and related land resources in Iowa.

Financing Future Developments

The studies mentioned above and detail plans relating to particular areas of interest will doubtless result in recommendations for current and future financing of water resource developments.

APPENDIX A – WATER QUALITY STANDARDS

IOWA WATER POLLUTION CONTROL COMMISSION
RULES AND REGULATIONS
WATER QUALITY STANDARDS

Pursuant to authority of Chapter 375, section 9 and section 13, Acts of the 61st General Assembly, the following water quality and effluent standards are hereby adopted.

Section 1. Water quality standard relating to floatable and settleable solids. The waters of the state shall be kept free of floatable and settleable solids as hereinafter provided.

1.1 Municipal effluent standard. No municipality shall discharge any sewage to the waters of the state without effective removal of floatable and settleable solids as the minimum degree of treatment.

These rules are intended to implement Chapter 375, section 9 and section 13, Acts of the 61st General Assembly.

These rules shall become effective as provided in Chapter 17A of the Code after filing in the office of the Secretary of State after review by the Departmental Rules Review Committee.

/s/ R. J. Schliekelman
R. J. Schliekelman
Technical Secretary
Iowa Water Pollution Control Commission

EXAMINED AND APPROVED

DATE Feb. 28, 1966

DATE ADOPTED Feb. 24, 1966

/s/ Robert B. Scism
ATTORNEY GENERAL

/s/ Robert R. Buckmaster
DEPARTMENT HEAD

REVIEWED AND APPROVED

DATE March 8, 1966

/s/ Adolph W. Elvers
CHAIRMAN DEPARTMENTAL RULES
REVIEW COMMITTEE

IOWA WATER POLLUTION CONTROL COMMISSION
RULES AND REGULATIONS
WATER QUALITY STANDARDS

Pursuant to the authority of section 455B.9 and 455B.13, Code of Iowa, 1966, the water quality standards found in the July, 1966, Supplement, Iowa Departmental Rules, page 70, are hereby amended by adding the following to Chapter 1.

Section 1.2 (455B) Surface water quality criteria.

1.2(1) **General policy considerations.** Surface waters are to be evaluated according to their ability to support the legitimate (beneficial) uses to which they can feasibly be adapted, and this specific designation of quality areas shall be done by the Iowa Water Pollution Control Commission.

Sampling to determine conformance to these criteria shall be done at sufficient distances downstream from waste discharge points to permit adequate mixing of waste effluents with the surface waters.

1.2(2) **General criteria.** The following criteria are applicable to all surface waters at all places and at all times:

a. Free from substances attributable to municipal, industrial or other discharges that will settle to form putrescent or otherwise objectionable sludge deposits;

b. Free from floating debris, oil, scum and other floating materials attributable to municipal, industrial or other discharges in amounts sufficient to be unsightly or deleterious;

c. Free from materials attributable to municipal, industrial or other discharges producing color, odor or other conditions in such degree as to be detrimental to legitimate uses of water;

d. Free from substances attributable to municipal, industrial or other discharges in concentrations or combinations which are detrimental to human, animal, industrial, agricultural, recreational, aquatic or other legitimate uses of the water.

1.2(3) **Specific criteria for designated water uses.** The following criteria are applicable at flows greater than the lowest flow for seven consecutive days which can be expected to occur at a frequency of once every ten years.

a. **Public water supply.** The following criteria for surface water quality apply to the point at which water is withdrawn for treatment and distribution as a potable supply:

(1) Bacteria: Waters shall be considered to be of unsatisfactory bacteriological quality as a source when:

A sanitary survey indicates the presence or probability of the presence of sewage of other objectionable bacteria-bearing wastes or

A bacteriological survey using coliform or other appropriate indices indicates bacteriological concentrations significantly higher than those normally found or expected in these waters when free from pollution by sewage.

(2) Radioactive substances: Gross beta activity (in the known absence of strontium-90 and alpha emitters) not to exceed 1000 micro-micro-curies per liter.

(3) Chemical constituents: Not to exceed the following concentrations:

Specific constituents (mg/1)

Arsenic	0.05	Cyanide	0.025
Barium	1.0	Fluoride	1.5
Cadmium	0.01	Lead	0.05
Chromium (hexavalent)	0.05	Phenols	0.02

All substances toxic or detrimental to humans or detrimental to treatment processes shall be limited to nontoxic or nondetrimental concentrations in the surface water.

b. **Aquatic life.** The following criteria are designed for the maintenance and propagation of a well-balanced fish population. They are applicable to any place in surface waters but cognizance will be given to opportunities for admixture of waste effluents with such waters.

(1) Warm water areas. Dissolved oxygen: Not less than 5.0 mg/1 during at least 16 hours of any 24-hour period and not less than 4.0 mg/1 at any time during the 24-hour period.

pH: Not less than 6.8 nor above 9.0.

Temperature: Not to exceed 93°F during the months of May through November, and not to exceed 73°F during the months of December through April.

Chemical constituents: Not to exceed the following concentrations:

Specific constituents (mg/1)

Ammonia Nitrogen (N)	2.0	*Copper	0.02
*Arsenic	1.0	Cyanide	0.025
*Barium	5.0	*Lead	0.10
*Cadmium	0.05	Phenols	0.20
*Chromium (hexavalent)	0.05	*Zinc	1.0
*Chromium (trivalent)	1.00		

*A maximum of 5.0 mg/1 for the entire heavy metal group shall not be exceeded.

All substances toxic or detrimental to aquatic life shall be limited to nontoxic or nondetrimental concentrations in the surface water.

(2) Cold water areas. All criteria stated for warm water areas apply to cold water areas except as follows:

Dissolved oxygen: Not less than 7.0 mg/1 during at least 16 hours of any 24-hour period nor less than 5.0 mg/1 at any time during the 24-hour period.

Temperature: No greater than 70°F.

c. **Recreation.** The following criteria are applicable to any waters used for recreational activities involving whole body contact such as swimming and water skiing.

(1) Bacteria: Waters shall be considered to be of unsatisfactory bacteriological quality for the above recreational use when:

A sanitary survey indicates the presence or probability of the presence of sewage or other objectionable bacteria-bearing wastes or

A bacteriological survey using coliform or other appropriate indices indicates bacteriological concentrations significantly higher than those normally found or expected in these waters when free from pollution by sewage.

These rules are intended to implement sections 455B.9 and 455B.13, Code of Iowa, 1966.

These rules shall become effective as provided in Chapter 17A of the Code after filing in the office of the Secretary of State after review by the Departmental Rules Review Committee.

EXAMINED AND APPROVED

DATE March 6, 1967

/s/ Fred Henderickson
ATTORNEY GENERAL

DATE ADOPTED February 28, 1967

/s/ Robert Buckmaster
DEPARTMENT HEAD

REVIEWED AND APPROVED

DATE March 17, 1967

/s/ Adolph W. Elvers
CHAIRMAN, DEPARTMENTAL
RULES REVIEW COMMITTEE

BIBLIOGRAPHY

Code of Iowa, 1966. Des Moines, State of Iowa, 1966.

Report of the Interim Flood Control Committee, Fifty-Second General Assembly of Iowa in Extraordinary Session, State of Iowa, 1948.

"Inventories of Water Resources and Problems", Bulletins 1-8. Des Moines, Iowa: Iowa Natural Resources Council.

Schwob, H. H. "Low-Flow Characteristics of Iowa Streams." Bulletin #9. Des Moines, Iowa: U. S. Geological Survey and Iowa Natural Resources Council, 1958.

Timmons, J. F., O'Byrne, J. C., and Frevert, R. K., eds. "Iowa's Water Resources-Sources, Uses and Laws", Iowa State College Press, Ames, Iowa, 1956.

Davis, Eugene. "Water Rights in Iowa," Iowa Law Review, Volume 41, p. 216-236, 1956.

Report of the Iowa Study Committee of Water Rights and Drainage Laws, Fifty-Sixth General Assembly of Iowa, State of Iowa, 1956.

Schaller and Riley. "The Water Problem in Iowa". Bulletin #122. Ames, Iowa: Iowa Agricultural Experiment Station, 1957.

McKinley, Keith. "Has Recent Legislation Limited Private Riparian Rights in Iowa?", Drake Law Review, Volume 8, p. 59-65, 1958.

O'Connell, Jeffrey. "Iowa's New Water Statute", Iowa Law Review, Volume 47, p. 549-636, 1962.

"Iowa Soil and Water Conservation Needs-Inventory". Ames, Iowa: Extension Service, Iowa State University, 1963.

Twenter, F. R. and Coble, R. W. "The Water Story in Central Iowa". Water Atlas Number 1, Iowa City, Iowa: Prepared by the U. S. Geological Survey in cooperation with the Iowa Geological Survey, 1965.

"Iowa's Water Resources-Pollution Control and Abatement", Papers presented at Seminar conducted November 9-11, 1965, Ames, Iowa.

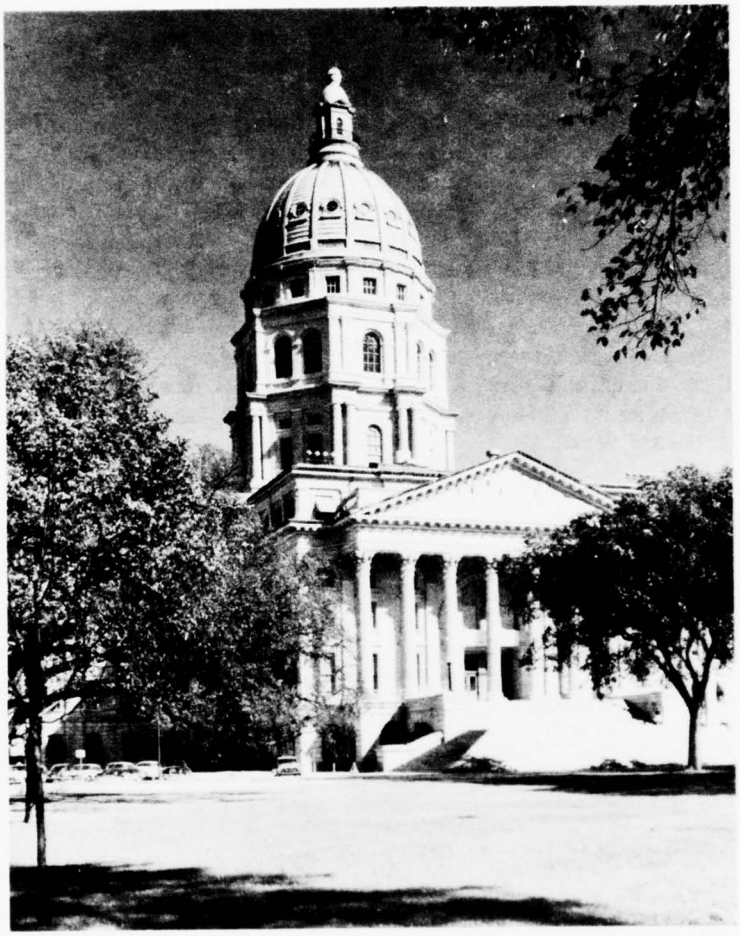
Hines, N. William, et.al. "Legal Aspects of the Small Watershed Program in Iowa", Monograph No. 6, Agricultural Law Center, College of Law, The University of Iowa, Iowa City, Iowa, 1965.

Hines, N. William. "A decade of Experience Under the Iowa Water Permit System", Monograph No. 9, Agricultural Law Center, College of Law, the University of Iowa, Iowa City, Iowa, 1966.

Schwob, H. H. "Magnitude and Frequency of Iowa Floods." Bulletin No. 28, Iowa Highway Research Board. Prepared by U. S. Geological Survey, Iowa City, Iowa, in cooperation with the Iowa State Highway Commission, Ames, Iowa, 1966.

Also, Biennial Reports of Iowa State Departments and Agencies.

STATE OF KANSAS



PREFACE

When the Kansas Water Resources Board was created in 1955, one of its first undertakings was a study of the laws of Kansas pertaining to the beneficial use of water. From that time on the Board has continued to devote careful attention to the legal climate at all levels of government with respect to the water resources of the State. It has continued to recognize, both expressedly and by implication, that planning and development take place, and can only take place, within a definite social, legal, and institutional framework.

The attention mentioned above has resulted in a number of recommendations for positive enactments in the State water resource field. It has, for example, led to adoption of the Kansas House Concurrent Resolutions of 1961, to the enactment of the State Water Plan Act of 1963, and to the enactment of the State Water Plan of 1965 and its 1967 amendments. Further, it has led to a number of studies that have been important in the reorganization and reformulation of laws relating to the acquisition of water rights in Kansas and to the protection of those rights. It is hoped that the following report will lead to further insights and will afford the basis for further investigations and activities in the areas discussed. It must be recognized that the responsibility of the Board is one of continuous, never ending inquiry.

One thing deserves emphasis. The various opinions and statutes that are covered in the following report are dealt with only as they were found. No effort was made to determine their effectiveness and no inquiry was made to ascertain their possible or probable obsolescence. Further, the main concern with the topics relating to State agencies was with legislative articulations, not with the de facto operation of those agencies and not with their administrative interpretations, activities, or programs. An understanding of this point of departure is necessary for a proper understanding of the matters reported.

It must be recognized, of course, that a knowledge of the "living law" of the fields covered by this report is vital to a proper understanding of the overall legal picture. For this reason, and in the face of obvious limitations of time, the report does not contain a separate section on conclusions or recommendations. Nevertheless, it is hoped that this report is of value in identifying areas for further investigations and in pointing to a proper perspective for effective future action.

ACKNOWLEDGEMENTS

Appreciation is expressed for the assistance of those individuals and agencies who reviewed all or parts of this report. Special recognition is made of the cooperation received from the office of the Kansas Attorney General; the Division of Water Resources, State Board of Agriculture; the Kansas State Board of Health; the Kansas State Corporation Commission; the Kansas State Geological Survey; the Kansas State Park and Resources Authority; and the Kansas Forestry, Fish and Game Commission.

While the information presented in this report has been reviewed by the affected agencies the responsibility for the presentation rests wholly with the author. The report was prepared for the Kansas Water Resources Board by Earl B. Shurtz, Professor of Law, University of Kansas.

JURISPRUDENCE

Kansas Water Law

1. State Constitution

In drafting the Wyandotte Constitution, which was adopted in 1859, the territorial legislature did not include any specific provision relating to water. It did, however, contain a section prohibiting state partitipation in works of "internal improvement."[1] A part of the Wyandotte Constitution that remains the basic law of the State, the section continues to prohibit works of "internal improvement."[2]

By the time the Kansas Constitution was drafted, other states had fallen into financial difficulties by becoming involved in the construction of canals and other works of internal improvement. The framers of the Kansas Constitution were anxious to avoid similar happenings. Consequently they included the mentioned prohibition and for nearly a century it served to prevent state financial participation in highway development, water control projects, and water development undertakings. In 1928, however, the people of Kansas amended the constitutional provision to permit the State to carry out a highway construction program. On November 4, 1958, they further amended the section to permit state participation in flood control works and works for the conservation and development of water resources. The provision, then, now provides:

> The state shall never be a party in carrying on any work of internal improvement except that: (1) It may adopt, construct, reconstruct and maintain a state system of highways but no general property tax shall ever be laid nor general obligation bonds issued by the state for such highways; (2) It may be a party to flood control works and works for the conservation or development of water resources.[3]

For many years prior to the adoption of the amendments mentioned above, the Supreme Court of Kansas recognized a distinction between "public improvements" and "internal improvements." It decided that "public improvements" include buildings and improvements, such as state houses, penitentiaries, educational institutions, and the like. It decided that "internal improvements" include such developments as turnpikes and canals.[4]

2. Statutes

In 1855 the first territorial legislature of Kansas provided:

> The common law of England and all statutes and acts of parliament made prior to the fourth year of James the First and which are of general nature, not local to that kingdom, and not repugnant to or inconsistent with the constitution of the United States, and the act entitled "An act to organize the Territories of Nebraska and Kansas," or any statute law which may from time to time be made or passed by this or any subsequent legislative assembly of the Territory of Kansas, shall be the rule of action and decision in this Territory, any law, custom, or usage to the contrary notwithstanding.[5]

In 1868, following Kansas statehood, the legislature provided:

> The common law as modified by constitution and statutory law, judicial decisions, and the

[1] Constitution of the State of Kansas; adopted at Wyandotte, July 29, '59 Article XI, Sec. 3.
[2] Kan. Const. Art. II, § 9.
[3] Kan. Const. Art. 11, § 9.
[4] State of Kansas, ex rel. Colemen, v. Kelly, 71 Kan. 811, 81 Pac. 450 (1905), and State of Kansas, ex rel. Fatzer, v. Board of Regents, 167 Kan. 587, 207 P.2d 373 (1949).
[5] Laws of The Territory of Kansas, Ch. XCVI, § 1.

conditions and wants of the people, shall remain in force in aid of the General Statutes of this state; but the rule of the common law, that statutes in derogation thereof shall be strictly construed, shall not be applicable to any general statute of this state, but all such statutes shall be liberally construed to promote their object.[6]

As a result of the provisions quoted above, the rules of the English common law became the rules of decision in this State in the water law field, except as they were modified by statute. In the years that followed, the Kansas legislature modified the basic law of the State by enacting a number of significant statutes. They included Kan. Laws 1866, Ch. 57; Kan. Laws 1876, Ch. 58; Kan. Laws 1886, Ch. 115, constituting the introduction of the appropriation doctrine into Kansas law; Kan. Laws 1889, Ch. 95; Kan. Laws 1889, Ch. 165; Kan. Laws 1891, Ch. 133; Kan. Laws 1895, Ch. 162, creating the State Board of Irrigation Survey and Experiment; Kan. Laws 1899, Ch. 151; Kan. Laws 1917, Ch. 172, creating the Kansas Water Commission and again emphasizing the appropriation doctrine; Kan. Laws 1919, Ch. 218, creating the Division of Irrigation of the State Board of Agriculture; Kan. Laws 1927, Ch. 293, creating the Division of Water Resources of the State Board of Agriculture and Irrigation; Kan. Laws 1933, Ch. 206; Kan. Laws 1945, Ch. 390, popularly known as the Kansas Water Appropriation Act; Kan. Laws 1957, Ch. 539, amending, supplementing and repealing certain provisions of the 1945 Act; Kan. Laws 1965, Ch. 557, amending K.S.A. 82a-706b (1964), one of the Kansas appropriation statutes; Kan. Laws 1963, Ch. 514, officially designated the "state water plan act"; and, Kan. Laws 1965, Ch. 558, officially designated the "state water plan."

The statutory provisions cited above constitute the main provisions enacted for the acquisition, administration, and control of water rights and water resource development in the State. A considerable number of other statutes, relating to a number of other activities in the water law field, were also passed. Those sections included matters relating to drainage, sewage disposal, pollution control, channel improvement, park development, levee and dam construction, data collection, soil conservation, general provisions relating to the creation of special districts, and the like. Only those statutes that relate to the specific topics covered by this report are included in the passages that follow.

3. Republican River Insterstate Compact (Colo.-Kan.-Nebr.)

The Republican River Compact, involving the states of Kansas, Colorado, and Nebraska, pertains to the waters of the Republican River Basin to its junction with the Smoky Hill in Kansas. After ratification by the three states, Congress ratified the compact and the President approved it on May 26, 1943.[7] Its major purposes are to provide for the most efficient use of the waters of the Republican River Basin for multiple purposes; to provide for an equitable division of such waters; to remove all causes, present and future, which might lead to controversies; to promote interstate comity; to recognize that the most efficient utilization of the waters within the basin is for beneficial consumptive use; and to promote joint action by the states and the United States in the efficient use of water and the control of destructive floods.[8]

Under the compact, the three states are required to collect and correlate the data necessary for the proper administration of the compact provisions. In each state the official charged with the duty of administering the public water supplies administers its provisions. In the performance of their duties they may, by unanimous action, adopt such rules and regulations as are consistent with the provisions of the compact.[9] Accordingly, on July 15, 1959, they did adopt rules and regulations constituting The Republican River Compact Administration.

Allocations of the water supplies of the several drainage basins making up the Republican River Basin to the three states are derived from the computed average annual virgin water supply of each of the basins as set forth in the compact. Should the future computed virgin water supply of any source vary more than ten percent from the computed average annual virgin water supply, the allocations made to each state from such sources are to be increased or decreased in the same relative proportions.[10]

4. Arkansas River Compact (Colorado-Kansas)

The Arkansas River Compact, which reflects an agreement between the states of Kansas and Colorado, involves the storage of water in the John Martin Reservoir in Colorado and the flows of the

[6]Kan. L.S. 1868, Ch. 119, § 3. This section now appears as K.S.A. 77-109 (1964).

[7]See 57 Stat. 86 (1943).
[8]K.S.A. 82a-518, Art. I (1964).
[9]K.S.A. 82a-518, Art. IX (1964).
[10]K.S.A. 82a-518, Art. III (1964).

Arkansas River. After ratification by the two states involved, Congress ratified the compact and the President approved it on May 31, 1949.[11] The major purposes of the compact are to settle existing disputes and to remove causes of future controversy between the states of Kansas and Colorado, and between the citizens of the two states, concerning the waters of the Arkansas River and concerning their control, conservation, and utilization for irrigation and other beneficial purposes; to equitably divide and apportion between the two states the waters of the Arkansas River and their utilization as well as benefits arising from the construction, operation, and maintenance by the United States of John Martin Reservoir for water conservation purposes.[12]

The compact provides for the "Arkansas River Compact Administration" to administer its provisions.[13] To comprise the Administration, the governor of each state appoints three representatives from his state for a term not to exceed four years.[14] Each governor must select two members who are residents and water right owners in specified areas affected by the compact.[15] The compact specifies that the third member from each state is to be a certain water administration official.[16] The Colorado representative must be the Director of the Colorado Conservation Board and the Kansas representative must be "the chief state official charged with the administration of water rights in Kansas." Accordingly, the Kansas representative is the chief engineer of the Division of Water Resources of the State Board of Agriculture. The President of the United States is requested by a provision of the compact to designate a person to represent the United States as an **ex officio** member and act as chairman of the Administration without vote.[17]

The Administration is empowered to adopt, amend, and revoke bylaws, rules, and regulations consistent with the provisions of the compact; to prescribe procedures for the administration of the compact; and to perform all functions required to implement the compact and to do all things necessary, proper, or convenient in the performance of its duties.[18]

The compact relates to the waters of the Arkansas River.[19] It defines those waters as the water originating in the natural drainage basin of the Arkansas River, including its tributaries upstream from the Colorado-Kansas State line, excluding waters brought into the Arkansas River Basin from other river basins.[20]

The compact apportions the waters of the Arkansas River between the states of Kansas and Colorado in terms of the periods of winter and summer storage and it establishes the conditions for the release of water from storage.[21] It also provides that each state may call for releases separately or concurrently with the other.[22] In general, the states of Kansas and Colorado have rights to releases from storage in the ratio of two to three respectively, with no allowance for debits or credits. The releases to which Kansas is entitled are to be satisfied by an equivalent state line flow. During periods when the reservoir is empty and Colorado reverts to the administration of decreed priorities, Kansas is not entitled to any portion of the flow into John Martin Reservoir. Waters originating in Colorado which may flow across the state line during such periods are apportioned to Kansas.[23]

5. Arkansas River Compact (Kansas-Oklahoma)

Recently the states of Kansas and Oklahoma have entered into an Arkansas River Compact, which compact involves the water supplies of the Arkansas River and its tributaries. After its ratification by the states of Kansas and Oklahoma, Congress ratified the compact and the President approved it on November 7, 1966.[24] The main purposes of the compacting parties are to promote interstate comity between the states of Kansas and Oklahoma; to divide and apportion equitably between the states of Kansas and Oklahoma the waters of the Arkansas River Basin and to promote the orderly development of those waters; to provide an agency for administering the water apportionment to which the compacting parties have agreed; to encourage the maintenance of an active pollution abatement program in each of the two states; and, to seek the further reduction of both natural and man-made pollution in the waters of the Arkansas River Basin.[25]

The compact provides for the creation of the "Kansas-Oklahoma Arkansas River Commission" to administer its provisions.[26] The Commission is

[11] 62 Stat. 145 (1949).
[12] K.S.A. 82a-520, Art. I (1964).
[13] K.S.A. 82a-520, Art. VIII (1964).
[14] K.S.A. 82a-520, Art. VIII (1964).
[15] K.S.A. 82a-520, Art. VIII (1964).
[16] K.S.A. 82a-520, Art. VIII (1964).
[17] K.S.A. 82a-520, Art. VIII(C) (1964).
[18] K.S.A. 82a-520, Art. III(B) (1964).
[19] K.S.A. 82a-520, Art. IV(A) (1964).
[20] K.S.A. 82a-520, Art. III(B) (1964).
[21] K.S.A. 82a-520, Art. V (1964).
[22] K.S.A. 82a-520, Art. V (1964).
[23] K.S.A. 82a-520, Art. V (1964).
[24] See 80 Stat. 1405 (1966).
[25] Kan. Laws 1966, Spec. Sess., Ch. 16, Art. I.
[26] Kan. Laws 1966, Spec. Sess., Ch. 16, Art. X.

to be composed of three commissioners from each of the states, which commissioners are to be appointed by their governors. The compact provides that two of the members of each state delegation must reside in the Arkansas Basin of their state and that the third member of each delegation must be the state official who is responsible for administering the water laws of his state. The compact requests that the President of the United States designate a representative to the Commission to represent the United States, which representative, without vote, is to be the presiding officer of the Commission.[27]

The Commission is empowered to employ personnel; to enter into contracts; to establish and maintain an office for the conduct of its affairs; to adopt rules and regulations governing its operation; to develop principles for the storage and release of water from all federal capacities of federal reservoirs; to permit either state, with the consent of the proper operating agency, to impound water for subsequent release and use for any purpose approved by the Commission; to hold hearings and take testimony and receive evidence; and, to print or otherwise reproduce and distribute all of its proceedings and reports.[28]

The compact relates to that portion of the waters of the Arkansas River and its tributaries originating in the drainage basin of the Arkansas River from a point immediately below the confluence of the Arkansas and Little Arkansas rivers in the vicinity of Wichita, Kansas, to a point immediately below the confluence of the Arkansas River with the Grand-Neosho River near Muskogee, Oklahoma.[29] The compact apportions the water supplies of the Arkansas River and its tributaries between the states of Kansas and Oklahoma by establishing the maximum total allowable conservation storage that is to be permitted in structures in each of the sub-basins of the Arkansas Basin in Kansas.[30] The construction of additional conservation storage in Oklahoma in excess of the tabulated 1963 amounts will increase the permissible maximum conservation storage in the same subbasin in Kansas by an equal amount of new conservation storage.[31]

[27]Kan. Laws 1966, Spec. Sess., Ch. 16, Art. X, A.
[28]Kan. Laws 1966, Spec. Sess., Ch. 16, Art. XI.
[29]Kan. Laws 1966, Spec. Sess., Ch. 16, Art. II, A, B, C, E.
[30]Kan. Laws 1966, Spec. Sess., Ch. 16, Art. V.
[31]Kan. Laws 1966, Spec. Sess., Ch. 16, Art. V.

6. Basic Water Law Doctrine in Kansas

Kansas is basically a California Doctrine state.[32] As reflected by early Kansas Supreme Court opinions, Kansas embraced riparian doctrine concepts with respect to surface watercourses and, on a number of occasions, it suggested that common law principles were applicable to ground water.[33] Later in its history, the state turned to appropriation principles, which principles apparently did not become significantly successful until after 1945. Recognizing a dual loyalty to the opposing principles of riparian rule and appropriation doctrine, the state apparently followed the lead of California as outlined in one of the most famous water law cases in the west.[34] In doing so it refrained from following the lead of Colorado[35] and refused to pay its allegiance to the appropriation doctrine to the exclusion of the riparian rule. As a result, early Kansas water law, and in fact Kansas water law down to 1945, consisted of a mixture of riparian, appropriation, and common law principles. Judicial decisions exposing riparian principles co-mingled with statutes embracing appropriation ideas. By

[32]The term "California Doctrine" is used to indicate the blending of riparian and appropriation principles, as distinguished from the term "Coforado Doctrine", which is used to indicate appropriation principles unaccompanied by riparian concepts.
[33]In State of Kansas, ex rel. Peterson, v. The Kansas State Board of Agriculture, 158 Kan. 603, 149 P.2d 604 (1944), the Supreme Court of Kansas stated that in Feldhut v. Brummit, 96 Kan. 127, 150 Pac. 549 (1915), the Court had been asked to adopt the doctrine of the western states concerning irrigation. An examination of the Feldhut opinion, however, reveals that the main question in the case concerned whether an irrigation ditch and rights-of-way for irrigation ditches were incumbrances on property involved in a contract for the exchange of lands. In the Feldhut case, at 96 Kan. 128, 150 Pac. 550, the court wrote: "Whether, however, the local conditions have called for the special exercise of legislation, as in Idaho where by acts of Congress and state statutes a comprehensive irrigation system has been established, and public records of maps, rights, easements, ditches, etc., pertaining thereto are preserved, the rule is that irrigation ditches are not an incumbrance." The court then cited Ireton v. Thomas, 84 Kan. 70, 113 Pac. 306 (1911), which involved a levee established on a river by law and maintained at public expense in open view of a purchaser, which case also involved a holding that such a levee was not an incumbrance that would constitute a breach of warranty in the sale of land upon which the levee was located. The Court then at 96 Kan. 129, 150 Pac. 550, made this interesting comment: "We are urged to apply this doctrine to irrigation ditches in this state. If this is to be done, it must be on the basis that the irrigation ditch is plainly observable to inspection; and could not be placed on the basis chiefly argued by appellant. He would put it on the ground that irrigation is necessary in western Kansas, and that we should adopt the Idaho doctrine. We could not do that. The situation in our state is peculiar. In eastern Kansas the Idaho or arid states' doctrine would be entirely inappropriate; in central Kansas it would be of doubtful propriety; in the extreme parts of western Kansas it might do very well; but no court has power to divide this state, like all Gaul, into three parts, and impose a peculiar doctrine upon our western frontier."
[34]Lux. v. Haggin, 69 Cal. 255, 4 Pac. 919, 10 Pac. 674 (1886).
[35]Coffin v. Left Hand Ditch Co., 6 Colo. 443 (1882).

and large it was a complex and unsatisfactory backdrop to water resource development.[36] At the foundation was the basic antagonism between a doctrine (riparian) that rested upon ideas of location and a contrary doctrine (appropriation), which rested upon recognition of industry and development.

In an important case decided by the Kansas Supreme Court in 1944,[37] the problem came to the forefront in a dramatic way. The state brought a quo warranto proceeding questioning the authority of the Division of Water Resources of the State Board of Agriculture and its Chief Engineer (1) to conduct a hearing on a city's application for a permit to appropriate water from nearby ground water supplies for beneficial use or (2) to regulate or allocate the use of ground waters. During the course of its consideration of the appropriation statutes, the Supreme Court reaffirmed its approval of riparian and common law principles. Without applying constitutional principles, the Court rendered ineffective the appropriation statutes that had long been thought to be of controlling significance in many parts of the state.

The 1944 decision caused considerable alarm. Its implications were unsettling and rose to threaten many interests. It is not surprising, then, that in August of 1944, Governor Schoeppel appointed a special study committee to investigate the laws of the state relating to the appropriation of water. The Committee reported to the governor in December of 1944. Among other things it wrote:

> It is essential to notice that the Kansas acts have not been effective in superceding the common law and establishing an orderly system for the appropriation and use of water. While the legislature provided that the common law can be modified in accordance with the condition and wants of the people, the way in which such statutes have come before the court for interpretation has resulted in the reaffirmation of the common law. The latest case was that of **State, ex rel. v. Kansas State Board of Agriculture,** 158 Kan. 603, June, 1944, where the court held the 1917 statute ineffectual to establish an administrative procedure for the appropriation of water.
>
> The situation created by this decision left Kansas as the only one of the seventeen western states without an effective statutory procedure for the appropriation of water, and the only one among sixteen of them without administrative procedure for the initiation and perfection of water rights.[38]

The Committee also stated that it believed conditions in Kansas had greatly changed since the early adoption of the common law as applied to water use. It insisted that the time had come for an effective modification in terms of a system of appropriation based upon priority of right, a system recognizing, nevertheless, the right of common law owner to compensation for injuries, if any, to unused common law rights.[39]

In this regard the Committee wrote:

> It believes two things are needed, (1) to establish the right of appropriation under the rule of priority of right, and (2) to establish adequate administrative control over the appropriation of water to prevent overdevelopment of any source of supply with resulting injury to established uses.
>
> In order to effectually establish the rule of appropriation, the Committee firmly believes that he who appropriates and puts water to beneficial use should not thereafter be subject to injunction by common-law claimants who have not previously established uses for reduction in the flow of a stream or in the reduction of the ground water source of supply. That any one damaged by the appropriator's use should have the right to recover for actual damages.
>
> It is the belief of the Committee that the adoption of the appropriation doctrine does not take from the common-law owner any substantial rights which have value sufficient to be capable of being measured, but rather provides for a system of protection of developments and financial investments in the appropriation and diversion works of the diligent person who perfects his use and realizes beneficial returns, as against such potentially present and almost valueless undeveloped equal rights to divert and use, recognized by the common-law doctrine.[40]

Following the report to the Governor, the 1945 Kansas Legislature enacted what has come to be known as the Kansas Water Appropriation Act of 1945.[41] This act, with rather extensive supplementations and amendments made in 1957[42] together

---

[36] In addition to the remaining portions of this Section, see the Section on Important Court Decisions Concerning Water Rights.

[37] State of Kansas, ex rel. Peterson, v. Board of Agriculture, 158 Kan. 603, 149 P.2d 604 (1944).

[38] A Report to the Governor of Kansas, 6, Topeka, Kansas (Dec. 1944).

[39] Id. at 43.

[40] Id. at 44.

[41] Kan. Laws 1945, Ch. 390.

[42] Kan. Laws 1957, Ch. 539.

with a further amendment made in 1965,[43] constitutes the existing appropriation statutes relative to the acquisition, protection, administration, and loss of water rights in Kansas. Because of the philosophy underlying the legislation, one might argue that Kansas is no longer a California doctrine state and has, perhaps, effectively substituted the appropriation doctrine in its entirety for the Kansas water use law that had existed previously. One thing at least is clear. Kansas is no longer a California doctrine state in the sense that it was a California doctrine state prior to the 1945 legislation.

7. Important Court Decisions Concerning Water Rights

In 1877 the Supreme Court of Kansas recognized the riparian doctrine as the rule of decision for water rights cases.[44] In the case in which it did so, a riparian mill company, with the consent of an upper riparian owner, had cut a channel through the land of the upper owner from a point on the Neosho River to its mill. After doing so, the company diverted a portion of the stream from its natural channel through land that the defendant later acquired, doing so without the assent of the defendant's predecessor in interest. The Supreme Court of Kansas held that the company had acquired no right to continue its diversion and was not entitled to a decree restraining the defendant from removing any obstruction, natural or artificial, in the bed of the river on his lands. In doing so, the Court insisted that a riparian owner had a right to the flow of the entire stream in its natural channel without diminution or alteration[45] and that such a right, a real property right, passed with a conveyance of the riparian land.

About four years later the Supreme Court of Kansas decided another famous case upon riparian principles.[46] In that case, a landowner had built mills on his land bordering the Cottonwood River and had operated those mills exclusively by water power generated by means of a dam across the river. In building the dam many years earlier, he had purchased the rights of flowage of an upper riparian owner, investing thousands of dollars in the property. Twenty years later, the City of Emporia bought a tract of land on the banks of the pond above the dam and dug a well 25 feet in diameter and 26 feet deep, some 75 to 100 feet from the banks of the pond, which well received its water from the pond by percolation through a gravel bed at the bottom of the well. The city then put a pipe into the well and another pipe directly into the pond, using the well to supply its citizens with their ordinary needs, intending to use the pipe to the pond only for the purpose of extinguishing fires. It constructed its system of water works without compensating the landowner and without condemning any of his rights. At certain seasons of the year the river supply was inadequate for the mill owner's operations, at which times he was forced to suspend work. The Supreme Court of Kansas held that the landowner was entitled to an injunction restraining the city from taking water from the pond, both from the pipe into the pond and from the pipe into the well. Addressing itself to the general doctrine concerning percolating ground waters, the Supreme Court of Kansas said that the owner of lands through which water percolates may appropriate it to any use and in any amount regardless of the effect on his neighbors. At the same time it insisted that no owner was entitled, either directly or indirectly, to destroy or diminish the flow of a natural surface stream to the injury of a riparian owner, such as the city had done.

The Supreme Court of Kansas went on to state that each riparian owner may use whatever water he needs for his own domestic purposes and for the watering of his livestock and that he may do so without incurring liability to any lower riparian owner. It insisted, however, that the city was not a riparian owner under the stated rule inasmuch as it, a corporation, had no natural wants, that the city of Emporia had not been taking water for its own use but, instead, for the purpose of supplying its citizens with water for their needs.

In addressing itself to one of the city's arguments, the Court recognized that as a general proposition the law takes no cognizance of percolating water. As the reason for the general rule, it stressed the impossibility of proving with reasonable certainty the sources of supply. It went on to state, however, that the doctrine is well settled that percolating water belongs to the owner of overlying land as much as the land itself or the rocks and stones found in it and that he may take the water which might otherwise percolate into his neighbor's lands. The Court recognized, however, that a party may not run pipes into a man's mill-pond, or dig a channel to it, and thereby divert water. "May he accomplish the same result," the Court asked, "by digging a well upon the very banks, and so near

---

[43] Kan. Laws 1965, Ch. 557.

[44] Shamleffer v. Council Grove Peerless Mill Co., 18 Kan. 24 (1877).

[45] Id. at 31, the Court insisted, "The maximum of the common law was, Aqua currit et debet currere ut currere solebat." (The Court was saying, "Water runs, and ought to run, as it has used to run.")

[46] City of Emporia v. Soden, 25 Kan. 58 (1881), motion for rehearing overruled in 26 Kan. 492 (1881).

thereto that the water oozes out from the pond into the well, and be beyond the reach of the law so long as he keeps a wall of earth between the well and the pond?". In giving a negative answer to its question, the Court wrote:

> . . . Of course, the mere proximity of the well to the stream does not prove the abstraction; there may be other subterranean sources of supply; and he who alleges the abstraction has the burden of proof, and, if he fails to establish the fact, he fails to show a right to relief, and, if he asks compensation for the abstraction, he can recover only for the amount which he is able to prove. Here the fact is found, and upon that finding plaintiff is entitled to relief.[46a]

Twenty years later, in a case in which a lower riparian owner successfully obtained injunctive relief restraining the diversion of water by an upper riparian owner onto a sand bar, a diversion of no beneficial use, the Kansas Supreme Court strongly reaffirmed the riparian doctrine.[47] It wrote:

> Some doubts may have existed in the ancient common law as to the right of an upper riparian proprietor to appropriate all of the water flowing through his land, whether necessary to his reasonable purposes or not; but there can be no doubt now that he has no right, as against a lower proprietor, to appropriate any more of the water of the stream than is needed for his own beneficial uses. The uniform holdings of the courts are that he has no such right, and upon the non-existence of such right plans for the equitable division of water among riparian proprietors have been devised by statute in all of the states where irrigation can be successfully practiced. (Kinney, Irr. §§ 165, 166.)[47a]

In 1905, the Supreme Court of Kansas gave the riparian doctrine one of its strongest moments.[48] In the case decided in that year the defendants were upstream irrigators riparian to Rose Creek. The plaintiff was a landowner riparian to Smoky Hill River, which was fed by the upstream Rose Creek, and was a prior irrigator. The years 1900 and 1901 were excessively dry and the shortage of water precipitated a dispute between the parties. In response to the plaintiff's litigious efforts, the trial court awarded damages and "the superior right to substantially the entire flow of Rose Creek in unpropitious seasons." In doing so, it applied the appropriation doctrine although none of the parties had ever attempted to comply with any of the irrigation statutes pertaining to the appropriation of water. In a strong, lengthy opinion by Justice Birch, the Supreme Court of Kansas, in reversing the judgment of the trial court, concluded that the common law riparian doctrine, not the doctrine of appropriation, pertained in Kansas. Under this doctrine, said the Court, the riparian owner's use of water for irrigation purposes must be reasonable under all of the circumstances. Moreover, the Court insisted, the use right must be exercised with due regard to the equal right of every other riparian owner along the stream.

The Supreme Court of Kansas went on to recognize that the doctrine of prior appropriation may exist in the same jurisdiction alongside the common law riparian doctrine. It insisted, however, that prior to the Kansas Irrigation statutes of 1886, which authorized the acquisition of rights on the basis of appropriation neither statute nor court decision had recognized the appropriation doctrine. Any local custom based upon principles of water appropriation, it said, was invalid, which meant that no water rights recognized by the Revised Statutes of the United States, sections 2339 and 2340, had ever vested in Kansas.[49] It implied, however, that water rights might have become vested after 1886 upon compliance with the 1886 irrigation statutes.

In 1915 the Supreme Court of Kansas refused to permit a city as a riparian owner, to the injury of a lower proprietor, to divert water from a stream for the domestic purposes of its citizens without compensating those whose rights had been impaired.[50] The following year the Supreme Court of Kansas decided another controversy involving the same parties.[51] In accordance with the riparian

---

[46a]Id. at 25 Kan. 609.
[47]Campbell v. Grimes, 62 Kan. 503, 64 Pac. 62 (1901).
[47a]Id. at 505, 80 Pac. 62.
[48]Clark v. Allaman, 71 Kan. 206, 80 Pac. 571 (1905).

[49]The Act of July 26, 1966, Ch. 262, § 9, 14 Stat. 253, R.S. § 2339; 30 U.S.C. § 51 (1964), and the first paragraph of 43 U.S.C. § 661 (1964), provides as follows: "Whenever, by priority of possession, rights to the use of water for mining, agricultural, manufacturing, or other purposes have vested and accrued, and the same are recognized and acknowledged by the local customs, laws, and the decisions of courts, the possessors and owners of such vested rights shall be maintained and protected in the same; and the right-of-way for the construction of any ditch or canal injures or damages the possession of any settler on the public domain, the party committing such injury or damage shall be liable to the party injured for such injury or damage." The Act of July 9, 1870, Ch. 235, § 17, 16 Stat. 218; R.S. § 2340, as amended by the Act of March 3, 1891, Ch. 561, § 4, 26 Stat. 1097; 30 U.S.C. § 52 (1964); provides as follows: "All patents granted, or homesteads allowed, shall be subject to any vested and accrued water rights, or rights to ditches and reservoirs used in connection with such water rights, as may have been acquired under or recognized by Section 51 of this title." The provision as it appeared in R.S. § 2340, now appearing in 43 U.S.C. § 661 (second paragraph) (1964), provides: "All patents granted, or preemption or homesteads allowed, shall be subject to any vested and accrued water rights, or rights to ditches and reservoirs used in connection with such water rights, as may have been acquired under or recognized by this section."

[50]Wallace v. City of Winfield, 96 Kan. 35, 149 Pac. 693 (1915).
[51]Wallace v. City of Winfield, 98 Kan. 651, 195 Pac. 11 (1916).

doctrine generally, the Court noted that water rights in a flowing stream are not rights with respect to the water itself but only rights to the use of water. It further noted that an injured party is entitled to damages for any loss or injury sustained as a result of a wrongful diversion. It insisted, however, that an injured party should not receive the value of the water diverted inasmuch as there is no property interest in the water itself until it has been reduced to possession and has become subject to management and control.

In 1917, the Kansas Supreme Court recognized a railway company's right, as against an upper riparian owner, to make reasonable use of stream water to supply its engines and to operate its railroad, in accordance with the riparian reasonable use principle that emphasizes "fairness and equality between owner and owner."[52] In 1935, the Court held that a riparian owner's right to the flow of a watercourse is a property right entitled to protection under the constitutional mandate providing that private property shall not be taken for public use without compensation being first made.[53] In 1938, it insisted that water in the natural channel of a stream is an inseparable attribute of the land through which it flows, as a part and parcel of the land itself, within the meaning of a procedural statute[54] that provided that actions for the recovery of real property or of an estate or interest in real property or for the determination in any form of any such rights or interests or to bar a defendant therefrom must be brought in the county in which the subject of the action is situated.[55]

Two years earlier, in an opinion reminiscent of its 1905 decision, the Supreme Court of Kansas again rejected appropriation principles and applied riparian concepts.[56] Its opinion revealed that lower irrigating owners riparian to Pawnee Creek had claimed they had acquired rights under the appropriation statutes of 1886, rights that were prior to the claims of upper riparian owners. In concluding that no error could be predicated upon the trial court's refusal to grant an injunction based upon a grievance which had ceased to exist at the time of trial, the Supreme Court of Kansas noted that because all of the land involved had passed from public to private ownership prior to the 1886 enactments, the lower owners had not acquired rights superior to the riparian rights of the upper owners. It insisted that the 1886 appropriation statutes had conferred no rights against other riparian claimants whose rights had attached to lands held under patents granted prior to the enactment of the statutes. It was the position of the Court that riparian rights held under titles antedating the 1886 statutes were governed by the common law. According to the Court, that law entitled each riparian owner to use all of the stream water necessary for his domestic and livestock purposes. Thereafter, according to the Court, each riparian owner, without preference, was entitled to a fair and equal share of the remaining waters for irrigation purposes.

In addition to its attitude concerning underground percolating water, as contained in the early case involving the City of Emporia,[57] the Supreme Court of Kansas on several occasions discussed common law rules pertaining to ground water. For example, in a 1907 case involving an oral agreement and a claim of prescriptive rights to the use of spring water on an overlying owner's lands, the Court said, "That percolating waters, such as these springs are, belong to the owner of the land as much as the land itself, admits of no doubt."[58] Likewise, in the important 1944 decision of the Supreme Court of Kansas that precipitated the enactment of the Kansas appropriation statutes of 1945, the Supreme Court of Kansas stated, "An owner of land owns its surface and underground water by the same title that he owns the land itself, and the clay, gravel, coal, or oil within it, even though these items of property differ in component parts."[59] These cases did not directly involve, however, judicial holdings concerning the relative rights of neighboring owners overlying a common source of supply.

In 1946, the Supreme Court of Kansas reiterated earlier pronouncements to the effect that underground waters are a part of the real property in which they are located.[60] The case in which it did so, however, did not involve a question arising under the then recently enacted appropriation statutes. The case merely pertained to a cross-plaintiff's alleged right to damages for violation of his rights as a tenant under a written lease for the use of water from another's land by virtue of a specific oral contract between that other party and the cross-plaintiff's original landlord. The earlier Kansas

[52]The Atchison, Topeka & Santa Fe Railway Company v. Shriver, 101 Kan. 257, 166 Pac. 519 (1917).
[53]Durkee v. Bourbon County Commissioners, 142 Kan. 690, 51 P.2d 984 (1935).
[54]Kan. G.S. 1935, 60-501. The present counterpart of this venue statute is now found in K.S.A. 60-601(b) (1964).
[55]Smith v. Miller, 147 Kan. 40, 75 P.2d 273 (1938).
[56]Frizel v. Bindley, 144 Kan. 84, 58 P.2d 95 (1936).
[57]City of Emporia v. Soden, 25 Kan. 588 (1881), motion for rehearing overruled in 26 Kan. 492 (1881).
[58]City of Emporia v. Soden, 25 Kan. 588, 608 (1881); Jobling v. Tuttle, 75 Kan. 351, 360, 89 Pac. 699, 703 (1907).
[59]State of Kansas ex rel. Peterson, v. Board of Agriculture, 158 Kan. 603, 609, 149 P.2d 604, 608 (1944).
[60]Arensman v. Kitch, 160 Kan. 783, 165 P.2d 441 (1946).

cases were cited with reference to the applicability of the statute of frauds.[61]

In 1949 the Supreme Court of Kansas continued to talk in terms of riparian principles in a case in which it affirmed a trial court's denial of a bill brought by a downstream riparian owner for a mandatory injunction to compel various upstream riparian owners to remove small dams built across a creek.[62] In discussing the natural flow and reasonable use theories of the riparian doctrine, the Court wrote:

> The "reasonable use" theory prevails in the great majority of states where the common-law doctrine has been applied. And this theory, as distinguished from the "natural flow" theory, has been adhered to in this state whenever the common-law doctrine of riparian rights was under consideration by this court . . .[63]

The Court noted that on the appeal both sides had relied chiefly on the common law but that, in addition, the defendants had contended that certain statutes, including the appropriations statutes, compelled affirmance of the trial court's judgment. Concerning this contention, the Court wrote:

> This statute and others enacted since 1917 (and perhaps since 1911) have undoubtedly modified the common law doctrine of riparian rights which theretofore had been the basic *principle of water rights in this* state. State ex rel. v. Kansas State Board of Agriculture, 158 Kan. 603, 608, 149 P.2d 604. However, there is no occasion here to discuss the extent to which that common law doctrine may have been modified by the statutory enactments. We know of no statute which would be of assistance or solace to the plaintiff, and since he has failed to establish any right to an injunction under the broader and more elastic common law doctrine, a further discussion of the statutory right of defendants would be of little purpose.[64]

In 1956, the Supreme Court of Kansas again applied riparian principles.[65] The Court did observe, however, that the "defendants had not applied for any appropriation rights from the Division of Water Resources under the provisions of G.S. 1949, 82a-701 **et seq**."[66] The decision was based upon the reasonable use doctrine as outlined in the Court's 1949 decision.

Since the enactment of the water appropriation statutes in 1945 and thereafter, the courts have decided three important cases involving the constitutionality of those statutes.[67] The Supreme Court of Kansas has also decided several other cases, of considerably less importance, involving the appropriation statutes.[68]

In the first of the three cases that recognized the constitutionality of the water appropriations statutes,[69] a majority of the qualified owners of irrigable lands on and near the Republican River in north-central Kansas petitioned the Chief Engineer of the Division of Water Resources of the Kansas State Board of Agriculture for authority to incorporate and also filed an application for a permit to appropriate waters from the Republican River for irrigation purposes. Although the Chief Engineer granted the petitions, the Federal Government declined to construct diversion dams and projects under federal laws applicable to cooperative development until the district's authority to incorporate and divert water had been judicially determined. As a result, an original **quo warranto** proceeding was instituted in the Supreme Court of Kansas in the name of the State on the relation of the county attorney of Republic County and the case was submitted to the court on pleadings and stipulations. Among other things the parties stipulated that the proposed diversion would diminish the annual flow of the river downstream and would, consequently, result in substantial injury to downstream riparian owners. In determining that the statutes involved were constitutional, the Kansas Supreme Court wrote:

> We next observe that no complaint is made of section 702, which declares: "All water within the state of Kansas is hereby dedicated to the use of the people of the state, subject to the control and regulation of the state in the manner herein provided (sic)." This is the heart of the statute. The rest of it treats of details and procedure. It forms the basis for a different approach to the solution of questions concerning water rights than we have had in some of our opinions. Heretofore we have approached the questions largely on the basis of individual interest alone. Under this declaration and other

---

[61] The statute as cited was Kan. G.S. 1935, 33-106. It now appears as K.S.A. 33-106 (1964).
[62] Heise v. Schulz, 167 Kan. 34, 204 P.2d 706 (1949).
[63] Id. at 43, 204 P.2d at 712.
[64] Id. at 45, 204 P.2d at 713-14.
[65] Weaver v. Beech Aircraft Corp., 180 Kan. 224, 303 P.2d 159 (1956).
[66] Id. at 229, 303 P.2d 163.
[67] State of Kansas, ex rel. Emery, v. Knapp, 167 Kan. 546, 207 P.2d 440 (1949); Baumann v. Smrha, 145 F. Supp. 617 (D. Kan. 1956), affirmed 352 U.S. 863 (1956); and, Williams v. City of Wichita, 190 Kan. 317, 374 P.2d 578 (1962).
[68] For example, see Artesian Valley Water Conservation Ass'n. v. Division of Water Resources and Robert V. Smrha, 174 Kan. 212, 255 P.2d 1015 (1953), and City of McPherson v. Smrha, 179 Kan. 59, 293 P.2d 239 (1956).
[69] State of Kansas, ex rel. Emery, v. Knapp, 167 Kan. 546, 207 P.2d 440 (1949).

provisions of the act we now approach them upon the basis of the interest of the people of the state without losing sight of the beneficial use the individual is making or has the right to make of the water. Unused or unusable rights predicated alone upon theory become of little if any importance. Broad statements found in some of our opinions, such as "Every man through whose land a stream of water runs is entitled to the flow of that stream without diminution or alteration" **(Shamleffer v. Council Grove Peerless Mill Company**, 18 Kan. 24), must be disregarded or modified to harmonize with this declaration. The change is an appropriate one for the legislature to make. Individuals do not live alone in isolated areas where they, at their will, can assert all of their individual rights without regard to the effect upon others.[70]

A three-judge federal district court in 1956 agreed that the Kansas appropriation statutes were constitutional.[71] In that case the plaintiff's farmlands were situated over the Equus beds, a large, underground formation composed of extremely permeable, water-bearing sand and gravel located primarily in Sedgwick, Harvey, and McPherson counties. Some of the great underground body of water in natural storage furnished natural subirrigation for the plaintiff's lands, which lands had passed into private ownership in 1880, and furnished water for their domestic needs. In 1940, the City of Wichita purchased a number of five-acre well sites within 10 miles from the plaintiffs' lands, developing these sites, and sites subsequently acquired, to obtain water for municipal purposes. After 1940, because of drought conditions and withdrawals by users in the area, the water table declined considerably, adversely affecting the plaintiffs' lands. After the City of Wichita applied to the Chief Engineer of the Division of Water Resources of the State Board of Agriculture for a permit to appropriate an additional 25,000 acre-feet of water, the plaintiffs, in 1955, sought a federal court judgment against the Chief Engineer that would declare the water appropriation statutes to be in violation of the Fourteenth Amendment of the Federal Constitution, that would restrain the Chief Engineer from operating under their provisions, and that would require him to revoke all actions taken by him under the statutes. The City of Wichita intervened and several interested parties filed briefs as friends of the court.

Finding the statutes consistent with the due process and equal protection provisions of the Fourteenth Amendment, the Court concluded that the statutes were constitutional. Further, the Court observed that although a state must recognize valid existing vested rights, it did not regard a landowner as having vested rights in underground water when he has *not* appropriated any of the water for beneficial use. The Court observed that its approach was consistent with the 1949 case decided by the Supreme Court of Kansas involving the Republican River,[72] which case, said the Court "must be regarded as having overruled the earlier cases."[73] Writing for the Court, Judge Phillips closed the opinion with the following twelve significant paragraphs:

> It should be observed that the Act recognizes and affords protection to vested rights. Section 82a-704 provides for the determination of such rights by the Chief Engineer and for a review of his action by appeal to the appropriate state district court. Section 82a-708 provides for the determination of priorities of rights or applicants for permits by the Chief Engineer and for a review of his determinations by appeal to the appropriate state district court.
>
> It is true that the Act does not provide for notice to persons, who may be adversely affected by the granting of a permit, of the hearing or of the action by the Chief Engineer upon applications for permits. However, permits are necessarily granted subject to valid existing vested rights and to prior appropriations, and provision for the protection of those rights, either by actions for damages or for injunction, is carefully made by sections 82a-712 and 82a-716.
>
> The power of a state either to modify or reject the doctrine of riparian rights because unsuited to the conditions in the state and to put into force the doctrine of prior appropriation and application to beneficial use or of reasonable use has long been settled by the adjudicated cases.
>
> Of course, such a modification in the law of the state must recognize valid existing vested rights, but we do not regard a landowner as having a vested right in underground waters underlying his land which he has not appropriated and applied to beneficial use.
>
> We hold that the state could properly apply the doctrine of prior appropriation and appli-

[70] Id. at 555, 207 P.2d at 447-48.
[71] Baumann v. Smrha, 145 F. Supp. 617 (D.Kan. 1956), affirmed per curiam 352 U.S. 863 (1956).
[72] State of Kansas, ex rel. Emery, v. Knapp, 167 Kan. 546, 207 P.2d 440 (1949).
[73] Baumann V. Smrha, 145 F. Supp. 617 at 625 (D. Kan. 1956).

cation to beneficial use to unused and unappropriated waters so long as it recognized and afforded protection to rights which landowners had acquired at the time of the effective date of the Act to appropriate and use water.

Whether such a change in the law of Kansas is contrary to earlier decisions of the Supreme Court of Kansas, it is cognizant with the latest decision of the Supreme Court of Kansas in State ex rel. Emery v. Knapp, 167 Kan. 546, 207 P.2d 440, which must be regarded as having overruled the earlier cases.

There is no vested right in the decisions of a court and a change of decision does not deprive one of equal protection of the laws or property without due process of law.

Even though prior decisions of a state court have established a rule of property, a departure therefrom in a subsequent decision does not, without more, constitute a deprivation of property without due process of law under the Fourteenth Amendment.

The Fourteenth Amendment in guaranteeing equal protection of the laws does not assure uniformity of judicial decisions or immunity from judicial error. Likewise, it is well settled that a legislature may change the principle of the common law and abrogate decisions made thereunder when in the opinion of the legislature it is necessary in the public welfare.

Adequate water supply is a necessity. In the arid and semiarid regions of the West it is imperative that all available water be utilized beneficially and without waste. The accomplishment of those ends is well within the competency of the legislature.

Plaintiffs have not seen fit to invoke the remedies afforded them by the Act. Those remedies are adequate, we think, to afford protection to any vested rights of the plaintiffs.

We conclude that the Act is constitutional.[74]

The Supreme Court of Kansas stifled the last assault on the constitutionality of the Kansas appropriation statutes in 1962. The litigation in which it did so[75] had been instituted by an owner of land in Harvey County to obtain an injunction to prevent the City of Wichita from drilling and pumping water wells in the Equus beds area under the provisions of the Kansas appropriation statutes. The plaintiff had contended that the defendant's activities would divert subterranean percolating water from his land, cause irreparable damage, and constitute an unconstitutional taking of property. Upon trial, the district court found "each and all of the issues of fact and law in favor of the plaintiff and against the defendant, the City of Wichita." It held that the "1945 water appropriation act of Kansas as amended" was unconstitutional and that the city should be permanently enjoined from using its wells. Upon appeal the Supreme Court of Kansas, one justice dissenting, reversed the trial judge and held that the appropriations statutes were constitutional. Writing for the majority of the Court, Justice Fatzer wrote:

> We find nothing in the Act which in any manner offends the Fourteenth Amendment to the constitution of the United States or in any way violates the constitution of Kansas. There is no inhibition in our constitution against legislation such as this regulatory Act which we find to be a proper and valid exercise of the police power.[76]

In the lengthy opinion, the Court also discussed the development of common law principles in Kansas and discussed the 1945 statutory departure. In this discussion Justice Fatzer wrote:

> It is evident that the legislature, in placing into effect the committee's recommendations exercised the police power of the state in determining its policy that "All water within the State of Kansas is hereby dedicated to the use of the people of the state, subject to the control and regulation of the state in the manner herein provided" (G.S. 1949, 82a-702), and in providing that "Subject to vested rights, all waters within the state may be appropriated for beneficial use . . .," and that nothing in the Act "shall impair the vested right of any person except for nonuse" (G. S. 1949, 82a-703). This declaration makes it clear that Kansas has embarked upon a new approach to the problem of use of the water resources of the state. In passing the Act it is manifest that two major factors were uppermost in the minds of the legislators: First, that the doctrine of appropriation should be based upon the time of use and the actual application of water to beneficial use without regard to the ownership of land contiguous to the streams or the overlying lands, and Second, that unused water could not wisely be held in perpetuity for a common-law owner who may never have use for it, without resulting in underdevelopment permitting the water to flow out of the state and on toward the ocean, as an economic waste and loss of a valuable natural

[74]Baumann v. Smrha, 145 F. Supp. 617 at 624-25 (D. Kan. 1956).

[75]William v. City of Wichita, 190 Kan. 317, 374 P.2d 578 (1962).

[76]Id. at 340, 374 P.2d 595.

resource. To achieve this result, the doctrine of appropriation for beneficial use based upon the rule of priority of right (first in time is first in right) was established, and adequate administrative controls were provided to prevent overdevelopment of any source of supply with resulting injury to established uses.[77]

The plaintiff had argued vigorously that he owned the water underlying his lands in accordance with previous decisions of the Supreme Court of Kansas. In rejecting the argument, Justice Fatzer, for the Court, wrote:

> The common law concept of "absolute ownership" of percolating water while it is in one's land is an anomaly--while giving him the right to abstract from his land all the water he can find there, it affords him no protection against the acts of his neighbors who, by pumping on their own land, manage to draw out of his land all of the available water it contains. Much of the language in the cases pertaining to absolute ownership is **obiter dicta** and completely unnecessary to the respective decisions. Moreover, ownership as a concept is often vague and denotes only certain rights of use against certain persons with respect to certain physical phenomena. Thus the use of the term "ownership" as applied to percolating water has never meant that the overlying owner had a property or proprietary interest in the corpus of the water itself. This necessarily follows from the physical characteristics of percolating water. It is migratory in nature and is a part of the land only so long as it is in it. There is a right of use as it passes, but there is no ownership in the absolute sense. It belongs to the overlying owner in a limited sense, that is, he has the unqualified right to capture and control it in the quantity desired and with an immunity from liability to his neighbors for doing so. When it is reduced to his possession and control, it ceases to be percolating water and becomes his personal property. But if it flows or percolates from his land, he loses all right and interest in it the instant it passes beyond the boundaries of his property, and when it enters the land of his neighbor it belongs to him in the same limited sense. . .[78]

8. Other Significant Court Decisions

Many of the important judicial decisions in Kansas relating to water and related land development have been concerned with property rights. Those cases having special significance in terms of the development of water rights under the appropriate doctrine are discussed in another section of this report. There are a large number of other cases, however, that have been important in planning for water development in Kansas.

In a number of instances the Supreme Court of Kansas has been concerned with defining watercourses. Although no single definition has emerged, the matter has been considered in terms of beds, banks, flow, channel, source of supply, and observable characteristics.[79]

Questions of navigability and related questions of land ownership and ownership of bed and banks have been subjected to judicial scrutiny.[80]

Court decisions have also dealt with a number of problems dealing with surface drainage and overflow from watercourses, liability for obstructions, rights to repel overflow and surface waters, rights of accretion and avulsion, and problems of regulation.[81]

---

[77] Id. at 333-34, 374 P.2d 591.
[78] Id. at 329-30, 374 P.2d 588.

[79] See especially Brown v. Schneider, 81 Kan. 486, 106 Pac. 41 (1910); Rait v. Furrow, 74 Kan. 101, 85 Pac. 934 (1906); Baldwin v. Ohio Township, 70 Kan. 102, 78 Pac. 424 (1904); Gibbs v. Williams, 25 Kan. 214 (1881); Palmer v. Waddell, 22 Kan. 352 (1879); Horner v. Baxter Springs, 116 Kan. 288, 226 Pac. 779 (1924).

[80] Siler v. Dreyer, 183 Kan. 419, 327 P.2d 1031 (1938); Dougan v. Shawnee Co. Comm'rs., 141 Kan. 544, 43 P.2d 223 (1935); Cities Service Gas Co. v. *Riverside Drainage Dist.*, *137 Kan.* 410, 20 P.2d 520 (1933); Webb v. The Board of County Comm'rs., 124 Kan. 38, 257 Pac. 966 (1927); Cushenberry v. Waite-Phillips Co., 119 Kan. 478, 240 Pac. 400 (1925); Piazzek v. Drainage Dist. No. 1, 119 Kan. 119, 237 Pac. 1059 (1925); Jackson Walker Coal & Material Co. v. Hodges, 283 Fed. 457 (D. Kan. 1918); Kaw Valley Drainage Dist. v. The Missouri Pacific Railway Co., 99 Kan. 188, 161 Pac. 937 (1916); State of Kansas, ex rel. Dawson, v. Akers, 92 Kan. *169, 140* Pac. 637 (1914); Dana v. Hurst, 86 Kan. 947 122 Pac. 1041 (1912); Kregor v. Fogarty, 78 Kan. 541, 96 Pac. 845 (1908); Wood v. Fowler, 26 Kan. 682 (1882); Palmer v. Waddell, 22 Kan. 352 (1879); Dreyer v. Siler, 180 Kan. 765, 308 P.2d 127 (1957); Stogsdill v. Minor, 103 Kan. 790, 176 Pac. 643 (1918); Winters v. Myers, 92 Kan. 414, 140 Pac. 1033 (1914); Peuker v. Canter, 62 Kan. 363, 63 Pac. 617 (1901); Topeka Water Supply Co. v. City of Potwin, 43 Kan. *404*, 23 Pac. 578 *(1890)*; Wear v. *Kansas*, 245 U. S. 154 (1917); Kansas v. Colorado, 185 U. S. 125 (1902); Kansas v. Colorado, 206 U. S. 46 (1906); Johnston v. Bowersock, 62 Kan. 148, 61 Pac. 740 (1900).

[81] Union Trust Co. v. Cuppy, 26 Kan. 754 (1882); Riddle v. Chicago, Rock Island & Pacific Railway, 88 Kan. 248, 128 Pac. 195 (1912); Atchison, Topeka & Santa Fe Railway v. Herman, 74 Kan. 77, 85 Pac. 817 (1906); Parker v. Atchison, 58 Kan. 29 (1897); Kansas City v. King, 65 Kan. 64, 68 Pac. 1093 (1902); Clements v. Phoenix Utility Co., 119 Kan. 190, 237 Pac. 1062 (1925); Foster v. Kansas Gas & Electric Co., 146 Kan. 284, 69 P.2d 729 (1937); Broadway Mfg. Co. v. Leavenworth Terminal Rly. & Bridge Co., 81 Kan. 616, 106 Pac. 1034 (1910); Missouri Pacific Rly. v. Keys, 55 Kan. 205, 40 Pac. 275 (1885); Roland v. St. Joseph & Grand Island Railway Co., 82 Kan. 546, 108 Pac. 808 (1910); Thompson v. McDougal, 103 Kan. 373, 175 Pac. 157 (1918); Horn v. Seeger, 167 Kan. 532, 207 P.2d 953 (1949); Horn v. Seeger, 174 Kan. 194, 255 P.2d 997 (1953); Horn v. Seeger, 174 Kan. 224, 255 P.2d 1000 (1953); State of Kansas, ex rel. Fatzer v. Barnes, 171 Kan. 491, 233 P.2d 724 (1951); State of Kansas, ex rel. Fatzer v. Mills, 171 Kan. 397, 233 P.2d 720 (1951); State of Kansas, ex rel. Mitchell, v. Ross, 159 Kan. 199, 152 P.2d 675 (1944); State of Kansas, ex rel. Burton, v.

9. Present Kansas Water Appropriation Statutes

Under existing Kansas water appropriation statutes, all water within the state which includes both ground and surface water, is dedicated to the use of the people, subject to control and regulation by the state.[82] Early in life of the statute which so provided, the Supreme Court of Kansas recognized that it constituted the foundation of a new approach to water law in Kansas.[83]

Another important section provides that subject to vested rights,[84] water may be appropriated by anyone desiring to use it beneficially.[85] The same provision also provides that nothing in it shall impair the vested right of any person except for nonuse.

Under the appropriation statutes a person can acquire an appropriation right to the use of water, other than for domestic purposes, only by filing an application with, and receiving the approval of, the Chief Engineer of the Division of Water Resources of the State Board of Agriculture.[86] The statutes set out in detail the information that an applicant must furnish the Chief Engineer.[87] Regardless of whether an applicant files an application for a permit to appropriate before or after he starts to construct his diversion and use works, his priority date is fixed by the date of filing of his application in the office of the Chief Engineer.[88] The statutes also provide that each application for a permit to appropriate water, except applications for permits for domestic use, must be accompanied by an application fee of ten dollars.[89]

If an application is made in good faith, in proper form, and contains a proposal for the utilization of water for beneficial purposes within reasonable limitations, and if the proposed use will neither impair an existing water use nor prejudicially and unreasonably affect the public interest, the Chief Engineer is required to approve the application.[90] He may, however, require an applicant to modify an application to conform to the public interest to the end that the highest public benefit and maximum economic development may result from the use of the water.[91] He may also limit an applicant to an amount of water smaller than that requested.[92]

The legislature has directed the Chief Engineer to take a number of matters into consideration in ascertaining whether a proposed use will prejudicially and unreasonably affect the public interest. It has directed him to consider the area, safe yield and recharge rates of the appropriate water supply, the priority of existing claims, the amount of each claim, and all other matters pertaining to the situation.[93] It has also formulated standards concerning whether a proposed use will impair a use under an existing water right. It has done so by defining

---

Van Dyne, 159 Kan. 378, 155 P.2d 458 (1945); a case not directly involved with water; Peuker v. Canter, 62 Kan. 363, 63 Pac. 617 (1901); Cushenberry v. Waite-Phillips Co., 119 Kan. 478, 240 Pac. 400 (1925); Goering v. Schrag, 167 Kan. 499, 207 P.2d 391 (1949); Martin v. Lown, 111 Kan. 752, 208 Pac. 565 (1922); Dyer v. Stahlhut, 147 Kan. 767, 78 P.2d 900 (1938); Bolinger v. Moorhouse, 154 Kan. 124, 114 P.2d 853 (1941); Gibbs v. Williams, 25 Kan. 214 (1881); Kraus v. Strong, 170 Kan. 459, 227 P.2d 93 (1951); Jansen v. Buffalo Drainage Dist., 148 Kan. 712, 84 P.2d 961 (1938); Gentry v. Weaver, 130 Kan. 691, 288 Pac. 745 (1930); Klassen v. Regier, 195 Kan. 61, 403 P.2d 106 (1965); Rardin v. Marcotte, 194 Kan. 186, 398 P.2d 351 (1965); Simon v. Neises, 193 Kan. 343, 395 P.2d 308 (1964); Reeder v. Board of County Comm'rs., 193 Kan. 182, 392 P.2d 888 (1964); Sandstrum v. Missouri Pacific Railway Co., 39 F.2d 165 (D. Kan. 1925); Perry v. City of Wichita, 174 Kan. 264, 255 P.2d 667 (1953); Cow Creek Valley Flood Prevention Ass'n. v. City of Hutchinson, 166 Kan. 78, 200 P.2d 279 (1948); Bellah v. Phoenix Utilities Co., 7 F.2d 406 (D. Kansas 1924); Butts v. Atchison, Topeka & Santa Fe Railway Co., 135 Kan. 85, 9 P.2d 648 (1932); Thompkins v. Brown, 134 Kan. 111, 4 P.2d 454 (1931); Skinner v. Wolf, 126 Kan. 158, 266 Pac. 926 (1928); Schrag v. the Blaze Fork Drainage Dist., 119 Kan. 169, 237 Pac. 1047 (1925); Liston v. Scott, 108 Kan. 180, 194 Pac. 642 (1921); Freeman v. Scherer, 97 Kan. 184, 154 Pac. 1019 (1916); State of Kansas, ex rel. Knittle, 87 Kan. 300, 124 Pac. 160 (1912).

[82] K.S.A. 82a-702 (1964).

[83] In speaking of the section in State of Kansas, ex rel. Emery, v. Knapp, 167 Kan. 546, 207 P.2d 440 (1949), Harvey, C. J. Wrote: "This is the heart of the statute. The rest of it treats details and procedure. It forms the basis for a different approach for the solution of questions concerning water rights than we have had in some of our opinions. Heretofore we have approached the questions largely on the basis of individual interest alone. Under this declaration and other provisions of the act we now approach them upon the basis of the interest of the people of the state without losing sight of the beneficial use the individual is making or has the right to make of the water . . . . The change is an appropriate one for the legislature to make. Individuals do not live alone in isolated areas where they, at their will, can assert all of their individual rights without regard to the effect upon others."

[84] Vested rights are defined by the act as those water rights perfected on or before June 28, 1945, the effective date of the act, and those perfected within a reasonable time thereafter upon completion of development works under construction on June 28, 1945. Being rights acquired under common law or statutory provisions, they are rights to continue the use of the amounts of water, at their maximum rates of diversion, which were applied to beneficial use on or before the effective date of the act or within a reasonable time thereafter upon completion of development works under construction on the effective date of the act. K.S.A. 82a-701(d).

[85] K.S.A. 82a-703 (1964).

[86] K.S.A. 82a-705 and 82a-709 (1964)

[87] K.S.A. 82a-709 (1964) requires that the application contain information pertaining to the source of supply involved, the location of the diversion works or proposed diversion works, the quantity and maximum diversion rate desired, the estimated completion dates for proposed works, the actual or estimated dates for the first use of water from the source involved, a description of any lands to be irrigated, the population figures and estimated future requirements for any municipal use proposed, and any additional information the Chief Engineer may require.

[88] K.S.A. 82a-709 (1964).

[89] K.S.A. 82a-708a (1964).

[90] K.S.A. 82a-711 (1964).

[91] K.S.A. 82a-711 (1964).

[92] K.S.A. 82a-712 (1964).

[93] K.S.A. 82a-711 (1964).

impairment to include the unreasonable deterioration of the water quality, the raising or lowering of the static water level, and the unreasonable increase or decrease of the streamflow at the water user's point of diversion beyond a reasonable economic limit.[94]

In a separate section the legislature has further declared that appropriation rights relate to specific quantities of water and that their holders must tolerate the reasonable raising or lowering of static water levels and the reasonable increase or decrease of streamflows at those holders' points diversion.[95] Further, it has formulated guidelines for the Chief Engineer concerning whether the raising or lowering in particular areas should be regarded as reasonable.[96] It has instructed the Chief Engineer to consider the economics of diverting or pumping water for the uses sought, cautioning that nothing in its language should be taken as authorizing a denial of an application to appropriate on the ground that the diversion contemplated might cause the water level to rise or decline at the prior appropriator's point of diversion, so long as the holders of existing water rights can obtain the amounts of water to which they are entitled.[97]

A further provision requires the Chief Engineer to notify an applicant of approval or disapproval, an approval constituting a permit to proceed with the work and diversion contemplated, subject to any terms and conditions set out by the Chief Engineer.[98] In this regard, the legislature has required the Chief Engineer to limit the time within which an applicant must perfect his appropriation to a reasonable period and it has directed him to allow an extension of time for good cause shown.[99] The appropriation system requires the applicant, upon the completion of his works and the use of water as proposed, to notify the Chief Engineer of the development that has taken place, that the Chief Engineer or his representative may then, as required, examine the diversion works.[100] It also requires the Chief Engineer to issue a certificate of appropriation in duplicate if he determines that the contemplated diversion works have been completed and the appropriation right perfected in conformity with the permit.[101] It directs the applicant to record his certificate, in the same manner appropriate for other instruments affecting real estate, with the register of deeds in the county or counties where the point of diversion is located and it requires the Chief Engineer to make the duplicate a matter of record in his office.[102]

The statutory provisions discussed above provide an exclusive method for the acquisition of appropriation rights in Kansas.[103] Accordingly, they provide that no water rights of any kind may be acquired solely by adverse use, adverse possession, or by estoppel.[104] It should be noted, however, that water rights in Kansas are freely transferable and inheritable.[105]

10. Scope of Appropriation Rights

Under Kansas law an appropriation right is a water right acquired pursuant to the provisions of the appropriation statutes and preserves to its holder the right to divert from a definite water supply a specific quantity of water at a specific rate of diversion.[106] It is a real property right appurtenant to the land on or in connection with which the water to which it relates is used.[107] It is severable from the land and is freely transferable and inheritable.[108]

As to a given source of water supply, an appropriation right that is first in time is first in right.[109] Appropriation rights date from the filing of applications for appropriations with the Chief Engineer of the Division of Water Resources of the State Board of Agriculture or, in the case of appropriation rights for domestic purposes, either from the date of the filing, which is optional with a domestic user, or from the date of the first actual use of water for domestic purposes, whichever is earlier.[110] This means that appropriators are en-

---

[94] K.S.A. 82a-711 (1964).
[95] K.S.A. 82a-711a (1964).
[96] K.S.A. 82a-711a (1964).
[97] K.S.A. 82a-711 (1964).
[98] K.S.A. 82a-712 (1964).
[99] K.S.A. 82a-713 (1964).
[100] K.S.A. 82a-714 (1964).
[101] K.S.A. 82a-714 (1964).
[102] K.S.A. 82a-714 (1964).
[103] K.S.A. 82a-705 (1964). K.S.A. 82a-705a (1964) gives special treatment to the use of water for domestic purposes. It provides: "The use of water for domestic purposes instituted subsequently to June 28, 1945, to the extent that it is beneficial, shall constitute an appropriation right. The Chief Engineer, however, may require any person using water for any purpose to furnish information with regard to such use thereof."
[104] K.S.A. 82a-705 (1964).
[105] K.S.A. 82a-701(g) (1964).
[106] K.S.A. 82a-701(f) (1964). After outlining the scope of an appropriation right, this subsection adds, ". . . provided such water is available in excess of the requirements of all vested rights that relate to such supply and all appropriation rights of earlier date that relate to such supply, and to apply such water to a specific beneficial use or uses in preference to all appropriation rights of later date."
[107] K.S.A. 82a-701 (g) (1964).
[108] K.S.A. 82a-701(g) (1964). This section, which deals with and defines a water right, provides that a water right passes as an appurtenance with a conveyance of the land by deed, lease, mortgage, will, or other voluntary disposal, or by inheritance.
[109] K.S.A. 82a-707 (1964)
[110] K.S.A. 82a-707 (1964) and K.S.A. 82a-709 (1964). Also see K.S.A. 82a-705(a) (1964).

titled to water to the extent of their appropriation rights in the order in which they file their applications. Although the appropriation statutes contain a provision recognizing that certain water users are preferred over others, the priority of appropriation determines the relationship between appropriators with respect to supplies that become limited.[111] The rights of appropriators, however, are all subject to vested rights[112] as defined by the statutes.[113]

Although an appropriation right is regarded as a real property right, it is not a right to any specific, identifiable body of water.[114] In other words, an appropriation right is usufructory, a right to use water rather than a right "in water" under the usual property ownership concepts.

11. Loss of Water Rights

An appropriation right to water, even after it has been perfected in accordance with statutory requirements, may be lost. The Kansas legislature has specifically provided that the failure of an appropriator continuously to apply water to lawful purposes, for a period of three years, without sufficient cause shown for the failure, shall constitute a forfeiture and surrender of the right.[115] Similarly, a vested right may be lost or surrendered, for in another section the Kansas Ligislature has provided, "Every water right of every kind shall be deemed abandoned and shall terminate when without due and sufficient cause no lawful, beneficial use is henceforth made of water under such right for three (3) successive years."[116] The section goes on to state, however, that before any water right shall be declared abandoned, the Chief Engineer must notify the user in writing and give him an opportunity to appear at a designated time and place to show cause why his water right should not be declared abandoned.[117] After setting out the procedure to be followed by the Chief Engineer with respect to the abandonment and termination of water rights, the section provides that appeals from orders declaring abandonment and termination may be taken by the holder of the right in the manner prescribed by the section of the statutes dealing with appeals.[118]

As has been pointed out previously, Kansas statutes provide that "no water rights of any kind may be acquired hereafter solely by adverse use, adverse possession, or by estoppel."[119] They do not, however, indicate that no water rights can be lost through the operation of the usual rules pertaining to adverse use, adverse possession and estoppel.[120]

12. Access to Lakes and Streams

In a 1962 opinion the Attorney General touched upon the important problem of rights to stream use for fishing, boating, and the like.[121] It is presented in a subsequent section.[122]

In Kansas there seems to be no Supreme Court opinion delineating the various rights and duties involved in this area. Without question this is an important topic, one which deserves further detailed study and analysis. That kind of study and analysis is beyond the scope of this report.

13. Diversion Between Basins

A Kansas statute recognizes water rights as severable from the land on or in connection with which the water is used.[123] It also recognizes an appropriation right as a right to divert a specific quantity of water at a specific rate from a definite water supply.[124] The statutes do not, however,

---

[111] K.S.A. 82a-707 (1964). The section provides in part, "(b) Where uses of water for different purposes conflict such uses shall conform to the following order of preference: Domestic, municipal, irrigation, industrial, recreational, and water power uses. However, the date of priority of an appropriation right, and not the purpose of use, determines the right to divert and use water at any time when the supply is not sufficient to satisfy all water rights that attach to it. The holder of a water right for an inferior beneficial use of water shall not be deprived of his use of the water either temporarily or permanently as long as he is making proper use of it under the terms and conditions of his water right and the laws of this state, other than through condemnation."

[112] K.S.A. 82a-703 (1964).

[113] K.S.A. 82a-701(d) (1964) defines "vested right" as a right under a common law or statutory claim to continue a beneficial use instituted on or before June 28, 1945, to the extent of the quantity and rate of diversion made and includes the right to use water beneficially in the event a claimant was in the process of constructing development works on June 28, 1945, provided those works were completed and water was applied beneficially within a reasonable time by the developing person, his heirs, successors, or assigns. It does not include common law claims under which no beneficial use was ever made.

[114] K.S.A. 82a-707 (1964). The statute provides "Such appropriation shall not constitute ownership of such water, and appropriation rights shall remain subject to the principle of beneficial use."

[115] K.S.A. 42-308 (1964).

[116] K.S.A. 82a-718 (1964). K.S.A. 82a-703 (1964) also provides in part: "Nothing in this act contained shall impair the vested right of any person except for nonuse."

[117] K.S.A. 82a-718 (1964).

[118] K.S.A. 82a-718 (1964). The appeals section is K.S.A. 82a-724 (1964).

[119] K.S.A. 82a-705 (1964).

[120] For a discussion of the loss of appropriation rights by abandonment, statutory forfeiture, adverse use, and estoppel, see Hutchins, Selected Problems in the Law of Water Rights in the West, 389 (1942).

[121] III Opinions of the Attorney General 355 (1963), Opinion No. 62-15 (Feb. 1, 1962), 10 Kan. L. Rev. 625 (1962).

[122] See the section of this report entitled "Opinions of the Attorneys General of Kansas."

[123] K.S.A. 82a-701(g).

[124] K.S.A. 82a-701(f) (1964).

place limitations on use or right transferability in terms of the basins in which users first divert water. In fact, one provision specifically provides, "Any owner of a water right may change the place of use, the point of diversion, or the use made of the water, without losing his priority of right."[125] It goes on to outline the procedures required for effecting changes. In doing so, it does not specifically preclude "trans-basin diversions."

Discussions with the office of the Chief Engineer of the Division of Water Resources of the State Board of Agriculture as late as of June of 1967[126] reaffirm the opinion that there is nothing in the Kansas Water Appropriation statutes that would prohibit "trans-basin diversions." As far as the Chief Engineer could recall on that date "no water rights have been granted in Kansas for diversion of water from one major river basin to another although such a right would probably be granted. This disregards the Russell diversion of Smoky Hill water into Big Creek and the Wichita diversion of Ninnescah River water into the Arkansas at Wichita."[127]

Opinions of the Attorneys General of Kansas

1. Introduction

In recent years the Attorneys General of Kansas have written a number of opinions relating to water resource problems. Many of them have related to questions of limited scope. Some have resulted in legislative change. A number of them have related to issues of important public and private concern. This report deals with a few of the more significant opinions.

2. Riparian Rights

In 1962, the Attorney General of Kansas expressed the opinion that any owner of land through which a non-navigable stream flows has the right to construct a fence across the stream, the public having no inherent right to travel over and fish in the stream.[128] In reaching this conclusion, he stated that "the rights of the public to travel through and fish in a stream are determined by a test similar to that of this state for navigability."[129] Said the Attorney General, "The test of navigability as defined in Webb v. Neosho County Commissioners, 124 Kan. 38, 257 Pac. 966, and cases cited therein, is whether the stream is susceptible to use for the purpose of transporting people and commerce."[130] He went on to stress, "The mere fact that over a certain portion of a stream a small boat, such as used for fishing, can travel does not make the stream navigable."[131] The Attorney General noted, however, that he had not found that the Kansas courts had ever approached the exact question dealt with in the opinion which concerned the land-owner's right to fence a non-navigable stream flowing through his property.[132]

In the same opinion, the Attorney General expressed the view that the parts of Chapter 32, Article 1 of the General Statutes of 1949, (Kan. G. S. 1949, 32-138 and Kan. G. S. 1949, 32-143) prohibiting a person from entering upon the premises of another to hunt, fish, or loiter without permission of the owner or person in possession of the land, apply to entry by boat upon a stream passing through the land.[133] Those sections[134] have since been repealed[135] and replaced by an amended section specifically mentioning "fenced premises."[136]

The Attorney General, not surprisingly, recently recognized that the Kansas River is a navigable stream and that the title to its bed is in the State.[137] He stated that he has found no statutes

---

[125] K.S.A. 82a-708(b) (1964).

[126] See letter of June 15, 1967, to Professor Earl Shurtz, Lawrence, Kansas, from W. E. Steps, Assistant Chief Engineer, Water Resources Board, Topeka, Kansas.

[127] Ibid. The letter also pointed out the incontestable proposition that "a proposal to make a trans-basin diversion would need to be considered in light of provisions of existing compacts which involve the basins in question."

[128] III Opinions of the Attorney General 355 (1963), Opinion No. 62-15 (Feb. 1, 1962), 10 Kan. L. Rev. 625 (1962).

[129] III Opinions of the Attorney General 355 (1963), Opinion No. 62-15 (Feb. 1, 1962), 10 Kan. L. Rev. 625 (1962).

[130] III Opinions of the Attorney General 355 (1963), Opinion No. 62-15 (Feb. 1, 1962), 10 Kan. L. Rev. 625 (1962).

[131] Ibid.

[132] The opinion cited "Right of Public to Fish in Stream Notwithstanding Objection by Riparian Owner," Annot., 47 A. L. R.2d 381 (1956), which reveals a diversity of approaches. Also see Johnson and Austin, "Recreational Rights and Titles to Beds on Western Lakes and Streams," 7 Nat. Res. J. 1 (1967), and Johnson, "Riparian and Public Rights to Lakes and Streams," 35 Wash. L. Rev. 580 (1960).

[133] III Opinions of the Attorney General 355 (1963), Opinion No. 62-15 (Feb. 1, 1962), 10 Kan. L. Rev. 625 (1962).

[134] Kan. G. S. 1949, 32-138 and Kan. G. S. 1949, 32-143.

[135] Kan. Laws 1963, Ch. 246 § 2.

[136] Kan. Laws 1963, Ch. 246 § 1; K.S.A. 32-142 (1964). The section now provides, in part, "That it shall be unlawful for any person to enter upon the fenced, occupied, grazed, posted, or cultivated premises of another person and fish, trap or hunt with dog or gun, thereon, or loiter thereon, or wound, kill or take thereon any fish, wild bird, game bird, game or fur-bearing animals, or domestic fowl or animals, without the permission of the owner or person in lawful possession thereof having been first obtained." The section then declares that a violation constitutes a misdemeanor and it provides penalties upon conviction.

[137] IV Opinions of the Attorney General 243 (1965), Letter of June 3, 1963. The opinion cites State of Kansas, ex rel., Dawson v. Akers, 92 Kan. 169, 140 Pac. 637 (1914), affirmed, Wear v. Kansas, 245 U. S. 154 (1917); and The Kaw Valley Drainage District v. The Missouri Pacific Railway Co., 99 Kan. 188, 161 Pac. 937 (1916).

or precedents, however, declaring the Verdigris River to be navigable in Kansas.[138] He also concluded that the legislature had retained control over the beds of navigable rivers for purposes other than the removal of sand, gravel, minerals, and other products.[139] Consequently, he reasoned, specific enabling legislation would be essential to the validity of any lease of the bed of the Arkansas River for the construction of business properties upon structures over it.[140]

The Attorney General also concluded that the state auditor was empowered by statute to sell lands in an abandoned channel of the Missouri River, a navigable stream, for the benefit of the school fund and that the auditor was authorized to convey a clear title to the lands.[141] He observed that Kan. G. S. 1949, 24-454, now K.S.A. 24-454 (1964), enacted in 1905, provided that the title of land between the banks of an abandoned "navigable watercourse" rests in certain drainage districts. He also observed that Kan. G. S. 1949, 72-2142 "et seq." (1964), enacted in 1921, provided that the title to land between the banks of an abandoned "navigable stream" vests in the State of Kansas and that such lands are to be sold for the benefit of the state school fund. Where conflicts exist, he noted, the latest legislative expression controls and specific statutes control general statutes. He insisted that the later statute was narrower and more specific in scope than the earlier provision and that, therefore, it was controlling.[142]

Relying primarily on two cases decided by the Supreme Court of Kansas[143] and one provision enacted by the legislature,[144] the Attorney General observed that the owner of land contiguous to the bed of a navigable river can acquire title to a portion of the bed by accretion even though the title to the bed was originally in the State.[145] According to the opinion, if accretion has occurred, the acquired land is subject to assessment and taxation, no recorded deed being necessary inasmuch as statutory provisions[146] provide methods for obtaining correct descriptions for tax roll purposes.

3. Littoral Rights

In 1960 the question arose whether the Forestry, Fish and Game Commission had the authority to grant to the city of Buffalo the right to take and use for municipal water supply purposes water impounded in the Commission's nearby lake. In response to the question, the Attorney General said that it was doubtful in the absence of specific legislative authority.[147] Noticing the absence of Kansas decision on the subject, he observed that under the common law a lake or pond located entirely on a single tract belonged as an appurtenance to the owner of the land and that the Commission was subject to the rules that would apply under the law of real property.[148]

A short time ago the Attorney General took the position that the Greenwood County Commissioners had no authority to terminate the rights of the public to enter land and take water from a reservoir on that land during emergencies after a former owner had dedicated those rights to the public. He observed that when no private rights had intervened, the legislature, although it had not done so, might authorize the County Commissioners to alienate the rights created for the public benefit.[149]

Finding no conflict between a statute providing that a county could establish and maintain a county public lake and recreational grounds and facilities at a cost not to exceed $150,000 (exclusive of donations and bequests)[150] and a statute providing that a county could establish and maintain a county public park and recreation grounds at a cost not to exceed $100,000 (exclusive of donations and bequests),[151] the Attorney General

---

138 Kan. Att'y. Gen. Ops., Letter Aug. 1, 1958, to the Hon. George Robb, State Auditor.

139 Kan. Att'y. Gen. Ops., Letter of June 14, 1962, to the Executive Council, State of Kansas.

140 Ibid. Starting with the recognized principle that the control of state property is in the legislature unless that body has delegated control to some state agency, citing Consumers Sand Co. v. Executive Council, 126 Kan. 233, 268 Pac. 123 (1928), he proceeded to examine the various state statutes having a bearing on the problem of state control.

141 IV Opinions of the Attorney General 121 (1965), Opinion dat d May 22, 1963.

142 Ibid. In support of the rule that a specific statute controls a general statute, the Attorney General cited Wulf v. Fitzpatrick, 124 Kan. 642, 261 Pac. 838 (1927).

143 Fitzpatrick v. Bernritter, 130 Kan. 356, 285 Pac. 233 (1930); and Pessemier v. Nichols, 153 Kan. 267, 109 P.2d 205 (1941).

144 Kan. G. S. 1949, 72-2128, now K.S.A. 72-2128 (1964).

145 IV Opinions of the Attorney General 243 (1965), Letter of June 3, 1963.

146 Kan. G. S. 1961 Supp., 79-408–79-410. These provisions are now K.S.A. 79-408–79-410 (1964).

147 II Opinions of the Attorney General 266 (1962), Letter of March 23, 1960.

148 Ibid. The safest plan, said the Attorney General, would be to obtain express legislative authority as was done with respect to the cities of Oberlin and Ulysses in Kan. G. S. 1959 Supp., 74-3319a and 74-3319b, which are now K.S.A. 74-3319a and 74-3319b (1964). The reader might also consult K.S.A. 74-3321 (1964), which authorized and directed the Forestry, Fish and Game Commission to convey certain well easements to Garden City, Kansas.

149 Kan. Att'y. Gen. Ops., Letter of December 16, 1964 to David W. Kester, Greenwood County Attorney, Eureka, Kansas.

150 The opinion cited H.B. No. 242, which became Kan. Laws 1963, Ch. 188. It is now found as K.S.A. 19-2803c to 19-2803f (1964).

151 Kan. G. S. 19-2801 (1961 Supp.). The section was amended materially by Kan. Laws 1965, Ch. 173, §1. The amended provision now appears as K.S.A. 19-2801 (1965 Supp.).

held that a county could establish both a county park under the one statute and a county lake under the other statute.[152] In the course of his opinion, he also discussed briefly the times for holding the elections dealt with in the statutes.

4. Ground Water Rights and Powers

About 10 years ago the Attorney General addressed himself to a proposal by a holder of "vested right permits"[153] to replace one of the wells encompassed by its determined vested right at a location on land acquired after the establishment of the vested right and to install additional wells on lands described in its application for the original determination of its vested rights.[154] He concluded that the user needed an additional permit for wells that were to be located on premises other than those described in the original order but not for the contemplated wells that were to be located on the land described in the application or order previously entered.

Previously, the Attorney General had held that a statute authorizing cities of the second class to condemn water supplies[155] was sufficient to authorize a city wanting to expand its water supply to condemn a right to drill test wells for exploration purposes.[156] He suggested that an express grant of power carries with it an implied grant that is necessary for its exercise.

5. Water Rights and Powers Concerning Lands and Roads

In 1946 the Attorney General, relying on two Kansas cases[157] construing two Kansas statutes,[158] was of the opinion that statutory authority existed whereby county commissioners could acquire lands for the purpose of erecting dikes and driving piles to prevent stream water from impairing roads by washing into and over them.[159] He noted, however, that if the dikes or piles would obstruct the water of the stream or change its flow, it might be necessary to obtain the approval of the "Chief of Water Resources of Kansas"[160] to erect the dike in accordance with statutory requirements.[161] Three and a half years earlier he had written that just as a landowner may prevent surface water, as distinguished from water in a natural watercourse, from flowing onto his land, a township may construct a dam and divert the flow of surface water along a township road.[162]

More recently it appeared that construction of a contemplated watershed dam would inundate an upstream county bridge that was badly in need of repair and inadequate for county needs and that the county commissioners were concerned about what share of the costs the watershed district should bear as damages for the inundation of the bridge. Observing that by statute[163] the county commissioners are empowered to replace the bridge, the Attorney General wrote:

> . . . The county engineer should estimate the cost of replacing the bridge at the present grade. Then the cost of relocation of the bridge at a grade which will be above the level of the watershed district lake should be determined. The difference between these two cost estimates would be a proper measure of the damages to the county caused by the necessity of relocating the road and bridge. If the county commissioners, on the other hand, determine that the present bridge is adequate and should be repaired, the difference between the cost of repair and the cost of relocation would be a proper measure of the damages.[164]

Concerning the State Highway Commission, the Attorney General concluded that it had been validly authorized by statute[165] to build roads within the Kanopolis Reservoir area in cooperation with the State Park Authority if in the exercise of its discretion it deemed the construction necessary.[166]

---

[152] IV Opinions of the Attorney General 92 (1965), Opinion No. 63-43 (June 4, 1963).

[153] See K.S.A. 82a-701, 82a-704, and 82a-717a (1964).

[154] Kan. Att'y. Gen. Ops., Letter of Feb. 15, 1957, to R. V. Smrha, Chief Engineer, Division of Water Resources, Kansas State Board of Agriculture.

[155] Kan. G. S. 1949, 14-701. Last amended by Kan. Laws 1963, Ch. 234, § 36, the statute is now found as K.S.A. 14-701 (1964).

[156] Kan. Att'y. Gen. Ops., Letter of May 14, 1954, to W. M. Ferguson, City Attorney, Wellington, Kansas.

[157] Balliet v. Clay County, 115 Kan. 99, 222 Pac. 132 (1924), and Breedlove v. Wyandotte County Commissioners, 127 Kan. 754, 275 Pac. 379 (1929).

[158] Kan. G. S. 1935, 68-114 and 68-115. These statutes now appear as K.S.A. 68-114 to 68-115 (1964).

[159] Kan. Att'y. Gen. Ops., Letter of Nov. 15, 1946, to O. M. Wheat, County Attorney, Medicine Lodge, Kansas.

[160] The Attorney General was undoubtedly referring to the Chief Engineer of the Division of Water Resources of the Kansas State Board of Agriculture.

[161] Kan. G. S. 1935, 82a-301, now K.S.A. 82a-301 (1964). Eighteen years later the Supreme Court of Kansas confirmed his speculation in Reeder v. Board of County Commissioners, 193 Kan. 182, 392 P.2d 888 (1964).

[162] Kan. Att'y. Gen. Ops., Letter of April 21, 1943, to W. S. Barackman, Acting County Engineer, Eureka, Kansas. Although its forerunner was not mentioned in the opinion, K.S.A. 24-105 (1964) should be consulted with reference to the problem.

[163] Kan. G. S. 1961 Supp., 68-1103, now K.S.A. 68-1103 (1964).

[164] Kan. Att'y. Gen. Ops., Letter of May 21, 1964, to Dean Matthew, Chautauqua County Attorney, Sedan, Kansas.

[165] Kan. G. S. 1957 Supp., 74-4511, now K.S.A. 74-4511 (1964).

[166] I Opinions of the Attorney General 212 (1961), Letter of September 14, 1959.

After discussing a number of judicial decisions, he stated that "the legislature may provide for the construction of highways, as a part of the 'state system of highways' which are not part of the 'state highway system' established under G. S. 1957 Supp., 68-406,[167] and such highways are not internal improvements forbidden to be made by the state under Article 11, Section 9 of the Kansas Constitution." [168] He further concluded that neither the federal ownership of lands leased to the State Park Authority nor the Authority's jurisdiction over any roads built[169] constituted automatic barriers to the authority of the State Highway Commission.[170]

The Attorney General also recently considered the power of the legislature to charge state park permit fees for access roads to water projects on federally owned lands[171] and the necessity of affirmative action on the part of the Federal Government for the establishment of exclusive federal jurisdiction over federally owned lands and reservoirs.[172] In a short opinion, the Attorney General wrote as follows:

> QUESTION: Does the State of Kansas have law enforcement jurisdiction around the federal reservoir located within the boundaries of this state? ANSWER: Yes.
>
> The general rule concerning the establishment of exclusive jurisdiction over federally owned land is that such exclusive jurisdiction does not arise without an affirmative act on the part of the Federal Government. With respect to the federal reservoirs in Kansas there is no record of such acceptance of exclusive jurisdiction.
>
> This question arises because of the provision in G. S. 1949, 27-102 giving exclusive jurisdiction to the United States over lands acquired by it within Kansas. Read alone, that section of the state laws would divest the state of jurisdiction over any and all territory acquired by the Federal Government. However, G. S. 1949, 27-102 (L. 1927, Ch. 206, sec. 2) must be read in connection with a statute of the United States enacted in 1940 now appearing as Title 40, U.S.C.A. section 255, which provides that the United States is not presumed to accept such a cession of jurisdiction and that the United States does not in fact take jurisdiction until the head of the federal department or agency having control over particular lands has notified the governor of the state that the United States has accepted jurisdiction. (See **State v. Burrell**, 256 N.C. 2d 288, 123 S.E.2d 795; cert. denied 370 U. S. 961, 8 L. Ed. 2d 827, 82 S. Ct. 1621 (1962).)[173]

6. Agency Liability

In another opinion the Attorney General concluded that in the absence of a special statute creating liability, the Kansas State Park and Resources Authority, under the principle of sovereign immunity, would not be liable for injuries suffered by invitees and licensees using its property and facilities.[174] He suggested that the Authority's liability for tort would be governed by the principles applicable to the State Highway Commission. He noted, however, that although there exists specific statutory authority to sue the State Highway Commission in tort,[175] no special authority exists in the statutes creating the State Park and Resources Authority.[176]

7. District Agreement Authority

In 1960 the Attorney General was asked whether an irrigation district created in accordance with the Kansas statutes[177] had the authority to enter into an agreement with the United States Bureau of Reclamation for the construction of an irrigation project consisting of a dam and reservoir and not including a conventional canal and lateral system for the distribution of water for irrigation purposes. In answering affirmatively, the Attorney General observed that irrigation districts had received very broad authority to determine what project facilities would be the most feasible in a given case and that their discretion was limited

---

[167] This section, as last amended in Kan. Laws 1961, Ch. 302 § 1, is now found as K.S.A. 68-406 (1964).

[168] Id. at 213.

[169] Kan. G. S. 1957 Supp., 74-4511 was the jurisdictional statute cited. It is now K.S.A. 74-4511 (1964).

[170] It should be noted that the legislature has made a number of important amendments and additions to the provisions involved since the Attorney General's opinion under discussion. For example, see K.S.A. 74-4510 and 74-4527 to 74-4535 (1965 Supp.).

[171] IV Opinions of the Attorney General 203 (1965), Letter of March 11, 1963.

[172] IV Opinions of the Attorney General 136 (1965), Opinion No. 63-88 (Oct. 30, 1963).

[173] IV Opinions of the Attorney General 136 (1965), Opinion No. 63-88 (Oct. 30, 1963).

[174] I Opinions of the Attorney General 246 (1961), Letter of June 18, 1959.

[175] Kan. G. S. 1949, 68-419. The section was last amended in Kan. Laws 1957, Ch. 359, § 1, and now appears as K.S.A. 68-419 (1964).

[176] The statutes cited were Kan. G. S. 1957 Supp., 74-4501 to 74-4526. For the existing statutes, see K.S.A. 74-4501 to 74-4509 and 74-4511 to 74-4526 (1964); and, K.S.A. 74-4509a, 74-4510, and 74-4527 to 74-4535 (1965 Supp.).

[177] Those involved were cited as Kan. G. S. 1949, 42-701 et seq. The existing provisions are now found at K.S.A. 42-701--42-730 (1964).

only by the requirement that they submit plans to, and secure the approval of, the Chief Engineer of the Division of the Water Resources of the State Board of Agriculture at each step of the way.[178]

In a 1963 opinion, the Attorney General expressed the belief that no Congressional consent was necessary to an agreement between a Kansas watershed district and an Oklahoma agency for the construction of a floodwater detention structure in Oklahoma.[179] He went on to note that if it were thought necessary or advisable to obtain Congressional consent, such consent had already been manifested by the terms of the Watershed Protection and Flood Prevention Act[180] and would be confirmed when Congress approved the work plan for the watershed projects.

8. Feedlot Regulation and Permit

In November of 1966, the Kansas Department of Health formulated proposed rules and regulations for the control of agricultural wastes, aiming primarily to control wastes from feedlot operations under a permit system.[181] On January 27, 1967, the Attorney General disapproved the proposed rules.[182] He recognized that by statute[183] the Board of Health had the responsibility of establishing rules to govern the disposal or escape of sewage wastes and that it might establish minimum steps to prevent the escape of sewage wastes into the waters of the state. He further noted that under another provision,[184] aside from its authority to adopt rules, the Board could, on a case-by-case basis, require the treatment or disposition of sewage or materials found to be polluting the waters of the state. On the proposed rules, however, his position was that "to be able to require registration of feed lots or to establish, require and issue permits for water pollution control facilities, the Board of Health would need further legislative action."[185]

In response to the opinion, two bills were enacted.[186] In April of 1967, the Attorney General discussed both provisions.[187] He found that the first bill[188] gives the State Board of Health the authority to require specific pollution control measures for individual pollution sources for the protection of the waters of the state. He further found that the bill provides for the issuance of permits for the discharge of sewage to persons, companies, corporations, institutions, and federal agencies,[189] in addition to those persons formerly specified.[190] Lastly, he found that nothing in the other bill,[191] which dealt with livestock feed lots, interfered in any way with the authority of the State Board of Health to require specific measures or to issue sewage discharge permits.[192] Further, he found the newly submitted regulations of the State Board of Health[193] to be in proper form.[194] He did urge, however, that the Board delineate "in the most specific terms possible the geographic area to be regulated, the beneficial water uses and the water quality standards criteria."[195]

9. Rural Water Districts

According to the Attorney General, a rural water district organized pursuant to the statute[196] may be composed of two or more non-contiguous areas.[197] Moreover, he said, a village, military installation, or single tract may be excluded in the event the appropriate board of county commis-

---

178 II Opinions of the Attorney General 187 (1962), Letter of Feb. 5, 1960.

179 Kan. Att'y. Gen. Ops. Letter of July 24, 1963, to Thad Kinnaman, Big Caney Watershed District, Cedar Vale, Kansas.

180 See 16 U.S.C. § 1001, § 1003 to § 1009 (1964) and 16 U.S.C. § 1002 (Supp.I., 1964).

181 See proposed Kansas Administrative Regulations 28-18-1 through 28-18-4, dated January 17, 1967, from the offices of the Kansas State Board of Health, Topeka, Kansas.

182 Kan. Att'y. Gen. Ops., Letter of Jan. 27, 1967, to Robert M. Corbett, Attorney, Kansas State Board of Health.

183 K.S.A. 65-171d (1964), which was amended by Kan. Laws 1967, Ch. 333, § 4.

184 K.S.A. 65-164 (1964).

185 Kan. Att'y. Gen. Ops., Letter of Jan. 27, 1967, to Robert M. Corbett, Attorney, Kansas State Board of Health.

186 House Bill No. 1497 became Kan. Laws 1967, Ch. 333. It amended K.S.A. 65-165 to 65-167, 65-171d, and 65-171h (1964), and repealed K.S.A. 65-168 and 65-171 (1964).

187 Kan. Att'y. Gen. Ops., Letter of April 21, 1967, to Hugh E. Dierker, M.D., M.P.H., State Health Officer, The Kansas State Department of Health; Kan. Att'y. Gen. Ops., Letter of April 24, 1967, to Hugh E. Dierker, M.D., M.P.H., State Health Officer, Kansas State Department of Health.

188 House Bill No. 1497, now Kan. Laws 1967, Ch. 333.

189 Kan. Laws 1967, Ch. 333, §§1, 2, and 3.

190 See K.S.A. 65-165 (1964) before its amendment by Kan. Laws 1967, Ch. 333, § 1.

191 Senate Bill No. 358, which became Kan. Laws 1967, Ch. 295.

192 Kan. Att'y. Gen. Ops., Letter of April 24, 1967, to Hugh E. Dierker, M.D., M.P.H., State Health Officer, Kansas State Department of Health. Said the opinion, "Senate Bill No. 358 contains the provision that nothing in that act shall be construed as limiting the authority of the State Board of Health in matters of stream and lake pollution. As long as the Board of Health concerns itself with the regulation of stream and lake pollution control as provided in K.S.A. 65-161 to 65-171(h), we foresee no limitation or interference by the livestock sanitary commissioner."

193 See Kansas Adm. Regulations, Kansas State Board of Health, 28-18-1 to 28-18-4 (1967).

194 Kan. Att'y. Gen. Ops., Letter of April 21, 1967, to Hugh E. Dierker, M.D., M.P.H., State Health Officer, The Kansas State Department of Health.

195 Ibid.

196 Kan. G. S. 1963 Supp., 82a-614. Since its amendment by Kan. Laws 1965, Ch. 556, § 1, the appropriate provision is K.S.A. 82a-614 (1965 Supp.).

197 IV Opinions of the Attorney General 250 (1965), Opinion No. 63-55, July 23, 1963.

sioners determines that exclusion will promote the public health, convenience, and welfare.[198] A rural water district, he wrote, has no authority, by contract or otherwise, to serve residents of another state although it could be authorized by the legislature to serve such residents.[199] Had the legislature intended to authorize districts to serve nonresidents, said the Attorney General, it probably would have so provided in K.S.A. 82a-621 (1965 Supp.), the only specific provision in the rural water district act authorizing districts to serve nonparticipating members.[200]

In 1962 the Attorney General had occasion to inquire into the statutory authority of rural water districts relative to financing. Although the applicable statute[201] stressed the power of a rural water district to enter into cooperative agreements with the Secretary of Agriculture, it went on to state that a district "shall have power to acquire loans for the financing of up to ninety percent (90%) of the cost of the construction or purchase of any project or projects necessary to carry out the purposes for which such district was organized . . ."[202] The Attorney General stated that he did not believe the section restricted districts to the acceptance of financial aid from the Secretary of Agriculture.[203] To hold a district so limited, he said, would prohibit the fulfillment of the purposes underlying the rural water district act.

In another opinion he outlined what he believed should be considered expenses incurred by a rural water district in connection with the construction and installation of a water system within the phrase "the cost of the construction" as used by the statute.[204] "It would be our view," he wrote, "that all expenses incurred by the water district in connection with the construction and installation of the water system, together with the legal fees for water pertaining to the construction, engineering fees for the preliminary survey, land acquisition, right-of-way costs and interest on any construction loan made to finance the construction, would be within the phrase 'the cost of construction'."[205]

He went on to note that legal fees incurred in connection with the organization of a watershed district could not properly be listed as costs of construction. He also wrote that it would be against public policy for a district's board of directors to contract for the services of one of its members as a maintenance man.[207] In construing a statutory provision relating to watershed districts,[208] he reached a similar conclusion, holding that public policy prohibited its board of directors for the performance of the work of the watershed district.[209]

Concerning methods of financing rural water districts, he wrote that under one statute[210] a district may borrow money not to exceed 90 percent of construction or purchase costs, with certain exceptions, and under another statute[211] a district may issue revenue bonds up to 100 percent of the costs, and that the financing methods are separate and alternative, the statute relating to borrowing being inapplicable to the statute relating to the issuance of bonds.[212]

The Attorney General held that a rural water district should not charge a sales tax on the monthly portion of each water bill charged to each benefit unit owner of the district for the interest payable on the mortgage debt owed to the Farmers Home Administration, which had financed the district, inasmuch as the interest charge was not a sale of water or other things.[213] He pointed out that when the district built its plant the contractor or builder had paid sales taxes on the construction items.[214]

10. Watershed Districts

In 1963 the Attorney General wrote that there were no specific statutory grants of power to watershed districts to relocate roads inundated by district projects, that boards of county commissioners had exclusive jurisdiction to locate, lay out,

198 Ibid.
199 Kan. Att'y. Gen. Ops., Letter of Sept. 30, 1966, to Rep. Bill Fribley, Crestline, Kansas.
200 Ibid.
201 K.S.A. 82a-619 (1964).
202 K.S.A. 82a-619 (1964).
203 Kan. Att'y. Gen. Ops., Letter of Jan. 10, 1964, to Samuel C. Jackson, Attorney, Grandview Kansas Rural Water District, Grandview, Kansas.
204 The section considered was Kan. G. S. 1959 Supp., 82a-619. Although it was amended by Kan. Laws 1963, Ch. 512, § 4, the words in question were not changed. The statute now appears as K.S.A. 82a-619 (1964).
205 II Opinions of the Attorney General 313 (1962), Letter of April 21, 1960.
206 Ibid.
207 Kan. Att'y. Gen. Ops., Letter of Feb. 20, 1963, to James F. Swoyer, Jr., Jefferson County Attorney, Oskaloosa, Kansas.
208 Kan. G. S. 1957 Supp., 24-1210, now K.S.A. 24-1210 (1964).
209 Kan. Att'y. Gen. Ops., Letter of Jan. 22, 1959, to Bernie D. Frigon, County Attorney, Cimarron, Kansas.
210 The section was Kan. G. S. 1959 Supp., 82a-619. Amended by Kan. Laws 1963, Ch. 512, § 4, it now appears as K.S.A. 82a-619 (1964).
211 The section was Kan. G. S. 1959 Supp., 82a-625. It now appears as K.S.A. 82a-625 (1964).
212 Kan. Att'y. Gen. Ops., Letter of June 2, 1961, to Wesley M. Norwood, County Attorney, Lawrence, Kansas.
213 IV Opinions of the Attorney General 240 (1964), Letter of Aug. 26, 1963.
214 Ibid. "The sales tax having once been paid by the consumers on the plant," wrote the Attorney General, "there is no justification or reason to pass it on to the water user. (See Southwestern Bell Tel. Co. v. State Commission on Revenue and Taxation, 168 Kan. 227, 233.)." The parallel citation is 212 P.2d 363 (1949).

and alter roads, and that township officers had the duty to improve township roads.[215] At the same time he insisted that watershed districts must reimburse other municipal corporations or quasi-corporations for lands taken for their projects.

Some time back the Attorney General also wrote an opinion concerning the mutual responsibilities of a city and a watershed district.[216] In it he stated that, like a private citizen, a city owes no duty to others to construct sewers for the disposal of surface water but that when it undertakes to do so, as it may pursuant to statutory authority, it must construct sewers and dikes in such a way that they do not invade the rights of private landowners. He then wrote that although a city may enter into an agreement with a watershed district for the mutual benefit of the two bodies, it retains its duty to maintain its drainage system notwithstanding that it is included in a watershed district.

The office of the Attorney General recently noted that improvement districts authorized by statute[217] are not to be treated as incorporated cities in applying those watershed statutes that deal with provisions for including and excluding cities from watershed districts.[218] Because one of the improvement district statutes specifically provided that "no lands shall be included within said *district which lie within* the limits of any incorporated city,"[219] the office concluded that the legislature intended improvement districts to be considered entities separate and apart from incorporated cities.[220]

In another opinion[221] the Attorney General took the position that after a city has approved a proposition that it be included in a watershed district by extension of the district in accordance with the election and transmittal requirements of the statutes,[222] no second election is necessary under the special election statute relating to the formation of districts.[223] He had occasion earlier to express the opinion, however, that any election for the formation of a watershed district under that statute;[224] when one is necessary, can be conducted at the same time as a general election.[225]

In the course of an opinion concerning the number of signatures required for a petition to protest the adoption of a general plan of work and projects to be undertaken by a district,[226] he concluded that when landowners have used the petition method to create a watershed district,[227] the result is the same as though the landowners had used the election method[228] and a number in excess of 20% of the petition signers would be sufficient under the protest statute[229] to require the calling of a special election. In another opinion he concluded that the protest statute, which does not specifically provide the form in which the proposition is to be submitted, should state in substance "shall the general plan approved by the board and the Chief Engineer be adopted?" and that, because passage requires a majority vote, a tie vote must be construed as a failure to adopt, there being no provision in the statute for resolving a tie vote.[230]

Elsewhere the Attorney General noted that as long as a majority of the qualified owners of irrigable lands within a proposed watershed district make application for the formation of a district and secure the approval of the Chief Engineer of the Division of Water Resources of the State Board of Agriculture, dissatisfied owners of lands included

---

[215] IV Opinions of the Attorney General 122 (1965), Opinion No. 63-14 (Feb. 22, 1963). The Attorney General dealt with Kan. G. S. 1961 Supp., 24-1202(c), which defined land, and now appears as K.S.A. 24-1202(c) (1964), and Kan. G. S. 1961 Supp., 24-1209, Eighth, which dealt with district power to acquire land and, since its amendment in Kan. Laws 1963, Ch. 234, § 69, now appears as K.S.A. 24-1209, Eighth (1964).

[216] Kan. Att'y. Gen. Ops., Letter of Nov. 27, 1956, to Bernie D. Frigon, Attorney, Cimarron, Kansas.

[217] K.S.A. 19-2753 (1965 Supp.), and K.S.A. 19-2757 to 19-2765 (1964).

[218] Kan. Att'y. Gen. Ops., Letter of Dec. 8, 1966, to Warden L. Noe, Attorney, State Board of Agriculture. The watershed statutes directly involved were K.S.A. 24-1202 and 24-1205 (1964).

[219] The statute cited was K.S.A. 19-2753 (1965 Supp.). The words quoted however, constitute the last sentence of K.S.A. 19-2754 (1965 Supp.), which was apparently the statute contemplated.

[220] The opinion also noted that the powers of the improvement districts contemplated were not the same as those of incorporated cities.

[221] Kan. Att'y. Gen. Ops., Letter of Oct. 14, 1964, to David A. Brace, Attorney, Moline, Kansas.

[222] Kan. G. S. 1961 Supp., 24-1205, 24-1206, and 24-1227, which statutes are now K.S.A. 24-1205, 24-1206, and 24-1227 (1964).

[223] Kan. G. S. 1961 Supp., 24-1207, now K.S.A. 24-1207 (1964).

[224] Kan. G. S. 1961 Supp., 24-1207, now K.S.A. 24-1207 (1964).

[225] Kan. Att'y. Gen. Ops., Letter of Aug. 9, 1958, to John S. May, Attorney, Atchison, Kansas.

[226] Kan. Att'y. Gen. Ops., Letter of July 22, 1958, to Howard M. Immel, Attorney, Iola, Kansas.

[227] The sections mentioned were Kan. G. S. 1957 Supp., 24-1205 and 24-1206. Since their amendment in 1959 and 1961 they now appear as K.S.A. 24-1205 and 24-1206 (1964). Both Kan. G. S. 1957 Supp., 24-1205 and K.S.A. 24-1205 (1964), its amended successor, contain the following language: "Before any watershed district shall be organized, a petition shall be filed in the office of the secretary of state, signed by not less than twenty percent (20%) of the landowners and representing twenty-five percent (25%) of the acreage within said proposed district to be selected by the first ten (10) signers of the petition."

[228] Kan. G. S. 1957 Supp., 24-1207. Since its amendment in 1959 and 1961, the statute now exists as K.S.A. 24-1207 (1964). Both of the sections require a favorable vote of a majority of those voting on the proposition for the creation of a district.

[229] Kan. G. S. 1957 Supp., 24-1215. Amended in 1959 and 1961, the appropriate statute is now K.S.A. 24-1215 (1964).

[230] Kan. Att'y. Gen. Ops., Letter of March 18, 1955, to Harry T. Coffman, Attorney, Lyndon, Kansas.

within district boundaries have no right to object to the inclusion of their lands in the district.[231]

In considering the watershed district statute providing for the initiation of proceedings to organize a district by a petition "signed by not less than twenty percent (20%) of the landowners and representing twenty-five percent (25%) of the acreage within said proposed district,"[232] the Attorney General took the view that "landowners" include all persons who have a proprietary interest in the lands involved, including all joint tenants and tenants in common, not merely owners who actively operate farms.[233]

He also dealt with an inquiry involving objections to a watershed district election at which materials recommending approval of a general plan were allegedly distributed from the table where the poll books and ballots were located. In responding, he found that the general election laws relating to electioneering near polling places[234] would apply inasmuch as they contained no provision indicating that they were not applicable to all elections.[235]

An eligible voter in a watershed district bond election relating to improvements to be paid for by special assessment levied against benefited lands, according to the Attorney General, "must be either a landowner, against whose land the special assessment would be assessed, and a qualified elector of the district; or a non-resident landowner against whose land the special assessment will be levied and over 21 years of age."[236] In the same opinion, the Attorney General said that a voter at a watershed district election is not required to vote at the polling place provided in the county where the voter lives but may vote at any voting place in the district.[237]

So far as employment was concerned, the Attorney General found that the statute pertaining to the service of watershed district directors without compensation but with an allowance for their natural and necessary expenses[238] appeared to prohibit a watershed district from employing a member of its board of directors and paying him a salary for the performance of district work.[239] He observed that in the absence of statutory prohibition, courts have held that it is against public policy for a public officer to contract with the municipality he serves in an official capacity.[240]

11. Other District Elections

In addition to election problems involving watershed district, in the past several years the Attorney General has dealt with a number of other election problems involving other kinds of water resource district. This report will note a few.

Concerning a drainage district election, wrote the Attorney General,[241] in addition to other requirements[242] to be eligible to vote a person must meet the state constitutional requirements.[243] He must, therefore, be a resident of the State for six months and he must be a resident of the township or ward (i.e. of the township in which some part of the drainage district is located) in which he offers to vote for at least 30 days (now 45 days since Nov. 6, 1962) preceding the election. The Attorney General also observed that a person is not eligible to vote if he owns no real estate within the district, that the county clerk is to provide the election judges and clerks with a list of eligible voters, based upon the previous year's taxrolls, that such a list is conclusive except when there has been compliance with the procedure for appearance before the county clerk,[244] and that persons wanting to vote must present themselves in person. On another occasion[245] he insisted that in an election for directors of an irrigation district under the appropriate statute,[246] residents of Kansas owning lands within the boundaries of the district could

---

[231] II Opinions of the Attorney General 187 (1962), Letter of Feb. 5, 1960.

[232] Kan. G. S. 1953 Supp., 24-1203. As amended in 1955 and 1959, the provision is now K.S.A. 24-1203 (1964).

[233] Kan. Att'y. Gen. Ops., Letter of Feb. 10, 1954, to Glen D. Byer, Reserve, Kansas.

[234] Kan. G. S. 1949, 25-1719. Amended by Kan. Laws 1965, Ch. 250, § 1, the provision now prohibits electioneering within 250 feet of the entrance of polling places instead of within merely 100 feet of polling places as formerly provided. The statute now appears as K.S.A. 25-1719(1965 Supp.).

[235] II Opinions of the Attorney General 121 (1962), Letter of March 28, 1960. The opinion went on to say, "However, we are not herein expressing the view that the election would be invalid by virtue of such alleged events. The statute in question would merely provide that such activities could subject the violator to possible punishment. However, if it could be affirmatively shown that such activities influenced the results of the election, a court would have authority to set the election aside."

[236] III Opinions of the Attorney General 303 (1963), Opinion 62-25 (May 31, 1962).

[237] III Opinions of the Attorney General 303 (1963), Opinion 62-25 (May 31, 1962).

[238] Kan. G. S. 1957 Supp., 24-1210, now K.S.A. 24-1210 (1964).

[239] Kan. Att'y. Gen. Ops., Letter of Jan. 22, 1959, to Bernie D. Frigon, County Attorney, Cimarron, Kansas.

[240] Ibid.

[241] III Opinions of the Attorney General 302 (1963), Opinion No. 61-260 (June 30, 1961).

[242] See Kan. G. S. 1949, 24-410 and Kan. G. S. 1959 Supp., 24-101a and 24-418.

[243] See Kansas Constitution, Art. 5, § 1; Kansas Constitutional Bill of Rights, § 7. It should be noted that Kansas Constitution, Art. 5, §1 was amended by the people of the State at the General election of Nov. 6, 1962.

[244] Kan. G. S. 24-410 (1949), now K.S.A. 24-410 (1964).

[245] Kan. Att'y. Gen. Ops., Letter of Feb. 24, 1967, to Clayton S. Hood, Attorney, Hays, Kansas.

[246] K.S.A. 42-706(e) (1964).

not vote by absentee ballot, neither the general election laws providing for absentee ballots[247] nor the district election statute[248] authorizing the use of absentee ballots in such an election. In another opinion dated the same day,[249] the Attorney General stated that a person may not vote by proxy at the annual meeting of an irrigation district conducted under the statute.[250]

In another significant opinion dealing with elections for the first board of directors of a drainage district organized pursuant to statute,[251] the Attorney General addressed himself to the question "whether or not the marital interest amounts to 'owning land' within the meaning of this statute."[252] After discussing the inchoate interest of a wife in her husband's property, he stated, "With these elaborations on the nature of the marital interest in mind, none of which is decisive to your question, we believe caution requires that a spouse be considered a landowner within the meaning of G. S. 1949, 24-410[253] and G. S. 1959, Supp., 24-101a[254] and allowed to vote if otherwise qualified."[255] "In reaching this opinion," he went on to say, "we are most mindful of the court's declarations that the marital interest possesses the elements of property."[256]

12. Assessed Valuation Reduction

In recent years several opinions of the Attorney General have dealt with problems relating to a reduction of the assessed valuation of acreage contiguous to lands used or donated for certain water resource developments by the owners of the contiguous acreages. He construed the word "contiguous" in one statute[257] as it has been applied to homestead exemptions, stating that "tracts are considered contiguous when separated by a highway, street, alley, railroad right-of-way, stream of water, quarter-section line, fence or garden except when the fee to the ground dedicated to public use is not vested in the abutting owners . . . ."[258] He concluded therefore, that adjoining tracts of land separated by a public road are contiguous within the meaning of the statute.[259] He insisted, however, that tracts touching only at their corners are not contiguous within the meaning of the homestead law and the statute relating to the reduction of assessed valuation although he noted that there was a division of authority on the matter.[260] He also interpreted the statute,[261] together with another provision,[262] as meaning that landowners who qualify are entitled to a reduction in the assessed valuation of their land each year during the period mentioned in the statute, which is ten years.[263] It may be mentioned that in an opinion dated Dec. 6, 1962,[264] and an amendatory opinion dated Feb. 26, 1963,[265] the Attorney General discussed developments and limitations of a number of statutes relating to reduction of assessed valuations.

13. Miscellaneous

In the recent past the Attorney General also concluded that a county park board might validly require nonresidents to pay a higher permit fee than residents to fish and boat in a park lake;[266] that a lake area attached to a city pursuant to statute[267] for park and recreational purposes should be excluded from township tax levies for township roads under a specific statute,[268] which provides that the levy shall be levied against all property "outside of incorporated cities;"[269] and, that sales

247 "K.S.A. 1965 Supp., 25-1101 et seq."
248 K.S.A. 42-706(e) (1964).
249 Kan. Att'y. Gen. Ops., Letter of Feb. 24, 1967, to Arno Windscheffel, Attorney, Smith Center, Kansas.
250 K.S.A. 42-706(e) (1964).
251 "Kan. G. S. 1949, 24-401 et seq." Now see K.S.A. 24-401 et seq. (1964).
252 II Opinions of the Attorney General 311 (1962), Letter of May 3, 1960.
253 Now K.S.A. 24-410 (1964).
254 Now K.S.A. 24-101a (1964).
255 II Opinions of the Attorney General 311, 312 (1962), Letter of May 3, 1960.
256 Ibid. "We point out," the opinion closed, "that under G. S. 1949, 24-410, the county clerk is to ascertain from the tax roll of the next preceding year the names of all the taxpayers who are qualified electors residing within said district. This list is delivered to the election judges and is conclusive. If the name of a spouse does not appear on this list, it will be necessary to obtain a certificate from the county clerk in order for the spouse to vote."
257 Kan. G. S. 1959 Supp., 82a-405, now, as amended, K.S.A. 82a-405 (1965 Supp.).
258 III Opinions of the Attorney General 692 (1963), Opinion No. 61-234 (June 13, 1961).
259 Ibid.
260 Ibid.
261 Kan. G. S. 1961 Supp., 82a-405, now, as amended, K.S.A. 82a-405 (1965 Supp.).
262 Kan. G. S. 1949, 82a-407 (1949), now, as amended, K.S.A. 82a-407 (1965 Supp.).
263 IV Opinions of the Attorney General 249 (1965), Letter of May 14, 1963. The opinion also stated that the authority of the Board of County Commissioners to make adjustments in the tax rolls for past years when the landowners did not receive a full reduction in assessed valuation is limited by Kan. G. S. 1949, 79-1701. The limiting section now appears at K.S.A. 79-1701 (1964).
264 Kan. Att'y. Gen. Ops., Opinion No. 62-126, Letter of Dec. 6, 1962, to Elvin D. Perkins, Attorney, Upper Verdigris Watershed Joint District No. 21, Emporia, Kansas.
265 Kan. Att'y. Gen. Ops., Letter of Feb. 26, 1963, to Elvin D. Perkins, Attorney, Upper Verdigris Watershed Joint District No. 21, Emporia, Kansas
266 IV Opinions of the Attorney General 80 (1965), Opinion No. 63-33 (April 30, 1963).
267 Kan. G. S. 1959 Supp., 15-911, now K.S.A. 15-911 (1964).
268 Kan. G. S. 1949, 68-535, now K.S.A. 68-535 (1964).
269 II Opinions of the Attorney General 290 (1962), Letter of June 22, 1960.

taxes should be charged to a city on the sales of water and electricity to its municipal swimming pool where it charged for admission to the pool,[270] regardless of whether city employees or lessees operated the pool.[271] Upon examining the appropriate statutory provisions, he also held that a city governing body, not the Board of Public Utilities, had the power to add fluorine to a municipal water supply.[272]

ADMINISTRATION

Kansas Water Resources Board

1. The Need for Planning and Coordination

In apparent recognition of the importance of water to the overall economy of the State and in recognition of the need for planning the policies and coordinating the activities in the field of flood control and in the conservation and development of the State's water resources, the 1955 Kansas Legislature created the Kansas Water Resources Board.[273] Although Kansas law had provided for central state planning and for the coordination of water development activities since 1917,[274] there had been little in the way of central planning and coordination before 1955.[275] With the creation of the Kansas Water Resources Board, the State immediately took steps toward comprehensive planning and coordination.

2. Board Membership

The Kansas Water Resources Board consists of seven members appointed by the Governor with the advice and consent of the Senate.[276] The members serve four-year terms on a staggered basis.[277] They must be citizens of the United States and for five years immediately preceding their appointments they must have been residents of Kansas.[278] Under statutory requirements, the Governor appoints a resident of each congressional district of the State and two members of the State at large who are not residents of the same congressional district.[279] In addition, by law, he appoints one of the members from the State at large who is an attorney admitted to practice law in the State.[280]

3. Organization

On or about July 1 of each year the Board organizes itself by electing from its membership a chairman and vice-chairman.[281] By law it holds at least one regular meeting in each calendar year and it may hold such other meetings as it finds necessary.[282] Although its office is in Topeka, it may hold its meetings at such times and places within the State as its rules and regulations may provide.[283] Board members may receive only their actual and necessary expenses, including mileage at the rate prescribed by law, while attending meetings of the Board, and, in addition, are entitled to reimbursement for the actual and necessary expenses that they incur in the performance of their official duties.[284]

4. Staff

The directives of the Board are carried into effect by a staff headed by an Executive Director, appointed by the Board, who is in the unclassified service under the Kansas Civil Service Act.[285] With the exception of the Executive Director, the Board's employees, whom it appoints, are within the classified service under the Kansas Civil Service Act.[286]

---

[270] Kan. Att'y. Gen. Ops., Letter of March 10, 1959, to Glendon E. Rewerts, County Attorney, Leoti, Kansas.

[271] II Opinions of the Attorney General 303 (1962), Letter of Oct. 5, 1960.

[272] Kan. Att'y. Gen. Ops., Letter of Aug. 13, 1955, to Charles W. Lowder, Attorney, Board of Public Utilities, Kansas City, Kansas.

[273] Kan. Laws 1955, Ch. 356.

[274] The Kansas Water Commission and its successor, the Division of Water Resources of the State Board of Agriculture, were authorized to adopt general plans for the comprehensive development of the various watersheds in the State and then to regulate all private and local water activities to insure their substantial conformance with the State plans. The planning function, however, was not attempted until 1941, at which time the legislature appropriated funds for the purpose for the first time. Grimes, Government and National Resources in Kansas: Water 84 (1957).

[275] Id. at 83-4.

[276] K.S.A. 74-2605 (1965 Supp.).

[277] K.S.A. 74-2605 (1965 Supp.).

[278] K.S.A. 74-2605 (1965 Supp.).

[279] K.S.A. 74-2605 (1965 Supp.).

[280] K.S.A. 74-2605 (1965 Supp.). The statute also provides that K.S.A. 46-132 (1964) shall not apply to the attorney member. K.S.A. 46-132 (1964) provides: "No person elected to the legislature shall receive any civil appointment to a state office during the term for which he has been elected and all such appointments shall be void: Provided, that a member of the legislature may be appointed to any elective office to fill a vacancy caused by the death or resignation of the incumbent. Neither shall any member of the legislature, within one (1) year after the expiration of his term, be interested in, either directly or indirectly, any contract with the state, which contract is authorized by any law enacted during the term for which he shall have been elected."

[281] K.S.A. 74-2605 (1965 Supp.).

[282] K.S.A. 74-2606 (1965 Supp.).

[283] K.S.A. 74-2606 (1965 Supp.).

[284] K.S.A. 74-2605 (1965 Supp.).

[285] Kan. Laws 1967, Ch. 419, § 1. Prior to April 18, 1967, the staff head was known as "the executive secretary." See K.S.A. 74-2607 (1965 Supp.).

[286] Kan. Laws 1967, Ch. 419, § 1.

5. Basic Responsibilities

Upon its creation in 1955, the Kansas Water Resources Board was charged with a number of responsibilities. In particular, the Legislature directed the Board to do the following things: (1) collect and compile information pertaining to climate, water and soil as related to the usage of water for agricultural, industrial and municipal purposes and the availability of water supplies in the watersheds of the State, first collecting and compiling the information obtainable from other agencies, instrumentalities of the State, political subdivisions of the State, and the Federal Government; (2) work out a state plan of water resources development for each watershed in the State, and cooperate with any agency or instrumentality of the State or Federal Government engaged in the development of plans or having developed plans affecting any watershed of the State; (3) review plans for the development, management, and use of the water resources of the State by any State or local agency; (4) for the purpose of determining the necessity or advisability of the enactment of new or amendatory legislation in Kansas, study the laws of Kansas and of the other states and of the Federal Government insofar as they relate to conservation and development of water resources, the appropriation of water for beneficial use, flood control, levee construction, drainage, irrigation, soil conservation, watershed development, stream control, stream gauging, and stream pollution; (5) make recommendations to other State agencies and political sub-divisions of the State for the coordination of their activities relating to flood control, levee construction, drainage, irrigation, soil conservation, watershed development, stream control, stream gauging, stream pollution, and groundwater studies; (6) in drafted bill form together with such explanatory information and data as the Board shall deem advisable, make recommendations to the 1957 regular session of the Legislature and to legislative sessions thereafter and to the Governor and the Kansas Legislative Council at such times as it shall deem advisable concerning necessary or advisable legislation relating to any of the matters or subjects that it is required to study.[287]

To enable the Board to perform the duties enumerated above, the Kansas Legislature has authorized the Board to exercise a number of privileges.[288] It has stated that the Board may (1) appoint citizens' advisory committees to study and advise on any subject the Board is required or authorized under the 1955 legislation to study and make recommendations concerning; (2) seek and accept grants and other financial assistance that the Federal Government and any other public or private sources make available, and use the assistance for any purpose that the Board by the 1955 legislation is required or authorized to study or make recommendations concerning; (3) contract with public agencies or with qualified persons or agencies to accomplish any purpose that the Board by the 1955 legislation is required or authorized to study or make recommendations concerning.[289] Further, the Legislature authorized the Board to adopt such rules and regulations as it might deem necessary for the government of the Board, its officers and employees, and to carry out the provisions of the 1955 legislation.[290]

6. Planning Development

In reporting to the 1961 Kansas Legislature, the Board suggested six basic ways in which the Kansas Legislature might make significant contributions toward solving the State's water problems. Specifically, it suggested that the Legislature might move in the following ways:

> Through the provision of additional funds between now and fiscal year 1964 to bring primary state water activities up to a level of program operations commensurate with current assigned responsibilities;
>
> Through active support for creation of a federal evapotranspiration research center in Kansas and provision of sufficient funds to permit the Kansas Agricultural Experiment Station to prepare a summary report on the evapotranspiration problem;
>
> Through establishment of a policy of state assumption of financial responsibility for the initial costs of obtaining needed conservation storage in the major reservoir program and watershed program;
>
> Through establishment of a policy of state financial assistance to watershed districts and other local units of government in carrying out flood control projects where a state interest is involved;

---

[287] K.S.A. 74-2608 (1964), Kan. Laws 1967, Ch. 420, § 1 amended the section to require the Board to make recommendations to each "regular session" of the Legislature instead of to each "biennial session" of the Legislature. No other changes were made.

[288] K.S.A. 74-2609 (1964).
[289] K.S.A. 74-2609 (1964).
[290] K.S.A. 74-2611 (1964).

Through a Legislative Council study on means of implementing the new policies recommended in items 3 and 4 and;

Through a concurrent resolution designed to satisfy the Chief of Army Engineers and the United States Congress relative to desired Kansas legislative assurance of recognition of the nonfederal obligations involved in providing water supply in the Milford reservoir, and to provide similar assurances relative to the four other reservoirs for which similar requests for water supply storage have been made.[291]

The 1961 Kansas Legislature responded favorably to the recommendations of the Kansas Water Resources Board.[292] Specifically, the House of Representatives and the Senate concurred in the recommendations of the Kansas Water Resources Board for the inclusion of water supply storage in the Milford, Perry, and John Redmond reservoirs[293] and concurred in the requests, also supported by the Board, of the cities of Independence, Coffeyville, Emporia, and Council Grove for the inclusion of water supply features in the Elk City reservoir on the Elk River and the Council Grove reservoir on the Neosho river.[294] In its concurrent resolution, the Legislature recognized the nonfederal repayment obligations required relative to the development of water supply features in federally financed projects and by adopting the resolution assured the Chief of Engineers that the State or its political subdivisions would fulfill such obligations, prior to the use of water, as they related to the specified projects and as the obligations are described in Public Law 534, 78th Congress (The Flood Control Act of 1944), Title III of Public Law 85-500 (The Water Supply Act of 1958).[295]

Following a study on State water policy conducted under the supervision of the Committee on Legislative Budget of the Kansas Legislative Council,[296] the Kansas Water Resources Board presented a comprehensive water plan program to the 1963 legislature, taking full account of the 1961 legislative action. Accepting the Board's recommendations, the 1963 Legislature enacted the "state water plan act."[297] Pursuant to this authorization the Board developed a comprehensive state water plan and presented that plan to the Legislature two years later. The 1965 Kansas Legislature enacted the plan into law, designating the enactment the "state water plan."[298] The 1963 and 1965 acts, as amended, containing and comprising the State's comprehensive plan and water development approach, constitute the basis for the State's water resources development program. Under this program the Kansas Water Resources Board plays a leading and vital role.

7. State Water Plan Responsibilities

Under the 1963 legislation the Kansas Water Resources Board was and is directed to formulate and adopt, and from time to time amend, extend or add to, a comprehensive state water plan for the development of the water resources of the State.[299] It was and is to do so with the cooperation of the Division of Water Resources of the State Board of Agriculture and the Chief Engineer of the Division, the State Geological Survey of the University of Kansas, the Director of the Agricultural Experiment Station of Kansas State University, the Chief Engineer of the Kansas State Board of Health, and all other interested State agencies.[300] In formulating such a plan, the Board was directed to consider the plans, regulations, rules, and recommendations of the State and Federal

---

[291] Report to the 1961 Kansas Legislature Concerning State Water Policy and Program Needs, 43, Kansas Water Resources Board, November, 1961.

[292] Kan. Laws 1961, Ch. 479, which was House Concurrent Resolution No. 5, related to notifying the U. S. Army, Chief of Engineers of the desire of the Kansas Legislature relative to water supply features in certain authorized reservoir projects. Kan. Laws 1961, Ch. 480, which was House Concurrent Resolution No. 6, related to memorializing the United States Congress to give attention to the creation of a federal evapotranspiration research center in Kansas. House Concurrent Resolution No. 18, 1961 Journal of the House 85, 229, directed the Kansas Legislative Council to take a study of means of carrying out basic State water policies relative to State participation in conservation storage development and flood control projects and to submit a report and recommendations thereon to the 1963 session of the Legislature.

[293] The Board had requested the inclusion of 300,000 acre-feet of water supply storage in the Milford reservoir on the Republican River, 150,000 acre-feet in the Perry reservoir on the Delaware River, and 34,900 acre-feet in the John Redmond reservoir on the Neosho River to meet future anticipated needs. See Report to the 1961 Kansas Legislature Concerning State Water Policy and Program Needs, 47-8, Kansas Water Resources Board, November, 1961. Also see Kan. Laws 1961, Ch. 480.

[294] Kan. Laws 1961, Ch. 479.

[295] With respect to legislative provisions relating to State payment, see the section herein on Conservation Storage Payment.

[296] A Suggested Water Development Program for Kansas, Research Department, Kansas Legislative Council, Pub. No. 243 (Jan. 1963). This study was made pursuant to a 1961 legislative directive to the Kansas Legislative Council: House Concurrent Resolution No. 18, 1961 Journal of the House 85, 229.

[297] Kan. Laws 1963, Ch. 514; K.S.A. 82a-901–82a-926 (1964). K.S.A. 82a-905 and 82a-906 (1964) were amended by Kan. Laws 1967, Ch. 420, § 2 and § 3.

[298] Kan. Laws 1965, Ch. 588; K.S.A. 82a-927–82a-946 (1965 Supp.). K.S.A. 82a-938 and 82a-939 (1965 Supp.) were amended by Kan. Laws 1967, Ch. 516, § 1 and § 2.

[299] K.S.A. 82a-903 (1964)

[300] K.S.A. 82a-903 (1964).

agencies concerned with the development of the water resources of the State.[301]

The State water plan act of 1963 established the procedures that the Board was to follow in developing a comprehensive water plan[302] and it outlined the considerations that the Board was to use.[303] Further, the 1963 act gave the Board certain responsibilities aimed at insuring that water resource development in the State takes place in ways consistent with the State water plan.[304] In some detail it developed procedures for Board review of development plans that might possibly conflict with a comprehensive plan and laid down provisions for notice and hearing with respect to Board review.[305] In addition, it authorized the Board to request the Attorney General of the State to institute appropriate proceedings in the name of the State to enjoin any action or proposed action that in the opinion of the Board is not consistent with the State water plan as enacted by the Legislature.[306]

8. Conservation Storage Development

Under the 1963 legislation, the Kansas Water Resources Board is authorized to recommend to any Federal agency the inclusion, in any proposed or authorized Federal project, of any conservation storage features for water supply that the Board anticipates will be needed.[307] In addition it authorizes the Board to extend to and procure for any Federal agency reasonable assurances and evidence that expected future demands for the use of storage will be made within a period of time that will permit the payment of the costs allocated to such purposes within the life of the project, if such assurances have been authorized by the major plan as enacted by the Legislature.[308] The State water plan, which specifies and describes major reservoirs and watershed projects that are a part of the State plan,[309] specifically provides that the Board "may provide evidence of need to any agency of the Federal Government relative to the inclusion in any proposed or authorized water resource project of any conservation storage features for water supply that the Board anticipates will be needed in the future.[310]

Subject to specified standards, the Board may submit to the Legislature for inclusion in the State water plan, or for other appropriate action to the Governor and the Kansas Legislative Council, recommendations for the inclusion at State expense in any proposed or authorized water development project of the Federal Government of any conservation storage features for future water supply.[311] It may make similar recommendations for the inclusion at State expense in any proposed water development project of any public corporation of any conservation storage features for future water supply.[312] With respect to such recommendations, the Board must include "a statement of (1) the portion of the state costs for which the state does not anticipate repayment of its expenditures; and (2) the part of the state costs for which the state does anticipate repayment for its expenditures."[313]

9. Conservation Storage Payment

Of major significance, the 1963 State water plan act authorizes the Board to enter into agreements with the Federal Government for the repayment of costs for the inclusion of any conservation storage features for water supply that the Board expects will be needed within the State in the future for the achievement of the purposes of the act.[314] Such authorization is operative, of course, only in the event the Board shall find it necessary or desirable to enter into such agreements for the achievement of the purposes of the act.[315] Further, the authorization is operative only "if such agreements have been authorized by the state water plan as enacted by the legislature."[316] In this regard, the 1965 State water plan provides as follows:

> The Kansas Water Resources Board, on behalf of the state, shall enter into negotiations and agreements with the federal government relative to the inclusion of, and the payment for, conservation storage features for water supply in any project that has been planned, authorized or constructed by the federal government when the board shall deem such negotiations and agreements to be necessary for the achievement

---

301 K.S.A. 82a-903 (1964).
302 K.S.A. 82a-905 and 82a-906 (1964). These sections were amended by Kan. Laws 1967, Ch. 420, § 2 and § 3. The first section replaced the words "each general legislative session" with the words "each regular session." The second replaced words "each general session" with the words "each regular session."
303 K.S.A. 82a-901 (1964) and K.S.A. 82a-907 (1964).
304 K.S.A. 82a-908 (1964).
305 K.S.A. 82a-908 (1964).
306 K.S.A. 82a-908 (d) (1964).
307 K.S.A. 82a-910 (1964).
308 K.S.A. 82a-910 (1964).
309 K.S.A. 82a-938 (1965 Supp.).
310 K.S.A. 82a-933 (1965 Supp.).
311 K.S.A. 82a-911 (1964).
312 K.S.A. 82a-912 (1964).
313 K.S.A. 82a-913 (1964).
314 K.S.A. 82a-910 (1964).
315 K.S.A. 82a-910 (1964).
316 K.S.A. 82a-910 (1964).

of the policies of the State of Kansas relative to the water resources thereof: **Provided, however,** such agreements shall be binding upon the state to the extent that future appropriations are made in support thereof.[317]

The 1963 State water plan act created in the state treasury a fund to be known as the water development fund, which is to consist of moneys appropriated or allocated to it by the Legislature.[318] In addition to any general fund appropriation, the water development fund may be used to pay assurance and as contractual obligations incurred to obtain the inclusion in Federal water development projects of conservation storage features "for future supply for streamflow regulation, recreation, domestic, municipal, agricultural, or industrial use."[319] The 1963 act also provides that in addition to general appropriations, the fund may be used to "fulfill the state financial obligations recognized by the 1961 legislature as evidenced by its adoption of House Concurrent Resolution No. 5."[320] The Board is required to use any of its available funds appropriated for financial assistance authorized by the 1963 legislation for the payments owing under the provisions of that legislation.[321] This section also authorizes the State Controller "to draw his warrants therefor on the state treasurer upon the presentation of vouchers duly itemized and approved in the name of the executive secretary of the board." Kan. Laws 1967, Ch. 419, § 1, amending K.S.A. 74-2607 (1965 Supp.), drops the term "executive secretary" and provides for the appointment of an executive director. It does not, interestingly, specifically provide for a transfer of authority.

10. Conservation Storage Operation and Releases

Under the 1963 act, the Board may negotiate with the Federal Government relative to releases of water from projects or reservoirs.[322] It may also enter into agreements with the Federal Government concerning the operation of projects or reservoirs for the release of water, "if such agreements are authorized by the state water plan as enacted by the legislature."[323] Under the State water plan of 1965, the Board is directed to "enter into negotiations and agreements with the federal government relative to the operation of, or the release of water from, any project that has been authorized or constructed by the federal government when the Board shall deem such negotiations and agreements to be necessary for the achievement of the policies of the State of Kansas relative to the water resources thereof."[324]

As a part of the 1963 program the Board is empowered to enter into written contracts with persons and organizations, public or private, for the diversion or use of water released from any reservoir by or under the authority of the State or pursuant to an agreement between the State and Federal Government for specific uses of water.[325] It may do so, however, only if such contracts have been authorized by the State water plan and are within the limits of the parties' water rights to appropriate water for the proposed uses.[326] Under the 1965 State water plan the Board is required to encourage water users to assume responsibility for repaying to the Federal Government reimbursable costs incurred in the development of conservation storage for water supply.[327] It also provides that users who accept benefits from conservation developments financed by the State "shall assume by contract the responsibility of repaying to the state their reasonable share of the state's obligations in accordance with such basis as will assure payment within the life of the development."[328] No use of such waters is to be permitted until the users have entered into a written contract with the Board for specific uses of the water.[329]

Under the 1963 act, the Board must include a number of terms in any contract negotiated for the diversion or use of water from conservation developments financed by the State. It must include the obligation of the grantee to repay the State, on a basis authorized by the State water plan, the expenses or costs, including interest, that are properly attributable to contracted water uses.[330] It must also include the grantee's promise and undertaking to pay the State such sums as the State shall expend or be obligated to expend for future maintenance and operation.[331] Further, it must also include the grantee's promise to comply with such maintenance and operational requirements as the

---

[317] K.S.A. 82a-934 (1965 Supp.).
[318] K.S.A. 82a-921 (1964).
[319] K.S.A. 82a-921 (1964).
[320] K.S.A. 82a-921 (1964). House Concurrent Resolution No. 5 may be found in Kansas Laws 1961, Ch. 479. For a discussion of its provisions, see the section herein on Planning Development.
[321] K.S.A. 82a-922 (1964).
[322] K.S.A. 82a-915 (1964).
[323] K.S.A. 82a-915 (1964).
[324] K.S.A. 82a-932 (1965 Supp.).
[325] K.S.A. 82a-914 (1964).
[326] K.S.A. 82a-914 (1964).
[327] K.S.A. 82a-935 (1965 Supp.).
[328] K.S.A. 82a-935 (1965 Supp.).
[329] K.S.A. 82a-936 (1965 Supp.).
[330] K.S.A. 82a-916 (1964).
[331] K.S.A. 82a-916 (1964).

Board shall specify for the achievement of the purposes of the 1963 legislation.[332]

The 1965 State water plan sets out several conditions that the Board must include in its water use contracts.[333] It must include "(1) such terms as it shall find reasonable and necessary for the protection of the health, safety, and general welfare of the people of the state, (2) such terms as it shall find reasonable and necessary for the achievement of the purposes of this act, of the state water plan act, being K.S.A. 82a-901 to 926, both inclusive, and of all acts amendatory of or supplemental to those acts,[334] and (3) such terms as shall make clear that the state of Kansas shall not be responsible to any person in the event the waters involved are insufficient for performance."[335] The Board is directed, however, that in no event shall it enter into any contract for a term of less than ten years, except to meet an emergency, which emergency is to be judged by the Governor.[336] The Board must deposit all payments received in the general fund of the State.[337]

The Board is also authorized to modify, enforce, and discharge contracts made by it in the name of the State under the authority of the 1963 legislation.[338] Before granting or contracting to grant permission to use conservation storage capacity in projects for which the State has financed conservation storage features, the Board must hold public hearings, notify all known interested parties, and permit interested persons to appear at the hearings to present their views and objections to the proposed agreements.[339]

11. State Assistance to Public Corporations

The Kansas Water Resources Board also received responsibilities with respect to the State's policy[340] to assist public corporations of the State[341] in developing flood control and water conservation projects that benefit the general welfare beyond the boundaries of those public corporations.[342] Upon receiving applications from public corporations requesting State assistance, each year the Board is to determine what persons are eligible to receive assistance and the amounts thereof.[343] Upon finding that a public corporation is entitled to State assistance under the terms of the 1963 act, the Board may submit a request for assistance, as a part of its annual budget requests and estimates, separately stating and identifying each request.[344] In doing so the Board must show the name of each project, the name of the public corporation to which the item relates, the county or counties in which the public corporation is located, the identification of the agreement or resolution supporting the request, and the amount requested.[345]

According to the 1963 legislation, authorized payments are to be made from the water development fund created in the State Treasury, which fund is to consist of moneys appropriated or allocated to the fund by the Legislature.[346] Under another section, the Board is directed to use any of its available funds appropriated for the financial assistance authorized by the 1963 legislation for the payment owing under the provisions of that legislation.[347]

12. Water Cost Projects

One further responsibility of the Kansas Water Resources Board under the State water plan act of 1963 should be noted. The Legislature has directed the Board to maintain in continuous process and revision tentative projected costs of water management projects covering a period of not less than 25 years.[348] The Board must submit the projected costs with its annual budget request and must include all items for which payment is expected to be made from State funds.[349]

13. Additional Powers

Under Federal law, the Chief of Engineers, Department of the Army, is required to transmit

---

[332] K.S.A. 82a-916 (1964).
[333] K.S.A. 82a-937 (1965 Supp.).
[334] Kan. Laws 1967, Ch. 420, § 2 and § 3, has amended K.S.A. 82a-905 and 82a-906 (1964).
[335] K.S.A. 82a-937 (1965 Supp.).
[336] K.S.A. 82a-937 (1965 Supp.).
[337] K.S.A. 82a-916 (1964).
[338] K.S.A. 82a-917 (1964).
[339] K.S.A. 82a-917 (1964).
[340] K.S.A. 82a-901 (1964).
[341] According to K.S.A. 82a-902 (1964), " 'Public corporation' means a body that has for its object the government of a political subdivision of this state and includes any county, township, city, district, authority, or other municipal corporation or political subdivision of this state."
[342] K.S.A. 82a-909 (1964); K.S.A. 82a-918 (1964); and see K.S.A. 82a-919–923 (1964).
[343] K.S.A. 82a-918 (1964).
[344] K.S.A. 82a-918 (1964).
[345] K.S.A. 82a-918 (1964).
[346] K.S.A. 82a-921 (1964).
[347] K.S.A. 82a-922 (1964). The section also authorizes the State Controller "to draw his warrants therefor on the state treasurer upon the presentation of vouchers duly itemized and approved in the name of the executive secretary of the board."
[348] K.S.A. 82a-920 (1964).
[349] K.S.A. 82a-920 (1964).

copies of proposed reports concerning plans for proposed flood control projects to affected states for review prior to submission of the reports to Congress.[350] Under the law, affected states within 90 days from the receipt of the proposed reports may submit their written views and recommendations to the Chief of Engineers.[351] The law then provides that the Secretary of the Army shall transmit the proposed reports to Congress with such comments and recommendations as he deems appropriate, together with the submitted views and recommendations. It further states that the Secretary of the Army may make his transmittal at any time following the 90-day period.[352] According to Federal law, the relations of the Chief of Engineers with any state are to be with the governor of the state or with such official or agency of the state as the governor may designate.[353] Also, under Federal law, the Secretary of the Interior, in making investigations of and reports on works for irrigation and purposes incidental thereto, is subject to the same provisions concerning reports that the Chief of Engineers and the Secretary of the Army are subject to.[354] The Kansas Water Resources Board has been designated as the official State agency with the responsibility of reviewing the reports of the Chief of Engineers and the Secretary of the Interior. The Board also participates in the planning of such Federal projects for Kansas.[355]

The Board also serves as technical consultant to the Governor on matters relating to the activities of the Arkansas-White-Red Basins Inter-Agency Committee, the Missouri Basin Inter-Agency Committee, and the Missouri River Main Stem Reservoir Operations Committee. Further, the Board is presently representing Kansas in negotiations with the State of Nebraska relative to the development of a compact between the two states relative to the Big Blue River Basin.

The Division of Water Resources

1. Organization

In 1927 the Kansas Legislature moved to consolidate the then existing Kansas Water Commission and Division of Irrigation into a new Division of Water Resources created within the State Board of Agriculture.[356] In doing so it conferred upon the new Division all of the authority, power, and duties of the Kansas Water Commission and the State Irrigation Commissioner[357] then abolishing the two older agencies.[358] It then authorized the Board of Agriculture to employ expert assistants and help to accomplish the purposes envisioned.[359]

2. Planning

When the legislature created the Kansas Water Resources Board in 1955, it directed the Board to cooperate with any agency or instrumentality of the State or Federal Government engaged in the development of plans affecting any watershed of the State.[360] It also specifically directed the Division of Water Resources of the State Board of Agriculture and the Chief Engineer thereof, among others, to cooperate with and make available to the Kansas Water Resources Board all facts, records, information, and data requested and to cooperate in all other ways appropriate to the purposes of the 1955 legislation.[361]

---

[350] Act of Dec. 22, 1944, Ch. 665, § 1; 58 Stat. 887; 33 U.S.C. § 701-1(a) (1964).

[351] Act of Dec. 22, 1944, Ch. 665, § 1; 58 Stat. 887; 33 U.S.C. § 701-1(a) (1964).

[352] Act of Dec. 22, 1944, Ch. 665, § 1; 58 Stat. 887; 33 U.S.C. § 701-1(a) (1964).

[353] Act of Dec. 22, 1944, Ch. 665, § 1; 58 Stat. 887; 33 U.S.C. § 701-1(a) (1964).

[354] Act of Dec. 22, 1944, Ch. 665, § 1; 58 Stat. 887; 33 U.S.C. § 701-1(c) (1964).

[355] This is done in accordance with the provisions of the Act of Dec. 22, 1944, 58 Stat. 887, § 1; 33 U.S.C. § 701-1 (1964).

[356] Kan. Laws 1927, Ch. 293, § 1, K.S.A. 74-506a (1964). For a discussion of this action, see State of Kansas, ex rel. Harley, v. Dolese Bros. Co., 151 Kan. 801, 102 P.2d 95 (1940). In State of Kansas, ex rel. Peterson v. The Kansas State Board of Agriculture, 158 Kan. 603, 610-11, 149 P.2d 604, 609 (1944), Justice Harvey, speaking for the Supreme Court of Kansas, noted, "By chapter 172 of the Laws of 1917 the legislature created a commission to be known as the Kansas Water Commission and provided how its members should be chosen. By chapter 218 of the Laws of 1919 the legislature created a Division of Irrigation within the State Board of Agriculture, provided for the appointment of a commissioner, and designated where he should hold his office. In 1927, by chapter 293, the Kansas Water Commission and the Division of Irrigation were specifically abolished and there was created a Division of Water Resources within the State Board of Agriculture. All of the authority, power and duties then conferred or imposed by law upon the Kansas Water Commission and the State Irrigation Commission were conferred upon the Division of Water Resources, and as amended by section 7 of chapter 271 of the Laws of 1933, the State Board of Agriculture was authorized to employ a chief engineer and such other expert assistants, clerical and other help as might be necessary properly to carry out the provision of the statutes."

[357] Kan. Laws 1927, Ch. 293, § 2, K.S.A. 74-506b (1964).

[358] Kan. Laws 1927, Ch. 293, § 3, K.S.A. 74-506c (1964).

[359] Kan. Laws 1927, Ch. 293, § 4. The section as amended in 1933, 1937, and 1965 is now found as K.S.A. 74-506d (1965 Supp.). After the 1965 amendment it expressly authorized the State Board of Agriculture to employ a Chief Engineer of the Division of Water Resources, although the State Board of Agriculture had established that position many years previously.

[360] K.S.A. 74-2608 (1964).

[361] K.S.A. 74-2610 (1964).

In 1963, in the State water plan act[362] the legislature again instructed the Division of Water Resources and its Chief Engineer, among others, to cooperate with the Kansas Water Resources Board in formulating a comprehensive State water plan.[363] This, of course, has been and still is being done.

3. Irrigation Responsibilities

Among its duties inherited from the old office the Irrigation Commissioner, the Division of Water Resources is required to gather data, information, and statistics from the existing irrigation plants in the State concerning water supplies, methods of securing water supplies, and methods of applying water to crops, and it is required to tabulate, preserve, and, from time to time, publish and distribute the information.[364] Further, it is required to visit proposed irrigation sites upon request and to give advice on the feasibility of irrigation proposals.[365] It is also directed to operate by lease under competitive bids all existing irrigation plants owned by the State and installed by certain State agencies.[366] It is also directed to take charge of all State property purchased or acquired by the Board of Irrigation Survey, Experiment, and Demonstration, and the State Irrigation Commissioner, and it was given authority to sell and dispose of such property not including real estate and not necessary to the work of the Division.[367] Further, it must make quarterly reports to the State Board of Agriculture, including itemized accounts of its receipts and expenditures.[368]

4. The Water Appropriation Act

The Chief Engineer of the Division of Water Resources has the responsibility of enforcing and administering the laws of Kansas pertaining to the beneficial use of water.[369] Under these laws[370] the Chief Engineer must control, conserve, regulate, allot, and aid in the distribution of the water resources of Kansas for the beneficial uses of all of the State's inhabitants in accordance with the rights of priority of appropriation.[371] This important duty is outlined in detail in another section of this report.[372]

5. The Watershed Districts Act

The Watershed District Act[373] assigns considerable responsibility to the Chief Engineer of the Division of Water Resources with respect to the organization of watershed districts and with respect to the formulation of both general and detailed plans for the construction of projects for flood control and water resource development. Proposals for the creation of watershed districts and for their specific projects must receive his approval to become operative.[374] His approval is also necessary for the transfer of territory from one watershed district to another;[375] to extend the territory of a watershed district;[376] and, to dissolve a watershed district in whole or in part.[377] In addition the Chief Engineer is a member of the Governor's Watershed Review Committee, which reviews applications for Federal financial assistance through the Soil Conservation Service.

6. Irrigation District Statutes

Pursuant to irrigation district statutes,[378] the Chief Engineer of the Division of Water Resources is significantly involved in the formation and maintenance of irrigation districts. Any proposed irrigation district and its general plan of construction and maintenance must receive his approval to be operative.[379] His approval is also a condition precedent to the power of a board of directors of an irrigation district to act upon a petition for boundary changes.[380] Further, he is involved in the steps necessary for the dissolution of any irrigation district.[381]

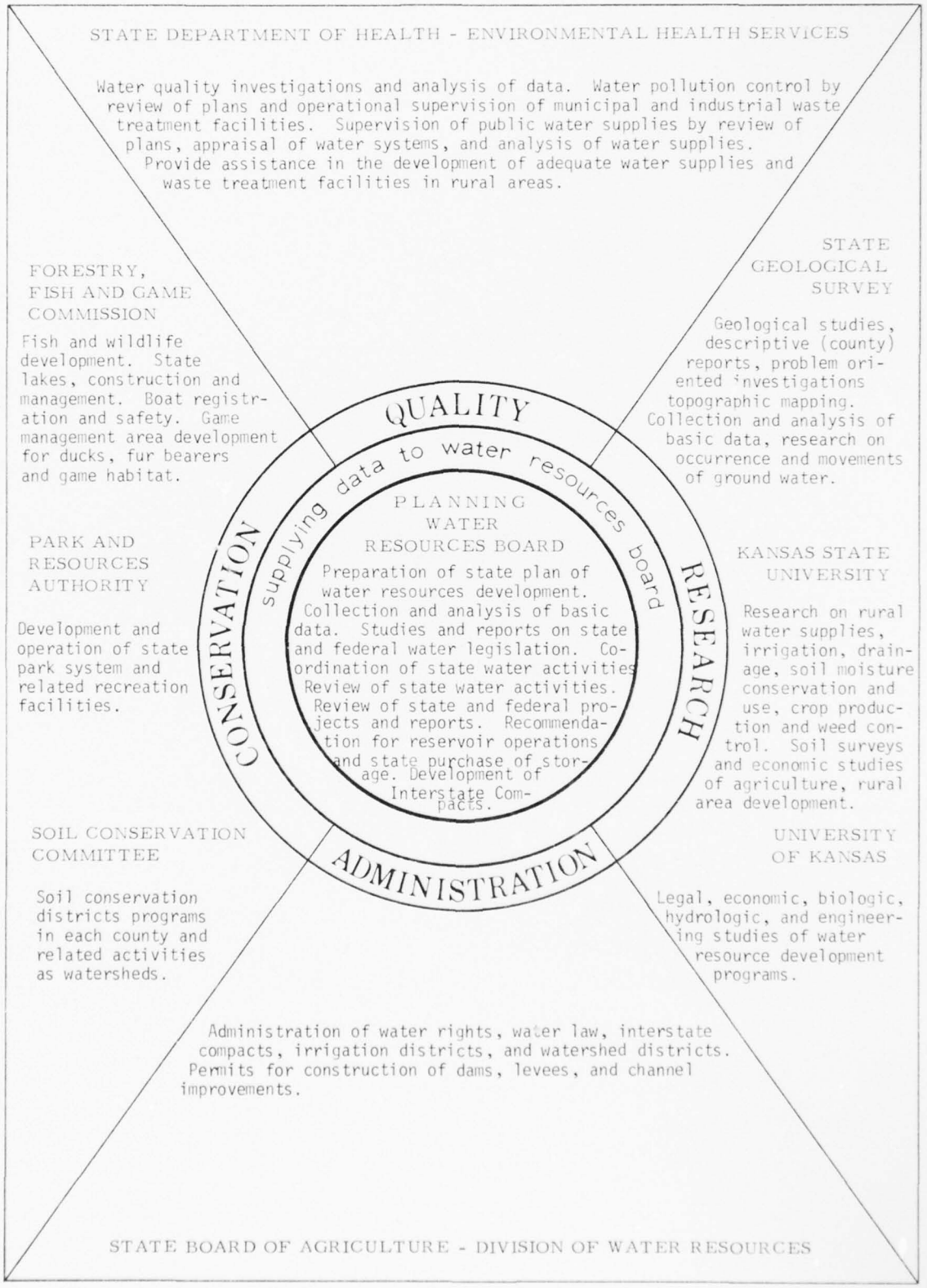
7. Ground-Water Management District

The 1968 Legislative Session enacted a new law entitled "Ground-water Management Districts Act," (K.S.A. 82a-1001 et al.). This legislation permits a

---

[362] K.S.A. 82a-901 to 82a-926 (1964).
[363] K.S.A. 82a-903 (1964).
[364] K.S.A. 74-509(1) (1964).
[365] K.S.A. 74-509(2) (1964).
[366] K.S.A. 74-509(3) (1964).
[367] K.S.A. 74-509(4) (1964).
[368] K.S.A. 74-509(5) (1964).
[369] K.S.A. 82a-706 (1964).
[370] K.S.A. 82a-701 to 82a-706a (1964), K.S.A. 82a-706c to 82a-725 (1964), K.S.A. 82a-706b (1965 Supp.), K.S.A. 42-309 (1964), and K.S.A. 42-313 (1964).
[371] K.S.A. 82a-706 (1964).
[372] See the subsection of this report entitled "Administration of Water Rights."
[373] K.S.A. 24-1201 to 24-1233 (1964).
[374] K.S.A. 24-1206, 24-1213, 24-1214, 24-1216 (1964).
[375] K.S.A. 24-1222 to 24-1225 (1964).
[376] K.S.A. 24-1227 (1964).
[377] K.S.A. 24-1229 (1964).
[378] K.S.A. 42-701 to 42-730 (1964).
[379] K.S.A. 42-701 to 42-704, 42-710 (1964).
[380] K.S.A. 42-725 (1964).
[381] K.S.A. 42-722 (1964).

PRESENT FUNCTION OF STATE AGENCIES IN WATER ACTIVITIES



group of ground-water irrigators to form a district for purposes of conservation of the ground-water resources. The objective is to put into the hands of local interests the responsibility and tools for implementing a program of water conservation, research and financing for sustaining the economy of the district. The Chief Engineer, Division of Water Resources, is charged with approval of the rules and regulations which a district is authorized to adopt. No districts have been formed since the law became effective and a shortcoming of the law may be its lack of provision for the establishment of ground-water management districts in areas where irrigation has not yet developed.

8. Surface Water Districts

In 1911 the State Legislature prohibited the construction of certain dams and levees that would obstruct or collect and discharge with increased force and volume the flow of surface water to the damage of adjacent owners or proprietors.[382] In 1931 it amended its action to permit the construction of levees under certain conditions when the Chief Engineer of the Division of Water Resources gave his permission for the construction.[383] In a separate measure it made unlawful the construction of levees along or near certain streams without the approval of the levee plans by the Chief Engineer of the Division.[384] Moreover, it has required that the approval of the Chief Engineer must be obtained before certain bridge construction may take place.[385] It has also determined that the approval of the Division of Water Resources is necessary before a city may undertake flood control projects.[386]

9. Streamflow Duties

Under State law dating back to 1929, it is unlawful for anyone to construct any dam or other water obstruction or to make any change in any existing dam or obstruction project or in any manner to change or diminish the course, current, or cross-section of any stream in the State without first applying for and obtaining the written consent of the Chief Engineer of the Division of Water Resources.[387] State law further requires that each application must be accompanied by complete maps, plans, profiles, and specifications of the obstruction or change and such other data and information as the Chief Engineer of the Division of Water Resources may require.[388] A later act[389] provides that a landowner or operator who wants to build, or who has built a dam, for agricultural purposes on the land he owns or operates, as a part of the federal agricultural conservation program without complying with the provisions of the 1929 legislation, may apply for the approval of the Chief Engineer. Landowners who obtain such approval, of course, would be eligible for a reduction in the assessed valuation of their contiguous acreages as provided for by statute.[390]

10. Bank and Channel Maintenance

The Chief Engineer of the Division of Water Resources also has responsibilities concerning stream cleaning. He must give his approval to plans for the establishment of bank lines along streams as a condition to a county's power to clean and maintain their banks and channels.[391]

11. Water Storage Encouragement

For a number of years the Kansas Legislature has encouraged the construction of water storage and flood detention projects and the donation to the State or to any of its agencies or subdivisions of lands, easements, and rights-of-way for such purposes. It has done so by providing that landowners who qualify shall be entitled to reductions in the assessed valuations of their contiguous acreages.[392] Plans for the dams contemplated by the Legislature[393] must receive the approval of the Chief Engineer of the Division of Water Resources and

---

[382] K.S.A. 24-105 (1964).

[383] K.S.A. 24-105 (1964). The 1931 amendment was Kan. Laws 1931, Ch. 184, § 1. The statute was last amended by Kan. Laws 1951, Ch. 261, § 1.

[384] K.S.A. 24-126 (1964). The office of the Chief Engineer has indicated that approximately 20 plans for levees will be filed during a one year period.

[385] K.S.A. 68-1414 (1964).

[386] K.S.A. 12-638 (1964). Also see Lyman Flood Prevention Association v. City of Topeka, 152 Kan. 484, 106 P.2d 117 (1940).

[387] K.S.A. 82a-301 (1964). The section also provides "That jetties or revetments placed for the purpose (of) stabilizing a caving bank shall not be construed as obstructions to this act providing such jetties and revetments are properly placed." Also see K.S.A. 82a-302 to 82a-305 (1964).

[388] K.S.A. 82a-302 (1964).

[389] Kan. Laws 1939, Ch. 354, K.S.A. 82a-312 to 82a-314 (1964).

[390] See the subsection of this report entitled Water Storage Encouragement.

[391] K.S.A. 82a-307a (1964).

[392] The applicable sections are K.S.A. 82a-405 (1965 Supp.), K.S.A. 82a-406 (1964), K.S.A. 82a-407 (1965 Supp.), K.S.A. 82a-408 (1964), K.S.A. 82a-409 (1965 Supp.), and K.S.A. 82a-409a to 82a-412 (1964). The subsection of the report dealing with "Opinions of the Attorneys General of Kansas" deals with a number of problems arising under these statutes.

[393] K.S.A. 82a-406 (1964). The section requires the landowner to submit to the Chief Engineer complete plans for a proposed dam showing the area of the drainage basin above the dam; the plan, profile and cross-sections of the dam and spillway; a topographic map of the reservoir basin; and, any other data or information the Chief Engineer may require.

the dams must be built in accordance with the approved plans. It is also necessary that the landowner maintain his dam or dams in a condition satisfactory to the Chief Engineer.[394]

12. Plans for Dams by Individuals

A 1941 enactment[395] authorized the Division of Water Resources to make surveys and to prepare plans and specifications for dams and reservoirs (of a certain size) for Kansas landowners upon their request and payment of a five dollar fee. Funds and personnel have not been available for the support of this program during the past several years.[396]

13. Interstate Compacts

The Chief Engineer of the Division of Water Resources officially represents Kansas on each of the bodies that administers the provisions of the interstate river basin compacts affecting the Missouri River Basin to which Kansas is a party. The purposes and the administrative responsibilities under the compacts are discussed in earlier portions of this report.[397]

State Board of Health

1. Organization

The Kansas State Board of Health consists of ten members.[398] Five of them must be licensed to practice medicine in Kansas, one pharmacy, one dentistry, and one veterinary medicine; one must be a hospital administrator and one a sanitary engineer.[399] With the advice and consent of the Senate, the Governor appoints the Board members for staggered, three-year terms, being required, as far as practicable, to appoint residents of the different parts of the State, which appointed residents may not serve for more than two successive terms.[400]

The Board must meet in Topeka and organize by electing one of its members president, which officer is to have no vote on any matter other than election of officers.[401] It must also elect a secretary "and said secretary shall be the executive secretary of said board, but not a member thereof."[402] In the event the Board chooses one of its members to serve as secretary, which it may do, the election creates a vacancy for the Governor to fill.[403]

Statutory materials dealing with the Board of Health distinguish between the Board itself and its existence as a department. State Board of Health means "the ten (10) member board established by section 74-901 of the General Statutes Supplement of 1961[404] and its executive secretary as established therein."[405] State Department of Health means "the State Board of Health established by section 74-901 of the General Statutes Supplement of 1961, except for the ten (10) member board and its executive secretary . . . ."[406] The Executive Secretary of the State Board of Health serves as the Director of Health and as such maintains supervision of and control over the State Department of Health, subject, of course, to the orders, rules, and regulations of the State Board of Health.[407] For the purpose of carrying out certain duties imposed upon the Kansas State Board of Health,[408] the State Board of Health is to name a member of the faculty of the School of Engineering of the University of Kansas or Agricultural University to serve as the Engineer of the State Board of Health.[409] In carrying out those duties the Secretary or the Engineer of the State Board of Health, or both, may act for the State Board of Health when the Board is not in session, and their decisions are to have the same effect as though made by the Board, when confirmed by the Governor and Attorney General.[410]

---

394 K.S.A. 82a-405 (1965 Supp.).
395 Kan. Laws 1941, Ch. 5, K.S.A. 82a-411 to 82a-412 (1964).
396 1967 Annual Budget Explanation and Justification, Division of Water Resources, Board of Agriculture, Budget Division form DA-400, Department of Administration, State of Kansas.
397 See Republican River Interstate Compact, the Arkansas River Compact (Colorado-Kansas), and Arkansas River Basin Compact (Kansas-Oklahoma).
398 Kan. Laws 1967, Ch. 434, § 25, amending K.S.A. 74-901 (1964).
399 Kan. Laws 1967, Ch. 434, § 25, amending K.S.A. 74-901 (1964).
400 Kan. Laws 1967, Ch. 434, § 25, amending K.S.A. 74-901 (1964).
401 Kan. Laws 1967, Ch. 434, § 25, amending K.S.A. 74-901 (1964).
402 Kan. Laws 1967, Ch. 434, § 25, amending K.S.A. 74-901 (1964).
403 Kan. Laws 1967, Ch. 434, § 25, amending K.S.A. 74-901 (1964).
404 Kan. Laws 1967, Ch. 434, § 25, amending K.S.A. 74-901 (1964).
405 K.S.A. 74-901a (1964).
406 K.S.A. 74-901a (1964).
407 Kan. Laws 1967, Ch. 414, § 1, amending K.S.A. 74-901b (1964). Before the amendment the Executive Secretary as the supervisory official of the Department of Health was known as the State Health Officer. The amendment, in part, provided, "On and after the effective date of this act any reference in the laws of this state or in the regulations of the State Board of Health to the state health officer shall be deemed to refer to the director of health." The effective date of the act was July 1, 1967.
408 See K.S.A. 65-161 to 65-164 (1964); Kan. Laws 1967, Ch. 333, § 1, amending K.S.A. 65-165 to 65-167 (1964); and, K.S.A. 65-168 to 65-170 (1964).
409 K.S.A. 65-170 (1964).
410 K.S.A. 65-170 (1964).

2. General Powers

The State Board of Health, with its Department of Health, is another State agency vitally concerned with the administration of policies dealing with the State's water resources. It is the principal State body concerned with controlling water pollution, performing as it does several functions that are designed to insure that minimum standards of health and sanitation are met in the supplying of water and the disposal of sewage and other pollutants. It has, of course, broad supervisory and enforcement powers for the achievement of these ends.[411]

In investing the State Board of Health with supervisory authority, the Legislature has undertaken to define "pollution" with respect to many of the purposes that relate to the Board's endeavors. In one section of the Kansas statutes[412] the Legislature has stated that pollution is defined as "such contamination, or other alteration of the physical, chemical or biological properties of any waters of the state as will or as is likely to create a nuisance or render such waters harmful, detrimental, or injurious to public health, safety or welfare, or to the plant, animal, or aquatic life of the state, or to other legitimate beneficial uses."[413]

3. *Water Supply*

The Kansas Legislature has conferred upon the Kansas State Board of Health several powers designed to insure that minimum standards of health and sanitation are met in water supply activities. It has authorized the Board to prepare and publish minimum standards for the design, construction, and maintenance of sanitary water and sewage systems and it has directed the Board to make recommendations from time to time to appropriate legislative committees concerning any possible legislation that may be necessary to protect the water supplies of the State from contamination.[414]

It has also provided that no person, company, corporation, institution, or municipality shall supply water to the public in Kansas for domestic purposes by means of waterworks without obtaining written permission from the State Board of Health.[415] In addition, the Board is authorized to make analyses, and rules and regulations relating to analyses, of water furnished by municipalities, corporations, companies, or individuals to the public.[416] Further, the legislature has provided that no additional sources of supply may be used for waterworks for furnishing water to the public for domestic purposes and no changes in the manner of storage, purification, or treatment may be made without an additional permit from the State Board of Health.[417] Importantly, the Legislature has empowered the State Board of Health (and the local boards of health as well) "to examine into all nuisances, sources of filth and causes of sickness that may, in their opinion, be injurious to the health of the inhabitants within any county or municipality in this state; . . . ." and it has made violations of removal orders which they are authorized to make, punishable by fine.[418]

4. Disposal of Sewage

Although no person, company, corporation, institution, or municipality may by discharging domestic sewage and industrial wastes into the waters of the State pollute those waters in a manner prejudicial to the health of the State's inhabitants,[419] such entities may discharge sewage and wastes in certain instances upon obtaining the approval of the Secretary of the State Board of Health.[420]

The Legislature has also authorized the State Board of Health to promulgate rules and regulations aimed at preventing soil and water pollution that would be detrimental to the public health or to the plant, animal, and aquatic life of the State or that would be detrimental to the beneficial uses

---

[411] See, for example, K.S.A. 65-101 (1964), K.S.A. 65-171b (1964), and Kan. Laws 1967, Ch. 333, § 4, amending K.S.A. 65-171d (1964).

[412] Kan. Laws 1967, Ch. 333, § 4, amending K.S.A. 65-171d (1964).

[413] This definition might be compared with the interesting one found in the Arkansas River Basin Compact, Kansas-Oklahoma, Kan. Laws 1966, Spec. Sess., Ch. 16, Art II, H. That subsection reads as follows: "The term 'pollution' means contamination or other alterations of the physical, chemical, biological or radiological properties of the water or the discharge of any liquid, gaseous or solid substances into any waters which creates or is likely to result in a nuisance, or which renders or is likely to render the waters into which it is discharged harmful, detrimental or injurious to the beneficial uses of the water."

[414] Kan. Laws 1967, Ch. 333 § 5, amending K.S.A. 65-171 (h) (1964).

[415] K.S.A. 65-163 (1964). The section states, however, that the provision shall not apply to the extension of water pipes for the distribution of water. For a case construing the statute as authorizing the State Board of Health to require a city to chlorinate the water it furnishes for domestic purposes to the public, see State of Kansas, ex rel. Londerholm, v. City of Galena, 194 Kan. 679, 401 P.2d 662 (1965).

[416] K.S.A. 65-156 to 158 (1964). The provisions also deal with service fees and with penal consequences of certain violations.

[417] K.S.A. 65-163 (1964). The section contains rather detailed procedural, as well as penal, provisions.

[418] K.S.A. 65-159 (1965). For a case recognizing an injunctive remedy, see Dougan v. Shawnee County Commissioners 141 Kan. 554, 43 P.2d 223 (1935), which discusses other important enforcement statutes.

[419] K.S.A. 65-1964 (1964).

[420] Kan. Laws 1967, Ch. 333, § 5, amending K.S.A. 65-171h (1964).

of the waters of the State.[421] Its authorization, which is broad indeed, states that the Board "shall make such rules and regulations including registration of potential sources of pollution, as may in its judgment be necessary to protect the waters of the state from pollution by oil, gas, salt water injection wells, or underground storage reservoirs; to control the disposal, discharge or escape of sewage as defined in K.S.A. 65-164, by or from municipalities, corporations, companies, institutions, state agencies, federal agencies, or individuals and any plants, works, or facilities owned and/or operated by them; and to establish water quality standards for the waters of the state to protect their beneficial uses."[422] The Legislature has proceeded to outline the procedures for insuring compliance with the Board's rules and regulations.[423]

The State Board of Health also has a number of responsibilities relating to the activities of sanitary sewer districts. Under one section[424] its approval of proposed facilities and improvements of a district created through the activities of county commissioners is an essential step in the issuance of main sewer district bonds. Another section[425] provides that in the creation of main sewer districts by county commissioners "no land shall be included in the main sewer district sought to be created which in the opinion of the State Board of Health is or may be adequately served by an existing sewer system." In still another,[426] provision is made for the submission for Board approval of plans of such districts for main trunk sewers and the method and means of sewage disposal. A similar provision[427] relates to Board approval of plans and specifications of sewage districts created by township boards.[428]

Under another section,[429] in the adoption of a sanitary code, county commissioners must prepare and submit any such code to the State Board of Health for review and approval. Another[430] requires the same procedure for the amendment or change of such a code.[431]

5. Pollution by Oil and Gas

The Kansas Legislature has foreseen that the State Board of Health's pollution prevention and abatement activities will often relate to the activities of oil and gas exploration and production.[432] It has given the Board certain responsibilities in determining whether proposed plans for the disposal of oil-field or gas-field brines and mineralized waters will protect the water resources of the State from pollution.[433] Also it has given the Board other administrative powers concerning the drilling of oil and gas wells with respect to the prevention of water pollution.

In one important section,[434] for example, it prohibited the storage or disposal of salt water, oil, or refuse in surface ponds unless a permit was first obtained from the State Board of Health, although it also stated that "such permit shall be considered as granted unless denied within ten (10) days." In the same section it provided that whenever the Board or its agents find water pollution by oil, gas, salt water injection wells, or underground storage reservoirs, or that the storage or disposal of salt water, oil, or refuse in a surface pond is causing or is likely to cause pollution of waters of the State or soil *detrimental to public health, plant, animal,* or aquatic life, the Executive Secretary or his designated agents shall issue an operation prohibition order, which order will take effect 10 days after its service upon the appropriate party. The section then goes on to detail the administrative and judicial procedures applicable for the enforcement of orders and for the full protection of all parties involved.

The State Board of Health is authorized, of course, on its own motion or upon complaint, to investigate cases of suspected water pollution.[435] If the Board finds pollution conditions existing, it may order the pollution to cease within a reasonable time, or it may require such manner of treatment or disposition of the polluting material as may be necessary to prevent further pollution.[436] If an entity involved considers an order illegal or

---

[421] Kan. Laws 1967, Ch. 333, § 4, amending K.S.A. 65-171d (1964).
[422] Kan. Laws 1967, Ch. 333, § 4, amending K.S.A. 65-171h (1964).
[423] Kan. Laws 1967, Ch. 333, § 4, amending K.S.A. 65-171d (1964).
[424] Kan. Laws 1967, Ch. 149, § 10, amending K.S.A. 19-2736a (1964).
[425] K.S.A. 19-2789 (1964).
[426] K.S.A. 19-2790 (1964).
[427] K.S.A. 80-2004 (1964).
[428] K.S.A. 80-2015 (1964) provides, in part, that joint sewage districts, composed of two or more sewage districts, "may be organized and governed in the same manner as is herein provided for the organization and government of sewage districts . . . ."
[429] K.S.A. 19-3704 (1964).
[430] K.S.A. 19-3705 (1964).
[431] K.S.A. 19-3706 (1965 Supp.), however, states, "This act or any sanitary codes adopted as provided in this act shall not apply to incorporated cities or to any premises under one ownership which is used only for agricultural purposes."
[432] See, for example, K.S.A. 55-136 to 55-138 (1964).
[433] K.S.A. 55-1003 (1964).
[434] Kan. Laws 1967, Ch. 333, § 4, amending K.S.A. 65-171d (1964).
[435] K.S.A. 65-164 (1964).
[436] K.S.A. 65-164 (1964).

unreasonable, it may appeal within 30 days to the district court of the county in which the alleged pollution or polluted condition has occurred.[437]

6. Sanitation Zone Responsibilities

Since 1965, the Department and State Board of Health have had certain responsibilities to assure the maintenance of healthful and sanitary development and conditions in areas of the State surrounding certain water impoundments.[438] After July 1, 1965, no person could lawfully build any facility, structure, or building in any sanitation zone without first obtaining a sanitation permit from the Department of Health or one of its authorized agents and the Department could not lawfully issue any permit until it or its authorized agent had approved plans for providing water and disposing of sewage.[439] Violators became subject to injunctive action.[440] "Sanitation zone," used in connection with the sanitary development responsibilities, was defined to mean "the area located within three (3) miles of the water line of the conservation pool of any state or federal reservoir having a surface area of its conservation pool of more than one hundred (100) acres, but not including any area within any incorporated city."[441]

In carrying out its sanitary development responsibilities, the State Board of Health may adopt rules and regulations and the Department of Health is authorized to enforce them, as well as the act authorizing their creation.[442] The Department of Health is also authorized to issue sanitation permits for any construction not in violation of the rules and their supporting legislation.[443] Further, the Department may designate agents to process sanitary permits, which agents may be local, city, or county health officers, or the like.[444] Further, the Department must maintain appropriate procedures to assure the prompt and adequate processing of applications for permits.[445]

The Department's sanitation zone responsibilities do not apply to land devoted exclusively to agricultural use or to land under the control of the State Park and Resources Authority or the State Forestry, Fish and Game Commission.[446] The statute so providing also authorized the Department and State Board of Health to provide for certain exceptions in the granting of sanitation permits.[447]

7. Nuclear Energy Development and Radiation Control Act

In 1963 the Kansas Legislature enacted the "nuclear energy development and radiation control act."[448] Under it the State Board of Health was given the responsibility for state radiation control.[449] The details of those responsibilities, together with the details of the act itself, extend considerably beyond the purposes of this report.

8. Burial Structures

Among its other duties, the Kansas State Board of Health must examine plans and specifications for the construction of mausoleums, vaults, and burial structures and must "be satisfied beyond any doubt" that the structures "would be absolutely permanent and sanitary" before any person, firm, or corporation may build them.[450] After requiring that such structures must be built so that the State Board of Health or other health officer can easily examine them,[451] the law then extends additional remedial powers to the State Board of Health or any health officer of the State or county in which the structures are situated to insure their sanitary maintenance.[452]

9. Federal Water Quality Act of 1965

The Federal Water Quality Act of 1965,[453] among other things, provides as follows:

> Sec. 5. (a) Redesignated section 10 of the Federal Water Pollution Control Act is amended by redesignating subsections (c) through (i) as subsections (d) through (j), and by inserting after subsection (b) the following new subsection:
>
> "(c) (1) If the Governor of a State or a State water pollution control agency files, within one year after the date of enactment of this subsection, a letter of intent that such State, after public hearings, will before June 30, 1967, adopt

---

[437] K.S.A. 65-164 (1964).
[438] K.S.A. 65-184 to 65-188 (1965 Supp.) and Kan. Laws 1967, Ch. 335, § 1, amending K.S.A. 65-189 (1965 Supp.).
[439] K.S.A. 65-186 (1965 Supp.).
[440] K.S.A. 65-186 (1965 Supp.). The enforcement provision is K.S.A. 65-188 (1965 Supp.)
[441] K.S.A. 65-185 (1965 Supp.).
[442] K.S.A. 65-187 (1965 Supp.).
[443] K.S.A. 65-187 (1965 Supp.).
[444] K.S.A. 65-187(c) (1965 Supp.).
[445] K.S.A. 65-187(d) (1965 Supp.).
[446] Kan. Laws 1967, Ch. 335, § 1, amending K.S.A. 65-187 (1965 Supp.).
[447] Kan. Laws 1967, Ch. 335, § 1, amending K.S.A. 65-187 (1965 Supp.).
[448] K.S.A. 48-1601 to 48-1619 (1964).
[449] K.S.A. 48-1606 (1964).
[450] K.S.A. 17-1324 (1964).
[451] K.S.A. 17-1325 (1964).
[452] K.S.A. 17-1326 (1964).
[453] 79 Stat. 903 (Oct. 2, 1965).

(A) water quality criteria applicable to interstate waters or portions thereof within such State, and (B) a plan for the implementation and enforcement of the water quality criteria adopted, and if such criteria and plan are established in accordance with the letter of intent, and if the Secretary determines that such State criteria and plan are consistent with paragraph (3) of this subsection, such State criteria and plan shall thereafter be the water quality standards applicable to such interstate waters or portions thereof."

"(2) If a State does not (A) file a letter of intent or (B) establish water quality standards in accordance with paragraph (1) of this subsection, or if the Secretary or the Governor of any State affected by water quality standards established pursuant to this subsection desires a revision in such standards, the Secretary may, after reasonable notice and a conference of representatives of appropriate Federal departments and agencies, interstate agencies, States, municipalities and industries involved, prepare regulations setting forth standards of water quality to be applicable to interstate waters or portions thereof. If, within six months from the date the Secretary publishes such regulations, the State has not adopted water quality standards found by the Secretary to be consistent with paragraph (3) of this subsection, or a petition for public hearing has not been filed under paragraph (4) of this subsection, the Secretary shall promulgate such standards."

The Board of Health is the appropriate water pollution control agency of the state relative to the foregoing provision.[454]

10. Planning

Together with a number of specific agencies, the Chief Engineer of the Kansas State Board of Health is required to cooperate with and make available to the Kansas Water Resources Board all facts, records, and information requested by the Board.[455] Further, the Chief Engineer of the Kansas State Board of Health, among others, was and is required to cooperate with the Kansas Water Resources Board in its formulation and amendment of a comprehensive State water plan.[456] At the same time, the Kansas Water Resources Board, in formulating the State water plan, was and is required to consider the plans and regulations, rules, and recommendations of the State and Federal agencies concerned with the development of the water resources of the State.[457] Such cooperation has taken place.

State Corporation Commission

1. Organization

The State Corporation Commission consists of three full-time, salaried members, all of whom are appointed by the Governor, by and with the advice and consent of the Senate, who serve for staggered, four-year terms.[458]

No more than two of the commissioners may belong to the same political party and no member of the State Legislature may become a commissioner during the term for which he is elected.[459] Presently the Commission elects one of its members as chairman.[460]

In addition to referring to the commissioners, the statutes refer to an attorney and a secretary and go on to provide that, subject to the Governor's approval, the Commission may employ and fix the compensation of necessary accountants, engineers,

---

[454] For Board of Health emergency regulations setting water quality standards, see Kansas Administrative Regulations, Board of Health 28-16-11 to 28-16-26, (1967). Authorized by K.S.A. 77-422 (1965 Supp.), these regulations were to expire Dec. 31, 1967, but, according to the Revisor's note, "may be regularly adopted and filed to continue in effect from and after that date." In "The Ever-Changing Picture of Water Quality Control," 10 Kan. Water News 7 (April, 1967), Melville W. Gray, Assistant Director, Environmental Health Services, Kansas State Department of Health, wrote as follows:

> In compliance with the Federal Water Quality Act of 1965, the Board of Health has adopted water quality criteria for all river basins in the state. These criteria were formulated with the assistance of representatives from state agencies, local governmental units, and public organizations having representation throughout the state. These criteria endeavor to set forth the limits of quality parameters which must be maintained if Kansas will continue to provide a quality of water which will be satisfactory for all beneficial use.
>
> In further compliance with the Water Quality Act of 1965, the Department of Health is developing a plan for implementating the water quality criteria. This plan must be approved by the Federal Water Pollution Control Administration and will include, among other things, a description of programming of both existing and future water quality control needs along with a timetable of abatement for each individual source of water pollution. Currently under development is a monitoring network which the Department must establish for collection of water samples in order to determine that satisfactory water quality is maintained, to abate existing pollution, or to take any preventive measures which may be necessary as indicated by water pollution indices.

[455] K.S.A. 74-2610 (1964).

[456] K.S.A. 82a-903 (1964).

[457] K.S.A. 82a-903 (1964).

[458] Kan. Laws 1967, Ch. 443, § 5, amending K.S.A. 74-601 (1965 Supp.).

[459] Kan. Laws 1967, Ch. 443, § 5, amending K.S.A. 74-601 (1965 Supp.).

[460] Kan. Laws 1967, Ch. 443, § 5, amending K.S.A. 74-601 (1965 Supp.).

experts, and special assistants.[461] They also provide that the Commission shall maintain its office in Topeka and its conservation division office in Wichita.[462] They further state, however, that the members of the Commission may act officially in any part of the State.[463]

2. Public Utilities

The Kansas Legislature has authorized the State Corporation Commission to supervise and control the public utilities and common carriers doing business in the State, which includes, of course, those utilities formed for the transmission, delivery, and furnishing of water.[464] Consequently, although the Commission's primary concern is not with water resources as such, it does possess certain powers and responsibilities relative to the conservation and control of the water resources of the State. Any non-municipal company that supplies water to the public is subject to regulation by the Commission concerning such matters as the reasonableness of services, facilities, rules, regulations, rates, and the like.[465] Also, before a second or third class city may change its system of waterworks by enlargement, extension, or improvement, it must obtain the Commission's approval.[466] The Commission must, of course, provide technical advice and services pertaining to any public utility operated within those cities whether publicly or privately owned.[467]

3. Pollution

In the drilling and operation of oil and gas wells, the danger of the pollution of the State's water resources is often present, and one of the important functions of the State Corporation Commission is to supervise those drillings and operations, together with their abandonment, to insure against pollution of the State's waters.[468] To this end, the State Corporation Commission is authorized to promulgate the rules and regulations necessary to control those wells.[469] The Commission is assisted in these duties, in some respects, by the State Board of Health, the State Geological Survey, and the Kansas Water Resources Board.[470] The State Corporation Commission is also authorized to regulate the disposal, or return to the horizon, of water containing minerals, salt-water, oil-field, and gas-field brines.[471]

4. Dams, Bridges and Other Obstructions

The approval of the State Corporation Commission is necessary before a city or a private water company supplying water to a city may build a dam in or across any nonnavigable watercourse within a drainage district.[472] The Commission's approval is also necessary before a dam, bridge, or other obstruction across a navigable stream, and not a part of a highway, may be constructed.[473]

A drainage district must obtain the permission of the Commission before it removes, lowers, or injures any dam, or makes any excavation or ditch to permit the flow around or by such dam, that has been constructed by any city or private water company in or across a nonnavigable natural watercourse for the purpose of storing or holding water for the use of a city or its inhabitants.[474]

5. Limitation Reminder

It must be kept in mind that the foregoing discussion touches upon only a few of the many powers and duties of the State Corporation Commission. Understandably, those not directly related to water resources conservation or development have been deliberately by-passed.

State Geological Survey

1. Organization

The State Geological Survey dates back to 1889 as a division of the University of Kansas.[475] The Chancellor of the University appoints the State

---

[461] Kan. Laws 1967, Ch. 434, § 23, amending K.S.A. 74-605 (1964). Also see, K.S.A. 74-607 (1964).
[462] K.S.A. 74-606 (1964).
[463] K.S.A. 74-606 (1964).
[464] The general powers of the State Corporation Commission are found in Article 6 of Chapter 74 and Article 1 of Chapter 66 of the Kansas Statutes. See esp. K.S.A. 66-104 (1964). This section provides, "Nothing in this act shall apply to any public utility in this state owned and operated by any municipality."
[465] E.g. K.S.A. 42-355 (1964) as to rates charged by irrigation companies. Also see K.S.A. 42-356 (1964), which states, "The State Corporation Commission shall have the same powers in relation to irrigation companies that they have in relation to railroad companies."
[466] K.S.A. 12-837 (1964).
[467] K.S.A. 12-825 (1964).
[468] See K.S.A. 55-128 to 55-132, (1964), and K.S.A. 55-134 to 55-142 (1964), and K.S.A. 55-133 (1965 Supp.).
[469] K.S.A. 55-134 (1964). Also see K.S.A. 55-602 (1964), which provides in part, "The State Corporation Commission shall have authority to make rules and regulations for the prevention of such waste and for the protection of all fresh-water strata, and oil- and gas-bearing strata encountered in any well drilled for, or producing oil."
[470] E.g., see K.S.A. 55-128 (1964).
[471] K.S.A. 55-901 (1964) and K.S.A. 55-1003 to 55-1007 (1964).
[472] K.S.A. 24-407 (Sixteenth) (1964).
[473] K.S.A. 68-1501 to 68-1506 (1964).
[474] K.S.A. 24-407 (Sixteenth) (1964).
[475] Kan. Laws 1889, Ch. 258, § 14. Drury, The Government of Kansas 255 (1961).

Geologist, who is to be a member of the faculty in the department of geology, and the State Geologist, in turn, directs the immediate work of the survey.[476] The Chancellor, is the ex officio director of the survey, however, and, according to statute, "shall have supervision over the same."[477] It is to the Chancellor that the State Geologist prepares and submits for publication all of the Survey's reports.[478]

2. Responsibilities and Functions

Under its authority to continue the operations of the State Geological Survey, the University of Kansas is "to make as far as possible a complete geological survey of the State of Kansas, giving special attention to any and all natural products of economic importance, in order to determine the character, location and amount of such products, and to prepare reports on the same as hereinafter prescribed."[479] The State Geological Survey plays an important part in the conservation and development of the water resources of the State by accumulating and reporting data pertaining to those resources. Not long ago it was reported that the Ground-Water Resources Department, which is concerned with the quantity, quality, and distribution of the ground-water resources of the State, was the second largest subdivision of the Survey.[480]

The Kansas Legislature has also directed the State Geological Survey to cooperate with and make available to the Kansas Water Resources Board all facts, records, information, and data that the Board might request.[481] And more specifically it has required and continues to require the Survey to cooperate with the Kansas Water Resources Board in the formulation of a continuing, comprehensive State water plan.[482] The section of this report dealing with the Kansas Water Resources Board attests to the successful cooperation of the agencies having planning responsibilities under Kansas law. Kansas law also requires the State Geological Survey to assist the State Corporation Commission, in some respects, with the Commission's duties of supervising the drilling, operation, and abandonment of oil and gas wells to prevent water pollution.[483] Interested communities and individuals may also avail themselves, of course, of the services of the Survey with respect to their various water problems.

Further, the State Geological Survey is one of a number of State agencies directed to undertake studies and to make recommendations as to the need for changes in laws and regulations relating to nuclear development. In particular, it is directed to do so with respect to the possibility of disposal of radioactive wastes in subterranean areas.[484]

State Park and Resources Authority

1. Organization

In 1955 the Kansas Legislature created the State Park and Resources Authority.[485] It did so, "For the purpose of conserving and planning the development of the natural resources of the state, and of providing for their use and enjoyment, thereby contributing to the cultural recreational and economic life of the people and their health. . . ."[486]

The Authority consists of nine members, five appointed by the Governor for staggered, four-year terms, and four ex officio members without vote, which members are the Governor (or his representative when he is unable to attend any meeting), the Director of the State Highway Commission, the Chairman of the Forestry, Fish and Game Commission, and the Director of the State Department of Economic Development.[487] Annually the Authority organizes by electing a chairman, a vice-chairman, and a secretary from its appointed membership.[488] Five members constitute a quorum, provided at least three of them are appointed members, and the affirmative vote of at least three appointed members is necessary for Authority action.[489]

Although the Authority's principal office is in Topeka, it may meet at such other places in the State as it may deem advisable.[490] It must, however, hold at least one meeting in each calendar quarter, one of which is to be an "annual" meeting, although special meetings may be called.[491]

With the advice and approval of the Governor, the Authority employs a director who serves as the

---

[476] K.S.A. 76-323 (1964).
[477] K.S.A. 76-323 (1964).
[478] K.S.A. 76-323 (1964).
[479] K.S.A. 76-322 (1964). K.S.A. 76-323 (1964) and K.S.A. 76-326 (1964) relate to the reports "hereinafter prescribed."
[480] Drury, The Government of Kansas 256 (1961). According to the Director of the State Geological Survey, this subdivision is now the largest in the Survey.
[481] K.S.A. 74-2610 (1964).
[482] K.S.A. 82a-903 (1964).
[483] E.g., see K.S.A. 55-128 (1964).
[484] K.S.A. 48-1604 (h) (1964).
[485] Kan. Laws 1955, Ch. 355.
[486] K.S.A. 74-4501 (1964).
[487] K.S.A. 74-4504 (1964).
[488] K.S.A. 74-4505 (1964).
[489] K.S.A. 74-4505 (1964).
[490] K.S.A. 74-4506 (1964).
[491] K.S.A. 74-4506 (1964).

chief executive and administrative officer of the Authority, exercising supervision, direction and control in carrying out the programs and policies of the Authority.[492] The Director, who falls within the classified exempt service of the Kansas civil service act, may appoint such assistants and employees, who shall be within the classified service, as he deems necessary to achieve the Authority's purposes and policies.[493] And the Authority may, also, employ or contract for consulting engineers, attorneys, accountants, construction, and financial experts, all under the unclassified service, and fix their compensations.[494]

2. Responsibilities and Functions

The powers and duties of the State Park and Resources Authority relate to the development of public recreation as related to natural resources and to the control and supervision of the parks,[495] lakes, and areas of recreational, scenic, or historic significance that may be acquired under the State Park and Resources Authority statutes.[496] Obviously, the Authority has considerable control and supervision over portions of the State's water resources. Many of its powers, however, are not relevant to problems of the development and conservation of the State's water resources as such.[497] This report will deal with a few of those that do.

The Kansas Legislature has granted the Authority the power and duty to enter into contracts with the board of directors of certain rural water supply districts for water supply purposes.[498] The State Corporation Commission, of course, must approve the rates charged under such contracts.[499]

The Authority may acquire real and personal property by gift, purchase, lease, or condemnation for park purposes,[500] and it may acquire, develop, construct, maintain, and operate park facilities.[501] The Authority may also accept Federal assistance for the construction of any park, lake, or park facility, may acquire Federal lands and properties under such conditions as the appropriate Federal agencies may impose, and may accept any other assistance from Federal agencies, including engineering aid.[502]

The Kansas Legislature also named the State Park and Resources Authority as the official State agency to administer Federal assistance under the provisions of the "Land and Water Conservation Fund Act of 1965."[503] It authorized the Authority to accept and disburse funds made available to the State under the Federal act in accordance with the policies established by the Joint Council on Recreation,[504] for which Council it is to serve as secretariat and furnish with staff and services.[505] It also instructed the Authority to perform such other acts as the Authority might find necessary or proper for the better protection, conservation, control, use, increase, enjoyment and development of the natural resources of the State.[506]

3. Planning Responsibilities

State statutes authorize the Authority to formulate and adopt an official plan.[507] It should be kept in mind, however, that the State Park and Resources Authority was created primarily to serve the recreational needs (in a very broad sense) of the people of the State. This is necessary for a proper understanding of the statutory provisions relating to the role of the Authority in the area of water resources.

Although the Authority is charged with responsibilities of "planning," "development," and "supervision" as the State's water resources relate to recreational possibilities, the Authority does not supersede the Kansas Water Resources Board with respect to the latter's comprehensive planning and supervisory authority in the area of water resource development and conservation. In other words, the water resources that are within the jurisdiction of the State Park and Resources Authority are not beyond the scope of the State water plan; therefore, the Authority and its activities that come within the purview of the plan are subject to the reviewing, recommending, and prohibiting authority of the Kansas Water Resources Board.[508]

---

[492] K.S.A. 74-4508 (1964).
[493] K.S.A. 74-4508 (1964).
[494] K.S.A. 74-4509 (h) (1964).
[495] K.S.A. 74-4502 (d) (1964) defines "state park" as "any land, site or object primarily of recreational value, or of cultural value because of its scenic, historic, archaeologic, scientific, or other distinctive characteristics or natural features." K.S.A. 74-4502 (b) (1964) defines "land" as "land, land under water, the water itself and every estate, interest and right, legal or equitable, in land or water."
[496] K.S.A. 74-4507 (1964).
[497] For example, Kan. Laws 1967, Ch. 424 (5), amending K.S.A. 74-4510 (5) (1965 Supp.), confers upon the Authority the power to preserve the type, style, location, and equipment of all wharves, docks, and anchorages.
[498] K.S.A. 74-4510a (1964).
[499] K.S.A. 74-4510a (1964).
[500] Kan. Laws 1967, Ch. 424, § 1 (1), amending K.S.A. 74-4510 (1) (1965 Supp.).
[501] Kan. Laws 1967, Ch. 424, § 1 (3), amending K.S.A. 74-4510 (3) (1965 Supp.).
[502] Kan. Laws 1967, Ch. 424, § 1 (1), amending K.S.A. 74-4510 (1) (1965 Supp.).
[503] K.S.A. 74-4532 (1965 Supp.). For the Federal act, see 78 Stat. 897 (1964).
[504] K.S.A. 74-4533 (1965 Supp.).
[505] K.S.A. 74-4529 (1965 Supp.).
[506] K.S.A. 74-4507 (c) (1964).
[507] K.S.A. 74-4507 (1964).
[508] See the Section ante on the Kansas Water Resources Board.

The same kind of conclusion mentioned above concerning the State water plan applies with respect to the administrative and supervisory powers of the Chief Engineer of the Division of Water Resources of the Kansas State Board of Agriculture concerning his duties under the Kansas water appropriation statutes and under his statutory duties relating to the diversion, obstruction, and use of the waters of the State. The same is true of other State agencies, such as the Forestry, Fish and Game Commission.[509]

Forestry, Fish and Game Commission

1. Organization

The Kansas Forestry, Fish and Game Commission consists of five residents of the State appointed by the Governor, with the consent of the Senate, for staggered, four-year terms, one from each of four designated districts of the State and one from the State at large.[510] To be eligible for appointment to the Commission, residents must have held some regular license issued by the Commission for each of the last four years immediately preceding the time of appointment.[511] Upon appointment each commissioner receives a per diem of $10.00, together with necessary traveling expenses, being limited to $500.00 in any one year for per diem.[512]

The Commission elects a chairman and a secretary from its membership.[513] As has been observed previously, the chairman serves as one of four ex officio members without vote of the Kansas State Park and Resources Authority.[514] For the transaction of Commission business, three members constitute a quorum.[515]

The Commission appoints a director who holds office at its pleasure.[516] In turn the Director, with the Commission's approval, appoints such employees as are necessary, all of whom, with the exception of the chief legal counsel, are in the classified service of the Kansas civil service act.[517]

The Director is required, with the consent and approval of the Commission, to organize a game protection service and to appoint one or more residents of each county to serve without salary as county game protectors.[518] Further, he may, with the approval of the Commission, appoint local preserve protectors to protect and supervise fish and game on preserves under the Commission's jurisdiction.[519]

The Kansas Legislature has directed the Forestry, Fish and Game Commission to locate its headquarters at Pratt, Kansas.[520]

2. Responsibilities and Functions

The Forestry, Fish and Game Commission is not basically a water resources development agency that is concerned with overall, comprehensive planning. A large number of its important activities relate to the preservation, propagation, and protection of the State's fish and game resources and are, therefore, outside the scope of this report. At the same time it has been given some important roles in the water policy area.

Certainly its duty to preserve, propagate, and protect the State's fish and game resources has made important its assistance in the area of pollution prevention.[521] Moreover, it has been authorized to make regulations relating to activities within the State parks, State lakes, recreational grounds, game sanctuaries, and forest areas that it has or will acquire (or control) in its name or in the name of the State to promote, safeguard, and protect public health, peace, safety, and decency.[522] Moreover, the Kansas Legislature has provided that fishing, hunting, and trapping upon any property under the possession or control of the State Park and Resources Authority is to be subject to the requirement of licensing by the Forestry, Fish and Game Commission according to law and its regulations.[523] Further, it has provided, "The

---

[509] Kan. Laws 1967, Ch. 424, § 1 (5), amending K.S.A. 74-4510, (5) (1965 Supp.), specifically states, for example, "The right to enforce all fish and game laws and regulations on all areas under the authority is reserved to the forestry, fish and game commission."

[510] Kan. Laws 1967, Ch. 434, § 35, amending K.S.A. 74-3301 (1964).

[511] Kan. Laws 1967, Ch. 434, § 35, amending K.S.A. 74-3301 (1964).

[512] Kan. Laws 1967, Ch. 434, § 35, amending K.S.A. 74-3301 (1964).

[513] Kan. Laws 1967, Ch. 434, § 35, amending K.S.A. 74-3301 (1964).

[514] K.S.A. 74-4504 (1964).

[515] Kan. Laws 1967, Ch. 434, § 35, amending K.S.A. 74-3301 (1964).

[516] Kan. Laws 1967, Ch. 443, § 13, amending K.S.A. 74-3302 (1964).

[517] Kan. Laws 1967, Ch. 443, § 13, amending K.S.A. 74-3302 (1964). Kan. Laws 1967, Ch. 434, § 32, amending K.S.A. 74-2205 (1964), provides, however, "The Commission shall appoint, hire, and discharge all employees serving under it."

[518] Kan. Laws 1967, Ch. 443, § 13, amending K.S.A. 74-3302 (1964).

[519] Kan. Laws 1967, Ch. 443, § 13, amending K.S.A. 74-3302 (1964).

[520] Kan. Laws 1967, Ch. 434, § 35, amending K.S.A. 74-3301 (1964).

[521] See Drury, The Government of Kansas, 208 (1961), and Grimes, Government and Natural Resources in Kansas: Water 72 (1957).

[522] K.S.A. 32-224 (1965 Supp.). For penal sanctions, see K.S.A. 32-225 to 32-226 (1964).

[523] Kan. Laws 1967, Ch. 424, § 1 (5), amending K.S.A. 74-4510 (5) (1965 Supp.).

right to enforce all fish and game laws and regulations on all areas under the authority is reserved to the forestry, fish and game commission."[524]

The Kansas Legislature has also given the State Forestry, Fish and Game Commission broad authority as the designated agency of the State with respect to applications for the procurement of Federal aid in matters pertaining to the development of natural resources insofar as it pertains to the control and utilization of waters, the prevention of soil erosion and flood control.[525] In the same statute containing that delegation,[526] the Legislature further provided as follows:

> And further, the Forestry, Fish and Game Commission shall have authority, control and jurisdiction over all matters pertaining to the development of conservation of the natural resources of the state, insofar as the same pertains to forests, woodlands, public lands, submarginal lands, prevention of soil erosion, game reserves, nesting grounds, and the control and utilization of waters, including all lakes, streams, reservoirs and dams; and further, the Forestry, Fish and Game Commission shall have charge of all funds which may be procured for the purposes herein specified and shall have charge of all projects constructed therewith; **Provided**, that nothing in this act shall prohibit any political subdivision of the state of Kansas now qualified to obtain loans and/or grants from the federal government for making applications for and receiving such loans and/or grants; **Providing further**, that nothing in this act shall prohibit any political subdivision of the state of Kansas or private corporation from having full control of any lake now constructed and owned by them.

The Commission is authorized also to develop facilities for public forestry, recreational grounds, fish and game preserves.[527] It may acquire or provide for the building and construction of reservoirs, lakes, and dams or embankments for impounding water on such land.[528] For these various purposes, and for the purposes contemplated by Article 33 of Chapter 74 of the Kansas Statutes, the Commission may, on behalf of the people of the State, accept gifts and grants of land and other property (including water and water rights), and is empowered to buy, sell, exchange, or condemn land or other property.[529] It is authorized, of course, to promulgate rules and regulations for the protection of the land and other property under its control.[530]

The Forestry, Fish and Game Commission is also empowered to extend or consolidate lands or waters, or both, suitable for any of the purposes enunciated in Article 2 of Chapter 32 of the Kansas Statutes, and to exchange lands or waters or both, for other lands or waters, or both, which the Commission may desire.[531]

3. Nuclear Energy Development and Radiation Control Act

The State Forestry, Fish and Game Commission is also one of a number of State agencies directed to undertake studies and to make recommendations concerning the need for changes in laws and regulations relating to nuclear development.[532] In particular it is directed to do so with respect to hazards to the natural resources of the State, including wildlife.[533]

Joint Council on Recreation

1. Organization

The 1964 Kansas Legislature created the Joint Council on Recreation,[534] thereby moving toward qualifying Kansas for financial assistance under the Federal Land and Water Conservation Fund Act of 1965.[535] In accordance with its organic law, the Council consists of 15 members.[536] The Governor appoints one member, to serve at his pleasure, from each of four State agencies: (1) the State Forestry, Fish and Game Commission, (2) the State Park and Resources Authority, (3) the State Highway Commission, and (4) the State Water Resources Board. He also appoints three members for terms of two years each to represent local public interests of the State.[537] In addition, Council membership includes the administrative heads, or their designees, of (1) the Forestry, Fish and Game Commission, (2) the State Park and Resources Authority, (3) the State Water Resources Board, (4) the State Highway Commission, (5) the State Historical Society, (6) the State Department of

---

[524] Kan. Laws 1967, Ch. 424, § 1 (5), amending K.S.A. 74-4510 (5) (1965 Supp.).
[525] K.S.A. 74-3308 (1964).
[526] K.S.A. 74-3308 (1964).
[527] K.S.A. 32-214 (1964).
[528] K.S.A. 32-214 (1964).
[529] K.S.A. 32-214 (1964). Also, Kan. Laws 1967, Ch. 443, § 13, amending K.S.A. 74-3302 (1964).
[530] Kan. Laws 1967, Ch. 443, § 13, amending K.S.A. 74-3302 (1964).
[531] K.S.A. 32-215 (d) (1964).
[532] The Kansas Nuclear Energy Development and Radiation Control Act of 1963 is found at K.S.A. 48-1601 to 48-1619 (1964).
[533] K.S.A. 48-1604 (g) (1964).
[534] K.S.A. 74-4527 to 74-4535 (1965 Supp.).
[535] 78 Stat. 897 (1964).
[536] K.S.A. 74-4528 (1965 Supp.).
[537] K.S.A. 74-4528 (1965 Supp.).

Economic Development, (7) the State Department of Health, and (8) the State Department of Administration.[538]

Annually the Council elects a chairman and a vice-chairman from its membership.[539] Providing staff and services for the Council, the State Park and Resources Authority serves as secretariat.[540] Its meetings are quarterly and when oftener, upon the call of the chairman.[541]

2. Responsibilities and Functions

The Joint Council on Recreation, which is authorized to make recommendations and suggestions to eliminate needless duplication of efforts,[542] is basically a planning entity. The purpose of the act under which it was created was "to provide coordination for planning, acquisition, and development of needed land and water areas and recreational facilities in the state and to develop an outdoor recreational development policy to guide the state in planning for development of the outdoor recreation resources of the state."[543]

The Council has the duty of developing an outdoor recreation policy for the State and a comprehensive long-range outdoor recreational development plan for the State.[544] The plan is to cover developments by State and local governments and private groups. Under its duty to formulate such a plan, the Council is to assist and encourage local governmental agencies in developing long-range plans for local recreational development.[545] That part of such an outdoor recreation plan dealing with State programs, however, is to be prepared by the State agency that will administer the program.[546] The plan of any such agency is to be submitted to the Council for review. When approved by the Council, the plan of any such agency is to be incorporated into the State's recreation plan.[547]

Nevertheless, the Joint Council on Recreation is the official State agency "to prepare a comprehensive outdoor recreation plan by which activities of all agencies of the state, county, city, and other governmental units having an interest in outdoor recreation may be coordinated."[548] And the official State agency to accept and disburse funds made available under the Federal Land and Water Conservation Fund Act of 1965,[549] which is the State Park and Resources Authority, is to deal with the funds derived from the Federal Government in accordance with the policies established by the Joint Council.[550]

---

[538] K.S.A. 74-4528 (1965 Supp.).
[539] K.S.A. 74-4528 (1965 Supp.).
[540] K.S.A. 74-4529 (1964).
[541] K.S.A. 74-4531 (1965 Supp.).
[542] K.S.A. 74-4530 (1965 Supp.).
[543] K.S.A. 74-4527 (1965 Supp.).
[544] K.S.A. 74-4530 (1965 Supp.).
[545] K.S.A. 74-4530 (1965 Supp.).
[546] K.S.A. 74-4530 (1965 Supp.).
[547] K.S.A. 74-4530 (1965 Supp.).
[548] K.S.A. 74-4534 (1965 Supp.).
[549] 78 Stat. 897 (1964).
[550] K.S.A. 74-4533 (1965 Supp.).

REFERENCES

Table of Cases

	Page
Arensman v. Kitch, 160 Kan. 783, 165 P.2d 441 (1946)	52
Artesian Valley Water Conservation Ass'n. v. Division of Water Resources and Robert V. Smrha, 174 Kan. 212, 255 P.2d, 1015 (1953)	53
Atchison, Topeka & Santa Fe Railroad Co. v. Shriver, 101 Kan. 257, 166 Pac. 519 (1917)	52
Atchison, Topeka & Santa Fe Railway Co. v. Herman, 74 Kan. 77, 85 Pac. 817 (1906)	56
Baldwin v. Ohio Township, 70 Kan. 102, 78 Pac. 424 (1904)	56
Balliet v. Clay County, 115 Kan. 99, 222 Pac. 132 (1924)	62
Baumann v. Smrha, 145 F. Supp. 617 (D. Kan. 1956), affirmed per curiam 352 U. S. 863 (1956)	54, 55
Bellah v. Phoenix Utilities Co., 7 F.2d 406 (D. Kansas 1924)	57
Bolinger v. Moorhouse, 154 Kan. 124, 114 P.2d 853 (1941)	57
Breedlove v. Wyandotte County Commissioners, 127 Kan. 754, 275 Pac. 379 (1929)	62
Broadway Mfg. Co. v. Leavenworth Terminal Rly. & Bridge Co., 81 Kan. 616, 106 Pac. 1034 (1910)	56
Brown v. Schneider, 81 Kan. 486, 106 Pac. 41 (1910)	56
Butts v. Atchison, Topeka & Santa Fe Railway Co., 135 Kan. 85, 9 P.2d 648 (1932)	57
Campbell v. Grimes, 62 Kan. 503, 505 64 Pac. 62 (1901)	51
Cities Service Gas Co. v. Riverside Drainage Dist., 137 Kan. 410, 20 P.2d 520 (1933)	56
City of Emporia v. Soden, 25 Kan. 588 (1881), motion for rehearing overruled in 26 Kan. 492 (1881)	50, 52

	Page
City of McPherson v. Smrha, 179 Kan. 59, 293 P.2d 239 (1956)	53
Clark v. Allaman, 71 Kan. 206, 80 Pac. 571 (1905)	51
Clemments v. Phoenix Utility Co., 119 Kan. 190, 237 Pac. 1062 (1925)	56
Coffin v. Left Hand Ditch Co., 6 Colo. 443 (1882)	48
Consumer Sand Co. v. Executive Council, 126 Kan. 233, 268 Pac. 123 (1928)	61
Cow Creek Valley Flood Prevention Ass'n. v. City of Hutchinson, 166 Kan. 78, 200 P.2d 279 (1948)	57
Cushenberry v. Waite-Phillips Co., 119 Kan. 478, 240 Pac. 400 (1925)	56, 57
Dana v. Hurst, 86 Kan. 947, 122 Pac. 1041 (1912)	56
Dougan v. Shawnee County Commissioners, 141 Kan. 554, 43 P.2d 223 (1935)	56
Dreyer v. Siler, 180 Kan. 765, 308 P.2d 127 (1957)	56
Durkee v. Bourbon County Commissioner, 142 Kan. 690, 51 P.2d 984 (1935)	52
Dyer v. Stahlhut, 147 Kan. 767, 78 P.2d 900 (1938)	57
Feldhut v. Brummitt, 96 Kan. 127, 150 Pac. 549 (1915)	48
Fitzpatrick v. Bernritter, 130 Kan. 356, 285 Pac. 233 (1930)	61
Foster v. Kansas Gas & Electric Co., 146 Kan. 284, 69 P.2d 729 (1937)	56
Freeman v. Scherer, 97 Kan. 184, 154 Pac. 1019 (1916)	57
Frizell v. Bindley, 144 Kan. 84, 58 P.2d 95 (1936)	52
Gentry v. Weaver, 130 Kan. 691, 288 Pac. 745 (1930)	57
Gibbs v. Williams, 25 Kan. 214 (1881)	56, 57
Goering v. Schrag, 167 Kan. 499, 207 P.2d 391 (1949)	57
Heise v. Schulz, 167 Kan. 34, 204 P.2d 706 (1949)	53
Horn v. Seeger, 167 Kan. 532, 207 P.2d 953 (1949)	56
Horn v. Seeger, 174 Kan. 194, 255 P.2d 997 (1953)	56
Horn v. Seeger, 174 Kan. 224, 255 P.2d 1000 (1953)	56
Hornor v. Baxter Springs, 116 Kan. 288, 226 Pac. 779 (1924)	56
Ireton v. Thomas, 84 Kan. 70, 113 Pac. 306 (1911)	48
Jackson Walker Coal and Material Co. v. Hodges, 283 Fed. 457 (D. Kan. 1918)	56
Jansen v. Buffalo Drainage Dist., 148 Kan. 712, 84 P.2d 961 (1938)	57
Jobling v. Tuttle, 75 Kan. 351, 360, 89 Pac. 699, 703 (1907)	52
Johnston v. Bowersock, 62 Kan. 148, 61 Pac. 740 (1900)	56
Kansas City v. King, 65 Kan. 64, 68 Pac. 1093 (1902)	56
Kansas v. Colorado, 185 U. S. 125 (1902)	56
Kansas v. Colorado, 206 U. S. 46 (1906)	56
Kaw Valley Drainage District v. The Missouri Pacific Railway Co., 99 Kan. 188, 161 Pac. 937 (1916)	56, 60
Klassen v. Regier, 195 Kan. 61, 403 P.2d 106 (1965)	57
Kraus v. Strong, 170 Kan. 459, 227 P.2d 93 (1951)	57
Kregor v. Fogarty, 78 Kan. 541, 96 Pac. 845 (1908)	56
Liston v. Scott, 108, Kan. 180, 194 Pac. 642 (1921)	57
Lux v. Haggin, 69 Cal. 255, 4 Pac. 919, 10 Pac. 674 (1886)	48
Lyman Flood Prevention Association v. City of Topeka, 152 Kan. 484, 106 P.2d 117 (1940)	77
Martin v. Lown, 111 Kan. 752, 208 Pac. 565 (1922)	57
Missouri Pacific Rly. v. Keys, 55 Kan. 205, 40 Pac. 275 (1885)	56
Palmer v. Waddell, 22 Kan. 352 (1879)	56
Parker v. Atchison, 58 Kan. 29 (1897)	56
Perry v. City of Wichita, 174 Kan. 264, 255 P.2d 667 (1953)	57
Pessemier v. Nichols, 153 Kan. 267, 109 P.2d 205 (1941)	61
Peuker v. Canter, 62 Kan. 363, 63 Pac. 617 (1901)	57
Piazzek v. Drainage Dist. No. 1, 119 Kan. 119, 237 Pac. 1059 (1925)	56
Rait v. Furrow, 74 Kan. 101, 85 Pac. 934 (1906)	56
Rardin v. Marcotte, 194 Kan. 186, 398 P.2d 351 (1965)	57
Reeder v. Board of County Comm'rs., 193 Kan. 182, 392 P.2d 888 (1964)	57, 62
Riddle v. Chicago, R. I. & P. Rly., 88 Kan. 248, 128 Pac. 195 (1912)	56
Roland v. St. Joseph & Grant Island Railway Co., 82 Kan. 546, 108 Pac. 808 (1910)	56
Sandstrum v. Missouri Pacific Railway Co., 39 F.2d 165 (D. Kan. 1925)	57
Schrag v. The Blaze Fork Drainage Dist., 119 Kan. 169, 237 Pac. 1047 (1925)	57

	Page
Shamleffer v. Council Grove Peerless Mill Co., 18 Kan. 24 (1877)	50, 54
Siler v. Dreyer, 183 Kan. 419, 327 P.2d 1031 (1938)	56
Simon V. Neises, 193 Kan. 343, 395 P.2d 308 (1964)	57
Skinner v. Wolf, 126 Kan. 158, 266 Pac. 926 (1928)	57
Smith v. Miller, 147 Kan. 40, 75 P.2d 273 (1938)	52
Southwestern Bell Tel. Co., v. State Commission of Revenue and Taxation, 168 Kan. 227, 212 P.2d 363 (1949)	65
State of Kansas, ex rel. Burton, v. Van Dyne, 159 Kan. 378, 155 P.2d 458 (1945)	56
State of Kansas, ex rel. Colemen v. Kelly, 71 Kan. 811, 81 Pac. 450 (1905)	45
State of Kansas, ex rel. Dawson, v. Akers, 92 Kan. 169, 140 Pac. 637 (1914)	56
State of Kansas, ex rel. Emery v. Knapp, 167 Kan. 546, 207 P.2d 440 (1949)	53, 54, 55
State of Kansas, ex rel. Fatzer v. Barnes, 171 Kan. 491, 233 P.2d 724 (1951)	56
State of Kansas, ex rel. Fatzer v. Board of Regents, 167 Kan. 587, 207 P.2d 373 (1949)	45
State of Kansas, ex rel. Fatzer, v. Mills, 171 Kan. 397, 233 P.2d 720 (1951)	56
State of Kansas, ex rel. Harley, v. Dolese Bros. Co., 151 Kan. 801, 102 P.2d 95 (1940)	75
State of Kansas, ex rel. Knittle, 87 Kan. 300, 124 Pac. 160 (1912)	57
State of Kansas, ex rel. Londerholm, v. City of Galena, 194 Kan. 679, 401 P.2d 662 (1965)	79
State of Kansas, ex rel. Mitchell, v. Ross, 159 Kan. 199, 152 P.2d 675 (1944)	56
State of Kansas, ex rel. Peterson, v. The Kansas State Board of Agriculture, 158 Kan. 603, 149 P.2d 604 (1944)	48, 49, 52, 53, 75
State v. Burrell, 256 N.C.2d 288, 123 S.E.2d 795; Cert. denied 370 U. S. 961, 8 L.Ed 2d 827, 82 S. Ct. 1621 (1962)	63
Stogsdill v. Minor, 103 Kan. 790, 176 Pac. 643 (1918)	56
Topeka Water Supply Co. v. City of Potwin, 43 Kan. 404, 23 Pac. 578 (1890)	56
Thompson v. McDougal, 103 Kan. 373, 175 Pac. 157 (1918)	56
Thompkins v. Brown, 134 Kan. 111, 4 P.2d 454 (1931)	57
Union Trust Co. v. Cuppy, 26 Kan. 754 (1882)	56
Wallace v. City of Winfield, 96 Kan. 35, 149 Pac. 693 (1915)	51
Wallace v. City of Winfield, 98 Kan. 651, 159 Pac. 11 (1916)	51
Wear v. Kansas, 245 U. S. 154 (1917)	56
Weaver v. Beech Aircraft Corp., 180 Kan. 224, 303 P.2d 159 (1956)	53
Webb v. The Board of County Comm'rs., 124 Kan. 38, 257 Pac. 966 (1927)	56
Williams v. City of Wichita, 190 Kan. 317, 374 P.2d 578 (1962)	53, 55
Winters v. Myers, 92 Kan. 414, 140 Pac. 1033 (1914)	56
Wood v. Fowler, 26 Kan. 682 (1882)	56
Wood v. Fowler, 26 Kan. 682 (1882)	56
Wulf v. Fitzpatrick, 124 Kan. 642, 261 Pac. 838 (1927)	61

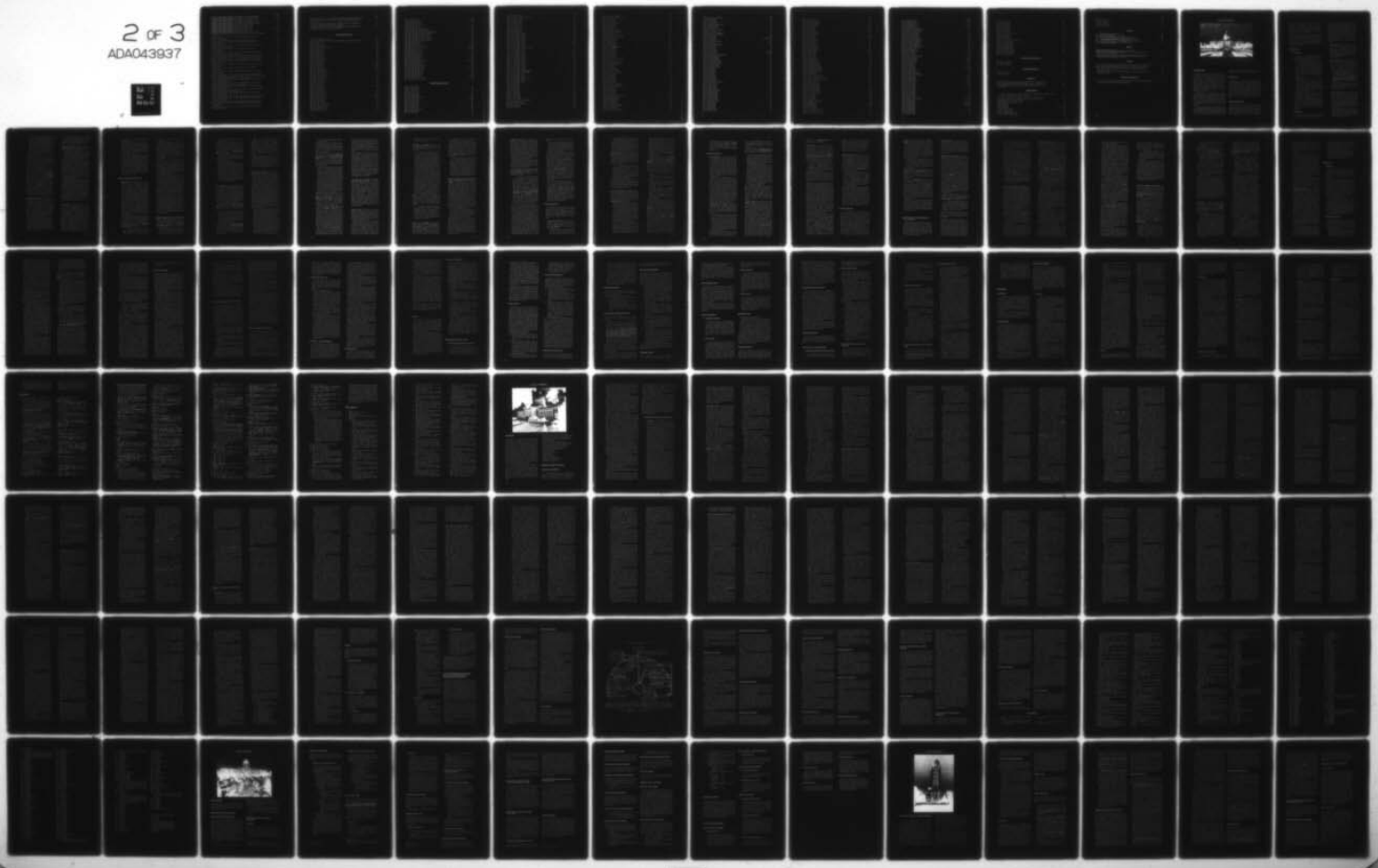
Attorney General's Opinions

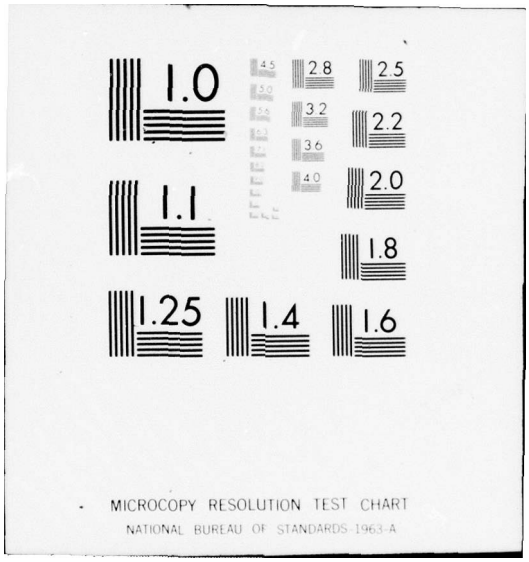
I Opinions of the Attorney General 212 (1961), Letter of September 14, 1959.	62
I Opinions of the Attorney General 246 (1961), Letter of June 18, 1959.	63
II Opinions of the Attorney General 121 (1962), Letter of March 28, 1960.	67
II Opinions of the Attorney General 187 (1962), Letter of Feb. 5, 1960.	64, 67
II Opinions of the Attorney General 266 (1962), Letter of March 23, 1960.	61
II Opinions of the Attorney General 290 (1962), Letter of June 22, 1960.	68
II Opinions of the Attorney General 303 (1962), Letter of Oct. 5, 1960.	69
II Opinions of the Attorney General 311 (1962), Letter of May 3, 1960.	68
II Opinions of the Attorney General 313 (1962), Letter of April 21, 1960.	65
III Opinions of the Attorney General 302 (1963), Opinion No. 61-260 (June 30, 1961).	67
III Opinions of the Attorney General 303 (1963), Opinion No. 62-25 (May 31, 1962).	67
III Opinions of the Attorney General 355 (1963), Opinion No. 62-15 (Feb. 1, 1962), 10 Kan. L. Rev. 625 (1962).	59, 60
III Opinions of the Attorney General 692 (1963), Opinion No. 61-234 (June 13, 1961).	68

AD-A043 937 MISSOURI BASIN INTER-AGENCY COMMITTEE F/G 8/6
COMPREHENSIVE FRAMEWORK STUDY MISSOURI RIVER BASIN. VOLUME 3. A--ETC(U)
JUN 69

UNCLASSIFIED NL

2 OF 3
ADA043937




1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Page

IV **Opinions of the Attorney General** 80 (1965), Opinion No. 63-33 (April 30, 1963). 68
IV **Opinions of the Attorney General** 92 (1965), Opinion No. 63-43 (June 4, 1963). 62
IV **Opinions of the Attorney General** 121 (1965), Opinion dated May 22, 1963. 61
IV **Opinions of the Attorney General** 122 (1965), Opinion No. 63-14 (Feb. 22, 1963). 66
IV **Opinions of the Attorney General** 136 (1965), Opinion No. 63-88 (Oct. 30, 1963). 63
IV **Opinions of the Attorney General** 203 (1965), Letter of March 11, 1963. 63
IV **Opinions of the Attorney General** 240 (1964), Letter of Aug. 26, 1963. 65
IV **Opinions of the Attorney General** 243 (1965), Letter of June 3, 1963. 60, 61
IV **Opinions of the Attorney General** 249 (1965), Letter of May 14, 1963. 68
IV **Opinions of the Attorney General** 250 (1965), Opinion No. 63-55, July 23, 1963. 64
Kan. Att'y. Gen. Ops., Letter of April 21, 1943, to W. S. Barackman, Acting County Engineer, Eureka, Kansas. 62
Kan. Att'y. Gen. Ops., Letter of Nov. 15, 1946, to O. M. Wheat, County Attorney, Medicine Lodge, Kansas 62
Kan. Att'y. Gen. Ops., Letter of Feb. 10, 1954, to Glen D. Byer, Reserve, Kansas. 67
Kan. Att'y. Gen. Ops., Letter of May 14, 1954, to W. M. Ferguson, City Attorney, Wellington, Kansas 62
Kan. Att'y. Gen. Ops., Letter of Aug. 13, 1955, to Charles W. Lowder, Attorney, Board of Public Utilities, Kansas City, Kansas 69
Kan. Att'y. Gen. Ops., Letter of Nov. 27, 1956, to Bernie D. Frigon, Attorney, Cimarron, Kansas. 66
Kan. Att'y. Gen. Ops., Letter of Feb. 15, 1957, to R. V. Smrha, Chief Engineer, Division of Water Resources, Kansas State Board of Agriculture. 62
Kan. Att'y. Gen. Ops., Letter of July 22, 1958, to Howard M. Immel, Attorney, Iola, Kansas. 66
Kan. Att'y. Gen. Ops., Letter of Aug. 1, 1958, to the Hon. George Robb, State Auditor. 61
Kan. Att'y. Gen. Ops., Letter of Aug. 9, 1958, to John S. May, Attorney, Atchison, Kansas. 66
Kan. Att'y. Gen. Ops., Letter of Jan. 22, 1959, to Bernie D. Frigon, County Attorney, Cimarron, Kansas. 65, 67
Kan. Att'y. Gen. Ops., Letter of March 10, 1959, to Glendon E. Rewerts, County Attorney, Leoti, Kansas 69
Kan. Att'y. Gen. Ops., Letter of March 18, 1959, to Harry T. Coffman, Attorney, Lyndon, Kansas. 66
Kan. Att'y. Gen. Ops., Letter of June 2, 1961, to Wesley M. Norwood, County Attorney, Lawrence, Kansas. 65
Kan. Att'y. Gen. Ops., Letter of June 14, 1962, to the Executive Council, State of Kansas. 61
Kan. Att'y. Gen. Ops., Opinion No. 62-126, Letter of Dec. 6, 1962, to Elvin D. Perkins, Attorney, Upper Verdigris Watershed Joint District No. 21, Emporia, Kansas. 68
Kan. Att'y. Gen. Ops., Letter of Feb. 20, 1963, to James F. Swoyer, Jr., Jefferson County Attorney, Oskaloosa, Kansas. 65
Kan. Att'y. Gen. Ops., Letter of Feb. 26, 1963, to Elvin D. Perkins, Attorney, Upper Verdigris Watershed Joint District No. 21, Emporia, Kansas. 68
Kan. Att'y. Gen. Ops., Letter of July 24, 1963, to Thad Kinnaman, Big Caney Watershed District, Cedar Vale, Kansas. 64
Kan. Att'y. Gen. Ops., Letter of Jan. 10, 1964, to Samuel C. Jackson, Attorney, Grandview Kansas Rural Water District, Grandview, Kansas. 65
Kan. Att'y. Gen. Ops., Letter of May 21, 1964, to Dean Matthew, Chautauqua County Attorney, Sedan, Kansas. 62
Kan. Att'y. Gen. Ops., Letter of Oct. 14, 1964, to David A. Brace, Attorney, Moline, Kansas. 66
Kan. Att'y. Gen. Ops., Letter of Dec. 16, 1964, to David W. Kester, Greenwood County Attorney, Eureka, Kansas. 61
Kan. Att'y. Gen. Ops., Letter of Sept. 30, 1966, to Rep. Bill Fribley, Crestline, Kansas. 65
Kan. Att'y. Gen. Ops., Letter of Dec. 8, 1966, to Warden L. Noe, Attorney, State Board of Agriculture. 66
Kan. Att'y. Gen. Ops., Letter of Jan. 27, 1967, to Robert M. Corbett, Attorney, Kansas State Board of Health. 64

Page

Kan. Att'y. Gen. Ops., Letter of Feb. 24, 1967, to Clayton S. Flood, Attorney, Hays, Kansas. 67
Kan. Att'y. Gen. Ops., Letter of Feb. 24, 1967, to Arno Windscheffel, Attorney, Smith Center, Kansas. 68
Kan. Att'y. Gen. Ops., Letter of April 21, 1967, to Hugh E. Dierker, M.D., M.P.H., State Health Officer, The Kansas State Department of Health. 64
Kan. Att'y. Gen. Ops., Letter of April 24, 1967, to Hugh E. Dierker, M.D., M.P.H., State Health Officer, Kansas State Department of Health. 64

Constitutional Provisions

Article 1 of General Statute of 1949 61
Constitution of the State of Kansas; adopted at Wyandot July 29, 1959, Article XI, Sec. 3 45
Kan. Const. Art. 5, § 1 67
Kan. Const. Art. 11, § 9 45
Kan. Const. Bill of Rights, § 7 67
Kan. Laws of Territory, Ch. XCVI, § 1 45
Kan. Laws 1866, Ch. 57 46
Kan. Laws 1867, Ch. 58 46
Kan. Laws 1868, Ch. 119 § 3 46
Kan. Laws 1886, Ch. 115 46
Kan. Laws 1889, Ch. 95 46
Kan. Laws 1889, Ch. 165 46
Kan. Laws 1889, Ch. 258, § 14 83
Kan. Laws 1891, Ch. 133 46
Kan. Laws 1895, Ch. 162 46
Kan. Laws 1899, Ch. 151 46
Kan. Laws 1917, Ch. 172 46, 75
Kan. Laws 1919, Ch. 218 46, 75
Kan. Laws 1927, Ch. 206, § 2 63
Kan. Laws 1927, Ch. 293, § 1 75
Kan. Laws 1927, Ch. 293, § 2 75
Kan. Laws 1927, Ch. 293, § 3 75
Kan. Laws 1927, Ch. 293, § 4 75
Kan. Laws 1931, Ch. 184, § 1 77
Kan. Laws 1933, Ch. 206 46
Kan. Laws 1933, Ch. 271, § 7 75
Kan. Laws 1939, Ch. 354 77
Kan. Laws 1941, Ch. 5 78
Kan. Laws 1945, Ch. 390 46, 49
Kan. Laws 1951, Ch. 261, § 1 77
Kan. Laws 1955, Ch. 355 84
Kan. Laws 1955, Ch. 356 69
Kan. Laws 1957, Ch. 359, § 1 63
Kan. Laws 1957, Ch. 539 46, 49
Kan. Laws 1961, Ch. 302, § 1 63
Kan. Laws 1961, Ch. 479 71, 73
Kan. Laws 1961, Ch. 480 71
Kan. Laws 1963, Ch. 188 61
Kan. Laws 1963, Ch. 234, § 36 62
Kan. Laws 1963, Ch. 234, § 69 66
Kan. Laws 1963, Ch. 246, § 1 60
Kan. Laws 1963, Ch. 246, § 2 60
Kan. Laws 1963, Ch. 512, § 4 65

	Page
Kan. Laws 1963, Ch. 514	46, 71
Kan. Laws 1965, Ch. 173, § 1	61
Kan. Laws 1965, Ch. 250, § 1	67
Kan. Laws 1965, Ch. 556, § 1	64
Kan. Laws 1965, Ch. 557	50
Kan. Laws 1965, Ch. 558, and 588	46, 71
Kan. Laws 1966, Spec. Sess., Ch. 16, Art. I	47
Kan. Laws 1966, Spec. Sess., Ch. 16, Art. II, A, B, C, E	48
Kan. Laws 1966, Spec. Sess., Ch. 16, Art. II, H	78
Kan. Laws 1966, Spec. Sess., Ch. 16, Art. V	48
Kan. Laws 1966, Spec. Sess., Ch. 16, Art. X	47
Kan. Laws 1966, Spec. Sess., Ch. 16, Art. X, A	48
Kan. Laws 1966, Spec. Sess., Ch. 16, Art. XI	48
Kan. Laws 1967, Ch. 149, § 10	80
Kan. Laws 1967, Ch. 295	64
Kan. Laws 1967, Ch. 333, § 1	64, 79
Kan. Laws 1967, Ch. 333, § 1, 2, and 3	64
Kan. Laws 1967, Ch. 333, § 4	64, 79, 80
Kan. Laws 1967, Ch. 333, § 5	79
Kan. Laws 1967, Ch. 335, § 1	81
Kan. Laws 1967, Ch. 414, § 1	78
Kan. Laws 1967, Ch. 434, § 25	78
Kan. Laws 1967, Ch. 419, § 1	69, 73
Kan. Laws 1967, Ch. 420, § 1	70
Kan. Laws 1967, Ch. 420, § 2 and § 3	71, 72, 74
Kan. Laws 1967, Ch. 424 (5)	85
Kan. Laws 1967, Ch. 424, § 1 (1)	85
Kan. Laws 1967, Ch. 424, § 1 (3)	85
Kan. Laws 1967, Ch. 424, § 1 (5)	86, 87
Kan. Laws 1967, Ch. 434, § 23	83
Kan. Laws 1967, Ch. 434, § 25	78
Kan. Laws 1967, Ch. 434, § 32	86
Kan. Laws 1967, Ch. 434, § 35	86
Kan. Laws 1967, Ch. 443, § 5	82
Kan. Laws 1967, Ch. 443, § 13	86, 87
Kan. Laws 1967, Ch. 516, § 1 and § 2	71

General Statutes of Kansas

Kan. G. S. 1935, 33-106	53
Kan. G. S. 1935, 60-501	52
Kan. G. S. 1935, 68-114	62
Kan. G. S. 1935, 68-115	62
Kan. G. S. 1935, 82a-301	62
Kan. G. S. 1949, 14-701	62
Kan. G. S. 1949, 24-401 et seq.	68
Kan. G. S. 1949, 24-410	67, 68
Kan. G. S. 1949, 24-454	61
Kan. G. S. 1949, 25-1719	67
Kan. G. S. 1949, 27-102	63
Kan. G. S. 1949, 32-138	60
Kan. G. S. 1949, 32-143	60
Kan. G. S. 1949, 42-701 et seq.	63
Kan. G. S. 1949, 68-419	63
Kan. G. S. 1949, 68-535	68

	Page
Kan. G. S. 1949, 72-2128	61
Kan. G. S. 1949, 72-2142 et seq. (1964)	61
Kan. G. S. 1949, 79-1701	68
Kan. G. S. 1949, 82a-407	68
Kan. G. S. 1949, 82a-701	53
Kan. G. S. 1949, 82a-702	55
Kan. G. S. 1949, 82a-703	55
Kan. G. S. 1949, 82a-704	54
Kan. G. S. 1949, 82a-708	54
Kan. G. S. 1949, 82a-712	54
Kan. G. S. 1949, 82a-716	54
Kan. G. S. 1953 Supp., 24-1203	67
Kan. G. S. 1957 Supp., 24-1205	66
Kan. G. S. 1957 Supp., 24-1205	66
Kan. G. S. 1957 Supp., 24-1206	66
Kan. G. S. 1957 Supp., 24-1207	66
Kan. G. S. 1957 Supp., 24-1210	65, 67
Kan. G. S. 1957 Supp., 24-1215	66
Kan. G. S. 1957 Supp., 68-406	63
Kan. G. S. 1957 Supp., 74-4501 to 74-4526	63
Kan. G. S. 1957 Supp., 74-4511	62
Kan. G. S. 1959 Supp., 15-911	68
Kan. G. S. 1959 Supp., 24-101a	67, 68
Kan. G. S. 1959 Supp., 24-418	67
Kan. G. S. 1959 Supp., 74-3319a	61
Kan. G. S. 1959 Supp., 74-3319b	61
Kan. G. S. 1959 Supp., 82a-405	68
Kan. G. S. 1959 Supp., 82a-619	65
Kan. G. S. 1959 Supp., 82a-625	65
Kan. G. S. 1961 Supp., 24-1202c	66
Kan. G. S. 1961 Supp., 24-1205	66
Kan. G. S. 1961 Supp., 24-1206	66
Kan. G. S. 1961 Supp., 24-1207	66
Kan. G. S. 1961 Supp., 24-1209, **Eighth**	66
Kan. G. S. 1961 Supp. 24-1227	66
Kan. G. S. 1961 Supp., 68-1103	62
Kan. G. S. 1961 Supp., 74-901	78
Kan. G. S. 1961 Supp., 79-408 to 79-410	61
Kan. G. S. 1961 Supp., 82a-405	68
Kan. G. S. 1963 Supp., 82a-614	64
K.S.A. 12-638 (1964)	77
K.S.A. 12-825 (1964)	83
K.S.A. 12-837 (1964)	83
K.S.A. 12-1205 (1964)	66
K.S.A. 14-701 (1964)	62
K.S.A. 15-911 (1964)	68
K.S.A. 17-1324 (1964)	81
K.S.A. 17-1325 (1964)	81
K.S.A. 17-1326 (1964)	81
K.S.A. 19-2736a (1964)	80
K.S.A. 19-2753 to 19-2756 (1965 Supp.)	66
K.S.A. 19-2754 (1965 Supp.)	66
K.S.A. 19-2757 to 19-2765 (1964)	66
K.S.A. 19-2789 (1964)	80
K.S.A. 19-2790 (1964)	80

	Page
K.S.A. 19-2801 (1965 Supp.)	61
K.S.A. 19-2803c to 19-2803f (1964)	61
K.S.A. 19-3704 (1964)	80
K.S.A. 19-3705 (1964)	80
K.S.A. 19-3706 (1965 Supp.)	80
K.S.A. 24-101a (1964)	68
K.S.A. 24-105 (1964)	62, 77
K.S.A. 24-126 (1964)	77
K.S.A. 24-401 et seq. (1964)	68
K.S.A. 24-407 (Sixteenth) (1964)	83
K.S.A. 24-410 (1964)	68
K.S.A. 24-1201 to 24-1233 (1964)	76
K.S.A. 24-1202 and 24-1205 (1964)	66
K.S.A. 24-1202 (c) (1964)	66
K.S.A. 24-1203 (1964)	67
K.S.A. 24-1205 (1964)	66
K.S.A. 24-1206 (1964)	66, 76
K.S.A. 24-1207 (1964)	66
K.S.A. 24-1209, **Eighth** (1964)	66
K.S.A. 24-1210 (1964)	65, 67
K.S.A. 24-1213 (1964)	76
K.S.A. 24-1214 (1964)	76
K.S.A. 24-1215 (1964)	66
K.S.A. 24-1216 (1964)	76
K.S.A. 24-1217 (1964)	66
K.S.A. 24-1222 to 24-1225 (1964)	76
K.S.A. 24-1227 (1964)	66, 76
K.S.A. 25-1101 et seq. (1965 Supp.)	68
K.S.A. 25-1719 (1965 Supp.)	67
K.S.A. 32-142 (1964)	60
K.S.A. 32-214 (1964)	87
K.S.A. 32-215 (d) (1964)	87
K.S.A. 32-224 (1965 Supp.)	86
K.S.A. 32-225 to 32-226 (1964)	86
K.S.A. 33-106 (1964)	53
K.S.A. 42-308 (1964)	59
K.S.A. 42-309 (1964)	76
K.S.A. 42-313 (1964)	76
K.S.A. 42-355 (1964)	83
K.S.A. 42-356 (1964)	83
K.S.A. 42-701 to 42-704 (1964)	76
K.S.A. 42-701 to 42-730 (1964)	63, 76
K.S.A. 42-706 (e) (1964)	68
K.S.A. 42-710 (1964)	76
K.S.A. 42-722 (1964)	76
K.S.A. 42-725 (1964)	76
K.S.A. 46-132 (1964)	69
K.S.A. 48-1601 to 48-1619 (1964)	81, 87
K.S.A. 48-1604 (g) (1964)	87
K.S.A. 48-1604 (h) (1964)	84
K.S.A. 48-1606 (1964)	81
K.S.A. 55-128 (1964)	83, 84
K.S.A. 55-128 to 55-132 (1964)	83
K.S.A. 55-133 (1965 Supp.)	83
K.S.A. 55-134 (1964)	83
K.S.A. 55-134 to 55-142 (1964)	83

	Page
K.S.A. 55-136 to 55-138 (1964)	80
K.S.A. 55-602 (1964)	83
K.S.A. 55-901 (1964)	83
K.S.A. 55-1003 (1964)	80
K.S.A. 55-1003 to 55-1007 (1964)	83
K.S.A. 60-601 (b) (1964)	52
K.S.A. 65-101 (1964)	79
K.S.A. 65-156 to 65-158 (1964)	79
K.S.A. 65-159 (1965)	79
K.S.A. 65-161 to 65-164 (1964)	78
K.S.A. 65-161 to 65-171 (h) (1964)	64
K.S.A. 65-163 (1964)	79
K.S.A. 65-164 (1964)	64, 78, 80, 81
K.S.A. 65-165 (1964)	64
K.S.A. 65-165 to 65-167 (1964)	64, 78
K.S.A. 65-168 (1964)	64
K.S.A. 65-168 to 65-170 (1964)	78
K.S.A. 65-170 (1964)	78
K.S.A. 65-171 (1964)	64
K.S.A. 65-171 b (1964)	79
K.S.A. 65-171 d (1964)	64, 79, 80
K.S.A. 65-171 h (1964)	64, 79
K.S.A. 65-184 to 65-188 (1965 Supp.)	81
K.S.A. 65-185 (1965 Supp.)	81
K.S.A. 65-186 (1965 Supp.)	81
K.S.A. 65-187 (1965 Supp.)	81
K.S.A. 65-187 (c) (1965 Supp.)	81
K.S.A. 65-187 (d) (1965 Supp.)	81
K.S.A. 65-188 (1965 Supp.)	81
K.S.A. 65-189 (1965 Supp.)	81
K.S.A. 66-104 (1964)	83
K.S.A. 68-114 (1964)	62
K.S.A. 68-115 (1964)	62
K.S.A. 68-406 (1964)	63
K.S.A. 68-419 (1964)	63
K.S.A. 68-535 (1964)	68
K.S.A. 68-1103 (1964)	62
K.S.A. 68-1414 (1964)	77
K.S.A. 68-1501 to 68-1506 (1964)	83
K.S.A. 72-2128 (1964)	61
K.S.A. 74-506 a (1964)	75
K.S.A. 74-506 b (1964)	75
K.S.A. 74-506 c (1964)	75
K.S.A. 74-506 d (1965 Supp.)	75
K.S.A. 74-509 (1) (1964)	76
K.S.A. 74-509 (2) (1964)	76
K.S.A. 74-509 (3) (1964)	76
K.S.A. 74-509 (4) (1964)	76
K.S.A. 74-509 (5) (1964)	76
K.S.A. 74-601 (1965 Supp.)	82
K.S.A. 74-605 (1964)	83
K.S.A. 74-606 (1964)	83
K.S.A. 74-607 (1964)	83
K.S.A. 74-901 (1964)	78
K.S.A. 74-901 a (1964)	78
K.S.A. 74-901 b (1964)	78

	Page
K.S.A. 74-2205 (1964)	86
K.S.A. 74-2605 (1965 Supp.)	69
K.S.A. 74-2606 (1965 Supp.)	69
K.S.A. 74-2607 (1965 Supp.)	69
K.S.A. 74-2608 (1964)	70, 75
K.S.A. 74-2609 (1964)	70
K.S.A. 74-2610 (1964)	75, 82, 84
K.S.A. 74-2611 (1964)	70
K.S.A. 74-2655 (1965 Supp.)	69
K.S.A. 74-3301 (1964)	86
K.S.A. 74-3302 (1964)	86, 87
K.S.A. 74-3308 (1964)	87
K.S.A. 74-3319a (1964)	61
K.S.A. 74-3319b (1964)	61
K.S.A. 74-3321 (1964)	61
K.S.A. 74-4501 (1964)	84
K.S.A. 74-4501 to 74-4509	63
K.S.A. 74-4502 (b) (1964)	85
K.S.A. 74-4502 (d) (1964)	85
K.S.A. 74-4504 (1964)	84, 86
K.S.A. 74-4505 (1964)	84
K.S.A. 74-4506 (1964)	84
K.S.A. 74-4507 (1964)	85
K.S.A. 74-4507 (c) (1964)	85
K.S.A. 74-4508 (1964)	85
K.S.A. 74-4509a (1965 Supp.)	63
K.S.A. 74-4509 (h) (1964)	85
K.S.A. 74-4510 (1965 Supp.)	63
K.S.A. 74-4510 (1) (1965 Supp.)	85
K.S.A. 74-4510 (3) (1965 Supp.)	85
K.S.A. 74-4510 (5) (1965 Supp.)	85, 86
K.S.A. 74-4510a (1964)	85
K.S.A. 74-4511 (1964)	62
K.S.A. 74-4511 to 74-4526 (1964)	63
K.S.A. 74-4527 (1965 Supp.)	88
K.S.A. 74-4527 to 74-4535 (1965 Supp.)	63, 87
K.S.A. 74-4528 (1965 Supp.)	88
K.S.A. 74-4529 (1964)	88
K.S.A. 74-4529 (1965 Supp.)	85
K.S.A. 74-4530 (1965 Supp.)	88
K.S.A. 74-4531 (1965 Supp.)	88
K.S.A. 74-4532 (1965 Supp.)	85
K.S.A. 74-4533 (1965 Supp.)	85, 88
K.S.A. 74-4534 (1965 Supp.)	88
K.S.A. 76-322 (1964)	84
K.S.A. 76-323 (1964)	84
K.S.A. 76-326 (1964)	84
K.S.A. 77-109 (1964)	46
K.S.A. 79-408 to 79-410 (1964)	61
K.S.A. 80-2004 (1964)	80
K.S.A. 80-2015 (1964)	80
K.S.A. 82a-301 (1964)	62, 77
K.S.A. 82a-302 (1964)	77
K.S.A. 82a-302 to 82a-305 (1964)	77
K.S.A. 82a-307a (1964)	77
K.S.A. 82a-312 to 82a-314 (1964)	77

	Page
K.S.A. 82a-405 (1965 Supp.)	68, 77
K.S.A. 82a-406 (1964)	77
K.S.A. 82a-407 (1965 Supp.)	68, 77
K.S.A. 82a-408 (1964)	68, 77
K.S.A. 82a-409 (1965 Supp.)	77
K.S.A. 82a-409a to 82a-412 (1964)	77
K.S.A. 82a-411 to 82a-412 (1964)	78
K.S.A. 82a-518 Art. I (1964)	46
K.S.A. 82a-518 Art. III (1964)	46
K.S.A. 82a-518 Art. IX (1964)	46
K.S.A. 82a-520 Art. I (1964)	47
K.S.A. 82a-520 Art. III (B) (1964)	47
K.S.A. 82a-520 Art. IV (A) (1964)	47
K.S.A. 82a-520 Art. V (1964)	47
K.S.A. 82a-520 Art. VIII (1964)	47
K.S.A. 82a-520 Art. VIII (C) (1964)	47
K.S.A. 82a-614 (1965 Supp.)	64
K.S.A. 82a-619 (1964)	65
K.S.A. 82a-621 (1965 Supp.)	65
K.S.A. 82a-625 (1964)	65
K.S.A. 82a-701 (1964)	62
K.S.A. 82a-701 to 82a-706a (1964)	76
K.S.A. 82a-701 (d) (1964)	57, 59
K.S.A. 82a-701 (f) (1964)	58, 59
K.S.A. 82a-701 (g) (1964)	58, 59
K.S.A. 82a-702 (1964)	57
K.S.A. 82a-703 (1964)	57, 59
K.S.A. 82a-704 (1964)	62
K.S.A. 82a-705 (1964)	57, 58, 59
K.S.A. 82a-705 (a) (1964)	57, 58
K.S.A. 82a-706 (1964)	76
K.S.A. 82a-706b (1965 Supp.)	76
K.S.A. 82a-706c to 82a-725 (1964)	76
K.S.A. 82a-707 (1964)	58, 59
K.S.A. 82a-708a (1964)	57
K.S.A. 82a-708 (b) (1964)	60
K.S.A. 82a-709 (1964)	57, 58
K.S.A. 82a-711 (1964)	57, 58
K.S.A. 82a-711a (1964)	58
K.S.A. 82a-712 (1964)	57, 58
K.S.A. 82a-713 (1964)	58
K.S.A. 82a-714 (1964)	58
K.S.A. 82a-717a (1964)	62
K.S.A. 82a-718 (1964)	59
K.S.A. 82a-724 (1964)	59
K.S.A. 82a-901 (1964)	72, 74
K.S.A. 82a-901 to 82a-926 (1964)	71, 74, 76
K.S.A. 82a-902 (1964)	74
K.S.A. 82a-903 (1964)	72, 76, 82, 84
K.S.A. 82a-905 (1964)	71, 72, 74
K.S.A. 82a-906 (1964)	71, 72, 74
K.S.A. 82a-907 (1964)	72
K.S.A. 82a-908 (1964)	72
K.S.A. 82a-909 (1964)	74
K.S.A. 82a-910 (1964)	72
K.S.A. 82a-911 (1964)	72

	Page
K.S.A. 82a-912 (1964)	72
K.S.A. 82a-913 (1964)	72
K.S.A. 82a-914 (1964)	73
K.S.A. 82a-915 (1964)	73
K.S.A. 82a-916 (1964)	73, 74
K.S.A. 82a-917 (1964)	74
K.S.A. 82a-918 (1964)	74
K.S.A. 82a-919 to 82a-923 (1964)	74
K.S.A. 82a-920 (1964)	74
K.S.A. 82a-921 (1964)	73, 74
K.S.A. 82a-922 (1964)	73, 74
K.S.A. 82a-927 to 82a-946 (1965 Supp.)	71
K.S.A. 82a-932 (1965 Supp.)	73
K.S.A. 82a-933 (1965 Supp.)	72
K.S.A. 82a-934 (1965 Supp.)	73
K.S.A. 82a-935 (1965 Supp.)	73
K.S.A. 82a-936 (1965 Supp.)	73
K.S.A. 82a-937 (1965 Supp.)	74
K.S.A. 82a-938 (1965 Supp.)	71, 72
K.S.A. 82a-939 (1965 Supp.)	71

Kansas Legislative Resolutions

H. C. Res. No. 5 (1961)	71, 73
H. C. Res. No. 6 (1961)	71
H. C. Res. No. 18 (1961)	71

Kansas Legislative Bills

H. B. No. 1497 (1967)	64
S. B. No. 358 (1967)	64

Regulations

Kansas Adm. Regulations, Kansas State Board of Health, 28-16-11 to 28-16-26 (1967).	82
Kansas Adm. Regulations, Kansas State Board of Health, 28-18-1 to 28-18-4 (1967).	64
Proposed Kansas Adm. Regulations, Kansas State Board of Health, 28-18-1 to 28-18-4, Jan. 17, 1967.	64

Federal Statutes

Act. of July 9, 1870 Ch. 235, § 17, 16 Stat. 218; R.S. 2340, as amended by the Act of March 3, 1891, Ch. 561, § 4, 26 Stat. 1097; 30 U.S.C. § 52 (1964).	51
Act of July 26, 1966, Ch. 262 § 9, 14 Stat. 253; R.S. 2339; 30 U.S.C. § 51 (1964)	51
Act of Dec. 22, 1944, Ch. 665, § 1, 58 Stat. 887, 33 U.S.C. § 701-1 (1964).	75
The Flood Control Act of 1944, P.L. 78-534	71
The Water Supply Act of 1958, P.L. 85-500	71
57 Stat. 86 (1943)	46
62 Stat. 145 (1949)	47
78 Stat. 897 (1964)	85, 87, 88
79 Stat. 903 (Oct. 2, 1905)	81
16 U.S.C. § 1001, (1964)	64
16 U.S.C. § 1002, (Supp. I, 1964)	64
16 U.S.C. §§ 1003 to 1009 (1964)	64

	Page
40 U.S.C. § 255	68
43 U.S.C. § 661 (1964)	51
57 U.S.C. § 86 (1943)	46
62 U.S.C. § 145 (1949)	47
80 U.S.C. § 1405 (1966)	47

Treatises

Drury, **The Government of Kansas** 208 (1961)	86
Drury, **The Government of Kansas** 255, 256, (1961)	83, 84
Grimes, **Government and Natural Resources in Kansas: Water** 72 (1957)	86
Grimes, **Government and Natural Resources in Kansas: Water** 83, 84 (1957)	69
Hutchins, **Selected Problems in the Law of Water Rights in the West**, 389 (1942)	59
Kinney, **Irrigation and Water Rights** (2d ed. 1912) § 165, 166	51

Reports

A Report to the Governor of Kansas, 6, Topeka, Kansas, (Dec. 1944)	49
A Suggested Water Development Program for Kansas, Research Department, Kansas Legislative Council, Pub. No. 243 (Jan. 1963)	71
Report to the 1961 Kansas Legislature Concerning State Water Policy and Program Needs, 43, Kansas Water Resources Board, November 1961	71

Articles

Gray, "The Ever-Changing Picture of Water Quality Control" 10 Kan. Water News 7 (April, 1967)	82
Johnson, "Riparian and Public Rights to Lakes and Streams" 35 Wash. L. Rev., 580 (1960)	60
Johnson and Austin, "Recreational Rights and Titles to Beds on Western Lakes and Streams", 7 Nat. Res. J. 1 (1967)	60
"Right of Public to Fish in Streams Notwithstanding Objections by Riparian Owner," Annot. 47 A.L.R. 2d 381 (1956)	60

Personal Communications

Letter of June 15, 1967, to Prof. Earl Shurtz, Lawrence, Kansas, from W. E. Steps, Assistant Chief Engineer, Kansas Water Resources Board, Topeka, Kansas	60



INTRODUCTION

Water, water, everywhere, nor any drop to drink.[1] Although these words from Coleridge's poem refer to the vast expanses of a saline body of water, their message may well apply to one of Minnesota's most important natural resources — water. Minnesota's lakes, streams and natural marshes, noted for their beauty and purity, offer unending recreational opportunities on a year-round basis. Simultaneously, the abundance of water in Minnesota has supplied the present needs of municipalities, industry and agriculture without too many conflicts with recreational users.

The maintenance of an adequate water supply to satisfy all the needs of competing uses and users becomes more difficult as our society expands in sheer number as well as in complexity. A need, therefore, exists to study and analyze the principles, laws and regulations affecting water so that modification and changes, if necessary, may be realized before this natural resource is permanently affected.[2]

This study brings together existing legal doctrines, policies and programs dealing with water and related land resources in Minnesota. It will not suggest what should or could be done, nor will it explore in depth the many facets of water regulation. Instead, it is hoped that this study will provide the background necessary for understanding and using our water supply most beneficially.

STATE LAW

Various sources enunciate the legal doctrines and principles which govern and regulate water and its uses. Those of primary importance are the state constitution, common law, and statutory enactments. None of these sources alone is determinative of a legal right pertaining to water law, rather, each supplements the other. For clarification, each source contributing to the entire body of water law will be discussed separately, and only where there exists a need to explain the correlation of two or more sources of law pertaining to water will such be done.

Minnesota Constitution

Article II, Section 2 of the Minnesota Constitution provides that the state of Minnesota shall have concurrent jurisdiction in all waters which form a common boundary with other states. This section further provides that navigable waters leading into the state shall be common highways and forever free to all citizens of the United States

from any tax, duty, import or toll therefore. Such language of the state constitution is taken from the federal Enabling Act of February 26, 1857, under which Minnesota was admitted to the Union.[3] The state jurisdictional powers over boundary waters is a regulatory right and is presently not impaired by a congressional pre-emption.[4]

Regulatory matters which are proper subjects of state supervision range from criminal sanctions to public health controls to recreational projects.[5] The effect, then, of Article II, Section 2 of the state's constitution, gives Minnesota the power to adopt and apply substantive legal principles to all waters within or touching the boundaries of the state.

Common Law

1. Introduction

Another source of legal rights affecting water and related land resources arises from a body of law generally referred to as the "common law." The common law has been defined as:

> . . . the body of those principles and rules of action, relating to the government and security of persons and property, which derive their authority solely from usages and customs of immemorial antiquity, or from the judgments and decrees of the courts recognizing, affirming and enforcing such usages and customs; and, in this sense, particularly the ancient unwritten law of England.[6]

A Washington federal district court has defined common law thusly:

> The common law consists of those principles, maxims, usages, and rules founded on reason, natural justice, and an enlightened public policy, deduced from universal and immemorial usage, and receiving progressively the sanctions of the courts. Common law is generally used in contradistinction to statute law.[7]

In short, the common law emanates from the judiciary when it is asked to resolve an actual dispute between two or more litigants.

Common law is important in Minnesota, for many rights and obligations pertaining to water and its uses have their origin in a substantial body of court decisions. From early in its existence, the Minnesota Supreme Court has firmly held that common law constitutes a part of our legal heritage.[8]

2. Classification

To discuss the various common law principles and doctrines relating to water, certain legal classifications of the physical settings of water adopted by the court should be noted. Basically, water has been legally catalogued to include the following main classifications: natural and artificial surface watercourses, diffused surface waters, ground waters, and atmospheric waters. Scientists and engineers are not always in agreement with these legal distinctions of water.[9] Since the common law, however, adheres to these distinctions, a meaningful discussion of water law can only be achieved through the utilization of these common law classifications.

a. ***Surface Watercourses***– The definition of surface watercourses distinguishes between natural watercourses, natural bodies of water, and artificial waterways or accumulations of water. Notwithstanding, the common law substantive principles applicable to surface watercourses in Minnesota generally are not altered or affected by these distinctions.[10]

Natural watercourses– A natural watercourse is defined as "a stream of water flowing in a definite direction or course in a bed with banks,"[11] or as "a stream of water and its channel, both of natural origin, where the stream flows constantly or recurrently on the surface of the earth in a reasonably definite channel."[12]

The Minnesota Court defined a natural watercourse in **Collins v. Wickland**[13] as follows:

> In order to constitute a 'natural watercourse' the flow ordinarily **must have** some **substantial permanency and continuity** and must be a part of a well-defined stream or body of water.[14]

The court here stresses that physical characteristics such as topography, volume, and continuity of flow will be determinative of what constitutes a natural watercourse.[15]

Natural bodies of water– Natural bodies of water normally bring to mind lakes or ponds. This classification of water is to be distinguished from a stream or natural watercourse in that a lake or pond is water in a natural state of rest, while water in a stream has a natural motion or current.[16] The Restatement of Torts defines a lake as "a reasonably permanent body of water substantially at rest in a depression in the surface of the earth. . ."[17]

While the Minnesota court has not specifically defined a natural body of water, the court, in discussing when casual surface waters lose their characteristics as such, has described what appears to be a lake or pond:

> And such waters (surface waters), when they have ceased to spread and diffuse over the surface or percolate through the soil; when they have lost their casual and vagrant character, and have reached and come to rest in a permanent mass or body, in a natural receptacle or reservoir, not spreading over or soaking into the soil, forming mere bog or marsh, – cannot be regarded as surface waters any more than they can be after they have entered into a stream.[18]

Although this apparent definition of a lake or pond appears in an early case, no revision or addition to that language can be found in any subsequently reported decision. There appears to be no reason why this definition would not be reiterated by the court today if called upon to define a natural body of water.

In addition, the **Schaefer** case is the only Minnesota case making a distinction between natural streams and lakes or ponds. Subsequent decisions generally treat the two classifications the same. In the case of **In re Judicial Ditch No. 9**,[19] the court in reference to the **Schaefer** case stated that "when surface waters reach and become a part of a natural stream or permanent body like a lake, they lost their character as surface waters and are governed by a different rule."[20] And in the **Collins** case, the court in defining a natural watercourse referred to "a well-defined stream or body of water."[21] Consequently, in applying the common law principles to Minnesota's streams, lakes and ponds, these classifications are treated the same, and all are referred to as natural surface watercourses.

Artificial surface watercourses– In classifying artificial surface watercourses, the Minnesota court applied its definition of "watercourse" and then distinguished the words "natural" and "artificial."[22] Generally, the term "artificial surface watercourse" has been used to describe a ditch or culvert constructed to carry flowing waters.[23] Another definition of an artificial watercourse is "raceway," which has been judicially described as "an artificial canal dug in the earth, or, as it is expressed in the conclusions of law, a channel cut in the ground."[24]

An artificial surface watercourse may originate from a natural watercourse. Such would occur when "the flow of a stream of water has been diverted from its natural channel, or obstructed by a permanent dam."[25] Or an artificial watercourse may be created by a conduit or channel to carry waters around the original bed of a natural watercourse.[26]

Finally, an artificial watercourse may in effect be part of, or an extension of, a natural watercourse. This situation develops where a person has deepened, widened or otherwise altered a natural channel or watercourse.[27]

b. ***Diffused Surface Waters***– In Minnesota, the definition of diffused surface waters is well settled. The supreme court has stated that:

> 'Surface waters' consist of waters from rain, springs, or melting snow which lie or flow on the surface of the earth, but which do not form part of a well-defined body of water or natural watercourse.[28]

These waters do not lose their character of diffused surface waters by merely lying stagnant or inactive in swamps or sloughs, nor because they may be absorbed by soaking into marshy or boggy land where they collect.[29] Further, flow of surface waters over the years which results in a visibly worn channel does not produce a natural watercourse. Rather, such courses are referred to by the courts as minor natural and artificial drainways or channels for the drainage of diffused surface waters.[30]

In legally classifying various types of waters, confusion has existed between artificial surface watercourses and minor channels which carry off diffused surface waters. As discussed earlier, artificial surface watercourses generally refer to ditches, channels, or raceways where waters other than diffused surface water run. Distinguished from that classification are the various terms reiterated by the court in the **Collins** case to describe the flow of surface waters in minor, well-defined channels. Terms used by the court applicable to diffused surface waters are "depression, swale, draw, drainway, ravine, ditch, etc. . . ."[31]

c. ***Ground Waters***– Generally, the term "ground water" is used interchangeably with "subterranean water" or "underground water." Ground waters are normally divided into two classes: (1) definite streams; and (2) percolating waters. No reported Minnesota case has defined a ground water stream, but resort to legal treatises reveals the following general definition: "Underground bodies or streams of water flowing in known and defined or ascertainable channels or courses."[32] Although the Minnesota court has not actually defined an underground stream, it has mentioned and recognized the existence of a "subterranean stream or natural flow of water."[33] In light of the language of this case, it appears reasonable to assume that the court would not

deviate greatly from the general definition quoted above.

Percolating waters have been described as waters which "filter through the ground and collect in underground cavities, forming springs or what are commonly known as wells."[34] Percolating waters may also be found in a stratum of earth which is continuously being inundated by the seepage of waters.[35]

The common law designation of ground water and its sub-classifications is often disregarded or rejected by geologists and engineers.[36] As previously noted, engineers also are critical of the common law distinction between ground water and surface water. Such distinctions do exist, however, in the application of common law rules to these various legal classifications of water.[37] An objective for further study is the reconciliation of existing legal concepts of water with the engineers physical classification of water and its occurrence.

3. Rights in Natural Surface Watercourses

a. ***Riparian Doctrine***– Generally, two legal doctrines are recognized in governing a person's right to use waters in natural surface watercourses (hereinafter called watercourses). One doctrine, which is most commonly applied in the western United States, is that of appropriation. This doctrine is based on the proposition that "first in time is first in right."[38] Priority of use is the one important element of this doctrine and a later user of water can only concern himself with the unappropriated waters in the watercourse. In short, he has no standing to object if a prior user consumes all the water. Generally, the use of waters under the appropriation doctrine is governed by a type of permit system. Each party contemplating the use of waters in a watercourse makes application for the use of so much water and he must thereafter diligently use the water for the contemplated purpose.[39]

The Minnesota Supreme Court has rejected this fundamental element of the appropriation doctrine. The court was not persuaded by the argument that a prior user of waters in a watercourse may continue to use the waters to the exclusion of a later user. The court in **Reeves v. Backus-Brooks Co.**[40] stated:

> . . .It matters not how much the owner of land upon a stream has actually used the water, or whether he has used it at all, his right to the use of it as a riparian owner remains unaffected during any period of time.[40A]

Although the Minnesota court has thus rejected a basic element of the doctrine, the permit system adopted by the Minnesota Legislature embodies certain features of that doctrine. However, no express advantage is given to a prior appropriator under the Minnesota permit system.[41] Furthermore, certain additional statutory rights to use water have been afforded Minnesota's mining industry by the legislature.[41A]

The second major doctrine regulating water rights in watercourses is the riparian doctrine. This doctrine is primarily in effect in the more humid eastern states, including Minnesota. The underlying basis for this doctrine is predicated on ownership of lands abutting on a watercourse. The riparian doctrine is expressed in two separate theories – the natural flow theory and the reasonable use theory.

For the purposes of discussion of these two theories, various terms should be defined. First, riparian lands are those which abut on a natural watercourse. Secondly, the owner of abutting lands is normally referred to as a riparian owner.

Applying these terms of the "natural flow" theory, a riparian owner would have the absolute right to the flow of a watercourse past his riparian lands in its natural state, neither diminished in quality or quantity. The natural flow doctrine does not correspond to reality in that it would result in almost a total non-use of a watercourse except by the lowest or last downstream user. No consumptive use by an upstream riparian owner could be undertaken because the resultant impairment in the quantity and quality of a watercourse would give rise to endless litigation under the natural flow theory. The natural flow doctrine appears to have no vitality in the common law of Minnesota: "The right of a party to the uninterrupted and full use of the water as it flows naturally past his land is not an absolute right . . ."[42]

b. ***Minnesota Riparian Doctrine – Reasonable Use Theory***– The Minnesota Supreme Court follows the riparian doctrine embodying the reasonable use theory in deciding relative rights in natural watercourses. The leading case is **Red River Roller Mills v. Wright**,[43] where the court held:

> His (riparian owner) enjoyment must necessarily be according to his opportunities prior to those below him, and subsequent to those above him, and liable to be modified

or abrogated by the reasonable use of the stream by others.[44]

Application of the reasonable use theory to determine a riparian owner's right involves a difficult question as to what use is or is not reasonable. The Minnesota court has expressed no explicit guidelines to define the term "reasonable." The court in the **Red River Roller Mills** case indicated that:

> What constitutes a reasonable use is not a question of law, but of fact, to be determined by the jury or the court from all the circumstances of the case . . .[45]

The Court then went on to say:

> Whenever it appears that any use of a stream by one riparian owner interferes with the reasonable use of the stream by a lower riparian owner, to his injury, either by the interruption, diversion, abstraction, or pollution of the water, the burden of proof is upon the former to show that his use is reasonable, and the greater the injury is to the lower owner the greater necessity for such use must the upper owner show in order to establish its reasonableness.[46]

c. ***Users of Waters***– Generally, riparian owners are the only ones who have the right to use waters in a watercourse abutting their lands. However, the Minnesota court has upheld a riparian owner's grant to allow a non-riparian landowner to draw water from a stream across the riparian owner's estate.[47] This decision appears to be an exception to the general rule and is contrary to the Minnesota permit system which prohibits water use by non-riparian landowners.[48]

A riparian owner does not lose his rights to use water through non-use. In **Reeves v. Backus-Brooks Co.**, the court dismissed any suggestion that a riparian owner loses his rights to use water:

> All persons having lands on the margin of a flowing stream have, by nature, certain rights to use the water of that stream, whether they exercise those rights or not, and they may begin to use them whenever they will. . . A mere non-user of his right raises no presumption against him.[49]

This protection of the right to future use was also stressed in the **Red River Roller Mills** case where the court rejected the prior users' argument that they had acquired a special interest by reason of the fact that their use of the water commenced some two years prior to the subsequent user.

However, the use and non-use of waters by a riparian owner is relevant in the court's determination of reasonableness. In **Pinney v. Lucey**,[50] the court held that an individual's construction of a dam in a stream was a reasonable use of the waters and did not affect an opposite riparian owner's rights. Emphasizing the court's decision was the fact that the latter had never made any use of the waters in the stream.

Finally, in applying the reasonable use theory pertaining to the riparian doctrine, the court has treated as equals an upper, lower, and opposite riparian owner. No different rights exist by reason of the physical setting of a riparian owner's lands. The important criterion is that one's lands actually abut the watercourse.[51]

d. ***Priorities as to Competing Uses***– Perhaps because Minnesota has a relative abundance of water, few cases involving a dispute between competing users of water have arisen. However, from those few cases considered by the supreme court, an indication of the priorities to be afforded to conflicting uses may be surmised. In a case involving a mining company and a resort owner, the court found strong and compelling reasons to prevent any diminution in the recreational values of the waters in question.[52] The court stressed that ownership of riparian lands resulted in certain proprietary rights to enjoy the sandy beaches for swimming, the hunting and fishing opportunities, and the natural beauty of scenery of the lake itself for those who view it. When these rights were contrasted with the mining company's intention to drain partially the lake bed in order to extract iron ore, the court affirmed the issuance of an injunction against the mining company based on the following reason:

> It is fundamental that a riparian owner's rights are measured by the necessities and character of his use. Paramount among such uses is the right to the water for ordinary domestic and manufacturing purposes. . . Here Youngstown intends, for private gain and on a purely commercial basis, not only temporarily to divert but completely to drain the waters from the eastern section of the lake for mining operations that will extend over a period of 20 years. The eastern section, once the source of excellent bass fishing, will be converted into an industrial enterprise in which plaintiffs have no interest. In fact, Youngstown's contemplated operations far

exceed a reasonable use within the meaning of our decisions.[53]

Although the court stated that ordinary domestic and manufacturing uses of water were of equal importance, the recreational and aesthetic uses of one of Minnesota's numerous watercourses here took priority over the contemplated commercial use.

The most clear expression of a common law priority of use is contained in **St. Anthony Falls Water Power Co. v. St. Paul Water Commissioners.**[53A] Here, the court held that the public use of water is paramount and takes priority over other riparian uses. In affirming the Minnesota court's decision, the United States Supreme Court stated:

> Whatever may be the rights of the plaintiffs in error (riparian owners) under their charters or as the riparian owners of land to build and maintain their dams to the center of the stream, there is no (Minnesota) decision cited which holds that they are entitled to the use of all the water which would naturally flow past their lands and over their dams so constructed, nor has the state court decided that the only right of the state, to which the alleged right of the plaintiffs in error is subject or subordinate in any way, is limited to the right of the state to control or use the bed of the stream and the waters therein for purposes of navigation only.[53B]

Supporting this common law principle of a municipality's paramount priority to the use of waters for a public purpose is the case of **Mitchell v. City of St. Paul,**[53C] where the Minnesota Supreme Court held that the public right to the use of waters for a water supply of inhabitants of a city is supreme to all other rights, including those of riparian owners.

Another case dealing with the rights of competing users, **Sanborn v. People's Ice Co.,**[54] involves the removal of ice from a lake for commercial purposes. A summer resident owning property on the lake brought an action to prevent an ice company from cutting and removing large blocks of ice because such conduct lowered the water level the following summer. Again, the court ruled in favor of the domestic user by holding the commercial activity unreasonable. In short, emphasis was placed on common users' rights in domestic uses of waters.[55]

The case of **Meyers v. Lafayette Club**[56] involved an action to enjoin the Lafayette Club from using the waters of Lake Minnetonka to sprinkle its golf course. The club's use of the waters allegedly impaired other riparian owners' swimming and boating activities. In the course of its opinion, the court asserted that the club's "sprinkling of its ground bordering on the lake was not a commercial or artificial use."[57] Further, the court held that the sprinkling was not unreasonable and did not prevent the other riparian owners from enjoying their respective rights.

Consequently, the Court did not enjoin the Lafayette Club from using the waters for sprinkling because a "riparian owner has the right to make reasonable use of the water for domestic, agricultural, and mechanical purposes."[58] Similar competing users, therefore, who are in dispute as to use of the same waters, whether for domestic, commercial, agricultural or mechanical purposes, thus face the burden of establishing the reasonableness of their conduct in light of all the circumstances. And as the **Meyers** case illustrates, the fact that one competitor is using the waters for consumptive purposes is *not* **prima facie** an unreasonable use.

c. ***Legal Differences with Respect to Streams, Lakes, Ponds and Watercourses***– As discussed earlier, the common law does recognize various classification of waters. Just as no distinction in the application of substantive common law rules is made regarding natural and artificial watercourses, the Minnesota Supreme Court has failed to apply different principles to lakes, ponds or watercourses: ". . . the common law is that the same rules as to riparian rights which apply to streams apply also to lakes, or other bodies of still water."[59] Consequently, the reasonable use theory adopted by the court in formulating rights under the riparian doctrine does not vary, notwithstanding the numerous legal classifications.

f. ***Navigable Waters***– The doctrine of riparian rights in watercourses involves common law principles of navigability. The determination of whether waters are navigable or not is relevant in situations where the state, public, and riparian owners all assert rights in the use of waters and ownership of underlying beds.

There has been one reported case in Minnesota where a riparian owner directly contended that the right of another riparian owner to use the water in a navigable watercourse is more restricted than a right to use waters in a non-navigable watercourse.[60] The court rejected the argument of restricted rights in navigable waters by saying that a riparian owner is entitled to the

use of waters for any purpose as long as he does not obstruct navigation.

Minnesota test of navigability– The early case of **Lamprey v. State**[61] expressed the following test in determining whether a watercourse was navigable:

> . . .under present conditions of society, bodies of water are used for public uses other than mere commercial navigation, in its ordinary sense, we fail to see why they ought not to be held to be public waters, or navigable waters, if the old nomenclature is preferred. Certainly, we do not see why boating or sailing for pleasure should not be considered navigation as well as boating or sailing for mere pecuniary profit. Many, if not most, of the meandered lakes of this state, are not adapted to, and probably will never be used to any great extent for, commercial navigation; but they are used--and as populations increase, and towns and cities are built up in their vicinity, will be still more used--by the people for sailing, rowing, fishing, fowling, bathing, skating, taking water for domestic, agricultural and even city purposes, cutting ice, and other public purposes which cannot now be enumerated or even anticipated. . . . We are satisfied that, so long as these lakes are capable of use for boating, even for pleasure, they are navigable, within the reason and spirit of the common-law rule.[62]

The rule of navigability thus adopted by the Minnesota court incorporates recreational uses into the definition of commerce in determining whether a body of water is navigable. The substance of this test has been adopted by the legislature in enacting Section 105.38 which provides:

> . . . all waters in streams and lakes within the state which are capable of substantial beneficial public use are public waters. . . The public character of water shall not be determined exclusively on whether it is a body or stream of water which was navigable in fact or susceptible of being used as a highway for commerce . . .[62A]

Federal test of navigability– The Supreme Court of the United States in **United States v. Holt State Bank**,[63] in declaring the Minnesota noncommercial navigability test to be an erroneous standard, held that watercourses are navigable "when they are used, or are susceptible of being used, in their natural and ordinary condition, as highways for commerce, over which trade and travel are or may be conducted. . ."[64]

Since that Supreme Court decision, the Minnesota court has generally adhered to the federal standard.[65] As a result, numerous lakes and streams in Minnesota are not navigable under the federal test. The restrictive nature of the federal test in its application to riparian rights in use of waters has been reduced by the decision in **Johnson v. Seifert**[65A] where the court stated that:

> It is not to be overlooked that the federal test of navigability is designed for the narrow purpose of determining the ownership of lakebeds, and for the additional purpose of identifying waters over which the federal government is the paramount authority in the regulation of navigation. Whether waters are navigable has no material bearing on riparian rights since such rights do not arise from the ownership of the lakebed but as an incident of the ownership of the shore.[65B]

g. ***Ownership of Watercourses, Beds and Overlying Waters: Non-navigable watercourse***– Since the **Johnson** case, the federal test of navigability probably is the most important in the area of determining the ownership of lands underlying watercourses. When a body of water is determined to be non-navigable, the owners of abutting land have an ownership interest in the bed of the lake.[66] The riparian owner of a non-navigable watercourse therefore owns the fee of the bed of the body of water subject to regulation by the state of Minnesota, and subject to the common rights of other abutting owners.[66A]

Not only do riparian owners own the bed, but they enjoy the exclusive right to use the waters overlying the bed of the non-navigable watercourse. This principle was declared in the early 1900's by the Minnesota court:

> It is elementary that every person has exclusive dominion over the soil which he absolutely owns; hence such an owner of land has the exclusive right of hunting and fishing on his land, and the waters covering it.[67]

Thus, the determination that a watercourse is non-navigable gives rise to the common law principle that the bed of the lake belongs to those riparian owners who may use the overlying water for all purposes. However, the Minnesota court has given indication that the public character and regulation of water may restrict a riparian owner who owns the underlying lakebed from exercising exclusive dominion of the overlying waters.[67A]

Navigable watercourses– If a watercourse is determined to be navigable under the federal commercial test, a riparian owners' water rights still exist but are subject to certain interests of the state and public. Besides the earlier discussion on Minnesota's riparian doctrine, common law rules provide that riparian owners' title to lands abutting a navigable watercourse extends to the ordinary high-water mark.[68] The state, on the other hand, owns absolutely the bed of a navigable watercourse.[69] Further, the state owns the waters overlying its beds.[70]

Notwithstanding the state's paramount rights in the bed and waters of a navigable watercourse, and the restrictions imposed by the reasonable use theory, riparian owners do enjoy certain rights in the use of navigable waters.

Justice Mitchell, in the case of **In re Union Depot Street Railway & Transfer Co.**,[71] stated the principles affecting a riparian owner's use of navigable waters thusly:

> . . . he has certain riparian rights incident to the ownership of real estate bordering upon a navigable stream. Among these are the right to enjoy free communication between his abutting premises and the navigable channel of the river, to build and maintain suitable landings, piers, wharves, on and in front of his land, and to extend the same therefrom into the river **to the point of navigability even beyond low-water mark**, and to this extent **exclusively** to occupy such and like purposes the bed of the stream, subordinate **only** to the paramount public right of navigation.*** These riparian rights are property, and cannot be taken away without paying just compensation therefor.[72]

Thus, a riparian owner has the right to use the waters of a navigable watercourse and the state cannot deny him access to those waters. He can encroach on those waters pursuant to permit up to the point where he does not impair the waters' navigability or other public purpose.[73]

An important doctrine in Minnesota mentioned earlier is the state's ownership of navigable waters and the underlying bed. This doctrine is commonly referred to as the Minnesota Trust Doctrine. The fundamental aspect of the doctrine is that the state, in its sovereign capacity, acts as trustee for the people and holds the navigable waters and the lands under them for public use.[74] The trust, for the exclusive benefit of the public, enables people to use and enjoy the waters of Minnesota equally and in common with riparian owners. The court, in order to delineate the extent of public use has stated that:

> Public use comprehends not only navigation by watercraft for commercial purposes, but the use also for ordinary purposes of life such as boating, fowling, skating, bathing, taking water for domestic and agriculture purposes, and cutting ice.[75]

As a result of this common law rule enabling non-riparian owners to enjoy the countless number of natural watercourses of the state, the particular significance of the federal test of navigability becomes apparent. By applying the more restrictive federal navigability test, the public would be deprived of access to, and enjoyment of, numerous Minnesota lakes and streams. Recognizing this problem, the Minnesota court responded in a series of cases, commencing with **State v. Bollenbach**,[76] by distinguishing between the overlying waters and the bed of a watercourse. The distinction was clearly articulated in 1958 when the court said that "the ownership of beds of streams and lakes is quite a different matter from the right to control waters."[76A]

The effect of these holdings is that the federal test is used to determine the ownership of an underlying bed, while the state's non-commercial test of substantial beneficial public use as expressed in **Johnson v. Seifert** and **State v. Kuluvar** is used to determine what waters are included within the Minnesota Trust Doctrine. By applying this dual standard, the court has made large, non-navigable bodies of water available for the public use. Fortunately, the public enjoys the valuable natural resource of water without being a riparian owner.

4. Diffused Surface Waters

Cases which have arisen in Minnesota dealing with diffused surface waters have been limited mainly to the questions of damages occasioned by one property owner discharging such waters upon the lands of another. No Minnesota cases have dealt with the collection and use of diffused waters.

a. ***Common Enemy Doctrine***– Early in its history, Minnesota adopted the common enemy doctrine as it applied to diffused surface waters. In **Pye v. City of Mankato**,[76B] the court enunciated that rule as follows:

> Surface water is a common enemy, which an owner, in the necessary and proper improvement of his land, may get rid of as best

he may, subject, however, to the restriction of the maxim that a man must so use his own as not unnecessarily to injure another.[76C]

Although originally adopting the common law rule of diffused surface waters being a common enemy, the court thereafter modified that rule.

This modification became obvious a few years after the **Pye** case when the court re-examined the common enemy doctrine. In **Beach v. Gaylord**,[77] the court found the defendant liable for discharge of surface waters upon the plaintiff's lands because defendant's activity in collecting and dispersing these waters was not incident to the ordinary use or improvement of defendant's property. In the course of its opinion, the court stated:

> . . . for although, under the common-law rule as to surface waters, which has been adopted in this state, it is held to be a common enemy which each owner . . . may get rid of as best he may . . . but he must not thereby cause it to flow upon the premises of another in greater volume or quantity than it would naturally otherwise do.[78]

Under the common enemy doctrine, each case presents a factual situation where the court or jury is asked to determine if the alleged wrongful discharge resulted from an ordinary improvement as well as whether the discharge resulted in a greater quantity of water.

b. ***Doctrine of Reasonable Use--Sheehan v. Flynn***– Because the common enemy rule was continually modified with exceptions and limitations each time it was applied, the court in 1894 adopted the doctrine of reasonable use in deciding disputes regarding diffused surface waters.[79] In **Sheehan v. Flynn**, the court held:

> The common-law rule as to liability for the diversion of surface water has been modified in this and other states by the rule that a person must so use his own as not unnecessarily or unreasonably to injure his neighbor. A circumstance to be considered in determining what is reasonable use of one's own land is the amount of benefit to the estate drained or improved, as compared with the amount of injury to the estate on which the burden of the surface water is cast . . .
>
> We hold that one has a right to drain his land for any legitimate use, whether for a railroad track, a wheat field, or a pasture, and whether the improvement is directly and wholly for the purpose of drainage, or whether it is for some other purposes, and such drainage is a mere incidental result. But, if he collect and convey the surface water off his own land, he shall do what is reasonable under all the circumstances, to turn it into some natural drain, or into some course in which it will do the least injury to his neighbor,--and, if he would prevent it from coming upon his land, he must not do so by obstructing some natural drain, and thereby hold back the water and flood the land of his neighbor, at least if such natural drain is an important one.[80]

For the most part, the rule of the **Sheehan** case has been followed by subsequent decisions of the Minnesota Supreme Court. In **Enderson v. Kelehan**, the court noted that the reasonable use doctrine did not follow the common law or civil law rule of drainage, but had "attained a distinct and independent status."[81,82] In this case, the court also set out guidelines to be utilized in determining what is reasonable:

> There is a reasonable necessity for such drainage.
>
> If reasonable care be taken to avoid unnecessary injury to the land receiving the burden.
>
> If the utility or benefit accruing to the land drained reasonably outweighs the gravity of the harm resulting to the land receiving the burden.
>
> If, where practicable, it is accomplished by reasonably improving and aiding the normal system of drainage according to its reasonable carrying capacity, or if, in the absence of a practicable natural drain, a reasonable and feasible artificial drainage system is adopted.[83]

While factual disputes still exist as to the reasonableness of the discharge of diffused surface waters from one's property to another, the court has provided definite standards to assist the trier of facts in its decision. In **Collins v. Wickland**,[84] the court clarified the distinction between natural watercourses governed by the riparian doctrine and its reasonable use theory and visibly worn channels which annually disperse surface waters regulated by the **Sheehan** doctrine. Secondly, the **Collins** case emphasized the factual difference between the urban and rural areas, illustrating that different requirements for drainage exist in each area. The court went on to say that even in urban areas, a different approach to drainage exists as between commercial or industrial and residential areas. As a result, no rigid drainage rule should be applied in each case because factors like topography, land utilization, and general physical

characteristics vary too greatly from case to case.[86] The decision in **Collins v. Wickland** exemplifies the Minnesota Supreme Court's approach in updating the common law rules pertaining to water for present-day rural-urban conditions.

5. Natural Ground Waters

a. ***Percolating Waters***– Various legal theories have been established to govern the use and control of percolating ground waters. The common law or "English" rule provides that percolating waters are a part of the soil on which they flow, ooze and seep. Since they are a part of the soil, an owner may do what he wants with such waters, at least in the absence of malice or contractual relationship, regardless of the effect this may have on abutting or lower landowners. This rule is also commonly referred to as the absolute ownership rule.[87]

Minnesota has rejected the absolute ownership rule and, instead, adopted a rule of reasonable use to regulate percolating waters. Before discussing Minnesota's rule, it should be noted that the percolating waters doctrine of reasonable use is oftentimes used interchangeably with the terms the American Rule and doctrine of "correlative rights." This latter term, however, generally applies when a supply of percolating water is insufficient to supply all users, resulting in all common overlying landowners then sharing proportionately in the available supply.[88] A correlative rights rule also applies to reconcile disputes between owners of separate tracts overlying the same artesian basin or reservoir.[89]

Although the Minnesota court in the case of **Stillwater Water Co. v. Farmer**[90] used the term "correlative rights," the fundamental principles of that term were rejected by implying that one landowner could use all the available percolating waters to the detriment of another abutting landowner:

> If the collection of these (percolating) waters was essential and necessary that defendant might use them for any reasonable purpose, or even, if from the evidence, it could be found that he was competing with the plaintiff, and proposed to use the waters for a public purpose, or if it were necessary that the natural conditions of his land should be disturbed and subsurface waters drained in order to improve it . . .[91]

The language just quoted would appear to indicate that Minnesota does not even follow a reasonable use doctrine for percolating waters. If a man's use of percolating waters is not malicious and wasteful, the court seems to say he may use and control as much as he desires, to everyone's exclusion.

From this rather harsh language and its implications, the court in the **Stillwater Water Co.** case concluded by stating the applicable rule to be:

> We see no reason why the maxim, 'So use your own property as not to injure another,' should not be applied in a proper case, to percolating waters, or why the limitation found therein is not pertinent when reason and justice suggest the need of it, ...
>
> We therefore formulate and announce the rule governing the facts here to be that, except for the benefit and improvement of his own premises, or for his own beneficial use, the owner of land has no right to drain, collect, or divert percolating waters thereon, when such acts will destroy or materially injure the spring of another person, the waters of which spring are used by the general public for domestic purposes. He must not drain, collect or divert such waters for the sole purpose of wasting them.[92]

The court did place reliance on the fact that a sale of water to the public was involved here. However, based on the reasoning adopted by the court in a subsequent appeal of the same case, there is nothing to indicate that the common law doctrine of reasonable use would not apply in a dispute between individual landowners concerning the use of percolating waters.[93]

When comparing the court's holding in the **Stillwater Water Co.** case with the reasonable use rules applied by the court in cases involving surface watercourses and diffused surface water cases, various similarities in the formulation and expression of these reasonable use doctrines are apparent. However, there is one major distinction which the Minnesota court has made. In the riparian reasonable use doctrine applied to surface watercourses and the reasonable use doctrine applied to cases involving diffused surface waters, all affected landowners are given due consideration for their needs and possible damage resulting from the flow or unavailability of water. In contrast, the **Stillwater Water Co.** case indicates that if a person is in need of all the ground water on his land, he may reasonably use that water regardless of the adjoining owners' needs. Such a right of complete use is not allowed under the riparian rights doctrine; but until the court is asked to re-examine its

implications in the **Stillwater Water Co.** case, its language remains unqualified.

b. ***Artesian Waters***– In the earlier section discussing classifications of water, no mention was made of artesian waters. The reason for this is that these waters are generally considered to be part of the general classification of percolating waters.[94] However, in the case of **Erickson v. Crookston Waterworks, Power & Light Co.**, which reached the supreme court twice on appeal,[95] the Minnesota court did distinguish between percolating waters and artesian waters:

> A discussion in this case does not call for a discussion of the legal principles to percolating waters. . . Percolating waters, as distinguished from artesian waters, filter through the ground; (whereas artesian) waters (are) located in well-defined strata.[96]

While hydrologists do not accept such legal distinctions, the court describes artesian waters as those which eventually reach an impervious barrier or stratum of earth so that when such a stratum is tapped, pressure produces an artesian well.[97]

Once the court recognized artesian waters as distinct from percolating waters, it went out to discuss the doctrine of reasonable use. The dispute arose because plaintiff had constructed an artesian well. Defendant, on the other hand, had a contract with the municipality to provide artesian waters to the inhabitants. Plaintiff erected various wells, the result of which caused plaintiff's well to become useless by reason of the drop in the artesian basin level. In the first appeal, the court held that the defendant could not deprive the plaintiff of his use of artesian waters. The court reasoned that since the doctrine of reasonable use was in effect in Minnesota, the defendant could not reasonably deny plaintiff his right to obtain the underground waters. Such a ruling would guarantee water to the least-developed well in the basin.

On the second appeal, the court reversed and directed the trial court to conduct a new trial by reason of the fact that defendant supplied water to residents of the municipality of which plaintiff was only one resident. The court indicated that if defendant's acts are reasonable, then: ". . . it will likewise require (plaintiff) to suffer a reasonable inconvenience for the common good of others equally dependent upon the same gift of nature."[98] In the **Crookston** cases, the court adhered to the doctrine of reasonable use by finding that the action of the City of Crookston in developing a ground water supply was not reasonably claculated to injure the property rights of another landowner whose well was affected. The effect was to require the landowner to develop more completely his well. The court's decision did not consider the true correlative rights doctrine since there was no showing that a shortage of water existed.

c. ***Underground Watercourses***– No cases have been decided in Minnesota, pertaining to natural underground watercourses. However, language in the **Crookston** cases indicates the rules the court would apply in resolving disputes over the use of underground waters. "Why should not analogous rules apply to a lake demonstrated to exist underground as to one in plain sight."[99] Then, in the second **Crookston** appeal, the court had occasion to say:

> Reasonable use is a question of fact, and if the rule is applicable to the use of a stream by an upper and lower proprietor, where both are dependent upon it as a motive power, . . . it is applicable here, where all the people of the City of Crookston are dependent upon a common source of supply of water (underground artesian basins) for domestic purposes.[100]

By reason of this language and other such similar discussion in cases dealing with diffused surface waters and surface watercourses there is no reason at the present to doubt that the court would not apply the doctrine of reasonable use to underground watercourses. Of course, the doctrine of reasonable use applicable in this situation would undoubtedly reflect the thinking which has been given by the Minnesota court to the riparian, diffused surface waters and percolating water reasonable use doctrines.

6. Artificial Watercourses

As was discussed earlier, the Minnesota court has recognized the legal classification of artificial watercourses, but no appellate court has been requested to decide a case where the uses of such watercourses have been in dispute. In light of the adoption of common law principles of reasonable use for other water classifications, it appears likely that these principles would likewise be applied to disputes involving artificial watercourses.

Two cases decided by Minnesota court deal indirectly with the uses and respective rights of abutting owners in artificial watercourses. They are important because they reveal the court's tendency to apply the same legal principle to both

artificial and natural watercourses. In **Kray v. Muggli**, an artificial impoundment had existed over 30 years prior to the commencement of the lawsuit by an abutting owner who was objecting to the abandonment of a dam across a natural watercourse. The court held that the artificial watercourse has existed for such a time that the riparian owners acquired a right to its continual maintenance. During the course of its opinion, the court cited with approval the following language of a Wisconsin court decision:

> The watercourse, though artificial, may have originated under such circumstances as to give rise to all the rights riparian proprietors have in a natural and permanent stream, or have been so long used as to become a natural watercourse prescriptively . . .[101]

The court thereafter cites the Minnesota case of **Canton Iron Co. v. Biwabik Bessemer Co.**[102] The conclusion to be drawn, of course, is that the Minnesota court will apply the reasonable use riparian doctrine to artificial, as well as natural, watercourses.

However, the **Canton Iron Co.** case points out that certain factors must be present before the court will treat an artificial watercourse substantially the same as a natural one. In the **Canton** case, the defendant had diverted a natural channel, but not for any great length of time. Further, the defendant did so only to improve its lands and never stated that it would be a permanent diversion. Here, the court held that the plaintiff had no right to rely, and consequently no right to enforce the continual existence on the permanency of the artificial watercourse.

Without further cases dealing with artificial watercourses, it is difficult to predict with certainty what general principles the court will apply. However, it appears that artificial watercourses will be governed by the common law riparian right doctrine which the court applies to disputes involving natural watercourses.

7. Other Common Law Principles Applicable to Waters in Minnesota

Various legal principles have been applied by the Minnesota Supreme Court to all waters and their uses in this state. These common law principles affect riparian and non-riparian owners alike and are integrated with the other basic principles affecting water. Many of these common law principles, of course, are altered or modified to some extent by legislative enactments.

a. ***Prescriptive Rights***– Prescriptive rights and related problems arise in Minnesota where waters have discharged and flooded from one person's property to another. Generally, cases dealing with this flowage problem center around two situations: (1) riparian owners and natural watercourses; and (2) landowners discharging diffused surface waters.

Riparian owners and watercourses– Prescriptive rights here refer to one causing a watercourse to overflow another person's property for a sufficient length of time, thereby giving the actor the right to maintain the overflowage continuously. Early cases held that the flooding must be done adversely for a period of 20 years.[103] Presently, the period required to gain prescriptive rights is set by statute at 15 years. Although the requisite time period has changed, the law relative to prescriptive rights remains the same as stated in the **Mueller** case: "To acquire a right by prescription to overflow the lands of another, it would require 20 years uninterrupted adverse use or enjoyment."[104] The corollary of this rule is that a person whose lands are flooded by another does not generally prejudice his rights by mere delay in bringing an action to prevent or eliminate the flooding prior to the running of the statutory period. Also, no prescriptive rights can be obtained until after the expiration of the time period.

Another criterion necessary to acquire a prescriptive right in the diversion of natural watercourses is illustrated in **Carpenter v. Board of Commissioners,**[105] where the court said:

> . . . merely maintaining a dam on one's own land, without thereby raising the water, will not create a prescriptive right upon the lands of another. It is only the uninterrupted flowing of such lands for the statutory period that will create such a right.[106]

In addition, the flooding of another's lands must produce a benefit to the land of the claimant and be adverse to the other landowner's use of his land.[107]

Prescriptive rights may be obtained by the alteration of an existing natural watercourse for the necessary period of time in such artificial condition. Again, a claimant must show an accrued benefit to him by reason of the changed circumstances.[108] On the other hand, if a person whose lands have been adversely affected by the alteration allows such a condition to exist for the statutory period, he will be estopped from asserting that no prescriptive rights

have accrued to a claimant. "A silent acquiescence in the maintanance of defendant's improvements for a sufficient length of time might give rise to a prescriptive right to continue them perpetually."[109]

The doctrine of prescriptive rights thus affords a landowner the opportunity to improve his land by diverting or altering natural watercourses which flow on his land. This is done by adversely affecting the land of another through flooding or otherwise imposing a burden on his neighbor's lands. Equally true is the principle that a landowner may acquire prescriptive rights in altered or changed watercourses brought about by another. This situation arises when a person improves his property with reference to a change in the watercourse and in reliance on its continuance. When such occurs, the court has held, as in the **Kray** case, that:

> The person who placed the obstruction in the stream, or caused the diversion of the waters, and all those claiming under or through him, are estopped upon principles of equity from restoring the waters to their natural channel or state.[110]

Landowners and diffused surface waters– The common law principles of prescriptive rights for natural watercourses are usually equally applicable to problems dealing with diffused surface waters. A landowner who has discharged diffused surface waters off his lands onto those of another for the necessary period of time is entitled to continue that conduct as a matter of right.[111] The manner or method of discharge, whether it be by open ditch, a tile system, or natural runoff into a ditching system on another's land, is immaterial, so long as the claimant receives benefit by his continuous conduct for the sufficient time period.

Again, the important feature of adversity or hostility must be present for a claimant to secure prescriptive rights. In **Naporra v. Weckwerth**, the court emphasized the fact that:

> . . . if the entry was permissive and, without a subsequent, distinct, and positive assertion of a hostile right, it could never give an easement by prescription no matter how long continued.[112]

Thus the acquisition of prescriptive rights in the area of diffused surface waters does not depend on consent, agreement, color of title or any initial claim to a legal right; rather these rights are acquired through an original hostile or adverse interest to utilize the lands of another to the possible detriment of the true owner.

b. ***Obstruction and Diversion***– Closely analogous to the common law principles of reasonable use and prescriptive rights are the principles of obstruction and diversion. These later common law rules have been formulated by the court in cases mainly dealing with natural watercourses and diffused surface waters.

As discussed earlier, a riparian landowner is entitled to the reasonable use of waters which flow past his abutting lands. If a riparian owner diverts or obstructs a watercourse in a reasonable manner, then no lower or upper riparian owner has any basis from which to object. However, if a court finds conduct creating a diversion or obstruction in a watercourse unreasonable, the common law provides various remedies. In one case, **Aubol v. Grand Forks Lumber Co.**,[113] the defendant permitted its logs to pile up in a stream, thereby causing a diversion from the natural bed. As a result, plaintiff was deprived of the use of the waters for agricultural and domestic purposes. The court granted plaintiff an injunction ordering the defendant to restore the stream to its natural channel, saying it: ". . . will enjoin the unlawful diversion of a stream from its natural course," and the rule ". . . is the same in case of unlawful obstructions in a stream."[114]

What distinguishes the remedy afforded plaintiff in this case as compared with those cases dealing with prescriptive rights is the doctrine of laches. Basically, this doctrine provides that when a person has allowed a condition to exist for a length of time during which the actor and others relied on the changed condition, the former cannot then be heard to complain about the present conditions. In short, if a complainant "has slept upon his rights,"[115] the court will not provide him a remedy for an admitted obstruction or diversion.

Another remedy available to a riparian landowner who has been damaged by an unreasonable obstruction or diversion of a watercourse is monetary damages. This remedy is generally utilized when an upper riparian owner's lands are occasionally flooded. Upon the happening of such event, the Minnesota Supreme Court has held that the injured party's rights are adequately restored by a monetary award.[116]

Common law in Minnesota grants a riparian owner the right to move and eliminate an obstruction in a watercourse. A person exercising this right must do so reasonably and not unnecessarily injure the lands upon which he enters. Further, the entry may only be for the purpose of cleaning or removing the obstruction which

has caused the watercourse to flow to the aggrieved party's detriment.[117]

The rules relating to obstruction and diversion of natural watercourses as evidenced by the above discussion illustrate the approach the Minnesota court has taken in other areas of the common law pertaining to water. Specifically, no precise statement may be applied to any given situation. Rather, the surrounding facts and circumstances of each situation must be applied to the nebulous doctrine of reasonable use. Thus, one may obstruct or divert natural watercourses, but he may do so only after making "proper and adequate provision for passage therein of such waters. . ."[118] In short, a person must act reasonably, but what is reasonable is determined only after he acts. The effect oftentimes dampens any attempt to obstruct or divert a watercourse, even though the result might be beneficial to at least some.

The common law principles relating to obstruction and diversion of natural watercourses are substantially identical to the ones adopted in resolving diffused surface water disputes.[119] In fact, cases are more numerous in this latter area because Minnesota applies the **Sheehan v. Flynn** doctrine, **i.e.**, a landowner may rid his land of diffused surface waters onto another's property in a reasonable manner. The **Sheehan** doctrine appears to have produced numerous agreements and projects among landowners in an attempt to provide an overall plan of orderly discharge of diffused surface waters into natural watercourses. At the same time, of course, more controversies are created between landowners as to what are their rights.

The most recent Minnesota case dealing with the obstruction and diversion of diffused surface waters is **Collins v. Wickland.**[120] Here, the court stresses that the primary criterion governing parties' drainage activities is reasonableness. Thus, factors such as physical characteristics and rural-urban setting all become relevant to determine ". . .whether an obstructor or diverter or a drainway or drainage channel for surface waters has made a reasonable use of his tract."[121] Other cases decided by the court have likewise uniformly held that only when a person has unreasonably diverted or obstructed the flow of diffused surface waters will he be subject to damages or injunctions.[122]

In a situation where adjoining landowners jointly construct a ditch or other drainage channel to carry off diffused surface waters, rights accrue to each party to have the artificially constructed drainage system maintained. The test is again one of reasonable use and not of negligence or due care.[123] The language the court had adopted as the general rule regarding obstruction and diversion of diffused surface waters in this situation is:

> . . . where neighboring landowners unite in the construction of a ditch to drain and improve their several holdings, each of them is thereafter estopped from closing the ditch in a way to deprive the others of the drainage provided.[124]

The importance of an agreement or understanding between landowners in order for the above rule to become applicable should be underlined. If a drainage system is constructed by one person to improve his land and incidentally benefits adjoining lands, the adjoining owner cannot demand maintenance of that system in the absence of prescriptive rights. The court has held that a temporary diversion of surface waters does not create an equitable estoppel which a benefited landowner may assert to demand the continuance of that diversion.[125]

c. ***Transfer and Assignment of Water Rights***– The common law in most states provides that waters may not be diverted to or used on non-riparian tracts of land. The Minnesota Supreme Court has ruled to the contrary. In the leading case of **St. Anthony Falls Water Power Co. v. City of Minneapolis,**[126] the court held valid a lease or conveyance of water rights to a non-riparian: ". . . a riparian owner may grant a part of his estate, not abutting on the stream, and, as appurtenant thereto, a right to draw water from the stream through his land."[127] Various other cases dealing with water power diversion, docks and piers, illustrate the court's treatment of water rights as property rights which can be conveyed, transferred, or assigned.[128]

A series of Minnesota cases dealing with rights in submerged lands also disclose the principle that certain riparian rights may be alienated or transferred to someone other than a riparian owner. The case of **Hanford v. St. Paul and D.R. Co.**, is the leading case enunciating that principle:

> . . . the riparian proprietor has the exclusive right. . . to improve, reclaim, and occupy the submerged land, out to the point of navigability, for any private purpose, as he might do if it were his separate estate; . . . that the enjoyment of the right — the use of the premises — need not be associated with the use of the upland; . . . that when the land

has been reclaimed it may be conveyed, according to most of the authorities, apart from the original upland . . .[129]

This principle has been followed by the court in subsequent decisions with the latest expression of the rule found in **Nelson v. DeLong**:[130]

> . . . we have repeatedly held, that rights in the shoreline and submerged lands along the lake shore may be separated and disassociated from littoral or riparian rights and transferred to and enjoyed by persons having no interest in the original riparian estate.

The transfer or alienability of riparian rights in submerged lands is not an absolute right or privilege enjoyed by riparian owners. Rather, this right is modified by the court as follows:

> . . . any grant by the riparian owner transfers only rights which are qualified, restricted and subordinated to the paramount rights of the state.[131]

As noted earlier, the state's rights are those held in trust for the public to enjoy — recreational and domestic uses of public waters.

The common law presently appears well settled that riparian rights in waters and related lands may be granted, conveyed or otherwise assigned to non-riparian owners. However, mention has been made of the permit system in effect in Minnesota, which has on occasion altered the common law. Such is the case here, for the state has adopted the position that permits will not be issued to anyone requesting to use waters on non-riparian lands.[132]

d. ***Water Quality***– Another equally important doctrine relating to water which the Minnesota court has had numerous occasions to consider is water quality. The early case of **O'Brien v. City of St. Paul** illustrates the court's recognition of a legal wrong for impairment of the quality of water:

> For a **supra** riparian owner to increase the flow of a natural watercourse by draining into it other streams so as to injure a lower riparian owner is a nuisance, and actionable by the latter; so also is the fouling of the watercourse by the **supra** riparian owner.[133]

From this early pronouncement of the availability of a remedy for polluting and fouling of Minnesota's waters, the supreme court has been confronted with disputes in two general areas; namely, (1) private parties affecting the quality of waters in a natural watercourse, and (2) municipal corporations' treatment and discharge of sewage disposal.

In the first general area, the cases decided by the Minnesota court indicate that when the question is one of pollution or contamination of waters, the doctrine of reasonableness plays an important role. In the leading case of **Red River Roller Mills v. Wright**,[134] discussing riparian rights in waters, the court announced the rule that:

> Whenever it appears that any use of a stream by one riparian owner interferes with the reasonable use of the stream by a lower riparian owner, to his injury, either by the interruption . . . or pollution of the water, the burden of proof is upon the former to show that his use is reasonable . . . Subject to the limitations and modifications already stated, every man has a right to the natural flow of the water unpolluted past his land.[135]

In this case, the court held that because sawdust and other refuse was discharged from his sawmill into the watercourse, causing great harm to the plaintiff's flour mill, the defendant was not making a reasonable use of the stream.

Other cases reveal the court's willingness to grant either an injunction or award monetary damages, or both, when one has unreasonably altered or affected the purity of a natural watercourse, even though the one complaining does not suffer a great economic hardship. In one case, the plaintiff made no use of the water for household purposes, but only for occasional watering of her dairy herd. The defendant operated a cheese factory obtaining a considerable amount of its raw products from the farmers in the same county. In its operation, defendant discharged whey into the stream flowing past plaintiff's lands. The trial court found defendant's operations "responsible for the sludge and noxious odor that emanates from and pollutes this stream."[136] Evidence showed plaintiff's damages to be $63.00 a year in diminished rental value of the pasture land. Based on these facts, the appellate court affirmed the trial court's action in issuing an injunction:

> . . . the discharge of whey upon plaintiff's premises and interfering by its stench and disagreeable appearance with plaintiff's proper enjoyment of her home and property justified the court in enjoining that nuisance.[137]

In another dispute, the defendant had contaminated and polluted a spring owned and used by plaintiff for commercial purposes. Defendant's operation of a creosoting plant near the spring had caused defendant to construct earlier a sewer to discharge refuse in a nearby

stream so as not to affect the purity of plaintiff's spring. However, the sewer broke and slowly an accumulation of creosote waste seeped into the spring. The court held that the pollution of the spring rendered it worthless and affirmed the award of damages to the plaintiff.[138]

A major source of water contamination and pollution arises from municipal sewage waste and disposal being discharged into Minnesota's lakes, rivers and streams. There is no dispute but that a municipal corporation may engage in the business of providing sewage disposal and like services to its citizenry. This undertaking, however, is a proprietary or private function as compared to a governmental or public one.[139] Consequently, when a municipal corporation undertakes the treatment of sewage and like substances, it becomes exposed to the same liability of a private party for unreasonably polluting and contaminating waters.

Various cases illustrate a municipal corporation's liability for polluting waters. Generally, its liability is based on negligence in the operation of a sewage plant and not on the original construction of the plant. Further, the theory of negligence is sustained on one of two underlying principles; namely, nuisance or trespass. In **Batcher v. City of Staples,** the court affirmed an award of damages to the plaintiff because the city's sewage plant, ". . . ever since its construction, has collected and deposited on plaintiff's lands large quantities of foul, offensive, decayed, and poisonous matter, which polluted the water of the brook and filled the air with offensive and poisonous vapors."[140] The Minnesota court not only recognizes the remedy of damages for one whose property is adversely affected by pollution, but will also sustain a remedy of *injunctive relief.* Thus, in a situation where the discharge of sewage and filth upon the plaintiff's lands is caused by a municipal corporation's continuous activity, an injunction will issue to abate any further discharge. The court *in these circumstances implies that a continuous* nuisance will cause irreparable injury and the damaged party's only satisfactory remedy is one of an equitable injunctive decree, notwithstanding the cost and inconvenience to a municipality and its citizens.[141]

The Minnesota Supreme Court has even extended a municipality's liability for polluting waters from sewage discharge where the majority of the materials attributed to the pollution came from a private source. In these situations, the court stresses the fact that "the duty of maintenance, repair, operation, and the keeping of the sewer from creating a nuisance rested on the city."[142] Consequently to the effluent discharged by the sewer, as in a case where a canning factory caused 85 to 90 percent of the ultimate pollution,[143] the harm sustained by a party attributed to the municipality's conduct in discharging injurious and noxious materials into a body of water must still be ascertained and imposed on the wrong-doer.[144]

Statutory Law

1. Introduction

The discussion of Minnesota's common law illustrated that certain judicial principles have been abrogated or modified by statutory enactments. These changes are apparent after reading the many statutes that in some manner affect waters in Minnesota.

For clarity and convenience, this report discusses common law and statutory law separately. However, to understand the principles and concepts which regulate the use and enjoyment of waters in Minnesota, one must not rely solely on one source of law to the exclusion of the other in an attempt to "announce" the applicable rule of law. Rather, the common law and the statutory law may abrogate, define, restrict, complement, expand, or otherwise clarify the interpretation or construction placed on the other.

General charge and control over the waters of the state and of their use, sale, leasing or other disposition is given to the commissioner of conservation. Minnesota Statutes § 84.027. He is given the power to devise and develop a general water resources conservation program for the state, which program shall contemplate the conservation, allocation and development of all the waters of the state, surface and underground, for the best interests of the people. Minnesota Statutes § 105.39.

2. Minnesota Permit System

The basic provisions of the state's statutes dealing with water and related topics are found in Chapter 150.[145] From the original enactment up to the present, the legislature has sought to establish a water policy for the state. Presently, this policy is as follows:

> In order to conserve and utilize the water resources of the state in the best interest of the people of the state, and for the purpose of promoting the public health, safety and welfare, it

is hereby declared to be the policy of the state:
(1) Subject to existing rights all waters in streams and lakes within the state which are capable of substantial beneficial public use are public waters subject to the control of the state. The public character of water shall not be determined exclusively by the proprietorship of the underlying, overlying, or surrounding land or on whether it is a body or stream of water which was navigable in fact or susceptible of being used as a highway for commerce at the time this state was admitted to the union. This section is not intended to affect determination of the ownership of the beds of lakes or streams.
(2) The state, to the extent provided by law from time to time, shall control the appropriation and use of surface and underground waters of the state.
(3) The state shall control and supervise, so far as practicable, the construction, reconstruction, repair, removal, or abandonment of dams, reservoirs, and all control structures in any of the public waters of the state.[146]

To enforce and give effect to the declared policy, the legislature provided the statutory means for state control and regulations over all waters:

> It shall be unlawful for the state, any person, partnership, or association, private or public corporation, county, municipality, or other political subdivision of the state to appropriate or use any waters of the state, surface or underground, without the written permit of the commissioner, previously obtained upon written application therefor to the commissioner. The commissioner may give such permit subject to such conditions as he may find advisable or necessary in the public interest. Nothing in this section shall be construed to apply to the use of water for domestic purposes serving at any time less than 25 persons or to any beneficial uses and rights, outside the geographical limits of any municipality, in existence on July 1, 1937, or to any beneficial uses and rights, within the geographical limits of any municipality, in existence on July 1, 1959.
>
> Except in the construction and maintenance of highways when the control of public waters is not affected, it shall be unlawful for the state, any person, partnership, association, private or public corporation, county, municipality or other political subdivision of the state, to construct, reconstruct, remove, or abandon or make any change in any reservoir, dam or waterway obstruction on any public water; or in any manner, other than in the usual operation of dams beneficially using water prior to July 1, 1937, to change or diminish the course, current or cross-section of any public waters, wholly or partly within the state, without written permit from the commissioner previously obtained. Application for such permits shall be in writing to the commissioner on forms prescribed by him.[147]

It was not until 1963 that the Minnesota Supreme Court considered the constitutionality of the regulatory sections of Chapter 105. In **State v. Kuluvar**,[148] the court declared the act to be constitutional, stating that:

> It is fundamental, in this state and elsewhere, that the state in its sovereign capacity possesses a proprietary interest in the public waters of the state. Riparian rights are subordinate to the rights of the public and subject to reasonable control and regulation by the state . . . We find no difficulty in holding that the statute is a regulation and that it does not unconstitutionally infringe upon any rights of a riparian owner, including the rights to use his land above the ordinary low-water mark, the right to wharf out to the point of navigability, or rights arising because of the claimed ownership of the bed underlying any waters declared public by Section 105.38.[149]

The permit system thus established curtails to a considerable extent the importance of the reasonable use doctrines formulated by judicial decision. This fact was pointed out in the **Kuluvar** case where the court stated that:

> When it is established that the public has access to waters capable of substantial beneficial use by all who so desire, the statute directs that the state fulfill its trusteeship over such waters by protecting against interference by anyone, **including those who assert the common-law rights of a riparian owner.**[150]

The permit procedure creates a system approximating the appropriation doctrine. Any person desiring to use surface or underground waters must make application to the state. Such application shall be submitted with accompanying maps, plans and specifications setting forth the contemplated use and appropriation and any other data as the commissioner may require.[151] Under this system, the decision of what constitutes reasonable use lies no longer with the riparian owner but rather with the commissioner of conservation.[152]

Certain limitations coupled with administrative practices in the application of the permit system indicate that the common law doctrine of reasonable use has not been discarded altogether. First, the legislature exempted domestic users from the

provisions of the permit system. Second, any beneficial use and rights in water outside the geographical limits of a municipality in existence on July 1, 1937 do not come under the provisions of the permit system. Finally, any beneficial use and rights within a municipality's geographical limits in existence on July 1, 1959 are not governed by the permit system.

Although these enumerated exceptions to the permit system would be presumably controlled by common law doctrines of reasonable use, no judicial decision has been rendered on this point. As a result, uncertainty exists in Minnesota as to whether beneficial uses and rights means actual enjoyment or use by a riparian owner having rights in water or includes as a property concept a right of future use.[153]

Administrative practices in issuing permits to use and appropriate waters tend to support the fact that the commissioner looks to the reasonableness of each separate application. In an interim report by a legislative committee, the commissioner's approach was described thusly:

> Decision is made on each application without reference to standards or precedent and achieves legal enforceability only through vague presumption of administrative reasonableness which may be unfounded in fact.[154]

The impression from such language is one of legislative disagreement with the commissioner's approach. Yet, this test of determining the reasonableness of each owner's contemplated use of water is precisely the same criterion the court adopts in its application of the common law doctrine of reasonable use.

Two other circumstances indicate the interrelationship between the permit system and the common law concept of reasonable use. First, Minnesota's permit system does not establish any priority of water uses. True, other statutory enactments illustrate a preference for a certain use, such as in the mining industry,[155] but the legislature has not as yet enacted provisions to resolve possible conflicts between competing users. Secondly, neither the common law principles nor the permit system afford a riparian owner any certainty that his use of water will be deemed reasonable. In the former, an owner's use is always subject to another's future reasonable use of waters. In the latter, the same uncertainty is injected in the system, for the legislature has decreed that the commissioner retains the right to cancel a permit previously issued.[156] In summary, the Minnesota permit system in theory adopts an appropriation concept while in practice it relies heavily on historical and traditional common law concepts to regulate waters.

3. Water Resources Board

The 1955 Legislature, in creating the Minnesota Water Resources Board, provided that the board be composed of members conversant with water problems and conditions within the watershed of the state other than government employees. It also provided that the membership of the board could be increased by the governor to five members. While the board was given the power to employ such technical and professional personnel as it might require, funds have not been appropriated to allow for such employment.

The declared intention of the legislature when creating the Water Resources Board was to create a forum where the conflicting aspects of public interests involved could be presented and a controlling water policy be determined. The intent was to have the issues resolved by one state agency conversant with the whole body of water law. The need to effect a systematic administration of water policy for the public welfare out of a code of water law contained in numerous statutes was expressly recognized. Minnesota Statutes § 105.72.

The board is given authority to decide questions of water policy where the use, disposal, pollution, or conservation of water is a purpose, incident, or fact in a proceeding that involves a question of state water law and policy. Minnesota Statutes § 105.73. The board may also resolve inconsistencies between statutes and may determine the proper application of that policy to facts in the proceeding when the application is a matter of administrative discretion.

The decision-making power given to the Water Resources Board can be invoked when the proceeding of an agency involves a question of water policy in one or more of the areas of water conservation, water pollution, preservation and management of wildlife, drainage, soil conservation, public recreation, forest management, and municipal planning. The board's jurisdiction can be invoked by petition, by any party to such a proceeding, the governor, the agency, the commissioner of conservation, or the director of any division of the Department of Conservation, the head of any other department of state, and any bureau or division of the federal government whose function is concerned in such a proceeding. Moreover, any person or group who the board deems representative of any substantial segment of the state or particularly able to present evidence bearing on the public

interest may so petition. Minnesota Statutes §§ 105.74, 105.75.

In addition, the court involved in a matter concerning the question of water policy of a nature enumerated in the foregoing paragraph may ask to have the matter referred to the board. Minnesota Statutes § 105.51.

Upon such a petition, the proceeding abates until recommendation by the board or until 60 days after the conclusion of the hearing before the board, whichever is earlier. Consent of the board to hear a matter is shown by a brief statement in general terms of the questions of public policy that the board will consider.

The board then is to proceed with all reasonable dispatch to hear, determine, and make its recommendations on the questions it has consented to consider. The decision of the board is in the form of a written recommendation. In the proceeding and upon any judicial review, the recommendation is evidence. Minnesota Statutes § 105.77.

4. Mining and the Drainage and Diversion of Water

The most illustrative example of legislative water policy involved the enactments to further the mining of four minerals. The commissioner of conservation is permitted by statute to grant permits for the drainage, diversion, control or use of waters when necessary for mining. In 1949, the legislature granted the commissioner such powers as they related to the mining of iron ore and taconite. In 1967, the legislature expanded this permit power to copper, copper-nickel, and nickel mining. Permits may be granted under this statute upon the following determination by the commissioner:

> That the proposed drainage, diversion, control or use will be necessary for the mining of substantial deposits, and that no other feasible and economical method therefor is reasonably available.
>
> That the proposed drainage, diversion, etc. will not substantially impair the interests of the public in lands or waters except as authorized in the permit.
>
> That the proposed mining operations will be in the public interest. Minnesota Statutes § 105.64.

In addition to the amendment of Section 105.64 in 1967, the legislature specifically gave the copper, copper-nickel, and nickel mining industries the right to use water from Birch Lake and the south Kawishwi River and, in connection with their operations, to flood or otherwise affect lands of the state adjacent to that lake and river subject to the conditions that the industry obtain a permit pursuant to Chapter 105, and that the water withdrawn from said lake and river be returned to the drainage basin from which it is taken in conformity with the water quality standards established by the Water Pollution Control Commission or other pollution control agencies.

The industry was also required to obtain from the Water Pollution Control Commission a permit for the maintenance of disposal systems in connection with such operations.

No lands of the state are to be flooded without permit, license, or lease having first been obtained from the commissioner of conservation. The commissioner is by statute specifically authorized to grant such permits, licenses and leases. Minnesota Laws, 1967, Chapter 556.

Minnesota Statutes Section 93.43 was also amended to provide that the business of mining, producing, or beneficiating copper, copper-nickel, or nickel is declared to be in the public interest and necessary to the public welfare, and the use of property therefor declared to be a public use and public purpose. Under this statute as well, the commissioner of conservation is authorized to license the flooding of state lands in connection with any permit or authorization for the public water issued by the legislature or by the commissioner of conservation pursuant to law.

With respect to mining and prospecting generally, the Department of Conservation is, with the approval of the executive council, empowered to issue rules and regulations governing the issuance of permits and leases for the prospecting for and mining of minerals under the waters of any public lake or stream in the state. Minnesota Statutes § 93.08.

5. County and Judicial Drainage Systems

The county boards of the various counties and the district courts are authorized to construct and maintain public drainage systems in accordance with Minnesota Statutes Chapter 106.

Such boards and courts are also authorized by statute to drain in whole or in part lakes which have become shallow and have marshy character and are not of sufficient depth or volume to be of any substantial public use. A meandered lake is not to be drained, except on the determination of the commissioner of conservation that such lake is not public waters.

In connection with the power of the county boards and district courts to regulate drainage and control flood waters, such boards are authorized

to raise, lower, or establish the height of water in any body of water. The board or court can construct and maintain all necessary structures and improvements for flood control and other public purposes related to flood control. The public water policy underlying the drainage legislation is the reclamation of land by the removal or management of surface water.

6. Dams and Lake Water Levels

Upon permission of the commissioner of conservation, the county boards are given the power to maintain and improve and operate water control works for any body or any part of a body of water which is situated in a single county for the following reasons:

a. To improve navigation thereon.

b. To promote the public health, safety, and welfare. Minnesota Statutes § 110.121. The county board is given the power to acquire by gift, purchase or condemnation, any existing dam or control works that may affect the level of such waters. The county board is also given the power to acquire other land and property needed for the purpose of improving any body of water. Minnesota Statutes § 110.122.

As to any body of water lying within a city, village or borough in this state, such municipality is given the same powers to improve the waters as are conferred on the county boards. Minnesota Statutes § 110.126.

The legislature has provided that there shall be no improvements either by county boards or by municipalities unless the public have access to some portion of the shore of such waters.

In addition to the general powers granted to all county boards, certain counties are given the additional power to determine and award damages to property affected by such improvements and to determine and assess special assessments against property affected thereby for benefits resulting in any way from such improvement. A system of determining such special assessments for Hennepin County is set out in Minnesota Statutes § 110.127.

7. Flood Plain – Shoreland Management

A 1969 Legislative Act (Minnesota Statutes Chapter 104) provides for state coordination and assistance to local governmental units to adopt, enforce and administer sound flood plain management ordinances and provides the Department of Natural Resources with the authority necessary to carry out a flood plain management program for the state and to coordinate federal, state and local flood plain management activities within the state.

Flood plain management means the full range of public policy and action for insuring wise use of flood plains. It includes everything from collection and dissemination of flood control information to actual acquisition of flood plain lands, construction of flood control measures, and enactment and administration of codes, ordinances and statutes regarding flood plain land use.

Whenever the Department determines that sufficient technical information is available for the delineation of local flood hazard areas, local governmental units are required to adopt or amend flood plain management ordinances consistent with minimum statewide standards.

Recognizing the growing threats of pollution, decreasing property values and conflicting land uses in and adjacent to Minnesota's public waters, the 1969 Minnesota Legislature passed the Shoreland Management Act. In accordance with the Minnesota Trust Doctrine the Act provides for the wise utilization of the shoreland resources of Minnesota, the preservation and enhancement of water quality, and the preservation of economic and natural environmental values of shorelands.

Under the Act, the Commissioner of Natural Resources was charged with administration of the program and was called on to draft minimum shoreland development standards and criteria by July 1, 1970. Minnesota's counties are required to enact shoreland control ordinances which at least incorporate the state's minimum standards by July 1, 1972.

These standards and criteria include a sanitary code, minimum lot sizes, building setbacks, land use guidelines and subdivision regulations. They effect only unincorporated areas and apply to land within 1,000 feet of lakes and 300 feet of rivers.

The Department of Natural Resources is responsible for development and coordination of the program and lends assistance as possible to counties as they proceed to implement their shoreland ordinances. Department staff attend numerous county meetings to discuss specific county shoreland problems in an attempt to develop sound, workable and enforceable regulations.

Minnesota counties are ultimately responsible for the administration and enforcement of their own shoreland regulations, but the Commissioner of Natural Resources may adopt a shoreland control ordinance for any county which fails to act by the legislative deadline of July 1, 1972.

8. Watershed Districts

In order to carry out conservation of natural resources of the state through land utilization and flood control upon sound, scientific principles, a public corporation known as a watershed district may be established for the protection of the public

health and welfare and for the provident use of the natural resources. Minnesota Statutes § 112.34.

A watershed district is established by the filing of a nominating petition with the Water Resources Board. The nominating petition is required to set forth the name of the proposed district, the necessity for the district, a statement setting forth the purpose of the contemplated improvements, and the territory to be included in the district. Minnesota Statutes § 112.37.

After the watershed district is established and the first board of managers qualified, the managers are required to adopt an overall plan for any or all of the purposes for which a district may be established. A copy of such plan is transmitted to the county auditor of each county affected, the Secretary of the Water Resources Board, the Commissioner of Conservation, the Director of the Division of Waters, Soils and Minerals, and the governing bodies of all municipalities and soil conservation districts within the area, which parties may make comments and recommendations. Following a public hearing, an order is issued by the Water Resources Board describing an overall water management plan for the district. Minnesota Statutes § 112.46.

The managers of a watershed district shall, when directed by the district court or county board, take over any judicial or county drainage system within its district. Minnesota Statutes § 112.65.

9. Irrigation

Upon application to the State Drainage Engineer, an owner of land within the state suitable for the growing of crops requiring irrigation may construct upon his lands and across any public ditch, drain, or watercourse within the boundaries of his land, dams, dikes or other controlling works necessary to use the water for irrigation. Minnesota Statutes §§ 113.01, 113.02.

It is specifically provided by Minnesota Statutes § 113.05 that if at any time it appears that the structures authorized for irrigation cannot be maintained without impairing the utility of a public drain or watercourse nor without depriving the other landowners of the benefit thereof, upon demand of the owner or owners of such other land, the license secured from the State Drainage Engineer shall be immediately revoked. This section appears to be little used, and is in conflict with Minnesota Statutes § 105.44, Subd. 8, which authorizes the Commissioner of Conservation to process irrigation permits.

10. Pollution Control Agency

In 1967, the Minnesota Legislature created an agency known as the Pollution Control Agency, which agency is to deal directly with problems relating to water and air pollution in Minnesota.

By Minnesota Statutes § 116.02, Subd. 5, the Pollution Control Agency is deemed the successor of the Water Pollution Control Commission, and all powers and duties now vested in that commission by Minnesota Statutes Chapter 115 are transferred to the Pollution Control Agency. The former Water Pollution Control Commission was given the following powers and duties:

a. To administer and enforce all laws relating to the pollution of any waters of the state.
b. To investigate and gather data desirable in the administration and enforcement of the pollution laws.
c. To make such classification of the waters of the state as it may deem advisable.
d. To establish and alter such reasonable pollution standards for any waters of the state in relation to the public use for which they are or may be put.
e. To make and alter reasonable orders requiring the continuance of the discharge of sewage, industrial wastes, or other wastes, into any waters of the state resulting in pollution in excess of the applicable pollution standard.
f. To require to be submitted and to approve plans for disposal systems, and to inspect the construction thereof.
g. To issue, continue, or deny permits for the discharge of sewage, industrial wastes or other wastes, or for the installation or operation of disposal systems. Minnesota Statutes § 115.03.

Any of the permits issued by it, whenever necessary in the opinion of the commission, could be revoked or modified. The commission was also empowered with the ability to prescribe and alter rules and regulations for the conduct of the powers granted to it, and to hold investigations and hearings as it deemed advisable. Minnesota Statutes § 115.03.

Regional Water Pollution Control

1. Water Pollution Control Advisory Committee

In 1961, the legislature created a water pollution control advisory committee consisting of two members from each congressional district of the state. The members of the committee are appointed by the governor with the advice and consent of

the senate. This committee has rarely functioned and apparently is not presently in existence.

The committee is charged with assisting the State Water Pollution Control Commission (now the Pollution Control Agency) in the performance of its statutory powers and duties and formulating a general statewide comprehensive policy for the conservation, utilization, and development of the water resources and other inter-related natural resources of the state. It is also charged with advising the commission concerning the prevention, control and abatement of pollution and the establishment of a reasonable pollution standard for the waters of the state.

The committee is to maintain liaison between the Pollution Control Agency and the communities, industries and persons concerned with water resources. It is also to assist in programs designed to inform the public of the importance of conservation, utilization and development of the water resources of this state, and the prevention, control and abatement of water pollution. See generally Minnesota Statutes § 115.17.

2. Sanitary Districts

Minnesota Statutes § 115.19 provides for the creation of a sanitary district for the purpose of promoting the public health and welfare by providing for an adequate and efficient system and means of collecting, conveying, pumping, treating and disposing of domestic sewage and garbage and industrial waste within the district in any case where the commission (now Pollution Control Agency) finds there is need, and that such purposes cannot be accomplished by any existing agency. No sanitray district may be created within 25 miles of the boundary of any city of first class without the approval of the governing body of such city and the approval of the governing body of every municipality in the proposed district.

Specifically, such district may:

(a) Construct and maintain facilities within or without the district required to control and prevent pollution of waters within its territory.

(b) Construct and maintain facilities within or without the district to provide for disposal of sewage, industrial and other waste originating within its territory. The district has the power to require any person upon whose premises there is a source of sewage, industrial and other waste, to connect the same with its disposal facilities.

(c) Construct and maintain facilities within or without the district to provide for the disposal of garbage or refuse originating within the district, and may require any person upon whose premises garbage is produced to dispose of the same through its system.

(d) Procure supplies of water so far as necessary to accomplish any of its purposes.

3. Control of Municipal Pollution

In order to control water pollution by municipalities, the commission (Pollution Control Agency) is granted the power to issue, modify, or revoke orders after due notice and hearing for the following purposes when deemed necessary to prevent, control or abate pollution:

(a) Prohibit or direct the abatement of any discharge of sewage, industrial waste or other waste into the waters of the state.

(b) Prohibit the storage of any liquid in a manner which does not reasonably assure proper retention against entry into any waters of the state that would be likely to pollute any waters.

(c) Require the construction, installation, maintenance and operation by any municipality of any disposal system or any part thereof or the reconstruction, alteration or enlargement of its existing disposal system, or the adoption of other remedial measures to prevent, control or abate pollution or discharge of sewage or other waste by a municipality. Minnesota Statutes § 115.43.

It is specifically provided by Minnesota Statutes § 115.43 that in exercising the foregoing powers, the commission shall give due consideration to the expansion of business, commerce and trade and other economic factors affecting the feasibility of any proposed action, including the burden on a municipality of any tax which may result therefrom. The former Water Pollution Control Commission was required by statute to prepare a long-range plan and program for effecting the abatement of pollution of all waters of the state. The succeeding Pollution Control Agency is given the specific task of studying and investigating the problems of solid waste control and problems concerning the uses of land in areas of the state which are affected by the pollution of air and water and reporting to the governor and the legislature in regard thereto not later than February 15, 1969.

4. Regional Sanitary Sewer Districts

In order to provide a method by which municipalities in a drainage area designated by law may join together to prevent water pollution in excess

of reasonable standards in that area, the 1965 legislature provided in Minnesota Statutes §§ 115.61-115.67 for regional sanitary sewer districts. The districts created by these sections are municipal corporations, responsible for the collection, treatment and disposal of sewage and industrial waste and other wastes received from the sewage systems of all municipalities within its corporate limits for the purpose of preventing pollution of public waters in excess of the permitted standards. Each district is responsible for the planning, collection, treatment and disposal facilities for all municipalities within its drainage area.

State Board of Health

The State Board of Health is empowered by Minnesota Statutes § 144.12, to adopt and enforce regulations to control, among other things:

(1) The pollution of streams and other waters.

(2) The distribution of water by private persons for drinking or domestic use.

(3) The accumulation of filthy and unwholesome matter injurious to public health.

(4) The general sanitation of tourist camps, summer hotels, and resorts in respect to water supplies and the disposal of sewage, garbage, and other wastes.

Soil and Water Conservation Districts

The policy of the state of Minnesota, as articulated by the legislature, is set out in Minnesota Statutes § 40.02, as follows:

> It is hereby declared that it is for the public welfare, health, and safety of the people of Minnesota to provide for the conservation of the soil and soil resources of this state, and for the control and prevention of soil erosion, **for land resource planning and development, and for flood prevention or the conservation development, utilization, and disposal of water, including but not limited to, measures for fish and wildlife, and recreational development,** and thereby preserve natural resources, control floods, prevent impairment of dams and reservoirs, assist in maintaining the navigability of rivers and harbors, preserve wildlife, protect the tax base, and protect public lands by land-use practices, as herein provided for.

The underlined portion of this statute was added by the legislature in 1965, indicating an increased awareness of water utilization and conservation to land resource planning and development.

To effect these policies, a state soil and water conservation committee was established, and provision made for the establishment of soil conservation districts, which districts become governmental subdivisions of the state, vested with extensive powers over all phases of soil conservation. Minnesota Statutes § 40.07.

Game and Fish Management

The game and fish laws are found in Minnesota Statutes, Chapter 97, and the primary responsibility for their implementation rests with the Division of Game and Fish of the Department of Conservation. Of particular relevance to the control and use of Minnesota's waters are the following powers specifically granted to the commissioner in connection with game and fish management:

(1) The commissioner may enter into contracts with bordering states relating to the removal of rough fish in boundary waters between Minnesota and those states, and to regulate the taking and possession of fish and mussels from such areas. Minnesota Statutes § 97.48, Subd. 2 and 3.

(2) The commissioner can set aside and reserve for any period he deems advisable, any waters of the state in the aid of propagation and protection of wild animals. Minnesota Statutes § 97.48, Subd. 11.

(3) The commissioner is empowered to acquire, by gift, lease, purchase or condemnation, access rights for the public to waters to which the public theretofore had no access or inadequate access, and upon which the public has a right to hunt and fish. Minnesota Statutes § 97.48, Subd. 15.

(4) The commissioner may designate all or part of any lake which does not exceed 2,000 acres of water, or any streams, as experimental waters and establish regulations relating thereto as he deems desirable after a public hearing held in the county where the lake or stream or major portion thereof is located. Minnesota Statutes § 97.48, Subd. 15.

(5) The commissioner may, by gift, lease, purchase, or trade of other state lands, acquire wildlife lands, including marsh and wetlands and the margins thereof, including ponds, small lakes, and stream bottom lands which he finds desirable to acquire in the interests of water conservation relating to wildlife development programs. Minnesota Statutes § 97.481.

The commissioner also has the power to designate by order any land or water areas, more than 50 percent of which are in public ownership, as state game refuges. Minnesota Statutes § 99.25.

Topographic Survey

The commissioner of conservation is authorized to make or provide for a topographic survey of the state, to

map the results, and to make necessary aerial surveys to accomplish this. Minnesota Statutes § 84.53.

The State Mapping Advisory Board continually studies the topographic and mapping needs of the state and advises the commissioner of conservation in determining the order of surveys and in the general planning of mapping operations. The board is also charged with the responsibility of promoting the coordination of survey and mapping activities of private agencies within the state.

State Geological Survey

On February 29, 1872, the legislature provided for a comprehensive geological and natural history survey of the state to be made by the University of Minnesota under the direction of the Board of Regents. Laws 1872, Chapter 30. The geological surveys made thereunder encompass and analyze a complete account of the minerals of the state, including chemical analyses thereof, magnitude of the various geological strata, richness in ores, corals, mineral water, etc., and their economic value and accessibility.

The natural history surveys include survey and examination of the vegetable products of the state, including all native trees, shrubs, and grasses, and a like survey and examination of the state's mammals, fish, reptiles, birds and insects.

Water Transportation

1. Transportation Terminals

Chartered cities in this state having populations of not less than 4,000 nor more than 50,000 are empowered to acquire land for passenger or freight transportation terminals by purchase or condemnation. Minnesota Statutes § 458.02. Such cities are also empowered to construct and maintain docks, wharves, and other water transportation facilities and to charge a reasonable price for their use.

2. Port Authorities

A commission known as a port authority was established by the legislature to serve any city of over 50,000 inhabitants situated upon a port or harbor located on a navigable lake or stream. Port authorities located upon the Great Lakes - St. Lawrence Seaway system are known as seaway port authorities. Minnesota Statutes § 458.09. Generally, port authorities are charged with the duties of promoting the general welfare of the port district, endeavoring to increase its volume of commerce, provision of adequate facilities, and the promotion of efficient, safe, and economic handling of commerce.

3. Harbors and Wharves

Cities of the first class have the right and power to condemn lands to harbors, wharves, boat landings, and such canals and approaches thereto as may be required. Minnesota Statutes § 458.24. Such cities are also authorized to establish and maintain public landings, wharves and docks, transfer railroad tracks, and loading, unloading, transfer and storage facilities. The cities may charge reasonable fees to maintain such facilities and regulate the manner of their use. Minnesota Statutes § 458.25.

4. Water Terminals

Cities of the second class in this state located upon navigable boundary waters have the power to acquire, by purchase or condemnation, land for the establishment of docks, wharves and water terminal facilities. Minnesota Statutes § 458.42. Such cities also have the power to construct the facilities on the land so acquired, and to charge a reasonable price for their use.

Water Safety Laws

The legislature declared in 1959 that:

It is the policy of this state, which is blessed with an abundance of water, to promote its full use and enjoyment by all of the people, now and in the future, to promote safety for persons and property in connection with the use of the waters of the state, to promote uniformity of laws relating to such use and to conform with any requirements of the United States relating thereto. Minnesota Statutes § 361.01.

Chapter 361 of the Minnesota Statutes sets out watercraft licensing requirements of Minnesota, as well as a comprehensive set of water safety rules. The sheriffs of the respective counties are charged with the responsibility of enforcing the water safety rules, and to maintain a program of search and rescue, posting and patrol, and inspection of watercraft for hire.

Metropolitan Council

The 1967 Legislature, by Chapter 896, created a Metropolitan Council for the seven-county area composed of Anoka, Carver, Washington, Ramsey, Hennepin, Dakota, and Scott Counties. The Metropolitan Council, which succeeds to the powers and duties of the former

Metropolitan Planning Commission, is governed by a 15-member board appointed by the governor, 14 from council districts and a chairman appointed at large with the advice and consent of the senate. The council is given broad powers in the area of water resources and is directed to prepare a comprehensive development guide for the metropolitan area which recognizes physical, social and economic needs. All requests by local governmental units for federal loans or grants must be submitted to the council. In the field of water, the council is authorized to study the feasibility of programs relating but not limited to water supply, refuse disposal, surface water drainage, transportation and other subjects of concern to residents of the metropolitan area.

Minnesota Resources Commission

In order to lay the basis for the establishment of a long-term comprehensive program to preserve, develop and maintain the natural resources of the state, the legislature enacted the Omnibus Natural Resources and Recreation Act of 1963. Minnesota Statutes §§ 86.06-86.12. The resources to which this application is directed included lakes, rivers and streams. In particular, the legislative purpose provided for the essential planning for both ground and surface water research necessary for recreation and conservation purposes, including hydrologic studies. It was also intended to provide an inventory of presently available outdoor recreational resources.

In 1967, the purpose of this act was revised by the legislature to one of providing the legislature with the background necessary to evaluate proposed programs to preserve, develop and maintain the natural resources of the state. The long-range planning function was eliminated. Minnesota Laws 1967, Ch. 867.

The Minnesota Resources Commission (formerly Outdoor Resources Commission), comprises seven members of the senate appointed by the Committee on Committees, and seven members of the house appointed by the speaker. Minnesota Statutes § 86.07.

State Planning Agency

The agency was created by the legislature in 1965 for the purpose of preparing comprehensive, long-range recommendations for the orderly and coordinated growth of the state. See generally Minnesota Statutes §§ 4.10-4.17.

Joint Control of Interstate Waters

1. Michigan-Minnesota-Wisconsin Boundary Compact

The Michigan, Minnesota, Wisconsin Boundary Compact, ratified and approved by the legislature in 1947, formally sets the boundaries in the waters of Lakes Michigan and Superior between the signatory states. Minnesota Statutes §§ 1.15-1.17.

2. Great Lakes Basin Compact

The compact, ratified by the legislature in 1955, created an agency of the party states known as the Great Lakes Commission. Minnesota Statutes §§ 1.21-.22. The commission functions are advisory, and it is to deal with the following waters lying within the party states:

a. Lakes Erie, Huron, Michigan, Ontario, St. Clair, Superior, and the St. Lawrence River, together with any and all natural or man-made water interconnections between or among them.
b. All rivers, ponds, lakes, streams, and other watercourses which, in their natural state or in their prevailing condition, are tributary to Lakes Erie, Huron, Michigan, Ontario, St. Clair, and Superior or any of them which comprise part of any watershed draining into any of said lakes.

The stated purpose of the compact is, through cooperative action:

(1) To promote the orderly, integrated, and comprehensive development, use, and conservation of the water resources of the Great Lakes Basin (hereinafter called the Basin).
(2) To plan for the welfare and development of the water resources of the Basin as a whole as well as for those portions of the Basin which may have problems of special concern.
(3) To make it possible for the states of the Basin and their people to derive the maximum benefit from utilization of public works, in the form of navigational aids or otherwise, which may exist or which may be constructed from time to time.
(4) To advise in securing and maintaining a proper balance among industrial, commercial, agricultural, water supply, residential, recreational, and other legitimate uses of the water resources of the Basin.
(5) To establish and maintain an inter-governmental agency to the end that the purposes of this compact may be accomplished more effectively.

3. South Dakota-Minnesota Boundary Waters Commission

The South Dakota-Minnesota Boundary Water Commission consists of the director of the game and fish commission of South Dakota, the commissioner of conservation of Minnesota, and an engineer appointed by the governors of Minnesota and

South Dakota, and has the power and authority:

a. To investigate and prescribe a plan for controlling and regulating the levels of artificially controlled boundary waters.
b. To conduct investigations, surveys, and hearings, and make orders to effect the control of the levels of the boundary waters.

The commission's orders are enforced by application for injunction to the district court or circuit court in either state in any county affected by the order.

4. Tri-State Waters Commission

This commission was created for the purpose of facilitating cooperation to insure the most advantageous utilization of the waters of the Red River, for the control of the flood waters of this river, and for the prevention of the pollution of such waters. Minnesota Statutes § 114.09.

The commission is given the duty of studying the various water problems relating to the water supply within the drainage basin of the Red River lying within the boundaries of the states. To effect its purposes, the commission is given the following powers:

(a) To approve, before commencement of construction, plans for works on boundary waters contemplated by state, municipal, or industrial agencies.
(b) To exercise the power of eminent domain.
(c) To cooperate in studies, surveys, and the maintenance and operation of water projects, with federal, state or municipal agencies.
(d) To exercise all other powers not inconsistent with the constitutions of the United States, North Dakota, South Dakota or Minnesota.

Although the commission is empowered to maintain and control lake levels and stream flow on boundary waters within the area, it can do so only with the approval of the county or state agencies in which area such lake or stream is located. In certain areas designated by statute, the commission has no jurisdiction over lake levels or stream flow. Minnesota Statutes § 114.09, Subd. 8.

5. Great Lakes Basin Commission, Souris-Red River Basin

The 1967 Legislature, by Chapters 254 and 891, authorized participation by the state of Minnesota in the Great Lakes Basin Commission and in the Souris-Red-Rainy River Basins Commission. These two federal-state commissions have been organized and are now beginning to function.

6. Boundary Waters Canoe Area

No study of the law applicable to Minnesota waters would be complete without reference to the various laws designed to protect and preserve the Boundary Waters Canoe Area, an area unique to the state of Minnesota, the use of which is governed by treaty, federal law and state law.

The Webster-Ashburton Treaty of 1842 between the United States and Great Britain established the boundary line between the United States and Canada, and provided that "all the Water Communications and all the usual portages along the line from Lake Superior to Lake of the Woods, also Grand Portage, from the shore of Lake Superior to the Pigeon River is now actually used, shall be free and open to the use of the citizens and subjects of both countries." In 1909, the United States and Great Britain entered into the Root-Bryce (Boundary Waters) Treaty, which defined boundary waters as the waters from main shore to main shore of the lakes, rivers, and connecting waterways along the international boundary between the United States and Canada, including all bays, arms, and inlets. The treaty sets forth an agreement between the United States and Great Britain that the navigation of all navigable boundary waters shall forever continue free and open for the purpose of commerce to the inhabitants of and to the ships, vessels, and boats of both countries subject to any laws and regulations of either country within zone territories not inconsistent with the privilege of free navigation and applied without discrimination of both countries.

The Shipstead-Nolan Act of 1930 withdrew public lands in the Superior National Forest area of northern Minnesota from entry or appropriation under the public land laws of the United States. 16 U.S.C.A. § 577.

Logging was forbidden on all shorelines from any lake or stream in the area to a depth of 400 feet from the natural waterline. Alteration of the natural water level of any lake or stream in the designated area without permit was prohibited. In 1948, the Thye-Blatnik Act empowered the Secretary of Agriculture to acquire lands within the area where in his opinion the development, exploitation, or the potential development and exploitation, impaired or threatened to impair the unique qualities and natural features of the remaining wilderness, canoe country. 16 U.S.C.A. § 577(c).

The Wilderness Act of 1964, Public Law 88-577; 78 Stat. 890, so far as it dealt with the use of water in the boundaries-canoe area, provided that the use of aircraft or motorboats, where established, may

be permitted to continue subject to such restrictions as the Secretary of Agriculture deems desirable. The act also provided that within the wilderness area, including the BWCA, the President may authorize regulations concerning the prospecting for water resources and the establishment and maintenance of reservoirs and water conservation works. The act specifically provided that it was not to be construed as an exemption from state water laws.

PROGRAMS

Introduction

Since congress enacted the Water Resources Planning Act of 1967,[157] much has been written and catalogued concerning various programs and projects dealing with water and related land resources. These publications illustrate to varying degrees the roles the federal, state and local governments, private organizations and interstate agencies have assumed, both separately and jointly, in studies, planning and actual development of water resources.[158]

While this report deals with state and local programs completed, in progress or contemplated, federal and interstate programs are mentioned in order to provide any overall understanding of water programs.

Federal Agencies

Federal agencies having significant responsibilities in water resources in Minnesota are: United States Army Corps of Engineers, North Central Division, St. Paul District; United States Department of Agriculture, Agricultural Conservation Program, Agricultural Research Service-Soil and Water Conservation Research Division-Corn Belt Branch, Farmers Home Administration, Forest Service North Central Forest Experiment Station, Soil Conservation Service; United States Department of Commerce, Weather Bureau; United States Department of Health, Education and Welfare, Public Health Service; United States Department of the Interior, Bureau of Mines, Geological Survey-Water Resources Division, Fish and Wildlife Service, Bureau of Sport Fisheries and Wildlife-Region 3, Bureau of Commercial Fisheries, and Bureau of Outdoor Recreation.

Coordination, cooperation and communication with each agency, along with state and local agencies, are and will be needed to provide the most efficient development and management of the state's water resources.

State and Local Agencies

State agencies having major responsibilities in water and related resources are: Minnesota Department of Natural Resources; Minnesota Department of Health; Minnesota Department of Highways; Minnesota Department of Iron Range Resources and Rehabilitation; Minnesota Geological Survey; Minnesota Association of Soil and Water Conservation Districts; Minnesota State Soil Conservation Commission; Minnesota Pollution Control Agency; Metropolitan Council; and the University of Minnesota Water Resources Research Center. In addition, various other agencies, commissions and committees, along with the newly created Water Resources Coordinating Committee, contribute to statewide activities regarding water.

1. Planning

The list of agencies and organizations concerned with waters is unquestionably a lengthy one. Preventing duplication of study and simultaneously encouraging dissemination of data and information, joint research and cooperative projects appears to be a primary goal for the state.

Until rather recently, most state and local agencies were not concerned with long-range planning. Rather, agencies devoted their energies to the administration and enforcement of existing water laws and policies. Further, any new policies or planning for water resources was initiated by each separate agency with little or no regard for the effect such innovation might have on some other agency's undertakings.

The Federal Water Resources Planning Act of 1965 provided the framework for a departure from this haphazard approach. The act offered the state the opportunity, in collaboration with the federal government, to create a central planning agency for water resources. In January 1967, this was put into effect by Minnesota with the establishment of a Water Resources Coordinating Committee under the supervision and control of the Natural Resources Planning Director. Its main objectives are to assist the State Planning Agency in an advisory capacity and to undertake the following primary functions:

a. Encourage state, federal and local and private organizations to cooperate with one another in the definition and solution of the state's water and related land resources planning programs.
b. Establish, where necessary, and maintain liaison with the various federal and state agencies previously mentioned.
c. Participate in federal, federal-state, or interstate

comprehensive water and related land resources planning.

d. Participate in water pollution control programs in the state.
e. Prepare a comprehensive statewide water and related land resources plan in harmony with comprehensive planning of other resources of the state and in light of local, regional, national and international water and related land resources plans.
f. Provide for the state training of qualified personnel.
g. Sponsor conferences, meetings, seminars and other informational and educational programs dealing with water and related land resources.

The Coordinating Committee will not, under normal circumstances, become directly involved in work on any specific programs.

Planning programs have been initiated in specific state agencies. The Department of Economic Development's Community Planning Division assists communities and regional areas throughout the state to develop a program with the main emphasis on carrying out an integrated planning program. Four divisions of the Department of Natural Resources are engaged in various planning programs. The Division of Forestry is preparing a forest management plan which includes inventory of land, timber, growth, planting needs and lake and river recreation on a district basis. The Game and Fish Division continues on programs of planning for selected watersheds. This planning project includes inventories of lakes, marshes, streams and upland game habitat. The Section of Comprehensive Planning is in the process of refining an outdoor recreation plan--"Minnesota Outdoor Recreation Preliminary Plan - 1965." Hydrologic reports on each of 39 watersheds covering the state are being prepared under a cooperative agreement with the Division of Soils, Minerals and Waters and the United States Geological Survey. Finally, agencies such as the Minnesota State Soil and Water Conservation Commission, and the Minnesota Pollution Control Commission, participate in continuing programs to establish criteria for the expenditure of funds and the establishment of quality standards for water. Of a local nature, the new Metropolitan Council will be engaged in the preparation and publication of the "Metropolitan Water Study," as well as other studies dealing with the metropolitan resource problems.

2. Research

Since its inception in September 1964, the Water Resources Research Center has been a major contributor and coordinator of research efforts in water related land resources. The center is under the auspices of the University of Minnesota Graduate School. A primary objective of the center is to coordinate University research with the resource programs of local, state, federal and private agencies. The center also provides a valuable service by acting as an information exchange through distribution of circulars, newsletters and bulletins.

Through constant compilation of gathered data, the center is able to assist and advise other agencies of needed research in areas of water resources which may have been neglected or are in need of re-evaluation.

In addition to present studies, the importance of planning for future research is not overlooked by the center. With the assistance of advisory committee members and consulting council representatives, the center formulates priority lists on future subjects of research.

Various divisions within the framework of the Department of Natural Resources conduct extensive research programs. The "Hydrologic Studies" section is primarily concerned with analysis of basic data and interpretive studies of water resources. Studies are made for projects for improvement of lakes and streams, determination of the natural ordinary high-water mark of lakes, and projects for the protection of lakes and streams. In general, studies are aimed at providing quantitative criteria in areas where causes and effects are only vaguely understood. Research presently being conducted or proposed includes:

a. Replenishing ground waters storage by artificial recharge of acquifers by injection wells or other means.
b. Soil-water relationships, with special reference to rates of infiltration of surface water into the ground.
c. Evaporation from water surface and from soil or vegetative cover. A classic study of evaporation from lakes and reservoirs was published in 1942 under the sponsorship of the former Minnesota Resources Commission. This study will be revised and republished.
d. Small water areas, ponds, marshes and swamps, will be studied to determine their effect on ground and surface water resources, and a plan evolved for their best use and development.

The Game and Fish Division likewise engages in extension research programs for water and related land resources. Programs currently in operation include: investigation of pollution as it affects game and fish; pesticides investigation; fish diseases and parasites; Mississippi River investigations; evaluation and experimental development of wetlands and other game habitat; banding and marking of

ducks; walleye studies in lakes; Lake Superior Steelhead Trout studies; and numerous other studies affecting many species of fish, fowl, furbearers and their natural environment. In addition, the research section surveys and maps fish, lake, stream and game areas. To date, over 7000 of these surveys have been completed.

3. Data Collection

The Department of Natural Resources plays the major role in the collection and compilation of data on water. Much of this work of gathering and recording data on surface waters, ground waters, and quality of water is done under an annual agreement with the United States Geological Survey, Water Resources Division. In previous years, much of this basic data was collected by the United States Geological Survey under a cooperative arrangement with the Iron Range Resources and Rehabilitation Commission.

The data collection projects presently in operation are numerous. Gauges are in use to measure lake water levels. Stream gaging is carried on to measure crests on high flows of Minnesota's streams and rivers. Various records are maintained by the Section of Waters from information supplied by permit holders regarding waters appropriated in accordance with their permits. Municipalities furnish information based on their annual water use records.

Well logs are required to be filed with the department by well drillers and contractors. In addition, state personnel conduct tests throughout the state to measure groundwater levels in various geologic formations. Analyses are continually being conducted on well-formation samples. In addition, private organizations and the Game and Fish Division contribute analysis test samples from lakes and streams located throughout the state.

The Bureau of Engineering of the Department of Natural Resources has as a major task the survey of lands and the preparation of topographic maps for acquisition and development of fish and wildlife management, boating, swimming, etc. The Bureau is also engaged in the study of public access sites, forestry campgrounds and all phases of park development. The bureau cooperates with the United States Geological Survey, particularly in the area of topographic mapping.

4. Development and Construction

The development and implementation of programs affecting water and related land resources is an ever-continuing process. Closely related to planning, research and data collection, the programs put into effect are the culmination of a multitude of efforts to benefit the state and its people.

a. ***Flood Control***– The United States Army Corps of Engineers is the major agency concerned with flood control. In its operation, the corps works closely with local and state agencies planning and initiating programs to control high waters. Various programs completed or in progress are found on the Otter Tail River, Red Lake River, Mississippi River and the Minnesota River.

In addition, the local watershed districts of the state play an active role in developing programs to effectively handle flood control and flood-plain zoning. The task of reviewing these proposals and plans of all other agencies, local, state and federal, is done by the Department of Natural Resources.

b. ***Water Supply***– Supplementing the efforts of the Department of Conservation and United States Geological Survey in the area of available supplies of water are state agencies such as the Department of Health's Section of Water Supply and General Engineering, which assists water users in efforts to fulfill their needs. The Division of Waters, Soils and Minerals, in conjunction with the Bureau of Engineering, assists the Division of Parks in the construction and maintenance of wells, dams and control structures for recreational pools and domestic consumptive use. The Bureau of Engineering drills wells to supply water for the state's use on conservation lands. The Department of Health's Water Supply Section examines plans and prepares reports on plans for public water supplies, plumbing systems, swimming pools, and sewage systems not discharging to surface drainage courses. It examines and licenses mobile trailer courts, inspects children's camps, immigrant labor camps and industrial camps. It also offers technical advice and assistance to communities in their overall development of water supply and treatment.

To insure continued quality, and improved quality where necessary, the Department of Health and the Minnesota Pollution Control Agency assume leading roles among state agencies. The Department of Health's main function is the prevention of disease, disability, and premature death through the application of preventative medicine and the elimination of health hazards. In helping to accomplish these objectives, the Division of Environmental Sanitation

is most directly concerned with water. Programs initiated by the division are aimed primarily at the control and understanding of environmental factors concerning acceptable public water supplies, adequate sewage treatment facilities, control of industrial waste products, inspection of over 21,000 hotels, restaurants and resorts on a yearly basis, and various radiation control programs.

c. ***Navigation***– As in the flood control area, the United States Army Corps of Engineers plays the predominant role in developing and constructing navigation projects in the state. The Corps does not initiate civil projects, for this is done by local interests after authorized by congress. However, the actual construction is undertaken by the corps. Some of the projects completed by the corps are the St. Croix River complex from Prescott, Wisconsin to Taylors Falls, Minnesota; Minneapolis and St. Paul harbor facilities on the Mississippi River; Grand Marais Harbor on Lake Superior; and dredging and improvements to harbor facilities at Duluth-Superior.

In addition, the corps enters into cooperative agreements for navigation improvement projects with various local and state agencies. An illustration of this cooperative type of arrangement is the Nine Foot Navigation project on the Lower Minnesota River, a joint project of the local watershed district and the corps.

d. ***Power***– Waters of Minnesota are used for the generation of hydroelectric and steam power. In 1959, there were 52 hydroelectric and 64 steam-electric generating plants in operation in the state. These plants are generally either privately owned or run on a cooperative basis. They are regulated somewhat by the Commissioner of Conservation,* in that permits to appropriate waters must in certain instances be acquired. Public and private studies are continuing in northeast Minnesota to discover new sources of water for the use of the mining industry.

e. ***Recreation***– In addition to the planning programs and projects affecting recreational uses of water and related land resources, a continual program of maintaining facilities to accommodate people engaging in outdoor recreational activities in state parks and historical places of interest is the responsibility of the Division of Parks.

The Bureau of Boat and Water Safety constantly promotes a program of safety to persons and property using Minnesota's waters. The Bureau also enforces and administers the law requiring the registration of most watercraft used in Minnesota.

There are also local and regional private organizations that actively promote and foster programs to enhance the state's stock of game, fish and fowl.

5. Regulatory Programs

Historically, the various divisions of the Department of Natural Resources have been established to administer and enforce the laws pertaining to water as enacted by the legislature. Although in recent years there has been a greater emphasis placed on planning and study as is evidenced by the preceding discussion, enforcement and administration of existing laws is an essential part of the duties of the Department. The major responsibility of regulation still rests with the Commissioner of Conservation* through the application of the permit system. Investigation, field checks, survey and sanctions for violations are all tasks performed by the department.

The Minnesota Highway Department is responsible for maintaining proper drainage of state highways and perpetuating the drainage systems. The Hydrologic Unit of the department handles the job of inspecting, repairing and improving drainage projects affecting the state's highway system. Problems dealing with sedimentation and erosion are also studied by the highway department, as well as other state agencies, in cooperation with the Corps of Engineers. New methods, approaches and equipment are sampled and tested constantly.

Drainage and irrigation problems are an ever-recurring problem to the citizens of Minnesota. Much of the regulation in this area is derived from the provision of Chapter 106 of the Minnesota Statutes. Here local agencies are mainly involved, either through the county boards or district courts. Again, irrigation procedures are regulated by the permit system previously discussed.

In concluding a discussion of the programs dealing with water and related land resources in Minnesota, the most recent change is the creation of watershed districts. A relatively new approach to regulation of waters in localized areas, watershed districts cross boundaries of traditional local governmental units. The objective is to have districts which encompass entire areas affected by the particular watershed. Originally created by the

* To be the responsibility of the Commissioner of Natural Resources effective January 1971.

Minnesota Water Resources Board, a watershed district regulates and plans projects varying from flood plain zoning to industrial uses to recreational facilities. With the adoption of their comprehensive plans prepared only after extensive consultation with federal, state and local agencies, groups and individuals, watershed districts, which presently number 17, appear to be yet another agency contributing significantly to a better understanding and utilization of a most precious resource - water.

REFERENCES

1. Samuel Taylor Coleridge, "The Rime of the Ancient Mariner" (1798).
2. "Law has never pumped a single gallon of water but a rational system of legal rights is essential to proper allocation of the available supply. And as the demand comes closer to the supply the role of law becomes more and more apparent." Cribbet, **Principles of the Law of Property** 296.
3. 11 Stat. 166 (1857).
4. Specifically, Article I, Section 8 of the United States Constitution grants the powers to the federal government to regulate commerce among the several states. Judicial construction of this constitutional provision has permitted a state to exercise its jurisdictional powers over its boundary waters absent complete federal presumption. **St. Anthony Falls Water Power C. v. Board of Water Commrs.**, 168 U.S. 349 (1897); **Cummings v. Chicago**, 188 U.S. 410 (1903); **State v. George**, 60 Minn. 503, 63 N.W. 100 (1895).
5. **State v. Kuluvar**, 266 Minn. 408, 123 N.W. 2d 699 (1963); **State v. George**, **supra** note 4.
6. Black's Law Dictionary 345-46 (4th Ed. 1951). See generally 1 Kent, Comm. 492; **Western Union Tel. Co. v. Call Pub. Co.**, 181 U.S. 92 (1901).
7. **United States v. Miller**, 236 F. 798, 800 (W.D. Wash. 1916).
8. "The common law of England, so far as it is applicable to our situation and governments, is the law of this country in all cases in which it has not been altered or rejected by statute, or varied by local usage under the sanction of judicial decisions." **Schurmeier v. St. Paul & Pacific R. R. Co.**, 10 Minn. 82 (Gil. 59, 76) (1865).
9. Haik, Theories of Water Law, Minn. CLE, Vol. I, No. 3, 81, 87 (1963).
10. See II, B 2 a ii, and II, B 6, **infra**.
11. 56 Am Jur. **Waters**, § 6 (1956).
12. Restatement, Torts § 841 (1939).
13. 251 Minn. 419, 88 N.W. 2d 83 (1958).
14. **Id.**, 88 N.W. 2d at 86 (emphasis added by court; footnote omitted).
15. **Id.**, 88 N.W. 2d at 86.
16. 56 Am. Jur. **Waters**, § 50 (1956).
17. Restatement, Torts § 842 (1939).
18. **Schaefer v. Marthaler**, 34 Minn. 487, 26 N.W. 726, 727 (1886).
19. 152 Minn. 544, 188 N.W. 321 (1922).
20. **Id.**, 188 N.W. at 322.
21. **Collins v. Wickland**, **supra** note 13, 88 N.W. 2d at 86. See generally **Petraborg v. Zontelli**, 217 Minn. 536, 15 N.W. 2d 174 (1944), where the court appears to make no distinction in applying common law doctrine to streams and lakes and ponds, mainly treating these different classifications as natural watercourses.
22. For example, **Bush v. City of Rochester**, 191 Minn. 591, 255 N.W. 256, 258 (1934), the court referred to "a natural well-defined or an artificial well-defined channel."
23. See, e.g., **Greenwood v. Evergreen Mines Co.**, 220 Minn. 296, 19 N.W. 2d 726 (1945); **In Re Judicial Ditch No. 9**, **supra** note 19.
24. **Wilder v. DeCou**, 26 Minn. 10, 1 N.W. 48, 53 (1879).
25. **Kray v. Muggli**, 84 Minn. 90, 86 N.W. 882, 884 (1901).
26. **Canton Iron Co. v. Biwabik-Bessemer Co.**, 63 Minn. 367, 65 N.W. 643 (1896).
27. E.g., **Schulenberg v. Zimmerman**, 86 Minn. 70, 90 N.W. 156 (1902); **Gilfillan v. Schmidt**, 64 Minn. 29, 66 N.W. 126 (1896).
28. **Enderson v. Kelehan**, 226 Minn. 163, 32 N.W. 2d 286, 288-89 (1948). See also **Collins v. Wickland**, **supra** note 13; **Johnson v. Agerbeck**, 247 Minn. 432, 77 N.W. 2d 539 (1956); **Hartle v. Neighbauer**, 142 Minn. 438, 172 N.W. 498 (1919); **Schaefer v. Marthaler**, **supra** note 18.
29. **Hartle v. Neighbauer**, **supra** note 28, 172 N.W. at 499.
30. **Collins v. Wickland**, **supra** note 13. In this case, the court emphasizes the fact that a resulting visible channel caused by yearly surface water runoff is not a natural watercourse because it is not a true stream or ancient watercourse.
31. **Collins v. Wickland**, **supra** note 13, 88 N.W. 2d at 87. See also **Hartle v. Neighbauer**, **supra** note 28; **Praught v. Bukosky**, 116 Minn. 206, 133 N.W. 564 (1911).
32. 56 Am. Jur. **Waters**, § 102 (1956).
33. **Hartle v. Neighbauer**, **supra** note 28, 172 N.W. at 499.

34. **Erickson v. Crookston Waterworks, Power & Light Co.**, 105 Minn. 182, 117 N.W. 435 (1908). A more encompassing definition is that found in 56 Am. Jur. **Waters**, § 102 (1956): "Waters which ooze, seep, or percolate through the earth, or which flow in unknown or undefined channels, generally (are) referred to as 'percolating waters.'"

35. See **Erickson v. Crookston Waterworks, Power & Light Co.**, 100 Minn. 481, 111 N.W. 391 (1907); **Stillwater Water Co. v. Farmer**, 89 Minn. 58, 93 N.W. 907 (1903).

36. Haik, The Right to Use Ground Water: Common-Law Rules and Statutory Regulation, Minn. CLE, Vol. I, No. 4, p. 99, 100 (1964).

37. See, **e.g., Erickson v. Crookston Waterworks, Power & Light Co., supra** note 34, 117 N.W. at 441; **Hartle v. Neighbauer, supra** note 28, 172 N.W. at 499.

38. **Eddy v. Simpson**, 3 Cal. 249 (1853).

39. Haik, Theories of Water Law, Minn. CLE, Vol. I, No. 3, 81, 84 (1963).

40. 83 Minn. 339, 86 N.W. 337 (1901).

40A **Id.** at 344, 86 N.W. at 338.

41. The permit system, as set out in Minn. Stat. Ch. 105 (1965), and how it alters and affects the common law in Minnesota, will be more fully discussed **infra**, at E (1).

41A See Minn. Stat. § 105.64 (1965).

42. **Red River Roller Mills v. Wright**, 30 Minn. 249, 254, 15 N.W. 167, 168 (1883).

43. 30 Minn. 249, 15 N.W. 167 (1883).

44. **Id.**, 15 N.W. at 168.

45. **Ibid.**

46. **Id.**, 15 N.W. at 169.

47. **St. Anthony Falls Water Power Co. v. City of Minneapolis**, 41 Minn. 270, 43 N.W. 56 (1889).

48. See **infra**, discussion of Minn. Stat., Ch. 105 (1966).

49. **Reeves v. Backus-Brooks Co., supra** note 40, 86 N.W. at 338.

50. 44 Minn. 367, 46 N.W. 561 (1890).

51. See **e.g., Minnesota Loan & Trust Co. v. St. Anthony Falls Water Power Co.**, 82 Minn. 505, 85 N.W. 520 (1901); **Pinney v. Lucy, ibid.**

52. **Petraborg v. Zontelli**, 217 Minn. 536, 15 N.W. 2d 174 (1944).

53. **Id.**, 15 N.W. 2d at 182.

53A 168 U.S. 349 (1897).

53B **Id.** at 371.

53C 225 Minn. 390, 31 N.W. 2d 46 (1948).

54. 82 Minn. 43, 84 N.W. 641 (1900).

55. It should be noted that this case arose under a statute prohibiting the removal of water where the result would be a lowering of the lake level. By reason of the ice company's demurrer to the complaint, it admitted that its conduct, in fact, lowered the level of the lake. However, from the facts before the court, this is not quite so certain. Consequently, the **Sanborn** decision is not as strong a precedent for domestic use priority as appears.

56. 197 Minn. 241, 266 N.W. 861 (1936).

57. **Id.**, 266 N.W. at 866.

58. **Id.**, 226 N.W. at 865.

59. **Lamprey v. State**, 52 Minn. 181, 198, 53 N.W. 1139, 1143 (1893). This principle has been reaffirmed in **Meyers v. Lafayette Club, supra** note 56.

60. **Morrill v. St. Anthony Falls Water Power Co.**, 26 Minn. 222, 2 N.W. 842 (1879).

61. **Supra**, note 59.

62. **Id.**, 53 N.W. at 1143-44.

62A Minn. Stat. § 105.38 (1965).

63. 270 U.S. 49 (1926).

64. **Id.** at 56.

65. **E.g., State v. Adams**, 251 Minn. 521, 89 N.W. 2d 661 (1957), **cert. denied**, 358 U.S. 826 (1958); **State v. Longyear Holding Co.**, 224 Minn. 451, 29 N.W. 2d 657 (1947), **cert. denied**, 336 U.S. 948 (1949).

65A 257 Minn. 159, 100 N.W. 2d 689 (1960).

65B **Id.**, 100 N.W. 2d at 694 (footnotes omitted).

66. **Lamprey v. State, supra** note 59. See also **Bingenheimer v. Diamond Iron Mining Co.**, 237 Minn. 332, 54 N.W. 2d 912 (1952); **Scheifert v. Briegel**, 90 Minn. 125, 96 N.W. 44 (1903).

66A **Johnson v. Seifert, supra** note 65A; **State v. Adams, supra** note 65.

67. **Lamprey v. Danz**, 86 Minn. 317, 321, 90 N.W. 578, 580 (1902). See also **State v. Bollenbach**, 241 Minn. 103, 63 N.W. 2d 278 (1954); **L. Realty Co. v. Johnson**, 92 Minn. 363, 100 N.W. 94 (1940); **Minnesota Valley Gun Club v. Northline Corp.**, 207 Minn. 126, 290 N.W. 222 (1940).

67A **State v. Kuluvar, supra** note 5; **Johnson v. Seifert, supra** note 65A.

68. **E.g., State v. Korrer**, 127 Minn. 60, 148 N.W. 617 (1914).

69. **E.g., State v. Longyear Holding Co., supra** note 65; **Lamprey v. State, supra** note 59.

70. **E.g., Nelson v. DeLong**, 213 Minn. 425; 7 N.W. 2d 342 (1942); **Lamprey v. State, supra** note 59. Ownership in this instance means that the state is holding the waters in its sovereign capacity in trust for the public.

71. 31 Minn. 301, 17 N.W. 626 (1883).

72. **Id.**, 17 N.W. at 628 (emphasis added by court).

73. **E.g., State v. Korrer, supra** note 68; **Lamprey v. State, supra** note 59.

74. **State v. Longyear Holding Co., supra** note 65; **Petraborg v. Zontelli, supra** note 52; **Nelson v. De Long, supra** note 69.

75. **Nelson v. DeLong, supra** note 70, 7 N.W. 2d at 346.
76. 241 Minn. 103, 63 N.W. 2d 278 (1954).
76A **State v. Adams, supra** note 65; 89 N.W. 2d at 678.
76B 36 Minn. 373, 31 N.W. 863 (1887).
76C **Id.**, 31 N.W. at 864.
77. 43 Minn. 476, 45 N.W. 1095 (1890).
78. **Id.**, 45 N.W. at 1096. For other early cases applying the common enemy doctrine, see **Township of Blakely v. Devine**, 36 Minn. 53, 29 N.W. 342 (1886); **Hoganon v. St. Paul, M. & M. Ry. Co.**, 31 Minn. 224, 17 N.W. 374 (1883); **McClure v. City of Red Wing**, 28 Minn. 186, 9 N.W. 767 (1881).
79. **Sheehan v. Flynn**, 59 Minn. 436, 61 N.W. 462 (1894).
80. **Id.**, 61 N.W. at 463, 466.
81. 226 Minn. 163, 32 N.W. 2d 286 (1948).
82. **Id.**, 32 N.W. 2d at 289.
83. **Ibid.** See also **Johnson v. Agerbeck**, 247 Minn. 432, 77 N.W. 2d 539 (1956).
84. 251 Minn. 419, 88 N.W. 2d 83 (1958).
86. **Id.**, 88 N.W. 2d at 88.
87. 56 Am. Jur. **Waters**, § 113 (1956).
88. **E.g., Eckel v. Springfield Tunnel & Development Co.**, 87 Cal. App. 617, 262 Pac. 425 (1928); **Katz v. Walkinshaw**, 141 Cal. 166, 70 Pac. 663 (1903).
89. **Erickson v. Crookston Waterworks, Power & Light Co.**, 105 Minn. 182, 117 N.W. 435 (1908). Since the Minnesota court treats artesian basins separately from percolating waters, the true doctrine of correlative rights as it applies to artesian basins is not actually merged into Minnesota's reasonable use doctrine governing percolating waters.
90. 89 Minn. 58, 93 N.W. 907 (1903).
91. **Id.**, 93 N.W. at 908-909.
92. **Id.**, 93 N.W. at 910.
93. **Stillwater Water Co. v. Farmer**, 92 Minn. 230, 99 N.W. 882 (1904).
94. 56 Am. Jur. **Waters**, § 111 (1956).
95. 100 Minn. 481, 111 N.W. 391 (1907) and 105 Minn. 182, 117 N.W. 435 (1908).
96. **Id.**, 117 N.W. at 439.
97. **Id.**, 111 N.W. at 394.
98. **Id.**, 117 N.W. at 441.
99. **Id.**, 111 N.W. at 393.
100. **Id.**, 117 N.W. at 441.
101. **Kray v. Muggli, supra** note 25; 86 N.W. at 865.
102. **Supra** note 26.
103. **Mueller v. Fruen**, 36 Minn. 273, 30 N.W. 886 (1886).
104. **Id.**, 30 N.W. at 887.
105. 56 Minn. 513, 58 N.W. 295 (1894).
106. **Id.**, 58 N.W. at 296.
107. **E.g., Kinney v. Munch**, 115 Minn. 536, 132 N.W. 326 (1911); **Baldwin v. Fisher**, 110 Minn. 186, 124 N.W. 1094 (1910). Compare **Schulenberg v. Zimmerman**, 86 Minn. 70, 90 N.W. 156 (1902).
108. **Kray v. Muggli, supra** note 25.
109. **Minnesota Loan & Trust Co. v. St. Anthony Falls Water Power Co.**, 82 Minn. 505, 85 N.W. 520 (1901).
110. **Kray v. Muggli, supra** note 25, 86 N.W. at 884.
111. **Schuette v. Sutter**, 128 Minn. 150, 150 N.W. 662 (1915).
112. 178 Minn. 203, 226 N.W. 569, 571 (1929).
113. 131 Minn. 186, 154 N.W. 968 (1916).
114. **Id.**, 154 N.W. at 969.
115. **Ibid.**
116. **E.g., Skinner v. Great Northern Ry. Co.**, 129 Minn. 113, 151 N.W. 968 (1915); **Fossum v. Chicago, M. & St. P. Ry. Co.**, 80 Minn. 9, 82 N.W. 979 (1900).
117. **Reed v. Board of Park Commissioners**, 100 Minn. 167, 110 N.W. 1119 (1907).
118. Dun. Dig., **Waters** § 10167 (1956).
119. **Poynter v. County of Otter Tail**, 223 Minn. 121, 25 N.W. 2d 708, 714 (1947).
120. **Supra** note 84.
121. **Collins v. Wickland, supra** note 84; 88 N.W. 2d at 88.
122. **E.g., Greenwood v. Evergreen Mines Co., supra** note 23; **Nye v. Kahlow**, 98 Minn. 81, 107 N.W. 733 (1906); **Jungblum v. Minneapolis, N.U. & S.W.R. Co.**, 70 Minn. 153, 72 N.W. 971 (1897).
123. **Will v. Boler**, 212 Minn. 525, 4 N.W. 2d 345 (1942).
124. **Id.**, 4 N.W. 2d at 348 (citation omitted).
125. **Canton Iron Co. v. Biwabik-Bessemer Co., supra** note 26.
126. 41 Minn. 270, 43 N.W. 56 (1889).
127. **Id.**, 43 N.W. at 57.
128. **E.g., Gravel v. Little Falls Improvement & Nav. Co.**, 74 Minn. 416, 77 N.W. 217 (1898); **City Power Co. v. Fergus Falls Water Co.**, 55 Minn 172, 56 N.W. 685, 56 N.W. 1006 (1893); **Cargill v. Thompson**, 50 Minn. 211, 52 N.W. 644 (1892); **Minneapolis Mill Co. v. Hobart**, 26 Minn. 37, 1 N.W. 45 (1878).
129. 43 Minn. 104, 42 N.W. 596, 44 N.W. 1144, 1147-48 (1890).
130. 213 Minn. 425, 7 N.W. 2d 342, 346 (1942).
131. **Id.**, 7 N.W. 2d at 347.
132. Haik, Theories of Water Law, Minn. CLE, Vol. I, No. 3, 96, (1963). A more detailed discussion of the permit system and its ramification on the common law in Minnesota is found **infra.**
133. 18 Minn. 176 (Gil. 163, 165-66) (1872).
134. 30 Minn. 249, 15 N.W. 167 (1883).
135. **Id.**, 15 N.W. at 169-70.
136. **Satren v. Hader Co-operative Cheese Factory**, 202 Minn. 553, 279 N.W. 361, 362 (1938).

137. **Id.**, 279 N.W. at 364.
138. **Sandstone Spring Water Co. v. Kettle River Co.**, 122 Minn. 510, 142 N.W. 885 (1913).
139. See **Keever v. City of Mankato**, 113 Minn. 55, 129 N.W. 158 (1910).
140. 120 Minn. 86, 139 N.W. 140, 141 (1912).
141. **Joyce v. Village of Janesville**, 132 Minn. 121, 155 N.W. 1067 (1916).
142. **Huber v. City of Blue Earth**, 213 Minn. 319, 6 N.W. 2d 471, 473 (1942).
143. **Id.**, 6 N.W. 2d at 473.
144. **Shuster v. City of Chisholm**, 203 Minn. 518, 282 N.W. 135 (1938).
145. Laws 1937, c. 468, M.S.A. 105.38 et req.
146. Minn. Stat. § 105.38 (1965).
147. Minn. Stat. §§ 109.41 (1), .42 (1965). The commissioner referred to in this provision is the commissioner of conservation. Minn. Stat. § 105.37 (2) (1965). His duties are more elaborately set out in § 105.39 (1) as follows:

    WATER CONSERVATION PROGRAM. The commissioner shall devise and develop a general water resources conservation program for the state. The program shall contemplate the conservation, allocation, and development of all the waters of the state, surface and underground, for the best interests of the people. The commissioner shall be guided by such program in the issuance of permits for the use and appropriation of the waters of the state and the construction, reconstruction, repair, removal, or abandonment of dams, reservoirs and other control structures, as provided by Sections 105.37 to 105.55.

148. 266 Minn. 408, 123 N.W. 2d 699 (1963).
149. **Id.**, 123 N.W. 2d at 706-07.
150. **Id.**, 123 N.W. 2d at 706.
151. Minn. Stat. § 105.44 (1965).
152. Of course, a party aggrieved by the administrative agency has recourse under Chapter 105 to a judicial review of the agency's findings and order. See Minn. Stat. § 105.47 (1965).
153. Failure to use the waters does not affect the riparian owner's rights to do so in the future. **Reeves v. Backus-Brooks Co.**, 83 Minn. 339, 86 N.W. 337 (1901).
154. Report of the Legislative Interim Commission on Water Conservation Drainage and Flood Control, 1955, p. 17.
155. Minn. Stat. § 105.64 (1965).
156. Minn. Stat. § 105.44 (9) (1965).
157. Pub. L. No. 89-80, 89th Cong., July 22, 1967.
158. Publications of particular importance to Minnesota and its waters and related problems are: Federal, State and Local Agencies Concerned with Water Resources in Minnesota, Bulletin No. 1, Water Resources Research Center, December 1965; Water and Related Land Resources Planning in Minnesota, Water Resources Coordinating Committee, State Planning Agency, St. Paul, Minnesota; Minnesota Water Resources Review Committee, Sub-Committee IV - Management of Water, July 1966; Hydrologic Atlas of Minnesota, Department of Conservation, Bulletin No. 10, April 1959. Much of the information in this section is abstracted from these sources.

BIBLIOGRAPHY

A. Statutes
Minnesota Statutes (1965)

B. Judicial Decisions
Minnesota Supreme Court Decisions (Northwestern Reporter)

C. Law Reviews
1. Bade, Title, Points and Lines in Lakes and Streams, 24 Minn. L. Rev. 305 (1940).
2. Comment, Public Right of Fishery as an Incident of Navigation, 40 Minn. L. Rev. 88 (1955).
3. Comment, Access By the Public to a Private Body of Water for Recreational Purposes, 38 Minn. L. Rev. 685 (1954).
4. Comment, Easements - Acquisition of Right to Have Changed Conditions in Water Course Continued, 22 Minn. L. Rev. 427 (1938).
5. Comment, Prescriptive Rights to Underground Water, 34 Minn. L. Rev. 574 (1950).
6. Comment, Liability of United States to Landowners on Navigable Streams for Raising the Water Level, 32 Minn. L. Rev. 844 (1948).
7. Comment, Test of Navigability, 25 Minn. L. Rev. 636 (1941).
8. Comment, Pollution - Accrual of Cause of Action, 21 Minn. L. Rev. 117 (1936).
9. Comment, Extent of Federal Control over Navigable Waters, 20 Minn. L. Rev. 798 (1936).
10. Comment, Impairment of Riparian Owner's Right of Access by State, 17 Minn. L. Rev. 456 (1933).
11. Comment, Power of State to Alien Lands Under Navigable Waters, 11 Minn. L. Rev. 574 (1927).
12. Comment, Joint Liability for Pollution of Water, 11 Minn. L. Rev. 386 (1927).
13. Comment, Right of Riparian Owners to Restrain Trapping in Navigable Waters, 5 Minn. L. Rev. 399 (1921).

14. Comment, Title to Land Under Water, 3 Minn. L. Rev. 211 (1919).
15. Comment, Irrigation as Public Use, 3 Minn. L. Rev. 199 (1919).
16. Comment, Adverse Possession of Navigable Waters by the State, 2 Minn. L. Rev. 470 (1918).
17. Fraser, Title to the Soil Under Public Waters - A Question of Fact, 2 Minn. L. Rev. 313 (1918).
18. Haik, The Right to Use Ground Water: Common Law Rules and Statutory Regulation, Minn. CLE, Vol. I, No. 4, 99 (1964).
19. Haik, Theories of Water Law, Minn. CLE, Vol. I, No. 3, 81 (1963).
20. Hallam, Rights in Soil and Minerals Under Water, 1 Minn. L. Rev. 34 (1917).
21. Hoshour, Boundary Controversies Between States Bordering on a Navigable River, 4 Minn. L. Rev. 463 (1920).
22. Kinyon and McClure, Interferences with Surface Waters, 24 Minn. L. Rev. 891 (1940).
23. Kinyon, What Can a Riparian Proprietor Do? 21 Minn. L. Rev. 512 (1937).
24. Note, Inalienable Rights of Public in Title to Soil Under Navigable Waters, 32 Minn. L. Rev. 484 (1948).
25. Note, Rule as to Surface Waters in Minnesota, 2 Minn. L. Rev. 449 (1918).
26. Note, Inalienable Rights of the Public in Navigable Waters, 1 Minn. L. Rev. 347 (1917).
27. Peterson, Governmental Responsibility for Torts in Minnesota - Interferences with Surface Waters, 26 Minn. L. Rev. 293 (1942).
28. Powell, Commerce Clause and State Police Power - Navigable Waters, 12 Minn. L. Rev. 607 (1928).
29. Williams, State Control of Natural Resources, 11 Minn. L. Rev. 129, 233 (1927).

D. Water Resources Research Center Publications

1. Bulletin No. 1, Federal, State, and Local Agencies Concerned with Water Resources Research in Minnesota (December 1965).
2. Bulletin No. 4, Lists of References and Selected Books Bearing on Water Resources in Minnesota (December 1966).
3. Bulletin No. 5, Water Resources Research and Educational Needs in Minnesota (March 1967).
4. Information Circular No. 21, Water Rights Development in the Western States.
5. Information Circular No. 28, Federal Departments, Agencies, and Commissions which Offer Assistance in Planning Development, Administration, and Use of Water and Related Land Resources.
6. Information Circular No. 51, Water Law: Government Discretion or Property Rights?
7. Information Circular No. 73, Minnesota's Accomplishments, Plans and Programs for Water Quality Management.
8. Information Circular No. 76, Ground Water Resource Investigation and Research Needs in the Minneapolis-St. Paul Area, Minnesota.
9. First Annual Report, Water Resources Research Center (December 1965).

E. Other

1. Brown, Rome G., The Law of Waters: Synopsis of Lectures at Law School of University of Minnesota, Law School of University of North Dakota and Minnesota College of Law (1921).
2. Guideline to Governmental Subdivisions for Receiving Land and Water Conservation Funds, Minnesota Department of Conservation, State Liaison Agency for Minnesota (March 1966).
3. Hydrologic Atlas of Minnesota, Minnesota Department of Conservation, Division of Waters, Bulletin No. 10 (April 1959).
4. Michaelson, V. J., Some Legal Aspects of Public and Private Waters in Minnesota, Minnesota Department of Conservation, Division of Waters, Bulletin No. 4 (1951).
5. Minnesota Outdoor Recreational Resources Commission, Parks and Recreation in Minnesota, Report No. 12 (1965).
6. Minnesota Water Resources Board, Report on Water Law Study and Recommendations (1963).
7. Minnesota Water Resources Review Committee, Sub-Committee IV - Management of Water (July 1966).
8. Report of the Legislative Interim Commission on Water Conservation, Drainage and Flood Control (Minn. 1955).
9. State Planning Agency, Water Resources Coordinating Committee, Water and Related Land Resources Planning in Minnesota (St. Paul, Minnesota).
10. University of Wisconsin and the United States Department of Agriculture, A Study of Legal and Economic Aspects of Water Rights in Minnesota, Wisconsin, Indiana, and Ohio, Contract No. 12-14-100-1010 (43) (Phase Report Nos. 1, 2, 4, 12, 13, 14, 15, 19, 21, 22 and 23) (August 1961).

STATE OF MISSOURI



FOREWORD

Planning, as a technique in the decision making process, must be designed to assist in political judgments relating to public investment in the resources field. In the process of determining the optimum utilization of water resources, it is necessary to understand completely the current situation and the events leading to it. It is also necessary to consider fully the land uses that affect the quantity and quality of water as well as the effect of the available water supply on the potential for land use. This publication presents the current situation in water and land development from the standpoint of both legal and physical aspects. It is intended that the material will assist in determining possible solutions to water and related land problems that confront or may in the future confront the State of Missouri.

The material is presented in a manner designed to serve two purposes. First, the publication can serve as a ready reference to legislators and government officials interested in existing conditions governing the availability, use, and management of water within the state. Second, it can be used in comprehensive river basin planning as a basis for judgments regarding institutional approaches capable of solving short and long-term water needs.

Acknowledgement is given to the following sources, as contributors to the information contained herein.

Division of Geological Survey and Water Resources
Water Pollution Board
University of Missouri, Extension Division
Division of Commerce and Industrial Development
Interagency Council for Outdoor Recreation
State Soil and Water Districts Commission
Committee on Legislative Research
Division of Health
Conservation Commission
State Park Board
Highway Department
Department of Agriculture
Department of Community Affairs
Missouri Boat Commission

PROPERTY RIGHTS IN WATER

Introduction and Overview

As our population increases and the technological nature of our civilization becomes increasingly more complex, the demand for water, for consumptive and other uses, grows apace. Water is needed for domestic

uses, for manufacturing, power and agricultural uses, and also for recreational uses. Not only do our rivers and streams furnish us with vital water for our basic needs, but they also serve as a means for carrying off our waste products. The importance of an adequate supply of water as one of the fundamental bases of modern life becomes more clearly recognized each year.

Missouri has fortunately been blessed with an ample supply of water, in the form of substantial rainfall and with many magnificent rivers and springs. In the development of the state, problems of water shortage have played little part. However, the adequacy of our water supply is beginning to be doubted, as demands for water increase while our water tables drop and our watercourses show signs of being inadequate to meet the manifold demands made upon them. Shortages of water are beginning to be felt, and will be experienced more acutely as competing uses of water increase.

Where water shortage exists, two things can be done. First, the available supply can be increased to equal the demand. This is seldom a practicable solution, although plans are being laid in the western states to transport water over many hundreds of miles, from regions of plenty to places of shortage, and elsewhere the desalinization of sea water for human use has begun. Second, the available supply can be regulated by law to determine which uses shall be given priority and which persons shall have rights to use the water which we do have. As a part of legal regulation, water waste and water pollution must be controlled. The task of water law, then, is to provide a framework whereby the rights of persons to use available water may be known and determined, and whereby conflicts to the use of water may be resolved and the outcome of potential conflicts predicted.

Water law has two sources: the common law, which is court-made law consisting of rules laid down by our courts in deciding actual controversies which do arise, and statutory law, which is enacted by the legislature. Although Missouri achieved statehood nearly 150 years ago, there is surprisingly little court-made law or statutory law pertaining to most phases of water use. As observed by the Missouri Supreme Court in 1964:

> Missouri is notable for the fact that it has almost no statutory law concerning rights of individual members of the public and of the public generally in public water and watercourses, and such cases as there are based on the common law usually arise from factual situations pertaining to the existence of too much rather than too little water.[1]

Accordingly, in Missouri there is an absence of comprehensive judicial determination or legislation respecting the use of water.

Perhaps it is fortunate that Missouri has not refined its law relating to waters; for it has not thereby become bound to any rigid water law doctrines which may interfere with future beneficial use and development of our water resources. Instead, at this point in our history we are able, without the stifling restriction of a pre-existing set of established rules and doctrines, to work out judicially and legislatively a system of water law which will be most beneficial to the future development and prosperity of the people of Missouri.

Present-day Missouri water law is by no means nonexistent, however. There are hundreds of judicial decisions and numerous statutes on the books relating to the water resources of the state. Necessarily, an understanding of existing Missouri water law must preface any future attempts to forge new legal doctrines. This paper reviews the existing common law doctrines and legislation affecting the water resources of the state. Part I deals with the Missouri court decisions arising out of legal conflicts respecting water and its use; Part II deals with the legislation adopted by our General Assembly relating to water resources.

1. The Common Law Relating to Water Resources

a. ***Introduction***– Fundamentally, American law relating to water resources has been court-made, particularly in the eastern states where rainfall and water supplies have been abundant. While state legislatures have made provision for such things as drainage and levee districts, and more recently have created administrative agencies to control water pollution and to engage in long-range water resources planning, these statutes have operated largely within the framework of water resources law laid down by the courts. In only a handful of the eastern states have comprehensive water use statutes been adopted. Likewise in Missouri the courts have been instrumental in creating the fabric of the state's water law, through decisions in controversies arising between competing interests relating to the use or disposition of water.

The courts have classified water as found in its natural state or as it has been artifically impounded or channeled by man, and have set forth the rights of various persons -- landowners, members of the public, and public agencies -- with respect to the water resources of the state. Necessarily, the law as declared by the courts has taken on something of a patchwork nature, because only when controversies have arisen involving specific aspects of water resources have the courts declared the rights of the respective parties. The courts do not, under our system of law, have the power to lay down a comprehensive system of water law, in the absence of the actual controversy which would require such a determination; the power of the courts extends only to the cases that are brought before them.

Therefore, where no case has arisen upon a particular point, the courts will have had no opportunity to decide that point, and the law is silent as to it. For this reason, many of the burning questions of water resources law remain unanswered -- they await a controversy which is taken to court or a legislative declaration, and until that occurs it will be possible only to speculate as to what the law of the state may be upon the particular issue.

b. ***Classification of Water***– Although it is today recognized that water occurs in a hydrological cycle, whose parts are closely interrelated, the courts have tended to classify water according to the physical state in which it is found, and to attach to water in a particular classification certain legal incidents or rights. This predominantly functional basis for classification originated at a time when the interrelationship between the various forms of water found in nature was not known or appreciated, and has been carried by the force of tradition and legal **stare decisis** down to the present.

The courts have classified water into five categories, depending upon the state of nature in which it is found: watercourses, lakes, diffused surface water, ground water, and atmospheric water. The criteria for distinguishing these forms have been spelled out with care, although in any particular instance it may be difficult to ascertain the specific class into which certain water may fall, since one class necessarily merges into others.

The following definition of a watercourse found in the early Missouri case of **Benson v. Chicago & Alton R.R. Co.**, decided by the Supreme Court in 1883, has been cited with approval many times in subsequent decisions:

> There must be a stream usually flowing in a particular direction, though it need not flow continually. It must flow in a definite channel, having a bed, sides or banks, and usually discharge itself into some other stream or body of water. It must be something more than a mere surface drainage over the entire face of a tract of land, occastoned by unusual freshets or other extraordinary causes. It does not include the water flowing in the hollows or ravines in land, which is the mere surface water from rain or melting snow, and is discharged through them from a higher to a lower level, but which at other times are destitute of water. Such hollows or ravines are not in legal contemplation water courses.[2]

Other Missouri decisions have added elements to the definition of a watercourse, as by describing it as a "living stream,"[3] as being "fed from other and more permanent sources than mere surface water,"[4] and as not necessarily always being confined within definite banks.[5]

The Missouri Supreme Court has more recently emphasized the importance of the function played by a particular waterway in determining whether it should be treated as a natural watercourse.[6] Thus, an artificial watercourse may, where it has been substituted for a natural watercourse, be treated as a natural watercourse.[7] Likewise, a natural drainway which is improved by an artificial ditch, which "thereafter meets the requirements of a 'natural watercourse' should be treated as a 'natural watercourse'."[8]

And whether or not an artificial watercourse will for all purposes be treated as a natural watercourse, it has been held that the rights of persons owning land adjacent to or upon which flows an artificial watercourse should be determined, as far as the use of the water is concerned, as though the watercourse were natural in origin.[9]

Generally, the rules of law relating to lakes are similar to those concerning watercourses. The Missouri courts have stated that:

> A lake is an inland body of water of considerable size, occupying a natural basin or depression in the earth's surface below the ordinary drainage level of the region. Whether a sheet of water is to be classed as a lake, or marsh, swamp or bog, it is necessary to take into account to comparative depth or shallowness of the water, its permanence or liability to dry down and refill according to season, the main source of supply, whether streams or springs or surface drainage.[10]

Thus, where the issue before the court was whether a particular body of water was a lake or mere diffused surface water, the court stressed the size, depth and permanence of the body of water, its regular source of supply, its well-defined banks and basin, and that it was connected to a river and a bayou, and held it to be a lake.[11]

By exclusion, it would seem that all water on the surface of the ground not a part of a watersource or lake, natural or artificial, is diffused surface water.

Further, in Missouri, all overflow waters from flooded watercourses and lakes are treated as diffused surface waters, even though they are contiguous to the water in the watercourse or

lake.[12] This differs from the general rule of law adopted by most English and American courts, which holds that as long as floodwaters are contiguous to a body of water, they are part thereof. The Missouri rule is qualified somewhat by holdings that water in a slough which has a defined bed and banks, and which is connected to a watercourse, should not be treated as diffused surface water, but instead as a watercourse.[13]

Ground water, or subsurface water, is generally recognized by the courts to fall into two categories — underground streams and percolating ground water. It has been recognized in Missouri that an underground stream must have a "well defined and known channel," while percolating ground water "filtrates or percolates through the soil or interstices of the rock."[14]

A final classification of water is that of atmospheric water — water found in the atmosphere in the form of rain clouds. The Missouri courts have not had occasion to deal with the legal interests which may exist in atmospheric water, and, indeed, in spite of occasional scientific and other attempts at rainmaking, including cloud seeding, there has been very little litigation anywhere involving the legal rights of persons engaged in such activities.

Watercourses and lakes are further classified upon the basis of whether they are navigable or nonnavigable. The Missouri Supreme Court has favorably quoted the following language:

> The test of navigability of a river, as stated by the Supreme Court of the United States, is that those rivers are navigable in law when they are used, or are susceptible of being used, in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water. Another test is whether, in its ordinary state, a stream or body of water has capacity and suitability for the usual purpose of navigation, ascending or descending, by vessels such as are employed in the ordinary purposes of commerce, whether foreign or inland, and whether steam or sail vessels.[15]

It has been stressed that it is the capability of use by the public for purposes of commerce, and not the manner and extent of such use, which is crucial in the determination of a stream's navigability.[16]

The foregoing test of navigability is applied in determining whether the ownership of the bed of the stream is in the public, or in the adjacent riparian owner. If the watercourse is navigable under this test, the bed is the property of the public; if not, it is the property of the riparian owner. Only the largest watercourses have been found to be navigable waters under this definition; for example, in 1921 it was held that the Meramec River is nonnavigable under this definition.[17]

On the other hand, Missouri has applied a less rigid test of "navigability" to determine whether the public has an easement of travel in a particular watercourse. Thus, even though the bed of the stream may be in private ownership as the property of the adjacent riparian, such ownership may be subject to an easement for public use. The leading case on this point is **Elder v. Delcour**,[18] decided by the Missouri Supreme Court in 1954. The test laid down in that case seems to be whether the stream may in fact be used by the public for any mode of travel; if so, then it is subject to the public easement, even though the ownership of the bed is in the adjoining landowner. Such public travel may be by boat, by canoe, or even by wading; and the stream may be used for business or for pleasure, including for purposes of fishing.

The easement of public travel will be protected by the courts, much in the same fashion as travel upon a public highway; any obstruction of a navigable stream which prevents free travel thereupon is a nuisance per se, and may be abated by judicial action.[19]

Finally, whether a stream is navigable is a question for judicial determination, and the state legislature has no power to declare a stream navigable unless it is navigable in fact, according to the tests above described.[20]

c. ***Riparian Rights in Watercourses and Lakes***— Missouri, like the other states in the eastern part of the United States, has adopted the doctrine of riparian rights with regard to watercourses and lakes. Under the riparian doctrine, rights to use the waters of a watercourse or lake inhere in those persons owning land adjacent to the body of water; the word "riparian" is derived from the Latin word for the bank of a stream. Thus, as an incident of the ownership of land upon the banks of a watercourse or lake, one has a right to the waters. The right would seem to arise from the fact that the owner of such land has access to the water; stated otherwise, the existence of the water upon or adjacent to the land is a benefit bestowed upon it by nature.

As early as 1841, the Missouri Supreme Court stated that "the proprietor of land is entitled to the use of a watercourse which flows

through it."[21] Thus, the ownership of the land carried with it the right to the continued flow of the watercourse and the right to use the water thereof.

While in the past decade several of the eastern states have adopted legislation modifying or even partly abolishing the doctrine of riparian rights, nevertheless it is apparent that in the foreseeable future this doctrine will continue to provide the foundation of water use law in Missouri and the other eastern states.

It is generally said that the courts have adopted two approaches to the use of water under the riparian doctrine -- that of reasonable use, and that of natural flow. Under the natural flow doctrine, the riparian owner is said to be entitled to the full natural flow of the watercourse which flows on or adjacent to his land, subject only to diminution through "natural uses" by other riparians, as would meet their natural or human wants. Under this theory, it makes no difference whether a diminution of the stream's flow from other causes actually interferes with a use which the riparian owner is making of the water; instead, since he is entitled to the full flow of the stream, any diminishing thereof is an injury to his right, and provides the basis for a legal action. Basically, "natural flow" is a dog-in-the-manager theory of water rights, and if strictly applied would strongly restrict beneficial water use and development.

Under the reasonable use doctrine, on the other hand, each riparian owner is entitled to make a reasonable use of the water in the watercourse or lake, determined with reference to the amount of water available and the uses being made of the water by other riparian owners. This clearly is the doctrine of riparian rights which most courts have adopted, and is a doctrine which actively encourages use and development of water. It is, perhaps, subject to the criticism that a riparian owner cannot know with any degree of certainty from one day to the next whether his use is in fact reasonable, as compared with the uses made by others.

Missouri has never definitively indicated which doctrine of riparian rights is applicable in this state, because no decision by the courts has ever required such a determination. Some language in cases involving obstruction and diversion of the water of streams has been couched in "natural flow" terms, and has given rise to speculation that the natural flow doctrine either is or would become the law of the state. A recent pronouncement of the Missouri Supreme Court, however, while certainly not a direct holding on the point, indicates that the reasonable use doctrine is in force in Missouri:

> The right of a riparian owner in the water of a stream, in jurisdictions wherein the doctrine of riparian rights obtain, include "the right to the flow of the stream in its natural course and in its natural condition in respect of both volume and purity, except as affected by reasonable use by other proprietors*** "[22]

It is submitted that in all likelihood the Missouri courts will adopt the doctrine of reasonable use when called upon to decide a controversy over the right to use the waters of a watercourse or lake.

One of the basic tenets of the riparian doctrine is that rights to use the water of watercourses and lakes is limited to riparian owners. Within the term "riparian owner" would normally be included any person with a possessory interest in riparian lands, including an owner in fee simple, a life tenant, a tenant for years, or even a tenant at will. The Missouri courts have not had occasion to speak to this matter.

The non-riparian, on the other hand, has no right to use the water of a watercourse or lake. While the Missouri courts have never ruled as to the use of water by a non-riparian, *the general* holding under the riparian doctrine by the courts of other states has been that non-riparians are without right to use the water.

Potentially, the problem of use by a non-riparian may be most acute with regard to municipal uses of water, whereby a municipality supplies water to numerous non-riparian owners and occupiers of land. In Missouri the problem may be complicated by language of the Supreme Court indicating that a municipality should be considered a riparian proprietor.[23] Conceivably, however, the issue could arise any time a riparian proprietor permitted a non-riparian to acquire access to a watercourse or lake for the purpose of making some use of the water.

The law relating to non-riparian use remains unclear. For example, is a use of water by a non-riparian wrongful as against all riparians upon the particular stream, or only as against those whose riparian uses may be interfered with by his non-riparian use? The question is not without importance, for if any non-riparian use is an invasion of the rights of all riparians, then a non-riparian can acquire prescriptive rights to the use of the water simply by making use of it for the required ten-year period; while if there must be actual injury to some riparian before

action can be brought by him against the non-riparian, it will be more difficult for the non-riparian to acquire prescriptive rights to the use of the water.

Finally, while there are no Missouri decisions in point, it would appear that the weight of authority in the United States is that the riparian right is an inherent part of the riparian land, and therefore the riparian owner may not convey his water rights separate from the land and give the grantee rights to the use of the water which will be upheld against other riparians.

The great weight of authority in the United States is that water from a watercourse or lake may, under the riparian doctrine, be used only upon land actually riparian to that water source. This means that a riparian owner may only use the water upon his own "riparian" tract of land, and that he may not (1) use the water upon his non-riparian land, or (2) permit it to be used by another for the benefit of non-riparian land.

In determining what is a riparian tract, two criteria have been employed: (1) the land must lie within the watershed of the stream or lake, and (2) the particular tract must be in actual contact with the water and its title must be in a single owner.

The application of these rules has been refined to the extent that if a riparian owner sells off a portion of his tract, and that portion has no actual contact with the source of the water, the new owner takes no riparian rights; similarly, if a riparian owner purchases a non-riparian tract which is contiguous to his riparian land, the new tract does not become riparian. More restrictive still, if the riparian owner sells off a part of his riparian tract so that it becomes non-riparian land, there is authority that if the riparian repurchases that part of the tract, it does not regain its former riparian status, but remains non-riparian.

The Missouri courts have never been called upon to determine the extent of riparian land, or the consequences of use on non-riparian land.

Under the riparian doctrine, priority is given to domestic uses of water. A riparian may, without qualification under either the natural flow or the reasonable use doctrine, use the waters of a stream or lake for drinking, cooking, and bathing purposes for himself and his family, to the extent that he may entirely deplete the waters thereof, and leave none for the use of other riparians. Some courts have included the watering of livestock within the category of domestic use.

Other uses of water are clearly secondary to domestic use. A number of courts have termed domestic uses as "natural", while calling other uses "artificial"; priority is given to natural uses, to the extent that until the natural needs of all riparians have been met, no artificial use will be permitted. As between artificial uses -- as for manufacturing, irrigation and recreation -- there would appear to be no priorities generally established, and under the reasonable use doctrine the propriety of any such use would necessarily depend upon its relative reasonableness.

A third class of water uses may be described as "prohibited" uses; these are clearly relegated to the lowest level. This class includes uses which are wrongful if injurious to riparian owners, such as non-riparian uses and use of the watercourse for waste disposal.

In Missouri, the courts have seldom indicated what, if any, priorities or preferences would exist as to competing uses of water. In **Bollinger v. Henry**, decided by the Missouri Supreme Court in 1964, the court indicated by way of dictum that irrigation may be a reasonable use of water, but that it is "subject to the priority of riparian owners for the supply of 'natural wants' which include drinking water for family and livestock."[24] And in the 1937 case of **Dardenne Realty Co. v. Abeken**, the St. Louis Court of Appeals affirmed a trial court judgment enjoining the diversion or diminution by defendants of any water from a creek, except for domestic purposes.[25] Beyond this expressed preference for domestic use, the Missouri courts have not been called upon to decide which of two or more competing uses should be favored.

Under the reasonable use doctrine, any use of the water of a stream or lake which consumes a part thereof must be gauged by its reasonableness as compared with other uses that are being made of the waters of the stream. Such consumptive uses are subject to the limitation that the riparian may not divert the watercourse from its natural channel, unless he returns it to that channel before it reaches the lands of a lower riparian.[26]

The Missouri courts have recognized the rule against the diversion of a stream, although it has most often been applied in cases where complaint was made by a landowner that unwanted water was being turned upon him, rather than cases where a riparian complained of being deprived of the waters of the stream.[27] However, in **Dardenne Realty Co. v. Abeken**[28] the lower riparian complained that the diversion of a creek by an upper riparian deprived it of a supply of

water for lakes upon its property. The evidence showed that the upper owner had dammed up the creek and had diverted it to supply water for artificial lakes upon the upper land. The primary issue in the case was whether the creek was a natural watercourse. The court held that it was, and affirmed a judgment enjoining further diversion, without any discussion as to the reasonableness or propriety of this use of the water by the upper owner. It was apparently assumed that any diversion of the entire stream was wrongful, although the effect of the injunction was to prohibit diversion of any part of the creek's waters.

Subsequently, in **Bollinger v. Henry**,[29] the Supreme Court indicated that irrigation of agricultural lands was a reasonable use, where the lower owner was making only an occasional use of the water for operation of a mill, in addition to watering a few hogs, and it was not shown that the lower owner was injured by the taking of the water.

Further, it has been held wrongful for a landowner, in the development and improvement of his land, to destroy springs furnishing water to a natural watercourse, thereby depriving lower riparians of the flow of water.[30]

The waters of a stream or lake lend themselves particularly well to use for waste disposal. However, dumping human, manufacturing or other wastes into a watercourse will very often render the water unusable for any other purpose, except perhaps to generate power. For this reason, pollution of watercourses has historically been regarded by the courts as a nuisance, and consequently a wrong against which relief in the form of damages or an injunction would be given. Nevertheless, it has also been recognized that any use of the waters of a stream or lake may detract from their purity, and therefore it has been said by the Missouri Supreme Court:

> The proprietor of land through which a stream flows cannot insist that the water shall come to him in the natural pure state. He must submit, and that, too, without competition, to the reasonable use of it by upper proprietors; and he must submit to the natural wash and drainage coming from towns and cities.[31]

Reported Missouri decisions dealing with pollution of watercourses by private persons and companies have involved such enterprises as strip mining,[32] oil and gasoline escaping from a pipeline,[33] a distillery and hog "styes",[34] a cannery,[35] and a slaughterhouse.[36] A somewhat more unusual case arose when a mining company dumped sludge into a creek, causing a mill pond to fill up, and impairing the water power source of the mill.[37] For the most part, these instances of pollution have been treated as temporary nuisances only, because they were abatable through discontinuance of the activity causing the pollution. But where permanent injury is done, as by the poisoning and destruction of a well, permanent damages for the loss are recoverable.

Pollution by municipal corporations falls within a separate category in Missouri. Before 1900, the only practicable method of sewage disposal for municipalities was to cast the untreated wastes into a convenient watercourse. No feasible methods of sewage treatment were then known, which meant that lower riparian owners on a stream into which a city's sewers emptied were required to bear the burden of the pollution of the stream waters. The resulting nuisance was treated as permanent, inasmuch as there would be no foreseeable lessening in the nature or amount of pollution of the waters.[38] Moreover, courts refused to enjoin municipal uses of watercourses for waste disposal, since there was no other way to dispose of the sewage. Pollution of watercourses by municipalities, wrongful as it was, was necessary to protect the public health.[39] Accordingly, the courts held that a lower riparian, injured by municipal sewage pollution, had to collect all of his damages in a single suit, which, because the city's use was in the nature of a damaging or taking of the lower lands for public purposes, assumed some of the aspects of a condemnation action.

The result has been that for many years, pollution by municipalities in Missouri has been treated as a permanent nuisance, rather than a temporary or abatable nuisance, and the injured landowner has been entitled to be compensated for the permanent damage to his property. Thus, where at the time the pollution began, the municipality was employing then current scientific means to treat the sewage, but failed to prevent pollution thereby, permanent damages were assessed against the municipality, although by the time of bringing suit, improved means of sewage treatment were available.[40]

On the other hand, where a municipal sewage disposal plant had not been operated properly, causing more severe pollution than necessary, the nuisance was held to be a temporary one, since abatement would result if the plant were run properly.[41] Similarly, where there is evidence from which it can be found that abatement of

pollution by the municipality is both scientifically possible **and** reasonably practicable, the nuisance may be treated as a temporary one.[42]

The distinction between permanent and temporary nuisance is important not only because of the different measure of damages which may be collected where the nuisance is temporary damages are assessed for the actual injury sustained, while if it is permanent, damages are measured as the lessening in value to the property which would result from the condition being permanent -- but it is also important in determining when an action must be brought. The period of the statute of limitations in cases of pollution damage is five years;[43] and where the nuisance is a permanent one, unless the action for permanent damages is brought within five years from the date of the first injury, the cause of action is lost and there can be no recovery. On the other hand, where the nuisance is a temporary, abatable one, as the pollution continues to cause injury, successive actions for damages may be brought, with the result that the statute of limitations bars only suits for injuries which occurred more than five years before the suit is filed; damages may be collected for injuries sustained within the past five years.

One may obtain rights to use water or to flood the land of another, or may acquire title to riparian lands through the use or occupancy thereof, which is adverse to the interests of the original owner. Thus, where one claimed title by reason of adverse possession to islands and lands created by accretion, it was necessary that he establish hostile, continuous and notorious possession of the land for a period of ten years.[44] Likewise, where the owner of a dominant tract claimed a right to flow water in a ditch through the lands of a lower owner, based upon ten years' use thereof, the court observed, "such a right in the estate of another can be created by actual use only when such use has been open, adverse, exclusive and uninterrupted for ten consecutive years."[45] And since the use was shown to have been with the permission of the lower owner, plainly it was not adverse to that owner's rights.

In a similar case it was held that a landowner did not gain a prescriptive right to drain his surface waters into a ditch maintained by another from the mere fact that he so drained his lands for ten years, where it appeared that the artificial ditch was not intended to be permanent, but only temporary and within the control of the person who had dug it.[46] The court there agreed, however, that under the proper conditions it is possible to acquire a prescriptive right in an artificial watercourse; and such has been the holding of the courts where, for example, a watercourse is diverted from its natural channel into an artificial one.[47]

Finally, where a permanent structure is built which obstructs a natural waterway and causes continuous flooding of upper lands, the right of action for damages accrues with the first flooding, and will be barred by the statute of limitations after ten years,[48] thereby in effect giving the lower owner a right to continue such flooding.

In addition to the acquisition of rights by prescription or adverse possession, it is also possible for a person to lose his rights relating to water through abandonment, through acquiescence, or through unreasonable delay in asserting the rights, the latter doctrine being known as laches. Thus, where parties owning land upon a lake built a fence in the lake and each only use that portion of the lake on his side of the fence for boating and fishing over a period of fifty years, it was held that the owners had acquiesced in the division of the lake, even though originally each may have had the right to use the entire surface for boating.[49] In the same case, where one owner stood by while the other built a pontoon bridge across one end of the lake, cutting off access from the lake to a river, the first party was held barred by his laches, or unreasonable delay, from asserting a right to such access.

The extent to which the doctrine of riparian rights applied to artificial watercourses and lakes is not definitely established in Missouri.[50] An artificial watercourse may, where it has existed for a number of years and is regarded as permanent by the parties concerned, be treated as a natural watercourse. Particularly will this be true where a natural watercourse is diverted into a new bed or channel, and the former channel abandoned.

In **Greisinger** v. **Klinhardt**,[51] decided by the Missouri Supreme Court in 1928, it was held that where an artificial lake was intended to be permanent when created, and the land subsequently passed into the hands of two separate owners, an easement was created in favor of each to enjoy the use of the lake, and each owner had a right to the use of the entire surface of the lake for boating and fishing, just as though the lake had been created naturally.

And in **Bollinger** v. **Henry**,[52] where a millrace had for 150 years carried water, the court declined to treat it as a natural watercourse for

all purposes, but held that the respective rights to the use of the water of the millrace, as between persons upon whose land it ran, should be determined as though those persons were riparian owners on a natural watercourse.

It is universally recognized as wrongful either to obstruct the flow of a watercourse so that the lands of others are flooded thereby,[53] or to divert the waters of a stream upon the lands of another.[54] Likewise, it is improper to modify the bed of a watercourse so as to direct the current against the land of another, causing it to be eaten away by erosion.[55] While many actions arising out of the flooding of lands due to obstruction or diversion of a watercourse have been based upon negligence,[56] it is clear that recovery in such a case is not based on the fact that the obstruction or diversion of the waters was intentional, or that it was caused by carelessness, but is based on the premise that the flooding constitutes either a nuisance[57] or a trespass[58] and consequently the acts causing the flooding are wrongful. In any case, plainly one may not seek to justify an obstruction or diversion which causes flooding, on the ground that it represents a reasonable use of the water.

As detailed earlier in the section dealing with navigable waters, title to the bed of navigable lakes and streams, which are navigable in the sense that they are generally useable as highways for commerce "in the customary modes of trade and travel on water," is in the public. This title originally was in the United States, but passed to the state upon its admission to the Union.

In navigable waters of this nature, riparian owners own to the low-water mark,[59] and riparians have the same rights in such navigable waters as they do in nonnavigable waters, subject to (1) the public ownership of the bed, and (2) the right of the public to navigate upon the water.

On the other hand, title to the bed of nonnavigable waters is in the adjoining riparian owners; on a watercourse, the riparian on each side owns to the thread or centerline of the main channel of the stream,[60] while on a lake, the riparian owns to the center of the lake, unless title to the lake bed has been conveyed according to government surveys which extend over the lake "just as though it was dry land."[61]

As an incident of the ownership of the bed of waters, the owner thereof takes title to islands formed in the watercourse or lake. On navigable waters in Missouri, the state has granted to the respective counties, in trust for school purposes, the title to the bed, as well as to any islands which may form therein.[62] Alternatively, islands which form in the bed of a nonnavigable stream are the property of the riparian who owns the bed where the island has formed.[63]

A further incident of the ownership of riparian land is that the owner thereof takes title to land formed by accretion, which is the creation of new land through gradual deposits of alluvial soil.[64] On nonnavigable as well as navigable streams, the riparian owner will plainly become the owner of land formed by accretion along his shore line, and likewise the owner of an island will be entitled to accretions formed to it. However, on navigable waters the riparian owner does not take title to an island formed by accretion; title to such an island follows the ownership of the bed, which is in the public.[65]

d. ***Ground water***– Generally, American courts have adopted either the "common law" doctrine or the "American" doctrine respecting percolating ground water, while where an underground watercourse is involved the courts have applied the same rules as to a surface watercourse. Under the common law doctrine of percolating ground water, which follows the 1843 English decision of **Acton** v. **Blundell**,[66] the landowner owns absolutely all percolating water which may be found beneath his land, and may deal with it as he wishes, including sale to other persons for use off the land. The effect upon neighboring landowners is immaterial. The only limitation, which has been applied by most courts that have adopted the common law doctrine, is that water may not intentionally be wasted, or depleted maliciously with intent to injure other landowners. Under the American doctrine, also called the reasonable use doctrine, on the other hand, the question is whether a particular use of the water is reasonable, under all the facts and circumstances. Although most courts which considered the question at or before the turn of the century adopted the common law rule, the modern trend in the United States is to the adoption of a reasonable use rule for percolating ground water.

As noted above, Missouri courts have recognized the distinction between underground streams and percolating ground water. However, very few Missouri decisions have dealt with the rights of landowners to use the water found beneath their land. Perhaps this is because Missouri has, at least until now, had sufficient ground

water to meet its needs, and therefore controversies have been few. Most of the reported decisions have involved actions resulting from the pollution of ground waters, which has adversely affected the quality of water of a spring or well.

The leading Missouri decision -- in fact, the only Missouri decision -- dealing with the use of ground water is **Springfield Waterworks Co.** v. **Jenkins**,[67] decided by the St. Louis Court of Appeals in 1895. In this case, plaintiff waterworks company supplied its customers from a spring which rose on land owned by it. Defendants owned a dam and mill on a watercourse which ran near plaintiff's spring, but which was separated from it by a ridge of rock. The flow from plaintiff's spring was interrupted by the acts of defendant in opening and closing the sluice gates at the dam, which was located above the spring; during the time the mill pond was refilling, there would be no water in the stream below the dam, and plaintiff's spring would suffer a diminished flow.

The court recognized that as to underground streams, the same rules are applicable as to surface watercourses. However, in the case there was not sufficient evidence to show that an underground stream was involved, since no "well defined and known channel" was established. Percolating ground water, on the other hand, "is regarded as a part of the soil," and "belongs to the owner of the land, and its diversion or appropriation by him for the improvement or benefit of his estate can not be made the basis of a complaint against him by anyone, however grievious the resulting injury may be." Nevertheless, in this case the court enjoined the defendants for opening and closing the sluice gates needlessly, as it was shown that defendants had not acted to improve their own land, but merely to injure the waterworks company, perhaps to compel the company to purchase the dam and mill from defendants to assure a steady flow of water in their spring.

Thus it appears that the court in the **Jenkins** case adopted at least the common law rule as to percolating ground waters in Missouri, with its modification against wasteful or malicious use. No subsequent Missouri decision has been found involving the use of ground waters. Whether a court in this state would today, if presented with a similar issue, embrace the common law rule, is at least doubtful; probably the American or reasonable use rule would be adopted.

Other Missouri ground water decisions deal with the matter of pollution of percolating ground waters, which affects the water of a well or spring used for domestic water supply or for watering livestock.[68] Most of these cases have dealt with escaping oil or gasoline from a pipe line or storage tank, and have involved questions as to whether the leak actually caused the pollution, and, if so, whether the resulting nuisance was permanent or temporary in nature. If permanent, all damages had to be recovered in a single action, while if temporary, successive suits could be brought for damages as additional injury was suffered due to new or continued leaks. Thus in **Shelley** v. **Ozark Pipe Line Corp.**,[69] the nuisance complained of was held to be temporary only, since it was abatable by the defendant, and therefore successive damage suits were possible.

With regard to pollution, it should be mentioned: (1) that even under the common law doctrine of ground water use, pollution has been held to be wrongful **per se**; and (2) that the courts have generally treated pollution of surface streams; it constitutes a nuisance, which is wrongful in and of itself.

e. ***Diffused Surface Waters***[70] By definition, diffused surface waters include all waters on the surface of the earth not confined within watercourses and lakes. And, as noted earlier, in Missouri diffused surface waters include the overflow or flood waters from watercourses. Water ceases to be surface water when it reaches and becomes a part of a natural or artificial watercourse or lake.

The major problems relating to surface waters have traditionally dealt with drainage.

No Missouri decisions deal with the consumptive use of diffused surface waters, and only a handful of cases anywhere are reported on this subject. Generally, these cases follow the so-called "English rule" which allows a landowner to impound and use any surface water on his land in any manner he desires, without any need to account to others for this use. In short, he is absolute owner of surface waters found upon his lands. Only in New Hampshire has a "reasonable use" rule been suggested which would restrict the unfettered use of surface waters by a landowner. This question may conceivably arise in the future, inasmuch as one principal source of water in watercourses and lakes is diffused surface water, in the form of drainage; collection or impoundment of this water in farm ponds or otherwise may conceivably affect stream flow in some areas.

Pollution of diffused surface waters gives rise to an action based upon the doctrine of nuisance. Thus, where a city's sewers overflowed and ran onto adjoining private premises, the owner thereof properly had an action for damages.[71]

Most surface water problems arise out of drainage matters. Missouri has adopted the so-called "common enemy" doctrine relating to drainage of surface waters,

> Which stated in its extreme form "is that as an incident to his right to use his own property as he pleases, each landowner has an unqualified right, by operations on his own land, to fend off surface waters as he sees fit without being required to take into account the consequences to other landowners, who have the duty and right to protect themselves as best they can."[72]

In so doing, Missouri rejected the "civil law" doctrine which requires that each landowner be subjected to the natural flow of surface waters across his land, and denies to the landowner the right to protect *himself* by means of embankments or other structures, but subjects him to the "natural servitude" of drainage of surface waters.

The common enemy doctrine as adopted by the Missouri courts has been modified to the extent that a landowner may not collect surface waters and cast them in a concentrated volume upon the land of his neighbor.[73] Thus, where in the construction of a home the grade is changed,[74] or in the construction of a parking lot railroad ties are used as curbs,[75] so that the surface water drainage is concentrated in its flow upon the lands of a neighbor, liability will be imposed for damage caused thereby. However, this modification does not mean that a landowner may not improve his land; if removal of grass, vegetation and topsoil causes surface water to drain more freely than before onto the lower lands of adjoining owners, no wrong has been done.[76] Nor can the adjoining owner complain that such waters bear with them mud and silt from the improved land, since this is to be treated as a part of the surface water.

In ridding his premises of surface waters, a landowner may make improvements upon his own land for collecting the water, providing he has some means of disposing of it. As stated by the Missouri Supreme Court,

> the rule is, in substance, that a landowner in the reasonable use and development of his land may drain it by building thereon sewers, gutters and such other artificial water channels for the purpose of carrying off the surface waters into a "natural surface-water channel"*** located on his property without liability to the owner of neighboring land, even though such method of ridding his property of surface water accelerates and increases the flow thereof, provided that he acts without negligence, and provided further that he does not exceed the natural capacity of the drainway to the damage of neighboring property.[77]

Thus, a distinction is drawn between "the discharge of surface water into a natural drainway on the landowner's property where it would have gone anyway, and the discharge of surface water on neighboring land where it would not naturally have drained.[78]

This is illustrated by **Haferkamp** v. **City of Rock Hill**,[79] in which a city and a real estate developer channeled surface water in artificial drains into a natural drainway, which had previously carried away the surface water, thereby accelerating and increasing the flow in the natural drainway, which originally drained into a sinkhole on adjoining land. It was held that the artificial improvements were wrongful only if they increased the flow of water to the extent that it exceeded the natural capacity of the outlet.

Although a landowner may drain his surface water into a watercourse or "natural drainway" upon or immediately adjacent to his own premises, he has no right to the use of a watercourse for drainage unless his land is riparian thereto. Thus, in a recent case of **Armstrong** v. **Westroads Development Company**,[80] where in improving urban lands a riparian through whose premises a stream flowed moved the stream channel and enclosed it in a large concrete culvert, an adjacent non-riparian owner whose surface water drainage was thereby impaired had no ground for complaint. The court said that "the right to drain into a watercourse depends upon the watercourse traversing or bordering lands drained."

Since overflow waters or flood waters from a watercourse or lake are treated as surface waters in Missouri, they, too, may be warded off without liability to others. Thus, where dams, dikes or other improvements are made by landowners to protect their premises from overflow waters and as a consequence thereof other lands are flooded, no cause of action arises.[81] However, if the improvements to ward off flood waters cause the water to be collected and cast in a

concentrated body upon the lands of another in a manner in which the waters would not normally flow, damages may be collected for injuries so inflicted.[82] Similarly, only a landowner in the protection of his own land may ward off floodwaters; and where a drainage district's levee would narrow the flood channel of a river so as to cause additional flooding of unprotected lands, the owner of such lands was permitted to recover for the damages, on the ground that the district was not a landowner improving its own lands.[83]

Under the common enemy rule a landowner may build embankments or otherwise alter the surface of his land to prevent surface water from coming upon his land from higher premises. It does not matter that the embankments cause surface water to form ponds or otherwise collect upon the lands of the upper owner; since the surface water is a common enemy, it can freely be warded off.[84] However, it seems to be a matter of some importance that the water be warded off **at the property line**, inasmuch as landowners have been held liable when they have built embankments elsewhere on their property, causing surface water to form a pool or pond which then extends from within the landowner's own property and onto the higher premises of the adjoining owner.[85]

There are certain statutory modifications in the common enemy rule. Thus under a statute requiring a railroad to construct ditches and drains along and through its roadbed, connecting with other "ditches, drains or watercourse," it has been held that the railroad cannot be held liable if the amount of water thereby cast into a watercourse exceeds the capacity of the watercourse.[86] Likewise, under a statute giving the right to drain agricultural lands into a watercourse, natural drainway or ditch, it has been held that an "absolute right" exists so to drain the water, apparently even though the capacity of the watercourse is exceeded by such drainage.[87]

2. Statutory Law Pertaining to Water and Related Land

a. ***Introduction***– It has become increasingly evident that common-law water doctrines are not adequate to solve impending problems of water use and development. The vast population increase of recent decades combined with the added per capita water consumption brought about by the technological advances of modern life has imposed a serious strain upon the relatively constant supply of water available for use in the eastern United States. The common law furnishes no satisfactory basis for the comprehensive water use regulation and water resources development which the changed conditions of our society have made necessary. Therefore, our attention must be directed to legislation as a means of furnishing satisfactory controls for the use and development of water resources.

Missouri has no comprehensive water resources legislation. What legislation exists has been adopted in a piecemeal fashion, directed at specific problems as they arose. Generally speaking, these statutes fall into several clearly-defined areas, including pollution control, water supply and sewage disposal, dam construction, and drainage and levees. An acquaintance with these provisions is vital to the understanding and intelligent assessment of future legislative proposals for water development and control in Missouri.

b. ***Pollution Control***– Prior to 1957, Missouri had no general or coordinated water pollution control law. Scattered statutory provisions covered some of the aspects of pollution of the state's water resources, but these provisions were extremely fragmentary in nature. For example, the contamination of waters was prohibited when it might "injure, stupefy or kill" the fish in such waters;[88] it was unlawful to cast "any dead animal, carcass or part thereof, the offal or other filth" into a watercourse or lake;[89] and certain cities had power to prevent pollution which adversely affected their municipal water supply.[90] In most instances, individuals whose interests were harmed by the pollution of watercourses or ground waters were forced to resort to the courts and the common law in order to protect themselves, as, for example, when petroleum products were allowed to run into a rural stream and caused the death of dairy cattle drinking from the stream.[91] Since there were no general water pollution standards, and no machinery for creating or enforcing such standards, the interest of the general public in maintaining the purity of the waters of the state was ignored almost completely. In this regard, Missouri lagged far behind most other states.

In 1957, after having rejected pollution control bills in 1953 and 1955, the Missouri General Assembly enacted legislation creating a state Water Pollution Board and giving to the Board broad power to establish and enforce standards for regulating the pollution of the waters of the

state.[92] At the same time, however, the legislation does not limit the common law remedies previously available to persons who are adversely affected by water pollution.[93]

The Missouri water pollution act declares it to be the policy of the state "to restore and maintain a reasonable degree of purity in the waters of the state," and to require treatment of sewage and industrial wastes where necessary.[94] The waters of the state protected by the act include not only watercourses and lakes, but embrace all "other bodies of surface or subsurface water"; waters confined entirely upon the property of a single owner do not, however, fall within the provisions of the act.[95]

> Pollution is defined by the act as:
> the discharge or deposit of sewage, industrial waste or other wastes into the waters of the state in such condition, manner, or quantity which causes the waters to be contaminated, unclean, impure, odorous, or noxious to such an extent as to be detrimental to public health, to create a public nuisance, to kill or have an unreasonably harmful effect upon fish or other aquatic life, or upon game or other wildlife, or unreasonably detrimental to agricultural, industrial, recreational or other reasonable uses . . . .[96]

The Water Pollution Board created by the 1957 legislation consists of six members, who are appointed by the governor for six-year terms.[97] The composition of the Board according to the interests of its members is prescribed by the statute: one member must be selected from each of (1) agricultural interests, (2) industrial interests, (3) municipal interests, (4) recreational, fish and wildlife interests, (5) mining interests, and (6) the public at large.[98] The Board must meet at least four times each year,[99] and is charged with administration of the state's water pollution laws,[100] with surveying the water resources of the state[101] and developing a comprehensive plan for pollution reduction and prevention,[102] and with establishing standards of water purity "in accordance with public interest in water supply, the conservation of fish, game, and aquatic life, and agricultural, industrial, and recreational uses."[103] The Board may cooperate with the federal government concerning water pollution control,[104] and may conduct research[105] and investigations[106] relating to water pollution. Biennially the Water Pollution Board is required to report to the governor and the general assembly concerning the Board's activities.[107]

Generally, the Board is directed to make use of technical and clerical personnel of other state agencies, but it may, if necessary, employ such personnel for its own purposes.[108] Board members serve without compensation, although they are entitled to reimbursement for necessary expenses connected with their regular duties.[109]

Fundamentally, the Missouri water pollution act declares all pollution of the waters of the state unlawful, and further declares the causing of pollution to constitute a public nuisance.[110] The impact of this absolute prohibition is abated somewhat by related provisions of the act which place upon the Water Pollution Board the burden of enforcement of the act, and give to the Board a relatively wide discretion in the manner of fulfillment of this duty.

Clearly, it would be impossible to require all pollution of the waters of the state to cease immediately. Many industries and municipalities have for decades relied upon watercourses for the removal of their partially-treated or untreated wastes, and are not now in a position to terminate all polluting activity. In recognition of this fact, the water pollution act permits the Water Pollution Board to cooperate with persons and municipalities which are failing to meet pollution standards[111] and to give them technical and scientific assistance.[112] If a person causing water pollution refuses to cooperate with the Board, it may order the pollution cease.[113] However, a reasonable time must be afforded the offender to make necessary arrangements and modifications in order to comply with the standards established by the Board.[114]

Any person who wishes to cause any new or increased pollution of the waters of the state, or to construct, install or modify any sewage or waste disposal system must obtain a permit from the Water Pollution Board.[115] Application for permits is made to the Board, which may require plans, specifications or other information from the applicant.[116] In considering whether to issue a permit, the Board is directed to "determine whether or not the discharge will cause a condition of pollution contrary to the public interest."[117] Permits may be issued subject to conditions imposed by the Water Pollution Board, and may be revoked or modified if the holder fails to operate the pollution control facility as required, or if new or increased pollution is caused by the permit holder.[118]

Where existing pollution is concerned, however, a permit is not necessary under the water pollution act. But it is not clear whether persons

who were casting sewage and wastes into the waters of the state at the time of the passage of the act are in a more or less favorable position than permit holders. For example, can successively more stringent water purity standards be enforced against this class of non-permit holders, while permit holders are immune from any modification of their permits unless they violate the provisions of the act or the conditions of the permit?

Persons who take exception to any Board order or Board action with respect to a permit may request a hearing before the Board, which may be heard by the Board itself or by an attorney designated by the Board.[119] The petitioner and other interested persons may appear at the hearing, present evidence, and examine all witnesses.[120] A record of the proceedings is kept, and the Board issues its order and decisions in accordance with its findings in respect to the hearing.[121] Judicial review, in the form of a trial de novo, may be obtained by any party through appeal to circuit court within fifteen days after the entry of the decision, finding or order appealed from.[122]

The Missouri water pollution act clearly fills a substantial need in the statutory law of the state. However, the act is not without uncertainties and possible flaws. For one thing, the legislative standards for Board action are not entirely clear. In granting permits, for example, is the only standard to be whether the issuance of a permit "will cause a condition of pollution contrary to the public interest"? If so, the Board and not the Missouri General Assembly will be making the broad policy decisions relating to the use of Missouri's water resources. Is the Board alone to determine the future of industrial or recreation development in the various areas of the state? Must all streams be sufficiently pure to sustain multiple forms of aquatic life, or can some validly be used for waste assimilation?

Nor is it clear whether permits are to be granted in perpetuity or for limited periods only. Moreover, it appears that once granted, permits will be subject to modification or revocation only for an express violation of the provisions of the act. To meet possible future emergencies or changes in condition, it might be well to incorporate a limitation into the statute giving the Board power to modify or suspend permits when necessary to protect the public health or safety.[123]

Since 1957, additional statutes have been enacted relating to water pollution. It has been declared unlawful to litter the navigable waters of the state or the banks of any navigable stream,[124] or to litter or contaminate the waters of any spring, pool, or stream in a state park.[125] Pollution of the waters of the state from sewage from marine toilets has been declared unlawful, and the Water Pollution Board has been empowered to establish standards for the treatment and disposal of marine sewage.[126]

c. ***Water Supply and Sewage Disposal***– Cities, towns, and villages in Missouri possess ample statutory authority to provide water and sewage disposal services for their inhabitants. Cities of the first class may establish waterworks and distribute water,[127] may maintain sewers[128] and sewage disposal plants,[129] and may by ordinance "prevent unnecessary waste of water."[130] Likewise, cities of the second class may provide sewers[131] and sanitary systems for sewage disposal,[132] and may furnish water to their inhabitants through waterworks;[133] these cities may regulate and improve watercourses within their limits,[134] and in order to protect the purity of their water supply in the interest of public health may regulate watercourses and other sources of supply "as far beyond the limits as is necessary."[135] Third class cities may establish public reservoirs, wells and cisterns,[136] and may purchase or condemn lands for waterworks and sewers within the city limits or within ten miles thereof;[137] further, third class cities may improve and operate mineral springs and wells.[138] Similarly, cities of the fourth class may establish public reservoirs, wells, and cisterns,[139] and may purchase or condemn lands for waterworks within the city limits or within five miles thereof.[140] Towns and villages are empowered to provide wells, cisterns, and pumps,[141] and drains and sewers,[142] for the use and benefit of their inhabitants, and may borrow money to supply the town with water.[143] Also, special charter cities and constitutional charter cities may acquire property for, maintain and operate waterworks facilities.[144]

In addition to the above provisions empowering municipalities of designated classes to acquire and operate waterworks facilities, sewers, and sewage disposal plants, there are general provisions permitting municipalities of whatever class to furnish these services to their inhabitants. Municipalities may either own and operate waterworks and distribution systems,[145] or may contract with other municipalities[146]

or with private or public corporations[147] to obtain a water supply. Supplemental provisions authorize cities owning waterworks to supply municipalities and persons beyond the city limits with water[148] and conversely permit municipalities to purchase water from such cities.[149] Likewise, any municipality may acquire, by purchase or construction, and may operate a sewage disposal system.[150] Combined waterworks and sewage disposal systems may be established and operated by any municipality,[151] and two or more municipalities may cooperate in the planning, acquisition or construction, and operation of joint sewage disposal facilities.[152] Reference should also be made to the National Defense Cooperation Law,[153] which empowers any municipality, county or school district located within a fifty mile radius of a military installation of more than ten thousand persons to finance and operate water supply and sanitary and storm sewer systems.[154]

To protect the purity and wholesomeness of water supplied to the public, the Missouri Division of Health is directed to enact rules and regulations for maintaining water quality standards and to conduct a sampling and testing program for all water furnished by municipalities, corporations, or individuals to the public.[155] Plans of all waterworks facilities intended to supply water to the public must be submitted to the Division of Health; and a permit approving the source of supply from which the water is to be taken must be acquired from the Division before any water may be distributed for public use.[156] Cities also have power to regulate the sale and distribution of water to the public and to protect the source of such water from contamination.[157]

Generally speaking, these statutes do not provide municipalities any broad control over the state's water resources. Instead, they simply authorize municipalities to acquire and distribute water and to dispose of sewage in accordance with the existing framework of the law. With the exception of the right to acquire sources of water supply by condemnation and to protect such sources from contamination and pollution, cities, towns and villages are not granted in respect to water resources and special rights or privileged standing which private persons are denied. Municipalities are amenable to the general water laws of the state in much the same fashion as individuals.

Corporations organized under the General and Business Corporation Law of Missouri for the purpose of distributing water have a "right" to take water from any nonnavigable stream and to erect a dam upon the stream to aid in this purpose.[158] This right to take the water of the stream for use and sale, however, is clearly limited by preexisting rights in the stream; the statutory provisions contemplate that companies will obtain the water through acquiring, by purchase or condemnation, the rights of "the owners of such water."[159] Water companies are subject to regulation by the Missouri Public Service Commission, which may adopt rules and regulations governing not only the rates to be charged by the companies and their manner of doing business,[160] but may also investigate the quality of the water being distributed by the companies and require improvements where the public health will be protected thereby[161] -- although this last function may lie more properly with the Division of Health, which as pointed out above, has regulatory powers over municipalities, corporations, and individuals engaged in distributing water to the public.[162]

Missouri statutes authorize the creation of water supply and sewage facilities by a variety of special districts. Often the legislation providing for the various types of districts is overlapping in nature, giving the residents of a particular area a choice between two or more types of districts, which have different requirements for their formation and different powers.

County public water supply districts may be organized in contiguous areas in one or more counties[163] for the purpose of furnishing ample water to areas which otherwise would have no water supply.[164] These districts are formed through petition to the circuit court[165] and an election of the qualified voters within the proposed district, who must approve the district's establishment by a two-thirds vote.[166]

Districts have broad powers to acquire and maintain necessary waterworks, or to contract to obtain water for their inhabitants,[167] and may supply water to consumers outside the district.[168] The five-member board of directors,[169] which manages the affairs and business of the district,[170] has power to fix rates and charges for water, subject to the regulation and control of the Missouri Public Service Commission.[171] In addition, the district may levy annual taxes,[172] and, upon an affirmative two-thirds vote of the qualified voters, issue general or special obligation bonds for the acquisition of facilities.[173]

In 1969, legislation was enacted to permit consolidation of county water supply districts

if consolidation is assented to by a majority of the voters in each district voting thereon at an election called and held for that purpose.[a1]

Metropolitan water supply districts may be organized in counties of the first class "to secure a source of water on a scale larger than is feasible for public water supply districts and cities acting alone and to sell such water at wholesale to public water supply districts and cities, towns and villages."[174] These districts are created upon petition to the circuit court[175] and an affirmative vote of the qualified electors within the proposed district.[176]

Districts are governed by a board of directors of five members,[177] and are empowered to own and operate water supply facilities, to exercise the power of eminent domain, to fix rates for water, and to lay mains for the furnishing thereof.[178] The district does not, however, have authority to sell water "directly or indirectly" to any area or municipality beyond the boundaries of the district.[179]

The district may levy ad valorem taxes upon tangible property in the district,[180] and may upon the requisite affirmative vote of the qualified electors issue general obligation and special obligation bonds for the acquisition of facilities.[181]

Sanitary drainage districts may be formed in areas partly within and partly without cities of over 300,000 population, when a "common outlet or channel" or a "system of drains or sewers" becomes necessary for the preservation of the public health, upon petition to the circuit court by the city or the county court[182] and an affirmative vote of legal voters within the proposed district.[183]

The district is governed by a board of three trustees,[184] who create a plan for the drainage of the district[185] and contract for the construction of such drainage works.[186] A special drainage tax is levied to pay for such works,[187] and where "urgent sanitary measures" are needed, bonds may be issued for that purpose upon approval of the circuit court.[188] Drainage works or sewers may be constructed within the district by municipalities or private persons, but must conform to the plan adopted by the district trustees.[189]

Provision is made for the formation of sewer districts in counties of between 700,000 and 750,000,[190] counties of the second class,[191] or in any county containing an unincorporated village or district in which sewers have been constructed or are necessary.[192]

In counties of between 700,000 and 750,000 —which includes only St. Louis County—sewer districts may be established upon petition by residents property owners to the circuit court,[193] a judicial investigation and hearing,[194] and the affirmative vote of two-thirds of the qualified voters of the proposed district.[195] Districts are governed by a board of three trustees, who may when authorized by the voters issue bonds for the sewer system[196] and levy taxes for the retirement of the bonds and the maintenance of the sewer system.[197]

In counties of the second class sewer districts may be formed to provide sewage treatment facilities or sewer systems[198] upon petition to the circuit court by the owners of a majority of the real property in the proposed district.[199] Upon a hearing, the court may, if objections are overruled, decree the incorporation of the district.[200] The district is governed by an elected board of five supervisors,[201] which may upon approval of the owners of two-thirds of the assessed valuation of real property in the district issue general obligation bonds or revenue bonds for the construction or acquisition of facilities,[202] and may levy taxes for current expenditures.[203] The district is further empowered to cooperate with other governmental subdivisions in furnishing sewage disposal facilities.[204]

Finally, in any county in which an unincorporated village or district exists where there are existing sewers or a need for a sewer system, the county court may establish a sewer district upon petition by a majority of the resident property owners.[205] The county engineer acts as sewer engineer, prepares plans for sewers, and supervises the construction and maintenance of sewers.[206] Sewers may be constructed under contract with a construction firm,[207] or directly by the county itself.[208] Special tax bills are levied against property within the district for the cost of construction,[209] and also for subsequent maintenance, repair, and administration.[210]

Cities, towns, and villages, and county sewer districts are given additional powers to "acquire, construct, improve or extend and to maintain and operate a sewerage system" for sanitary or storm water disposal, or both, within or without the boundaries of the municipality or district.[211] Likewise, municipalities may by ordinance acquire and operate a combined waterworks and sewerage system,[212] to be financed by the issuance of revenue or general obligation bonds, special assessments, or other funds available to the municipality.[213] Two or more municipalities may cooperate to provide such services[214] and a municipality may enter into

a contract with an industrial establishment to make available the municipal disposal facilities for the purpose of reducing stream pollution.[215]

d. ***Private Dams and Drainage Rights***– Provision is made in the Missouri statutes for the erection and maintenance of dams across nonnavigable streams to operate mills and electric power and light works. Any person or corporation so authorized, owning the land through which the watercourse passes or owning land riparian to the watercourse and a part of the bed thereof, may petition the circuit court of the county in which it is proposed to locate the machinery connected with the dam for authority to erect a dam.[216] The petition must describe the land and watercourse involved, and the dam and works to be erected. If the petitioner owns land on only one side of the stream, the petition must state the name and residence of the owner of the land opposite, where the dam is proposed to abut, together with a prayer that one acre of such land be vested in the petitioner.[217]

Upon receipt of the petition the court issues its writ **ad quod damnum**, directing the sheriff to summon twelve jurors to view the site of the proposed dam to assess the damages which the dam would cause, to determine whether the mansion house, outhouses, curtilages, gardens or orchards of any person would be flooded by the dam, to ascertain to what extent the dam would interfere with the passage of fish, and to determine whether the health of the neighborhood would be "materially affected" by the dam.[218] If the petitioner owns land on only one side of the stream, notice is given to the owner of the land opposite, and the jury is also to assess the value of the one acre prayed for, which the sheriff is to set off by metes and bounds.[219]

The written findings of the jury are filed with the court and any person aggrieved thereby may file his objections to the findings,[220] in which case the issues are made up and tried as in other civil cases. If the objections are sustained, the proceedings may be quashed and the jury's verdict set aside.[221] In this case the court may, however, issue a new writ **ad quod damnum** and cause a new jury to be summoned.[222]

If the objections are overcome, or if no objections are filed, and the court finds that no mansion house, outhouses, curtilages, gardens or orchards will be overflowed and that the health of the neighborhood will not be affected by the stagnation of impounded water, the court may then grant or refuse the prayer of the petition, "according to its judgment of what would be most reasonable and just under all circumstances."[223] In granting a petition which contains a prayer for one acre of land upon which the dam will abut, the court includes in its order a judgment vesting the land in the petitioner and his heirs or successors.[224] The finding of the jury or order of the court as to damages does not, however, except to the extent that the damages were actually foreseen, bar any action against the owner of the dam for injury caused by the construction and maintenance of the dam and machinery.[225]

The right of the successful petitioner to erect the dam and machinery is subject to any conditions respecting navigation and the passage of fish upon the watercourse that the court may impose. The judgement in petitioner's favor is further conditioned on the requirement that all damages assessed be paid by the petitioner, that the dam and machinery be completed and "ready for business" within three years from the date of the court's order, and that in the event of destruction or material impairment of the dam or machinery that it be restored or repaired within three years.[226] Moreover, the right to maintain the dam is subject to the condition that it in no way interfere with subsequent improvement of the navigation of the watercourse by the state or county government, and in the event that the dam would obstruct such improvement the owner must remove or modify the dam so as to make it consistent with the plans for improvement.[227] Also, all dams must have a chute or apron over which the main current of the watercourse may flow, sufficiently low to permit the free passage of fish whenever the stream is "swollen beyond its ordinary size."[228]

Any dam not built in accordance with the procedure outlined above is declared a public nuisance,[229] and any person injured by any unauthorized construction or heightening of a dam or other stoppage of the water is entitled to double damages against the person responsible therefor.[230] The circuit court has power to abate or to prevent construction of any dam, obstruction or stoppage that will interfere with any mill, electric power and light works or any dam previously authorized, or that will render "impure or unwholesome or unhealthy" a watercourse at the point from which a municipality supplies its inhabitants.[231] If a dam authorized by order of court is not constructed or maintained lawfully or in accordance with the conditions imposed by law, the owner of the dam

has no right that another person shall not construct a dam at the same or a lower place upon the stream and cast the water back upon the upper dam or damsite.[232] Furthermore, where an acre of land has been vested in the petitioner for a place for the dam to abut, and the petitioner fails to comply with the conditions imposed upon him by law for the erection and maintenance of the dam and machinery, the parcel of land reverts to its former owner.[233]

Normally, a dam must be maintained and operated for the purpose or purposes for which originally constructed. However, where a dam has been maintained for at least thirty years, and property above and within one mile of the dam has been developed for the use of the impounded waters, the owner or owners of the land at the point where the dam is located may maintain the dam even though it is not used for the original purpose.[234] This provision appears to be strictly for the benefit of the dam owner, and would not seem to protect an upper owner who did not own the land at the damsite, but who made some use of the impounded water, as for recreation or residential development.

Finally, any person owning land across the neck of the bend of a watercourse, where a tunnel through the bend would produce a waterfall to create electric power, may divert water through such a tunnel for this purpose. Sufficient water must be left in the stream channel for the "wants of stock and families" below the point of diversion, and the water must be returned to the watercourse below the bend. Riparian owners along the bend, whose water supply is affected by the diversion, are entitled to compensation for the taking, to be determined through the usual condemnation proceedings.[235]

In addition to the drainage districts discussed hereafter, the Missouri statutes also provide a means whereby a landowner may, through the power of condemnation, acquire the right to construct and maintain a ditch, tile or levee upon the lands of others to assist in the drainage of his and their lands.

The owner of any swamp, wet, flat or overflowed land is given the right to drain or protect his land for sanitary or agricultural purposes by constructing an open ditch, laying tile, or building a levee which lies between the land to be drained or protected and any "lake, bayou, hollow, creek, artificial drainage ditch, river, depression or other outlet" into which the water from his land can be drained. If it is necessary for the landowner to construct his ditch, tile or levee across the lands of other persons, they are entitled to be compensated for the land taken and for any other damages which they may sustain by the construction and maintenance of the improvement.[236] The Missouri courts have on several occasions held that this statute gives a landowner in need of drainage a substantive right to drain his lands into any of the natural or artificial watercourses or depressions mentioned in the statute.[237]

If the owner of the land to be drained or protected and the owner of the land upon which the improvement is to be constructed fail to agree as to the location of the improvement or as to the value of the land and damages which will accrue, the person seeking to drain or protect his land may file with the circuit court a petition stating such facts and describing the lands of each and the nature of the proposed construction. With the petition is filed a "rough plat" of the land which will be affected, showing the proposed location of the ditch, tile, or levee. Before filing the petition, the petitioner must tender to the other landowner an amount of money which, in his opinion, is adequate to cover the cost of the land to be taken and the resulting damages.[238]

Upon the filing of the petition, a hearing is set and notice given to interested persons, who may file whatever objections they may have. In the event that the objections are overruled or if none are filed, the court appoints three disinterested freeholders as commissioners.[239] The commissioners view the lands and assess the benefits and damages, if any that will accrue to each tract or parcel of land according to the works proposed in the petition. A written report of their findings is filed.[240] A second hearing is set in the circuit court after the filing of the report, and objections may be filed to the report.[241]

The objections are considered in a summary manner by the court, which may dismiss the proceeding if it finds that any of the objections should be sustained or that the total damages and the value of the land to be taken exceed the total benefits accruing from the proposed improvement.[242] If the court dismisses the proceedings, the petitioner is taxed with the costs thereof. If, on the other hand, the court confirms the report and orders the improvement made, the costs are assessed against the petitioner only if the amount tendered by him to the other landowners affected was less than the damages and the value of the land taken.[243]

In the event that the proceedings are dismissed because the damages and value of the land taken exceed the benefits, the petitioner may proceed with the proposed ditch, tile or levee at his own expense, but under such conditions that the other owners of land which may be improved thereby shall not be charged with any of the costs of the improvement.[244]

If the report of the commissioners is approved by the court, the owner or owners of the land benefited by the proposed work may proceed to lay out and construct the improvement after paying to the owners of the land taken or damaged the amount specified in the report.[245] If, however, the owners of the land benefited are unable to agree as to the manner of constructing the improvement, the circuit court may upon further petition let a contract for the construction of the work to the "lowest or best bidder," and shall apportion the cost thereof to each landowner benefited in accordance with the benefits shown in the report of the commissioners.[246] After the improvement is constructed, the owners of the land benefited thereby may at any time go upon the land where the works have been built in order to repair them, but may not enlarge or change the location thereof without obtaining the consent of the landowners where the improvement is located, or without petitioning the circuit court for such permission.[247]

e. ***Drainage and Levee Districts***– To enable surface waters to be drained from agricultural, mining, and other lands, and to protect lands from flooding by watercourses, the Missouri General Assembly has authorized the formation of drainage districts and levee districts. These districts may be created in either the circuit court or the county court, separate statutes having been enacted for each method of incorporation. The powers of drainage and levee districts differ according to the manner of their incorporation. One principal difference is that drainage districts created in the circuit court are autonomous public corporations governed by an elected board of supervisors, while county court drainage districts are administered by the county court. Levee districts, on the other hand, are public corporations whether created in the circuit court or the county court. Subdistricts may be organized in drainage and levee districts "for the purpose of obtaining and providing local or more complete drainage and protection."[248]

Drainage districts may be organized in the circuit court of the county upon the petition of the owners of a majority of the acreage of "any contiguous body of swamp, wet or overflowed lands, or lands subject to overflow" in order to reclaim and protect the lands from water,

> for sanitary or agricultural purposes, or when the same may be conducive to the public health, convenience or welfare, or of public utility or benefit.[249]

Drainage districts may similarly be organized in circuit court to drain lands containing valuable mineral deposits.[250] The petition for a drainage district takes the form of articles of association, and after affording an opportunity for objections from other property owners, the court may by decree incorporate the drainage district as a public corporation.[251]

Once created, a drainage district may be enlarged by the inclusion of new lands,[252] may be consolidated with another drainage district,[253] or may annex another drainage district.[254]

The drainage district is governed by a [illegible] ted board of five supervisors,[255] who are given extensive powers to affect the drainage of water within the district, including

> to clean out, straighten, widen, change the course and flow, alter or deepen any ditch, drain, river, watercourse, pond, lake, creek, bayou or natural stream in or out of said district; to fill up any creek, drain, channel, river, watercourse or natural stream; and to concentrate, divert or divide the flow of water in or out of said district***.[256]

The supervisors appoint a chief engineer for the district, who surveys the district and prepares a plan for "draining, leveeing and reclaiming" the lands within the district.[257] When the plan for reclamation is filed and adopted by the board of supervisors, it is filed in the circuit court, which appoints three commissioners to inspect the district in the light of the plan and to assess and report to the court the benefits and damages which would accrue to district lands for carrying out the plan.[258] The circuit court may, upon hearing, approve the plan and report if it finds the benefits will exceed the cost of the plan;[259] otherwise, the district shall be dissolved.[260]

Upon approval of the plan by the court, the board of supervisors constructs the improvements, or contracts for their construction.[261] Drains already existing within the district may be connected to the improvements, and landowners may with the consent of the supervisors construct new ditches or drains to connect with the district drains.[262] While the general supervision of district ditches and drains is in the

chief engineer, the board may appoint overseers to keep the improvements in good repair; the overseers have the power, in time of emergency, to require "all able-bodied men over sixteen years of age and under fifty years within the district" to work to protect the drains, levees or other works of the district.[263]

The Board of supervisors may levy taxes upon the lands within the district for the costs of organization,[264] and may levy taxes upon "lands, railroad and other property" for district works and improvements,[265] and for maintenance thereof,[266] according to the benefits found by the commissioners and assessed by the court. District taxes constitute a lien against the real estate upon which they are levied.[267] Bonds may be issued to meet the cost of district works and improvements, payable from an annual tax levy.[268]

Drainage districts may also be organized in county court upon the petition of one or more landowners, describing the proposed improvement, "when it shall be conducive to the public health, convenience or public welfare, or when it will be of public utility or benefit."[269] When the petition is filed, the court appoints an engineer and three viewers to determine and report the necessity, practicability and probable cost of the drainage improvement.[270] When the report is filed, affected landowners are afforded an opportunity to file remonstrances, and the county court determines in summary manner whether to incorporate the district.[271]

When the district is incorporated, the county court has power

> to cause to be constructed, straightened, widened, altered or deepened, any ditch, drain, natural stream (not navigable), bank protection, current control, or watercourse, when the same is necessary to drain or protect any land or other property.[272]

Upon formation of the district, the engineer and viewers determine the precise nature of the works and improvements, and assess benefits and damages to district lands that will accrue from the improvements.[273] Upon hearing, the county court may confirm the report of the engineer and viewers.[274] Thereafter, the court appoints a district engineer, and may either perform the work constructing the improvements itself, or may invite bids from contractors for this purpose.[275]

The county court has the management and control of the dams, ditches, and levees within the drainage district,[276] and may order repairs to be made when necessary.[277] When the district works are complete, any person may construct connecting ditches and drains emptying into the district ditches.[278]

The county court is directed to levy taxes upon land within the district for the preliminary expenses of the district,[279] for the cost of the improvements,[280] and for the maintenance of the improvements,[281] and such taxes constitute a lien upon the land.[282] Further, bonds may be issued for the cost of the district improvements.[283]

The provisions for the incorporation of levee districts in circuit court largely parallel those relating to the circuit court organization of drainage districts. Levee districts may be established for the purpose of protecting lands subject to overflow through the construction of "levees, dikes, bank protections, current control or other protection or reclamation improvements."[284] A petition in the form of articles of incorporation is filed in the circuit court by the owners of a majority of the acreage "in any contiguous body of swamp, wet or overflowed land."[285] Notice and hearing are afforded, and the court may declare the levee district a public corporation of the state.[286]

Five supervisors are elected,[287] and the board of supervisors is given powers very similar to those of drainage districts organized in circuit court.[288] A chief engineer is appointed and a plan for "leveeing, draining, reclaiming or protecting the lands and property" is created.[289] Commissioners are appointed by the court to assess and report benefits and damages,[290] and if the court determines that the benefits exceed the cost[291] the board of supervisors may construct the improvements or contract for their construction.[292]

Taxes may be levied to pay the cost of organizing the district,[293] the cost of district improvements,[294] and the maintenance of improvements,[295] and constitute a lien against district real property.[296] Bonds may be issued to pay the cost of improvements.[297]

Levee districts may also be incorporated by the county court, upon application of any landowner or upon the motion of the county court itself.[298] Notice thereof must be published prior to action by the county court incorporating the district.[299]

Upon organization of the levee district, the county court appoints a board of three directors,[300] who are authorized to determine what work is necessary to protect district lands,[301] and to let contracts for the performance of the work and the construction of improvements.[302]

A levee fund tax may be imposed to meet the expenses of surveys and estimates of levees and other works, and for construction and maintenance thereof.[303] The directors of the levee district may borrow money and issue bonds or interest bearing notes therefor.[304]

f. ***Conservancy and Conservation Districts***– In 1959, the Missouri General Assembly adopted a comprehensive statute providing for the formation of river basin conservancy districts. The statute is patterned after conservancy district acts which have been adopted by a number of other states in recent years. The purpose of the act is to enable persons and communities within relatively small watershed areas to develop their water resources through cooperation in constructing facilities for conservation and beneficial use of water.

River basin conservancy districts may be formed

> to enable the residents of prescribed areas of the state to determine the need for, and have a voice in, maintaining and improving the water resources of such areas so as to alleviate floods, conserve water against drought, and develop the resources and wealth of the state for sanitary, domestic, agricultural, recreational, business and industrial purposes, when the same may be conducive to the public health, safety, convenience, or general welfare, or for public use or benefit*** [305]

The prescribed areas, designated as river basins are divided according to the Missouri Bureau of Geology and Mines Drainage Map of 1927, into primary and secondary drainage basins and tributary and unnamed drainage areas.[306]

To form a river basin conservancy district, a petition containing a requisite number of signatures[307] is filed in the circuit court of the county containing the major portion of the lands of the proposed district.[308] The petition sets forth a name for the proposed district, the purposes for which the district is to be formed, a "general description of the territory," the fact that the petitioners obligate themselves to pay the organizational costs in the event the petition is dismissed, and a prayer that the court find the petition "worthy" and order a referendum by the district voters.[309] With the petition must be filed a sufficient bond, in such amount as the court shall fix, to guarantee organizational expenses.[310]

The court, if it finds the petition "worthy", appoints a surveyor to determine specifically the boundaries of the proposed district.[311] When the survey is complete, the court calls a hearing and gives notice by publication;[312] at the hearing any property owner in the proposed district may file written objections to the formation of the district and be heard thereon.[313] If the court finds that the purpose of the chapter would be subserved by the creation of a district, it declares the district organized for purposes of a referendum and orders a referendum election;[314] if the court does not so find, it dismisses the proceedings at petitioners' costs.[315]

Upon entering an order organizing the district, the court appoints an election district commission composed of the county clerks of the counties having territory within the district,[316] which commission divides the district into six election districts of approximately equal population.[317] The commission has the duty of supervising the referendum election and the election of the first board of trustees of the district.

If a majority of the qualified voters[318] casting ballots approve the establishment of the district,[319] the court declares the district established in perpetuity as a public corporation and political subdivision of the State of Missouri.[320] Costs of the election, if successful, are paid out of the contingent funds of the county where the action is pending, if the county was a petitioner, or from "sums donated or advanced" by petitioners, subject in either case to reimbursement by the district from annual district levies.[321]

River basin conservancy districts are governed by a board of eight trustees, six chosen from the election districts, and two appointed from the district by the Governor.[322] Terms of trustees run four years.[323] The board chooses a president from among its members and a secretary who may or may not be a member of the board.[324] The board also employs a registered professional engineer as chief engineer of the district. It is his duty to serve as superintendent of all district works, improvements and facilities, and to make recommendations, suggestions, and reports to the board concerning the district.[325] The board may also employ such other agents and employees as it deems necessary and proper.[326]

The board of trustees has power to acquire, by purchase, lease or condemnation, lands, easements and water rights within the district, and may construct, operate and maintain engineering works and other works, improvements, and facilities, and further may

clean out, straighten, widen, alter, deepen, or

change the course or terminus of any ditch, drain, sewer, river, watercourse, pond, lake, creek or natural stream within the district; fill up any abandoned or altered watercourse; concentrate, divert or divide the flow of water within said district.[327]

The board may make regulations for the administration of the district and for the "adjustment, connection or coordination of watercourses or works, facilities or operations to or with the waters, improvements, works, operations or facilities of the district."[328] It is unlawful to construct or operate any works or facilities which are harmful to the district and contrary to regulations adopted by the board of trustees.[329]

To achieve its purposes, the board may let contracts for necessary works or grant concessions upon district property for serving the public who may be using the resources or facilities of the district.[330] Concessions or leases may be granted for periods in excess of twenty years, but must be reappraised and redetermined by the board each twenty years as to the rates to be charged.[331]

When the district is organized, it is the duty of the board to prepare "broad general plans... for the purposes for which the district was created." The plan shall include maps, plans and specifications of the location and character of the work and projects to be accomplished by the district, and may be submitted by the chief engineer of the district.[332] When a preliminary plan has been adopted by the board of trustees, the plan is transmitted to the appropriate state agency for review.[333] The agency examines the plan, and approves it or recommends changes.[334] When the preliminary plan has been approved, the board gives notice by publication of the completion of the plan, provides for public inspection thereof, and sets a date for hearing any objections to the plan.[335] After the hearing, the board adopts the plan or a modification thereof as the official plan of the district.[336] Objections to the official plan may be filed in the circuit court by any person or public corporation, and the court shall either approve or reject the plan or refer it back to the board for amendment.[337]

When it is proposed to organize a river basin conservancy district in a secondary drainage basin, a tributary drainage area or an unnamed drainage area, the circuit court must request a recommendation from a designated state agency as to the extent and purpose of the proposed district.[338] Further, where a conservancy district has been organized in an area constituting a part of a primary drainage basin, a district for the entire primary drainage basin may be organized, and the original district will be absorbed by the larger district.[339] Subdistricts may also be formed within an established river basin conservancy district, where the purposes and powers of the subdistrict would affect only a part of the entire conservancy district.[340] Subdistricts are organized in the same manner as original districts, and are empowered to levy taxes and to make contracts with the district itself. When a subdistrict is organized, the original board of trustees of the district serves also as trustees of the subdistrict.[341] Likewise, the officers, chief engineer, attorney and other officers and employees of the district serve in similar capacities for the subdistrict.[342]

Adequate provision is made for the financing of the district through taxation and the issuance of bonds. When the district is organized, all tangible property in the district may be taxed for a period of up to three years for organizational expenses.[343] General taxes may also be collected upon tangible property lying within the district.[344] General obligation bonds may be issued by the district, upon an affirmative two-thirds vote by the qualified electors.[345]

The water conservancy district act does not apply to any city having more than four hundred fifty thousand people, or to any county in which such a city is located. In other words, the act does not apply to the City of St. Louis or to Jackson County.[346]

In 1961 the Missouri General Assembly amended the existing soil conservation district's law, first enacted in 1943,[347] to include water conservation.[348] Under the Soil and Water Conservation District's law there may be organized in any county, or within one or more municipal townships thereof, a soil and water conservation district whose principal purpose is to cooperate with local farmers in initiating and carrying out soil and water conservation measures.

The act provides for the establishment of a Missouri Soil and Water Districts Commission, consisting of five members, three of whom are active farmers appointed by the governor, and the other two are ex officio members, being the director of the University of Missouri agricultural experiment station and the director of the agricultural extension service of the University of Missouri.[349] The commission has the general duty of formulating policies and general programs for soil and water conservation, of encouraging and supervising the formation and operation of soil and water conservation dis-

tricts, and of advising, assisting, and cooperating with districts and other agencies. The commission may accept federal or state technical assistance or financial aid, and may distribute available funds and other resources to local districts.

Proceedings for the establishment of a soil and water conservation district are initiated by filing with the commission a petition signed by twenty-five or more local "land representatives" --owners of farms or their representatives designated by power of attorney[350]---from each included township, declaring that the saving of soil and water within the county or specified townships thereof is a public necessity.[351] The Commission, upon receipt of a petition, holds a local public hearing to determine whether there is a "general desire" within the area for a soil and water conservation district. If such a desire exists, the commission conducts a survey of the area to determine the necessity and administrative feasibility of a district. Upon a favorable finding, a referendum is held by the commission within the proposed district, and upon the affirmative vote of a majority of those land representatives casting ballots, the commission declares the district established as a body corporate under the name of "The Soil and Water Conservation District of_____ County."[352] Only one district may be organized in any county,[353] but in the event that the original district embraces less than the entire county, additional townships may subsequently be added to the district through petition and referendum.[354]

When a district is established, a further election is held under the supervision of the state commission to elect four resident tax-paying land representatives as district supervisors, to serve four-year terms.[355] The four elected, together with the county agricultural extension agent, who serves as a supervisor in an ex officio capacity, constitute the board of supervisors of the soil and water conservation district. Board members receive no compensation for their services, other than actual expenses, but may employ assistants and employees with available funds. The Board may adopt rules and regulations, but these must be submitted to the state commission for approval, also the board must submit to the commission an annual audit of the district's finances.[356]

Soil and water conservation districts have power, through their boards of supervisors, to promote soil and water conservation measures within the district, to cooperate and enter into agreements with federal and state agencies and with district land representatives with respect to soil and water conservation, and may provide technical, financial, and material assistance to landowners within the district.[357] Although districts may accept grants, gifts, and contributions in money, services or materials from any source, including the federal government,[358] they may not solicit contributions from persons within the district by "exactions or persuasions," but must rely upon contributions of a wholly voluntary character.[359]

Districts are strictly limited in their activities to voluntary cooperation, to educating local farmers, and to expending and furnishing funds and resources provided to the district by governmental or private sources. Districts are expressly denied the power to levy taxes or benefit assessments, to issue bonds or incur indebtedness beyond the amount of available funds, or to exercise the power of eminent domain.[360] Nor may districts initiate or carry out any soil or water conservation measures upon district farms without the "full consent and agreement" of the affected land representatives.[361]

In short, soil and water conservation districts are organized to provide a state and local administrative framework whereby conservation measures may be brought down to the level of the local farmer through education and voluntary cooperation. Districts provide an agency by means of which grants, gifts and contributions of money, services, and materials by private persons, local governments, the state, and, most importantly, the federal government, may be accepted and expended in a beneficial manner. These districts are not coercive in nature, but provide the farmer an opportunity to engage actively and to receive assistance in conserving the soil and water resources of his farm.

In 1954, Congress passed what is popularly known as the Watershed Protection and Flood Prevention Act, giving to the Secretary of Agriculture power to assist local governmental units in protecting agricultural lands against damage by erosion, floodwater or sediment.[362] Under the act, the Secretary of Agriculture may provide financial and technical assistance to local organizations, including states and their political subdivisions, soil and water conservation districts, and flood prevention or control districts, in undertakings for flood prevention or for the "conservation development, utilization, and disposal of water."[363] Assistance is limited, however, to watersheds not exceeding 250,000 acres, and structures providing less than 12,500 acre-feet of floodwater detention capacity and

less than 25,000 acre-feet of total capacity. Moreover, if the federal contribution is to exceed $250,000 or the plan includes a structure of more than 2500 acre-feet of capacity, special approval by designated Congressional committees is required.

The local organization must acquire any land, easements or rights-of-way necessary for the project at its own cost, with federal participation in the cost thereof if the reservoir is to be used for fish or wildlife or recreation development. Further, the local unit must assume an "equitable" share of the cost of the improvement where agricultural conservation, fish or wildlife or recreational development is the purpose of the project, and all of the cost of installing other works; it must also arrange for the maintenance and operation of the improvements after construction, acquire necessary water rights, and obtain from the owners of at least half of the lands situated in the watershed above the improvement an agreement to carry out recommended soil conservation practices.[364] In order to assist in these undertakings, the Secretary of Agriculture may make long-term loans to the local organization not exceeding $5,000,000.[365]

To qualify Missouri soil conservation districts for assistance under the Watershed Protection and Flood Prevention Act, the General Assembly in 1957 adopted legislation providing for soil and water conservation subdistricts for the purpose of carrying out watershed protection and flood prevention programs.[366] Subdistricts may be organized in a single watershed lying in one or more soil conservation districts, upon petition by a majority of the land representatives to the board of supervisors of the soil conservation district.[367] The petition describes the lands to be included in the subdistrict, and must include a statement of the reason for organizing the subdistrict and prayer for a hearing and referendum.[368] After notice,[369] a public hearing is held to determine whether the proposed district is "desirable, practicable, feasible, and of necessity in the interest of public health, safety and the general welfare."[370] Upon an affirmative finding by the board of supervisors, an election is held and upon the favorable vote of sixty-five percent of the land representatives voting the board declares the subdistrict organized.[371]

The subdistrict is governed by the board of supervisors of the soil conservation district in which the subdistrict is located.[372] To assist in the administration of the subdistrict, three resident trustees are elected for six-year terms by the land representatives of the subdistrict.[373] Any rules or regulations adopted for the government or operation of the subdistrict must be submitted to the state soil districts commission for approval.[374]

When the district board of supervisors has obtained agreements to carry out recommended soil conservation measures from the owners of not less than sixty-five percent of the lands within the subdistrict, an annual tax may be levied upon real estate for the administration of the subdistrict, acquisition of real and personal property, and the construction, repair, alteration, maintenance and operation of works of improvement.[375] Although the 1957 act did not give the subdistrict power to borrow money, a subsequent amendment gives the board of supervisors power to borrow and to issue negotiable warrants therefor.[376]

In 1967 legislation was enacted to permit the district board of supervisors to issue and sell bonds and to exercise the right of eminent domain.[a3] Before the right of eminent domain can be exercised, it is necessary to establish that the acquisition of lands proposed for condemnation is necessary for the purpose of the subdistricts. Soil and watershed subdistricts were also designated as political subdivisions with authority to enter into agreements with other political subdivisions of the State and adjoining states in the development of watersheds which cross state and county lines.[a4]

In 1969 legislation was enacted to permit the consolidation of two or more watersheds if 65% of all voting landowners in each of the subdistricts voted in favor of consolidation. Outstanding indebtedness of any district entering into such consolidation remains an obligation of only the property located within that component subdistrict. The purpose for which subdistricts might be established were extended to include irrigation, recreation, and fish and wild life.[a5]

g. ***Planning and Surveys***– In 1961, the Missouri General Assembly created the Missouri Water Resources Board, which is charged with surveying the water resources of the state and developing a plan for a "comprehensive state-wide program for the conservation, development, management, and use of the water resources of the state."[377] The Board consists of five members, appointed by the governor for terms of six years.[378] The Board employs an executive director, who must be an engineer with experience

in water resources, and who has general supervision over performance of the functions of the Board and employs technical, clerical, stenographic and other employees of the Board.[379]

The Water Resources Board is directed to survey and create a comprehensive plan for water resources, to act as a clearing house and coordinator for the collection and use of water resources data, [380] and to make reports to the governor and general assembly upon its activities.[381] Other state agencies are required to cooperate with the Board in the discharge of its duties. [382] Further authority may be delegated to the Board by the Governor,[383] who has assigned to it the responsibility to "investigate, cooperate, and protect the state's interests" in relation to P.L. 534, 78th Congress, dealing with flood control, and to represent the state on several interagency committees organized to coordinate regional water resources development programs.

The Water Resources Board also administers the state water development fund, created for the purpose of purchasing municipal and industrial water supply storage in works constructed under the federal Water Supply Act of 1958, as amended, under the federal Watershed and Flood Prevention Act, or under other federal legislation.[384] The Board may give reasonable assurance to the federal government that demands for water use will justify the cost of works projects for water storage, and may, when funds have been specifically appropriated, contract with the federal government to discharge "non-federal responsibilities relating to municipal and industrial water supply storage."[385]

The Board is responsible for the allocation and distribution, through sale and otherwise, of water or storage space created by such projects.

Funds collected therefrom shall be deposited to the credit of the water development fund, and moneys in the fund may be appropriated by the general assembly to permit the Board to participate in municipal and industrial water supply storage projects.[386]

In 1969 the General Assembly authorized the Water Resources Board to protect the public interest by instigating legal action against any practice interfering with the purposes for which federal reservoirs were constructed. The law requires the reporting of all major water use to the Board.[86] The Board was also authorized to cooperate with other states and their agencies as well as with the U.S. Government agencies.[87]

The purpose of the Division of Commerce and Industrial Development is to "promote the development of the State of Missouri and all of its resources in order to provide a dynamic and balanced economy for the state."[387] The Division is charged with investigating and studying power and water facilities, transportation facilities, and the availability of industrial sites, and with encouraging the development of recreational areas.[388]

Formerly, the Division was charged with formulating and maintaining coordinated plans for the economic and resource development of the state.[389] However, the planning function has very recently been transferred to the newly created State Department of Community Affairs.[390]

The State Department of Community Affairs is responsible for assisting political subdivisions and communities of the state through the administration of programs involving federal assistance and through encroachment of local initiative to provide coordination and liaison with appropriate federal and state agencies. The Department administers the distribution of federal planning money and supervises the efforts of regional planning commissions.[391]

Other services available through the Department include gathering and disseminating information, establishing training programs for local governmental officials, encouraging and assisting local governments to solving common problems by joint action and to coordinate all state and local planning activities.[392]

Regional planning commissions may be formed by order of the governor after a petition by a local governmental unit and a public hearing, if there is a need for regional planning and a majority of the local governmental units within the region are in favor of the regional commission.[393] Regional commissions are strictly "advisory to the local governments and local governmental officials" within the region,[394] and are charged with making a comprehensive plan for regional development,[395] which may be adopted by the commission after public hearing.

The regional plan is simply to aid local governmental units in their planning function, and such local units may adopt the plan for their own development,[396] and shall submit to the regional commission for advisory recommendations any proposals for local developments and improvements which are included with the regional plan.[397] In addition, the regional commission may furnish planning services to local governments within the region.[398]

The State Geologist is directed by law to conduct a geological survey of the state, and to

determine the location of and formations in which ground water may be found.[399] Further, he is authorized to "make a survey of the water resources of the state, including a survey of underground water supplies and the chemical composition of such waters," and may employ gauging stations for this purpose.[400]

h. ***Other State Agencies***– The functions of several other state agencies are related to the regulation, use and development of the water resources of the state. The powers of these agencies over water resources are not extensive, and are generally incidental to the general purposes of the agency.

As mentioned in the section dealing with water pollution, the Missouri Division of Health is directed to make and enforce "adequate rules and regulations for the maintenance of a safe quality of water dispensed to the public" by municipalities, corporations and individuals.[401] The Division of Health is also concerned with the sanitation of tourist camps and cabins, and is empowered to make regulations concerning the water supplies thereof.[402]

The jurisdiction of the Missouri Public Service Commission extends to "all water corporations, and to the land, property, dams, water supplies, or power stations thereof and the operation of the same," to "all privately owned sewer systems and sewage treatment works and their operation," and to the manufacture of electricity.[403]

The permission and approval of the Public Service Commission is necessary before any water system or electric plant may be constructed, or before any franchise to supply water may be exercised. Such approval is based upon whether the facility or franchise is "necessary or convenient for public service."[404] Companies generating electricity and supplying and distributing water "for any purpose whatsoever" are subject to the jurisdiction of the Commission, which shall investigate the methods and quality of water supplied and order reasonable improvements "as will best promote the public interest, preserve the public health and protect those using" the water.[405]

Moreover, the Commission has power to fix rates for water,[406] to approve the sale of all or part of any water or electrical corporation's franchise, works or system,[407] and to hear and determine complaints concerning the rates of the quality of service.[408]

The Missouri Conservation Commission, which was created by the Missouri Constitution, has control and management of all wildlife and forestry resources of the state, "including hatcheries, sanctuaries, refuges, reservations and all other property owned, acquired or used for such purposes."[409] The Commission has control over all "fish and other aquatic and amphibious forms" in which title and ownership are vested in the State of Missouri,[410] and is empowered to adopt rules and regulations relating thereto.[411]

Authority has been delegated to the Commission to prescribe and approve precautionary measures for pollution control by individuals and industries so as to avoid pollution which would "injure, stupefy or kill fish,"[412] and also to supervise the use in the waters of the state of explosive substances which might be harmful to the fish therein.[413] Further, the Commission is authorized to approve fishways in dams to provide fish with free passage, and to dispense with such fishways where impractical or unnecessary.[414]

The Missouri State Park Board has a measure of power over the development and use of the waters of the state, at least to the extent that the waters are found upon lands held by the Board. The Board is empowered to make rules and regulations respecting the use of state parks,[415] and to charge reasonable fees for the use and enjoyment of park facilities.[416] Further, the Board may let concessions, not to exceed two years, to private persons for conducting businesses such as the rental of boats or conducting sightseeing trips within the parks.[417] The Board's powers over water resources, however, are largely incidental to its other powers in operating and developing the state park system.

In 1965 the General Assembly created the State Inter-Agency Council for Outdoor Recreation.[418] It is composed of the executive heads, or their delegated staff members, of the following agencies:

(1) Department of Agriculture
(2) Department of Health and Welfare
(3) Division of Commerce and Industrial Development
(4) Missouri Boat Commission
(5) Missouri Conservation Commission
(6) Missouri State Park Board
(7) State Geological Survey
(8) State Highway Department
(9) University of Missouri
(10) Water Pollution Board
(11) Water Resources Board
(12) Soil and Water Districts Commission
(13) Department of Community Affairs

The purpose of the Council is to receive and disburse federal funds, including those received by Missouri under the Land and Water Conservation Fund Act of 1965, P.L. 578 of the 88th Congress; to act as liaison between the state and federal government; and to act "as an advisory and planning agency for overall outdoor recreational programs."[419] The Council is administered by an executive secretary, who is to be selected on the basis of skill and training" in the broad field of natural resource management and use in recreational matters."[420]

In 1969, the Council for Outdoor Recreation was authorized to make assurances of state participation in fish and wildlife and recreational enhancement features associated with federal reservoirs. The Council is responsible for advising on the administration of a special fund to meet costs associated with assurances and contracts made under provisions of the Water Projects Recreation Act. Contracts made in connection with repayment to the federal government are between the federal construction agency and the Missouri state agency chosen to administer project lands. The law provides that the Missouri legislature approve through resolution any formal contracts committing the State to a long-range repayment schedule from general revenue funds.[a8]

The Boat Commission is responsible for enforcing laws and regulations relating to watercraft. In addition to policing responsibilities, employees of the commission carry out education and instruction programs on boating safety.

License fees may also be used for construction and maintenance of boating facilities. Authority of the Commission extends over all navigable waters of the state, including Federal reservoirs.[421]

In 1969, amendments to the laws governing the Boat Commission activities were passed to conform with the requirements and standards of the U. S. Coast Guard. In addition, the Commission was authorized to separate competing activity on the surface waters of the State and to mark and enforce regulations relative to the zoning of surface areas.[a9]

In 1967, the Missouri General Assembly created the Tourism Commission within the Executive Department of the Missouri state government. The Commission is directed to "formulate a program for the promotion of tourism in Missouri".[a10]

The Tourism Commission consists of nine members, including two members of the Senate of different political parties appointed by the President Pro Tem of the Senate, two members of the House of Representatives of different political parties appointed by the Speaker of the House and five other persons appointed by the Governor. The Commission members are appointed for two year terms. The Commission employs a Director of Tourism, who in turn employs such staff as is necessary to carry out the work of the Commission.[a11]

POLICY

The Water Resources Board has adopted the policies outlined by the President's Water Resources Council and published as Senate Document No. 97, to guide the development of a state water plan. The essentials of the policy are contained in the following portions of the Document:

"I. Purpose and Scope

The purpose of this statement is to establish Executive policies, standards, and procedures for uniform application in the formulation, evaluation, and review of comprehensive river basin plans and individual project plans for use and development of water and related land resources. Problems of cost allocation and of reimbursement or cost sharing between the Federal Government and non-federal bodies will be covered subsequently.

These provisions shall govern, insofar as they are consistent with the law and other applicable regulations, all formulation, evaluation, and review of water and related land resources plans. Any proposed variation from these policies and standards shall be specified in planning reports and the reasons therefor indicated.

II. Objectives of Planning

The basic objective in the formulation of plans is to provide the best use, or combination of uses of water and related land resources to meet all foreseeable short-and-long term needs. In pursuit of this basic conservation objective, full consideration shall be given to each of the following objectives and reasoned choices made between them when they conflict:

A. Development

National economic development, and development of each region within the country, is essential to the maintenance of national strength and the achievement of satisfactory levels of living. Water and related land resources development and management are

essential to economic development and growth, through concurrent provision for--

Adequate supplies of surface and ground waters of suitable quality for domestic, municipal, agricultural, and industrial uses -- including grazing, forestry, and mineral development uses.

Water quality facilities and controls to assure water of suitable quality for all purposes.

Water navigation facilities which provide a needed transportation service with advantage to the nation's transportation system.

Hydroelectric power where its provision can contribute advantageously to a needed increase in power supply.

Flood control or prevention measures to protect people, property, and productive lands from flood losses where such measures are justified and are the best means of avoiding flood damage.

Land stabilization measures where feasible to protect land and beaches for beneficial purposes.

Drainage measures, including salinity control where best use of land would be justifiably obtained.

Watershed protection and management measures where they will conserve and enhance resource use opportunities.

Outdoor recreational and fish and wildlife opportunities where these can be provided or enhanced by development works.

Any other means by which development of water and related land resources can contribute to economic growth and development.

B. Preservation

Proper stewardship in the long-term interest of the Nation's natural bounty requires in particular instances that --

There be protection and rehabilitation of resources to insure availability for their best use when needed.

Open space, green space, and wild areas of rivers, lakes, beaches, mountains, and related areas be maintained and used for recreational purposes; and

Areas of unique natural beauty, historical and scientific interest be preserved and managed primarily for the inspiration, enjoyment and education of the people.

C. Well-being of people

Well-being of all of the people shall be the overriding determinant in considering the best use of water and related land resources. Hardship and basic needs of particular groups within the general public shall be of concern, but care shall be taken to avoid resource use and development for the benefit of a few or the disadvantage of many. In particular, policy requirements and guides established by the Congress and aimed at assuring that the use of natural resources, including water resources, safeguard the interests of all of our people shall be observed."

It would be misleading to leave the impression that complete unanimity exists among the several water use interests within the State. Divergent views and cross purposes appear in the considerations of each project or proposal for development. The final decision on interpretation and application of policy as it effects the use of water and related land resources is through the administrative authority of the chief executive.

STATE PROGRAMS FOR WATER AND RELATED LAND CONSERVATION, REGULATION AND CONTROL

Historically, the State of Missouri has solved resource problems by creating a new agency with statutory responsibility for regulating, controlling, or correcting the recognized situation. Over many years this practice has resulted in the distribution of governmental agencies involved in resource management through the several departments of state government. This practice has been particularly true in the field of water resources. In recent years a recognition of problems created by this type of organization has resulted in the creation of boards and councils charged with responsibility for coordinating all activities associated with a particular interest or purpose.

Missouri legislatures have from time to time enacted permissive resource legislation to local units of government with the result that many of the functions of water management are or can be a local responsibility without overall supervision on the state level. No attempt is made in this publication to describe the programs and activities of water districts, levee districts, drainage districts, or county governments currently operative within the state. The activities and programs described herein consist only of those carried out and funded on a state wide basis.

Administration of the programs and services described is through a governmental organization illustrated by the

chart shown in Figure I. The responsibilities and programs of the several agencies of state government involved in water and related land resource functions are as follows.

Water Resources Board

A relatively new agency, the Water Resources Board is charged with coordinating the collection of water data and with the preparation of a long range comprehensive plan for the development of water resources. The five-member Board represents the interests of the state in interstate and federal water projects as well as promotes local interest and participation in water conservation measures. The Board has been designated by the Governor to represent the State on the Missouri Basin Inter-Agency Committee and the Arkansas-White-Red Basins Inter-Agency Committee as chartered by the Federal Water Resources Council. The Board has also been delegated the responsibility for negotiating and cooperating with the Chief of Engineers in the planning of federal water resources projects, and is responsible for the review of both Corps of Engineers and Department of Agriculture plans for water development within the State.

As a means of fulfilling its duties to prepare a long range comprehensive plan for the development, management, and utilization of the water resources of the State of Missouri, the Board is participating with other states and federal agencies in two comprehensive river basin studies and in the development of one comprehensive river basin plan. Studies are being carried out in the Missouri and Upper Mississippi River Basins and the planning activity which will lead toward authorization of projects and developments is being carried out in the White River Basin of Southern Missouri and Arkansas. As a means of accomplishing the most complete representation of the State of Missouri in the studies and planning activity, the Board has solicited assistance from other state agencies. These agencies provide representation from the State on the several work groups and task committees associated with the comprehensive planning and study endeavors.

The General Assembly has authorized the Board to make assurances to federal agencies for municipal and industrial water supply storage provided in federal structures under authority of the Water Supply Act of 1958. Based on reports of the Water Resources Board, money is transferred to a Water Development Fund to be used in repaying these costs. The Board is authorized to contract for the sale of water purchased in this manner and money so received is returned to the fund. To date assurances have been made for repayment of 20,000 acre feet of storage in the Cannon Dam and Reservoir, Salt River Basin, Missouri. Studies are being made by the Board to determine storage needs in the Meramec and Grand River Basins.

Water Pollution Board

The Missouri Water Pollution Board is responsible for the control of pollution of waters of the state both surface and subsurface. A permit to construct or to operate any sewage disposal facility that results in a discharge to waters of the state is required. The Water Pollution Board requires the submission of detail plans and specifications for review together with an engineering report outlining the scope of the project and the characteristics of the effluent prior to the issuance of a permit. At the present time there are over 1796 waste treatment facilities in the State for which operating permits have been issued. Approximately 150 new waste treatment facilities are constructed each year.

Acid mine drainage adversely affects approximately 170 miles of streams. Progress has been made in correcting an acid mine drainage problem in Cedar Creek, Boone-Callaway Counties. Work is needed in other areas of the State to reduce acid mine drainage.

The Missouri Water Pollution Board carries out a stream survey program in cooperation with the Missouri Conservation Commission, the Missouri Geological Survey and Water Resources, and U. S. Geological Survey. Stream surveys have been completed on the Meramec, Big, Bourbeuse, James, Elk, and Spring River West. Water quality monitoring stations have been established at over 150 locations. The Missouri Water Pollution Board is authorized by statute (Chapter 204, RSMo 1959) to establish water quality standards. In conformance with the Water Quality Act of 1965, the Missouri Water Pollution Board has established water quality standards on all interstate and intrastate streams in Missouri. Generally these standards were accepted by the Department of Interior with minor exceptions. Sampling of all interstate streams in Missouri has been inaugurated. This program will be continued and where ever possible joint sampling stations will be established with adjoining states.

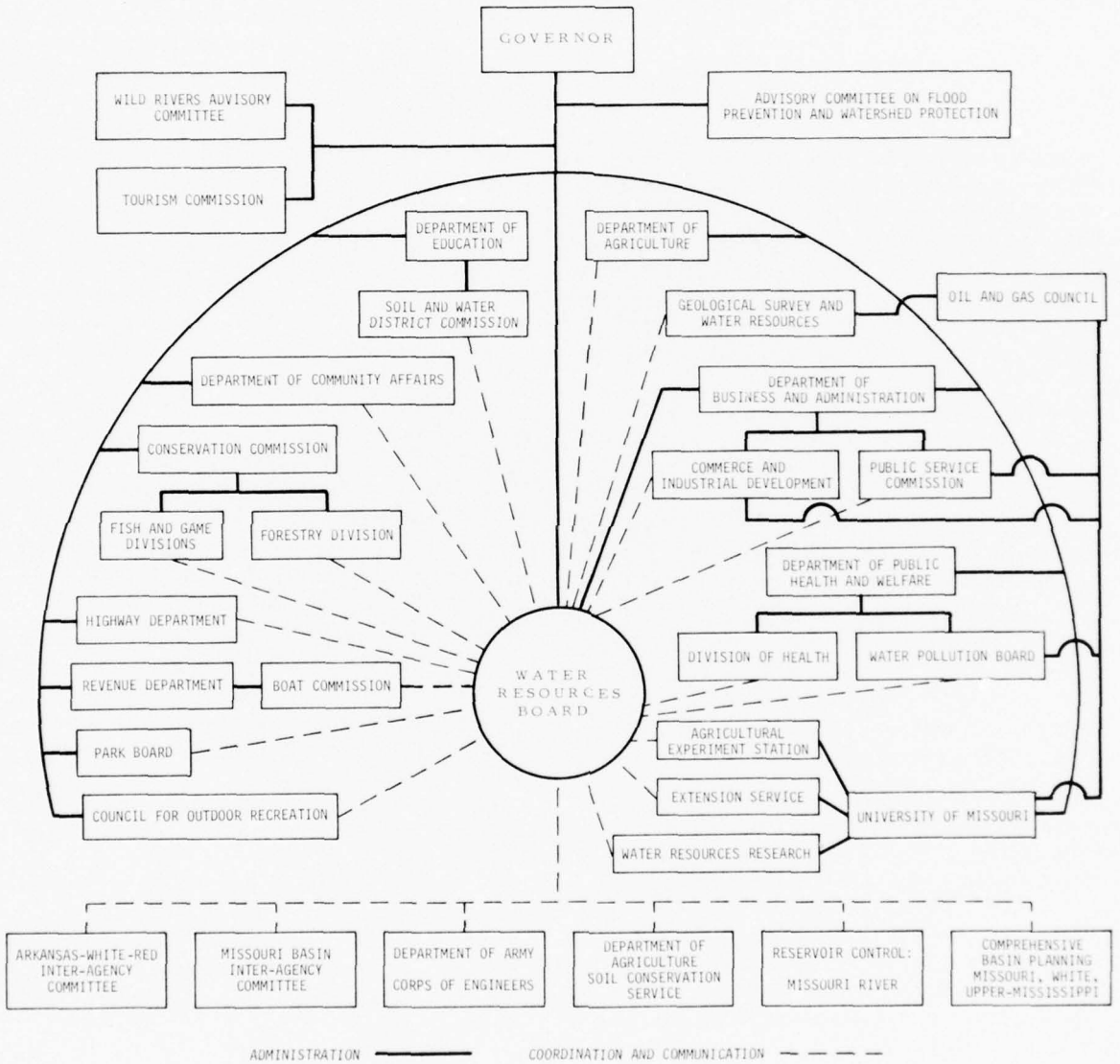
The Missouri Water Pollution Board administers priorities for the construction grant program authorized by Public Law 660. Approximately 350 cities have received federal grants for the construction of pollution abatement works since the program was inaugurated in 1956.

State Park Board

The function of this agency is to acquire, protect, preserve, develop, and interpret for the inspiration, use, and enjoyment of the people of the State a well balanced system of areas of outstanding scenic, recreational and historic importance.

The Missouri State Park Board now administers 80,904 acres of land and water in 40 state parks. They contain 1,024 acres of man-made lakes plus parks on the Lake of the Ozarks, Table Rock, Pomme de Terre, Lake

WATER RESOURCE ORGANIZATION AND COMMUNICATION
STATE OF MISSOURI



Wappapello and Stockton. A new park will be developed on the new Kaysinger Bluff Reservoir. A large number of state parks are on major streams. The State Park Board administers 13 historic shrines and memorials.

The attendance records indicated that the more popular parks all have water related recreation facilities available.

The State Park Board publishes a new brochure each year to inform the public of the available recreation facilities.

Conservation Commission

Assuring adequate and suitable water for fish and wildlife habitat and providing water areas and access for public recreational use associated with hunting and fishing are primary responsibilities of the Conservation Commission. Maintenance of water quality is achieved through aid in water pollution control and the application of improved land use practices including forest management, fire control, and through development of cover to protect land from erosion.

A staff of over 575 permanent employees and approximately 1,000 hourly and seasonal employees are utilized in carrying out the fish, game and forest management responsibilities of the Commission. The bulk of these activities involve efforts to achieve improved natural resource management practices, particularly those related to the land, forests, and waters.

Of particular significance are intensive fire protection activities on 9+ million acres of forest land, fisheries and game research activities as related to wildlife species and habitat requirements, and on the ground technical management assistance to owners and managers of the forests, lands, and waters in the state.

Educational activities are directed primarily to youth groups, teachers, schools, colleges, and organized adult groups. Results of research, resource management information, and items of general public interest in the fish, game, resource, and recreation field are dispensed through a variety of publications varying from highly technical to quite general. The "Missouri Conservationist", a very popular Commission magazine, is distributed monthly to 185,000 subscribers with the actual number of readers estimated at 830,000.

The Commission holds title to approximately 263,875 acres in 294 separate administrative units or blocks. Approximately 45 other areas are managed under terms of use permits, leases, or similar arrangements. Practically all areas are available for a variety of public recreation uses. The range is varied and includes such things as stream access, lake fishing, waterfowl shooting, big game hunting, nature trail hiking, and picnicing.

State Soil and Water Districts Commission

The State Soil and Water Districts Commission is composed of five members. Three are farmer members, who are land owners and are appointed by the Governor of the State of Missouri; two ex officio members by law include the Director of the Experiment Station, University of Missouri, and the Director of the Agricultural Extension Service, University of Missouri. The commission determines policies and procedures in the organization of Soil and Water Conservation Districts in Missouri and assists in the establishment of watershed subdistricts.

Soil and Water Conservation Districts are established in 90 of the 114 counties in Missouri. All but five districts are county wide. Technicians to assist county land owners with soil surveys, planning and layout of conservation measures are made available by the United States Soil Conservation Service. Subdistricts are organized in 38 watersheds to carry out watershed protection and flood prevention programs. The size of these subdistricts vary from 12,800 acres to 240,290 acres. Seventeen watershed projects have been authorized for construction under the authorities of Public Law 566. Two structures within these watersheds have included the additional purposes of public water supply and recreation through cost-share agreements with non-federal interests.

Missouri Boat Commission

The Boat Commission is responsible for patrolling all waters of the State and for enforcement of water safety laws. Employees of the Commission carry out patrol activities during the boating season, and conduct an educational program through schools, service clubs, etc., for the remainder of the year.

Employees of the Commission are currently limited by law to sixteen. The vast water areas created by federal impoundments, added to the natural waters of the state, understandably limit the effectiveness of patrol functions. A great emphasis is placed on equipment inspection, including safety equipment at access points and boat ramps. Those features of safety involving operating practices are for the most part stressed in the education program.

Public Service Commission

The Commission has general supervision over privately owned utilities that furnish water to the general public. The powers and duties of the Commission extend to the supply, service, and facilities, rates, and all relationships between the utility and the consumers. The water is furnished for domestic, commercial, and industrial users,

conditioned as to quality and in adequate amounts to meet present requirements, keeping in mind the expected future demands as the needs of each community grow.

Council for Outdoor Recreation

The field of outdoor recreation, a major activity for hundreds of thousands of Missourians and out-of-state visitors, took a great stride forward in this State on October 13, 1965, when the State Inter Agency Council for Outdoor Recreation was activated under law authorized by House Bill 304 passed by the 73rd General Assembly and signed into law by the Honorable Warren E. Hearnes, Governor of Missouri.

The Council is composed of representatives of thirteen state agencies as follows: State Park Board, Conservation Commission, Department of Community Affairs, Department of Health and Welfare, Division of Commerce and Industrial Development, Missouri Boat Commission, Division of Geological Survey & Water Resources, State Highway Commission, University of Missouri, Water Pollution Board, Water Resources Board, Department of Agriculture, and the State Soil and Water Districts Commission.

One of the major functions of the Council will be to allocate federal monies received primarily from the Land and Water Conservation Fund. House Bill 304 provides that not less than 50% of the federal monies received must be allocated to political subdivisions for the acquisition and development of public outdoor recreation areas and facilities.

Missouri is most fortunate in that its preliminary plan was accepted early by the Bureau of Outdoor Recreation and was one of the first twelve States to be approved for the allocation of the grants-in-aid from the Land and Water Conservation Fund. The Council has now entered in a contract with a private firm to update and refine the State Comprehensive Outdoor Recreation Plan. Present scheduling calls for an updating of this Plan to be completed by December, 1969.

The Council has established certain criteria for the various political subdivisions to meet before an application for matching funds can be accepted. Due to the demand for grants-in-aid, a priority system has been developed in order to insure, insofar as possible, an equitable distribution of the monies throughout the state.

State Oil and Gas Council

This newly created agency is responsible for carrying out a program of oil and gas conservation, including consideration of oil and gas well construction, disposal of waste from oil and gas field operation, spacing of wells and royalty distribution, and allocation of production. The Council is composed of the Division of Geological Survey & Water Resources, the Division of Commerce & Industrial Development, the Public Service Commission, the Water Pollution Board and the University of Missouri. All actions of the Council are subject to review by the Public Service Commission.

The scope of activity of this Council is not as yet defined. With continued exploration for new reserves and a known reserve of viscous petroleum in the western part of the state, the creation of the Council is considered timely and necessary.

Highway Department

The Highway Department is concerned with hydrology for purposes of bridge and culvert design, and erosion of highway structures. Gaging and investigation of runoff from small drainage areas are specially studied as well as channel capacities and flood elevations involved in major bridge and highway design.

The department is also responsible for carrying out a program of scenic routes and for highway beautification. This latter involves the removal of advertising signs, relocation or screening of automobile junk yards, and landscaping of state and federal highways. A program of rest stops, roadside parks and scenic overlooks is also underway for the state, and federal road system.

Department of Agriculture

The Department of Agriculture is primarily charged with regulatory responsibilities in the areas of production, labeling, storage, and distribution of agricultural products and supplies. A limited amount of research and education is carried out in connection with the regulatory activities.

The Commissioner of Agriculture has been designated by the Governor as Chairman of the Advisory Committee on Watershed Protection and Flood Prevention. The committee, made up of representation from state agencies and farm groups is responsible for receiving, reviewing, and setting priorities on applications received for watershed development under provisions of P. L. 566.

The Commissioner is also designated by statute to serve on several boards and councils involved in water and related land resource planning and management. It is largely through the considerations of these groups that he is able to represent agricultural interests in the state resource programs.

State Department of Education

Local, state, and federal agencies are cooperatively responsible for the provisions of educational opportunities for all who can profit therefrom. The public school is a

particular function of the State. The responsibility for its direction is assigned by Law to the State Department of Education--a service agency of the State.

Since the solution to the probiems pertaining to soil and water conservation depends in a degree upon the education of the public, the State Department of Education, in part, is responsible for disseminating such information through the public schools of the State.

Division of Geological Survey and Water Resources

Administered by the State Geologist, this division is the prime State agency source for all ground water and surface flow data. Basic ground water data or occurrence, quality, quantity, and water level monitoring is provided by more than 24,000 logs of wells and 40 wells equipped with automatic water level recorders. Specific information on problems of mine dewatering, feasibility of surface reservoirs, sewage oxidation lagoons, water supply data for municipalities, industry, or private facilities are provided.

A cooperative program of stream gaging with the Water Resources Division of the U. S. Geological Survey has been continuous since 1920. Cooperative programs in specific ground water studies have been continuous since 1963. Results of studies and presentation of data are published as bound volumes and as Water Resources Reports.

Personnel of the Survey directly involved in water resources are: two geologists assigned for water well prediction and ground water advisory service; four geologists for sample study and subsurface correlation, supplemented by four technicians in the subsurface laboratory; two engineering geologists engaged in surface hydrogeologic investigations; and one geologist engaged in study and investigation of caves and springs.

Division of Health

The Missouri Division of Health is responsible for control of quality of water dispensed to the public by municipalities, corporations, companies, and individuals. To accomplish this purpose, and to assure the delivery of safe, sanitary, and potable water, the Division has promulgated regulations, duly filed with the Secretary of State, which: (1) define a public water supply; (2) require Division approval of all plans and specifications for new public water supplies and for additions or alterations to existing supplies; (3) establish standards for bacterial and chemical quality; (4) require routine analysis of both raw and treated water and; (5) require continued maintenance and upkeep of all public supplies. Additional responsibility for water quality as it may affect the health of an individual is implied under the broad duties of the Division to safeguard the health of all of the people of the State. The laws of Missouri require the Division of Health to prevent the entrance of disease and to control spread of contagion.

Approval of new water supplies for municipalities involve consideration of sewage provisions for safety to public health. The Division of Health is also concerned with the effect of one source of supply, public or private, upon the bacterial and chemical quality of a nearby supply. Further, the sanitary quality of a delivered water supply is often dependent upon the pressures maintained in the distribution system, making necessary considerations of quantities of water available at the source.

Fulfillment of Division responsibility in the area of safe quality water for public supplies, and in protecting the health of individuals as it may be affected by both public and private water supply, makes it necessary to consider: (1) location of the source as regards the effect of pollution, flooding, etc., both present and future, on the water quality; (2) bacterial and chemical quality of the source of water supply as it may be made acceptable by known treatment methods; (3) construction for permanency and sustained operation; (4) quantity to assure adequate pressures in the distribution system; and (5) quantity to assure future needs of a growing community. These considerations are applicable in cases of both surface and ground water supply sources.

At the present time there are 575 public water supplies serving 750 cities and municipalities, 95 water systems serving water districts in 200 small communities, 130 serving subdivisions and mobile homes, 31 serving state parks, and 94 additional private and miscellaneous water supplies on the Division of Health routine bacteriological sampling program. In addition to these, there are a number of small systems serving subdivisions, housing developments, etc., presently outside of the Division of Health water supply program. Public water supply facilities are also being developed rapidly over Missouri. There are, in various stages of planning, 100 additional public water supply districts in Missouri. Engineering reports have been approved for 45 additional community water supplies and, during the past year, construction on 60 supplies was started, which will be placed in service during 1970. Considerable emphasis is being placed on serving the small rural community and suburban areas around larger communities with suitable public water supply facilities.

Division of Commerce and Industrial Development

This division assists in problems of industrial location throughout the State. Location problems are handled from the standpoint of both the industry and the community. Data and information on water supply, waste

disposal, labor markets, transportation, etc., are assembled and made available to industry. A community betterment program helps alert local interests to develop those services and institutions necessary to attract industry.

The division also approved revenue bond issues for the purpose of providing factory buildings constructed by communities for select industry. Repayment is from rental of the building and local taxes are not increased.

An airport program distributes state grants and assists in planning, marking, and other features necessary for federal participation in construction of memorial airports. Sixty communities are participating in new air facilities or expansion of existing facilities at the present.

There are currently 238 local communities participating in the betterment program. A further incentive is the 5-Star phase program. Criteria have been established in categories as follows: education, utilities, transportation, community planning and community services. Currently eight communities have achieved the 5-Star status.

University of Missouri

In addition to providing formal education for persons entering the fields of resource management, the University functions include research in the fields of soils, water, and conservation. Research is carried out through a Water Resources Research Institute, the Agriculture Research Station, and the several divisions involved in water, land, sociology, economics, and related activities.

Currently research in the areas of irrigation and agricultural water requirements, economic effects of water development, social desires and individual needs related to leisure time, and methodology for determining and projecting area development trends is underway.

In addition to the resident instruction program on the campus, a teaching program conducted by the Extension Division disseminates findings and information throughout the state. This Division also assists local communities to provide the best possible environment through a program of education and suggestions.

Department of Community Affairs

The Department of Community Affairs is a new agency of Missouri state government replacing the Office of State and Regional Planning and Community Development previously assigned to the Executive Department of the Governor. This department is responsible for developing a comprehensive state plan; providing planning assistance to local governments; coordinating and providing assistance upon request to state agencies and to local and regional planning units; and for distributing federal planning grants and reviewing local plans prepared under provisions of the federal laws.

The act which created the Office of State and Regional Planning and Community Development also permits creation of regional planning commissions for purposes of study and planning two or more political subdivisions of the state. The State governmental responsibilities regarding regional planning commissions are now carried out by the Department of Community Affairs, Office of Planning.

Among the programs administered by the Department are: research and analysis of state statutes relating to local government, administered by the Governmental Studies Institute; administration of the Older Americans Act by the Office of Aging; technical planning assistance to cities, counties and regions by the Office of Planning; training and education programs for public officials and personnel as provided under Title I of the Higher Education Act administered by the Bureau of Community Services; economic development for depressed areas provided for by the Public Works and Economic Development Act and administered by the Public Works Section; planning for development of the Ozarks area through the Ozarks Regional Commission; and comprehensive health planning provided by the Comprehensive Health Planning Act and administered by the Office of Comprehensive Health Planning.

Tourism Commission

The Tourism Commission is a new state agency created by the Missouri General Assembly in 1967 and assigned to the Executive Department of the Governor. The Commission is charged with: the formulation of a program for the promotion of tourism in Missouri, the encouragement of educational tourism promotional material; the promotion of tourism in Missouri by advertisements and by the establishment of promotional exhibitions; and the establishment and maintenance of travel offices at major points of entry to the state.

REFERENCES

1. Bollinger v. Henry, 375 S.W.2d 161, 165 (Mo. 1964).
2. 78 Mo. 504, 514. See also Munkres v. Kansas City, St. Joseph and Council Bluffs Railway Company 72 Mo. 514 (1880).
3. Gray v. Schriber, 58 Mo. App. 173, 177 (St. L. App. 1894).
4. Anderson v. City of Jefferson, 262 S.W.2d 169, 171 (K. C. App. 1953).

5. Nicket v. St. Louis, Memphis and Southern Railway Company, 135 Mo. App. 661, 116 S.W. 477 (St. L. App. 1909).
6. Happy v. Kenton, 362 Mo. 1156, 247 S.W.2d 698 (1952).
7. Brill v. Missouri, Kansas and Texas Railway Company, 161 Mo. App. 472, 144 S.W. 174 (K. C. App. 1912) **Cf.** Bollinger v. Henry, 375 S.W.2d 161 (Mo. 1964).
8. Happy v. Kenton, 362 Mo. 1156, 247 S.W.2d 698, 702-03 (1952).
9. Bollinger v. Henry, 375 S.W.2d 161 (Mo. 1964).
10. Keener v. Sharp, 95 S.W.2d 648, 652 (Spr. App. 1936).
11. Keener v. Sharp, 341 Mo. 1192, 111 S.W.2d 118 (1937).
12. Goll v. Chicago and Alton Railway Company, 271 Mo. 655, 199 S.W. 244 (1917)
13. Place v. Union Township, 66 S.W.2d 584 (Spr. App. 1933); Schalk v. Inter River Drainage District, 226 S.W. 277 (Spr. App. 1920).
14. Springfield Waterworks Company v. Jenkins, 62 Mo. App. 74, 80 (St. L. App. 1895).
15. Slovensky v. O'Reilly, 233 S.W. 478, 481-82 (Mo. 1921). See also Elder v. Delcour, 269 S.W.2d 17, 22 (Mo. En Banc 1954).
16. McKinney v. Northcutt, 114 Mo. App. 146, 89 S.W. 351 (St. L. App. 1905).
17. Slovensky v. O'Reilly, 233, S.W. 478, (Mo. 1921).
18. 269 S.W.2d 17 (Mo. En Banc 1954).
19. Weller v. Missouri Lumber & Mining Company, 176 Mo. App. 243, 161 S.W. 853, (Spr. App. 1913).
20. State ex rel. Applegate v. Taylor, 224 Mo. 393, 123 S.W. 892 (En Banc 1909)
21. Welton v. Martin, 7 Mo. 307, 309 (1841).
22. Bollinger v. Henry, 375 S.W.2d 161, 166 (Mo. 1964).
23. City of Cape Girardeau v. Hunze, 314 Mo. 438, 284 S.W. 471 (1926).
24. 375 S.W.2d 161, 166.
25. 232 Mo. App. 945, 106 S.W.2d 966.
26. Stough v. Steelville Electric Light & Power Company, 206 Mo. App. 85, 226 S.W. 295 (Spr. App. 1920).
27. Wood v. Craig, 133 Mo. App. 548, 113 S.W. 676 (K. C. App. 1908).
28. 232 Mo. App. 945, 106 S.W.2d 966 (St. L. App. 1937).
29. 375 S.W.2d 161 (Mo. 1964).
30. Belveal v. H.B.C. Development Company, 279 S.W.2d 545 (K.C. App. 1955).
31. Joplin Consolidated Mining Company v. City of Joplin, 124 Mo. 129, 135 27 S.W. 406 (1894).
32. Bartlett v. Hume – Sinclair Coal Mining Company 351 S.W.2d 214 (K. C. App. 1961).
33. Divelbiss v. Phillips Petroleum Company, 272 S.W.2d 839 (K.C. App. 1954)
34. Smiths v. McConathy, 11 Mo. 517 (1848).
35. Thomas v. Concordia Cannery Company, 68 Mo. App. 350 (K.C. App. 1897).
36. Hanlin v. Burk Bros. Meat & Prov. Company, 174 Mo. App. 462, 160 S.W. 547 (K. C. App. 1913).
37. Blankenship v. Kansas Explorations, 325 Mo. 998, 30 S.W.2d 471 (1930).
38. Stewart v. City of Springfield, 350 Mo. 234, 165 S.W.2d 626, (En Banc 1942). Compare Harrisonville v. W.S. Dickey Clay Mfg. Co. 289 U. S. 334 (1933).
39. Smith v. City of Sedalia, 244 Mo. 107, 149 S.W. 597 (En Banc 1912).
40. Lewis v. City of Potosi, 348 S.W.2d 577 (St. L. App. 1961).
41. Newman v. City of ElDorado Springs, 292 S.W.2d 314 (Spr. App. 1956).
42. Hillhouse v. City of Aurora, 316 S.W.2d 883 (Spr. App. 1958).
43. Riggs v. City of Springfield, 344 Mo. 420, 126 S.W.2d 1144 (EnBanc 1939).
44. Volkerding v. Brooks, 359 S.W.2d 736 (Mo. 1962). See § 516.010 RSMo. 1959.
45. Dunham v. Joyce, 129 Mo. 5, 14, 31 S.W. 337 (1895).
46. Ranney v. St. Louis and San Francisco Railway Company, 137 Mo. App. 537, 119 S.W. 484 (St. L. App. 1909).
47. See Smith v. Musgrove, 32 Mo. App. 241 (St. L. App. 1888).
48. Bird v. Hannibal and St. Joseph Railway Company, 30 Mo. App. 365 (St. L. App. 1888).
49. Luesse v. Weber, 350 S.W.2d 424 (St. L. App. 1961).
50. See Evans, Riparian Rights in Artificial Lakes and Streams, 16 Mo. L. Rev. 93 (1951).
51. 321 Mo. 186, 9 S.W. 2d 978 (1928).
52. 375 S.W.2d 161 (Mo. 1964)
53. Happy v. Kenton, 362 Mo. 1156, 247 S.W.2d 698 (1952); Keener v. Sharp, 341 Mo. 1192, 111 S.W.2d 118 (1937).
54. Wood v. Craig, 133 Mo. App. 548, 113 S.W. 676 (K. C. App. 1908).
55. Jacobs v. Frangos, 329 S.W.2d 262 (St. L. App. 1959).
56. See Corrington v. Kalicak, 319 S.W.2d 888 (St. L. App. 1959).
57. Welton v. Martin, 7 Mo. 307 (1842).
58. Rector v. Tobin Construction Company, 351 S.W. 2d 816 (St. L. App. 1961).
59. Conran v. Girvin, 341 S.W.2d 75 (Mo. En Banc 1960).
60. Bratschi v. Loesch, 330 Mo. 697, 51 S.W.2d 69 (1932).

61. Kirkpatrick v. Yates Ice Company, 45 Mo. App. 335 (Kansas City App 1891).
62. §§ 241.290, 241.300 R.S.Mo. 1959.
63. T. L. Wright Lumber Company v. Ripley County, 270 Mo. 121, 192 SW 996 (1917).
64. See Comment, 3 Mo. L. Rev. 181 (1938).
65. Hahn v. Dawson, 134 Mo. 581, 36 S.W. 233 (En Banc 1896); Cooley v. Golden, 117 Mo. 33, 23 S.W. 100 (En Banc 1893).
66. 12 Mees and W. 324.
67. 62 Mo. App. 74.
68. See e.g. Ozark Pipe Line Corp. v. Decker, 32 F. 2d 66 (8th Cir. 1929); Bollinger v. Mungle, 175 S.W.2d 912, (St. L. App. 1943); Haynor v. Excelsior Springs Light Company, 129 Mo. App. 691, 108 S.W. 580 (K.C. App. 1908).
69. 327 Mo. 238, 37 S.W.2d 518 (1931).
70. See Snodgrass & Davis, the Law of Surface Water in Missouri, 24 Mo. L. Rev. 137, 281 (1959).
71. Clark v. City of Springfield, 241 S.W.2d 100 (Spr. App. 1951).
72. Haferkamp v. City of Rock Hill, 316 S.W.2d 620, 625 (Mo. 1958).
73. Blydenburgh v. Amelung, 309 S.W.2d 150 (K.C. App. 1958).
74. Peters v. Shull, 379 S.W.2d 837 (K.C.App. 1964).
75. Behm v. King Louie's Bowl, Inc., 350 S.W.2d 285 (K.C. App. 1961).
76. Casanover v. Villanova Realty Company, 209 S.W. 2d 556 (St. L. App. 1948).
77. Haferkamp v. City of Rock Hill, 316 S.W.2d 620, 625-26 (Mo. 1958).
78. **Id.** at 627.
79. **Ibid.**
80. 380 S.W.2d 529 (St. L. App. 1964).
81. Goll v. Chicago and Alton Railway Company, 271 Mo. 655, 197 S.W. 244 (1917); Sigler v. Inter-River Drainage District, 311 Mo. 175, 279 S.W. 50 (1925).
82. Blackburn v. Gaydon, 241 Mo. App. 917, 245 S.W.2d 161 (Spr. App. 1951).
83. Inter-River Drainage District v. Ham, 275 Mo. 384, 204 S.W. 723 (1918).
84. See e.g., Walther v. City of Cape Girardeau, 166 Mo. App. 467, 149 S.W. 36 (St. L. App. 1912); Mehonray v. Foster, 132 Mo. App. 229, 111 S.W. 882 (K.C. App. 1908).
85. Farrar v. Shuss, 221 Mo. App. 472, 282 S.W. 512 (K.C. ct. App. 1926).
86. White v. Wabash Railway Company, 240 Mo. App. 344, 207 S.W.2d 505 (K. C. App. 1947).
87. Young v. Moore, 241 Mo. App. 436, 236 S.W.2d. 740 (Spr. App. 1951). The statute is § 244.010 RSMo 1959.
88. § 252.210. All statutory references, unless otherwise identified, are to Missouri Revised Statutes, 1959, and Supplement 1965.
89. § 564.010.
90. § 77.110 (35) (second class cities)
91. Divelbiss v. Phillips Petroleum Co. 272 S.W.2d 839 (K.C. App. 1954).
92. Missouri Laws 1957, p. 659
93. § 240.160
94. § 204.020
95. § 204.010(7).
96. § 204.010(5).
97. § 204.070.1, .2.
98. § 204.070.2
99. § 204.070.5.
100. § 204.080(5).
101. § 204.080(3).
102. § 204.080(4).
103. § 204.080(9)
104. § 204.120. The Board may also enter into compacts with other states respecting pollution control of interstate waters. § 204.090(3).
105. § 204.090(1).
106. § 204.100, .130.
107. § 204.110.
108. § 204.140.
109. § 204.070.3.
110. § 204.030.1.
111. § 204.040.1.
112. § 204.040.2
113. § 204.040.3.
114. § 204.040.4.
115. § 204.030.2.
116. § 204.030.3.
117. **Ibid.**
118. **Ibid.**
119. § 204.050.1 If the hearing is presided over by an attorney designated by the Board, the Missouri administrative procedure act places certain limitations upon the power of the Board to render a decision. § 536.080.
120. § 204.050.3.
121. § 204.050.4.
122. § 204.060.
123. Compare Model Water Use Act § 602 (d).
124. § 564.480
125. § 560.473
126. §§ 306.250-.290.
127. §§ 73.110(8), (11), (54); 91.090.
128. §§ 73.110(13); 88.316; 88.832.
129. § 73.120
130. § 73.110(11).
131. §§ 75.110(11), (29); 88.832.
132. § 75.110(14).
133. §§ 75.110(35), (36), (37); 91.090
134. § 75.110(13).
135. § 75.110(35).

136. §§ 77.140,91.450.
137. §§ 77.530,91.090.
138. § 77.150.
139. §§ 79.390; 91.010; 91.450.
140. § 79.380.
141. § 80.090(14).
142. §§ 80.090(29); 88.832.
143. § 80.090(28).
144. §§ 81.190; 91.090; 91.600.
145. § 90.010.
146. § 71.540.
147. §§ 71.530, .540.
148. § 91.050.
149. § 91.060.
150. § 250.010.
151. § 250.020.
152. § 250.220.
153. §§ 91.620- .770.
154. § 91.630(2).
155. § 192.180.
156. § 192.200.
157. §§ 71.700, .710.
158. § 393.030.1.
159. § 393.030.2.
160. § 393.140.
161. § 393.140(3).
162. § 192.180.
163. § 247.030.
164. § 247.010.
165. § 247.040.1.
166. § 247.040.6.
167. § 247.050
168. § 247.050(15).
169. § 247.040.5
170. § 247.060.
171. § 247.110.
172. § 247.120.
173. § 247.130.
174. § 247.230.
175. §§ 247.250, .260.
176. § 247.350.
177. § 247.270(7).
178. § 247.440.
179. § 247.670.
180. § 247.450.
181. § 247.550.
182. § 248.010.
183. § 248.040.
184. § 248.070.
185. § 248.090.
186. § 248.110.
187. § 248.120.
188. § 248.130.
189. § 248.150.
190. § 249.010.
191. § 249.763.
192. § 249.440.
193. § 249.010.
194. §§ 249.040, .050, .060.
195. §§ 249.070, .090.
196. §§ 249.110, .120.
197. § 249.130.
198. § 249.763.
199. **Ibid.**
200. §§ 249.765, .767.
201. § 249.770.
202. §§ 249.790,, .797.
203. § 249.787.
204. § 249.777.
205. §§ 249.440, .450
206. §§ 249.460, .510
207. § 249.520.
208. § 249.530.
209. § 249.520.2.
210. § 249.640.
211. § 250.010.
212. § 250.020.
213. § 250.040.
214. § 250.220.
215. § 250.230.
216. §§ 236.010, .020, .030.
217. § 236.040.
218. §§ 236.060, .070.
219. § 236.080.
220. §§ 236.110, .120.
221. § 236.130.
222. § 236.150.
223. § 236.160.
224. §§ 236.170, .190.
225. § 236.210.
226. § 236.180.
227. § 236.260.
228. § 236.230.
229. § 236.240.
230. § 236.270. Compare § 537.410, providing for damages for backwater caused by boom across stream.
231. § 236.220.
232. § 236.250.
233. § 236.190.
234. § 236.255.
235. § 236.280.
236. § 244.010.
237. See e.g., Gray v. Schriber, 58 Mo. App. 173 (St. L. App. 1894); Young v. Moore, 241 Mo. App. 436, 236 S.W.2d 740 (Spr. App. 1951)
238. § 244.020.
239. § 244.030.
240. § 244.040.
241. § 244.050.
242. §§ 244.060, .070.2.
243. § 244.060.

244. § 244.070.2.
245. § 244.090.1.
246. § 244.090.2. The assessed benefits constitute a lien against the lands benefited, and the costs are recoverable in an action in the name of the State of Missouri at the relation of any interested party. § 244.090.3.
247. § 244.100.
248. § 246.010.
249. § 242.020.
250. §§ 242.700 -.750.
251. § 242.040.
252. § 242.050.
253. § 242.060.
254. §§ 242.692, -.699.
255. § 242.150.
256. § 242.190.
257. § 242.220.
258. §§ 242.230, .240, .260.
259. § 242.280.
260. § 242.290.
261. § 242.330.
262. § 242.370.
263. § 242.380.
264. § 242.430.
265. § 242.450.
266. § 242.490.
267. § 242.590.
268. § 242.480.
269. §§ 243.020, .030.
270. § 243.050.
271. §§ 243.060, .070.
272. § 243.020.
273. § 243.080.
274. § 243.140.
275. §§ 243.160, .170, .180.
276. § 243.240.
277. § 243.220.
278. § 243.250.
279. § 243.290.
280. § 243.300.
281. § 243.330.
282. § 243.370.
283. § 243.390.
284. §§ 245.010, .015.
285. § 245.015.
286. §§ 245.020, .025.
287. § 245.060.
288. § 245.095.
289. § 245.100.
290. §§ 245.110, .120.
291. §§ 245.130, .135.
292. § 245.150.
293. § 245.175.
294. § 245.180.
295. § 245.195.
296. § 245.215.
297. § 245.230.
298. §§ 245.290, .300.
299. § 245.300.
300. § 245.335.
301. § 245.365.
302. § 245.370.
303. § 245.445.
304. § 245.490.
305. § 257.010.
306. § 257.020(5).
207. § 257.040.1.
308. § 257.030.1.
309. § 257.040.3.
310. § 257.050.
311. § 257.070.1.
312. § 257.070.2.
313. § 257.070.3.
314. § 257.070.5.
315. § 257.070.6.
316. § 257.080.1.
317. § 257.080.2.
318. §§ 257.110.1, 257.160.2. (1)
319. § 257.110.1.
320. § 257.130.
321. § 257.120.
322. § 257.160.
323. § 257.160.
324. § 257.180.2.
325. § 257.190.1.
326. § 257.190.1.
327. § 257.200.
328. § 257.240.1.
329. § 257.240.2.
330. § 257.250.
331. § 257.260.
332. § 257.290.1.
333. § 257.290.2.
334. § 257.290.2.
335. § 257.300.1.
336. § 257.300.3.
337. § 257.300.4.
338. § 257.060.
339. § 257.310.1.
340. § 257.310.2.
341. § 257.310.8.
342. § 257.310.9.
343. § 257.350.
344. § 257.360.
345. § 257.370.
346. § 257.480.
347. Mo. Laws 1943, p. 839.
348. §§ 278.060 - .155.
349. § 278.080.
350. § 278.070(2). If there are less than fifty land representatives within any township, it is only

necessary that a majority from that township sign the petition.

351. § 278.100.1.
352. § 278.120.1.
353. § 278.070(3).
354. § 278.100.2.
355. § 278.110.
356. § 278.110.
357. § 278.120.2.
358. §§ 278.120.2(3), (6).
359. § 278.130.
360. § 278.130.
361. § 278.120.2(2).
362. 16 U.S.C.A. §§ 1001-1008.
363. 16 U.S.C.A. § 1002.
364. 16 U.S.C.A. § 1004.
365. 16 U.S.C.A. § 1006a.
366. §§ 278.160 - .260.
367. § 278.170. When the lands sought to be organized are in two soil conservation districts, the petition may be presented to the board of supervisors of either district, and thereafter the boards of both districts act jointly with respect to sub-district matters. § 278.220.
368. § 278.170.
369. §§ 278.180, .190.
370. § 278.200.1.
371. § 278.200.2. Election procedures, as well as other rules and regulations governing the establishment of subdistricts, are developed by the state soil districts commission (now the state soil and water districts commission). § 278.210.
372. § 278.240.1.
373. § 278.240.2.
374. § 278.210.
375. § 278.250.
376. § 278.255.
377. § 256.200.
378. § 256.180.
379. § 256.210.
380. § 256.200.
381. § 256.260.
382. § 256.250.
383. § 256.220.
384. § 256.290.
385. § 256.300.
386. §§ 256.310, .340.
387. § 255.011.
388. § 255.021(3), (6).
389. § 255.021(4).
390. § 251.110.
391. §§ 251.010 - .320.
392. § 251.050.
393. § 251.070.
394. § 251.180.
395. §§ 251.200, .210, .220.
396. § 251.250.
397. § 251.240.
398. §§ 251.260, .290, .300.
399. § 256.050.
400. § 256.060.
401. § 192.180.
402. §§ 315.240, .250.
403. § 386.250.
404. § 393.170.
405. §§ 393.110, .140(2).
406. § 393.150.
407. § 393.190.
408. §§ 393.260, .270.
409. Mo. Const. Art. IV, § 40(a).
410. § 252.030.
411. Mo. Const. Art IV, § 45.
412. § 252.210.
413. § 252.220.
414. § 252.150. **Cf.** § 252.200, making it a misdemeanor to obstruct the free passage of fish in any watercourse.
415. § 253.035.
416. § 253.090.
417. § 253.080.
418. § 258.010.
419. § 258.060.
420. § 258.040.
421. R.S. Mo. 1959, Chapter 306

a1. S.B. No. 311, 75th General Assembly
a2. § 278.280
a3. § 278.245
a4. § 70.210
a5. S.B. No. 184, 75th General Assembly
a6. S.B. No. 245, 75th General Assembly
a7. S.B. No. 18, 75th General Assembly
a8. S.B. No. 58, 75th General Assembly
a9. S.B. No. 194, 75th General Assembly
a10. § 258.310
a11. § 258.320

STATE OF MONTANA



BACKGROUND

The public policy of the state is to promote the conservation, development, and beneficial use of the state's water resources to secure maximum economic and social prosperity for its citizens.

MONTANA'S BASIC WATER LAWS

Appropriation Doctrine Recognized

The basic water law recognized in Montana is the prior appropriation doctrine. This doctrine is a "time-use" doctrine in which the concept of "first in time, first in right" is the principle criteria for determining or recognizing the relative status of alleged water rights. The acceptance and development of the appropriation doctrine rather than the riparian doctrine was due to first, the particular type of frontier settlement (mining and ranching) which occurred in Montana, and secondly, that most of the land was public domain.

The appropriation doctrine was recognized in the first water-right decision of the Montana Supreme Court in 1869.[1] Only five years later the U. S. Supreme Court acknowledged the unsuitability of the riparian doctrine, particularly to the use of mining on the public domain, when in affirming a decision of the Territorial Supreme Court of Montana it stated:[2]

> "The first appropriator who subjects the property to use, or takes the necessary steps for that purpose, is regarded, except as against the government, as the source of title in all controversies relating to the property."

MONTANA WATER LAWS AND PROGRAMS

Ownership

No person owns water in Montana. Rather, the state has ownership of water by virtue of the state constitution[3] (which holds that the use of water is a public use) and by the opinion of the Montana Supreme Court.[4] An individual has (owns) the right to use the water so long as he does not infringe on rights of prior appropriation.

---

[1] Caruthers v. Pemberton, 1 Mont. 111, 117, (1869)

[2] Atchinson v. Peterson, 87 U.S. 507, 510-513 (1874)

[3] Mont. Const. art. III, sect. 15.

[4] Galahan V. Lewis, 105 Mont. 294, 300, 72 P 2d 1018 (1937)

Acquisition of Water Rights

The principal method of acquiring a water right in Montana is by appropriation. The nature of the appropriation procedure differs for adjudicated and unadjudicated streams.

1. Appropriation from Adjudicated Streams

The revised Codes of Montana (R.C.M.) 1947, Title 89-829 through 838 spells out the procedure for appropriation of water of adjudicated streams. An appropriator shall:

(1) Employ a competent engineer to survey the area and means of conducting water from its source to place of intended use.

(2) Have aerial photographs and drawings thereon to show the course of the intended diversion or location of intended impoundment.

(3) File with the Clerk of the Court in the county of appropriation a petition which includes:
   (a) the amount of water sought by appropriation,
   (b) a description of the watercourse or body from which water is intended to be appropriated,
   (c) a description of the means of diversion or size, location, and manner of construction if a reservoir is intended,
   (d) the engineers survey and aerial photographs,
   (e) a declaration by the appropriator that the rights sought shall be subject to and bound by any decree theretofore rendered adjudicating the waters or any body to which the waters may be tributary.

(4) Name all others who have or appear to have rights in the source of supply as defendants in the appropriation proceeding.

When this procedure is completed, a summons and trial follows which normally results in a decree. The court shall in every case, if an appropriation be awarded plaintiff, provide that the same shall be subject to all adjudicated rights which are prior in time to plaintiff's rights, and the plaintiff shall be bound by the terms of any prior decrees with respect to water rights in the proper order of his priority as if he had been a party to the decree originally.[5]

2. Appropriation from Unadjudicated Streams

The appropriation of water from an unadjudicated stream in Montana is similar to the procedure for adjudicated streams but **does not require litigation.** The procedure requires:[6]

(1) Posting of notice in a conspicuous place at the point of intended diversion, stating:
   (a) quantity of water claimed,
   (b) use for which water is claimed and place of use,
   (c) description of means of diversion,
   (d) date of appropriation,
   (e) name of appropriator.

(2) Filing, within 20 days after date of appropriation, of a notice of appropriation with the county clerk, including in addition to the posted notice:
   (a) name and description of the stream,
   (b) description of point of diversion with reference to a permanent monument or natural marker and,
   (c) verification by affidavit of the appropriator that faces of the notice are true.

Size of Water Right

A point often misunderstood concerning water rights is that the amount of water claimed in an appropriation is not necessarily the amount to which the appropriator has a right. **THE AMOUNT OF WATER BENEFICIALLY USED DETERMINES THE SIZE OF THE RIGHT.** In this respect the court has said:

> "The rights of appropriators of water may not be measured entirely by what they claimed in their notices of appropriation, but must be measured by their beneficial use thereof over reasonable periods;..."[7]

A water right in Montana may be lost in two ways, abandonment and adverse use. Both are questions of fact and are determined as such.

1. Abandonment

> Abandonment of a water right is a voluntary act, and to constitute it there must be a concurrence of act and intent--the relinquishment of possession and the intent not to resume it for a beneficial use--neither alone being sufficient to bring about its abandonment.[8]

---

5 89-832, R.C.M., 1947

6 89-810, R.C.M., 1947

7 Irion v. Hyde, 107 Mont. 84, at 95, 81 Pac., 2d, 353, (1938)

8 Thomas v. Bull 66 Mont. 161, at 166, 213 Pac. 597. See also Osnes Livestock Co. v. Warren, 103 Mont. 284, at 294, 62 Pac. 2d, 206.

2. Adverse Use

Adverse use or prescription is the open, notorious, exclusive, adverse, continuous and uninterrupted use of water by a party other than that claiming the water. In order to acquire a water right by adverse use or prescription the proof must show all the following elements: That the use has been continuous for five years, exclusive, open, under a claim of right, hostile, and an invasion of another's rights which the latter had a chance to prevent.[9]

The use of the water with permission negates the possibility of adverse use.

The claim of adverse use of a water right cannot be initiated until the owner of the superior right is deprived of the benefit of its use in such a substantial manner as to notify him that his rights are being invaded; mere use of the water during the statutory period alone is not sufficient, but it must appear that during such entire period an action could have been maintained against the claimant by the party against whom it is made.[10]

Official Measurement of Water

The legal standard for the measurement of water in Montana is the cubic foot per second of time.[11] A cubic foot of water equals 7.48 gallons per second. Since many water rights in the past were granted in miner's inches the law provides the following conversion or equivalent factors.[12]

100 miner's inches = 2-1/2 cubic feet per second
200 miner's inches = 5 cubic feet per second

GROUND WATER LAW

Montana's ground water code is administered by the Montana Water Resources Board. The principle provisions of this code, which have yet to be tested in court are itemized below as contained in Title 89 of the Revised Codes of Montana.

1. Rights to Use (89-2912)

The application of ground water to a beneficial use prior to January 1, 1962 is hereby recognized as a water right.

Rights to surface water where the date of appropriation precedes January 1, 1962, shall take priority over all prior or subsequent ground water rights.

Beneficial use shall be the extent and limit of the appropriative right.

Appropriative rights shall relate only to quantities of water for beneficial uses and not to water levels, means of use, or ease of withdrawal; and appropriative rights shall not apply to minimal household use as provided in Section 89-2915.

2. Filing, Notices of Appropriation, and Completion (89-2913)

Notices of ground water appropriation and completion are to be filed by the appropriator with county clerks on forms provided to the clerks by the Montana Water Resources Board.

3. Controlled Ground Water Areas (89-2914)

Designation or modification of an area of controlled ground water use may be proposed to the board by the board's director or by petition signed by at least twenty (20) or one-fourth (whichever is the lesser number) of the users of ground water in a ground water area wherein there is alleged to be factual data showing that:

(1) withdrawals exceed recharge,

(2) excessive withdrawals are likely to occur in the near future because of consistent and significant increases in withdrawals,

(3) significant disputes regarding priority of rights, amount of water in use by appropriators, or priority of type of use are in progress within the ground area.

NOTE: Ground water area is defined in 89-2911 as an area which, as nearly as known facts permit, may be designated so as to inclose a single and distinct body of ground water...

Following a proposal for a controlled ground water area, the board must hold hearings to consider evidence and information and after the hearings make written findings and an order as to the proposed controlled area.

4. Controlled Area Permit (89-2918)

A permit from the Montana Water Resources Board is required in order to appropriate ground water from a controlled area.

WATER DISTRICTS IN MONTANA

Montana law provides for four principal types of "districts" that may be established for the general purpose of studying, planning, and promoting the development and conservation of water and related land resources

---

9 OP. Cit. Irion v. Hyde
10 Ibid.,
11 89-817, R.C.M., 1947
12 89-818, R.C.M., 1947

and providing flood control. These are (1) County water and sewer districts, (2) Drainage districts, (3) Irrigation districts, and (4) State soil and water conservation districts.

In addition to districts there are two "corporate" types of organizations which may be formed for water development in Montana. These are Water Users Associations and Canal Companies. Most irrigation development in Montana has been accomplished through these private types of development. The Montana Water Resources Board develops and markets water through the Water Users Associations.

Finally, there has been substantial irrigation and water development in Montana through the U.S. Bureau of Reclamation.

County Water and Sewer Districts (16-4501 thru 4534, R.C.M., 1947)

County water districts in Montana may be formed by any combination of counties or cities or portions of those political divisions, including unincorporated territory, having not less than 200 inhabitants. Petitions to form a county water district must be signed by 10 percent of the registered voters in the proposed district. Any district incorporated has the power to acquire, operate and maintain water rights, water and sewerworks and other rights useful or necessary for the storage, conservation, supply, and conveyance of water useful for purposes beneficial to the district. Incorporated districts may accept assistance from public and private sources, borrow money, incur bonded indebtedness, and levy taxes.

Drainage Districts (89-2201 thru 2825 R.C.M., 1947)

Drainage districts in Montana are formed for particular projects. Once created, however, they may be expanded. Drainage districts are under the jurisdiction of the judge of the district court who may create the drainage district and appoint the commissioners. Drainage districts may be created to (1) construct drains, ditches, levees, across the lands of others or to straighten, or otherwise alter any natural stream or watercourse not navigable, for the promotion of public health or welfare or (2) maintain and keep in repair such works previously constructed. Drainage districts have the power of taxation -- they may also assess lands that have benefited from the districts projects.

Irrigation Districts (89-1201 thru 2128)

Irrigation districts in Montana may be formed to cooperate with the United States under federal reclamation laws for the purposes of constructing irrigation works (including drainage) and purchasing, extending, and maintaining constructed works. Sixty (60) percent of the landholders whose land is susceptible to irrigation from the district and whose title or evidence constitutes sixty (60) percent of said land must make the petition for a district to the district court. A copy of the petition and all other associated maps and papers filed must also be filed with the Montana Water Resources Board. At the time of the filing in the district court the board must present reports on (1) engineering features involved, (2) possibilities for water supplies, and (3) a copy of the decree of the district court showing any adjudicated water rights involved.

State Soil and Water Conservation Districts (76-101 thru 219)

Any ten (10) occupiers of land lying within the limits of the area proposed to become a district may petition the state soil conservation committee to form a district. A state soil and water conservation district is body corporate and politic governed by five supervisors appropriately elected. The districts are coordinated through the State Soil Conservation Committee.

State soil and water districts are empowered to develop comprehensive district plans for soil and water conservation; flood control; to undertake demonstration projects; to construct, improve, and operate structures as may be necessary for authorized operations; and to conduct research on soil erosion, floods, and sedimentation to illustrate a few of the activities and reasons why soil and water districts may be formed.

FLOOD CONTROL

Counties and municipalities may individually or jointly engage in flood control and prevention work through their governing bodies or through and with the cooperation of an appropriate water district. For purposes of flood control and prevention projects typical powers such as property acquisition and condemnation, acceptance of aid, special assessments, and contractual indebtedness are specifically granted counties and municipalities. Montana flood law explicitly contemplates that the federal government may assume actual direction and the doing of the work of a flood project.[13]

---

[13] 89-3301-3313, R.C.M., 1947

WEATHER MODIFICATION

Attempts to change or control weather by artificial methods in Montana are regulated by the Water Resources Board. Basic elements of the weather modification program as stipulated in Montana law are as follows:

License and Permit Required (89-313)

No one may engage in weather modification activity in Montana except under and in accordance with a license and permit issued by the Water Resources Board.

Exemption from Fee Requirement (89-314)

The Board may provide by rule to exempt from license and permit fees weather modification activity of certain types and under certain conditions including:

(1) state and federal research, including colleges and universities.
(2) emergency operations against fire, frost, sleet, or fog.

Licensee Qualifications (89-315)

The Board may by rule set the procedure and conditions for issuing a license to applicants. Applicants must demonstrate competence in meteorology to the satisfaction of the Board. If the applicant is an organization the requirements must be met by the individual in charge of the operation.

Terms of License and Fee (89-316, 89-317)

(1) a weather modification license expires at the end of the calendar year of its issue.
(2) a fee of one hundred dollars ($100) shall be charged for a weather modification license.

Requirements for Permit (89-318)

Permits shall be issued in accordance with procedures and subject to conditions the Board may establish only:

(1) if the applicant is licensed pursuant to this act;
(2) if sufficient notice of intention and proof of publication is filed as required in 89-322, R.C.M., 1947.
(3) if applicant furnishes proof of financial responsibility in an amount determined by the Board as required in 89-323, R.C.M., 1947.
(4) if the permit fee is paid.
(5) if the Board has determined that the weather modification activity is for the general welfare and public good.
(6) if the Board has held an open public hearing in the area to be affected as to such issuance.

Separate Permit for Each Operation (89-319)

A separate permit is required for each weather modification operation. An operation is defined as the activity producing or attempting to produce a certain modifying effect within one geographical area over one continuing time interval not exceeding one year.

Permit Fee (89-324)

The fee for a weather modification permit shall be one and one-half (1-1/2) percent of the estimated cost of the operation.

COMPACTS AND TREATIES

Waterways Treaty (1909)

According to the Waterways Treaty, signed in 1910, by the United States and Great Britain, the waters of the St. Mary and Milk Rivers and the international tributaries of the Milk River are to be divided equally between the United States (Montana) and Canada. In making such equal apportionment, however, more than half of the water may be taken from one river and less than half from the other by either country so as to afford a more beneficial use of each. During the irrigation season, the United States is entitled to a prior appropriation of three-fourths of the natural flow of the Milk River and Canada is entitled to three-fourths of the natural flow of the St. Mary River. The principal international tributaries affecting Montana are Sage Creek (North of Havre), Lodge and Battle Creeks (North of Chinook), and Frenchman Creek (North of Saco).

Yellowstone River Compact (1950)

The states of Montana, North Dakota, and Wyoming are members to the Yellowstone River Compact, ratified in December 1950. This compact provides the means for the allocation and appropriation of water from the Yellowstone River System. The principle terms and provisions of the compact are specified as follows:

(1) The compact is administered by a commission consisting of one representative from each state and the U.S. Geological Survey.
(2) The area of the Yellowstone Basin within Yellowstone National Park is exempt from the provisions of the compact.
(3) Water rights on the Yellowstone River and its tributaries which were perfected prior to 1950

are considered vested and are not subject to the terms of the compact.

(4) No water shall be diverted outside the Yellowstone Basin without unanimous consent of the signatory states.

(5) As to Montana and Wyoming the unused and unappropriated waters of the major interstate Yellowstone River tributaries are to be apportioned as follows:

Clarks Fork of the Yellowstone
- To Wyoming 60%
- To Montana 40%

Big Horn River (Excluding the Little Big Horn)
- To Wyoming 80%
- To Montana 20%

Tongue River
- To Wyoming 40%
- To Montana 60%

Powder River (including the Little Powder River)
- To Wyoming 42%
- To Montana 58%

WATER POLLUTION

The Montana State Board of Health and the State Water Pollution Council are responsible for administering the water pollution laws of the state. The Board of Health has supervision over all state waters which are directly or indirectly being used as a public water supply. However, it is the Water Pollution Council which is responsible for establishing and modifying the classification of water in accordance with present and future beneficial uses. The council is responsible for formulating a program for pollution abatement.

STATE WATER PROGRAMS

Bureau of Mines and Geology

1. Groundwater Research

A cooperative program carried on with the U.S. Geological Survey and the Water Resources Research Center at Montana State University. The program is designed to provide extensive information (e.g. location, quantity, development) on the states ground waters. Completed studies are published by counties and/or ground water areas.

Board of Health – Water Pollution Council

1. Water Classification

Basic functions of this program are the appraisal of water, establishment of standards, and water classification. The program is designed to coincide with federal activity in water pollution.

State Soil Conservation Committee

1. District Planning Assistance

A program of the State Committee to prepare and disseminate planning guidelines to state soil and water conservation districts.

2. Watershed Planning Assistance

A financial program through which funds from the State Soil Conservation Committee may be transferred to the Soil Conservation Service for application to watershed planning and development including Public Law 566 augmentation.

Water Resources Board

1. Flood Plain Information Services

The Water Resources Board acts as the Montana liaison in the Flood Plain Management Services program of the Corps of Engineers. Through this program municipalities may request a detailed study providing among other things flood hazard information, flood plain delineation, and zoning suggestions for reducing flood damages.

2. Ground Water Administration

The ground water program of the Water Resources Board may be summarized as follows: (1) Compiling and cataloging information on ground water appropriations and ground water logs. (2) Controlled ground water area administration. (3) Settling any disputes that arise over ground water, whether or not the dispute is in a controlled area. (4) Investigating, when called upon to do so, the capping and valving of flowing wells as prescribed by law.

3. Project Construction and Operation

The Water Resources Board engages in construction of water development projects. The Board's program enables it to investigate proposed

projects and when feasible to either do the construction itself or let contracts for the construction. The Board markets the water from its projects through Water Users Associations whose purchases are applied towards repayment of project costs. Operation and maintenance costs of projects may also be recovered through contracts with water purchases.

4. State Water Planning

The Water Resources Board is responsible for the state's comprehensive water plan. The Board's planning program also involves representing Montana in interstate water planning and coordinating local, state and federal water development and planning.

5. *Stream Measurement*

A cooperative program for stream measurement with the U.S. Geological Survey is carried on by the Board. Information from gaging stations operated by both agencies is coordinated to provide a broad coverage of the state.

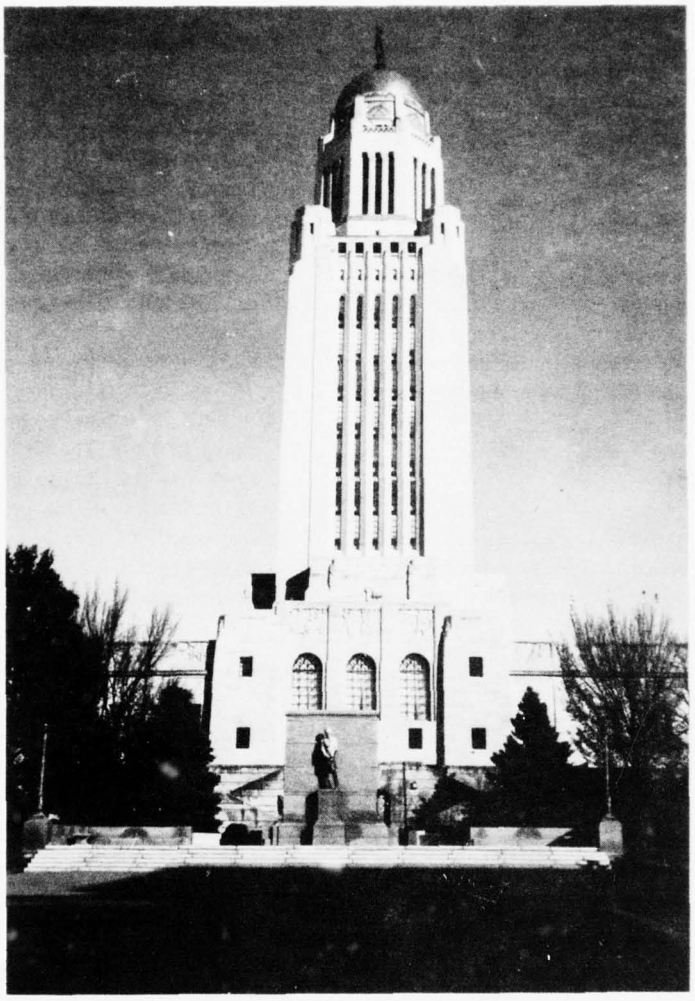
6. Water Resources Survey

A county-by-county survey of water claims, water systems, and irrigated lands has been carried on for 25 years. Results are published in a County Water Resources Survey book as each county is completed. Included are drainage maps, irrigation maps, the location of dams, reservoirs, and canals, and a report on the status of adjudicated waters in each county.

7. Weather Modification Regulation

This is a new program inaugurated by the Board in 1967. The purpose of the program is to allow the state to regulate weather modification in the interest of the general public. In order to accomplish this, the program calls for public hearings before the Board can issue a permit for a weather modification operation.

STATE OF NEBRASKA



STATE LAW, HISTORY, AND BACKGROUND

At the time that Nebraska became a State, in 1867, the common-law riparian doctrine of water rights was in effect. As the development of the State progressed the need for irrigation to sustain the economy in its western, semiarid portion became apparent. It was soon found that the irrigation of substantial areas of land could not be accomplished under the doctrine because of its limitations. An irrigation act passed by the legislature in 1889 abrogated the riparian doctrine and established the doctrine of prior appropriation with respect to the waters of the natural streams. The two doctrines have existed concurrently since then, but all water rights of record are based on the appropriation theory. The legislation had the effect of preventing the acquisition of riparian rights after its adoption. It did not abolish those already vested.

The 1895 Legislature enacted a comprehensive water rights law by adding to the 1889 Act, establishing procedures for the administration of the act and creating a state agency, the State Board of Irrigation, to administer it. The 1895 Act was patterned after the water laws of Wyoming and Colorado. It is similar in many respects to the laws of most of the other western states which have water laws based on the appropriation doctrine.

It has been state policy, except in recent years, to rely on local organizations or entities to plan, finance, construct and operate water resource developments. Legislation enacted in 1877 provided for the exercise of eminent domain for works of internal improvement. In 1895 the legislature enacted the Irrigation District Act under which most of the project-type irrigation development has occurred. Subsequent legislation provides several additional types of special improvement districts to develop and control the state's water resources, such as

drainage districts, public power and/or irrigation districts, reclamation districts, watershed districts, soil and water conservation districts, rural water districts and others.

CONSTITUTIONAL PROVISIONS

The Nebraska Constitution, which was adopted in 1875, was silent with respect to water rights. Among the Miscellaneous amendments adopted as a result of the 1920 Constitutional Convention are the following with respect to the public waters:

"The necessity of water for domestic use and for irrigation purposes in the State of Nebraska is hereby declared to be a natural want". (Sec. 4, Article XV)

"The use of the water of every natural stream within the State of Nebraska is hereby dedicated to the people of the state for beneficial purposes, subject to the provisions of the following section." (Sec. 5, Article XV)

"The right to divert the unappropriated waters of every natural stream for beneficial use shall never be denied except when such denial is demanded by the public interest. Priority of appropriation shall give the better right as between those using the water for the same purpose, but when the waters of any natural stream are not sufficient for the use of all those desiring to use the same, those using the water for domestic purposes shall have preference over those claiming it for any other purpose, and those using the water for agricultural purposes shall have the preference over those using the same for manufacturing purposes; provided, no inferior right to the use of the waters of this state shall be acquired by a superior right without just compensation therefor to the inferior user." (Sec. 6, Article XV)

"The use of the waters of the state for power purposes shall be deemed a public use and shall never be alienated, but may be leased or otherwise developed as by law prescribed." (Sec. 7, Article XV)

STATUTES

The water rights statutes are contained in Chapter 46, Article 2, Reissue Revised Statutes of Nebraska, 1943. They provide a complete procedure for appropriating the waters of the natural streams for all useful purposes. The Department of Water Resources, which is the successor to the State Board of Irrigation and its successors, has jurisdiction over all matters pertaining to water rights for irrigation, power or other useful purposes.

A water appropriation from a natural stream or a reservoir may be initiated only by the filing of an application with the Department of Water Resources. If there is unappropriated water in the source of supply, the application must be approved, subject to certain limitations and conditions imposed by the Department as authorized by statute. Start of construction, completion of the project and application of the water to the beneficial use for which the appropriation was granted must be accomplished within the time limited by the department in order to perfect the appropriation. The department has the power to cancel an appropriation following a hearing where a showing has been made of more than three years of non-use. A water appropriation for irrigation is appurtenant to the land and its place of use cannot be changed. An appropriation of water may not be used for any purpose other than that for which it was granted.

POWER LEASE

Within six months after the approval of an application for water power and before placing the water to beneficial use, the applicant must enter into a contract with the state, through the Department of Water Resources, for leasing the use of the water involved. Such lease shall not run for more than 50 years and the applicant shall pay into the state treasury annually, ten dollars for each 100 horsepower for all water so appropriated.

COURT DECISIONS

Numerous aspects of Nebraska's water laws have been tested in the State Supreme Court and in the Federal Courts. Some of the more important decisions are cited below.

1. The right of appropriation for irrigation purposes is limited to the water of natural streams of the state, and does not extend to waters in artificial drainage ditches. **Drainage District No. 1 v. Suburban Irrigation District**, 139 Neb. 460, 298 N.W. 131 (1941).
2. Riparian owner damaged by appropriation may recover only actual damages sustained, **McCook Irrigation and Power Co. v. Crews**, 70 Neb. 109, 96 N.W. 996 (1903). In a subsequent case in the State Supreme Court, **Wasserburger v. Coffee**, 180 Neb. 149, 141 N.W. 2d 738 (1966), the court held that defendant appropriator could be enjoined from interfering with downstream riparian owners. In this determination it is relevant whether or not the appropriator is a district conferring public benefits. In **Kirk v. State Board of Irrigation**, 90 Neb. 627, 131 N.W. 167 (1912), the Nebraska Supreme Court held that riparian owners cannot appropriate water of running streams without consent of state.
3. Trans-Basin Diversions. Certain statutes, Sec. 46-206 and 46-265, R.R.S., Neb. 1943, were interpreted as limiting the location and construction of

irrigation canals and ditches as well as the land irrigated by same to the basin containing the source of the water used, and requiring that all unused waters shall be returned to the stream from which diverted. **Osterman v. Central Neb. Pub. Power and Irr. Dist.**, 131 Neb. 356, 268 N.W. 334 (1936). The court retreated from its position when it held in **Ainsworth Irr. Dist. v. Bejot**, 170 Neb. 257, 102 N.W. 2d 416 (1960) that a diversion from the Snake River to the Niobrara River was permissible by balancing the equities.

In **Metropolitan Utilities Dist. v. Merritt Beach Co.**, 179 Neb. 783, 140 N.W. 2d 626 (1966) the court permitted a trans-basin diversion of ground water (which affected surface water) from wells on the bank of the Platte River and on an adjacent island of Sarpy County, to the City of Omaha.

4. Reuse of Water. In **U.S. v. Tilley**, 124 f 2d 850 (8th Cir. 1941), the court held that, under Nebraska law, an appropriator of public waters for use under an irrigation project or canal is entitled to collect seepage waters upon any part of the land under such project or canal, by means of drains or ditches and to apply them to further beneficial use upon any of the land under such project or canal, and the scope of the United States appropriative rights in connection with a Federal reclamation project are the same, under the Nebraska law, as those in connection with any irrigation canal, and includes the right, by proper means, to collect seepage waters from any part of the land and to re-apply them upon other lands within the project and under the appropriation.

SUMMARY OF WATER RIGHTS LAWS

In this state, the United States, or any other entity or person, may acquire a water appropriation only by applying to the Department of Water Resources for a permit to appropriate water. If there is unappropriated water in the source of supply and the granting of the appropriation is not detrimental to the public welfare, the department shall approve the application. The applicant must start and complete construction, and apply the water to beneficial use in accordance with the limitations and conditions contained in the approved application in order to perfect the appropriation. Continuous beneficial use of water must be made to keep the appropriation in full force and effect. A failure to make beneficial use of a perfected appropriation for a period more than three years can result in its forfeiture and cancellation following a public hearing.

A water appropriation takes a priority as of the date of filing the application. The first in time is the first in right. A water appropriation for irrigation is appurtenant to the land and an appropriation for power or other useful purpose attaches to the site for which granted. The place of use and character of use cannot be changed. Water may be appropriated and diverted from any natural stream and stored in a reservoir for subsequent beneficial uses. Nebraska law makes no provision for the appropriation of ground water.

The use of water for domestic purposes has a preference over use for other purposes and the use for irrigation has a preference over use for power or manufacturing. A prior right for an inferior purpose may be interfered with by a junior right for a superior purpose upon payment of just compensation to the prior appropriator.

WATER REGULATION

The Department of Water Resources has jurisdiction over all matters pertaining to water rights for all useful purposes, as provided in Section 46-209 and 46-210, R.R.S., 1943, which follow:

"**46-209. Department of Water Resources; jurisdiction; hearings; orders.** The Department of Water Resources is given jurisdiction over all matters pertaining to water rights for irrigation, power or other useful purposes, and drainage, except as such jurisdiction is specifically limited by statute. Such department shall adopt rules governing matters coming before it. It may refuse to allow any water to be used by claimants until their rights have been determined and made of record. It may request information relative to irrigation, water power, and drainage works from any and all county, irrigation, power, or drainage officers and from any other person or persons. It shall have public hearings on complaints, petitions, or applications in connection with any of the above matters. Such hearings may be had at the time and place designated by the department. The department shall have power to certify to official acts, compel attendance of witnesses, take testimony by deposition as in suits at law, to examine books, papers, documents, and records of any county, party, or parties interested in any of the matters hereinbefore mentioned, or have such examinations made by its qualified representative, and shall make and preserve a true and complete transcript of its proceedings and hearings. Upon any hearing, the department shall receive any evidence relevant to the matter under investigation and the burden of proof shall be upon the person making the complaint, petition, and application. After such hearing and investigation, the department shall render a decision in the premises in writing and shall issue such order or orders duly certified as it may deem necessary.

46-210. Department of Water Resources; decisions; appeal to Supreme Court; time; procedure. If any county, party or parties interested in irrigation, water power, highways or drainage work affected thereby shall be dissatisfied with the decision or with any

order adopted, such dissatisfied county, party or parties may institute proceedings in the Supreme Court of Nebraska to reverse, vacate or modify the order complained of. The procedure to obtain such reversal, modification or vacation of any such decision or order upon which a hearing has been had before the Department of Water Resources shall be governed by the same provisions in force with reference to appeals and error proceedings from the district court to the Supreme Court of Nebraska. The evidence presented before the department as reported by its official stenographer and reduced to writing, together with a transcript of the record and pleadings upon which the decision is based, duly certified in such case under the seal of the department shall constitute the complete record and the evidence upon which the case shall be presented to the appellate court; PROVIDED, the time for perfecting such appeal shall be limited to one month after the rendition of such decision or order, and the Supreme Court shall advance such appeal to the head of its docket."

For the purpose of administering, or regulating the use of, the available water supply, the state is divided into two water divisions. Each of the divisions is subdivided into six water districts following major watershed boundaries. A division engineer is the chief administrator in each division and he directs the work of local water commissioners, of which there are one or more in each water district. During times of water scarcity it is the responsibility of these officials to regulate diversions from the natural streams in accordance with the priorities and amounts of the water appropriations of record, under the general direction of the Director of Water Resources.

The Department of Water Resources is charged with the duty of measuring the quantity of water flowing in the several streams of the state and making a record thereof; and of making such discharge measurements as may be necessary in considering applications for water appropriations and in connection with controversies which arise regarding the distribution of water. The basic stream gaging program is conducted under a 50-50 matching of services agreement with the U. S. Geological Survey.

All persons owning or controlling any canal or reservoir which is used for diverting or storing water may be required by the Department of Water Resources to construct and maintain headgates, diversion works and measuring devices, including water stage recorders, of a design approved by the department. No person owning or controlling a canal or reservoir shall willfully open, close, or change any headgate or diverting facility without authority from the Department of Water Resources.

Any person intending to construct a dam for reservoir purposes or across the channel of a natural stream, except certain small dams for flood or erosion control, or for livestock water, must submit the plan of the same to the Department of Water Resources for examination and approval before starting construction. The law provides that the department shall make annual inspections of dams with impounding capacities of ten acre-feet or more, and shall require the owner to make necessary repairs. A Copy of Chapter 46, R.R.S., 1943, General Provisions Governing the Appropriation and Use of Water of Natural Streams (Article 2), and the State's ground water laws (Article 6), is available as Appendix A and Appendix B respectively to the State's publication with coverage similar to that herein.

INTERSTATE REGULATION

The waters of the South Platte River downstream from the west boundary of Washington County, Colorado, are apportioned by the South Platte River Compact between Colorado and Nebraska which became effective on March 8, 1926. The waters of the Republican River Basin are apportioned among the States of Colorado, Kansas and Nebraska by the Republican River Compact which became effective May 26, 1943.

The waters of the North Platte River Basin are allocated among the States of Colorado, Wyoming and Nebraska by a decree of the Supreme Court of the United States dated October 8, 1945. It was modified by the court in 1953 pursuant to a stipulation of the parties.

The two compacts and the decree are administered by the officials of the states who are responsible for the administration of the water laws of their respective states.

A compact with South Dakota, allocating the waters of the Niobrara River tributaries common to South Dakota and Nebraska, and the Ponca Creek, was ratified by the Legislatures of the signatory states in 1961, and a compact with Wyoming with respect to the waters of the Upper Niobrara River (above Agate, Nebraska) was ratified by the legislatures of Wyoming and Nebraska in 1963. The former compact remains for final action by the Congress and thus is not yet effective, but the Upper Niobrara River Compact was approved by the Congress and became law late in 1969.

GROUND WATER

Nebraska statutes make no provision for regulating the use of ground water, other than the power given to locally organized ground water conservation districts to adopt rules and regulations which may provide for the imposition of restrictions of use within the district boundaries. The following cases established a ground water rule of reasonable use with correlative sharing in time of shortage. **Olson v. City of Wahoo**, 124 Neb. 802, 248 N.W. 304 (1933). **Luchsinger v. Loup River Public Power Dist.**, 140 Neb. 179, 299 N.W. 549 (1941).

Present statutes require the registration in the Department of Water Resources of all water wells in the state, except domestic wells, within thirty days after their completion. In registering a well, the owner and the driller are required to furnish a log of the same, the dimensions of the well, its location by legal description, the yield, static head, drawdown, and other required data. There is also a well spacing law which prohibits the drilling of an irrigation well within 600 feet of an existing irrigation well on the property of another, or within 1,000 feet of a registered municipal or industrial well. The law also prohibits the drilling of an industrial well or well of another municipality within 1,000 feet of any registered irrigation, industrial or municipal well. However, the Department of Water Resources may grant a permit, upon special application therefor, for closer spacing if conditions warrant it.

A special act, Sec. 46-638 to 46-655, R.S. Supp., 1967, authorizes the Director of Water Resources to grant permits to cities, villages and municipal corporations supplying water to cities and villages to withdraw, transport and use ground water. Although such permits are not mandatory under the law, an applicant which "desires to avail itself of the provisions of the Act" may apply for such a permit. A utility or municipality may withdraw, transport and use ground water without any permit.

PUBLIC WATER SUPPLIES AND WATER POLLUTION CONTROL

The construction and operation of public water supply systems and systems for the disposal of wastes from municipalities and from industrial installations are regulated by the State Department of Health, through the Bureau of Environmental Health Services and the State Water Pollution Control Council. (See Articles 26 and 30, Chapter 71, R. R. S., 1943.)

WATER RESOURCES DEVELOPMENT

Historically, water resources development in Nebraska has been accomplished by individual enterprise or through local districts created in accordance with enabling legislation. Early project-type irrigation developments were generally constructed by irrigation districts organized under the Irrigation District Act which was passed in 1895. However, a substantial amount of the development was done by mutual irrigation companies, nearly all of which have since reorganized under the district law. In 1933 the enabling act to permit the formation of public power and/or irrigation districts was passed to provide a quick way to form a non-taxing agency which could take advantage of Federal financing that was available under public works programs of that period. The Reclamation District Act, passed in 1947, permits the formation of conservancy-type districts for the development of water projects. These and special purpose districts which deal with other aspects of water development and control with statutory references are listed as follows:

DISTRICTS WITH TAXING POWERS

Irrigation Districts

Under the Irrigation District Act, Chapter 46, Article 1, R. R. S., Neb., 1943, a district may be initiated by a majority of the landowners representing a majority of the lands in a proposed district filing a petition with the county board. If the county board, following a hearing at which the Director of Water Resources reports on the proposal, finds favorably, it holds an election on the proposition. Upon the favorable vote of a majority of those voting, the county board declares the district formed. An irrigation district, through its board of directors, is empowered to make surveys and develop plans, acquire water rights, lands and other property necessary for the construction, operation and maintenance of an irrigation system. It has the power of eminent domain, the power to levy taxes and collect tolls, to issue bonds, to enter into contracts with the United States for the construction of its irrigation facilities, and to do all other things necessary in the operation and maintenance of an irrigation project. There are now 44 irrigation districts embracing more than 600,000 acres of land.

Reclamation Districts

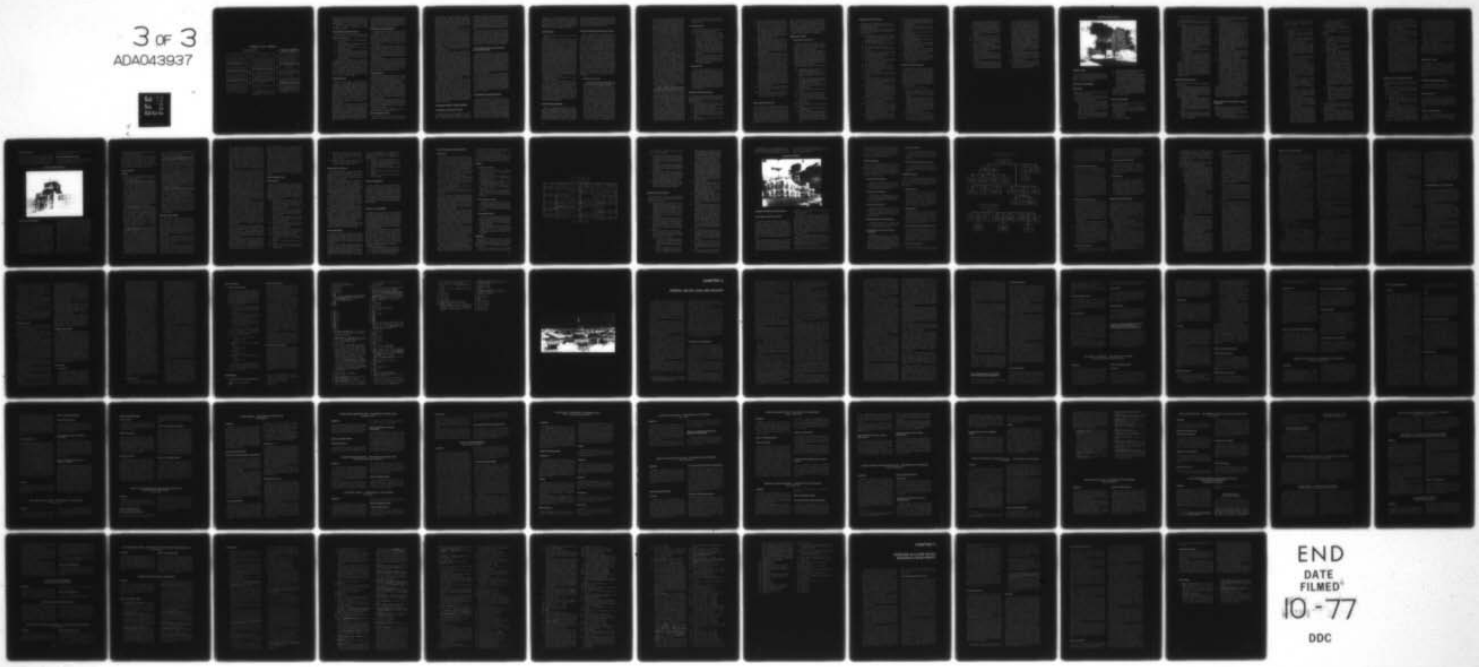
Under the Nebraska Reclamation Act, Chapter 46, Article 5, a district is formed if favorable action is taken, after a hearing, on a petition filed with the Department of Water Resources signed by the owners of not less than thirty percent of the acreage of the lands to be included in the district, exclusive of lands in cities and villages. If the electors within a reclamation district vote favorably upon the proposition of a tax levy, the board of directors may levy up to one mill on the dollar on all tangible property within the district for the promotion of water resources projects within the district. After a district project is completed and in operation, the district may increase the levy to two mills, and to three mills under certain conditions, to assist in paying operation and maintenance costs of the project. An additional levy may be made on lands receiving benefits from ground water recharge by the project.

The board of directors has power to issue bonds to acquire water rights, construct, purchase or lease property and facilities necessary for irrigation, power, flood control, drainage, recreation, municipal water supply,

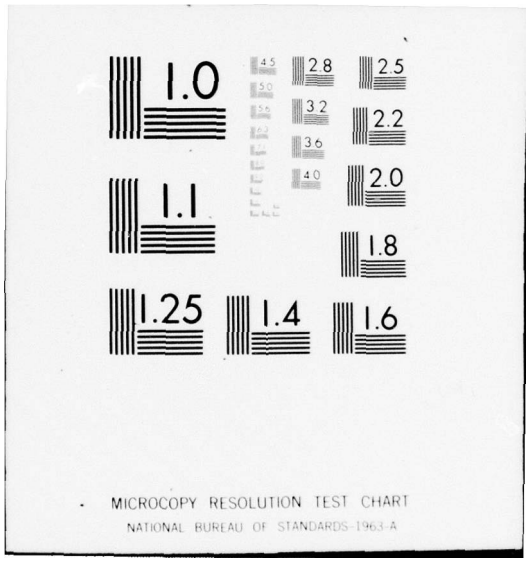
AD-A043 937 MISSOURI BASIN INTER-AGENCY COMMITTEE F/G 8/6
COMPREHENSIVE FRAMEWORK STUDY MISSOURI RIVER BASIN. VOLUME 3. A--ETC(U)
JUN 69

UNCLASSIFIED NL

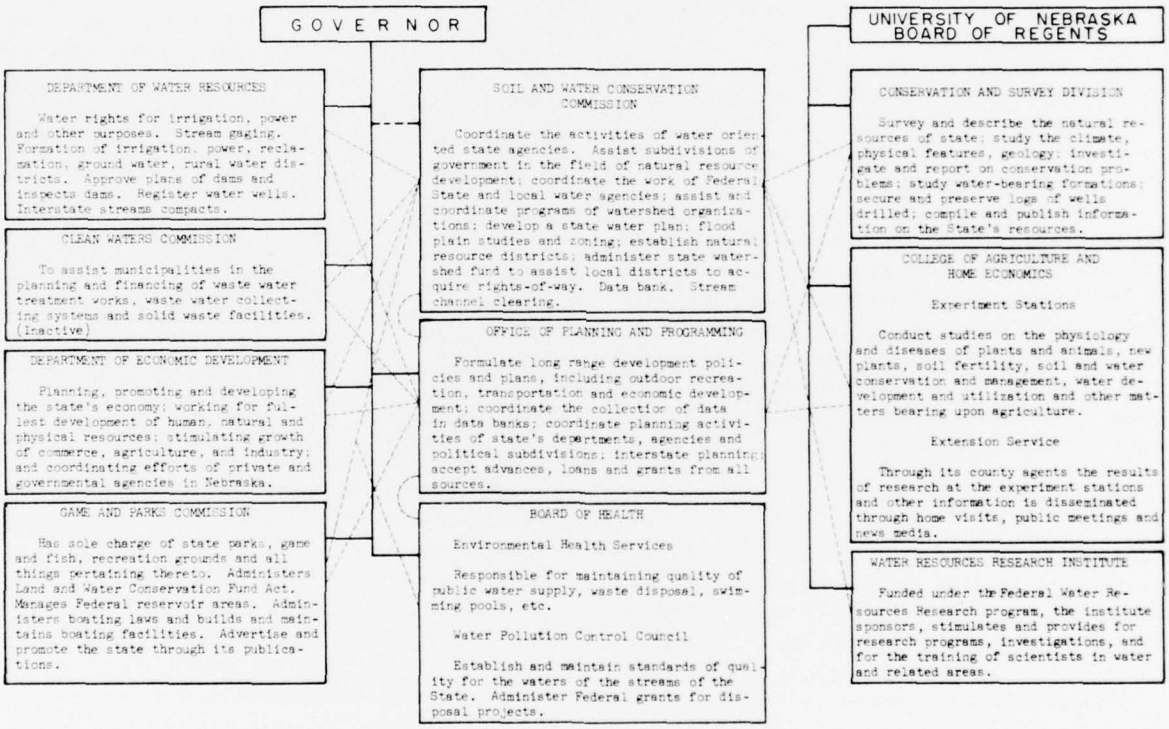
3 OF 3
ADA043937



END
DATE FILMED
10-77
DDC


1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6
6.3
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

NEBRASKA WATER AGENCIES



ground water recharge and other purposes. The board may enter into contracts with the United States and with irrigation districts and others for the construction, operation and maintenance of water control facilities and for the furnishing of water service. There are five reclamation districts containing 1,170,000 acres, of which 365,000 are irrigable.

Ground Water Conservation Districts

A ground water conservation district organized under Chapter 46, Article 6, R. R. S., Supp., 1967, has the following principle powers:

(a) To gather information concerning ground water conservation.
(b) Contract with private or public agencies engaged in ground water conservation.
(c) Disseminate information concerning ground water conservation.
(d) Adopt rules and regulations to ensure the proper conservation of ground water within the district.
(e) Levy a tax of not more than one mill on the dollar of assessed value of taxable real property within the district.

A ground water conservation district is initiated by the filing of a petition with the county board after the petitioners have received from the Conservation and Survey Division, the Soil and Water Conservation Commission and the Department of Water Resources, a hydrologic and geographic evaluation of the proposed boundaries of the district. At present there are two ground water conservation districts, each covering an entire county, exclusive of cities and villages.

Watershed Districts

Chapter 31, Article 8, R. R. S., 1943, provides for the formation of a watershed district. Such a district may be formed only in an area within which is located a city of the primary class (population 100,000 to 300,000). A watershed district is initiated by filing in the office of the county clerk a petition signed by a specified number of landowners. If the county board acts favorably upon the petition, after a hearing, and if no appeal is taken, the proposition is put to a vote of the electors of the proposed district. If a majority of the votes cast are favorable the county board enters an order declaring the district organized.

Such a district has powers to issue bonds, borrow money and levy a tax. The amount of the tax levy shall be sufficient to meet the amount of funds required for the district, but not to exceed three-fourths mills on the dollar upon the assessed valuation of all taxable property in the district. The district may cause plans to be developed for controlling erosion, for draining and reclaiming land and preventing flooding and other water damage to lands within the district. Such a district may enter into contracts with the United States, state agencies and local districts or agencies involved in water resources development and control. The Salt Valley Watershed District is organized and in operation under this act, the only one possible because of the limitation with respect to the inclusion of a city of the primary class.

Watershed Conservancy Districts

A watershed conservancy district may only be formed as a subdistrict of a soil and water conservation district as provided in Chapter 2, Article 15, R. R. S., 1943, for the purpose of developing and executing plans and programs relating to any phase for the conservation of water, water usage, flood prevention, flood control, erosion prevention and control of erosion, flood water and sediment damages.

A watershed conservancy district is initiated by the filing of a petition with the board of supervisors of the Soil and Water Conservation district within which the area is located. The board of supervisors approves or disapproves watershed formation after receiving recommendations from the Nebraska Soil and Water Conservation Commission.

The board of directors of a watershed conservancy district has the power to levy not to exceed two mills upon the dollar of the assessed valuation of all taxable property in the district, and the power of eminent domain to carry out the purposes of the district. There are 61 watershed conservancy districts in the state, organized primarily to sponsor P. L. 566 projects.

Drainage Districts

Drainage districts may be organized under a number of procedures as provided in Chapter 31, R. R. S., 1943. All types of such districts have the power to assess taxes on lands in the district in accordance with benefits.

A drainage district may be formed under Chapter 31, Article 3, by proceedings in District Court and under Chapter 31, Article 4, by proceedings before the county board with a vote of landowners. Sanitary and Improvement Districts in municipalities may be formed under Chapter 31, Article 5 and under Acts of 1947 and 1949, Chapter 31, Article 7. There are more than 200 drainage districts, and sanitary and improvement districts organized under these laws.

Drainage districts are organized to drain and protect land while sanitary and improvement districts are organized primarily to establish, maintain and construct water mains, sewers and disposal plants, and to dispose of drainage, waste and sewage.

Drainage may also be accomplished by county authorities under Chapter 31, Articles 1, 2 and 9.

Natural Resources Districts

Legislative Bill 1357 was passed in the 1969 session to accomplish a reorganization of existing soil and water

conservation districts, watershed conservancy districts, watershed districts, advisory watershed improvement boards, and watershed planning boards, having limited individual responsibilities, into larger districts of more comprehensive scope. The statutory law governing natural resources districts is in sections 2-3201 to 2-3261 (Supp. 1969) of the Nebraska Statutes.

According to the natural resources district law, by January 1, 1972, approximately 150 districts of the types mentioned are to be reorganized into between 25 and 50 natural resources districts, which will cover the entire State. The law specifies that the most important objective of choosing the locations for boundaries is to provide effective coordination, planning, development and general management of "common problem areas." Examples of "common problem areas" would include contiguous areas of lowering ground water tables, surface drainage in a common watershed, land treatment, and similar concerns.

These districts have an array of project authorities available for local people to apply in solving local resource problems. According to section 2-3229 of the Nebraska Statutes, these project authorities include: (1) erosion prevention and control, (2) prevention of damages from flood water and sediment, (3) flood prevention and control, (4) soil conservation, (5) water supply for any beneficial uses, (6) development, management, utilization and conservation of ground water and surface water, (7) pollution control, (8) solid waste disposal and sanitary drainage, (9) drainage improvement and channel rectification, (10) development and management of fish and wildlife habitat, (11) development and management of recreational and park facilities, (12) forestry and range management, and (13) mosquito abatement.

To implement their programs, the districts are given the following powers to: levy a tax of not to exceed two mills; acquire and dispose of water rights; act as fiscal agent for the United States; cooperate with and furnish financial aid when it would advance the purposes of the district; construct facilities necessary to carry out the purposes of the district; store, transport and supply water to users in the district; make studies, surveys and investigations and to conduct demonstration projects which advance district purposes; acquire property by eminent domain; promulgate and enforce land use regulations and ground water regulations in restricted circumstances; and invest surplus funds.

DISTRICTS WITHOUT TAXING POWERS

Soil and Water Conservation Districts

Provision is made for the organization of Soil and Water Conservation Districts in Chapter 2, Article 15, R. R. S., Nebraska, 1943. Such a district is initiated by the filing of a petition by twenty-five land owners with the State Soil and Water Conservation Commission. If favorable action is taken following a hearing before the Commission and if the electors vote favorably at a subsequent election, the district is declared a governmental subdivision of the State. There are now 86 soil and water conservation districts which include all of the lands in the state.

A district, through its supervisors, has broad powers to conduct surveys and research relating to soil erosion and measures to prevent it; to conduct demonstrational projects; to construct and maintain structures; to develop comprehensive plans for the conservation of soil and water resources; and to acquire, operate and administer any soil and water conservation project undertaken by the United States, or by the state or any of its agencies.

Public Irrigation Districts and Public Power and Irrigation Districts

A district of this type may be created for the purpose of constructing and operating an irrigation project or an irrigation and power project. The enabling act is Chapter 70, Article 6, R. R. S., 1943. Such a district is initiated by the filing in the office of the Department of Water Resources of a petition signed by not less than 15 percent of the electors within the proposed district. If the petition is found to be in conformity with the law, and the proposal appears feasible, the Director of Water Resources enters an order declaring the district to be a governmental subdivision.

A district may not levy a tax or issue general obligation bonds. It can issue revenue bonds, borrow money, acquire and construct reservoirs, dams, canals and other water facilities and enter into contracts to furnish water service for irrigation of lands and for other purposes. It has essentially the same powers as an irrigation district or a reclamation district except for taxing powers. There are five public power and irrigation districts in operation. Their combined territories consist of all of nine counties and parts of five others.

WATERSHED PLANNING BOARDS

Under the provisions of Chapter 31, Article 8, a watershed planning board may be formed by at least 100 land owners in a watershed petitioning the Governor, through the Director of Water Resources, to create such a board. "A watershed planning board (1) may make such studies as may be necessary for coordinating the plans of local, state, and federal agencies for the conservation, development, and utilization of water within the watershed; (2) shall cooperate with federal and state agencies, and with local organizations, municipalities, counties, and other political subdivisions; and (3) shall

be eligible to receive financial support from gifts and contributions and from counties under the provisions of sections 23-320.5 and 23-320.06." A watershed planning board has no power to levy taxes. There are two such planning boards in existence, one for the Big Blue River Basin and one for the Lower Elkhorn River Basin.

STATE POLICY

The state water resources policy is set forth in Sec. 2-1502(4).

Declaration of Policy. "It is hereby declared to be the policy of the Legislature to provide for the conservation of the soil and water resources, rainfall, and soil moisture of this state, and for the control of soil erosion, and thereby to preserve natural resources, control floods, prevent impairment of dams and reservoirs, preserve wildlife, protect the tax base, and protect public lands, and protect and promote the health, safety and general welfare of the people of the state. It is hereby declared that recurrent floods on rivers and streams of this state, causing loss of life and damage to property, disrupting of commerce, interruption of transportation and communications and wasting of water are detrimental to the peace, health, safety, and welfare of the people of the state. The control and prevention of such floods and the loss and damage caused thereby and the conservation and protection of the state's land and water resources are proper functions and activities of the state, in cooperation with counties, cities, state agencies, and public districts and in cooperation with the United States, or any of its departments or agencies."

Additional policy is stated in Section 1, L. B. 893, 1967 Session, as follows:

"Section 1. It is hereby declared that, because of the loss of lives and property caused by flood in various areas of the state, in the interest of public health, safety, and general welfare, flood-way encroachment lines are to be established along watercourses and drainways, and other appropriate regulations made as to the floodways of watercourses and drainways in order to minimize the extent of floods and reduce the height and violence thereof insofar as such are caused by any natural or artificial obstruction restricting the capacity of the floodways of the waters of the state."

STATE WATER AGENCIES

There are five principal state agencies with duties, powers and responsibilities in the fields of water studies, water resources planning, water administration and water management and control. They are (1) The Conservation and Survey Division, University of Nebraska, (2) The Soil and Water Conservation Commission, (3) The Department of Water Resources, (4) The Game and Parks Commission and, (5) The Department of Health. There is also the Clean Waters Commission which was established following the enactment of enabling legislation in the 1967 session. Brief descriptions of the agencies, their powers, duties and responsibilities follow.

State Soil and Water Conservation Commission

Section 2-1504 R. R. S., 1943, established the Nebraska Soil and Water Conservation Commission to serve as the official agency of the state in connection with soil and water conservation, flood prevention, watershed protection, flood control, and flood plain zoning. The Commission consists of fourteen members, six being elected by the Nebraska Association of Soil and Water Conservation Districts; one by the Nebraska State Irrigation Association; three appointed by the Governor, one to represent irrigation interests, one to represent chambers of commerce and one to represent municipal and industrial interests; and the Director of the Conservation and Survey Division, the Dean of the College of Agriculture, the Director of the State Agricultural Extension Service of the University of Nebraska; and the Director of Water Resources. Serving as advisory members at the invitation of the commission are representatives of the Secretaries of Agriculture, Interior, and Army of the United States and a representative of the Governor. Section 2-1504.01 R. R. S., 1943 provides for a state advisory committee composed of representatives of the Department of Health, Department of Roads and the Game and Parks Commission.

1. Special Powers and Duties

"**2.1507. State soil and water conservation commission; special powers and duties; hearings.** In addition to the duties and powers hereinafter conferred upon the Nebraska soil and water conservation commission, it shall have the following duties and powers: (1) To offer such assistance as may be appropriate to the supervisors of soil and water conservation districts, organized as provided hereinafter, in the carrying out of any of their powers and programs; (2) to keep the supervisors of each of the several districts organized under the provisions of this act informed of the activities and experience of all other districts organized hereunder, and to facilitate an interchange of advice and experience between such districts, and cooperation between them; (3) to coordinate the programs of the several soil and water conservation districts organized hereunder so far as this may be done by advice and consultation; (4) to secure the cooperation and assistance of the United States and any of its agencies, and of agencies of this

state, in the work of such districts; (5) to disseminate information throughout the state concerning the activities and programs of the soil and water conservation districts organized hereunder, and to encourage the formation of such districts in areas where their organization is desirable; (6) assist and encourage where feasible such watershed organization as watershed districts, watershed conservancy districts, and watershed planning boards; (7) assist and coordinate the programs of the various watershed organizations; (8) plan, develop, and encourage the implementing of a comprehensive program of resource development, conservation, and utilization for the soil and water resources of this state in cooperation with other local, state, and federal agencies and organizations; (9) when necessary for the proper administration of the functions of the department, to rent or lease space outside the State Capitol; (10) assist such local governmental organizations as villages, towns, cities, counties, watershed districts, and watershed conservancy districts, in securing, planning and developing information on flood plains to be used in developing regulations and ordinances on proper use of these flood plains; and (11) hold hearings on all watershed or flood control programs as developed by watershed conservancy districts, watershed districts, drainage districts and watershed planning boards. Such hearings shall be held within sixty days from the date such programs are received by the committee. At such hearings, the committee shall review such programs and make such recommendations as to encourage the comprehensive resource development needs of the area and to assist in the development of a plan that is desirable, practicable, feasible and necessary in the interest of health, safety and public welfare."

"2-1503.02. Nebraska soil and water conservation commission; flood control funds; allocation; acquisition of land or easements. The Nebraska soil and water conservation commission may allocate to any local organization in this state, from the Small Watersheds Flood Control Fund, such sum or sums as in the judgment of the state commission may be necessary to enable such local organization to acquire real property or easements needed to permit said local organizations to install upstream flood control or watershed protection and flood prevention structures on rivers, tributaries, streams or watersheds thereof, including cooperative projects between the local organization and the United States government. When any property or easement has been acquired by the use of any funds allocated under the provisions of this section, and the property is thereafter sold or leased, it shall be the duty of the local organization to remit to the state commission a pro rata share of the proceeds of such sale or lease equal to the percentage of total state funds involved."

2. Flood Plain Zoning

Under the provisions of L. B. 893, 1967 Session, the Commission has additional powers to:

(1) Initiate a comprehensive study for delineation of commission floodways for every watercourse and drainway in the state, and enter into arrangements with state and federal agencies to accomplish the study.

(2) Establish, by order, after a public hearing, floodway-encroachment lines for a floodway of a 100-year flood, and furnish such data to the political subdivision having jurisdiction over the area, together with adopted rules and regulations for enforcement of land-use standards.

(3) Enforce the commission floodway, if within one year the local government fails to do so, and prevent the location of any obstructions within the floodway unless specifically authorized by the commission.

3. State Water Plan

Under Legislative Resolution No. 5, 1967 Session, the Commission is directed to analyze the soil and water resources of the state and to prepare a comprehensive water and related land plan for the State of Nebraska, such framework plan to be completed no later than June 30, 1971, and to be known as the State Water Plan, which, in addition to an evaluation of the land and water resources, will also include an examination of legal, social, and economic factors which are associated with resource development.

Conservation and Survey Division

The Conservation and Survey Division of the University of Nebraska was created in 1921 and has the following duties and powers as set forth in Sections 85-163 and 85-165, R. R. S., 1943.

(1) Survey and describe the natural resources of the state, including soil, water, water power, potash, forests, road materials, and cement;

(2) Study the climate, physical features, geology, and mineral resources of the state;

(3) Study and describe the operations, production, and importance of the leading industries of the state;

(4) Investigate and report upon conservation problems of the state;

(5) Study the water-bearing formations of the state, and assist the citizens in locating water supplies;

(6) Secure and preserve the logs of wells drilled in the state, and preserve specimens from each stratum, member, or formation penetrated in said drillings, and inspect such drillings at any time during their progress, and require the person or persons in charge of drilling or prospecting to submit full data in regard to the specimens and logs of the wells;

(7) Prepare and show lantern slides or pictures, including motion pictures, of the state's resources, industries, institutions and development, to be used for educational and industrial purposes within the state and for publicity purposes without the state, and secure and distribute other educational films and slides in Nebraska for educational purposes;

(8) Compile and record, or publish information with reference to, the state's resources, industries and development, and when called upon so to do by an interested party, investigate and report upon foreign realty sold or offered for sale in Nebraska and investigate and report upon oil, mineral, and gas structures and properties situated outside the state, leases or interests therein or thereon being sold or offered for sale in Nebraska; cases or propositions wherein said investigations show that land, mineral, oil, or gas properties are misrepresented, or that fraud is practiced in selling same, their officers or agents shall be notified by the Conservation and Survey Division, and if they continue to so operate the same in Nebraska after said notice is given, the division shall report its findings to the Attorney General for action; and

(9) Serve the citizens as an information bureau in regard to the resources, industries, and development of Nebraska.

(10) Enter into such agreements with federal departments as may be necessary to carry on cooperative surveys and investigations in the state.

Game and Parks Commission

The general powers of the Game and Parks Commission, as set forth in Section 81-805, R. S. Supp., 1967, are to have sole charge of state parks, game and fish, recreation grounds, and all things pertaining thereto. Section 37-427, R. S. Supp., 1965, assents to the provisions of the Land and Water Conservation Fund Act, P. L. 88-578, and authorizes the Game and Parks Commission to perform such acts as necessary to conduct, coordinate, and carry out the purposes of the Act for and within the State. Sections 37-428 and 429, R. S. Supp., 1965, create the Land and Water Conservation Fund, provide for matching Federal funds and allocate such funds to state projects and to projects of political subdivisions. The Commission is empowered to enter into agreements with Federal agencies and other agencies for the development, operation and maintenance of recreational areas around reservoirs and elsewhere.

Department of Health

1. Water Pollution Control Council

Chapter 71, Article 30, R. S. Supp., 1967, sets forth the provisions for the creation of the Water Pollution Control Council and defines its duties and powers as summarized below.

The council, which is within the Department of Health, is composed of six members appointed by the Governor, three representing industries, two representing municipalities and one representing agriculture, and four ex-officio members representing the departments of Health and Water Resources, the Game and Parks Commission and the Soil and Water Conservation Commission.

The principal duties and powers of the council are:

(1) To administer and enforce the provisions of the Water Pollution Control Act.

(2) To develop comprehensive programs for the prevention of pollution of the waters of the state.

(3) To consult and cooperate with other agencies, industries and political subdivisions to accomplish the purposes of the act.

(4) To administer loans and grants from the federal government and other sources for pollution control.

(5) To conduct studies, research and demonstrations.

(6) To collect and disseminate information.

(7) To adopt and enforce water quality standards.

(8) To control the discharge of wastes and waters of the state; to require construction of disposal systems.

(9) To hold hearings.

(10) To require prior approval of plans of disposal systems.

(11) To require proper operation and maintenance of disposal systems.

(12) To enter at reasonable times upon private or public property for the purpose of inspecting and investigating conditions relating to the pollution of waters, and to have access to records relating to the operation of disposal systems.

Department of Water Resources

The Department of Water Resources is a code department with the Director appointed by the Governor and confirmed by the Legislature.

The major powers, duties, and responsibilities which are set forth in detail in Chapters 46 and 70 R. R. S., 1943, as amended, are:

(1) To have jurisdiction over all matters pertaining to water rights for irrigation, power, and other useful purposes, except as such jurisdiction is specifically limited by statute.
(2) To adopt rules governing matters coming before it.
(3) To hold hearings and subpoena witnesses.
(4) To approve all plans of proposed drainage districts.
(5) To make surveys of streams, showing possible irrigation, power and drainage projects.
(6) To determine priorities of rights to use the waters of the natural streams.
(7) To measure, or cause to be measured, the quantity of water flowing in the several streams of the state and make records thereof.
(8) To cancel water appropriations for nonuse.
(9) To grant permits to change the point of diversion of a water appropriation or to change the location of a storage site.
(10) To regulate the diversion of water from a stream in accordance with appropriations of record.
(11) To require the owner of any canal or other facility for diverting the public waters to construct and maintain a proper headgate, measuring device and recording gage.
(12) To examine and approve before the start of construction the plans and specifications of any dam to be constructed across the channel of any natural stream or for reservoir purposes, except dams impounding no more than 15 acre-feet to be constructed for livestock or erosion control purposes on an ordinarily dry watercourse.
(13) To inspect annually all dams impounding ten acre-feet of water, or more, and give notice to owners of any repairs required.
(14) To require the filing, before April 1st of each year by each appropriator, of a list of lands which he intends to irrigate during the ensuing season, and an annual report by each power appropriator showing the amount of power generated during the preceding year.
(15) To examine copies of petitions, maps and papers filed with county boards for the organization of an irrigation district and to report on the same to said boards.
(16) To establish reclamation (conservancy) districts for conserving, developing and stabilizing water supplies when conditions set forth in a petition are found to exist.
(17) To establish the compensation to be paid to members of the board of directors of a reclamation district.
(18) To register all water wells except those used for domestic purposes.
(19) To grant special permits for spacing of wells less than the legal distance apart.
(20) To recommend boundaries of proposed ground water conservation districts.
(21) To approve petitions for the creation of public power and/or irrigation districts when certain conditions are found to exist.
(22) To approve amendments to the creative petitions of districts and to issue orders directing the procedure for the election of members of boards of directors of public districts.
(23) To approve projects of proposed rural water districts and approve plans, specifications, proposed operating budgets and estimates of cost of any such district.

1. Nebraska Clean Waters Commission

Legislative Bill 884, 1967 Session, provides for the creation of a Clean Waters Commission. Membership consists of five voting members appointed by the Governor, and five non-voting, ex-officio members, the Chairman of the Water Pollution Control Council, the Secretary of Game and Parks Commission, the Director of Water Resources, a representative of the Department of Health, and the Executive Secretary of the Soil and Water Conservation Commission.

The purposes of the Commission are:

(1) To assist municipalities in the planning of waste water treatment works, waste water collection systems and solid waste disposal facilities.
(2) To provide financing arrangements for furnishing municipalities the ways and means by which they can participate in state or federal programs for the prevention, abatement and control of water pollution. This purpose held unconstitutional by the Nebraska Supreme Court in State vs Duxbury, 183 Nebr. 302, 160 N.W. 2nd 88 (1968).

The Commission has the following powers:

(1) To enter into contracts, leases, and agreements necessary, convenient or desirable for carrying out the purposes of the Commission and the powers granted under this act with

appropriate agencies, municipalities, corporations and persons, and to execute all documents and instruments essential thereto;

(2) To fix and collect fees and other charges for the services provided by the commission and to provide for the imposition of reasonable penalties for any fees and charges that are delinquent;

(3) To acquire, hold and dispose of real or personal property in the exercise of its powers;

(4) To borrow money and issue negotiable bonds, notes or other obligations and to provide for the rights of the holders thereof;

(5) To invest any money held in reserve or sinking funds or any money not required for immediate use or disbursement in such securities as it shall determine;

(6) To purchase municipal bonds and notes, make loans or loan commitments to, and to enter into option arrangements with, municipalities for the purchase of municipal bonds and notes;

(7) To sell municipal bonds and notes or other securities acquired by the commission whenever it is determined by the commission that the sale thereof is desirable. Municipal bonds and notes acquired by the commission may be sold, at public or private sale, at such price or prices as it shall determine. The proceeds of any municipal bonds and notes shall be held for the benefit of the bonds and notes and interest thereon entitled to be paid therefrom, or shall be used to purchase, or be applied towards the redemption of bonds and notes at not more than the applicable redemption price, plus accrued interest to any date fixed for redemption, or, if not then redeemable, at a premium of not more than the redemption price applicable on any date fixed for redemption, plus accrued interest to such date, all subject to such agreements with bondholders or noteholders as may then prevail;

(8) To accept and administer loans and grants from the United States, its agencies, the State of Nebraska, its agencies and from other sources public or private, for carrying out any of its functions;

(9) To administer state grants to municipalities for the construction of waste water treatment works, waste water collecting systems, and solid waste disposal facilities.

STATE OF NORTH DAKOTA



CONSTITUTION

Section 210, North Dakota State Constitution, provides that "All flowing streams and natural watercourses shall forever remain the property of the state for mining, irrigating, and manufacturing purposes."

STATUTORY PROVISIONS

Public Waters

Public waters are defined as follows in Section 61-01-01, North Dakota Century Code:

"61-01-01. Waters of the state - Public waters. - All waters within the limits of the state from the following source of water supply, namely:

(1) Waters on the surface of the earth excluding diffused surface waters but including surface waters whether flowing in well defined channels or flowing through lakes, ponds, or marshes which constitute integral parts of a stream system, or waters in lakes; and

(2) Waters under the surface of the earth whether such waters flow in defined subterranean channels or are diffused percolating underground waters; and

(3) All residual waters resulting from beneficial use, and all waters artificially drained; and

(4) All waters, excluding privately owned waters, in areas determined by the state engineer to be noncontributing drainage areas. A noncontributing drainage area is hereby defined to be any area which does not contribute natural flowing surface water to a natural stream or watercourse at an average frequency oftener than once in three years over the latest thirty year period;

belong to the public and are subject to appropriation for beneficial use and the right to the use of these waters for such use, shall be acquired pursuant to the provisions of chapter 61-04."

Priority of Water Rights

Priority of water rights and their definition are outlined in Section 61-01-01.1:

"61-01-01.1. Priority of water rights - Definitions. In all cases where the use of water for different purposes conflicts such uses shall conform to the following order of priority:

(1) Domestic use.

(2) Livestock use.

(3) Irrigation and industry.

(4) Fish, wildlife and other outdoor recreational uses.

As between appropriations for the same use, priority in time shall give the better right. For purposes of this section:

(1) 'Domestic use' shall mean the use of water by an individual, or by a family unit, or household, for personal needs and for household purposes, including, but not limited to heating, drinking, washing, sanitary and culinary uses; irrigation of land not exceeding one acre in area for non-commercial gardens, orchards, lawns, trees or shrubbery; and for household pets and domestic animals kept for household sustenance whether the water is supplied by the individual, a municipal government or by a privately owned public utility or other agency.

(2) 'Livestock use' shall mean the use of water for drinking purposes by herds, flocks or bands of domestic animals.

(3) 'Fish, wildlife and recreation' shall mean the use of water for the purposes of propagating and sustaining fish and wildlife resources and for the development and maintenance of water areas necessary for outdoor recreation activities.

Neither a conditional nor a perfected water permit shall be required of a landowner or his lessee to appropriate water from any source or any constructed works for domestic and livestock uses. Regardless of proposed use, however, all water users shall secure a water permit prior to constructing an impoundment capable of retaining more than twelve and one-half acre-feet of water."

State Water Resources Policy

The state water resources policy is promulgated in Section 61-01-26:

"61-01-26. Declaration of state water resources policy. - In view of legislative findings and determination of the ever-increasing demand and anticipated future need for water in North Dakota for every beneficial purpose and use, it is hereby declared to be the water resources policy of the state that:

(1) The public health, safety and general welfare, including without limitation, enhancement of opportunities for social and economic growth and expansion, of all of the people of the state, depend in large measure upon the optimum protection, management and wise utilization of all the water and related land resources of the state;

(2) Well-being of all of the people of the state shall be the overriding determinant in considering the best use, or combination of uses, of water and related land resources;

(3) Storage of the maximum water supplies shall be provided wherever and whenever deemed feasible and practicable;

(4) Accruing benefits from these resources can best be achieved for the people of the state through the development, execution, and periodic updating of comprehensive, coordinated and well-balanced short- and long-term plans and programs for the conservation and development of such resources by the departments and agencies of the state having responsibilities therefor;

(5) Adequate implementation of such plans and programs shall be provided by the state through cost-sharing and cooperative participation with the appropriate federal and state departments and agencies and political subdivisions within the limitation of budgetary requirements and administrative capabilities;

(6) Required assurances of state cooperation and for meeting non-federal repayment obligations of the state in connection with federal-assisted state projects shall be provided by the appropriate state department or agency;

(7) Required assurances of local cooperation and for meeting non-federal repayment obligations of local interests in connection with federal-assisted local projects may, at the request of political subdivisions or other local interests be provided by the appropriate state department or agency, provided, if for any reason it is deemed necessary by any department or agency of the state to expend state funds in order to fulfill any obligation of a political subdivision or other local interests in connection with the construction, operation or maintenance of any such project, the state shall have and may enforce a claim against the political subdivision or other local interests for such expenditures.

The provisions of this chapter shall not be construed to in any manner limit, impair or abrogate the rights, powers, duties or functions of any department or agency of the state having jurisdiction or responsibilities in the field of water and related land resources conservation, development or utilization."

Powers and Duties of State Water Conservation Commission

Powers and duties of the State Water Conservation Commission are set forth in Section 61-02-14:

"61-02-14. Powers and duties of the commission. - The commission shall have full and complete power, authority, and general jurisdiction:

(1) To investigate, plan, regulate, undertake, construct, establish, maintain, control, operate, and

supervise all works, dams, and projects, public and private, which in its judgment may be necessary or advisable:

(a) To control the low-water flow of streams in the state;

(b) To impound water for the improvement of municipal, industrial, and rural water supplies;

(c) To control and regulate flood flow in the streams of the state to minimize the damage of such flood waters;

(d) To conserve and develop the waters within the natural watershed areas of the state and, subject to vested rights, to divert the waters within a watershed area to another watershed area and the waters of any river, lake or stream into another river, lake or stream;

(e) To improve the channels of the streams for more efficient transportation of the available water in the streams;

(f) To provide sufficient water flow for the abatement of stream pollution;

(g) To develop, restore and stabilize the waters of the state for domestic, agricultural, and municipal needs, irrigation, flood control, recreation, and wildlife conservation, by the construction and maintenance of dams, reservoirs and diversion canals;

(h) To promote the maintenance of existing drainage channels in agricultural lands and to construct any needed channels;

(i) To provide more satisfactory subsurface water supplies for the municipalities of the state;

(j) To finance the construction, establishment, operation, and maintenance of public and private works, dams, and irrigation projects, which in its judgment may be necessary and advisable;

(k) To provide for the storage, development, diversion, delivery and distribution of water for the irrigation of agricultural land, and supply water for municipal and industrial purposes;

(l) To provide for the drainage of lands injured by or susceptible of injury from excessive rainfall or from the utilization of irrigation water, and subject to the limitations prescribed by law, to aid and cooperate with the United States and any department, agency, or officer thereof, and with any county, township, drainage district, or irrigation district of this state, or of other states in the construction or improvement of such drains;

(m) To provide water for stock; and

(n) To provide water for the generation of electric power and for mining and manufacturing purposes;

(2) To define, declare, and establish rules and regulations:

(a) For the sale of waters and water rights to individuals, associations, corporations, municipalities, and other political subdivisions of the state, and for the delivery of water to users;

(b) For the full and complete supervision, regulation, and control of the water supplies within the state;

(c) For the complete supervision and control of acts tending to pollute watercourses, for the protection of the health and safety of all the people of the state; and to pollute shall mean such contamination, or other alteration of the physical, chemical, or biological properties, of any waters of the state, including change in temperature, taste, color, turbidity, or odor of the waters, or such discharge of any liquefied, gaseous, solid, radioactive, or other substance into any waters of the state as will or is likely to create a nuisance or render such waters harmful, detrimental, or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life; and

(d) Establish rules and regulations governing and providing for financing by local participants to the maximum extent deemed practical and equitable in any water development project in which the state participates in cooperation with the United States or with political subdivisions or local entities.

(3) To exercise full power and control of the construction, operation, and maintenance of works and the collection of rates, charges, and revenues realized therefrom;

(4) To sell, lease, and otherwise distribute all waters which may be developed, impounded, and diverted by the commission under the provisions of this chapter, for the purpose of irrigation, the development of power, and the watering of livestock, and for any other private or public use;

(5) To exercise all express and implied rights, power and authority, that may be necessary, and to do, perform, and carry out all of the expressed purposes of this chapter and all of the purposes reasonably implied incidentally thereto or lawfully connected therewith;

(6) To acquire, own and develop lands for irrigation and water conservation and to acquire, own and develop dam sites and reservoir sites and to acquire easements and rights of way for diversion and distributing systems;

(7) To co-operate with the United States and any department, agency or officer thereof in the planning, establishment, operation, and maintenance of dams, reservoirs, diversion and distributing systems, for the utilization of the waters of the state for domestic, municipal and industrial needs, irrigation, flood control, water conservation, generation of electric power and for mining, agricultural and manufacturing purposes, and in this connection the state water conservation commission is hereby authorized, within the limitations prescribed by law, to acquire, convey, contribute or grant to the United States moneys, real and personal property, including land or easements for dams and reservoir sites and rights-of-way and easements for diversion and distribution systems or participate in the cost of any project."

Cooperation and Coordination Authority

Cooperation and coordination authority for intrastate, interstate and international waters is provided in Section 61-02-24:

"61-02-24. Co-operation and co-ordination with all existing agencies. - The commission may investigate, plan, co-operate, and make all contracts or compacts necessary, or requisite:

(1) With the United States and any department, agency, or officer thereof;

(2) With the states of Minnesota, South Dakota, Montana, and Wyoming, and with any other state, and with any department or officer of any state; and

(3) With the Dominion of Canada or any of its provinces, and with any agency, department, or officer of the Dominion or any of its provinces.

The powers granted by this section shall extend to all waters, whether considered as intrastate, interstate, or international. The commission is specially authorized and empowered to co-operate with the United States or any of its agencies concerned with investigating, planning, conserving, utilizing, developing, and handling water in any form for purposes of water conservation, flood control, prevention of water pollution, or soil reclamation, or with any other resources of the state, and concerned with the administration of the public works program of the state or any part thereof. The commission is authorized to act and to contract fully with the United States, or with any department, agency, or officer thereof, with full power of purchase, sale, or lease to carry out, develop, or administer any federal project within this state or partly within the state, and also to accept and to use any funds provided by the United States or any agency thereof for any such purposes."

In addition, all political subdivisions may participate in planning and development of projects for the beneficial utilization and control of water resources. This includes, counties, townships, cities, park districts, soil conservation districts, irrigation districts, conservancy districts, and water management districts.

Appropriation of Water

Appropriation of water procedures are outlined in Section 61-04-02. Anyone intending to acquire the right to the beneficial use of waters must make application to the State Engineer for a water permit unless the water is to be utilized for domestic or livestock purposes. If an impoundment for such use exceeds 12-1/2 acre-feet capacity, a water permit is required prior to initiating construction.

Annual Plan of Operation (Reservoirs)

An annual plan of operation is required to be filed with the State Engineer by the operator of a reservoir having a capacity of more than 1,000 acre-feet.

Interstate Compacts

North Dakota is a party to the Yellowstone River Compact with the states of Montana and Wyoming, which allocates the waters between Montana and Wyoming based on measured flows at specified points on an annual water year basis. (61-23, North Dakota Century Code.)

Quality of Water Standards

Quality of water standards have been adopted by the state and submitted to the Federal Water Pollution Control Agency in accordance with the Federal Water Pollution Control Act.

Planning Constraints

A federal constraint to planning is the Fish and Wildlife Coordination Act of 1964 which provides that federal water resources development projects planned must be submitted to the U. S. Fish and Wildlife Service for concurrence. The Federal Water Projects Recreation Act provisions must be considered when allocating costs and determining benefit-cost ratios.

WATER LAWS COMPILATION

The North Dakota State Water Conservation Commission has compiled the state's water laws as of 1965 and these are available through the Commission.

STATE OF SOUTH DAKOTA



GENERAL BACKGROUND

Historically, the State of South Dakota has a long record of a unique combination of statutory and common law governing water rights. This law of water rights, evolved during early settlement periods, has been adapted to meet the changing social and economic needs of the people living in this area and to meet the pattern and purposes of water resources development. Statutory water law (the law of water shortage) dates from Territory of Dakota legislative enactments in 1866 and 1881 (embodied in state law following attainment of statehood in 1889) and from state legislative acts in 1890 and 1907, culminating in a major re-enactment with modifications and expansion in 1955. Common law (the law of reasonably adequate water supply) applications date from a Territorial Supreme Court decision in 1888 and amplified and modified by many later decisions.

The coexistence of statutory and common law rights in water, as established by legislation and court interpretations in South Dakota, has had important meanings in the development of the current law of water rights. As a result of the statutes enacted in 1955 and court review of these statutes in 1964, many of the principles applied in earlier court decisions are matters of academic interest, except for the specific vested rights determined thereby.

State policies and programs have contributed to and have in turn been governed by this law of water rights and related statutes concerning development of water resources. Influences of federal laws, policies, and programs are reflected in South Dakota statutes and, consequently, in the state's policies and programs.

This presentation is intended as a guide in public and private development of water resources, including related land and other resources. Interpretation of its contents should recognize that only generalized coverage is in-

cluded. Elaboration or application in greater detail should be the subject of specific inquiry.

A chart included at the end of the presentation summarizes briefly for each subdivision of state government the authorities and relationships in the field of water laws, regulation, and development. This differentiates between those state agencies primarily responsible for water regulation and development, and the water advisory, research, disaster, and information agencies.

WATER RIGHTS

Citations

Citations for state statutes and related basic documents pertaining to water rights may be summarized with explanations as follows:

The Constitution of the State of South Dakota is silent as to water rights. The state may engage in constructing works of internal improvements. Drainage and irrigation of agricultural lands, generation and sale of electrical energy, and some other endeavors related to natural resources are declared to be public purposes. Special improvement districts may be created to accomplish these purposes (and other purposes through court decision), provided, that creation of such districts shall be by favorable vote of a majority of the electors of the proposed district and, provided, that no long-term financial obligation shall be incurred unless authorized by a favorable vote of the majority of the electors of such districts.

The water rights statutes are contained in Chapters 46-1, 46-2, 46-3, 46-4, 46-5, 46-6, 46-7, 46-8, 46-9, 46-10 of the South Dakota Compiled Laws, 1967. These statutes provide for acquisition of appropriative water rights, define "vested rights" including riparian rights, and provide for regulation of water use. Both surface waters and ground waters are covered in equivalent degree. The administering agency is the Water Resources Commission with power to promulgate rules and regulations. Decisions of this Commission are subject to appeal to the courts.

Court case law for practical purposes in **current water rights determinations** is embodied in one broad South Dakota Supreme Court decision (Knight vs. Grimes, et al, 80 SD 517, March 1964). In this case, the Court (1) upheld the constitutionality of the 1955 statutes, (2) accepted the statutory definition of "vested rights", including riparian rights, (3) made beneficial use the measure of the right irrespective of the statutory or common law basis for the right, (4) reaffirmed the priority-of-use principle, (5) accepted the statutory definition of ground water thereby removing the distinctions between percolating water and underground streams, (6) placed acquisition of water rights on the statutory basis only, and (7) established water use regulation as an exercise of the police power of the State. Prior case precedent may be applicable concerning some details of the statute, upon issue. This cannot be foreseen.

Court case law concerning riparian landownership rights in relation to public meandered lakes is reflected in numerous decisions. The principles interpreted therein may be summarized by (1) the private riparian landowner owns land outright to "ordinary high water mark"; and exposed land inwardly to "ordinary low water mark" subject to public access; and the state owns the land contained within "ordinary low water mark", not as a proprietor but in trust for public recreational (state navigable) purposes, (2) the state may supply supplemental water (other than waters naturally tributary) to the lake up to "ordinary high water mark", the private riparian landowner having no adverse claim because of encroachment by water upon the strip of land between "ordinary low water mark" and "ordinary high water mark", (3) meander lines are not property boundaries.

Opinions by the South Dakota Attorney General having special importance on the subject of water include opinion of May 21, 1956, concerning rights to use water from public meandered lakes; opinion of June 7, 1965, establishment of "ordinary high water mark" for public meandered lakes is a function of the Water Resources Commission pursuant to statutes if or when public interest requires; opinion of March 11, 1966, concerning precedence of domestic use over appropriative water rights. There are many other opinions of the Attorney General of South Dakota relating to water rights and water resources development. Specific factual cases should include research of such opinions.

Meanings of Water Rights

In South Dakota, water rights are private property rights in public waters. They do not constitute private ownership of water, being limited to privileges of use, only, although under certain circumstances water rights, temporarily, have many of the attributes of private ownership. As property rights, water rights may not be infringed, damaged, nor taken by others without just compensation. Water rights constitute governmental security for investments in water use facilities and water resources developments.

Water rights in South Dakota are statutory. The governing statutes recognize, define, and limit common law riparian rights and such statutory declarations of the common law are supported by decision of the South Dakota Supreme Court.

Beneficial use is the basis, the measure and the limit of a water right. Unless the water is used beneficially the right to use may be forfeit. Beneficial use is defined as any use of water that is reasonable and useful and beneficial to the appropriator and at the same time is consistent

with the interests of the public in the best utilization of water supplies. Domestic use (ordinary household uses by a family unit, stockwatering, and irrigation of not to exceed one-half acre) has precedence over all other water rights and such other water rights are regulated to maintain domestic water supplies. Other than domestic use, all water rights, irrespective of purposes served, have equal standing, none having any preference over any other. Certain special privileges are granted to municipalities, conservancy sub-districts, state government facilities, and the United States for acquisition of water rights, but not in circumvention of the principle of equal standing.

Prior acquisition of a water right in South Dakota constitutes the better right. The first in time is the first in right. Priority date as determined by statute is therefore an important part of a water right along with continuing beneficial use and reasonably efficient methods by which water is put to use, which are also specified in statutory provisions. Water needed to satisfy an earlier priority is provided from available water supplies before water is supplied for a water right of later priority. Priority is related to time of water right acquisition and should be differentiated from preference in water use.

Beneficial use implies diversion and control of water and application to accomplish a purpose, consequently, control of water to alleviate damage but without useful application otherwise (flood control or flood prevention) is not a "beneficial use" pursuant to statute, and is not subject to acquisition of water rights.

Acquisition of water right confers a private privilege to use the public water supplies only. It does not grant easement or any other rights in properties of another owner which may be necessary for works to put the water to beneficial use. Neither does it obviate the liability for damages to properties belonging to another owner which may result from application of water to a beneficial use. The use of water pursuant to a water right is subject to the same common law principles concerning personal liability as are applied to any other artificial (man-made) improvement which may change natural conditions so as to damage the properties of another owner.

Degree of beneficial use is not a measure of the validity of a water right, provided that reasonably efficient methods and facilities are used in application of the water. The water user is entitled to and limited by the amount of water that he needs and applies to beneficial use, irrespective of the quantity of water specified in his water right document.

Water rights, except domestic use, may be condemned in order to apply the water to another beneficial use by another user or prospective user. Through this provision, flexibility is provided to meet changing patterns of need and the otherwise more permanent allocations of water for specified purposes may be avoided. In essence, the ability and willingness to pay just compensation for the taking of a property right in public water supplies is the measure of so-called "more important needs for water". Otherwise a water right owner is protected in his water right in accordance with his relative priority so long as he uses the water beneficially pursuant to his water right.

When storage of water for later use is part of a water right, water in unusable portions of the storage space (dead or silt space) is considered to be part of the beneficial purposes to be served by the water in usable portions of the storage space (conservation, or flood, or multiple use, or etc. space). In essence, once stored the water may be considered to be privately owned water, being subject only to the requirement that it is to be used beneficially pursuant to the water right by reasonably efficient means.

WATER REGULATION

Basic Authority

The general oversight and full control of all waters in the State, surface and underground, and the regulation of water use therefrom are the responsibility of the Water Resources Commission. This Commission is directed to regulate and control the development, conservation and allotment of the waters of the State according to the principles of beneficial use and priority of appropriation. Regulation may be exemplified by the following types of procedural actions:

(1) Issuance of permits to appropriate water upon application therefor and, following inspections, issuance of certificates of construction and water licenses, including those providing for impoundments of water,

(2) Issuance of restrictive orders concerning diversions of water as are necessary, including policing action through local watermasters and water use control areas,

(3) Determine current validity of water rights, adjust in conformity therewith, and publicly issue such determinations,

(4) Review and make recommendations concerning all state and federal projects, including coordination of project formulation,

(5) Approve flood control plans,

(6) Participate in inter-state activities, including water compact negotiations and administration,

(7) Administer water well drillers licensing,

(8) Control well spacing, capacity, depth, etc., so as to optimize development of ground water supplies,

(9) Establish and maintain observation well network,

(10) Supervise and assist water resources improvement districts of various kinds in the conduct of their business,

(11) Participate as members of state regulatory interagency boards in pollution and water quality control, weather modification and soil and water conservation.

(12) Establish "ordinary high water mark" and "ordinary low water mark" for meandered public lakes as dictated by public interest.

Water Quality and Pollution

Water quality and pollution are governed by Chapter 46-25 of the South Dakota Compiled Laws, 1967, as amended by Chapter 279 of the Session Laws of 1969. Administration is vested in the Committee on Water Pollution, having seven members.

Quality of water standards may be established to protect the public health and welfare, present and prospective use as public water supplies, propagation of fish and aquatic life, wildlife, recreational pursuits, agricultural uses, industrial supplies, and other legitimate uses. Such standards become effective upon adoption by the Water Pollution Committee after public hearings.

The public waters may be classified into two categories. "Class A" waters are those in which pollution or contamination can be controlled by standards. "Class B" waters are those which are more important to the state as carriers of wastes, provided that such wastes are not detrimental to public health. No interstate or navigable waters can be classified as "Class B" waters.

Investigations as to pollution, including public hearings, may be initiated by the Water Pollution Committee and are mandatory through a written request from the governing body of a municipality, a city or county board of health, or one hundred electors of the state. Determinations as to cause, orders to cease pollution, and enforcement procedures through the courts are provided.

Permits to discharge wastes are required and are obtained through the Water Pollution Committee.

Continuing inspection and regulation of public sewage treatment is maintained. Sewage treatment plant operators work shops help provide pollution insurance.

Public Water Supplies

Construction of public water supply systems, including plans therefor and operation thereof, are regulated by the Department of Health in accordance with rules and regulations promulgated pursuant to the general health laws (Title 34 of the South Dakota Compiled Laws, 1967).

Quality of water supplies provided for public consumption and domestic use is regulated as to biological constituents. Chemical quality, while analyzed on a continuing periodic basis, is not considered to be reasonably administrable through establishment and enforcement of desirable criteria, since chemical quality in water supply sources is variable and in most cases is highly saline by drinking water standards (2000 + parts per million).

Regulatory coverage may be exemplified by the following actions:

(1) Approval of professionally prepared construction plans for public water supply systems.

(2) Inspections of operations of public water supply treatment and distribution systems.

(3) Laboratory analysis of water supplies, raw and treated.

(4) Official approval of satisfactory public water supplies.

(5) Conduct of water supply treatment plant operators work shops.

Stream Flow Regulation

Low-flow regulation is a part of water rights administration, the criterion being maintenance of current natural flows at rates sufficient to satisfy "domestic use" requirements, including stock-watering. Releases of water from reservoirs are regulated to maintain stream flows only if one of the purposes for which the reservoir was built is pollution or low-flow augmentation as provided in water rights. Water diversions for low-flow improvement, likewise, are covered and regulated through water rights procedures.

Recreation, Fish and Wildlife

Regulation for recreational use, fishery, and wildlife in natural meandered public lakes is a function of the Commission and Department of Game, Fish and Parks under authorities contained in Title 41 of the South Dakota Compiled Laws, 1967. This agency administers the state-owned land within ordinary low water mark of meandered public lakes. Such ownership is not proprietary but is held in trust for public recreational purposes (state navigable purposes).

Artificial, man-made improvements for meandered public lakes or creation of recreation, or fish and wildlife lakes are subject to acquisition of water rights covering the water supplies to be used and the facilities to be built. Water diversions and use for these beneficial purposes are regulated pursuant to water rights statutes. Otherwise management of the improved or new lake waters for recreational purposes is the same as for meandered public lakes in their natural condition.

Regulatory actions include:

(1) Promulgating and policing safety regulations.

(2) Issuance of boating, fishing, and hunting licenses.

(3) Enforcement of laws pertaining to lake usage.

(4) Fishery and recreational area management.

WATER RESOURCES DEVELOPMENT

Background

Water resources development, with some exceptions, is handled through state enabling legislation providing for creation and management of taxing-power, (some exceptions) special improvement districts. The principal water resources enabling statutes are contained in Chapters 46-12, 46-13, 46-14, and 46-15 (Irrigation District), 46-20, 46-21, 46-22, 46-23 (Drainage District), 46-16 (Conservancy District), 46-24 (Watershed District), of the South Dakota Compiled Laws, 1967. These special improvement districts are empowered to construct water projects or to sponsor state or federal projects.

Titles 7 (Counties), 8 (Townships), 9 (Municipalities), of the South Dakota Compiled Laws, 1967 contain authorities for these public agencies to engage in certain types of water resources developments, directly or as sponsors in state or federal projects.

None of these subdivisions of state government can obligate the State of South Dakota.

Certain exceptions exist in South Dakota statutes for development of water resources by agencies of state government.

The state legislature may authorize construction of water projects and fund specified developments through appropriation of general fund monies. While constitutionally permissive, state government, as such, does not obligate itself through sponsorship of the construction of federal water projects, although state government does provide funding for cooperation in federal water data-collecting and project planning.

Another exception concerns the construction of water and water related projects and sponsorship of federal projects by the Game, Fish, and Parks Commission. This state agency has funding separate from annual or biennial appropriations by the legislature. Some of these funds are used to develop or sponsor water projects related to fish and wildlife. Recreational purposes otherwise, however, do not normally share in such separate funding, except as user fees may be prescribed.

All special districts are created through local petition, public hearings, favorable vote of the electorate of the proposed district, certification by the creating public entity, and formal documentation of the creating actions. One exception exists. A watershed district may be created through a 60% petition in lieu of election.

These special districts may commit themselves to financing of project construction or to long-term sponsorship of state or federal projects only through favorable vote upon the question by their respective electorates.

Taxing power is a special assessment against the property benefited, except watershed districts which have a choice of financing method. The levies are made by the governing boards and collected through the county tax-collecting officials. Some districts use the state treasury as a depository for tax monies received; others may designate a depository of their own choice.

Certain non-taxing-power improvement districts may be created. These districts finance their operations by service charges. Otherwise, creation and management is similar to those for taxing power improvement districts.

Citations

1. Taxing-Power Districts

The Conservancy District Act is codified in Chapters 46-17 and 46-18 of the South Dakota Compiled Laws, 1967.

The Irrigation District Act is Chapters 46-12, 46-13, 46-14, and 46-15 of the South Dakota Compiled Laws, 1967.

The Watershed District Act is Chapter 46-24 of the South Dakota Compiled Laws, 1967.

The Drainage District Act is Chapters 46-20, 46-21, 46-22, and 46-23 of the South Dakota Compiled Laws, 1967.

The Sanitary District Act (water supply and sewage treatment outside of municipalities) is Chapter 34-17 of the South Dakota Compiled Laws, 1967.

2. Non-Taxing-Power Districts

The Water Conservancy District Act is Chapter 46-16 of the South Dakota Compiled Laws, 1967.

The Soil and Water Conservation Act is Chapter 38-7 and 38-8 of the South Dakota Compiled Laws, 1967.

3. Special Related Statutes

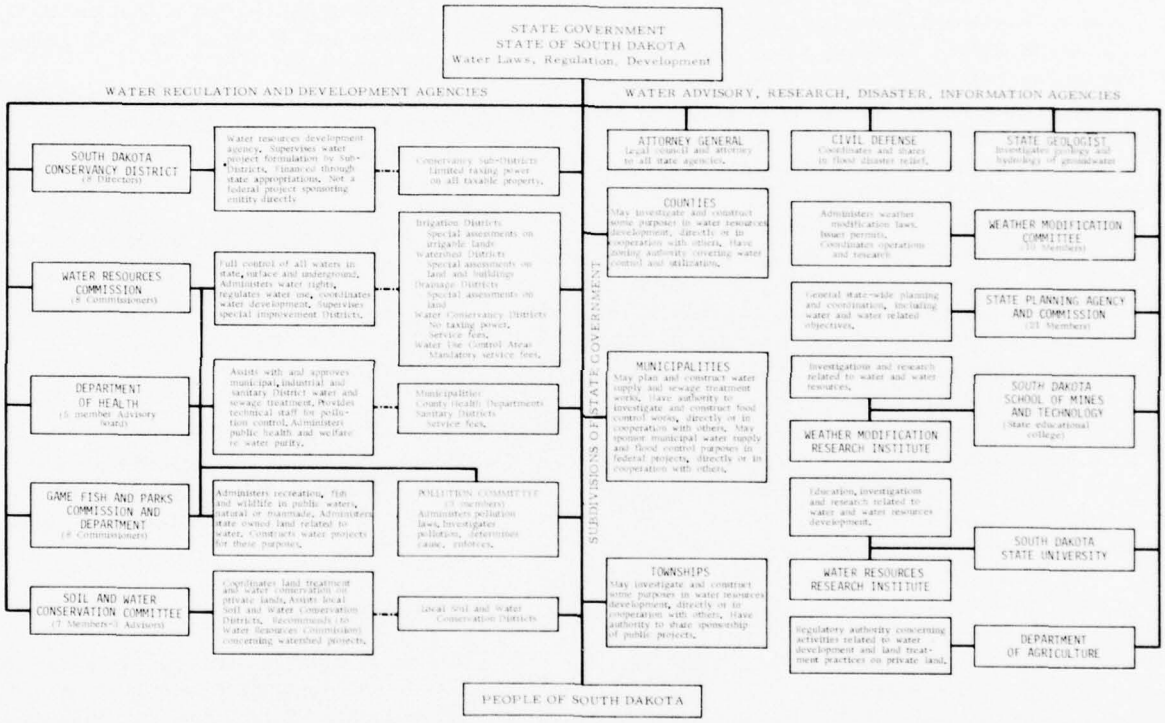
Zoning, as a part of water resources development, can be accomplished under laws governing Counties through a County Zoning Commission as provided in Chapter 11-2 of the South Dakota Compiled Laws, 1967.

State comprehensive planning coordination is provided in Chapter 11-1 of the South Dakota Compiled Laws, 1967. State water and related land planning is assigned to the Water Resources Commission.

State Policy

Perhaps the best summary of the policy of the State of South Dakota concerning water resources development may be presented by quotation from the Conservancy District Act of the South Dakota Compiled Laws, 1967, 46-17-2.

"It is the intent of this Chapter to relate, reasonably and equitably, the financing of water resources proj-


STATE GOVERNMENT
STATE OF SOUTH DAKOTA
Water Laws, Regulation, Development
WATER REGULATION AND DEVELOPMENT AGENCIES
WATER ADVISORY, RESEARCH, DISASTER, INFORMATION AGENCIES
SUBDIVISIONS OF STATE GOVERNMENT
SOUTH DAKOTA CONSERVANCY DISTRICT
(9 Directors)
Water resources development agency. Supervises water project formulation by Sub-Districts, Financed through state appropriations. Set a federal project sponsoring entity directly
Conservancy Sub-Districts
Limited taxing power on all taxable property.
WATER RESOURCES COMMISSION
(5 Commissioners)
Full control of all waters in state, surface and underground. Administers water rights, regulates water use, coordinates water development. Supervises special improvement Districts.
Irrigation Districts
Special assessments on irrigable lands
Watershed Districts
Special assessments on land and buildings
Drainage Districts
Special assessments on land
Water Conservancy Districts
No taxing power.
Service fees.
Water Use Control Areas
Mandatory service fees.
DEPARTMENT OF HEALTH
(5 member Advisory board)
Assists with and approves municipal, industrial and sanitary District water and sewage treatment. Provides technical staff for pollution control. Administers public health and welfare re water purity.
Municipalities
County Health Departments
Sanitary Districts
Service fees.
GAME, FISH AND PARKS COMMISSION AND DEPARTMENT
(8 Commissioners)
Administers recreation, fish and wildlife in public waters, natural or manmade. Administers state owned land related to water. Contracts water projects for those purposes.
POLLUTION COMMITTEE
(5 members)
Administers pollution laws, investigates pollution, determines cause, enforces.
SOIL AND WATER CONSERVATION COMMITTEE
(7 Members-3 Advisors)
Coordinates land treatment and water conservation on private lands. Assists local Soil and Water Conservation Districts. Recommends to Water Resources Commission concerning watershed projects.
Local Soil and Water Conservation Districts
ATTORNEY GENERAL
Legal council and attorney to all state agencies.
COUNTIES
May investigate and construct some purposes in water resources development, directly or in cooperation with others. Have zoning authority covering water control and utilization.
MUNICIPALITIES
May plan and construct water supply and sewage treatment works. Have authority to investigate and construct flood control works, directly or in cooperation with others. May sponsor municipal water supply and flood control purposes in federal projects, directly or in cooperation with others.
TOWNSHIPS
May investigate and construct some purposes in water resources development, directly or in cooperation with others. Have authority to share sponsorship of public projects.
CIVIL DEFENSE
Coordinates and trains in flood disaster relief.
Administers weather modification laws. Issues permits. Coordinates operations and research.
WEATHER MODIFICATION RESEARCH INSTITUTE
General state-wide planning and coordination, including water and water related objectives.
Investigations and research related to water and water resources.
WATER RESOURCES RESEARCH INSTITUTE
Education, investigations and research related to water and water resources development.
Regulatory authority concerning activities related to water development and land treatment practices on private land.
STATE GEOLOGIST
Investigates geology and hydrology of groundwater
WEATHER MODIFICATION COMMITTEE
(7 Members)
STATE PLANNING AGENCY AND COMMISSION
(21 Members)
SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY
(State educational college)
SOUTH DAKOTA STATE UNIVERSITY
DEPARTMENT OF AGRICULTURE
PEOPLE OF SOUTH DAKOTA

ects to the degree of benefits received from such water resources projects by:

(1) provisions whereby state-wide financing will be forthcoming for those phases of water resources development which concern the general welfare of the people in the state and result in state-wide benefits;

(2) provisions whereby specific areas will finance those phases of water resources development which provide general benefits to the people in such areas;

(3) provisions whereby water users or direct beneficiaries of water control and regulation will finance those phases of water resources development which provide water for use or which protect or enhance the values of property;

(4) provisions whereby assignment of administrative jurisdiction and responsibility for the various phases of water resources development are related to such variable degrees of benefits."

Application of Law and Policy

Reflecting this policy as related to usual sponsorship of federal water resources development, the following relationships are pertinent:

(1) State-wide sponsorship and financing of non-federal obligations is through specific act by the Legislature with probable administration for multiple purposes in the South Dakota Conservancy District and for single purposes in other appropriate agencies, the coverage of sponsorship and degree of financing as determined by the Legislature.

(2) For indirect areal benefits from water resources projects all or portions of the obligations, sponsorship and financial, may be undertaken by Conservancy Sub-Districts covering multiple or single purposes. Taxing power of these Sub-Districts cannot exceed one mill on all taxable property.

(3) For direct benefits from water resources projects, accruing to property owners using water or receiving protection, non-federal sponsorship and financing may be obtained.

   (a) for Bureau of Reclamation irrigation features from Irrigation Districts whose financing power consists of special assessments (not statutorily limited) on irrigable lands;

   (b) for Corps of Engineers flood control purposes from Watershed Districts whose financing capability stems from either or both a maximum one mill levy on land and buildings and special assessments (not statutorily limited) on the real properties benefited and Municipalities, Counties, and Townships whose financing powers are in budget appropriation ordinances;

   (c) for Soil Conservation Service flood prevention structural improvements from Watershed Districts (financing capability as above), and for soil erosion and land treatment from local Soil and Water Conservation Districts working through and with landowners in the Watershed District. Soil and Water Conservation Districts have no taxing power. Financing of these organizations activities is by charges for services performed;

   (d) for Bureau of Reclamation and Corps of Engineers electric power features, non-federal sponsorship as such not being required, from purchases of energy by public bodies and cooperatives, first, and with surpluses by private entities;

   (e) for Corps of Engineers navigation features, for which sponsorship as such is not required, from operators, shippers, industries, and municipalities as appropriate covering use and supplemental navigation features;

   (f) for all federal agencies incorporation of recreation and fish and wildlife enhancement features from Conservancy Sub-Districts (financing capability as above) in addition to, or in conjunction with the state agency, Game, Fish and Parks Commission, whose financing capability is through hunting and fishing license fees (for fish and wildlife features) and by either or both Legislative appropriations or user fees (for recreational features), and from Watershed Districts, Municipalities or Counties (financing capabilities as above);

   (g) for all federal agencies incorporation of municipal and industrial water supplies from Municipalities (incorporated), Sanitary Districts (rural) (financing through County government), and public or private industries;

   (h) for all federal agencies incorporation of pollution or quality control or low-flow augmentation from Conservancy Sub-Districts, Municipalities and Sanitary Districts;

   (i) for other purposes built into federal projects appropriate adaptation is probable.

Drainage Districts are not appropriate subdivisions of state government to sponsor federal water projects. Peculiarities of their financing and management are designed for local construction and operation. Some basic problems would exist in adapting such Districts to meet federal laws and regulations.

STATE OF WYOMING



ADMINISTRATION OF WATER RIGHTS

State Engineer and Board of Control

In 1885 the Legislative Assembly of the Territory of Wyoming created the office of Territorial Engineer. It gave him general supervision of the diversion and division of the water of the natural streams, and supervision of the Water Commissioners of the territory.[1] In 1886, Elwood Mead was appointed to be the first Territorial Engineer. When Wyoming became a State, Mr. Mead became the first State Engineer. He was largely responsible for the constitutional provisions and the first water laws.

The Constitution created the office of the State Engineer and gave him general supervision of the waters of the State and of the officers connected with its distribution.[2] Upon proper application, he issues permits for the use of water, and through the Division Superintendents, supervises the water of the State.[3] He is now also responsible for coordinating a State water and related land resource plan.[4]

The State Board of Control was also constitutionally created. Its duty is to supervise appropriation, distribution and diversion of water throughout the State. The Board consists of five members - the four Water Division Superintendents and the State Engineer.[5] The Board has power, after proper notice and hearing, to accept or reject proofs of appropriation[6] and various types of amendments to existing water rights.[7] The Board also hears and decides the questions of abandonment and other water problems.[8] Its decisions are subject to review by the Courts.[9]

Each of the four Water Division Superintendents is in charge of a Water Division. They supervise the Water Commissioners in their respective Division. They also control the storage and use of water, accept proofs of appropriation, and hold hearings on various matters. They are supervised by the State Engineer.[10]

Each of the four Water Divisions is divided into Water Districts.[11] Commissioners are appointed by the

Governor with the recommendation of the Division Superintendent and advice of the proper County Commissioners.[12] The Water Commissioner is the chief administrator of water in his district.[13] His decisions are subject to appeal to the Division Superintendent, then to the State Engineer, and finally to the Courts.[14]

Other State Agencies

Seven other state agencies have an interest in water matters. They are the Board of Land Commissioners, the Department of Public Health, the Game and Fish Commission, the Highway Commission, the Department of Economic Planning and Development, the Recreation Commission, and the State Soil and Water Conservation Committee. Their interests are:

1. Board of Land Commissioners

The Board of Land Commissioners oversees the management, leasing, and sale of state lands. This includes watershed protection through erosion control and water conservation practices.[15]

2. Department of Public Health

The Department of Public Health oversees control of water quality and has promulgated water quality standards under the Federal Water Pollution Control Act of 1965.[16]

3. Game and Fish Commission

The Game and Fish Commission has the duty to develop and manage water-based recreation. The Commission may acquire water rights for recreational purposes by making proper application to the State Engineer.[17]

4. Highway Department and Geological Survey

The Highway Department, in cooperation with the U. S. Geological Survey, conducts flood water studies for highway planning purposes.[18]

5. State Department of Economic Planning and Development

The Department is the successor to the Wyoming Natural Resource Board which was abolished as of July 1, 1969. The Department has as its purpose, the planning for and the development of the physical and economic resources of the state. The Department consists of the Divisions of Water, Industrial, and Mineral Development and also the Office of the Chief of State Planning.

6. Recreation Commission

The Recreation Commission may acquire water to serve state parks, public recreation grounds, historical landmarks, and historical, archaeological, geological and ecological sites now existing or created later.

7. State Soil and Water Conservation Committee

The State Soil and Water Conservation Committee organizes and coordinates Soil and Water Conservation Districts for the better use of Wyoming water.[21]

Local Water Districts

There are nine different types of local water districts that are presently operating in Wyoming. All of these districts are formed by order of the District Court after petition by a required number of landowners. The districts include:

1. Irrigation Districts

Irrigation Districts may be formed to (1) reclaim and irrigate lands, (2) construct and operate water storage and distribution facilities and electric power plants, and (3) make and sell electric power incident to the other functions. District lands need not be connected, but each tract within the district must have benefits exceeding costs. There are presently 34 irrigation districts in Wyoming.[22]

2. Drainage Districts

Drainage districts may be formed to construct and maintain drains, levees, and drainage ditches. The district may include several noncontiguous or disconnected tracts of land. But, as is the case in many of the older water district laws, benefits are to exceed costs on each tract. There are presently 20 drainage districts in Wyoming.[23]

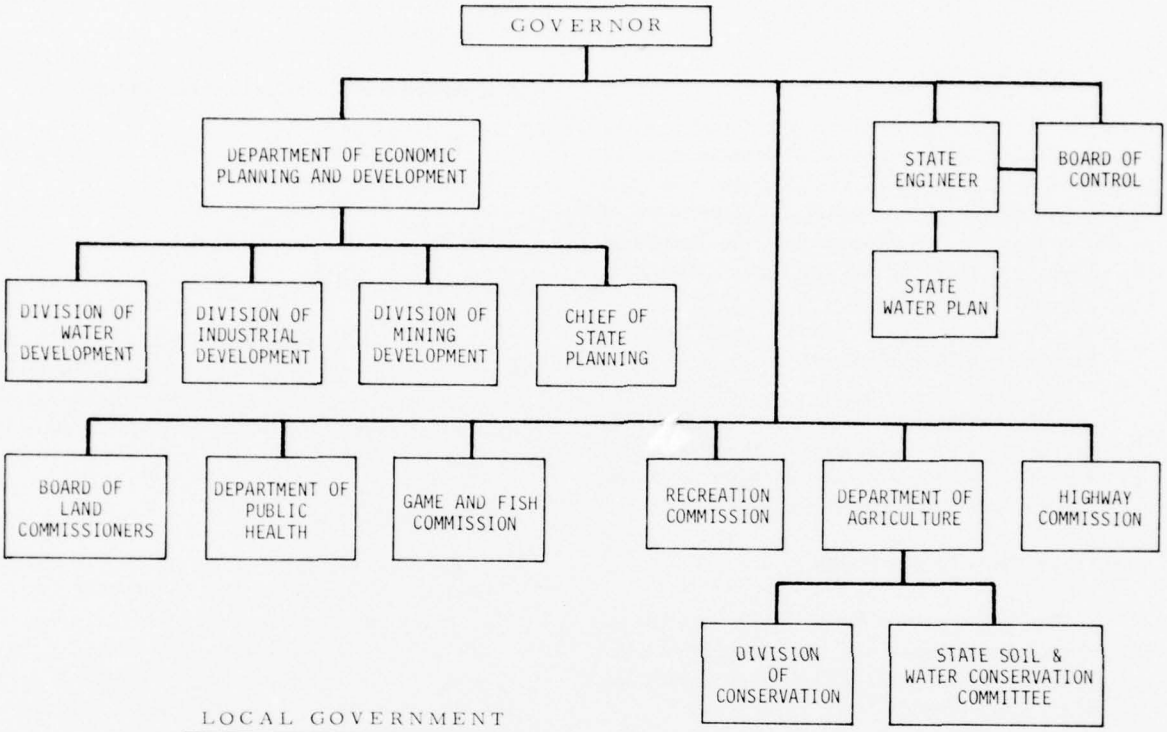
3. Jointly Operated Irrigation and Drainage Districts

Irrigation districts and drainage districts can cooperate in the operation and maintenance of their respective systems. A governing body, called the Board of District Managers, is composed of either one or two commissioners from each district cooperating. There is one jointly operated irrigation and drainage district in Wyoming at present.[24]

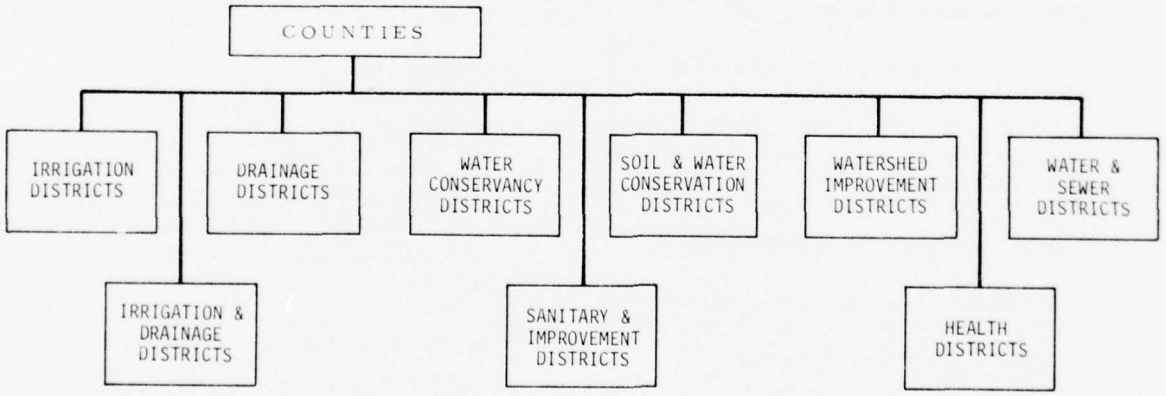
4. Water Conservancy Districts

Water Conservancy Districts may be organized for conserving, developing, and stabilizing supplies

WATER RESOURCE ORGANIZATION
STATE OF WYOMING



LOCAL GOVERNMENT



of water for domestic, transportation, industrial, manufacturing, irrigation, power, recreation and other beneficial uses. They may exist within or across boundaries of other governmental units. However, first class cities must give their consent before they may be included in the district. There are three water conservancy districts in Wyoming at the present time.[25]

5. Soil and Water Conservation Districts

Soil and Water Conservation Districts bring landholders together into effective workgroups to examine soil and water conservation needs. Their principal interests are to prevent erosion, control runoff, and, in general, to promote better use of soil and water. These problems are generally larger than the area contained in just one farm. Therefore, several landowners working with each other and the Soil Conservation Service attack these problems under federal laws, such as P. L. 566, the Small Watersheds Project Act. Soil and Water Conservation Districts may organize across the lines of other governmental and district boundaries. Wyoming presently has 45 soil and water conservation districts which include approximately 90 percent of the area of the state.[26]

6. Watershed Improvement Districts

The most recent Water District Act was passed in 1961. It permits forming of watershed improvement districts. These districts may be formed as subdistricts of soil and water conservation districts. The purpose of the watershed improvement district may be to control erosion, flood water, and silt. The district may store, develop, use and dispose of water. The area included may be within a single or adjoining watersheds. The area may include a part of one or more soil and water conservation districts.[27]

Advantages of watershed improvement districts over soil and water conservation districts are the watershed improvement districts' financial powers. The soil and water conservation districts cannot incur debt, build and run facilities, or levy charges or taxes. Watershed improvement districts have all these powers. They can charge for special benefits to land. They may acquire property. They have the power of eminent domain. They may incur debt. They may contract with other governmental units at any level. At present there is one watershed improvement district in Wyoming.[28]

7. Water and Sewer Districts

The purposes of water and sewer districts are to supply domestic water, sewage systems, and/or storm drain systems outside cities and towns. Local improvement districts also can be formed under this law. There are two water and sewer districts and two sewer districts presently in Wyoming. Others are in various stages of formation.[29]

8. Sanitary and Improvement Districts

Sanitary and improvement districts may be organized in unincorporated areas to facilitate the establishment and maintenance of satisfactory water works and sewage disposal. There are five sanitary and improvement districts in Wyoming at the present time.[30]

9. Health Districts

Cities, towns, counties, and unincorporated areas, either in combination or separately, can organize into health districts. The District Board of Health submits its budget to the County Commissioners who may levy up to 1 mill of property tax for health purposes. Health Departments may make rules to prevent disease and promote public health by controlling water quality. There are presently two health districts in the State of Wyoming.[31]

OBTAINING A WATER RIGHT

The present method of obtaining a right to use water in Wyoming is under the supervision of the State Engineer and the Board of Control. This system, which was first established in 1890,[32] became the prototype for other Western States. The method outlined is exclusive[33] and those who divert water without first obtaining a permit from the State Engineer are guilty of a misdemeanor.[34] The same basic procedure is used for surface water and underground water.[35]

"Any person, association or corporation" may acquire the right to use water.[36] This includes:

> "municipal corporations (which) shall have the same right as individuals to acquire rights by prior appropriation . . . to the use of water for domestic and municipal purposes, . . ."[37]

If an application anticipates a diversion in excess of 25 c.f.s. or reclamation of over 1,000 acres, the State Engineer may request more detailed information to satisfy himself of the good faith of the applicant.[38] A common carrier, or a public utility, may initiate appropriative rights for water to be used by its consumers.[39] There is no good reason, according to the Wyoming Supreme Court,[40] if the law is complied with in other respects, why a person should be forbidden to act as a volunteer for another in obtaining a right to use water.

The procedural steps for acquiring a right to use water include:

"an appropriation of water in good faith, initiated by the appropriator or his agent in the manner prescribed by law, pursuing the construction of works in connection with it, if necessary, with reasonable diligence, and applying the water to beneficial use within a reasonable time."[41]

The following procedure provides the statutory means for implementing these principles under the supervision of the State Engineer and Board of Control:

(1) A registered professional engineer or land surveyor, licensed to practice in Wyoming, must conduct a survey and prepare maps and plans.[42]

(2) A prospective user files his application, maps and plans, accompanied with the proper fee to the State Engineer.[43] This must be done prior to the initiation of any construction.[44] The date of priority is established as that date when the application is accepted by the State Engineer.

> "Under our present statutory system, the inceptive point or date of a water right is not the commencement of construction, or even the commencement of survey. It is the filing of an application for a permit."[45]

As an early Wyoming Court stated:

> "To constitute an appropriation there must exist not only an intent to take the water, but that intent must be accompanied or followed by some open physical demonstration, and there must ultimately be an application to some beneficial use, the initial act must also be followed up with reasonable diligence, and the purpose consummated without unnecessary delay in order that, by the doctrine of relation, the time of appropriation may relate back to such initial proceeding."[46]

(3) After acceptance of the application and accompanying materials, it is the duty of the State Engineer to examine everything submitted to ascertain if the descriptions in the accompanying materials agree with the descriptions in the application.[47] He also must be certain that the maps, plans and application fulfill the statutory requirements,[48] and comply with the Rules and Regulations of the State Engineer.

If the materials submitted do not meet the necessary standards, the State Engineer may return them to the applicant or his agent for necessary corrections.[49] When the application, maps and plans meet the State Engineer's requirements, and if the proposed use is not against the public interest[50] and does not impair existing rights, the State Engineer must approve the permit.[51] If, in the State Engineer's opinion, there is no available unappropriated water, or if the use conflicts with existing rights or is detrimental to the public interest, he shall reject the application.[52]

(4) When the State Engineer approves a permit, he shall require that construction begin within one year of the date of approval.[53] If the permit contemplates a ditch, the State Engineer shall also require that the application of water to a beneficial use be completed within a specified time after commencement of construction.[54] All construction work must be completed within five years after the date of approval. The State Engineer may require it to be completed sooner.[55] Within five years of the date of completion, the applicant must submit proof of appropriation.[56] The State Engineer may for good reason, extend these times.[57] However, the request for extension must be received prior to the expiration date.[58]

(5) The user must then comply with the conditions of the permit. He must inform the State Engineer of his progress from time to time. He is required to notify the State Engineer when he commences construction, when he completes construction, and when he puts the water to beneficial use. These notices must be received by the State Engineer prior to dates specified in the permits.[59]

(6) After the applicant has used the water as specified in the permit, and filed the proper notices with the State Engineer, he may then submit proof of appropriation to the Division Superintendent of the Water Division in which the right is situated.[60] The Superintendent will then advertise in a local newspaper that such proofs have been taken.[61] The proofs will then be held open for public inspection. Any affected water user may then object to the allowance of the proof.[62] Upon objection, the Division Superintendent shall hold a hearing concerning the validity of the objections. He shall take testimony and receive evidence from all concerned parties.[63] The Division Superintendent shall then submit the transcript and the evidence to the Board of Control.[64] At its next meeting, the Board shall consider all proofs taken by the Division Superintendents (including those that have been contested) and if they are satisfied that there are no conflicts and that the appropriations have been perfected in accordance with the terms of the permit, the Board shall issue a certificate of appropriation.[65] A copy of this certificate is filed with the County Clerk of the county in which the land is situated.[66] That certificate is evidence of an adjudicated right to the use of water.

EXTENT OF A WATER RIGHT

The Wyoming Constitution provides that the ownership[67] and control[68] of the State's water resides in the State. This has been interpreted to mean that the State holds the water as trustee for use of the public.[69] Although a user may obtain a water right by following the proper statutory procedures,[70]

> "The water belongs to the State and only the use of it is granted to an appropriator in the manner and method specifically permitted."[71]

The Wyoming Legislature has provided for three different types of appropriations: direct use of the unstored natural flow, stored water, and underground water. Although the methods of acquisition of each of these appropriations are basically the same, each type of appropriation has limitations peculiar to that particular appropriation. All of the rights are limited to that amount that can be beneficially used within the terms of the permit.[72] In addition, permits for the direct use of unstored surface water is limited to one cubic foot per second for each seventy acres. If a direct flow right was established prior to 1945, and all other pre-1945 rights from the same source have been satisfied, a prorated share of the surplus, up to an additional cubic foot per second for each seventy acres, may be diverted. Beneficial use under the terms of the permit is the only limitation placed on stored water or underground water.

Once having been acquired, the place, purpose and method of use, under certain conditions, may be changed without loss of priority. However, any such changes are strictly limited to those situations wherein no other user from the same source of supply will be injured. Also, a right for the direct flow of unstored surface water for agricultural purposes acquired after 1909 cannot usually transfer that right to lands not described in the permit.[73]

Wyoming statutes establish preferences for different types of uses and methods for changing non-preferred uses to a preferred use.[74]

The order of those preferences is:

(1) Water for drinking purposes for both man and beast;
(2) Water for municipal purposes; and
(3) Water for the use of steam engines and for general railway use, water for culinary, laundry, bathing, refrigerating and the manufacture of ice, steam and hot water heating plants, and steam power plants and industrial purposes.[75]

Although the statute refers to these uses as "preferred uses", the term must be defined to be understood. A non-preferred senior right will not be shut down to furnish water to a preferred junior right. The preferred user has only the right to obtain an earlier non-preferred right and change it to a preferred use. With the exception of use for steam power plants and industrial purposes,[76] preferred uses carry with them the power of condemning earlier, non-preferred rights.

The statute makes one express exception to this general policy statement: "The use of water for irrigation shall be superior and preferred to any use where water turbines or impulse water wheels are installed for power purposes." This language gives irrigation and all other enumerated preferred uses a true preference over water uses "where water turbines or impulse water wheels are installed for power purposes." This "true preferences" gives any enumerated preferred use the right to call for water even though that use has a priority date junior to a right "where water turbines or impulse water wheels are installed for power purposes," without condemnation of the senior use.

Changing a right to preferred use necessitates a public notice, an inspection and hearing if necessary by the proper Division Superintendent, report of the Superintendents to the Board of Control, and an Order by the Board of Control. In determining whether or not a change of use should be allowed, the Board of Control must equally guard all the various interests involved.[77]

There are two types of interests to be guarded: (1) the interests of other users, and (2) the interests of the transferring party. These are adverse interests. It is the duty of the Board of Control to protect them both. To protect these interests, it is, of course, necessary to first determine their extent.

The other users most likely to be affected by a change are the junior appropriators from the same source. It must be remembered that:

> "An appropriator of water obtains by his appropriation that only of which he makes a beneficial use, . . . and . . . as against a subsequent appropriator, a senior appropriator cannot give the water he does not use to another for a certain period who otherwise would have no right to use it . . ."
>
> * * *
>
> "His appropriation, and therefore his water right dependent thereon, is at all times limited, within the maximum of his appropriation, to the quantity capable of beneficial use and actually so used. If during any period he does not require the use of the water it falls during that period to the subsequent appropriator who does need the same and can beneficially use it . . . . In other words, the burden upon the use must not be enlarged beyond that which rested upon it under the original appropriation and while in the hands of the original appropriator as he was entitled to and did use it."[78]

In making a change of a direct flow irrigation right to industrial use or to other use, the return flow must be considered. The industrial user is only entitled to the same consumptive use that was made under the old right. He is not necessarily entitled to divert the same amount as the irrigator. The same amount of water, both in

quantity and quality, must be available to other users as was under the previous use. Thus the return flow from both uses must be determined and the industrial right must be adjusted accordingly. This, of course, varies from case to case, and the burden is upon the transferor to show to the satisfaction of the Board of Control that no other users will be injured. In one instance, when the city of Laramie obtained a direct flow irrigation right and changed its use and its point of diversion, the city was allowed to continue diverting the same amount because reputable engineering reports showed that under the original use, return flows averaged only nineteen percent, and the average return flow from the city's use would be approximately sixty percent.[79] Each transfer must stand upon its own merits.

Storage rights and underground water rights are more flexible than surface water rights. Owners of storage rights are not limited in time of use and need not account for return flow. If the reservoir has a secondary permit, a proportionate share of the storage capacity attaches to those lands, and the transferor of the water right must have the consent of the landholders. However, once such a consent is obtained, it is a simple matter to petition the State Board of Control to detach the secondary permits from those lands and change it to another use. Even though other users may have been taking advantage of the return flow from application of stored water, they have no right to its continuance. The owner of the stored water need not irrigate. If he does not irrigate, the water remains in the reservoir, not in the stream, and other users cannot force its gratuitous release.[80]

Ground water resources in Wyoming are largely undeveloped. However, if a preferred user desired to obtain an existing well for another use and convert it to the preferred use, the industry would be subject to the same limitation as upon an appropriation which diverts water from outside the basin of use. Therefore, while the transferor would not have to account for the return flow (unless it could be shown that some of the water returned to the original aquifer) he would be limited as to the historical time of use.

In attempting to state a single overriding principle common to all changes of use, it is necessary to return to the river and examine the various types of uses and the effects of each use upon the river. A direct flow appropriator diverts from the river when he needs water and when it is available to him in priority. His right is limited to beneficial use. So long as he can beneficially use that amount upon lands described in his permit, he can continue his diversion until the supply in the river is inadequate to furnish all earlier appropriations. Irrigation efficiency being what it is, there will probably be return flow. If the efficiency is increased, since no more land can be added to the permit, less water will be diverted, and more will remain in the stream, available to junior appropriators.

The same is not true of the other types of appropriations. The transbasin diverter brings a new source of water into the river. Any addition to the basin of use is an addition to the natural supply, and beyond the entitlement of other users in the basin. The storage of water affects the natural river at the time of storage. Senior appropriators are not affected because storage in the junior reservoir can only be made after the senior's rights are filled. Junior appropriators are only entitled to the natural supply available after the senior reservoirs are filled. The owner of the storage water right, within the terms of the permit, has the right to use the stored water at the time and place of his own choosing. Even though a part of the stored water may become available to other users through return flow, such availability is a gratuity to them, and does not create an enforceable right in its continued availability.

ABANDONMENT OF A WATER RIGHT

In 1888, the Territorial Legislature passed an irrigation-appropriation statute that included a provision that any water user who failed to use water under an appropriation for two successive years would be considered as having abandoned that appropriation.[81] In 1905, the non-use period was extended to five years.[82] Much of the 1905 language has been retained in the present abandonment statute.

That statute provides that if any water user:

> "shall fail to use the water therefrom for irrigation or other beneficial purposes during any five successive years, they shall be considered as having abandoned the same, and shall forfeit all water rights, . . . and the water formerly appropriated by them may be again appropriated for irrigation and other beneficial purposes, the same as if such ditch, canal or reservoir had never been constructed . . . ."[83]

The statute is not self-executing, and a water right is not considered abandoned until the proper authority, either the Board of Control or the District Court, issues an order of abandonment.

The statutes provide that any water user who might be affected by the abandonment may petition the State Board of Control to abandon another user's water rights.[84] If the Board feels a prima facie case is present, a hearing is held before a Division Superintendent[85] who then reports to the Board. If the Board feels that rights have been abandoned, an order is issued.[86] This order is appealable to the District Court and the Wyoming Supreme Court.[87]

Although there is a statutory procedure, this is not an exclusive procedure, and it has been held that abandonment of a water right upon which injunctive relief is dependent can be properly interposed in an action for injunction.[88]

Abandonments and forfeitures are not favored,[89] and cannot result if the non-use of water was caused by facts not under the appropriator's control.[90] However,

"nonavailability, as well as other factors, not under the appropriator's control, is properly a matter of defense, and contestants . . . are not obligated to show availability over the period of non-use."[91]

As a general principle, forfeitures must be promptly asserted and, if not so asserted, they are waived. A wait of sixteen or seventeen years before bringing an action for abandonment, during which time the reservoir in controversy was twice repaired and use of water recommenced, was held to be an unreasonable delay in bringing an abandonment action.[92]

Initially, proof of abandonment was difficult because of the unavailability of discovery procedures to gain access to the lands. However, the Wyoming Administrative Procedures Act, which gives parties the same discovery powers as were available under the Wyoming Rules of Civil Procedures,[93] has cured this apparent defect.

WATER QUALITY

The Wyoming Department of Health has broad coverage and responsibilities in the fields of waste disposal, water supply and water quality.

Under 35-25, Powers and Duties. The Division of Administration, through the Director of Health, is given specific powers. Subsection (6) outlines the powers in regard to water supply and waste disposal.

"(6) Sanitary Standards generally. To enforce such sanitary standards for the protection of public health as to the quality of water supplied to the public and as to the quality of the effluent of sewerage systems and trade wastes discharged upon the land or into the surface or ground waters of the state, as are or may be established by law, and to advise with municipalities, utilities, institutions, organizations and individuals, concerning the methods or processes believed by him best suited to provide the protection or purification of water and the treatment of sewage and trade wastes to meet such minimum standards."

Sections 35-184 thru 35-196 are entitled "Protection of Public Water Supply". However, they primarily pertain to the disposal of wastes for the protecting of public waters and water supply.

By definition any pollution adversely affecting livestock, agriculture, wild life, fish or aquatic life is deemed to affect public health.

A water pollution control advisory council is established to guide the pollution abatement program. The Department of Health is designated as the agency to coordinate the activities of all state agencies in regard to water quality.

The laws are specific in regard to submission of plans for industrial waste treatment facilities, municipal waste systems and disposal and water supply systems. Approval of plans is required prior to construction.

Generally, permits are not used or required for waste disposal. The exception is when a portion of a natural stream or drainage area is to be used for tailing ponds, etc. In this case a portion of such areas may be utilized when approved by the Director of Public Health, the State Game & Fish Commissioner, and the State Engineer. If review and approval of the area and plans for protection of down stream areas are satisfactory a permit for such use can be issued.

Water Quality Standards for interstate waters were adopted as required by the Water Quality Act of 1965. These Standards were approved, without exception, by the Department of the Interior in November 1968.

Section 35-197 thru 35-200 established quality standards for public water supplies.

Sections 35-462 thru 35-466 cover a broad area regarding the disposal of such items as garbage, rubbish, dead animals, offal, offensive matter, etc. These sections generally prohibit disposal of such matter in waterways, creeks, streams, ponds, etc. and public right-of-ways, public grounds, or within one-half mile of an inhabited dwelling or within one-half mile of a public roadway.

INTERSTATE WATERS

Although the appropriative theory has been acceptable to the Western States on an intrastate basis,[94] States near the headwaters, which are higher in altitude and colder in climate, have a shorter growing season, and whose population expands more slowly, have not been willing to apply this same theory on an interstate basis. In instances where rivers flow across State lines and each State has developed a dependency upon the continued availability of that water for present or future development, controversies have been settled either by interstate litigation under the original jurisdiction of the United States Supreme Court or by interstate compacts, negotiated and ratified by the individual States and approved by Congress.[95] In the Missouri River Basin, the State of Wyoming is presently subject to two (2) decrees of the United States Supreme Court, and is a party to three (3) interstate compacts.

Court Decrees

1. Laramie River[96]

The Laramie River begins in Colorado in the Medicine Bow National Forest, southeast of Laramie. It flows in a northeast direction west of Laramie where it is joined by the Little Laramie River. It then continues down through the mountains and eventually joins the North Platte River below Guernsey. In 1911 the State of Wyoming brought suit in the United States Supreme Court

against the State of Colorado and two Colorado corporations to prevent a proposed diversion from the natural basin of the waters of the Laramie River. The original decree was entered in 1922. That decree was an injunction limiting a specific trans-mountain diversion of water, without prejudice to certain other trans-mountain diversions in Colorado or to certain diversions for the irrigation of the meadowland within the Laramie River Basin in Colorado. The decree was amended and modified in 1922, in 1932, in 1936, and in 1940. The modified decree allows diversions in Colorado in the aggregate of 39,750 acre-feet. Wyoming receives the remaining flow of the Laramie River and its Colorado tributaries. The decree excludes Sand Creek, which is only nominally a tributary of the Laramie River. By 1957, of the 39,750 acre-feet allocated to Colorado, 19,875 acre-feet were being diverted out of the basin. The remaining uses were within the basin on meadowlands in Colorado.

In the 1950's Colorado felt that they were entitled to divert more of this remaining 19,875 acre-feet of the basin for uses in other parts of Colorado. Wyoming contended that under the law of prior appropriation, the place of use of water could not be changed to the detriment of other appropriators from the stream, and that in excess of 16,000 acre-feet of the 19,875 acre-feet annually diverted to the meadowlands in Colorado returned to the stream and flowed on to Wyoming. This water was then available for the use of Wyoming appropriators, and that to allow any additional out of basin diversion in Colorado would irreparably harm those in Wyoming who had developed a dependency upon the return flows of this meadowland irrigation. When suit was threatened, the States of Colorado and Wyoming met and agreed to file a joint motion with the United States Supreme Court, requesting the Court to approve a stipulation vacating the previous decrees and to substitute a new decree which provided that users in Colorado be limited to annual diversions of 49,375 acre-feet from the Laramie River. Users in Wyoming would then be entitled to divert the remaining flow of the Laramie River and its tributaries. Colorado was also enjoined from diverting more than 19,875 acre-feet of this 49,375 acre-feet from the basin for use in other parts of Colorado. The remaining 29,500 acre-feet of water allocated to Colorado was to be used within the basin, and not more than 18,000 acre-feet was to be diverted in any year after July 31st.

2. North Platte Decree[97]

The North Platte River begins in Colorado, crosses into Wyoming near Saratoga, Wyoming, flows north to Casper, bends east past Glenrock and Douglas, turns southeast past Torrington and then flows into Western Nebraska. In the early 20's, Nebraska, fearful that the advent of Federal reclamation projects in Wyoming would diminish the historical water supply available to users in Nebraska, brought suit in the United States Supreme Court to determine the rights of the respective States to the use of the waters of the North Platte River. The State of Colorado was joined as a party, and the United States, who owns major dams on the North Platte River, intervened. The case was finally determined by the Supreme Court of the United States in 1945, and an order was issued which provided that the State of Colorado be enjoined from diverting water from the North Platte and its tributaries for the irrigation of more than a total of 135,000 acres of land in Jackson County, Colorado, during any one irrigation season. They were further enjoined from storing more than 17,000 acre-feet annually between October 1st of any given year and September 30th of the following year. Out of basin diversions were limited to no more than 60,000 acre-feet in any period of ten consecutive years.

Exclusive of the Kendrick Project and the Seminoe Reservoir, Wyoming was enjoined from diverting water above the Guernsey Reservoir or from the tributaries of the North Platte above the Pathfinder Dam for the irrigation of more than a totaf of 168,000 acres of land in Wyoming during any one irrigation season. They were also enjoined from storing more than 18,000 acre-feet annually for use above Pathfinder Reservoir. In the area between Guernsey and the Tri-State Dam section, between May 1st and September 30th of any year, the natural flow of the North Platte River was divided between Wyoming and Nebraska on the basis of 25 percent to Wyoming and 75 percent to Nebraska. Water stored in federal reservoirs was not affected by the decree, but is controlled by contracts of the North Platte Project and Warren Contracts.

In 1952, when the Glendo Project was found to be feasible, the parties felt it necessary to amend the decree. The decree was amended in 1953 by stipulation to provide that Colorado might increase its use from 135,000 acres of land to 145,000 acres of land. Storage rights in Glendo were to be limited to 40,000 acre-feet annually, and including carry-over storage, would never exceed 100,000 acre-feet. This water was to be distributed according to contracts with the Secretary of Interior, and divided among the states with 15,000 acre-feet available for use in Wyoming below Guernsey Dam and 25,000 acre-feet available for use in Nebraska.[98]

Interstate Compacts

1. Yellowstone River Compact[99]

The Yellowstone River Compact, dividing the waters of the tributaries (Clarks Fork, Big Horn, Tongue and Powder of the Yellowstone) between the States of Wyoming, Montana and North Dakota, was negotiated in 1950, and ratified by the three States and the Federal Government in 1951. This Compact included the following provisions for all four of the tributaries:[100]

(a) Existing rights as of January 1, 1950, maintain their status quo. Supplemental supplies for the existing rights are exempted from allocation.

(b) Existing and future domestic and stock water uses including stock water reservoirs up to a capacity of 20 acre-feet are exempted from the provisions of the Compact.

(c) Devices and facilities for the control and regulation of surface water are exempted from the provisions of the Compact.

The unappropriated or unused total divertible flow of each tributary, after needs for supplemental supply for existing rights are met, is allocated to Wyoming and Montana as follows:[101]

(a) Clarks Fork of the Yellowstone River:
Wyoming – 60%
Montana – 40%

(b) Big Horn River (exclusive of Little Big Horn River):
Wyoming – 80%
Montana – 20%

(c) Tongue River:
Wyoming – 40%
Montana – 60%

(d) Powder River (including the Little Powder River):
Wyoming – 42%
Montana – 58%

Lands in Montana and North Dakota below Intake, Montana, are entitled to beneficial use of the flow of the Yellowstone River on a proportionate basis of acreage irrigated.[102]

2. Upper Niobrara Compact[103]

The Upper Niobrara River Compact concerns the states of Wyoming and Nebraska, and was ratified by Congress in 1969. For the purposes of the Compact, the Upper Niobrara River includes the Niobrara River and its tributaries in Nebraska and Wyoming west of Harrison, Nebraska.[104]

Wyoming direct flow rights prior to August 1, 1957, are excluded from control of the Compact, but, except for additional rights on 143 acres prior to July 1, 1961, direct flow rights with priority dates after August 1, 1957, on the main stem below its juncture with Silver Springs Creek and on Van Tassell Creek from about four miles north of the town of Van Tassell shall be regulated in priority with rights west of Harrison, Nebraska.

The Compact limits domestic and stock reservoirs constructed after August 1, 1957, to a 20 acre-foot capacity. Mainstem storage reservoirs in Wyoming with priority dates after August 1, 1957, are limited to an annual total of 500 acre-feet. Storage in all reservoirs shall be made only between October 1st and June 1st or, during the rest of the year, when available, after fulfilling other direct flow appropriations in Wyoming or Nebraska. These reservoirs shall be entitled to one fill per year only.[105]

The Compact also provided that data would be gathered upon the groundwater supplies of the Niobrara River Basin in cooperation with the Geological Survey. After making such a study, the states may then enter into negotiations to apportion the groundwater between the two states.[106]

3. Belle Fourche River Compact[107]

The Compact between Wyoming and South Dakota for the division of the waters of the Belle Fourche River and its tributaries originating in Wyoming was negotiated and ratified by the two states in 1943, and the Federal Government in 1944. This Compact recognizes all existing rights in Wyoming, as of the date of the Compact, and allows Wyoming to deplete the flow an additional 10 percent. It also permits Wyoming unlimited use for stock water reservoirs with capacities up to 20 acre-feet. Reservoirs for use of water only in Wyoming are limited to a total capacity of 1,000 acre-feet each.

REFERENCES

1. **2d Annual Report of the Territorial Engineer** 14 (1890).
2. Article 8, Section 5, **Wyo. Const.**
3. **Ibid.**
4. Section 41-1.6, **Wyo. Stat.** (1957). (All section references are to the 1957 edition of the Wyoming Statutes as amended to 1967.)
5. Article 8, Section 2, **Wyo. Const.**
6. Section 41-211.
7. Section 41-213.

8. Sections 41-47 thru 41-53.
9. Article 8, Section 2, **Wyo. Const.**
10. Section 41-57.
11. Section 41-61.
12. Section 41-62.
13. Section 41-63.
14. **Ibid.**
15. House and Cahill, **Everybody's Guide to Wyoming Water Administration** 11 (1967). (Hereinafter referred to as **Everybody's Guide.**)
16. **Ibid.**
17. **Ibid.**
18. **Id.** at 12.

21. **Id.** at 13.
22. **Id.** at 15.
23. **Id.** at 14.
24. **Id.** at 16.
25. **Id.** at 18.
26. **Id.** at 17.
27. **Id.** at 19.
28. **Ibid.**
29. **Ibid.**
30. **Id.** at 17.
31. **Id.** at 15.
32. **Session Laws of Wyoming** 1890-91, Ch. 8, approved December 22, 1890. This law is currently found in Sections 41-201 to 41-216.
33. **Laramie Rivers Co. v. LeVasseur**, 202 P.2d 680 (1949); see also **Campbell v. Wyo. Dev. Co.**, 100 P.2d. 124, 102 P.2d. 745 (1940).
34. Section 41-201.
35. Article 8, Section 1, **Wyo. Const.**, declares that the water "*of all natural streams*, springs, lakes or other collections of still water" within the State belong to the State. Article 1, Section 31, **Wyo. Const.** states that the control of water "must be in the State, which, in providing for its use, shall equally guard all the various interests involved."

    As to surface flow, this concept was found constitutional in **Farm Investment Co. v. Carpenter**, 61 Pac. 258 (1900). Although Wyoming has had a ground water statute since 1947, the only case concerning its constitutionality was dismissed by the Supreme Court on procedural grounds. **Bishop v. City of Casper**, 420 P.2d. 446 (1966).
36. Section 41-201.
37. Article 13, Section 5, **Wyo. Const.**
38. Section 41-205.
39. **State v. Laramie Rivers Co.**, 136 P.2d. 487 (1943).
40. **Scherck v. Nichols**, 95 P.2d. 74 (1939).
41. **State v. Laramie Rivers Co.**, 136 P.2d. 487 (1943).
42. Section 33-366. Provided, however, if the application is for a stock water reservoir of less than five acre-feet, the applicant or his agent may certify to the map submitted.
43. Section 41-201.
44. Diversion of water prior to the filing and approval of an application is a misdemeanor. **Ibid.**
45. **Whalen v. North Platte Canal & Colonization Co.**, 71 Pac. 995 (1903); **Wyo. Hereford Ranch v. Hammond Packing Co.**, 236 Pac. 764 (1925); **Laramie Rivers Co. v. LeVasseur**, 202 P.2d. 680 (1949).
46. **Moyer v. Preston**, 6 Wyo. 308, 321, 44 Pac. 845 (1896).
47. Section 41-208.
48. Section 41-215.
49. Section 21-205.
50. Article 8, Section 3, **Wyo. Const.**
51. Section 41-203.
52. **Ibid.**
53. Section 41-206.
54. **Ibid.**
55. **Ibid.**
56. **Ibid.**
57. **Ibid.**
58. **Ibid.**; Attorney General's Opinion No. 45, dated September 22, 1965; Unnumbered Opinion dated May 8, 1968. See also **Laramie Rivers Co. v. LeVasseur**, 202 P.2d. 680 (1949).
59. Section 41-206.
60. Section 41-211.
61. **Ibid.**
62. Section 41-176.
63. Section 41-177.
64. Section 41-179.
65. Section 41-211.
66. **Ibid.**
67. Article 8, Section 1, **Wyo. Const.**
68. Article 1, Section 31, **Wyo. Const.**
69. **Willey v. Decker**, 73 Pac. 210 (1903); **Merrill v. Bishop**, 287 P.2d. 620 (1955); **Lake DeSmet Res. Co. v. Kaufman**, 292 P.2d. 482 (1956); **Hunziker v. Knowlton**, 322 P.2d. 141 (1958).
70. **Quinn v. John Whitaker Ranch Co.**, 92 P.2d. 568 (1939).
71. **Willey v. Decker**, 73 Pac. 210 (1903).
72. Section 41-2.
73. **Ibid.**
74. Sections 41-3 and 41-4.
75. Section 41-3.
76. **Ibid.**
77. Article 1, Section 31, **Wyo. Const.**
78. **Johnston v. Little Horse Creek Irr. Co.**, 13 Wyo. 208, 227-28 (1904).
79. Testimony of H. T. Person, given September 5, 1963, before the State Board of Control, In the Matter of the Petition of the City of Laramie for a Change to a Preferred Use, **Transcript**, p. 8.

80. Cahill, Industrial Water Panel, Wyo. State Bar Conv., September 12, 1968 (unpublished).
81. Chapter 55, Section 14, **Session Laws of Wyo.** (1888).
82. Chapter 39, Section 1, **Session Laws of Wyo.** (1905).
83. Section 41-47.
84. Section 41-48.
85. Section 41-49.
86. Section 41-50.
87. Section 41-53.
88. **Louth v. Kaser,** 364 P.2d. 96 (Wyo. 1961).
89. **Sturgeon v. Brooks,** 281 P.2d. 675 (1955).
90. **Scherck v. Nichols,** 95 P.2d. 74 (1939); **Ramsay v. Gottsche,** 69 P.2d. 535 (1937); **Horse Creek Cons. Dist. v. Lincoln Land Co.,** 92 P.2d. 572 (1939).
91. **Hemenway v. Yentzer,** 440 P.2d. 7, 13 (1968).
92. **Sturgeon v. Brooks,** 281 P.2d. 675 (1955).
93. Section 9-276.25(h).
94. **Everybody's Guide** 21.
95. **Ibid.**
96. **Wyoming v. Colorado,** 259 U.S. 419 (1922).
97. **Nebraska v. Wyoming,** 295 U.S. 40 (1935).
98. **Id.,** 345 U.S. 981 (1953).
99. Section 41-511.
100. **Id.** at Article V.
101. **Ibid.**
102. **Id.** at Article V(D).
103. Section 41-512.5.
104. **Id.** at Article II(B).
105. Section 41-512.5.
106. **Id.** at Article VI.
107. Section 41-487.



CHAPTER 3

FEDERAL WATER LAWS AND POLICIES

The following brief summary of Federal laws and policies and their relation to the 10 States of the basin was prepared by a special task force designated by the Standing Committee for Comprehensive Planning. Its members represented the three Federal Departments most heavily involved in the planning and development of water and related land resources, and with the administration of Federal lands. These members drew upon the agencies of other Departments in the field for material on basic and general authorizations covering their assigned functions.*/

In this chapter attention is called first to the highlights of the historical background and Federal constitutional provisions affecting water resource development. Complementing this, there follows a brief resume of the general, basic, and special authorizations for the Federal agencies that govern their participation in water and related land resource planning, development, and operations in the Missouri River Basin.

With a few exceptions, coverage is for the Federal laws only through the 1968 session of Congress. However, subsequent to the composition of the body of this chapter, the President submitted to Congress on July 9, 1970, Reorganization Plans No's. 3 and 4 which affect primarily the administration and programs of the Federal Water Quality Administration (Department of the Interior) and Environmental Science Services Administration (Department of Commerce) as discussed herein. Under the reorganization this established the Environmental Protection Agency (EPA) as a new independent agency within the Executive Branch, and the National Oceanic and Atmospheric Administration (NOAA) in the Department of Commerce.

For EPA the purpose is to establish a uniform mission and organize against environmental pollution on an integrated basis where management was scattered among 80-odd Federal agencies. Under EPA is assembled water pollution control, air pollution control, and control of solid wastes, pesticides, and radiation hazards. This should have the effect of integrating responsibilities and upgrading environmental matters within the Federal Government, and also assist the States and local communities in their programs of quality control.

For NOAA the purpose is to make possible a consolidated program for achieving a more comprehensive understanding of oceanic and atmospheric phenomena, and to facilitate cooperation between public and private interests that can best serve the interests of all. In exercising leadership in this field for programs of research and development NOAA will coordinate its own scientific and technical resources with the technical and operational capabilities of other governmental agencies and private institutions. Under NOAA are assembled the functions for the Environmental Science Services Administration (Commerce Department) and the Bureau of Commercial Fisheries (Interior Department) as described herein for water-related activities, together with several other service agencies whose functions are not of particular concern to or documented in this chapter.

HISTORICAL BACKGROUND

The Missouri River Basin was the principal part of the Louisiana Purchase of 1803. The basin's potential first was surveyed by the Lewis and Clark Expedition in 1804 and 1805. At that time, waters of the Missouri River Basin were considered to be useful primarily for navigation. The only early legislation relating to water was the Act of March 3, 1811 (2 Stat. 662, 666) which declared navigable waters of the Louisiana Territory to be public highways for all time.

Until after the Civil War, Congressional legislation for the Missouri River Basin emphasized communications, Indian pacification, and settlement. The only basin resources considered in legislation were the naked land, lead and salt,[1] iron and coal,[2] timber,[3] and gold, silver, cinnabar, and copper.[4]

With the close of the Civil War and the renewed surge of peoples to the West, Congressional enactments affecting the Missouri River Basin and the semiarid sections of the West began increasingly to recognize that the creation of national wealth and of citizen opportunity depended

*/ Members of the special task force included A. E. Bielefeld (chairman), Department of the Interior; C. H. Penstone and L. A. Chotena, Department of Agriculture; and H. B. Weber and H. M. Voight, Department of the Army.

largely on the development of water resources.[5] This recognition was spurred by the Hayden, Powell, and Jenny Surveys which Congress authorized in 1867, 1872, and 1876. The recognition of water importance came first in minor matters, principally relating to rights-of-way for canals and reservoirs,[6] but the scope of Congressional action was progressively enlarged.

In 1877 Congress passed the Desert Land Act,[7] which provided that a settler who was willing to develop irrigation would be entitled to acquire 640 acres of the public land. After 1890, only 320 acres could be so acquired. The Act provided for the use of water on nonriparian lands. This permitted the full development of the doctrine of appropriation and of the surface water use principle of "first in time, first in right." Without this doctrine, irrigation and other uses from surface waters would have been confined to the riparian owners, since only they could then have legally used the water. In 1872 Congress authorized Yellowstone National Park, the Nation's first such park, and thereby set a new policy for the management and use of public lands.[8]

During this same period Congress began to appropriate monies for surveys, such as those of Powell and Hayden, who explored and expounded the potential of developed water resources.[9]

Strong Congressional support for large-scale water resource development was thereafter expressed in the Joint Resolution of March 20, 1888 (25 Stat. 618, 619). This resolution directed the Secretary of the Interior "to investigate the practicability of constructing reservoirs for the storage of water in the arid region of the United States." The Congress emphasized the fact that,

> ". . . a large portion of the unoccupied public lands of the United States is located within what is known as the arid region and now utilized only for grazing purposes, but much of which, by means of irrigation, may be rendered as fertile and productive as any land in the world, capable of supporting a large population thereby adding to the national wealth and prosperity. . . ."

One hundred thousand dollars was initially appropriated for the Secretary's investigation.[10] At the same time, Congress withdrew from sale or entry all lands needed for irrigation works or "susceptible of irrigation."[11] This withdrawal was prompted by the Congressional concern that "continued disposal of lands in that region under the land laws might render it difficult and costly to obtain necessary rights-of-way for canals and ditches."[12] An outcry from prospective settlers, however, required a modification of the withdrawal action and, in 1890, Congress stipulated that lands west of the 100th Meridian could be entered or sold if they were made subject to a right-of-way for ditches or canals constructed by authority of the United States.[13]

In the General Allotment Act of 1887, Congress gave further emphasis to water resource development when it directed the Secretary of the Interior to arrange for the "just and equal distribution of water" among Indian allottees.[14] Succeeding agreements with the Indian Tribes made additional and specific provisions for the construction of irrigation facilities.[15]

Increased state participation in water resource development was sought through the Carey Act of 1894.[16] Under that act the Congress provided that each state could receive up to a million acres of public land without charge, if the state would arrange for the reclamation and settlement of such land in 160-acre tracts.

Congressional enactments and grants of public lands and rights-of-way now further emphasized the national interest in water resource development. These new laws covered municipal water facilities,[17] development of power,[18] water transportation, and the development of hydroelectric power "as subsidiary to the main purpose of irrigation,"[19] stock reservoirs,[20] and fishways.[21] Provision was also made for the dissemination of 6,000 copies of a bulletin on "The Use of Water in Irrigation."[22] At the same time, appropriations for water surveys continued.[23]

The Reclamation Act of June 17, 1902 (32 Stat. 388) was the culmination of the many studies, surveys, and hearings which Congress had theretofore directed.[24] This Act provided that a Reclamation Fund should be accumulated from the sale or disposal of public lands in the West, and that the Secretary should use such fund for the survey, construction, and maintenance of irrigation works in the West. From the date of the Reclamation Act to the present, no session of Congress has failed to take important action on water resource development in the West, and in the Missouri River Basin in particular.

In 1906 Congress recognized that reclamation development should comprehend not only irrigation but hydroelectric power generation and the development of municipal water supplies.[25] The sale of surplus water for lands already irrigated was authorized in the Warren Act of 1911.[26] Also, Congress repeatedly reaffirmed its interest in the family-sized farms which the 1902 Act was designed to provide.[27] In 1920 Congress provided for the furnishing of water for miscellaneous purposes, which opened the way to industrial use of reclamation water.[28]

The concept of the multipurpose project, which came to full fruition in the Missouri River Basin, was presented first in the Boulder Canyon Project Act of 1928.[29] During the bitter thirties, the concept of integrated resource development was applied on a large scale in the Tennessee Valley,[30] in the Columbia Basin,[31] and in California's Central Valley.[32]

In the Missouri River Basin, the Kendrick Project in Wyoming was the first to adapt the integrated resource plan as part of its basic 1935 authorization.[33] The power function was here assigned responsibility for paying off irrigation costs which the farmers could not carry.[34] This

use of power revenues to assist in the repayment of project construction costs which the farmers could not carry had been suggested by the arrangement of the Shoshone Project in Wyoming, where power revenues were assigned to pay off the cost of multi-purpose Buffalo Bill Dam and Reservoir.[35] This use of revenues earned by one function of a project to help pay costs required for another function of the project was then confirmed by the Hayden-O'Mahoney amendment to the Interior Department's Appropriation Act of 1939.[36]

The Reclamation Project Act of 1939 further endorsed the principle of integrated resource development and established the proposition that the water users' obligation to repay project construction costs should be measured by the water users' repayment ability.[37]

Meanwhile, in the Missouri River Basin, Congress got under way two great projects which were to affect the future design of basin development. The first of these was the Fort Peck Project in Montana, authorized in 1938, which presaged and was the forerunner of full-scale basin resource development.[38] The Fort Peck Project was conceived to serve primarily navigation, flood control, and power generation. Responsibility for the project fell jointly on the Corps of Engineers as the construction agency and the Bureau of Reclamation as distributor and marketing agent for its electrical energy. Congress marked the project's administration as "provisional pending the establishment of a permanent administration for Fort Peck and other projects in the Missouri River Basin."[39] The die thus was cast for a multipurpose project with multiagency participation.

The Water Conservation and Utilization Act of 1939 was another authorization for large-scale water resource development which Congress provided as it affected the Missouri River Basin.[40] Under its provisions Congress paired the Departments of the Interior and Agriculture in a plan for relieving the effects of drought on the Great Plains, and for "providing opportunities for permanent settlement of farm families."[41] Interior was the constructing and operating agency and Agriculture was the settlement agency. In pursuing the multipurpose project, the Secretary of the Interior was authorized to secure the help of the other Federal and State agencies.[42] Also, the principle was announced that construction costs should be repaid "within the limit of the water users' ability to repay."[43]

With the stage thus set for a full-scale development of the Missouri River Basin, both the Bureau of Reclamation and the Corps of Engineers began planning for such development. The Bureau plan was incorporated in S.D. 191 (78th Cong., 2d Sess.) and understandably placed emphasis on irrigation development.[44] The Corps' plan was incorporated in H.D. 475 (78th Cong., 2d Sess.) and understandably placed emphasis on flood control and navigation.[45] Both plans contemplated multipurpose development with participation by all interested Federal and State agencies in the Missouri River Basin. After long and frequently heated hearings, the Congress directed a consolidation of the two plans. This was effected in a joint agreement between the Bureau and the Corps of Engineers which was set out in S.D. 247 (78th Cong., 2d Sess.).[46] Under this plan, the Corps was to build the downstream and mainstem reservoirs whose functions were primarily navigation and flood control. And the Bureau was to build the upstream reservoirs and the facilities whose functions were primarily for irrigation and other consumptive-use purposes. Also, the Bureau was to market the electrical energy and water produced. The plan, commonly referred to as the "Pick-Sloan Plan," was then authorized by Congress as a part of the 1944 Flood Control Act.

From the standpoint of water resource development, the Missouri River Basin program was the most comprehensive that Congress had envisaged up to that time. It proposed the enlistment of the States and Federal agencies concerned. It covered works for the development of irrigation, power, flood control, navigation, silt control, domestic, municipal and industrial water supplies, fish and wildlife, recreation, pollution abatement, and hydrology research.[47]

Also, the program confirmed the now long-standing Congressional principle that water resource development was an essential element for the economic and social growth of the Missouri River Basin.

On December 16, 1946, the Secretary of War and the Secretary of Agriculture entered into an agreement to establish principles and policies to govern the planning, development, and management of water and land resources associated with water resource development projects constructed or to be constructed by the Corps of Engineers and associated with units of the National Forest system. This agreement was further implemented by the Memorandum of Understanding of August 15, 1964, between the Secretary of the Army and the Secretary of Agriculture.

On January 26, 1948, the Bureau of Reclamation, Department of Interior, and the Forest Service, Department of Agriculture, entered into an agreement pertaining to the development and administration of recreational facilities at Bureau of Reclamation Reservoirs that are wholly or substantially within the boundaries of National Forests.

In 1948 Federal legislation was enacted aimed at water pollution control, but it provided only for an experimental water pollution control program. The Federal Government entered the pollution control area contemplating State and Federal cooperation through broadened programs of research, training, planning, abatement efforts, and financial assistance. In 1956 permanent water pollution control legislation was enacted. The basic legislation was broadened in the 1960's to strengthen the

program substantially, and this legislative trend is continuing in the 1970's. The strengthened legislation is not meant to override the State agencies' responsibility to enforce pollution control regulations such as the Water Quality Standards which are federally approved; rather, the legislation is intended to provide a backstop to the States' authorities. The Federal Government will continue to encourage the States to carry out their responsibilities by providing them with better financial and technical assistance, in addition to the promise of Federal involvement should they fail to act on matters of interstate concern.

While earlier legislation and action programs were reflected in many specific recreation and fish and wildlife developments and operations in the basin and nationally, the middle 1960's marked the passage of unusually significant legislation and a new impetus in these fields. Especially important was Public Law 89-72 (Act of July 9, 1965). This provided uniform policies with respect to recreation and fish and wildlife benefits and costs of Federal multiple-purpose water resource projects, and for other purposes. Even before this date, but especially with the changes, the Federal and State agencies began increasingly to plan and develop outdoor recreation opportunities in the expanse of water area and shoreline created by the Federal impoundments. So extensive are recreation and fish and wildlife developments today that they are prime factors in the economic justification for the construction of multiple-purpose dams and reservoirs.

Finally, the outdoor environment now is recognized as among the important considerations in all water and related land resource planning and development efforts, with current emphasis on water pollution, air pollution, solid wastes disposal, and other environmental improvements.[48] An analysis of the impact on environmental quality is a requirement of all Federal water investigation reports in cooperation with the States, and consideration will continue through all phases of planning into the actual development, operation, and management of the projects.

While a matter more of policy than law, earlier efforts leading up to and the provisions of Senate Document No. 97 of May 29, 1962, establishing "Policies, Standards and Procedures in the Formulation, Evaluation, and Review of Plans for Use and Development of Water and Related Resources" are highly important, and require continued effort for implementation and improvement.

THE FEDERAL CONSTITUTION AND WATER RESOURCE DEVELOPMENT

The Constitution of the United States provides the Federal Government with a spectrum of authorities relating to water resource development.

The Commerce Clause

The Commerce Clause vests in the Federal Congress the preeminent right to control navigable waters in the interest of commerce. The clause provides that the Congress "shall have power to regulate commerce with foreign nations and among the several states and with the Indian Tribes."[49] Commerce control of waters includes not only control for navigation, but also control for flood protection, watershed development, and recovery of the cost of improvements through the production and sale of water-generated electric power.[50]

When waters are navigable, the ordinary citizen may float his boat and hunt and fish on them, without hindrance by the riparian owner.[51] But, the operation of boats will be subject to the admiralty and maritime rules of navigation, and to special rules that fix the measure of liability for accidents.[52]

The first cases arising over application of the navigation servitude started with efforts by the Federal Government to compel removal of structures or other obstructions which were interfering with navigation. In the early days, these obstructions were usually bridges, wharves, or similar structures. It is now well established that navigable waters may not be bridged, or controlled except by Federal authority,[53] and the riparian owner may be denied compensation when he is damaged by Federal commerce projects which change the regimen or level of the navigable waterway or deny him access thereto.[54] Also, when the flow of nonnavigable streams is required to maintain the capacity of a navigable stream, the obstruction or limitation on such flows may be prevented by Federal action.[55]

Waterways which have been judicially held to be navigable in the Missouri River Basin include the following: (1) Missouri River from Three Forks, Mont., to Fort Benton, Mont.,[56] (2) Missouri River in St. Charles County, Mo.[57] (3) Big Horn River in Mont. and Wyo.[58] (4) Kansas River, Kans.,[59] & (5) Lake of the Ozarks, Mo.[60] Also, two waterways have been administratively held to be navigable so as to be subject to Coast Guard regulations, including: (1) All of the Missouri River from its mouth near St. Louis, Mo., to a point 263 miles upriver from Fort Benton, Mont.,[61] and (2) Osage River, Mo.[62]

The Property Clause

The Property Clause provides that "the Congress shall have power to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States."[63] This grant of power permits the United States to reserve water, for present and future use, in nonnavigable[64] and navigable[65] waterways which cross or abut land areas reserved for Federal

purposes. The quantities of water which can be so reserved are those required to carry out the purpose for which the Federal lands were reserved.[66]

The Property Clause has been used to affirm Federal authority to build irrigation projects serving Federal lands.[67]

The General Welfare Clause

The General Welfare Clause authorizes Congress to use Federal revenues to provide for the general welfare of the United States.[68] This grant of power permits the Congress "to promote the general welfare through large-scale projects for reclamation, irrigation, or other internal improvements."[69]

The Treaty Clause

The Treaty Clause authorizes the President to make treaties with the advice and consent of the Senate.[70] The treaty power is unlimited except by those restraints found in the Constitution itself and those arising from the nature of the State and Federal Governments. A treaty could not authorize what the Constitution forbids nor could it change the character of Federal or State Government, nor could it impose a cession of state territory without consent of the State.[71] In the Missouri River Basin, an apportionment of the waters of the St. Mary and Milk rivers between the United States and Canada was agreed upon by the Treaty with Great Britain proclaimed May 13, 1910.[72]

Treaties creating Indian reservations in the Missouri River Basin[73] also have been held to have impliedly reserved water for the irrigation of the reservation lands.[74] However, the authority of the Federal Government to reserve water for Indian lands is considered to be founded on the Property Clause of the Federal Constitution.[75]

The War Power

Congress is empowered by the Constitution to levy taxes and to appropriate funds to provide for *national* defense. This power was used to support dam construction by the Tennessee Valley Authority. (This authority could conceivably be used for like purposes in the Missouri River Basin.)[75a]

The Supreme Court

Under its constitutional powers the Supreme Court of the United States may adjudicate water rights as between states. In such cases the doctrine of equitable apportionment may be applied. This doctrine means that the state which has first used the available interstate water may be allowed a continuing priority in its use.

FEDERAL WATER RESOURCE STATUTES AND THE AGENCIES PRINCIPALLY RESPONSIBLE FOR THEIR EXECUTION

From the standpoint of water and related land resource development there are many Federal laws, some dating back to the early 1800's, that bear heavily on Missouri River Basin resource development. These include several major laws and many lesser acts in addition to the specific project authorizations. It is within the complementary pattern of these laws and those of the affected states that federally assisted water and related land resource development has proceeded.

THE CORPS OF ENGINEERS – DEPARTMENT OF THE ARMY

Flood Control and Water for Navigation and Power

GENERAL

The Corps of Engineers has responsibility for planning, constructing, and improving harbors, dredging navigable streams, and maintaining navigable channels; planning and constructing flood control and multipurpose projects; controlling hydraulic-mining debris; administering laws pertaining to the protection and preservation of navigable waters; fighting floods and making emergency repairs; and making investigations and engineering reports on stream basins, harbors, and shorelines.

BASIC AUTHORIZATIONS

Navigation

The Act of March 3, 1811,[76] provided that all navigable rivers and waters of the Louisiana Purchase "shall be and forever remain public highways." The Act of April 30, 1824,[77] first vested the Corps of Engineers with responsibility for improving waterways for navigation. Beginning with the Act of May 24, 1824,[78] investigations and improvements for navigation and related

purposes have been authorized by a series of rivers and harbors acts, from which basic policies and procedures have been established. The 1920 Rivers and Harbors Act[79] expanded the Federal policy regarding navigation improvements and established general requirements for local cooperation where the benefits from such improvements are mainly local in nature. Subsequent acts have further clarified and expanded the Federal policy and have authorized many specific navigation projects.

Flood Control

In the 1880's the Corps of Engineers was authorized to construct flood control levees along the Mississippi River, and in 1917 it was assigned the responsibility for flood control work on the Sacramento River. The Flood Control Act of 1936[80] then vested the Corps of Engineers with full responsibility for prosecuting flood control studies and improvements. This Act stated that "flood control on navigable waters or their tributaries is a proper activity of the Federal Government in cooperation with states, their political subdivisions, and localities thereof."

Recreation

The general policy followed in the past, with respect to the installation of recreation facilities, has been that the Federal Government supplies the basic requirements for public health and safety, such as access roads, parking areas, water wells, sanitary facilities, boat-launching ramps, camping areas, and picnicking facilities. As a cooperative venture, many of the states, counties, cities, and communities actively participate in the funding, construction, and maintenance of public use facilities at Corps projects.

Uniform policies, with respect to recreation and fish and wildlife benefits, and costs of Federal multipurpose water resource projects, have been set out in the 1965 Federal Water Project Recreation Act[81] to guide the cost sharing of recreation facilities, thus encouraging greater non-Federal participation. The non-Federal interests have been further encouraged by the Land and Water Conservation Fund Act of 1965[82] which established a land and water conservation fund to assist the States and Federal agencies in meeting the outdoor recreation demand.

Multipurpose Projects

The Flood Control Act of 1944[83] prescribed the following for Federal water resource development:

(1) Comprehensive and coordinated development of the Nation's water resources was declared to be the national policy.

(2) Federal developments would be advanced in cooperation with State and local agencies. Under Sections 1(a) and 1(c), State and local agencies were to be kept abreast of all planning.

(3) "The use for navigation. . . of waters arising in States lying wholly or partly west of the 98th Meridian shall only be such use as does not conflict with any beneficial consumptive use, present or future, in States lying wholly or partly west of the 98th Meridian, of such waters for domestic, municipal, stock water, irrigation, mining, or industrial purposes."

(4) In the Missouri River Basin, comprehensive water development would proceed pursuant to a cooperative undertaking in which the Corps would be responsible for flood control and navigation developments, and the Bureau of Reclamation would be responsible for reclamation developments. Each agency would be responsible for power installations at the projects which it constructs. The electric power and energy generation at Corps' projects in excess of project requirements would be delivered to the Secretary of the Interior for marketing.

The Water Supply Act of 1958[84] provided that the Corps could, upon receiving adequate local assurances as to need and likelihood of repayment thereof, include storage space in its reservoirs to take care of future domestic, municipal, and industrial needs. Subsection 2(b) of the Federal Water *Pollution Control* Act, as added by the Act of July 20, 1961 directed consideration of the inclusion of storage for regulation of streamflow for the purpose of water quality control by the Corps and other Federal agencies in the survey or planning of any reservoir.[84a]

SPECIAL AUTHORIZATIONS

Small Navigation Projects

Under Section 107 of the 1960 Rivers and Harbors Act,[85] the Corps may construct small navigation projects, each not exceeding $500,000 in Government cost, without specific authorization by the Congress. However, feasibility requirements are the same as for other navigation projects, and total expenditures for the small navigation projects may not exceed $10 million in any one year.

Small Flood Control Projects

Under Section 205 of the 1948 Flood Control Act,[86] the Corps may construct small flood control projects, each not exceeding $1 million in Government cost, without specific authorization by Congress; however, total

expenditures for the small flood control projects may not exceed $25 million in any one year.

Emergency Work

Emergency bank protection work to prevent flood damage to highways and bridge approaches and public works which does not involve expenditures of over $50,000 for any one locality in any one fiscal year may be performed by the Corps under Section 14 of the Flood Control Act of 1946.[87] Emergency clearing of snags and debris which does not involve expenditures of over $100,000 for any single tributary in any one fiscal year may be performed by the Corps under the Flood Control Act of 1954.[88] Emergency flood fighting and repair and rescue work may be performed by the Corps with available funds under the Act of June 2, 1955.[89] Emergency repair work to public facilities damaged by floods may be performed by the Corps, where directed by the Office of Emergency Planning, under Public Law 875.[90] Removal of wrecks and obstructions may be effected under Section 19 of the Rivers and Harbors Act of 1899.[91]

Deposits or Discharges Into Navigable Waters

The Refuse Act, Section 13 of the 1899 Rivers and Harbors Act,[91] declared it unlawful for anyone to discharge or deposit into any navigable water of the United States, or into any tributary of such navigable waters, any refuse matter, except liquids flowing from streets or sewers in a liquid state, in the absence of a permit issued by the Secretary of the Army. Section 21(b) of the Water Quality Improvement Act of 1970 (PL 91-24) in part provided that anyone seeking a Department of the Army permit for the discharge or deposit of refuse matter must first secure from the state in which the discharge will take place a certification that applicable water quality standards will not be violated. If the state refuses to issue the certification, the permit may not be granted.

Structures and Fills in Navigable Waters

Section 10 of the 1899 Rivers and Harbors Act provided, in the absence of Congressional authorization, that it is unlawful for anyone to undertake any work which results in an obstruction to the navigable capacity of any waters of the United States. The Section further provided that it is unlawful to place any structure in any navigable waters of the United States without first securing a permit authorized by the Secretary of the Army.

Flood Plain Studies

Flood plain studies may be made by the Corps under Section 206 of the 1960 Flood Control Act,[92] where requested by a state or governmental agency to determine the use and best protection of flood plains.

Under provisions of the 1960 Flood Control Act, as amended, and directed by Executive Order of August 10, 1966, the Corps of Engineers furnishes flood hazard information, and advice for use in planning to ameliorate the flood hazard, to local governmental entities and to Federal agencies. Flood plain information reports are prepared upon request of the State and local governmental agencies to delineate flood problems.

Comprehensive Framework Studies

Comprehensive river basin studies are conducted or participated in by the Corps for the purpose of defining the compass, use, and limitations on water and related land resources and of developing projections for the use of and needs for such resources. This is pursuant to the Water Resources Planning Act.[93]

BUREAU OF RECLAMATION – DEPARTMENT OF THE INTERIOR

Water for Irrigation and Power

GENERAL

Federal reclamation activities began in 1902 under the leadership of President Theodore Roosevelt. At first these activities involved principally the planning and construction of works to impound and divert water for the irrigation of public and private lands in the 17 western states. Seven of these States lie wholly or partly within the Missouri River Basin. Today these Federal reclamation activities include the planning and construction of works for impounding and diverting water for irrigation, power generation, municipal and industrial uses, recreation, fish and wildlife enhancement, stream regulation and pollution control, and, where approved by the Corps of Engineers, for navigation and flood control. Federal reclamation activities were initially the responsibility of the Geological Survey and the Reclamation Service of the Geological Survey. In 1923 these activities became the responsibility of the Bureau of Reclamation.

BASIC AUTHORIZATIONS

Irrigation

The Reclamation Act of June 17, 1902,[94] authorized the Secretary of the Interior to build water diversion and impoundment facilities to provide irrigation water for public and private lands. The costs of constructing, operating, and maintaining such works were to be repaid by the water users pursuant to water-right applications and repayment contracts which provide for a lien on the benefited land. In accordance with the one-to-a-customer precedent set up in the Preemption and Homestead Laws,[95] water from Reclamation projects was not to be made available to any acreage in excess of 160 irrigable acres per single ownership, or in excess of 320 irrigable acres jointly owned by husband and wife. This rule was somewhat relaxed by Section 46 of the Adjustment Act of 1926,[96] which now permits project water to be delivered to lands in excess of 160 irrigable acres per single ownership if the excess landowner agrees to dispose of his excess land within a reasonable time at a dry-land price. The reason for requiring the sale of excess land at a dry-land price is to avoid the purchaser's paying twice for his irrigation water right. If he paid an irrigable-land price for land on which construction charges were owing to the United States, he would be paying twice for his water right: First to the seller of the excess land, and second to the United States.

The Warren Act of February 21, 1911,[97] permits the Secretary to sell Reclamation project water to nonproject water users and to permit such water users to carry or store water in project works if there is capacity surplus to the needs of the Reclamation Project. Several such contracts are in operation in the Missouri River Basin.

Under the Extension Act of August 13, 1914,[98] the water users are permitted to assume responsibility for the operation and maintenance of Reclamation projects through water users' organizations. The Act of May 15, 1922,[99] provides that where an irrigation district accepts a general obligation to pay construction, operation, and maintenance costs on account of reclamation works, individual water-right applications with their attendant liens on the benefited lands may be cancelled. Subsequent Acts of Congress have provided extensions of time on the payment of reclamation construction costs. (Section 46 of the Omnibus Adjustment Act of May 25, 1926[100] made joint-liability contracts with irrigation districts mandatory for reclamation projects thereafter constructed.) The Fact Finders' Act of 1924 and the Reclamation Project Act of 1939[101] also now permit the repayment of reclamation construction costs to be geared to the payment capacity of the water users based on the productivity of the lands benefited. The Hayden-O'Mahoney amendment in the Act of May 9, 1938,[102] authorizes the use of power and other project revenues to assist in the payment of project construction costs allocated to irrigation.

Power

Section 5 of the Act of April 16, 1906,[103] authorized the Secretary of the Interior to develop and sell electric energy in connection with Reclamation projects. Surplus power or power privileges could be sold or leased for 10 years, with purchasers for municipal use getting a preference. Section 9(c) of the Reclamation Project Act of 1939[104] permits sales of power or leases of power privileges for periods not exceeding 40 years, with preference in purchasing or leasing going to municipalities or other public corporations or agencies, and to cooperative and other nonprofit organizations having R.E.A. financing.

Municipal and Industrial Water Use

Section 4 of the Act of April 16, 1906,[105] permits the Secretary of the Interior to provide and contract for water for municipal purposes. The Act of February 25, 1920,[106] permits the Secretary to contract for the sale of Reclamation project water for miscellaneous purposes. Section 9(c) of the Reclamation Project Act of 1939[107] permits the Secretary to furnish Reclamation project water for municipal water supply or for miscellaneous purposes under forty-year contracts. The Water Supply Act of July 3, 1958,[108] provided that the Secretary could, upon receiving adequate local assurance as to the need and likelihood of repayment therefor, include storage space in any reservoir constructed by the Bureau of Reclamation to take care of present and future municipal and industrial needs.

Multipurpose Use

Section 9 of the Reclamation Project Act of 1939[109] authorizes the Secretary of the Interior to undertake multipurpose projects in which costs and benefits may be assigned to irrigation, power, municipal water supply and other miscellaneous purposes, navigation, and flood control. The Flood Control Act of 1944[110] provides that on multipurpose projects constructed by the Corps of Engineers, the Secretary of the Interior was to be responsible for the sale of power and use of irrigation water. The Act of August 14, 1946,[111] and the Fish and Wildlife Coordination Act of August 12, 1958,[112] authorize the Secretary to provide for fish and wildlife needs in reclamation programs. The Federal Water Project Recreation Act of July 9, 1965,[113] implements the last two Acts by providing for local participation and for the development of other recreational facilities. Subsection 2(b) of the Federal Water Pollution Control Act,

as added by the Act of July 20, 1961,[115] authorized the Secretary to include storage capacity for water quality control in any future reservoir project. The Park, Parkway and Recreational Area Study Act of June 23, 1936[114] authorized the National Park Service to furnish assistance to other Federal agencies, and by an April 5, 1955 Memorandum of Understanding with the Bureau of Reclamation and subsequent understandings with the Bureau of Outdoor Recreation, the National Park Service provides post-authorization recreation planning assistance.

Financing Water Users

The Rehabilitation and Betterment Act of October 7, 1949,[116] authorizes the Secretary of the Interior to contract for the financing of rehabilitation and betterment work on existing reclamation projects. The water users' repayment of Federal expenditures is to be without interest and in accordance with the water users' repayment ability. The water users themselves are permitted to perform the necessary work. The Act of July 4, 1955,[117] provides for federal loans to permit the water users themselves to construct irrigation distribution systems on reclamation projects. The Small Reclamation Projects Act of 1956[118] authorizes the Secretary to loan money for the construction of small reclamation projects. Loans must be in amounts not exceeding $6,500,000 and for projects not exceeding $10,000,000 in total costs. The water users' repayment of the Government loan may be scheduled over a period not to exceed fifty years and is without interest except for costs allocable to lands in excess of 160 irrigable acres per single ownership.

Flood Aid

Under Public Law 875 (81st Cong., 2d Sess.)[119] the Bureau of Reclamation was authorized to restore public facilities damaged by flood when directed by the Office of Emergency Planning.

SPECIAL AUTHORIZATIONS

The Fort Peck Project Act

The Fort Peck Project Act of May 18, 1938,[120] authorized the Secretary of the Interior to market and to build the necessary facilities to transmit energy generated at the Fort Peck Dam which was constructed by the Corps of Engineers in Montana.

The Water Conservation and Utilization Act of 1939[121]

This Act paired the Department of the Interior and Department of Agriculture in a plan for relieving the effects of drouth in the Great Plains by the construction of reclamation projects. Interior was the constructing and operating agency and Agriculture was the settlement agency. Provision was made for participation by other Federal and State agencies. The water users' repayment of project construction costs was to be geared to their repayment ability.

Section 9 of the Flood Control Act of December 22, 1944[122]

This approved a general comprehensive plan for development of the water resources of the Missouri River Basin and authorized the initial stages of this plan. Under the plan, the Corps of Engineers was to build the mainstem reservoirs on the Missouri River, where navigation and flood control were principal functions. The Bureau of Reclamation was to build the upstream reservoirs and distribution facilities where the principal functions were making water available for irrigation, other consumptive uses, and power generation. The Corps was to have the basic responsibility for navigation and flood control operations, and the Department of the Interior was to have the basic responsibility for the marketing and distribution of power produced at all Federal hydroelectric developments in the basin and for irrigation operations.

SOIL CONSERVATION SERVICE — DEPARTMENT OF AGRICULTURE

Water Conservation

GENERAL

The Soil Conservation Service is the technical soil and water conservation agency of the Department of Agriculture. It administers activities involving technical and financial assistance for planning and carrying out programs to protect and improve water and related land resources in small watersheds. The Service was established in 1935. It was preceded by the Soil Erosion Service which had been established in 1933.

BASIC AUTHORIZATIONS

Erosion Control

The Act of April 27, 1935,[123] directed the Secretary of Agriculture to establish the Soil Conservation Service to demonstrate, carry out, and cooperate in measures to conserve soil and moisture.

Waterflow Retardation

Section 2 of the Flood Control Act of June 22, 1936,[124] authorizes the Secretary of Agriculture to make preliminary examinations and surveys for runoff and water-flow retardation and soil erosion prevention in watersheds. Special projects for water-flow retardation work are authorized by Section 13 of the Flood Control Act of December 22, 1944.[125] Section 15 of the same Act authorized the Secretary of Agriculture to perform emergency water-flow retardation work.

Watershed Protection

The Watershed Protection and Flood Prevention Act of August 4, 1954 (P.L. 566),[126] as amended, authorizes the Secretary of Agriculture to plan for and assist in the financing of projects for the control and use of water in sub-watersheds not exceeding 250,000 acres in area. Water impoundments may not exceed 25,000 acre-feet in capacity, with not more than 12,500 acre-feet for flood prevention. Project purposes may include flood prevention measures, drainage, irrigation, streamflow regulation, wildlife, recreation facilities, and municipal and industrial water supplies including storage of water for future municipal and industrial uses. Section 4 of the Act authorizes the Secretary to make long-term loans to finance the increased cost of a structural measure when it is enlarged to include municipal and industrial water supplies.

Great Plains Conservation Program

Section 16(b) of the Soil Conservation and Domestic Allotment Act of 1936, as amended,[127] authorizes the Secretary of Agriculture to enter into soil and water conservation contracts for periods not exceeding 10 years with farmers and ranchers in the Great Plains area of Colorado, Kansas, Montana, Nebraska, North Dakota, South Dakota, Wyoming, and certain southwestern States. Under these contracts the Government shares the cost of developing conservation practices designed particularly for the soil types, terrain, and climatic conditions of the Great Plains. The technical services of the Soil Conservation Service are utilized in planning land conversions and such practices as terraces, dams, and other measures designed to protect the land from wind and water erosion.

SPECIAL AUTHORIZATIONS

Under the Water Conservation and Utilization Act of 1939,[127a] the Secretary of Agriculture and the Secretary of the Interior were authorized to cooperate in developing irrigation projects in the Great Plains. The Secretary of the Interior was responsible for building and operating the projects and the Secretary of Agriculture was responsible for their settlement and agricultural development. Provision was made for participation by other Federal and State agencies, and the repayment of construction costs was to be geared to the water users' ability to pay.

AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE
DEPARTMENT OF AGRICULTURE

Grants in Aid

GENERAL

The Agricultural Stabilization and Conservation Service (ASCS) administers cropland adjustment and conversion programs and conservation programs involving Federal payments and cost shares.

BASIC AUTHORIZATIONS

Agricultural Conservation Program

The ASCS provides Federal cost-share payments for the performance of certain approved conservation practices including the construction of farm ponds, grassed waterways, check dams, terraces, channel improvements, and other practices, all designed to conserve soil, water, and wildlife. The program is carried out pursuant to the Soil Conservation and Domestic Allotment Act of 1936,[128] as amended. Technical assistance with respect to certain practices is provided by the Soil Conservation Service and the Forest Service.

FOREST SERVICE – DEPARTMENT OF AGRICULTURE

Forest Watersheds

GENERAL

Since early times Congress has concerned itself with the preservation of forests as watersheds and as essential natural resources. Federal regulation of the use and occupancy of the national forests was first directed by the Act of June 4, 1897.[129] This Act provided for the establishing of a National Forest Service, for a regulated use of the forest resources, and for the protection of such resources against fire and depredation. Initially, the administration of the national forests was the responsibility of the Secretary of the Interior.[130] This responsibility was transferred to the Secretary of Agriculture by the Act of February 1, 1905.[131]

BASIC AUTHORIZATIONS

Reserving and Acquiring Forest Lands and Water

Section 24 of the Act of March 3, 1891,[132] authorized the President of the United States to set apart and reserve public lands covered with trees or undergrowth. The reservation of lands served to reserve water sufficient to effectuate the purpose for which the land reservation was made,[133] although this is a matter not endorsed by some of the affected States.

The Weeks Act of March 1, 1911,[134] authorized the Federal acquisition, by purchase or exchange of forested, cutover or denuded lands within the watersheds of navigable streams and provided for their inclusion in the national forest; however, the States were to retain civil and criminal jurisdiction in the national forests and were to be paid a percentage of the forest revenues. State and Federal cooperative agreements for forest fire protection were authorized. Interstate compacts to protect forests and water resources also were authorized.

The Act of March 20, 1922,[135] further provided for the consolidation of national forest lands by the exchange of public lands for private lands. Many other land exchanges in specific national forests have also been permitted by Congress.[136]

Protecting Watersheds

The Act of June 4, 1897,[137] stated that a principal purpose for acquiring, improving, and protecting lands for national forests was to secure "favorable conditions of water flows." Protection of the watersheds has, therefore, been a basic obligation of the officers administering the national forests. The Bankhead-Jones Farm Tenant Act of July 22, 1937, as amended,[138] provided for the prevention of soil erosion, measures for reforestation, the mitigation of floods, and the protection of watersheds. Section 7 of the Flood Control Act of June 28, 1938,[139] further authorized the Secretary of Agriculture to undertake any emergency measures required for runoff retardation and soil erosion prevention.

The Act of May 28, 1940,[140] authorized the Secretary of Agriculture to contract with a municipality for the withdrawal from entry, location, appropriation, or conflicting use of any national forest lands which provide the watershed for the municipality's water supply.

Reforestation

The Clark-McNary Act of June 7, 1924,[141] authorized the Secretary of Agriculture to cooperate with State and local agencies in reforestation activities, in fire protection for forested lands, and in other activities designed to perpetuate the forests. Also the Act authorized the Secretary to determine and report to the National Forest Reservation Commission[142] the location of public lands chiefly valuable for streamflow protection in the interest of navigation or irrigation. The Commission then determined whether Congressional authority for including the lands in the national forests should be asked.

The Act of March 3, 1925,[143] as amended in 1950, expanded the reforestation authorities of the Secretary of Agriculture and authorized him to cooperate with State and private agencies in the reforestation of State and private lands.

Multiple Use of Forests

The Act of June 12, 1960[144] declared the Congressional policy that the National Forests are established and shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes. The Act authorized and directed the Secretary to develop and administer the renewable surface resources of the National Forests for multiple use and sustained yield of the several products and services obtained therefrom. In the effectuation of the Act the Secretary was authorized to cooperate with interested State and local governmental agencies and others in development and management of the National Forests.

Section 4 (d) (4) of the Wilderness Act of September 3, 1964,[145] provides that the President may authorize prospecting for water resources, the establishment and maintenance of reservoirs, water conservation works, power projects, and transmission lines, if he determines that such uses in the specific area will better serve the interests of the United States and the people thereof than will its denial.

FARMERS HOME ADMINISTRATION – DEPARTMENT OF AGRICULTURE

Land and Grants in Aid

GENERAL

The Farmers Home Administration provides financial assistance to farmers and local organizations for the development of irrigation and drainage systems, watershed protection and flood prevention projects, community water and waste disposal systems, and similar projects.

BASIC AUTHORIZATIONS

Watershed Protection

The Secretary has assigned to the Farmers Home Administration responsibility for administering the loan and advance provisions of the Watershed Protection and Flood Prevention Act.[145a] Total loans outstanding on any one project may not exceed $5 million.

Water, Waste Disposal, and Similar Developments

The Consolidated F.H.A. Act of 1961,[146] as amended, authorizes long-term direct and insured loans as well as grants of up to 50 percent of construction costs to public and nonprofit associations for the development of community water and waste-disposal systems in rural areas, including rural municipalities of not more than 5,500 population. Planning grants also may be made for the development of official comprehensive area water and sewer plans. Loans to groups and individuals are made for the development of soil conservation, irrigation, drainage, grazing, forestry, and recreation projects.

ECONOMIC RESEARCH SERVICE – DEPARTMENT OF AGRICULTURE

Study of Water Needs in Resource Development

GENERAL

In keeping with its assignments within the Department of Agriculture, the Economic Research Service conducts studies and investigations to provide economic information about the short-term and long-range agricultural demands for land and water resources, and the economic effect of alternative potentials for development of such resources on the agricultural and related sectors of the economy.

The Economic Research Service has general responsibility for basinwide economic aspects and elements within the Department of Agriculture for comprehensive river basin planning. It develops and analyzes the agricultural economic base of river basin and water resource region studies, including an appraisal of trends in land and water use. It develops projections of agricultural production, employment, income, rural population, and land use for the economic analysis of agricultural water management needs and potentials.

BASIC AUTHORIZATION

Section 6 of the Act of August 4, 1954, (P.L. 566)[147] *authorized the Secretary of Agriculture to cooperate* with other Federal, State, and local agencies in conducting watershed studies in connection with coordinated programs for resource development.

GEOLOGICAL SURVEY – DEPARTMENT OF THE INTERIOR

Water Surveys

GENERAL

Since 1879 the Geological Survey has been engaged in mapping and cataloging natural resources. The Survey's interest in the location and character of water resources and of irrigable land caused it to be the agency through which the Federal reclamation program was initiated in the West. It was relieved of reclamation construction responsibilities by the formation of the Bureau of Reclamation, *but it continued to be the leading agency in the* survey and measurement of the Nation's water resources.

BASIC AUTHORIZATIONS

Land and Mineral Surveys

The Act of March 3, 1879,[148] established the Geological Survey to classify the public lands, and to examine the geological structure, mineral resources, and products of the national domain.

Water Surveys

The Act of August 18, 1894,[149] was the first to allow funds to the Geological Survey for the purpose of "gauging the streams and determining the water supply of the United States, including the investigation of underground currents and artesian wells in arid and semiarid sections."

Current appropriation acts[150] authorize the Geological Survey "to perform surveys, investigations, and research covering topography, geology, and the mineral and water resources of the United States, its territories, and possessions, as authorized by law (72 Stat. 837 and 76 Stat. 427);[151] classify lands as to mineral character and water and power resources; give engineering supervision to power permits and Federal Power Commission licenses;" and to "publish and disseminate data relative to the foregoing activities."

Water Developed by Oil and Gas Operations

The Act of June 16, 1934,[152] provides that where oil and gas prospectors or lessees strike water of usable quality and quantity while drilling for oil and gas, the Secretary of the Interior may purchase the well casing and operate the well. The usability and value of the water is determined by the Geological Survey.[153]

FEDERAL POWER COMMISSION

Regulating Water Power Projects

GENERAL

Basic authority of the Federal Power Commission for its water resources activities is the Federal Power Act, as amended.[154] This Act was adopted in 1935 by including as Part I the Federal Water Power Act of 1920 relating to the licensing of non-Federal hydroelectric projects, and by adding Parts II and III vesting the Commission with jurisdiction over the transmission and sale at wholesale of electric energy in interstate commerce and over public utilities engaged therein. The Act authorizes the Commission to make investigations and to collect and record data concerning the utilization of water power resources in any region to be developed; to cooperate with other agencies of state or national governments in water resources investigations; to review and evaluate the water power features of Federal multipurpose river basin planning studies; and, subject to provisions contained in the Act, to issue licenses for periods not in excess of 50 years to non-Federal entities for the purpose of constructing, operating, and maintaining dams, water conduits, and reservoirs, or other facilities for the development of hydroelectric power in or affecting navigable waters or on any stream over which Congress has jurisdiction where the project affects interstate commerce, or on Government lands, or utilizing surplus water from Government dams. The projects to be licensed must in the judgment of the Commission be best adapted to a comprehensive basin plan for various beneficial purposes, including recreation; and the Commission supervises and inspects such projects to assure continuing compliance with these public interest standards. The Act provides that the United States shall have the right, upon two years' written notice by the Commission, to take over projects licensed to non-public entities upon the expiration of the licenses. Also, the Act directs the Commission to determine the charges to be paid by a licensee or the non-Federal owner of an unlicensed project for benefits provided by headwater improvements of another licensee or of the United States. Further, the Commission determines the effect on power site values of proposed entries, locations or selections of public lands reserved for power sites, and acts upon applications for right-of-way, use permits, and leases affecting such sites.

OTHER AUTHORIZATIONS

The Flood Control Act of 1938,[155] and subsequent Flood Control and Rivers and Harbors Acts authorized the Commission to investigate the power potentialities at projects to be constructed by the Department of the Army, and charges the Commission with the responsibility of making recommendations to the Secretary of the Army with regard to the installation of penstocks or similar facilities adapted to possible future use in the development of hydroelectric power at such projects.

Section 5 of the Flood Control Act of 1944,[156] requires prior approval by the Federal Power Commission, except in the Missouri River Basin, of rate schedules for the sale by the Secretary of the Interior of electric power and energy generated at reservoir projects under the control of the Department of the Army, and, in the opinion of the Secretary of the Army, not required in the operation of the projects.

The Water Resources Planning Act of 1965,[157] created a five-member Water Resources Council consisting of the Secretaries of Agriculture, the Army, the Interior, and Health, Education and Welfare, and the Chairman of the Federal Power Commission. The Secretary of Transportation was added as a member in 1966. The Council is assigned broad powers to coordinate water resources planning, and the responsibility for administering a program of grants to the States for water resources planning purposes. Duties are administered through regional offices throughout the country.

COAST GUARD – DEPARTMENT OF TRANSPORTATION

Marine Law Enforcement and Marine Safety

GENERAL

On inland navigable waters the water resources functions of the Department of Transportation's Coast Guard are to facilitate and make safe the movement of waterborne traffic, to provide flood relief assistance, and to enforce marine laws. The Coast Guard is charged with marine search and rescue, enforcement of navigation, pollution, vessel inspection, and motorboat equipment laws; the installation and maintenance of navigation aids; the approval of bridge clearances and operating regulations; flood relief; the protection and security of vessels, harbors, and waterfront facilities; and the supervision of loading dangerous cargo.

BASIC AUTHORIZATIONS

Organization

The Act of August 4, 1949,[158] codified the laws relative to organization of the Coast Guard and the vesting of responsibility for law enforcement, protection of life and property, and establishment of aids to maritime navigation, including the marking of wrecks (14 USC 86), on and over waters subject to the jurisdiction of the United States and for the control of waterborne traffic. The Coast Guard was transferred to the Department of Transportation by the Department of Transportation Act of October 15, 1966.[159]

Boating

The Motorboat Act of April 25, 1940,[160] prescribed standards for motorboat lights, signals, life preservers, fire extinguishers, and engine facilities; provided for the licensing of operators of certain commercial boats; prohibited reckless or negligent operation of motorboats; and fixed penalties for the violation of standards or licensing laws.

The Federal Boating Act of September 2, 1958,[161] required the numbering of vessels propelled by machinery of more than 10 h.p.; provided for Coast Guard examination of these vessels; and required reports of accidents and transfers of vessels.

Marine Inspection

Under the Shipping Laws,[162] the Coast Guard is responsible for the administration of the merchant marine safety laws passed by Congress. Based upon these laws, regulations require the inspection of most commercial vessels while under construction and periodically thereafter. The personnel that operate these vessels are required (with certain exceptions) to have licenses, for which the Coast Guard makes certain requirements regarding experience and professional knowledge. Passenger vessels, and vessels carrying combustible, flammable or hazardous cargo are given special attention. When marine casualties occur, the Coast Guard investigates and makes recommendations looking toward future prevention.

Bridges

The Secretary of Transportation has the responsibility for approval of bridge construction, administration of the alteration of obstructive bridges, and the regulation of drawbridge operations.[163]

Navigation

The Act of April 29, 1864,[164] and regulations thereunder, prescribed rules concerning lights, sound signals for fog, etc., for steering and sailing, and for the manner in which orders were to be given to helmsmen in all navigable waters and their tributaries which empty into the Gulf of Mexico.

Pollution

The Refuse Act of March 3, 1899,[165] and the Oil Pollution Act of June 7, 1924,[166] generally prohibit the polluting of navigable waters with oil or other refuse. The Coast Guard is charged with enforcement of these acts.

Flood Relief

The Act of August 4, 1949,[167] provides that the Coast Guard is responsible for saving life and protecting property, particularly during time of flood.

Port Security

The Act of June 15, 1917, and regulations thereunder,[168] provide that the Coast Guard has responsibility to protect ports and harbors from sabotage, accidents, and other causes.

NATIONAL PARK SERVICE – DEPARTMENT OF THE INTERIOR

Water for Parks

GENERAL

The National Park Service was established by the Act of August 25, 1916,[169] which states the policy of Congress for the management and use of national parks. The fundamental purpose of the parks, monuments, and reservations is to conserve the scenery and the natural and historic objects and the wildlife therein, and to provide for the enjoyment of same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

The Service administers natural parks, monuments, historic sites, and recreation areas. Where public lands are reserved for national parks, monuments, and recreation areas, there also is reserved sufficient water to carry out the purpose for which the lands were reserved,[170] although this is a matter not endorsed by some of the affected States.

SPECIAL AUTHORIZATIONS IN THE MISSOURI RIVER BASIN

Special authorizations have been adopted by Congress over the period 1872 to 1966 for four national parks, nine national monuments, one national memorial, one national memorial park, two national historic sites, and one national recreation area.

BUREAU OF OUTDOOR RECREATION – DEPARTMENT OF THE INTERIOR

Water for Recreation

GENERAL

The Bureau of Outdoor Recreation was created on April 2, 1962, by administrative order of the Secretary of the Interior.[171] The Bureau's primary function was to be the coordination and development of Federal and State programs for outdoor recreation. Since streams, lakes, and reservoirs are essential to many forms of outdoor recreation, the Bureau has a vital interest in water resources.

BASIC AUTHORIZATIONS

Planning

The Act of May 28, 1963,[172] authorized the Secretary of the Interior to accomplish an inventory of comprehensive recreation resources and to classify them; to formulate a nationwide outdoor recreation plan; to provide technical assistance to Federal and non-Federal agencies in the development of outdoor recreation resources and to encourage interstate and regional cooperation in such development; to advance research and education in outdoor recreation; and to accept donations for advancing the purposes of the Act.

Financing Recreation Planning and Development

The Land and Water Conservation Fund Act of September 3, 1964,[173] provided that Federal funds accruing (1) from entrance and users fees at recreational areas, (2) from disposal of Federal surplus property; and (3) from the motorboat fuels tax, should be placed in a land and water conservation fund in the National Treasury. Such funds were to be used to finance one-half the cost of State planning for and development of outdoor recreation resources; and for the Federal acquisition of lands and waters needed for outdoor recreation in national parks, forests, and refuges. The Bureau of Outdoor Recreation is principally responsible for the administration of this Act.

Recreation in Multipurpose Projects

The Federal Water Project Recreation Act of July 9, 1965,[174] provided for recreation planning and development at multipurpose projects constructed or authorized for construction by Federal agencies. The Act contemplated that as a condition to Federal participation, one-half of the separable construction costs and all of the operation and maintenance costs of project features specifically required for recreation would be financed by State or local interests, or both. The Bureau of Outdoor Recreation has responsibility for approving recreation plans developed under this legislation.

BUREAU OF INDIAN AFFAIRS – DEPARTMENT OF THE INTERIOR
Water for Indian Lands

GENERAL

The Bureau of Indian Affairs is responsible for the administration of Indian lands and water on 23 Indian reservations wholly or partially within the Missouri River Basin.[175] The Indians on each of these reservations have some claim to the use of the waters which are located on, or which flow through or along the boundaries of the Indian reservation.[176]

BASIC AUTHORIZATIONS

Indian Water Rights

Indian water rights are read from the treaties and agreements between Indian tribes and the United States which have been approved by acts of Congress or formalized by Executive Orders.[177] Indian water rights normally have a priority as of the date on which the Indian reservation was established, and maintain their validity even though unexercised.[178] Such rights can be quantified by fixing the amount of water needed to serve the purposes for which the Indian reservation was established. Thus, if the purpose of the reservation was to promote an agricultural economy, as generally has been the case, the quantity of water reserved would be the amount needed to serve the practically irrigable acreage on the Indian reservation.[179] It also has been urged on behalf of the Indians that since the purpose of the Indian Reservation is to provide an economic base for the Indian people residing thereon, it must follow that the Indian water right is a right to use the available reservation waters for any beneficial use. While opposed by the Indian tribes, several State Water Administrators continue to urge that the Indians should be entitled only to that water for which proper application under State procedures has been made.

Irrigation of Indian Lands

The Irrigation of Indian lands was authorized by the General Allotment Act of February 8, 1887,[180] which provided also that the Secretary of the Interior should make a just and equal distribution of the available water among the Indians.

Later the Act of April 4, 1910,[181] made specific provision for irrigation developments on Indian reservations and authorized the employment of a superintendent of irrigation. Special authorizations have been provided by Congress for many projects in the Missouri River Basin.

Use of Indian Water Rights for Non-Irrigation Purposes

The use of Indian water rights for non-irrigation purposes has not been judicially questioned or ruled upon. In Arizona v. California the Special Master Simon H. Ritkind, emphasized that in fixing the measure of the Indians' water right he did not rule on whether such rights might be used for other than irrigation purposes.[182]

BUREAU OF LAND MANAGEMENT – DEPARTMENT OF THE INTERIOR
Water on Public Lands

GENERAL

The Bureau of Land Management was created on July 16, 1946, through the consolidation of the General Land Office, established in 1812, and the Grazing Service, established in 1934. The consolidation was pursuant to Sections 402 and 403 of the President's Reorganization Plan of 1946.[183]

The Bureau of Land Management is responsible for the administration of public lands and the water rights appurtenant to them. Since water conservation is critical on the public lands which are located principally in the arid and semiarid portions of the Missouri River Basin, the Congress and the Secretary of the Interior have taken steps to advance water conservation wherever practicable.

BASIC AUTHORIZATIONS

Encouraging Private Irrigation Development

The Desert Land Act of March 3, 1877,[184] provided that a settler who was willing to develop irrigation would be entitled to acquire 320 acres of the public land. Also the Act legally separated the water from the land so that the water could be transported wherever it could best be used.[185] This permitted the full development of the

doctrine of appropriation and of the water-use principle of, "first in time, first in right." Without this doctrine, irrigation would have been confined to the river bottoms, since only riparian owners could then have legally used the water.

The Carey Act of August 18, 1894,[186] provided that each of the public land States could receive up to a million acres of public land without charge, if the State would arrange for the reclamation and settlement of such land in 160-acre tracts.

Rights-of-Way Over the Public Lands for Water Facilities

The Act of July 26, 1866,[187] provided for free rights-of-way over the public lands for canals and ditches. The Act of July 9, 1870,[188] required that patents to public lands contain a reservation of rights-of-way for ditches and reservoirs acquired by priority of possession.

The Act of August 30, 1890,[189] provided that public lands west of the 100th Meridian could only be entered or sold if they were made subject to a right-of-way for ditches or canals constructed by authority of the United States. Under recent amendments to the Act, compensation may be paid to the landowner when the right-of-way is exercised.

Rights-of-way over the public lands were also authorized for municipal water facilities,[190] the development of power,[191] water transportation and the development of power as subsidiary to the main purpose of irrigation,[192] stock reservoirs,[193] and fishways.[194]

Withdrawal of Public Lands for Public Water Reserves

The Act of June 25, 1910,[195] authorized the President of the United States to withdraw public lands for water power sites and irrigation. Section 10 of the Act of December 29, 1916,[196] also authorized the withdrawal for public use of public lands having springs and waterholes. The Act of June 16, 1934,[197] permitted the Secretary of the Interior to acquire as a water source, if needed or desirable, any drilled oil or gas well which produced only water.

BUREAU OF SPORT FISHERIES AND WILDLIFE – *DEPARTMENT OF THE INTERIOR*

Water for Fish and Wildlife

GENERAL

The Fish and Wildlife Service was reorganized in 1956[198] to include the Bureau of Sport Fisheries and Wildlife and the Bureau of Commercial Fisheries.* The former agency is the most active in the Missouri River Basin, although the latter operates modest research and Federal aid programs as well as coordinating with the Bureau of Sport Fisheries and Wildlife in river basin studies. The Bureau of Sport Fisheries and Wildlife assists the States in the development of projects for the restoration and management of fish and wildlife resources. In the Missouri River Basin, the Bureau operates bird and game refuges. The Bureau also has responsibility for planning and approving programs for the maintenance or improvement of fish and wildlife resources on all multipurpose water projects undertaken by other public or private agencies.

*Now in National Oceanic and Atmospheric Administration, in the Commerce Department, under reorganization of July 9, 1970 - See introduction to this chapter.

BASIC AUTHORIZATIONS

Aid to States

The Federal Aid in Wildlife Restoration (Pitman-Robertson) Act of September 2, 1937,[199] and the Federal Aid in Fish Restoration (Dingell-Johnson) Act of August 9, 1950,[200] authorized the Secretary of the Interior to assist the States in the development of projects to restore and manage fish and wildlife populations and to preserve and improve sport fishing, hunting, and related activities.

Investigations and Planning for Fish and Wildlife Purposes

The Fish and Wildlife Coordination Act of March 10, 1934,[201] as amended by the Acts of August 14, 1946,[202] and of August 12, 1958,[203] charged the Fish and Wildlife Service with the duty of investigating the possible damage to fish and wildlife resources caused by water projects, and of recommending means and measures (1) to reduce such damages, and (2) to improve and develop

fish and wildlife resources. Modification of existing water projects for fish and wildlife advantage also was authorized. The Act of August 12, 1958 also amended the Watershed Protection and Flood Prevention Act of August 4, 1954,[204] to extend the Service's fish and wildlife investigation responsibilities in connection with projects authorized by that Act.

Local Cost Sharing in Fish and Wildlife Facilities

The Federal Water Project Recreation Act of July 9, 1965,[205] provided that the cost of mitigating the damage to fish and wildlife resources caused by the development of a Federal water project should be a part of the total project costs. This Act also provided that the construction of facilities that enhanced fish and wildlife resources was authorized where State or local interests agreed to pay one-half of the separable costs for those facilities and agreed to operate and maintain them. The other half of the separable costs, and all costs of "joint facilities" which served functions additional to the fish and wildlife function, would be paid by the Federal Government on a nonreimbursable basis.

Refuges

The Endangered Species Preservation Act of 1966[206] vests the Bureau with responsibilities for the National Wildlife Refuge System. The Bureau also has responsibilities for enforcement of the Migratory Bird Treaty Act,[207] and the Migratory Bird Conservation Act[208] provides the Bureau with authority for refuge acquisitions requiring water supply. Other authorities for revenues and land acquisition for fish and wildlife conservation purposes are included in the Migratory Bird Hunting Stamp Act of March 16, 1934, the Acquisition Act of August 1, 1958, and the Shared Revenue Act of August 30, 1964. The Wetlands Loan Act of October 4, 1961 and 1967 amendment provide a 15-year land acquisition program for waterfowl.

FEDERAL WATER QUALITY ADMINISTRATION[1/] – DEPARTMENT OF THE INTERIOR

Water Quality

GENERAL

The Congress initiated pollution control bills as early as 1897. The Refuse Act, Section 13 of the 1899 Rivers and Harbors Act,[91] declared it unlawful for anyone to discharge or deposit into any navigable waters of the United States, or into any tributary of such navigable waters, any refuse matter, except liquids flowing from streets or sewers in a liquid state, in the absence of a permit issued by the Secretary of the Army. In 1948 Federal legislation[209] was enacted aimed specifically at broader water pollution control, and permanent legislation calling for cooperative Federal-State programs was enacted in 1956 and amended in 1961.

Under the Water Quality Act of 1965, Public Law 89-234, the Federal Water Pollution Control Administration was established in the Department of Health, Education, and Welfare. The Administration, as well as most functions of the Secretary of Health, Education, and Welfare authorized by the Federal Water Pollution Control Act, as amended, was transferred to the Secretary of the Interior and his Department by Reorganization Plan No. 2,[210] which became effective May 10, 1966. On November 3, 1966, the Clean Water Restoration Act became law. This landmark legislation, together with the Water Quality Act of 1965, signaled a new era for water pollution control in the United States. The name of the Federal Water Pollution Control Administration was changed to the Federal Water Quality Administration by the National Water Quality Improvement Act of 1970, Public Law 91-224, Sec. 110 (a).[211]

The Federal Water Pollution Control Act sets forth the objective of the Federal program: To provide a supply of water of adequate quality for all beneficial purposes including public water supply, propagation of fish and aquatic life and wildlife, recreational purposes, and agricultural and other legitimate industrial uses. The objective is a broad one and requires a diverse effort to reach it. The many tools available are being utilized through an approach designed to clean up pollution in entire river basins. This effort brings together the establishment of standards for interstate streams, construction of waste treatment facilities on a high priority basis, research and demonstration projects, and support for river basin organizations and their programs.

BASIC AUTHORIZATIONS

Supplementing the Refuse Act of 1899,[91] the Federal Water Pollution Control Act of 1948 was amended by the Acts of July 9, 1956,[212] and of July 20, 1961,[213] and by the Water Quality Act of October 2, 1965,[214]

1/ Now in Environmental Protection Agency, in the Executive Branch, under reorganization of July 9, 1970 – See introduction to this chapter.

and the Clean Water Restoration Act of 1966,[215] and by Executive Order 11288,[216] establishing the policy that the heads of the departments, agencies, and establishments of the Executive Branch of the Government shall provide leadership in the nationwide effort to improve water quality through prevention, control, and abatement of water pollution from Federal activities in the United States. The basic legislation and the Executive Order establish the following activities:

a. **Water Quality Standards** for all interstate streams.
b. **Federal grants** are authorized as follows: (1) to States and to interstate water pollution control programs; (2) to States, municipalities and interstate and intermunicipal agencies to support the construction of waste treatment facilities for storm-water and sewage separation and for advanced waste treatment demonstration projects; (3) to persons and agencies for research training and demonstration relating to water pollution control; and (4) to planning agencies for basin-wide water quality control and abatement planning.
c. **Research and demonstration** in water pollution control.
d. **Technical assistance** to public and private agencies for water pollution control.
e. **Development of comprehensive programs** of water pollution control.
f. **Collection, evaluation, and dissemination of data** on water pollution problems and their solution.
g. **Training** of pollution control personnel.
h. **Public information** on water quality and water pollution control to be disseminated.
i. **Field and research laboratories** to develop techniques and to train personnel in water quality control.
j. **Abatement of water pollution** through conferences, public hearings, and court enforcement.
k. **Development, review, and enforcement** of interstate water quality standards.
l. **Control** of water pollution from Federal installations.
m. **Oil pollution of navigable waters** to be controlled by the Secretary of the Interior with the cooperation of the Coast Guard and the Corps of Engineers.
n. **Special studies** on the sources, prevention, and control costs of pollution.
o. **Water Pollution Control Advisory Board** appointed by the President to (1) consult with and advise the Secretary of the Interior on policy matters relating to pollution control activities, and (2) to hold public hearings where appropriate.

OFFICE OF SALINE WATER – DEPARTMENT OF THE INTERIOR

Saline Water Conversion

GENERAL

The Office of Saline Water has responsibility for research and development of practical means for the economical production, from sea or other saline water, of water suitable for agricultural, industrial, municipal, and other beneficial consumptive uses.

This program is conducted by means of research grants to, and contracts are made with chemists, physicists, engineers, educational institutions, scientific organizations, or industrial or engineering firms, to conduct research and technical development work.

The Office of Saline Water is engaged in an accelerated and intensified effort to find economical and feasible means of converting saline waters to fresh water.

BASIC AUTHORIZATION

The Act of July 3, 1952,[217] provides basic authority for the functions of the Office of Saline Water. The Saline Water Demonstration Act of September 2, 1958,[218] authorized the construction and operation of saline water conversion demonstration plants in various parts of the country, as at Webster, S. Dak. An amendment to the basic Saline Water Act of 1952, approved on June 24, 1967, changed these demonstration plants into research and development test beds. This made them a part of the basic research and development program where experimental hardware can be introduced into the saline water conversion process employed by the specific plant in order to obtain performance data.

PUBLIC HEALTH SERVICE – DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Water and Health

GENERAL

The Surgeon General and the Public Health Service have continuing responsibilities in connection with public health aspects of water resources use and development.

BASIC AUTHORIZATIONS

Research and Investigation

Section 301 of the Public Health Service Act,[219] authorizes the Surgeon General to conduct research and investigation on disease prevention including water purification, sewage treatment, and pollution control. Grants-in-aid for comprehensive health planning, involving water quality, also were authorized by the 1966 amendment.

Regulation of Drinking Water

Section 361(a) of the Public Health Service Act authorizes the Surgeon General to control the transmission of communicable diseases by regulating drinking and culinary water which is provided for public use by interstate carriers.

Water Quality Control

Under Sections 1(e) and 1(f) of Reorganization Plan No. 2,[220] the Secretary of Health, Education, and Welfare was assigned the responsibility vested in the Surgeon General by the Water Quality Act of October 2, 1965,[221] to consult with and advise Federal agencies on health questions involved in determining the need for and value of water storage for quality control; as well as other health aspects of pollution control. This was further specified in an Inter-departmental Agreement between the Secretary of Interior and the Secretary of Health, Education, and Welfare dated September 2, 1966.

Emergency Water Supplies

Under Executive Order No. 11001,[222] the Secretary of Health, Education, and Welfare has responsibility for preparing plans to assure provision of usable public water supplies for essential community uses in an emergency. This was further specified in the Interdepartmental Agreement between the Secretary of Interior and the Secretary of Health, Education, and Welfare dated September 2, 1966.

Solid Waste Disposal

Under the Solid Waste Disposal Act of September 20, 1965,[223] the Secretary of Health, Education, and Welfare is authorized to conduct, stimulate, and provide grants-in-aid for studies and work on solid waste disposal.

THE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION [1/] DEPARTMENT OF COMMERCE

Technical Services and Research

GENERAL

The Environmental Science Services Administration (ESSA) was established July 13, 1965, through consolidation of the Coast and Geodetic Survey and the Weather Bureau.[224] The mission of ESSA is to describe, understand, and predict the state of the oceans, and the state of the lower and upper atmosphere in order to further the safety and welfare of the public, and thus enhance and improve the Nation's economy. Functions related to development of land and water resources are performed primarily by the Weather Bureau, Environmental Data Service, and Coast and Geodetic Survey, as described individually.

ESSA Weather Bureau

Weather and Flood Forecasting

The Weather Bureau provides the National Weather Service. It observes and reports the weather of the United States and its possessions and develops and distributes forecasts of weather conditions and severe storms, floods, and other adverse weather associated conditions. Its official operation began through a Joint Congressional Resolution, passed February 9, 1870.[225] The "Organic Act" of October 1, 1890 assigned the Weather Bureau to the Department of Agriculture.[226]

1/ Now in National Oceanic and Atmospheric Administration, in the Commerce Department, under reorganization of July 9, 1970 – See introduction to this chapter.

Effective June 30, 1940, it was transferred by Reorganization Plan IV from Agriculture to Commerce.[227] The Act of June 25, 1948[228] expressed the Congressional purpose that the Weather Bureau ". . . shall have charge of forecasting the weather, the issue of storm warnings, the display of weather and flood signals. . . ."

ESSA Environmental Data Service
Processing and Publication of Data

This agency functions under the same basic "Organic Act" of October 1, 1890, as the Weather Bureau.[229] It operates data centers, such as the National Weather Records Center at Asheville, N. C., for the storage, retrieval, compilation, publication, and dissemination of environmental data for use by commerce, industry, the scientific and engineering community, and the general public. It conducts research to improve the quality and availability of environmental data, to insure its widest and best use; and it coordinates climatological and geophysical data matters with world scientific organizations.

ESSA Coast and Geodetic Survey
Charts, Maps, and Geodetic Controls

The principal products of the present-day Coast and Geodetic Survey are nautical and aeronautical charts which are basic tools in developing and maintaining the Nation's air, sea, and land transportation systems. Early authorizations were based on Congressional resolutions, such as the Third Congress calling for a report on the seacoast from Georgia to Virginia in 1795. On February 10, 1807, President Jefferson approved a bill creating the "Survey of the Coast," a new bureau under the Treasury Department.[230] This bureau became the "Coast and Geodetic Survey" in 1878, when nationwide geodetic surveys became necessary.[231] In 1903 the C&GS was moved from the Treasury Department to the Commerce Department.[232] With the advent of the space age of today, it has become actively involved through cooperative agreements with Federal agencies in satellite triangulation and tracking programs.

ECONOMIC DEVELOPMENT ADMINISTRATION – DEPARTMENT OF COMMERCE
Creation of New Employment Opportunities

The Economic Development Administration (EDA) was established September 1, 1965, by the Secretary of Commerce pursuant to authority given in the Public Works and Economic Development Act of 1965[233] and Reorganization Plan V of 1950.[234] Prior to that time it functioned as the Area Redevelopment Administration (ARA), which was established May 8, 1961, and terminated August 31, 1965, by the Secretary of Commerce pursuant to the Area Redevelopment Act[235] and Reorganization Plan V of 1950. The primary function now assigned the EDA by statute is the long-range economic development and programming for areas and regions of substantial and persistent unemployment and low income. This is done through the creation of new employment opportunities and by developing and expanding existing facilities and resources. The Public Works and Development Act of 1965 authorizes Federal aid for areas designated as redevelopment areas. These include public works grants and loans, loans for industrial and commercial facilities, technical planning, and research assistance. EDA's area offices and representatives provide direct assistance to State and local agencies concerned with economic development.

CENSUS BUREAU – DEPARTMENT OF COMMERCE
Provide Basic Statistics about People and the Nation's Economy

The Constitution provides that a census of population be taken every 10 years.[236] The Act of March 6, 1902, established the Census Office as a permanent bureau.[237] The Act of February 14, 1903, transferred the Census Office to the Department of Commerce and Labor.[238] At a later date Labor became a separate department with the Census Bureau remaining in Commerce. The mission of the Census Bureau is to provide basic statistics about people and the economy of the Nation in order to assist the Congress, Government, and the public in planning, carrying out, and evaluating active programs. The schedule of major censuses regularly taken is: Population and housing, once every 10 years for years ending in 0; agriculture, once every 5 years for years ending in 4 and 9, with drainage and irrigation for years ending in 9; governments once every 5 years for years ending in 2 and 7; and manufacturers, mineral industries, business, and transportation, generally once every 5 years (dates have varied), scheduled in future for years ending in 2 and 7. Data collected at monthly, quarterly, or annual intervals provide up-to-date information on many subjects covered in the major censuses, on construction, and on United States foreign trade. The number, location, and personal and family characteristics of the population, such as age, sex, race, marital status, place of birth, mother tongue of the foreign born, work status, occupation, education, mobility, and income, are included in the decennial census.

OFFICE OF BUSINESS ECONOMICS – DEPARTMENT OF COMMERCE

Basic Data on National Economy

The Office of Business Economics was established in 1932 by Department of Commerce Order 15. Its assigned mission is to provide basic economic measures of the National economy, current analyses of the economic situation and business outlook, the United States balance of international payments, measurement and analysis of the factors affecting regional economic development, and economic research on the functioning of the economy. Effective February 13, 1964, its basic authorization was amended by the establishment of a Regional Economics Division, thus permitting a contractual agreement with the Water Resources Council for a National Program of Economic Analysis and Projections. This contract with the Water Resources Council produced economic data used in comprehensive basin planning.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Grants and Loans for Water and Sewer Facilities and National Flood Insurance

GENERAL

The Secretary is authorized to make grants and Public Facility Loans to local public bodies and agencies to finance specific projects for basic public water facilities (including works for the storage, treatment, purification, distribution of water, and interest on bonds for a 5-year period for advance acquisition of land) and for basic public sewer facilities. (Other than "treatment works" as defined in the Federal Water Pollution Control Act.)

Grants are contingent on projects being consistent with area-wide water and sewer facilities systems as part of the comprehensively planned development of the area.

The Secretary also is authorized to make grants to local bodies for comprehensive planning, including that for water and sewer systems. Grants will cover two-thirds of the cost for communities other than federally impacted (decrease in employment) or EDA area communities. These communities are eligible for three-fourths of the cost of comprehensive planning, including that for water and sewer systems.

Public works planning advances, which are interest-free loans to be repaid when construction is started, also are available to local public bodies.

Under provisions of Public Law 90-448, as amended, the Secretary of Housing and Urban Development is authorized to establish and carry out a flood insurance program by means of which flood insurance can be made available through the cooperative efforts of the Federal Government and the private insurance industry. The law encourages State and local governments to make appropriate land use adjustments to preclude the development of lands susceptible to flooding; to guide the development of future construction away from flood hazardous areas; and to encourage lending and credit institutions to assist in reaching the objectives of the flood insurance program.

The National Flood Insurance Program has two main thrusts: (a) It encourages states and communities wishing to participate to make appropriate land use adjustments designed to prevent unwise use of the flood plain and reduce the amount of property exposure to flood, and (b) through a cooperative effort between the Federal Government and the private property insurance industry, it provides insurance protection against flood losses to owners of properties in flood-prone areas who previously were unable to obtain insurance, and for owners of properties already in the flood plain the program provides Federal assistance to keep rates within reasonable bounds.[239]

BASIC AUTHORIZATION

Title VII of the Housing and Urban Development Act of 1965, as amended,[240] and Sec. 701 and 702 of the Housing Act of 1954, as amended,[241] provide the authority for the cited activities for grants and loans. Authority for flood insurance is contained in the National Flood Insurance Act of 1968.[242]

WATER RESOURCES COUNCIL

National Water Resource Studies

GENERAL

The Water Resources Council is a Cabinet-level body established by the Water Resources Planning Act of 1965, Public Law 89-80. It consists of the Secretaries of Agriculture, Army, Health Education and Welfare, Interior, and Transportation, and the Chairman of the Federal Power Commission. Housing and Urban Development, and Commerce, are associate members, and Justice and the Budget Bureau are observers. The Chairman is designated by the President, and at the present time he is the Secretary of the Interior. The Council meets quarterly.

Each member designates a representative, who joins with others in a biweekly meeting. The Council has a small staff headed by an Executive Director.

The functions of the Council are stated in the three titles of the Act. Title I directs the Council generally to coordinate Federal activities dealing with water and related land resources; to adopt principles, standards, and procedures for planning Federal water resource projects; and to prepare a biennial assessment of the Nation's water resources.

Title II authorizes the President, on the request of affected Governors, to establish joint Federal-State river basin commissions to coordinate programs and to develop a comprehensive, coordinated, joint plan for the conservation, utilization, and development of water and related land resources in major river basins. To date, four Commissions have been established for the New England, Great Lakes, Pacific Northwest, and Souris-Red-Rainy River Basins. The chairman of each Commission is a full-time Federal employee appointed by the President. The Water Resources Council arranges for the Federal contribution to the Commission budget, provides direction to the chairman and Federal members of the Commission, and reviews the comprehensive plan developed by the Commission.

Title III of the Act authorizes the Council to administer a program of matching grants to States to help finance state water-planning activities.

BASIC AUTHORIZATION

The Water Resources Planning Act of July 22, 1965[243] established the Council and prescribed its functions. The Secretary of Transportation was added as a member pursuant to Section 7 (b) of the Act of October 15, 1966.[243a]

NATIONAL WATER COMMISSION

Review of National Water Resource Problems

GENERAL

In 1968 Congress established the National Water Commission to consist of 7 members appointed by the President from outside the Federal Government. The Commission is to review national water resource problems, consult with the Water Resources Council, and submit its final report to the President and Congress by September 26, 1973.

BASIC AUTHORIZATION

The Act of September 26, 1968,[244] authorized the establishing of the National Water Commission.

COUNCIL ON ENVIRONMENTAL QUALITY

On January 1, 1970, the President signed the National Environmental Policy Act of 1969,[244a] which establishes a national policy on the environment. The Act (1) states that the Federal responsibility is in cooperation with state and local governments and other concerned public and private organizations to use all practicable means and measures to insure a healthful environment; (2) directs all Federal agencies, to the fullest extent possible, to administer programs in accordance with the Act and to consider the environmental impact of decisions; (3) requires the President to submit annually, beginning July 1, 1970, an Environmental Quality Report appraising status and progress; and (4) establishes a Council on Environmental Quality in the Executive Office of the President, to assist with the annual report, establish a system to monitor status of the environment, and review Federal programs affecting quality of the environment.

OFFICE OF WATER RESOURCES RESEARCH – DEPARTMENT OF THE INTERIOR

Research Activities

GENERAL

The Office of Water Resources Research supports water resources research activity in the States comprising the Missouri River Basin through the Water Resources Research Institutes of colleges and universities in the basin.

BASIC AUTHORIZATION

The Water Resources Research Act of 1964[245] authorizes the financing of water resources research by the several States. The Supplemental Appropriation Act of 1965,[246] as well as subsequent appropriation acts,[247] provides the Office of Water Resources Research with funds to carry out the objectives of the Water Resources Research Act of 1964.

WILD AND SCENIC RIVERS – DEPARTMENTS OF THE INTERIOR AND AGRICULTURE

Nature's Own Waters

GENERAL

In 1968 Congress concluded that certain rivers in the United States possessed outstanding scenic, recreational, geologic, cultural, historical, and like values so as to warrant retention in their present environment. These rivers were to be protected from spoliation and industrial use. The Secretaries of the Interior and Agriculture were directed to initiate a program that would accomplish this purpose.

BASIC AUTHORIZATION

The Act of October 2, 1968,[248] authorized the Secretaries of the Interior and of Agriculture to institute a program of land acquisition and controlled use of certain rivers to protect their wild and scenic values. None of those designated is within the Missouri River Basin, but the Gasconade River and the Missouri River from Fort Benton to Ryan Island are noted as potential additions to the list of waterways to be studied and characterized as wild and scenic rivers, if appropriate.

INTERSTATE WATER COMPACT COMMISSIONS

GENERAL

The Federal Constitution provides that no state shall enter into any agreement or compact with another state without the consent of Congress.[249] In the Missouri River Basin interstate compacts have been entered into to cover the division in rights to the use of interstate waters on several streams.

BASIC AUTHORIZATIONS

a. **The South Platte River Compact** between Colorado and Nebraska was approved by the Act of March 8, 1926.[250] It provided for the use of South Platte River waters substantially in accordance with state priorities and provided for a diversion in Colorado to serve Nebraska lands.

b. **The Republican River Compact** among Colorado, Kansas, and Nebraska was approved by the Act of May 26, 1943.[251] It allocated the waters of particular drainage basins of the Republican River and recognized the findings in Weiland v. Pioneer Irrigation Co., 259 U.S. 498. Diversions and impoundments of water in one compacting state for use in another compacting state were authorized.

c. **The Belle Fourche River Compact** between Wyoming and South Dakota was approved by the Act of February 26, 1944.[252] Under this compact water right priorities theretofore established in one state were to be recognized in the other. Of the remaining unappropriated water, 90 percent was to be allocated to South Dakota and 10 percent to Wyoming. Diversions and impoundments of water in one state for use in the other state were authorized where state appropriation laws were observed.

d. **The Yellowstone River Compact** among Wyoming, Montana, and North Dakota was approved by the Act of October 30, 1951.[253] It divided Yellowstone River Basin waters (1) in the Clarks Fork 60 percent to Wyoming and 40 percent to Montana; (2) in the Big Horn River, 80 percent to Wyoming and 20 percent to Montana; (3) in the Tongue River, 40 percent to Wyoming and 60 percent to Montana; and (4) in the Powder River, 42 percent to Wyoming and 58 percent to Montana. Diversions and impoundments in one state for use in another state were authorized where state appropriation laws were observed. Diversions out of the Yellowstone Basin required the unanimous consent of all of the compacting states.

e. **The Upper Niobrara River Compact** between Nebraska and Wyoming was approved by the Act of August 4, 1969.[254] It apportions the water of the river between the two states and provides for studies of ground water supplies and their potential apportionment.

f. **The Lower Niobrara River and Ponca Creek Compact** between Nebraska and South Dakota currently is awaiting Congressional approval.

g. **The Big Blue River Compact** between Kansas and Nebraska affecting the Big Blue and Little Blue Rivers is now under negotiation.

h. **The Upper Colorado River Compact** approved April 6, 1949, permits transbasin diversion into the Missouri River Basin under certain conditions and diversions presently are made into the basin in Colorado and Wyoming.[255]

REFERENCES

1 Reserved from patent: Act of March 3, 1807 (2 Stat. 440, 441); Act of March 3, 1811 (2 Stat. 662, 665); and Act of September 4, 1841 (5 Stat. 453, 456).

2 Permitted to Northern Pacific Railway Company under land grants: Act of July 2, 1864 (13 Stat. 365, 368).

3 Permitted to Union Pacific Railroad Company under land grants: Act of July 1, 1862 (12 Stat. 489,492). See also subsequent Timber Culture Acts beginning with the Act of March 3, 1873 (17 Stat. 607) which allowed entries on a quarter section of public land for the purpose of developing timber growth.

4 Allowed to mineral claimants: Act of July 26, 1866 (14 Stat. 251, 253).

5 See F. H. Newell, first Chief Engineer of the Reclamation Service, *in the* **First Annual Report of the Reclamation Service** (Washington: Government Printing Office, 1903) at pp. 22-24.

6 The Act of July 26, 1866 (14 Stat. 251) provided for free rights-of-way over the public land for canals and ditches. While the emphasis in this legislation was on water use for mining, the importance of water use for irrigation was also recognized. The Act of July 9, 1870 (16 Stat. 218) required that patents contain a reservation of rights-of-way for ditches and reservoirs acquired by priority of possession.

7 Act of March 3, 1877 (19 Stat. 377); amended by Section 1 of the Act of August 30, 1890 (26 Stat. 391).

8 Act of March 1, 1872 (16 U.S.C. 21; 17 Stat. 32).

9 Act of March 3, 1873 (17 Stat. 513); Act of July 31, 1876 (19 Stat. 120); Act of March 3, 1877 (19 Stat. 348); Major John Powell's report of 1879 is credited with sparking and then snowballing public and Congressional interest in a national reclamation program. **First Annual Report of the Reclamation Service, op. cit.**, p. 48.

10 Act of October 2, 1888 (25 Stat. 505, 526). This $100,000 appropriation was shortly followed by an appropriation of $250,000 for irrigation investigations. Act of March 2, 1889 (25 Stat. 939, 960-961).

11 Act of October 2, 1888 (25 Stat. 505, 527).

12 **Ide** v. **United States**, 263 U.S. 497, 502 (1923).

13 Act of August 30, 1890 (26 Stat. 391). Selected reservoir sites, however, were still withheld from sale or entry.

14 Act of February 8, 1887 (24 Stat. 388, 390).

15 See, for example, the Act of March 3, 1905 (33 Stat. 1016) in which a principal consideration for the cession of lands on the Wind River Indian Reservation in Wyoming was the accumulation of funds for the construction of an irrigation system. See, to the same effect, the Crow Indian Cession Act of March 3, 1891 (26 Stat. 1039); and the Fort Peck Indian Cession Act of May 30, 1908 (35 Stat. 558).

16 Act of August 18, 1894 (28 Stat. 372, 422).

17 Act of April 24, 1896 (29 Stat. 97).

18 Act of June 3, 1896 (29 Stat. 202, 232).

19 Act of May 11, 1898 (30 Stat. 404).

20 Act of January 13, 1897 (29 Stat. 484).

21 Act of January 14, 1901 (31 Stat. 729).

22 Resolution of February 13, 1901 (31 Stat. 2001).

23 Act of July 13, 1892 (27 Stat. 88, 108); Act of March 2, 1895 (28 Stat. 910, 940); Act of June 11, 1896 (29 Stat. 413, 436); Act of June 4, 1897 (30 Stat. 11, 37); Act of July 1, 1898 (30 Stat. 597, 623); Act of March 3, 1899 (30 Stat. 1074, 1099); Act of June 6, 1900 (31 Stat. 588, 617); Act of June 3, 1901 (32 Stat. 1133, 1161); and Act of June 28, 1902 (32 Stat. 419, 455).

24 The platforms of the three major parties all strongly urged a national reclamation program. **First Annual Report of the Reclamation Service, op. cit.**, pp. 40-41.

25 Act of April 16, 1906 (34 Stat. 116).

26 Act of February 21, 1911 (36 Stat. 925).

27 Section 5 of Act of June 17, 1902 (32 Stat. 388); Section 5 of Act of June 27, 1906 (34 Stat. 519); Section 3 of Act of August 9, 1912 (37 Stat. 265); Section 12 of Act of August 13, 1914 (38 Stat. 686).

28 Act of February 25, 1920 (41 Stat. 451).

29 Act of December 21, 1928 (45 Stat. 1057). The Boulder Canyon Project was to serve the purposes of river regulation, navigation, flood control, irrigation, domestic use, and power. Project revenues were to be placed in a Colorado River Dam fund from which the project construction costs were to be liquidated. While the Boulder plan was untried, and only time was to prove its imminent practicability, its effect on reclamation planners was electric. The tremendous potential of integrated resource development had been recognized and accepted.

30 Act of May 18, 1933 (48 Stat. 58). The TVA's use of the corporate form for its development agency was unique and was not adopted in the West.

31 Act of August 30, 1935 (49 Stat. 1028, 1039); Act of August 20, 1937 (50 Stat. 731).

32 Act of August 26, 1937 (50 Stat. 850).

33 **Bureau of Reclamation Project Feasibilities and Authorizations** (Washington: Government Printing Office, 1957), pp. 499-503.

34 **Idem**, p. 503.

35 Act of March 4, 1929 (45 Stat. 1562, 1592); Act of April 9, 1938 (52 Stat. 210).

36 Act of May 9, 1938 (52 Stat. 291, 322). Earlier statutory recognition of the right to credit power revenues on project costs includes Section 5 of the Act of April 16, 1906 (34 Stat. 117, 43 U.S.C. § 522); and Subsection I of the Fact Finders' Act of December 5, 1924 (43 Stat. 703, 43 U.S.C. § 501).

37 Act of August 4, 1939 (53 Stat. 1187). The act also improved the mechanics for constructing, operating, and financing multipurpose projects. Further relief to distressed water users was also here authorized. This legislation was strongly influenced by Senator Carl Hayden's treatise on "National Irrigation Policy, Its Development and Significance." Senate Document No. 36 (76th Cong., 1st Sess.).

38 Act of May 18, 1938 (52 Stat. 403).

39 **Idem**, Section 2.

40 Act of August 11, 1939 (53 Stat. 1418); amended by Act of October 14, 1940 (50 Stat. 869); and Act of July 16, 1943 (57 Stat. 566).

41 Act of October 14, 1940, **supra**, Section 1.

42 **Idem**, Section 2.

43 **Idem**, Section 2.

44 This plan was frequently referred to as "the Sloan Plan," since Reclamation Planning Engineer W. G. Sloan was its principal author.

45 This plan was referred to as "the Pick Plan," since Brig. Gen. Lewis A. Pick of the Corps of Engineers was its principal author.

46 The history of the joint plan is provided in Marian E. Ridgeway's **The Missouri Basin's Pick-Sloan Plan** (Urbana: University of Illinois Press, 1955).

47 S.D. 191 (78th Cong., 2d Sess.) pp. 11-14.

48 Environmental Policy Act of 1969 (P.L. 91-190)

49 U.S. Const. Art. I, Sec. 8, Cl. 3.

50 **U.S.** v. **Appalachian Electric Power Co.**, 311 U.S. 377, 426 (1940).

51 Section 12 of the Act of March 3, 1811 (2 Stat. 662, 666; 33 U.S.C. § 10) states that all navigable waters within the Louisiana Purchase "shall be and forever remain public highways." Historically, all citizens have a right to hunt and fish in navigable waters. **Grimes Packing Co.** v. **Hynes**, 67 F. Supp. 43 (D.C. Alaska, 1946); affirmed 165 F.2d 323 (9th Cir. 1947).

52 **Loc-Wood Boat & Motors** v. **Rockwell**, 245 F.2d 306 (8th Cir. 1957).

53 **Obstructed**: Act of March 3, 1899 (30 Stat. 1151; 33 U.S.C. § 403).

Bridged: General Bridges Act of August 2, 1946 (60 Stat. 847; 33 U.S.C. § 525 **et seq.**). Until 1946, no compensation was allowed a bridge owner who was obliged to alter his bridge because of navigation improvements. See **Union Bridge Co.** v. **U.S.**, 204 U.S. 364 (1907); and **Louisville Bridge Co.** v. **U.S.**, 242 U.S. 409 (1917). However, the Truman-Hobbs Act of July 24, 1946 (60 Stat. 642; 33 U.S.C. § 701p) now authorizes the Chief Engineer to include at Federal expense the cost of altering legally constructed railroad bridges and approaches where required in connection with a flood control project.

Controlled: Federal Power Act (41 Stat. 1063; 16 U.S.C. § 797). See **Tatum** v. **Blackstock**, 319 F.2d 397 (5th Cir. 1963).

Polluted: **United States** v. **Republic Steel Corp.**, 362 U.S. 482 (1960) held that the dumping of refuse into a navigable stream so as to reduce its depth constituted an obstruction forbidden by the Act of March 3, 1899, **supra**.

54 **United States** v. **Willow River Power Co.**, 324 U.S. 499 (1945); **United States** v. **Commodore Park**, 324 U.S. 386 (1945); **United States** v. **Rands**, 389 U.S. 121 (1967).

55 **United States** v. **Rio Grande Irr. Co.**, 174 U.S. 690, 708 (1899); **United States** v. **531.13 Acres of Land, Etc.**, 366 F.2d 915 (4th Cir. 1966), **cert. denied**, 385 U.S. 1025.

56 **Montana Power Co.** v. **Federal Power Commission**, 185 F.2d 491 (D.C. Cir. 1950), **cert. denied**, 340 U.S. 947 (1951).

57 **Coates** v. **United States**, 110 F. Supp. 471 (Ct. Cl. 1953).

58 **The Crow Tribe of Indians** v. **United States**, Civil No. 214, U.S. Dist. Ct. Mont. (1963).

59 **Kaw Valley Drainage Dist. of Wyandotte County** v. **Missouri Pacific Ry. Co.**, 99 Kan. 188, 161 Pac. 937 (1916).

60 **Loc-Wood Boat and Motors Co.** v. **Rockwell**, 245 F.2d 306 (8th Circ. 1957).

61 33 U.S.C.A. § 2.38-1 (1967).

62 33 U.S.C.A. § 2.47-15 (1967).

63 U.S. Const. Art. IV, Sec. 3.

64 **Federal Power Commission** v. **Oregon**, 349 U.S. 435 (1955).

65 **Arizona** v. **California**, 373 U.S. 546, 601 (1963). The Court said: "Arizona's contention that the Federal Government had no power, after Arizona became a State, to reserve waters for the use and benefit of federally reserved lands rests largely upon statements in (various court cases). —They do not determine the problem before us and cannot be accepted as limiting the broad powers of the United States — to regulate government lands under article 4, paragraph 3 of the Constitution. We have no doubt about the power of the United States under these clauses to reserve water rights for its reservations and its property."

66 **Id.** See Also p. 265 of the Special Master's Report in **Arizona** v. **California, supra,** note 69.

67 **United States** v. **Arizona,** 295 U.S. 174, 184-185 (1935).

68 U.S. Const. Art. I, Sec. 8.

69 **United States** v. **Gerlach Live Stock Co.,** 339 U.S. 725, 738 (1950).

70 U.S. Const. Art. II, Sec. 2.

71 **De Geofroy** v. **Riggs,** 133 U.S. 258 (1890).

72 36 Stat. 245.

73 Fort Laramie Treaty confirmed April 29, 1868 (15 Stat. 635) Sioux Tribe;
Fort Laramie Treaty confirmed May 7, 1868 (15 Stat. 652) Crow Tribe;
Fort Bridger Treaty confirmed July 3, 1868 (15 Stat. 673) Shoshone Tribe; and see
Act of April 15, 1874 (18 Stat. 28) Gros Ventre, Piegan, Blood, Blackfeet, and River Crow Indians;
Executive Order of November 26, 1886 - Northern Cheyenne Indians;
Act of April 30, 1888 (25 Stat. 94) Sioux Indians of North Dakota;
Act of May 1, 1888 (25 Stat. 113) Gros Ventre, Piegan, Blood, Blackfeet, and River Crow Indians (Blackfeet, Fort Belknap, and Fort Peck Reservations);
Act of March 2, 1889 (25 Stat. 888) Sioux Indians (Standing Rock, Cheyenne River, Crow Creek, Lower Brule and Pine Ridge Reservations);
Act of September 7, 1916 (39 Stat. 739) Chippewa Indians (Rocky Boys Reservation).

74 **Winters** v. **United States,** 207 U.S. 564 (1908).

75 See References 66 and 67 and accompanying text. Too, in **Winters** v. **United States, supra,** reliance was placed on principles set out in **United States** v. **Rio Grande Dam and Irr. Co.,** 174 U.S. 690, 702 (1899) which dealt, in relevant part, with Federal rights under the Property Clause.

75a See Ashwander v. T.V.A. 297 U.S. 288 (1935).

76 2 Stat. 662, 666; 33 U.S.C. § 10.

77 4 Stat. 22.

78 4 Stat. 32.

79 41 Stat. 1009, 1013-1014.

80 Act of June 22, 1936 (49 Stat. 1570), amended by the Act of August 28, 1937 (50 Stat. 877; 33 U.S.C. § 701c). This legislation, required among other things, that local agencies contribute the rights-of-way needed for the flood control projects; however, the Flood Control Act of June 28, 1938 (52 Stat. 1215) relaxed this requirement in the case of certain projects.

81 79 Stat. 213; 16 U.S.C. § 460(1)-12.

82 78 Stat. 897; 16 U.S.C. § 460(1)-4 to § 460(1)-11.

83 58 Stat. 887.

84 Title III of the Rivers & Harbors Act (72 Stat. 297, 319), amended by the Act of July 20, 1961 (75 Stat. 204; 43 U.S.C. § 390b).

84a 75 Stat. 204; 33 U.S.C. § 466 (a) & (b).

85 74 Stat. 480, 486; 33 U.S.C. § 577-578.

86 62 Stat. 1171, 1182 as amended; 33 U.S.C. § 701s.

87 60 Stat. 641, 653; 33 U.S.C. § 701r.

88 68 Stat. 1243, 1266; 33 U.S.C. § 701g. See also Sec. 3 of the 1945 Rivers and Harbors Act (59 Stat. 10, 23; 33 U.S.C. § 603a).

89 69 Stat. 186; 33 U.S.C. § 701n.

90 Act of September 30, 1950 (64 Stat. 1109; 42 U.S.C. § 1855, **et seq.**).

91 30 Stat. 1121, 1154; 33 U.S.C. § 414, **et seq.**

92 74 Stat. 480, 500 as amended; 33 U.S.C. § 709a.

93 Act of July 22, 1965 (79 Stat. 244; 42 U.S.C. § 1962, **et seq.**)

94 32 Stat. 388; 43 U.S.C. § 371 **et seq.**

95 Pre-emption Act of September 4, 1841 (5 Stat. 459; 43 U.S.C. §714); Homestead Act of May 20, 1862 (12 Stat. 392; 43 U.S.C. § 161).

96 Act of May 25, 1926 (44 Stat. 636; 43 U.S.C. § 423e).

97 36 Stat. 925; 43 U.S.C. § 523-525.

98 38 Stat. 686; 43 U.S.C. § 499.

99 42 Stat. 541; 43 U.S.C. § 511-512.

100 44 Stat. 636, 649; 43 U.S.C. § 423e.

101 Subsec. D of Sec. 4 of the Fact Finders' Act of December 5, 1924 (43 Stat. 702; 43 U.S.C. § 462); Secs. 4(b) and 9(d) of the Reclamation Project Act of 1939 (53 Stat. 1187), as amended by the Act of August 8, 1958 (72 Stat. 542; 43 U.S.C. § 387).

102 52 Stat. 291; 43 U.S.C. § 392 g.

103 34 Stat. 116, amended by the Act of February 24, 1911 (36 Stat. 930; 43 U.S.C. § 522).

104 53 Stat. 1187; 43 U.S.C. § 485h(c).

105 34 Stat. 116; 43 U.S.C. § 567.

106 41 Stat. 451; 43 U.S.C. § 521.

107 53 Stat. 1187; 43 U.S.C. § 485h(c).

108 72 Stat. 297, 319, amended by Act of July 20, 1961 (75 Stat. 204, 210; 43 U.S.C. § 390b).

109 53 Stat. 1187; 43 U.S.C. § 485(h).

110 Secs. 5 and 8 of the Act of December 22, 1944 (58 Stat. 887, 890-891; 16 U.S.C. § 825s and 43 U.S.C. § 390).

111 60 Stat. 1080; 16 U.S.C. § 661, **et seq.**

112 72 Stat. 563; 16 U.S.C. § 661, **et seq.**

113 79 Stat. 213; 16 U.S.C. § 460(1)-12, **et seq.**

114 49 Stat. 1894; 16 U.S.C. § 17k.

115 75 Stat. 204; 33 U.S.C. §§ 466 (a), (b).

116 63 Stat. 724, amended by the Act of March 3, 1950 (64 Stat. 11; 43 U.S.C. § 504).

117 69 Stat. 244; 43 U.S.C. § 421b.

118 70 Stat. 1044, amended by the Act of September 2, 1966 (80 Stat. 376; 43 U.S.C. § 422).

119 Act of September 30, 1950 (64 Stat. 1109; 42 U.S.C. § 1855, **et seq.**)

120 52 Stat. 403; 16 U.S.C. § 833.

121 Act of August 11, 1939 (53 Stat. 1418), amended by Act of October 14, 1940 (54 Stat. 1119) and Act of July 16, 1943 (57 Stat. 566; 16 U.S.C. § 590y).

122 58 Stat. 887, 891. Certain units of the Missouri River Basin Project were specifically authorized; the Act of July 16, 1954, 68 Stat. 486, reauthorized the Glendo unit; the Act of August 21, 1954, 68 Stat. 757, authorized the Ainsworth, Lavaca Flats, Mirage Flats Extension, and O'Neill Units; the Act of August 3, 1956, 70 Stat. 975, reauthorized the Farwell Unit; the Act of August 20, 1958, 72 Stat. 687, authorized the Gray Reef Dam and Reservoir, Glendo Unit; the Act of August 5, 1965, 79 Stat. 433, reauthorized the Garrison Diversion Unit; the Act of November 14, 1967, 81 Stat. 444, authorized the Nebraska Mid-State Division; and the Act of August 3, 1968, 82 Stat. 624, authorized the initial stages of the Oahe Unit, James Division.

123 49 Stat. 163, amended by the Act of February 29, 1936 (49 Stat. 1148; 16 U.S.C. § 590a, **et seq.**).

124 49 Stat. 1570, amended by Section 7 of the Watershed and Flood Prevention Act of August 4, 1954 (68 Stat. 666; 33 U.S.C. § 701b).

125 58 Stat. 887, 905.

126 68 Stat. 666, amended by the Act of August 7, 1956 (70 Stat. 1088; 16 U.S.C. § 1001, **et seq.**).

127 70 Stat. 1115; 16 U.S.C. § 590p(b).

127a See Reference 121.

128 49 Stat. 1148; 16 U.S.C. § 590g-q.

129 30 Stat. 11, 35; 16 U.S.C. § 475.

130 **Idem.**

131 33 Stat. 628; 16 U.S.C. § 472.

132 26 Stat. 1095, 1103, amended by the Acts of March 4, 1907 (34 Stat. 1271); June 25, 1910 (36 Stat. 847); August 24, 1912 (37 Stat. 497); and June 7, 1924 (43 Stat. 655; 16 U.S.C. § 471).

133 **Arizona** v. **California,** 373 U.S. 546, 601 (1963).

134 36 Stat. 961, amended by Section 6 of the Act of June 7, 1924 (43 Stat. 653, 654; 16 U.S.C. §§ 480, 500, 513-19, 521, 552 & 563).

135 42 Stat. 465; 16 U.S.C. §§ 485, 486.

136 See 16 U.S.C.A. §§ 471a to 471e; 486a to 486w. See also the Act of July 9, 1968 (76 Stat. 140) which permits lands acquired under Section 8 of the Taylor Grazing Act to be included in the national forest. And see Section 6(a)(1) of the Land and Water Conservation Fund Act of 1965 (78 Stat. 897; 16 U.S.C. § 460(1)-9) which permits revenues from the Fund to be used in acquiring lands and water rights in wilderness and outdoor recreation areas in the national forest.

137 30 Stat. 11, 35; 16 U.S.C. § 475.

138 50 Stat. 522, 525; 7 U.S.C. § 1010, **et seq.**

139 52 Stat. 1215, 1225; 33 U.S.C. § 701b-1.

140 54 Stat. 224; 16 U.S.C. § 552a.

141 43 Stat. 653; 16 U.S.C. § 564.

142 This Commission was established by Section 4 of the Act of March 1, 1911 (36 Stat. 961; 16 U.S.C. § 513) and consisted of the Secretaries of War, Agriculture, and Interior, two senators, and two representatives designated by the President.

143 43 Stat. 1132, amended by Section 5 of the Act of April 24, 1950 (64 Stat. 82; 16 U.S.C. § 572).

144 74 Stat. 215; 16 U.S.C. § 215, **et seq.**

145 78 Stat. 890; 16 U.S.C. § 1131, **et seq.**

145a 68 Stat. 666, 16 U.S.C. § 1001, **et seq.**

146 Title III of the Agricultural Act of 1961 (75 Stat. 294, 307; 7 U.S.C. § 1921, **et seq.**).

147 68 Stat. 666, 668, amended by Act of August 7, 1956 (70 Stat. 1088, 1090; 16 U.S.C. § 1001, **et seq.**).

148 20 Stat. 377, 394; 43 U.S.C. § 31.

149 28 Stat. 372, 398.

150 **E.g.,** Department of the Interior Appropriation Act 1969 (82 Stat. 425, 431).

151 Act of August 23, 1958, and Act of September 5, 1962.

152 48 Stat. 977, amending Act of February 25, 1920 (41 Stat. 437, 441; 30 U.S.C. § 229a).

153 30 CFR 241 (1968).

154 41 Stat. 1063, amended by the Acts of March 3, 1921 (41 Stat. 1353); June 23, 1930 (46 Stat. 797); and August 26, 1935 (49 Stat. 803, 838; 16 U.S.C. § 792, **et seq.**).

155 Act of June 28, 1938 (52 Stat. 1213; 33 U.S.C. § 701j).

156 Act of December 22, 1944 (58 Stat. 887; 16 U.S.C. § 825s).

157 79 Stat. 244; 42 U.S.C. § 1962-1, **et seq.**

158 63 Stat. 495, amended by the Acts of June 22, 1951 (65 Stat. 89) and of September 3, 1954 (68 Stat. 1237; 14 U.S.C. § 2, **et seq.**).

159 80 Stat. 931, 938; 49 U.S.C. § 1655.

160 54 Stat. 163; 46 U.S.C. § 526, **et seq.**

161 72 Stat. 1754, amended by the Act of August 30, 1961 (75 Stat. 408; 46 U.S.C. §527, **et seq.**).

162 46 U.S.C. **passim.**

163 32 Fed. Reg. No. 239, December 12, 1967, Part II; 33 U.S.C. § 525, **et seq.**; 33 U.S.C. §511, **et seq.**; 33 U.S.C. § 499.

164 13 Stat. 58, amended by Acts of August 19, 1890 (26 Stat. 320); of February 8, 1895 (28 Stat. 645); of February 19, 1895 (28 Stat. 672); of June 7, 1897 (30 Stat. 96); of May 21, 1948 (62 Stat. 249); and of August 8, 1953 (67 Stat. 497; 33 U.S.C. § 301, **et seq.**).

165 33 U.S.C. § 407.

166 33 U.S.C. § 432, **et seq.**

167 63 Stat. 496; 14 U.S.C. § 2.

168 40 Stat. 220, amended by Acts of August 9, 1950 (64 Stat. 427) and September 26, 1950 (64 Stat. 1038; 50 U.S.C. § 191); and Executive Order No. 10173, 33 CFR 6.01, **et seq.**

169 39 Stat. 535; 16 U.S.C. § 1.

170 **Arizona** v. **California**, 373 U.S. 546, 601 (1963).

171 Senate Report No. 11, 88th Congress., 1st Sess.

172 77 Stat. 49; 16 U.S.C. §§ 460(1) to 460(1)-3.

173 78 Stat. 897; 16 U.S.C. §§ 460(1)-4 to 460(1)-11.

174 79 Stat. 213; 16 U.S.C. §§ 460(1)-12 to 460(1)-21.

175 The Blackfeet Reservation (Marias R.); the Fort Belknap Reservation (Milk R.); the Wind River Reservation (Wind R.); the Crow Reservation (Big Horn R.); the Northern Cheyenne Reservation (Tongue R.); the Fort Peck Reservation (Missouri R.); the Fort Berthold Reservation (Missouri R.); the Standing Rock Reservation (Missouri R.); the Cheyenne River Reservation (Cheyenne and Missouri R.); the Pine Ridge Reservation (Cheyenne R.); the Crow Creek Reservation (Missouri R.); the Rosebud Reservation (Missouri R.); the Yankton Reservation (Missouri R.); the Ponca Reservation (Missouri R.); and the Santee-Sioux Reservation (Missouri R.).

176 **Arizona** v. **California**, 373 U.S. 546, 601 (1963).

177 Act of May 7, 1868 (15 Stat. 652) Crow Indians; Act of July 3, 1868 (15 Stat. 673) Shoshone Indians; Act of June 5, 1872 (17 Stat. 228) Osage Tribes; Act of April 15, 1874 (18 Stat. 28) Gros Ventre, Piegan, Blood, Blackfeet, and River Crow Indians; Act of April 30, 1888 (25 Stat. 94) Sioux Indians of North Dakota; Act of May 1, 1888 (25 Stat. 113) Gros Ventre, Piegan, Blood, Blackfeet, and River Crow Indians (Blackfeet, Fort Belknap, and Fort Peck Reservations); Act of March 2, 1889 (25 Stat. 888) Sioux Indians (Standing Rock, Cheyenne River, Crow Creek, Lower Brule, and Pine Ridge Reservations); Act of September 7, 1916 (39 Stat. 739) Chippewa Indians (Rocky Boys Reservation); and Executive Order of November 26, 1884 — Northern Cheyenne Indians.

178 **Arizona** v. **California**, 373 U.S. 546, 600 (1963). See also **United States** v. **Winters**, 207 U.S. 564 (1908); **United States** v. **Walker River Irrigation District, et al.**, 104 F.2d 334, 340 (CA9, 1939); **United States** v. **Ahtanum Irrigation District et al.**, 330 F.2d 897, 915 (CA9, 1964); **United States** v. **Winans**, 198 U.S. 371 (1905); **United States** v. **Powers**, 305 U.S. 527 (1939).

179 **Idem.** Some tribal representatives also urge that the Indian water right is an unlimited right to use the available reservation waters for any beneficial use including irrigation, livestock, domestic, power, recreation, industrial and municipal purposes, and to take full advantage of technological advances in such use.

180 24 Stat. 388, 390; 25 U.S.C. § 331, **et seq.**

181 36 Stat. 269, 270-271; 25 U.S.C. § 384.

182 Special Master Simon H. Rifkind's Report in **Arizona** v. **California**, **supra**, p. 265.

183 5 U.S.C. § 133y-16

184 19 Stat. 377; 43 U.S.C. § 321, **et seq.**

185 **California Oregon Power Co.** v. **Beaver Portland Cement Co.**, 295 U.S. 142 (1935).

186 28 Stat. 372, 422; 43 U.S.C. § 641, **et seq.**

187 14 Stat. 251, 253; 43 U.S.C. § 661.

188 16 Stat. 218; 43 U.S.C. § 661.

189 26 Stat. 391, amended by the Acts of September 2, 1964 (78 Stat. 808) and of October 4, 1966 (80 Stat. 873; 43 U.S.C. § 945).

190 Act of April 24, 1896 (29 Stat. 97).

191 Act of June 3, 1896 (29 Stat. 202, 232).

192 Act of May 11, 1898 (30 Stat. 404; 43 U.S.C. § 951).

193 Act of January 13, 1897 (29 Stat. 484; 43 U.S.C. § 952).

194 Act of January 14, 1901 (31 Stat. 729).

195 36 Stat. 847; 43 U.S.C. § 141.

196 39 Stat. 862, 865; 43 U.S.C. § 300.

197 48 Stat. 977; 30 U.S.C. § 229a.

198 See the Fish and Wildlife Act of August 8, 1956 (70 Stat. 1119; 16 U.S.C. § 742a, **et seq.**

199 50 Stat. 917; 16 U.S.C. § 669, **et seq.**

200 64 Stat. 430; 16 U.S.C. § 777, **et seq.**

201 48 Stat. 401; 16 U.S.C. § 661, **et seq.**

202 60 Stat. 1080; 16 U.S.C. § 661, **et seq.**

203 72 Stat. 563; 16 U.S.C. § 661, **et seq.**

204 68 Stat. 666; 16 U.S.C. § 1001, **et seq.**, amended by Acts of August 7, 1956 (70 Stat. 1088; 16 U.S.C. § 1002, **et seq.**); of August 12, 1958 (72 Stat. 567; 16 U.S.C. § 1008); and of September 2, 1958 (72 Stat. 1605; 16 U.S.C. § 1004).

205 79 Stat. 213; 16 U.S.C. § 460(e)-12 to 460(1)-21.

206 80 Stat. 926; 16 U.S.C. §§668aa **et seq.**

207 40 Stat. 755; 16 U.S.C. §§ 703-711.

208 45 Stat. 1222, 16 U.S.C. §§ 715 **et seq.**

209 62 Stat. 1155; 33 U.S.C. § 466, **et seq.**

210 Reorganization Plan No. 2 of 1966, effective May 10, 1966 (80 Stat. 1608; note, 33 U.S.C.A. § 466).

211 83 Stat. 852.

212 70 Stat. 498; 33 U.S.C. § 466a, **et seq.**

213 75 Stat. 204; 33 U.S.C. § 466a, **et seq.**

214 79 Stat. 903; 33 U.S.C. § 466, **et seq.**

215 80 Stat. 1246; 33 U.S.C. § 446a, **et seq.**

216 Exec. Order No. 11288, 3 CFR 1966 Comp. p. 127.

217 66 Stat. 328; 42 U.S.C. 1951-1958 (1964).

218 72 Stat. 1707; 42 U.S.C. 1958a-1958g (1964).

219 58 Stat. 682, as amended by the Act of July 3, 1946 (60 Stat. 421); of February 28, 1948 (62

Stat. 38); of June 16, 1948 (62 Stat. 469); of June 24, 1948 (62 Stat. 601); of June 25, 1959 (73 Stat. 148); of April 8, 1960 (74 Stat. 34); of July 12, 1960 (74 Stat. 419); of Nov. 3, 1966 (80 Stat. 1180); and by 1953 Reorganization Plan No. 1, Secs. 5 and 8, effective April 11, 1953 (67 Stat. 631); 1966 Reorganization Plan No. 2, effective May 10, 1966 (80 Stat. 1608); and 1966 Reorganization Plan No. 3, effective June 25, 1966 (80 Stat. 1610); 42 U.S.C. § 201, **et seq.**

220 See Reference 219

221 See Reference 215

222 3 CFR, 1959-1963 Comp. p. 556 (1962).

223 79 Stat. 997; 42 U.S.C. § 3251, **et seq.**

224 Reorganization Plan No. 2, 15 U.S.C.**A.** § 311.

225 16 Stat. 369.

226 26 Stat. 653

227 3CFR, 1938-1943 Comp. p. 1303 (1968).

228 62 Stat. 795; 18 U.S.C. § 2074 (1964).

229 26 Stat. 653.

230 2 Stat. 413.

231 20 Stat. 206, 215.

232 32 Stat. 825, 826.

233 79 Stat. 552; 42 U.S.C. § 3121, **et seq.**

234 3 CFR, 1949-1953 Comp. p. 1004.

235 75 Stat. 47; 42 U.S.C. § 2501.

236 U.S. Const. Art. I, Sec. 2, Cl. 3.

237 32 Stat. 51.

238 32 Stat. 825, 826.

239 42 U.S.C. 4001-4127 effective January 28, 1969 (33 FR 17804 November 28, 1969), Part 1910 Subtitle B of Title 24.

240 79 Stat. 451, 489, as amended by Title VI of the Housing and Urban Development Act of 1968 (82 Stat. 476; 42 U.S.C. § 3102).

241 Act of August 2, 1954; (68 Stat. 590, 640).

242 Act of August 1, 1968 (82 Stat. 575; 42 U.S.C. 4001-4127)

243 79 Stat. 244; 42 U.S.C. § 1962-a, **et seq.**

243a 80 Stat. 931, 942.

244 82 Stat. 868; 42 U.S.C.**A.** § 1962a, note.

244a See Reference 48.

245 Act of July 17, 1964 (78 Stat. 329; 42 U.S.C. § 1961, **et seq.**

246 Act of October 7, 1964 (78 Stat. 1023).

247 **E.g.**, Interior Appropriation Act, 1969 (82 Stat. 425, 437).

248 82 Stat. 906.

249 U.S. Const., Art. 1, Sec. 10, Cl. 3.

250 44 Stat. 195.

251 57 Stat. 86.

252 58 Stat. 94.

253 65 Stat. 663.

254 83 Stat. 86.

255 63 Stat. 31.

CHAPTER 4

PROBLEMS IN FUTURE WATER RESOURCES DEVELOPMENT

The preceding three chapters provide perspective for the existing framework of State and Federal laws, policies, and administration in the field of water and related land resources development in the Missouri River Basin. While there are challenges and differences in interpretation at times on given water issues, it is recognized that the 10 State and Federal legal-policy frameworks are now, and have in the past been, largely complementary as they apply to the planning, development, operation, and management of water resource projects. The past accomplishments and progress that have been made through joint efforts of the State and Federal Governments in developing and utilizing water in the arid West cannot be overemphasized.

Just as the historical record shows a progressive response to water problems by enactment of amendments to earlier laws and policies, future water resource development poses added problems and the need for adjustments and more comprehensive legislation and action programs.

Most of the problems that have arisen in the past have been solved on an individual basis by the Congress, by interstate compact, or by court test, under the existing framework of law, and by appropriate State legislative action. Many problems in future water resources development will be of wide geographic coverage and will require comprehensive legislation or other solutions. However, there is no reason why unique and individual problems of the future in the Missouri Basin, or even larger areas, cannot be resolved by special consideration and action as in the past.

Certain of these problems and the need for adjustment have come into focus during formulation of the framework plan for the Missouri Basin. While some of the State summaries point up certain constraints on the most effective use of water, no attempt has been made to develop specific recommendations therein for the individual States. However, in the following paragraphs there are summarized some of the problems and, in some cases, an indication of types of solutions where these are apparent. Primarily, however, the issues covered are those that require added study and action. Finally, there is need to consider adjustments in institutional arrangements of the Federal, State, and local levels of plan implementation.

The Federal Reserved Water Doctrine

One issue that creates a current and potentially serious problem affecting the Missouri Basin and other public land states is the Federal reserved water doctrine. This doctrine provides that when lands were reserved from the public domain, the United States impliedly reserved water sufficient for use in accordance with the purposes for which the lands were reserved and as of the date of land withdrawal. The doctrine is the outgrowth of various court decisions (Arizona v California, supra) based on the Federal Constitution and treaties rather than Federal legislation. The genesis of this problem stems in part from the dual sovereignty system of government. The development of the Nation has wrought a continual change in the nature of governmental structure in response to a progressive change in the nature of society's problems. In some instances the nature of the problems has required an extension of Federal Government control.[1/] The Federal reserved water doctrine appears to have developed in part from a dispute over the authority of the States to exercise control over the appropriation and use of water on Federal lands.

Whether or not water administration in the arid West should be subject to the Federal reserved water doctrine could involve a major policy decision. If it is a policy decision it should not be left to the interested States as they are not likely to view the problem broadly. Likewise, the executive branch or agencies of the Federal Government do not seem to be the proper places to make this kind of decision because they have limited responsibilities and authority. Finally, the courts may not be a proper forum for this kind of policy decision. This would appear to be the sense of the United States Supreme Court in its analysis in **Baker** v. **Carr**.[2/] Protracted argument or litigation would be expensive, compound hard feelings and ill will, and above all would be a

major impediment to future Western water development, possibly for years to come.

One place to make a final determination concerning the Federal reserved water doctrine would be the United States Congress. The advantages of a Congressional determination are several: The legally supportable authority of the Congress to make a policy determination;[3] the dispatch with which a determination could be made as opposed to prolonged litigation; the comprehensiveness with which a solution could be fashioned; the ability and effectiveness of the Congress, through its hearing procedure, to hear and weigh all viewpoints; the advantage of a court review of the Congressional product, as opposed to piecemeal judicial legislation and Congressional response thereto; and finally and foremost, avoidance of protracted friction which otherwise could continue between the Federal Government and the States.

In any event, it seems obvious that means should be developed to quantify or measure the water use requirements of lands reserved from the public domain so that other water rights can be safety and firmly established. Quantification of water use requirements already is in progress on some reserved lands.

Water Quality Control

The struggle for water quality control presently has many of the earmarks of a grassroot crusade. However, people who have been connected with water quality control over the years say that the quality-of-water problems have not become suddenly more serious, but only that they have recently become more publicized and the subject of action programs. It is recognized that the full usefulness of water resources in some sections of the country has been lost due to the degradation of water quality. Widespread public concern has generated support and funds to assist in a major problem area that has been insidious in its growth and impacts.

Most people currently favor adequate water quality control. Thus the real issue is, who will exercise the control on water quality--the States or the Federal Government? The present laws generally provide for State control. From the inception of legislation assigning the Federal Government a role in the protection of water quality, the objective has not been to override the State agency responsibilities to enforce water pollution control regulations, but rather to provide a backstop to the State authorities. Recent administrative and Congressionally proposed legislation tend toward greater Federal control. Here again the solution should and probably will be Congressional. Three views on the responsibility for control seem evident:

1. ***State control***– This should be acceptable to all concerned if it is made effective. The States, however, may expect to lose control under any system if they do not do an effective job on their own.

   Those States failing to attain adequate water-quality control affecting interstate waters may anticipate pressures from the Federal Government, along with requests for action from other downstream and adversely affected States.

2. ***Federal control***– Legislation proposed by the administration and Congressional members, if enacted, would provide greater Federal agency control. Pressure from many of the States upon their Congressional delegations is likely to make it difficult to enact such legislation unless and until State control proves ineffective.

3. ***State control with Federal guidelines, financial and technical support, and coordination under reasonable supervision***– This seems to be a sensible middle ground. Each State should be given the opportunity to enforce its own laws. There would, however, be the authority of Federal enforcement if the State fails to discharge its obligations. From an over-all standpoint, this procedure shows promise of the most effective approach to efficient water quality control.

Recreation

More and more the question is arising in the basin how storage water releases or natural flows that may be dedicated to needs such as recreation, fish and wildlife, and quality control can be protected in situations where the State laws do not define these as beneficial uses. Actually, recreation and water together with related land usage have become inextricably intertwined. How recreation uses of water should be viewed in relation to other water uses should be made the subject of a policy determination. However, it may be difficult to reach an accord on a national basis. In areas with high rainfall any preference of recreation use over other beneficial uses of water does not pose the serious problems that such a preference would pose in more arid areas. Too, a state's ranking of preferences in the use of water could be a vehicle to circumvent otherwise appropriate national objectives.

It has been suggested that one solution to the problem may be to permit economics to control the situation. In any event, the imposition and maintenance of minimum stream flows for recreation and allied purposes, without diversion, may not quickly be recognized as an acceptable beneficial use in the arid States. This is so because minimum flow maintenance can be a chilling factor on future development because of the quantities of water minimum stream flows could require. In an analogous situation, rights to maintenance of flow for power production have been downgraded by the courts.[4]

More Uniformity in Water Law

Four possibilities for more uniform water laws seem evident: (1) a Federal system, (2) a nationwide State riparian system, (3) a nationwide State appropriation system, and (4) a State system based on mixed appropriation and riparian systems.

Because of physical facts, only (1) and (4) would seem to be workable, and it must be recognized that because of the physical facts, some parts of the nation may require a prior appropriation system while other sections require a riparian system.

In the arid Western States, including most of the Missouri Basin, the right to use water is generally acquired by appropriation. State law prescribes the steps to be taken to perfect a water right appropriation. These steps usually include (1) a notice of the intent to appropriate water; (2) the building of works necessary to divert or impound water; and (3) the application of the water to a beneficial use. The priority of the State water right is then based on the rule of "first in time is first in right."

The various State laws differ as to (1) what may be defined as a beneficial use; (2) what priority or preference may be applied to different uses; (3) the amount of water per acre that may be allowed under an irrigation appropriation; and (4) procedures for acquisition, adjudication, and readjudication of rights.

Efforts to attain more uniform laws on water rights administration might serve a very useful purpose. On the other hand, it should be recognized that progress in this area will be very slow. There is a complex of institutions built up on the basis of historically evolved water-right administrations in the States, and the inertia of these will mitigate against any rapid change. Also there may be doubt as to the virtue of uniformity. For example, uniform rules on the duty of water may prove impracticable in view of the fact that consumptive use rates and effective precipitation vary widely in the field with climate, elevation, growing season, and soil conditions. These facts have been recognized by the United States Supreme Court.[5/]

Notwithstanding, the States must realize that no appropriator, including the Federal Government, should be obliged to comply with a wide variety of State water laws where the variations are not predicated upon basic field differences. The States should, as they have done in other areas, strive to make their water laws as uniform as practical, and yet responsive to the water needs of the people.

Water Law Appraisal

Until very recent times, the water resources field has been oriented towards economic development, and both Federal and State legal institutional arrangements are so structured. Development in this context has been geared to the economic market place, and practically all of the present "tools" used in this field can be classed as "market place." Even certain national goals have been defined in terms which suggest that their objective is largely the enhancement of the "gross national product." The differences which have developed on some water issues between the Federal and the State positions, particularly in the West, have been really a debate of which law is to be first in the field.

No one would deny that there are certain serious conflicts in the water resources field. However, there has evolved a new spectrum which may make the present Federal-State water law dichotomy less relevant. The new entry is difficult to classify under one term, but for purposes of discussion here the term "environmental concerns" can be used to represent this new field.

The environmental concerns are perhaps a natural evolution from the activities in the field of water quality control. Water quality control under the Federal laws was, until recently, oriented to the "market place" development concept. Perhaps the provisions of P.L. 91-190 (National Environmental Policy Act of 1969) are still directed more toward development than some environmentalists would like. However, there are elements in this new law, particularly Sec. 102, which will have an impact on the water resources development programs on the part of the Federal Government. Under Sec. 102, all Federal program proposals will have to account for their environmental impact. It is obvious that new methods of evaluation will have to be developed which can properly accommodate these new environmental concepts, as well as economic and technical considerations.

Legal remedies will have to be developed to provide ground rules within which these new concepts can secure protection and expression. The strain on the natural environment has become so great that it appears courts are allowing class actions to test developments.[6/] In Federal Courts the concept of "standing to sue" is being expanded.[7/] This is only an indication that there is a need to provide new or modified laws and policies related to the environmental field.

Present legal institutional water concepts will be hard put to continue unchanged in the face of the new environmental demands. Without doubt there will be future added State and Federal legislation covering the environmental field. Surely water law will be included as a part of the change which is occurring in the resource development field because of the interest and efforts to enhance or at least sustain environmental quality.

At this time it seems impracticable to outline in any definitive way the course that legal institutional arrangements will take; very likely they will be shaped by legislation. The only purpose of this explanation is to point out this new area of consideration which seems to loom

ever more important in the water and related land resources field.

Miscellaneous Problems

There is need to contrive some means of coordinating the uses of ground and surface waters which in many respects may be interdependent in their hydrologic relationship, but which operate under differing rules of use and priority.

The updating of the excess land provisions of the Federal Reclamation Laws also presents a problem that needs to be resolved. Under these provisions water from federally constructed works is not to be made available for the irrigation of lands in excess of 160 irrigable acres in the ownership of one person or corporation, or in excess of 320 irrigable acres in the joint ownership of husband and wife.[8/] This law applies to the 17 Western States excluding only Minnesota, Iowa, and Missouri in the Missouri River Basin. There is growing recognition that in many areas within the Missouri Basin, and elsewhere, a 160-acre or a 320-acre farm unit is not the most economic operation, particularly in relation to productive capability of the lands, limitations in potential crops, and the cost of maintaining a modern competitive, mechanized operation. There appears to be a need for legislative action regarding the acreage that can be served from any federally constructed water facility, regardless of the program under which developed.

Finally, statutes should be enacted in some of the States whereby unexercised, adjudicated water rights can be deemed abandoned or forfeited by a simplified procedure, initiated either by the State or by potential water users, so that future development can properly proceed.

REFERENCES

1/ **Bailey v. Drexel Furniture Co.**, 259 U.S. 20 (1922).

2/ **Baker v. Carr**, 369 U.S. 186 (1962). Specifically Mr. Justice Brennan's test number [3] - "the impossibility of deciding without an initial policy determination of a kind clearly for nonjudicial discretion." **Id.** at 217.

3/ **Cf. Winters** v. **United States**, 207 U.S. 564 (1908).

4/ Hydroelectric power generation has been recognized as an inferior use because a hydroelectric facility can demand such large amounts of water that it can stop any future upstream development. **Tanner v. Bacon**, 103 Utah 494, 136 P.2d 957 (1943); **East Bay Municipal Utility Dist. v. Dept. of Public Works**, 1 Cal. 2d 476, 35 P.2d 1027 (1934).

5/ **Nebraska v. Wyoming**, 325 U.S. 589 (1945).

6/ **Scenic Hudson Preservation Corp. v. F.P.C.**, 354 F.2d 608 (2d Cir. 1965).

7/ **Flast v. Cohen**, 392 U.S. 83 (1968).

8/ 43 U.S.C. § 431. Section 8 of the Flood Control Act of 1944 (43 U.S.C. § 390) also provided that water from future Corps-constructed reservoirs could be utilized for irrigation, but only in compliance with the Reclamation Laws.

GPO 835-500