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# The political system's response to crisis conditions: Case study of Texas' water policy for irrigated agriculture in the High Plains region

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The University of Texas at Dallas, 1990

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# THE POLITICAL SYSTEM'S RESPONSE TO CRISIS CONDITIONS: CASE STUDY OF TEXAS' WATER POLICY FOR IRRIGATED AGRICULTURE IN THE HIGH PLAINS REGION

by

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AGRICULTURE IN THE HIGH PLAINS REGION

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To my family and friends who gave encouragement and inspiration these many years, especially Moe

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The public policy concern of this dissertation relates to the projected water shortages for certain regions in Texas. The High Plains is one such region. It utilizes water from the Ogallala Aquifer, which is being overdrafted in some areas. Ninety-five percent of the water drawn from the Ogallala is used in irrigated agriculture. Farmers are being forced to change from irrigated farming to less productive dryland farming thereby threatening the region's $4 billion annual contribution to the State's economy. The State has a vested interest in addressing the water needs in this region as well as in other areas. Water conservation is assumed to be the policy objective since alternatives are not viable in the High Plains. Diminishing natural resources such as water present a compelling argument for government protection of the public interest for present and future generations.

Some political theorists believe that interest groups have significant power over the policymaking process. Multiple interest groups, water districts, regional and urban/rural interests have been involved in water policy matters in Texas. However, none of these actually control the legislative process as some theorists would suggest. The relationship between policymakers and interested parties is "ad hoc" as individuals/groups coalesce around particular concerns. Legislators face other constraints such as private property rights and a cultural preference for local control. Texas appears to be in a water policy deadlock. If water-shortage projections are accurate, interest groups and legislators alike must play an important role in educating citizens and in organizing support for State-managed solutions. The Legislature may be forced to change current water rights to restrict usage.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

# CHAPTER I

## INTRODUCTION

The research for this study was prompted by the dire prediction that demand for water will either exceed supplies or come close to doing so within fifty years, and possibly much sooner in certain areas of the State. Governor Mark White (Governor of Texas 1978-1982) stated that "the issue of water is perhaps the most significant long-term issue facing the State of Texas."[1] Thus, the water problem should be a matter of concern to all Texans. How could this condition of poor water supply have been allowed to occur in a State where people pride themselves on their "can do" approach to problem-solving and , indeed, persist in their faith that technology can rescue them? A solution seemed to be an arena for State action. I concentrated my analysis on the Legislative component of public policy. Questions addressed included the following: What legislative changes since 1969 have sought to improve water resources management? Is the Texas policy-making process capable of dealing with projected water scarcities? Is there any evidence of significant political support for an increased role for the State in developing additional water supplies and/or mandating water conservation to extend the available water supplies? Have policy-makers been derelict in their duties or do they face formidable constraints?

The parameters for State action are set by legal, social, economic, and political principles and by relationships that are not readily subject to change. For example, surface water and ground water in Texas are governed by differing legal concepts. Surface-water flowing in public water-courses is public property subject to State administration and is accepted as such by the public. The State has extensive and direct involvement in conserving and controlling surface-water supplies. Ground water is handled differently, both legally and administratively: the courts uphold the "right of capture"; that is, a landowner has a right to take for use or sale all the water he can capture from beneath his land. Thus, the State has limited jurisdiction over ground-water use. Also, the "right of capture" of ground water has long been recognized by the courts as a private property right. The passionate defense of private ownership of land and ground water is an integral part of the political culture in Texas. The following description so aptly expresses the general sentiment of Texans:

> Land and property ownership have long been associated in American thought with ideas about individualism, democracy, and freedom, and accordingly, conflicts over specific land uses or regulation strategies evolve into battles over the most basic values in American society.[2]

This attitude makes it difficult to place the State in the central position of regulating underground water rights by means of permits in the same manner as for surface-water

usage. Texans fight diligently to protect property which they feel rightfully belongs to them.

For the most part, the State has delegated ground-water supply management to local governments, e.g., underground water conservation districts, and lets them determine any necessary water-use regulations. In 1985 the Legislature established a procedure for identifying areas either where ground-water problems have been experienced already or can be anticipated within twenty years. This may lead to locally-held elections to determine if new districts should be formed. If, however, local voters defeat a proposition, no alternative mechanism exists to protect ground water underlying land outside of districts.

Underground water conservation districts are said to have broad powers to regulate activities that could damage the aquifers either from over-pumping or from pollution. As special districts authorized by the State, under Article XVI of the Texas Constitution, these districts must preserve and conserve natural resources. Chapter 52 of the Texas Water Code also specifies considerable powers for districts formed under this code. However, most districts prefer, instead, to cast themselves as service agencies and facilitators of ground-water conservation, rather than as seemingly heavy-handed regulators. They enact well-spacing rules, require permits for wells, and enforce the rules against willful waste

and negligence. Few districts impose more stringent measures, such as metered wells, restricted pumpage, and water use fees which have been taken in some other states.

Strong sentiment persists for retaining local management of ground-water basins, another manifestation of the political culture of Texas. Daniel J. Elazar shows that the political culture in Texas is strongly individualistic and traditionalistic.[3] "Individualistic" tendencies are evident in the resentment Texans show when anyone tries to tell them how to run their affairs. The "traditional" aspect of the culture means that Texans resist changes to the accepted way of doing things until they are given a compelling reason to do so. Local control over ground water has been the rule. Water users in many areas feel that the politicians in Austin do not understand their local problems, and they resent any implication that Austin bureaucrats could do a better job of managing their local water resources. Perhaps they are right.

Many groups resent proposals for massive water development projects designed to alleviate projected water shortages. They feel these proposals may impose economic burdens on groups of citizens who will not be direct beneficiaries of the specific projects. It is difficult to convince people from varying regions that they have a common interest in ensuring a dependable water supply for all regions, and that they should assume additional tax burdens toward achievement of

this goal. Chronic budgetary problems at the state and local levels already force hard choices about the allocation of scarce financial resources.

The sheer size of the State has a unique influence on public policy in Texas. There are 267,000 square miles of territory. Regions of the State differ in natural resource endowments, population distribution, per capita income, industrial mix, and rural/urban orientation. The differences in both endowments and experiences make it difficult for the residents of the different regions to have a sense of common benefit from public policies that might restrain either individual or regional activities. For example, the perceived divergence of rural and urban interests works against formulation of common, comprehensive water policies.

In studying public policy issues it becomes apparent that the parameters for State action are set by political preferences as well as by legal restrictions. Policies must be politically feasible. "Political feasibility" can be judged by whether legislators are likely to view them favorably for enactment in the context of the Texas' political environment. Policies which appear to be rational still may not be possible. The political environment is largely determined by power relationships; these power relationships equally affect water policy decisions just as they do other areas of public policy. Solutions to the problems are

influenced by matters such as which individuals and groups have significant input to the policy-making process.

A sub-group of political scientists known as "interest group theorists" believe that groups play a crucial role in understanding the policy-making process. However, a broad spectrum of opinions exists about the positive and negative aspects of interest group activity. Defenders of pluralism, for example, believe that the expression of multiple interests in competition is positive expression of democracy at work. Other theorists contend that a few powerful groups have sufficient influence with public officials so that they are able to control the public agenda; as a consequence, they believe that some vital issues are effectively eliminated from political consideration. While water districts and river authorities are special units of local government, they tend to behave as interest groups as they lobby to protect and further their own interests and those of the people they serve. Some theorists include strong indictments of public officials whom they feel abrogate their responsibilities to enact and enforce laws that promote the public welfare under pressure from interest groups.

This study investigates the role of interest groups in the water policy-making process and asks the following Questions: Do some legislators appear derelict in their duties by being too responsive to certain groups? Do other

constraints on policy response exist? Is the Texas policy-making process capable of dealing with projected water scarcities?

As a case study, I have chosen to concentrate on the water policies for the High Plains of Texas, a region almost totally dependent upon ground-water supplies that are diminishing. This problem is an important public policy issue because the High Plains area is a major contributor to agricultural production both for the State and for the nation as a whole. Since agricultural productivity is both sustained and enhanced by irrigation from ground water, a significant reduction in crop yields due to the depleting ground-water supply will affect the economy of both the region and the State.

FORMAT OF THE STUDY

- Chapter I - an introduction, explains the purpose and focus of the thesis.
- Chapter II - points out the serious projected water shortages and the drastic need for dramatic changes to resolve the water supply problems in the High Plains of Texas.
- Chapter III - offers a review of the literature on interest group theory and suggests the application of

various theories to current role players in the water policy-making process.

- Chapter IV - focuses the investigation on evaluating the role of interest groups in the State of Texas's water policy. The concept of interest group activity is expanded to include entities which behave like interest groups in their attempts to influence water policy.
- Chapter V - recounts how citizens, interest groups, and local governments in the High Plains Regions and the State government have responded to regional water needs up to the 1990's.
- Chapter VI - reviews the role of Legislators in water policy making in Texas and outlines some of the constraints they face. Finally, conclusions are drawn regarding the impact of interest group activities and their potential role in devising solutions for the 21st century.

## NOTES

[1]Letter from the Governor's Office to the 69th Texas Legislature to accompany draft water legislation SJR 7 and SB138, regular session, n.d. Letter also was signed by the Lieutenant Governor W. P. Hobby and the Speaker of the House Gib Lewis.

[2]Judith Innes de Neufville, Ed., The Land Use Policy Debate in the United States, 1981, New York: Plenum Press, p. 2.

[3]Daniel J. Elazar, American Federalism: A View from the States, 2d. ed., New York: Thomas Y. Crowell Co., Inc., 1972, p. 118-119.

## CHAPTER II

## THE PROBLEM

Rapid population growth and economic development have combined with variable rainfall and climate conditions to impose immediate as well as potential future water supply problems in many areas of Texas. In general terms, the Texas water supply situation can be described by measuring the annual precipitation: The western half of the State receives an average of less than 30 inches of rainfall per year while the eastern half receives more than 30 inches. Appendix B-1 gives the normal annual precipitation for the various regions of Texas. East Texas generally has adequate water resources while West Texas experiences chronic shortages. Those areas of the state with inadequate rainfall are more dependent upon the aquifers. Texas has seven major aquifers and sixteen minor aquifers. These are shown in Appendix B-2. One of the largest aquifers is the Ogallala, which underlies portions of Wyoming, South Dakota, Nebraska, Colorado, Kansas, Oklahoma, and New Mexico as well as Texas.

In 1980, 17.9 million acre-feet[†] of water were used in the State; 10.9 million acre-feet (61 percent) were supplied from ground-water sources and 7.0 million acre-feet came from

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[†]Definition: One-acre foot is 325,851 gallons or the amount of water required to cover one acre to a depth of one foot.

surface-water sources.[1] Statewide, from both ground-water and surface-water sources, consumer allocation was as follows: agriculture--72.5 percent; municipal and domestic use--15.8 percent; industrial--8.5 percent; steam-electric power use--1.8 percent, and mining operations--1.3 percent.[2] Of the 10.9 million acre-feet of ground-water used, 82.5 percent was used by agriculture.[3] Agriculture also uses about 54 percent of the surface-water annually.[4]

Estimates made in 1984 of water usage for the year 2030 range from 22.2 to 30.3 million acre-feet annually. The "low" and "high" estimates make different assumptions about population growth and water conservation efforts. Appendix A-1 reports the population and water use for 1980 and for the projected figures for years 2000 and 2030 using a "low" and "high" series". Appendix B-3 gives the same information in bar graph form. For example, statewide irrigation water use was projected to range from 10.1 to 16.2 million acre-feet annually by the year 2000, and from 11.1 to 15.0 million acre-feet annually by the year 2030.[5] The "low" projection for water needs in the year 2030 is less than the actual usage--12.7 million acre-feet--for irrigation in the State in 1980. (The "low" projection assumes adoption of water conservation methods and shifts to more profitable cropping patterns.)[6]

More recent water-use surveys have indicated a decline in ground-water pumpage. In 1984, 8,854,470 acre-feet of water

were extracted, an 18 percent reduction from the 1980 total.[7] Appendix B-4 shows the ground-water pumpage in acre-feet by county in 1984. Appendix B-5 gives a graphic portrayal of the pumpage by county in 1984. Most of the reduction was attributable to a decrease in pumpage for irrigated agriculture. Factors contributing to this reduction were "a decline in irrigated acreage, an above-average rainfall and soil moisture content during the last of the growing season, and a more efficient application of irrigation water."[8] However, the Texas Water Development Board warns, "This trend of reduced water use for irrigation may not continue as economic conditions may improve, resulting in increased agriculture activity."[9] At the same time, pumpage for municipal use totaled 1,477,672 acre-feet of water, a 10 percent increase over 1980. The increase for municipal use occurred in all the major aquifers.[10]

The High Plains of Texas covers about 35,000 square miles and includes all or parts of forty-six counties. The major source of municipal and irrigation water for the High Plains is the Ogallala Aquifer. Appendix B-6 maps the extent of the High Plains Aquifer in Texas, and Appendix A-2 gives a detailed description of it. The Ogallala holds eight times the amount of water as the other twenty-two aquifers combined.[11] Ninety-six percent of the water pumped from the Ogallala is used for irrigation.[12] Some parts of the aquifer are being

over-drafted. Recharge occurs principally by infiltration of rainfall. Only a small percentage actually reaches the water table due to a combination of small annual precipitation, high evaporation rates, and low infiltration rates. One study indicates that an average of less than 0.2 inches of water per year reaches the water table as natural recharge.[13] The most severe problems resulting from the depletion of the aquifer have occurred in Texas and New Mexico where irrigation developed earliest.[14]

The Ogallala Aquifer is estimated to produce 3.5 million acre-feet of water in the year 2000, and this quantity can be expected to irrigate about 3.2 million acres, a reduction to about 55 percent of the 5 million acres irrigated in 1984.[15] If past trends for water use continue, the Ogallala will irrigate about 2.2 million acre-feet annually or 35 percent of the acreage currently irrigated by the year 2030.[16]

A 1984 ground-water use survey showed an encouraging reduction in pumpage from the Ogallala. An estimated 5,321,379 acre-feet of water was pumped, a 26 percent decrease from 1980.[17] Water levels had risen in areas south of Lubbock and in the North High Plains south of the Canadian River. These rises were primarily a result of reduced pumpage for irrigation. However, water-level declines were still occurring in the heavily irrigated areas between Lubbock and Amarillo and north of the Canadian River.[18] Appendix B-7

shows the approximate changes of water levels for various areas in the High Plains for the period 1980-85. Appendix B-8 reports the water level in selected wells in the Ogallala.

Public policy debate regarding adequate water supplies for water-scarce regions such as the High Plains has been episodic over the past thirty-five years. Public attention most often coincides with periods of drought. Various approaches to the problem have been debated--interbasin transfers and importation of water; weather modification to increase precipitation; secondary recovery of underground water resources; desalinization; improved technologies in irrigated agriculture; water conservation techniques in municipal use; and building new reservoirs. Traditionally, the State has set its priority on building new reservoirs. At present, Texas has seventy-four major reservoirs. Appendix B-9 locates the major reservoirs in Texas. Twenty-four major reservoirs for water supply have been built since 1969, and five more are under construction.[19] However, additional reservoir projects will be needed to meet increasing water demands and to replace declining ground-water supplies. In addition, chloride control projects are needed to prevent naturally occurring contamination of surface-water in some areas. The estimated combined capital costs of reservoir and chloride control projects by years are as follows: 1984-1989--

$1.19 billion; 1990-1999--$4.65 billion, and for the period 2000-2005--$7.6 billion.[20]

It is not clear whether enough reservoirs can be put in place in time to meet the anticipated future needs. Each proposed water-supply reservoir project spawns opposition and there are delays from individual citizens and/or groups concerned about the loss of agricultural lands, of wildlife habitat, of scenic and recreational rivers environments, and of fresh-water inflows to bays and estuaries. In addition, funding often is not available for the huge capital outlays which the water development projects require. In any event, surface-water reservoirs are not the answer both in the High Plains and in West Texas because few streams are capable of reservoir development, and any new reservoirs will provide only limited supplies relative to present and future demand.

In the 1980's, increased pressure on the water resources of the State has broadened the thinking of certain legislators, of state and local water agency personnel, and of interest groups. A strategy has developed beyond the traditional emphasis on surface-water development to include water conservation technologies to slow the rate of consumption. A federal study of the Ogallala Aquifer regional resources concludes, "Water conservation programs are identified as the single most important public policy and private action for immediate consideration."[21]

Since agriculture is the primary user of water resources in Texas, any effective water conservation strategy must include increased water-use efficiency by farmers. This is especially true in the High Plains Region of Texas where irrigated agriculture uses ninety-six percent of the water mined from the Ogallala[22]. Water saved in agriculture in the near term will be available for future farming as well as for other economic activities. Conservation of the available ground water also can assist a more orderly transition in this economically distressed region. Low commodity prices, rising production costs, and staggering farm debt along with depleting water supplies, have brought about significant changes in the High Plains' economy. "In Texas, 42 percent of all FmHA farm borrowers were delinquent in paying their loans during 1985. That translated to 2000 delinquent borrowers on the South Plains, 1300 in the Panhandle and more than 3700 across the remaining expanse of the State."[23] In Appendix B-10 the Federal Land Bank reports changes in the value of farm real estate in the various regions of Texas for the period 1984-85. Trends for the longer period 1981-1985 are shown in Appendix B-11. For the period 1984-85, Northern High Plains' values were -6.55 percent and for the period 1981-85, -4.17 percent. For the period 1984-85, Southern High Plains' values were -7.91 percent and for the period 1981-85, -16.84 percent. The percent change in land values is based on benchmark

values, the maximum amount used by Federal Land Banks in their lending decisions. These values may not reflect actual market values. The Federal Land Bank states that strong dependency upon agriculture and oil, weather problems in some years, and close proximity to other states experiencing similar problems may have contributed to the decline in farmland values in the Panhandle. For the same periods 1984-85 and 1981-85, the center of the State experienced significant increase in land values.[24]

Although it may not be readily apparent to residents of other regions, agriculture in the High Plains makes an important contribution to the Texas economy. Major agricultural commodities contribute $3.8 billion per year of the total agriculture production in Texas of $74.0 billion per year.[25] The area contains one-third of the State's total cropland from which the following production is generated: almost 80 percent of the State's grain-fed beef, 61 percent of its wheat, 60 percent of its cotton bales, and 50 percent of its grain sorghum.[26] High Plains agriculture makes a significant contribution to the national economy as well. A U.S. Commerce Department survey of the Ogallala Aquifer resources in six[†] states acknowledged the role of the region: "... the Region

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[†]Two of the eight states situated over the Ogallala Aquifer, Wyoming and South Dakota, were not included in the study because the extent of their irrigation dependent on the aquifer is negligible.

has one percent of the Nation's population living on six percent of the Nation's land area, producing over 15 percent of the total value of wheat, corn, sorghum, and cotton...."[27] Appendix A-3 gives the estimated crop projections to the year 2020 for each of the six states, and shows that the Texas portion of the region will increase production of wheat, sorghum, alfalfa, and cotton and will decrease production of corn and soybeans. The total region will increase production of all these crops.

Productivity is far greater from irrigated crops than from dryland farming. For example, average dryland cotton produces about 60 percent as much lint as irrigated cotton; dryland yields of wheat and sorghum are generally 33-40 percent of those under irrigation.[28] Further, the livelihood of three to five million Texans depend upon the irrigation generated business.[29]

One might be tempted to say that if the consumption of ground water is decreasing in the High Plains due to the general economic conditions in agriculture, the problem of mining of the aquifer will resolve itself. This may be a premature conclusion, and one that may not be in the best interest of the State. Since irrigated agriculture in this region has proven itself to be an important contributor both to the State and national economies, policy-makers may want to consider the value of saving this valuable resource. If such

a decision were to be made, a secure water supply would be absolutely essential.

Some water experts feel that the State currently has the legal authority to do anything necessary to preserve and conserve natural resources. Article XVI, Section 59 of the Texas Constitution reads, "... the preservation and conservation of all such natural resources of the State are each and all hereby declared public rights and duties; and the Legislature shall pass all such laws as may be appropriate thereto." Nonetheless, public officials are reluctant to expand State management which would interfere with the long-held concept of private property rights. Water resources management that adequately addresses the needs of the State likely will entail infringement by government on traditional property rights, a re-structuring of water agency relationships, and high levels of government spending. All of these actions involve tough political choices.

Texas has opted to delegate most areas of ground-water supply management to local governments, i.e., underground water conservation districts, and to let them determine any necessary water usage regulations. This would appear to be an inadequate means of assuring dependable supplies for all citizens. It bespeaks 19th century politics attempting to address 20th century needs. But water policy changes may not occur. A journalist surveying the political horizon

commented, "State control of ground-water is right up there with abortion and a state income tax as subjects that legislators don't like to talk about."[30]

Politicians, interest groups, and voters all have a responsibility to contribute to sound public policy. The interpretation of "sound" is determined according to individual perceptions and vested interests. Political leaders should accept as part of their role the education of constituents about the water problems in the State and recommend an appropriate response. Interest groups also can play an important role; sometimes, they are actually the ones who bring an issue to the public agenda by lobbying for action and finding legislators who share similar views. Voters can have a strong participatory role since the Texas Constitution requires voter approval of constitutional amendments in matters such as the issuance of state water development bonds. Months and years of planning effort either can be brought to fruition or neutralized at the polls.

This investigation looks at how all the above participants have responded in the past. The manner in which projected water shortages are addressed may define the social and economic choices of Texans in areas of where to live and work, dictate the types of goods and services produced, and portend even greater government control when conditions reach crisis proportions.

# NOTES

[1]Texas Department of Water Resources, Water for Texas, 1 (November 1984): 12.

[2]Ibid., 12.

[3]Ibid., 12.

[4]Ronald A. Kaiser, Handbook of Texas Water Law: Problems and Needs, (Bryan Station, TX: Texas Water Resources Institute, Texas A & M University, n.d.): 12.

[5]Texas Department of Water Resources, 28.

[6]Ibid.

[7]Texas Water Development Board, Ground-Water Conditions in Texas, 1980-1985 (Report 309, October 1988): 49.

[8]Ibid.

[9]Ibid., 52.

[10]Ibid.

[11]Bruce Tomaso, "The High Plains," Dallas Morning News, 19 August 1984, p. 6.

[12]Texas Water Development Board, 5.

[13]Texas Department Water Resources, Evaluating the Ground-Water Resources, 1 (May 1984): 24.

[14]U.S. Geological Survey, "High Plains Regional Aquifer," n.d.

[15]Dennis Medlin, U.S. Soil Conservation Service, telephone interview by author, Temple, Texas, 14 March 1986.

[16]High Plains Water Conservation District No. 1 and Texas Department of Water Resources, A Summary of Techniques and Management Practices for Profitable Water Conservation on the Texas High Plains, No. 79-01, Preface, 1979.

[17]Texas Water Development Board, Ground-Water Conditions, 5.

[18]Ibid., 2.

[19]Texas Department of Water Resources, Water for Texas, 3.

[20]Texas Department of Water Resources, Water for Texas Technical Appendix, 2 (November 1984): V13-V17.

[21]Tomaso, 7.

[22]Texas Water Development Board, Ground Water Conditions, 6.

[23]Texas Department of Agriculture, Crisis in Texas Agriculture, April, 1986, p. v.

[24]Ibid.

[25]The Cross Section, (September 1986): 1.

[26]Tomaso, 6.

[27]High Plains Study Council, A Summary of Results of the Ogallala Aquifer Regional Study, With Recommendations to the Secretary of Commerce and Congress, December 13, 1982, p. 1.

[28]Ibid., 7.

[29]Joe G. Moore, Jr., Water for Texas, draft copy 1985, p. 37.

[30]Bruce Tomaso, "Water Control: Texas Dabbles, Arizona Dives In," Dallas Morning News, 31 March 1985, sec A, p. 49, quoting an unnamed legislative aide to Lieutenant Governor Bill Hobby.

## CHAPTER III

## REVIEW OF THE LITERATURE ON INTEREST GROUP THEORY

Interest group theorists in political science share with the disciplines of sociology, psychology, anthropology, and economics the belief that groups are of central importance in understanding men in their relationships in society. Earl Latham states, "The chief social values cherished by individuals in modern society are realized through groups."[1] It might be expected that this shared belief would lead to common expressions about the behavior of interest groups in the political arena. However, E. E. Schattschneider exemplifies the disparity of thought even among political interest group theorists:

> Students of special-interest politics need a more sophisticated set of intellectual tools than they have developed thus far.... Everything changes once a conflict gets into the political arena--who is involved, what the conflict is about, the resources available, etc.[2]

Interest group theorists differ among themselves even in their definition of "interest group." Some portray shared interests as the essence of group organization. Graham K. Wilson sees an interest group as "...an organization which seeks or claims to represent people or organizations which share one or more common interests or ideals."[3] David B. Truman expands the definition to include the goal of the organization:

> ... Any group that, on the basis of one or more shared attitudes, makes certain claims upon other groups in the society for the establishment, maintenance, or enhancement of forms of behavior that are implied by the shared attitudes."[4]

How pertinent is "shared interests" to the overall concept of interest group theory? Shared interests are a measure of the cohesiveness of a group. A group that is more cohesive than its competitors enjoys an advantage in its pursuit of group goals by presenting a united front.[5]

Other group theorists such as Mancur Olson discount the notion of shared attitudes, i.e., common interests, as the motivating factor for group affiliation: "... [Members] will not act to advance their common or group objectives unless there is coercion ...or unless some separate incentive, distinct from the achievement of group interest, is offered to the members of the group individually ...."[6] Olson is convinced that individuals pursue private goods out of economic self-interests and may not have incentive to contribute to the provision of collective goods for society [e.g. protection and enhancement of water resources] since other individuals can enjoy the benefit of non-exclusionary goods without making a contribution. This is known as the "free rider" problem. Olson thinks that one way to increase member contributions to public goods is by an organization offering selective incentives. These are private benefits which can be enjoyed by the contributing member and can also be withheld

from non-contributors. The Texas Farm Bureau is an organization whose members have been described as being primarily motivated by direct economic incentives as theorized by Olson. "Many farmers join the AFBF [American Farm Bureau Federation] to take advantage of services such as cheap insurance. . . ."[7]

Terry M. Moe supports Olson's premise that selective (economic) incentives play the primary motivational role.[8] However, Moe expands the concept of selective incentives to include tangible benefits such as meetings and conferences where members can exchange ideas and discuss problems.[9] Moe also recognizes the role of non-economic inducements to group membership, which include solidary incentives such as friendship, conviviality, and social status which yield psychological benefits. Moe further contends that persons respond to purposive incentives, i.e., the opportunity to support causes, value systems, and principles if they feel they can make a difference.[10] Groups such as the Sierra Club and the League of Women Voters offer non-economic incentives, e.g., the opportunity to socialize and act upon their beliefs in the efficacy of political participation as a means of protecting natural resources. The League provides an opportunity for members to become involved at the neighborhood level in deciding what policy issues should be given priority and in providing continuing education for members.

In his analysis of the internal politics of organizations, Moe disagrees with Wilson and Truman's requisite of shared goals. Moe concludes that there is no necessary connection between individual goals and group goals as long as members are tied into the group by means of selective incentives. They can disagree with associational policy and still further group goals as long as they derive some personal benefit.[11] Wilson also concedes that many economic organizations pursue broad goals little related to the immediate interests of its members.[12]

Although the exact number is not known, many Farm Bureau members are non-farmers who join the organization to take advantage of favorable insurance, to do business with other members and/or to appear civic-minded for their interest in agriculture.[13]

Truman recognizes that individuals have diverse interests which lead them to identify with certain potential groups and affiliate with other actual groups. The varied interests of individuals and groups are not always consistent and unambiguous. At times, there will be conflicting loyalties from overlapping memberships. Truman notes positively the fact that an individual is not absorbed by any one organization. He sees this as an important constraint on organized group activity.[14] "Overlapping membership among organized interest groups...and potential groups is...the principal balancing

force in the politics of a multi-group society such as the United States."[15]

Latham states that organized groups exist both inside and outside of government. Latham refers to these groups as "public governments" and "private governments" respectively.[16] Whether an integral part of the public institutional structure or not, the groups behave similarly; they all have identities, prejudices, and seek self-promotion and security.[17] The primary difference is that groups inside government enjoy the resource known as "officiality."[18]

In Texas, water districts and river authorities, as units of local government, are entities that are "inside government." For example, current state policy encourages the formation of underground water conservation districts to impose any measures deemed desirable to control the depletion of ground water. This policy also satisfies and perpetuates the strong preference within the political culture for local control as opposed to state control.

Grant McConnell and Theodore J. Lowi are among the political theorists who have a problem with the fact that a number of groups have been able to isolate segments of government and public policy so as to achieve substantial autonomy in the exercise of public authority. They are favorably positioned to exploit public policy for their own interests.[19] If these theorists are accurate in their portrayal of pressure

groups as representative of minority interests in seeking assistance from government, and if public policy is, indeed, the outcome of interest group interaction, a large part of societal needs is being disregarded in policy decisions.

High Heclo disputes the paradigm of "iron triangle" relationships or sub-governments with the capacity to thwart outsiders. He says this concept is "disastrously incomplete" because it overlooks the "fairly open networks of people that impinge on government."[20] He feels that activists welfare policies have greatly increased the incentives for groups to form around differential effects of these policies with each group refusing to allow any other groups to speak in its name. Rather, there are loosely jointed specialized subcultures composed of highly knowledgeable policy-watchers--"issue networks"--so that it is almost impossible to identify the dominant actors.[21]

Interest group activity has implications for federal/ state/local relations. Schattschneider points out that interest groups move from one level of government to another if the issue at-hand warrants it. It may be advantageous to some groups to restrict the scope of conflict by localizing it.[22] Conversely, if a group is losing at the local level, it may take the struggle to the national arena. This offers a plausible explanation of why many farming operations in Texas prefer local determination of rules to protect ground-

water from depletion and pollution while groups such as the Sierra Club have chosen on occasion to take their fight to protect water supplies to the state and federal courts.[23]

For example, the Guadalupe-Blanco River Authority has filed suit requesting a ruling that the State of Texas has the right to regulate waters of the Edwards Aquifer as it does surface water. The lawsuit was filed after negotiations broke down among water providers and water users in their attempt to develop a regional water resources management plan for the Edwards Aquifer in response to a serious drop in the water table. Springs from the Edwards Aquifer feed the Guadalupe, Blanco, and Comal Rivers.[24]

Access to the courts is only one of many means of protecting interests. Robert A. Dahl demonstrates the full variety of resources that can be applied in the political arena: time, money, credit, wealth, control over jobs, control over information, esteem or social standing, charisma, popularity, legitimacy, legality, and the rights pertaining to public office.[25] He defines a resource "... as anything that can be used to sway the specific choices or the strategies of another individual."[26] Dahl concludes that "legitimacy" is perhaps the most important resource. The widespread support for the American creed requires that political leaders inside and outside of government be perceived as operating within the legal framework in order to earn legitimacy.[27] Terry Moe also

talks about the advantage to be gained to a group by gaining recognition as the legitimate spokesperson for a certain economic sector.[28]

In Texas, the Sierra Club has gained legitimacy as a representative of multiple environmental interests. Dr. Ken Kramer, who routinely speaks to business groups, academic seminars, and legislative hearings on behalf of the Sierra Club, notes that the Sierra's winning of a number of environmental lawsuits has assisted its credibility.[29]

The spokespersons for the interest groups were selected and interviewed for this study because they are recognized for their expertise (legitimacy). Their access to information and other expertise devices are significant resources. One's reputation of knowing his business, regardless of the focus, allows an individual/group to be considered part of the information and policy formulation network. Schattschneider makes a cogent argument for the definition of issues and alternatives as the "supreme instrument of power."[30]

Zachary Smith evaluated the relative value of various resources to interest groups involved in water policy in Arizona, California, and New Mexico. He concluded that the ability to provide information and expertise were especially valuable to poorly staffed, non-professional legislators.[31] Smith defines non-professional legislatures by short sessions and low salaries.[32] Texas meets this definition with its

140-day regular biennial sessions and annual salary of $7,200[33]

The internal politics of interest groups is the emphasis of Terry M. Moe. He sees the role of the entrepreneur--the group leader--as a valuable resource. Admittedly, the entrepreneur is serving his/her own self-interest by securing the leadership position within the organization. Nonetheless, the organization benefits from the efficient performance of duties by this person. Typical tasks are the supplying of information to sub-group leaders and the general membership and setting up the organization structure.[34]

Steve Stagner, Director of the Texas Water Alliance, exemplifies the "entrepreneur" model. Undoubtedly, his prior years' experience as an aide to Lieutenant Governor Bill Hobby, being directly involved in negotiations on water legislation, uniquely qualified him to become one of the organizers of the Alliance. He has considerable latitude in running the day-to-day affairs of the organization, in testifying at legislative hearings, and in proposing policy positions to its members.[35]

Theorists continue to debate such matters as what comprises an interest group, an individual's motivation for joining a group, the representativeness of groups of the larger society, the most effective resources to use and pursue, and the implications of interest group activity for

the American political system. These concepts are tangential to two major schools of interest group theory which continue to escalate the debate.

The Pluralists

Some scholars see the American society as pluralistic. "Pluralism" is a theory in which political power is widely distributed among varied groups within the community. The existence of small units of social, political and economic organizations are viewed as a positive force. Their power is scattered, and the groups counterbalance one another. The groups' influence on government seems to have protected the polity from extremist policies, such as those practiced by totalitarian governments. Economically, the United States has prospered under the current arrangement. Pluralists hold that since the system works well, it should not be hastily disturbed.[36]

Robert A. Dahl, a noted advocate of the pluralist position in his early work, investigated the politics of New Haven, Connecticut, cited as being representative of the American political system, to see who is influencing public policy decisions. Dahl studied sets of leaders and sub-leaders in three policy areas in New Haven: the nomination of political candidates, public education, and urban redevelopment.

He found that citizen participation was limited; the majority of the populace was apolitical and far more concerned with jobs, homes, etc.[37] Still, Dahl felt that the government leaders remained responsive to the citizenry. For example, although rank-and-file party members had very little direct input in the selection of nominees, party leaders were careful to select candidates with the most voter appeal.[38] The public school administrators were said to remain sensitive to different public school interests; i.e., teachers, parents, colleagues, and superiors, in order to avert opposition, especially in elections.[39] In the policy area of urban redevelopment, Dahl observed that the leaders constantly struggled to align their proposals with what they believed to be acceptable to their constituents.[40]

Dahl found support for the pluralist theory in the fact that no cadre of social and economic elites ruled across public policy areas. Most of the influence came from the middle class.[41] Influence was specialized; persons in one sector tended not to be influential in another sector.[42] The mayor, a duly elected official, was at the center of intersecting circles of influence.[43] Hence, the citizenry had indirect influence on public policies through the electoral process.[44] To Dahl, the interaction of interest groups is a viable system as long as government leaders are held accountable.

There also are strong detractors from pluralist theory. Henry Kariel says that while pluralism was given encouragement as a means of protecting individuals from the power of a unified government, it is not "... that wonderful and wholly legitimate conglomeration of little groups ...." Above them is a newer set of large-scale, heterogenous organized power blocs.[45]

Theodore J. Lowi attacks several assumptions of pluralism. He explains how these assumptions are erroneous:[46]

1. The system of bargaining among interest groups is self-correcting;
2. Competition among interest groups yields a public interest or other ideal result;
3. Imperfect competition or oligopoly is not a serious problem;
4. Group activities are beneficial for society.

Lowi contends that the above problems with pluralist theory have contributed to the following:[47]

1. Atrophy of institutions of popular control;
2. Conservatism (resistance to change, inflexibility)
3. Structure of privilege within society, and
4. Lack of accountability to the public.

## The Elitists

"Elitism" is another theory of political power. Gaetano Mosca (1858-1941), Vilfredo Pareto (1848-1923), and Robert Michels (1876-1936) represent classical elite theory.[48]

They shared the view that elites are an inevitable feature of all societies but that variations in elite structures and functions are decisive for political outcomes. When political participation in the United States is limited, as Dahl concluded about New Haven, should citizens worry that public officials are only held accountable at election time, unless they have been implicated in gross improprieties or dereliction of duty? Does it matter that those who vote have imperfect information about the qualifications and positions of political candidates, and that information can be manipulated by interest groups, political campaigns and the media? Some elite theorists are likely to say, "not to worry--someone is minding the store"--a benign elite. Rather than the fragmentation and counter-balance of power among interest groups typically portrayed by the pluralists, advocates of elitism support the concentration of power in the hands of social and economic elites. Often such elites are referred to as "the establishment," a coalition of the leaders of finance, business, and the professions. Elitist leaders hold power and influence with government officials even when they are not part of government. Elites support public policies that maximize freedom of action for themselves; nonetheless, they are secure in the belief that public policies that benefit them serve the community as well through a trickle-down effect.

Although David Truman generally is not recognized as an elitist, he defends the specialized function of elites: The diversity of organized interests in society and the multitude of access points in the political process tend to diffuse responsibility for the system as a whole. Some individuals and groups will be denied access to the decision-making process while other established groups and interests are favored. Frustration among the disenfranchised may build to the point that serious challenges are made to the system. Because of this risk, the elites must take on the burden of being guardians of the rules regarding governmental authority as well as protection of individual rights.[49]

It is Truman's conviction that:

> ... The essentials of the system are peculiarly in the custody of those in key governmental positions and those who occupy leading positions within the groups that make up the structure intervening between the government and the ordinary citizens. Such people ... are elites ... Elite understanding and constructive action are essential to the continued vitality of the rules and to the survival of the system.[50]

Clarence N. Stone and others agree that elites have a special relationship with government--but not toward the benefit of society. Stone portrays elites as enjoying a psychological advantage because the populace hesitates to challenge elites' authority. Incumbent governing elites can frame the policy issues in their own terms, gain support of favored groups as allies, and virtually close out partici-

pation by others who may be affected by the policy considerations. The governing elite is positioned to exploit special privilege and private aims.[51] Grant McConnell states, "... Organization of political life by small constituencies tends to enforce conformity, to discriminate in favor of elites, and to eliminate public values from effective political consideration."[52] McConnell feels that a substantial part of government in the United States has come under the influence or control of narrowly based and largely autonomous elites.[53] Ironically, good motivations led to the current power structure. The federal government actually helped establish some of the groups in their special relationship with government. Government officials were trying to coopt potentially disruptive forces by giving them their own limited sphere of influence. What actually happened, instead, is that government became coopted by these groups.[54]

Relative to Texas water policy, I do not perceive a neat theoretical "fit" to either pluralism or elitism as described above. Instances can be recounted to support each theory. The following events seem supportive of pluralist theory:

1. Numerous public hearings across the state prior to adoption of the final drafts of the State Water Plans (1968, 1984) made citizen participation possible even if individuals and groups chose not to attend.

2. Legislative hearings are routinely held to receive testimony on possible legislative revisions. Individuals, as well as organized groups, address the committees. At times, water legislation is changed to accommodate certain concerns.

3. Voter approval of certain water bond issues can be taken as evidence that diverse economic interests--farmers, urban dwellers, coastal fisherman, et al--were able to identify with possible solutions to the water problems peculiar to the area. Support ranged beyond the social and economic elites.

The following situations can be given in support of elitist theory:

1. Traditionally, there has been a disproportionate number of lawyers and businessmen, i.e., "establishment" types, in the Texas Legislature. They would not be expected to act contrary to their self-interests.

2. Few limitations to campaign contributions exist in Texas. The field is ripe for influence peddling by those endowed with ample monetary resources.

3. The upper-class bias of certain interest groups combined with the expertise of their spokespersons may give them disproportionate influence in setting the water policy agenda.

The participants and political processes observed gave no clear-cut application of either pluralist or elitist theory.

## The Role of Government

The appropriate role of the State continues to be a matter for debate among interest group theorists. Some perceive a diminished role and question the capacity of the American political system to respond to changing needs. Earl Latham and Theodore J. Lowi in their discussion of the public interest contend that pluralists removed the notion of the State as an ethical, separate rule-making, autonomous structure.[55] Pluralists believe that some kind of natural harmony results from group competition. But Lowi says that

interest group influence on government has reduced government to a mechanistic institution--only a process--and that legitimacy has been impaired.[56]

David Truman expresses a different concern about the role of government, but the feared result is the same, a breakdown in the viable functioning of government. Truman refers to the "... danger of excessive stability in the short run, to the threat of immobilism--an incapacity in the system to accommodate new kinds of demands in the society."[57]

Lowi emphasizes that another consequence of pluralistic government is the lack of planning. "Planning requires law, choice, priorities, moralities. Liberalism replaces planning with bargaining."[58] Lowi argues that politicians and government administrators are guided by "... whatever organized interests they have taken for themselves as the most legitimate; and that is the measure of the legitimacy of demands."[59] This criticism can be applied to the tough choices Texas policy-makers face regarding provision of adequate water resources and the question of which groups are influencing the policy decisions.

Earl Latham portrays an active albeit circumscribed role for legislators in the writing of laws: "The Legislature referees the group struggle, ratifies the victories of the successful coalitions, and records the terms of the surrenders, compromises, and conquests in the form of statutes."[60]

This is a strangely limited role for groups inside government who, according to Latham, have the advantage of officiality.[61] In some instances, government leaders put their resources to little advantage other than to give official sanction to negotiated group demands.

Raymond Seidelman and Edward J. Harpham are among the political theorists who advocate a more active role for the State, yet they forecast an uphill battle to do so. They feel that reformers underestimate the resistance to change.[62] The authors believe that interest group politics dominates the public policy process. Business interests in particular rule supreme with their leverage of investment or divestiture in the American capitalism system. Average citizens have little sense of efficacy in the political process.

Graham K. Wilson disagrees with the evaluation of Seidelman and Harpham in regard to the pervasiveness of business' influence on government decision-making.[63] Modern-day businesses feel pressures from consumer interests and environmental interests so that firms have had to adapt their ways of doing business accordingly. Businesses can no longer assume that government officials are philosophically attuned to their needs. Business must use pluralist tools (lobbying and political action committees) to protect and promote its interests.

Lowi and Kariel are among interest group theorists who propose solutions for strengthening the role of government. Both men address inadequacies in leadership at the federal level, but parallel recommendations can be made at the state level also. Lowi would have lawmaking bodies make the tough public policy choices and issue clear commands. The executive (governor) would faithfully execute the laws, but would veto laws where the legislative branch had not done its job properly or adequately. The judiciary would declare as invalid and unconstitutional any delegation of power that is not accompanied by clear standards of implementation.[64] Kariel calls for further integration of the executive branch's agencies/departments to make them less vulnerable to influence from dominant clientele interests.[65] In essence, both Lowi and Kariel want public officials to assume their rightful responsibilities as important actors in the political process.

The Public Interest

The position one takes on the broad spectrum of opinion about the role of interest groups in government decision-making as well as one's evaluation of government leaders in their fiduciary capacity, probably relates to acceptance or rejection of the notion of a separate public interest. Grant McConnell explains how the concept of "public interest" lost favor among political theorists: During the Progressive era, the hope of science in government and administration was the

"... greatest good for the greatest number in the long run."[66] But the idealism gave way to disillusionment through "... sordid incidents of influence peddling."[67] Gradually, the vision grew dim as "... the hallowed principle of liberty of expression seemed to give great favor to all the special interests but none to the public interest."[68] There were also growing doubts that the public really cared for what was presumably in its own interest as long as the average American received his special advantage from the government.[69] Moreover, suspicions were expressed that "the public interest" was unknowable or non-existent. Then, says McConnell, Alfred Bentley's book The Process of Government (1908) declared that groups are the significant actors in the political process. The accepted reality became group self-interests rather than an abstract notion of public interests.[70]

David Truman, like most political theorists, does not like the term "public interest." He finds it misleading as it implies a widespread consensus when it does not exist. He does suggest that his "rules of the game" qualify as "public interest" because they represent functional pre-requisites of the system.[71] For Truman believes the public interest is protected by effective and authoritative articulation of the rules by the appropriate actors in and out of government.[72]

E. E. Schattschneider believes, instead, in a national interest. As evidence he cites the common interest in

national survival that explains the large defense budgets.[73] "... An interest may be said to have become public when it is shared so widely as to be substantially universal."[74] Schattschneider feels that certain policy issues qualify as matters of severe consequence for society. He warns, however, that when any group claims to represent the "public interest," it should be viewed cautiously since "... special interest groups often tend to rationalize their special interests as public interest."[75] One should look at the exclusive or non-exclusive nature of the benefits. Any group may have a hidden agenda. It is important to ask, "Whose interests are really being served by the proposed policy position of any given interest group?"

It is hoped that this dissertation will convince the reader that conservation and enhancement of water resources is a "public interest" matter for the State of Texas. A symbiotic relationship may well exist at the state level between certain agency personnel, legislators and interest group spokespersons that would inhibit sound policy-making.

This review of the literature on interest group theory, with the varied views on the role of the participants and pertinent factors, does not give any definitive guidelines for the researcher. It does, however, advise that these aspects of group relations and the role of government should be con-

sidered in the investigation of the politics of water policy-making in the State of Texas.

## Application of Interest Group Theory to the Politics of Water Policy

Zachary A. Smith demonstrates that interest group theory can be a useful tool in evaluating water policy questions. Citing the work of theorists Alfred Bentley, David Truman, and Terry Moe as the basis for his study of interest group interaction and ground water policy formation in the Southwest, he presents case studies in the states of Arizona, California, and New Mexico.[76] The interest groups selected in each state had reputations among water administrators for being active in ground water policy matters. The groups varied by state. For example, California groups involved in ground water issues include representation of agricultural, municipal, and environmental interests.[77] Smith considered interest group resources such as membership characteristics, staff size, technical expertise, campaign contributions, group cohesiveness, access to the media, and access to legislators. "Access to legislators," for example, was measured by the likelihood that legislators would seek out a group leader's opinion. Interestingly, resources for a particular interest group varied considerably across states. The California Sierra Club was said to be "resource-rich" because it had good access to the media and legislature, in-house technical

expertise, an educated membership, and the ability to mobilize its members. However, it lacked the funds to be an active contributor to political campaigns.[78] In contrast, the New Mexico Sierra Club was given a "resource-poor" rating. It performed favorably by the measures of in-house expertise, group cohesion, ability to mobilize its members, and media access; nevertheless, the group was found to be deficient in "access to legislators" since it rarely was contacted for an opinion. Smith attributed this to the group's inability to make campaign contributions and its small, poorly-distributed membership.[79]

In his investigation of the preferred branch of government for influencing policy decisions, Smith found that by far, interest groups named the legislative branch.[80] However, all environmental groups surveyed preferred the courts. Generally, interest groups felt that they lacked influence with other branches of government.[81] This did not hold true for the resource-rich Sierra Club in California; it apparently was able to influence the legislature by compensating for its lack of campaign contributions with the ability to mobilize its membership.[82]

Smith feels that many of the problems in California relate to the inability of individuals and government to effectively manage ground water under existing water laws. Ground water management does exist in some parts of the state

as a result of ground water rights litigation and local management units, but in other areas, such as the San Joaquin Valley, many users mine ground water at will.[83]

Smith shows how interest group politics can influence water policy outcomes. Numerous proposals to protect ground water from overdraft were defeated in the California legislature prior to 1981. The bills encountered heavy opposition from agricultural interests. In 1982, a coalition of environmental groups placed an initiative on ground water management on the ballot. It was soundly defeated after the agricultural community spent almost two million dollars in opposition.[84] Farming interests opposed state regulation of ground water partly in fear that it would shift control of this resource to non-farmers and that regulated pumping would force cutbacks in irrigated agriculture. Smith concludes that agricultural interests in California were successful in maintaining the status quo because of their influence with the legislature, especially as relates to political contributions.[85]

Political theorists David Truman refers to "potential interest groups." He says that as long as the interests of these potential groups are being adequately represented by governmental institutions, there is no need to organize. However, in the event of disturbances in established relationships in society, new groups may form. Their prospective overt involvement in the political process is ever present.[86]

Zachary Smith discovered in his investigation of factors influencing water policy in several western states, that physical constraints such as ground water overdraft have as much influence as existing interest group activity in setting the parameters for state action.[87] The same is likely to hold true in Texas when certain regions face depleting water tables, few alternative water sources, and sustained drought. Then, as Truman suggests, newly organized groups may evolve from "potential groups." Legislators may find themselves with a new array of vocal constituencies demanding accountability for what they perceive as abrogation of responsibility on the part of lawmakers to protect the public interest.

## Summary of Interest Group Theories Relevant to Texas' Water Policy

All of the interest group theories reviewed in this chapter has relevance to Texas' water policy as a check list against observed phenomena. But the findings of this dissertation support the work of these theorists: Truman emphasizes shared goals as the basis of an organization. Sierra Club members, whether active or not, are believed to share a commitment to protect the environment; that is their primary motivation for joining the organization. League of Women Voters' members coalesce around the goal of educating the public about important policy issues such as water conservation.

Olson focuses on economic incentives to entice group membership. Farm Bureau members seem to be attracted to the various insurance programs available through the Bureau. Moe adds incentives yielding psychological/social benefits. The League and Sierra Club offer opportunities to socialize through meetings while furthering members' beliefs.

Latham's theory is useful in recognizing the existence of interest groups within government and their unique opportunity to exert influence based upon their accepted officiality. Water districts and river authorities in Texas meet this criterion.

Although research did not identify locked-in relationships, an element of truth exists in McConnell and Lowi's portrayal of groups as capable of isolating segments of government and public policy so as to exploit public policy to promote their own interests.

Relative to water policy, Dahl was correct in targeting as a valuable resource the acceptance of a group leader as the legitimate spokesperson. Representatives of the Sierra Club, League of Women Voters, and Texas Water Alliance were observed repeatedly testifying at legislative hearings. They were well known to the officials involved and were given credence.

One purpose of this dissertation is to identify interest groups who might enhance or detract from sound water policies. Insofar as the overall relationship between interest groups

and the officials responsible for enacting water policy, the most accurate theoretical portrayal is that of Hugh Heclo. He describes a large number of skilled participants, both in and out of government, who form fluid "issue-networks" around particular policy issues. Various groups share a common technology and language but do not agree necessarily on any particular action to be taken. A detailed description of the role of groups identified to be important to water policy in Texas is found in the next chapter.

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## CHAPTER IV

## POLITICAL INTERESTS IN WATER POLICY

### A. INTRODUCTION

When frustration is felt over the inability to put into action a comprehensive, coordinated water resource management plan for the state, it is necessary to view the limited progress in the context of the political system. The initiation of programs and the prospective allocation of resources among competing individuals and groups are highly political decisions as well as economic. To an important extent, long-term public policy in any substantive area is constrained by characteristics inherent in the American political system. At best, building a consensus for a particular public policy is a complex process. The dispersion of power in and out of government means that any accomplished program is the result of imperfectly communicated information, bargaining and compromise with regard to policy preferences among the participants. However, a crucial question remains. Who are these persons making policy decisions for the rest of us? The review of the literature on political interest group theory in the previous chapter suggested some answers.

As a test, I sought to determine if interest groups operate with sufficient power in Texas exist to prevent changes in water law that this and future generations might need to provide the vital resource of water. I chose as my

methodology qualitative analysis of information gained through interviews with legislators, agency personnel, and lobbyists; public hearings, and review of legislative records. This method seemed superior to a written sampling survey because, in many instances, qualitative research presented the opportunity (1) to participate in discussions of issues that otherwise might have been overlooked; (2) to better comprehend the strong emotions involved when interests appeared threatened, and (3) to build a rapport with persons interviewed so that doors would remain open for securing future information. One purpose of the research was to identify important political interests; the research did, in fact, turn up a pattern of names of organizations whose spokespersons frequently testified at public hearings and were mentioned by legislative and water agency personnel. Research also indicated that within the realm of water policy-making, the term "political interests" has broader application than simply to organized interest groups. For example, water districts and river authorities, although units of local government, behave as organized interest groups in their efforts to influence water policies perceived to benefit their clients. At times, regional alignments and urban/rural alignments also have been influential in setting the parameters for water policy-making.

My concept of political interests has theoretical foundation in the literature. Political scientist Jack W. Peltason

elaborates on the political interests surrounding court decisions: Contrary to popular opinion, judges are not impartial "competent legal technicians" in their interpretation of the law. Judges are part of the effort to perpetuate values, rights, and demands. Government officials (including judges) represent particular interests "when they act in such a way to support that interest."[1]

Jack Peltason elaborates on the political influences surrounding court decisions and concludes that "... an interest should not be ... limited to a formal organization or association."[2] He shows that political interests permeate the judicial process:

(a) Groups try to select judges who are most likely to support their values;

(b) Authors of law journal articles exert influence on those judges who read their writings;

(c) Prosecutors reflect values in the cases they decide to prosecute or dismiss;

(d) Litigants bring competing political interests to the courts;

(e) Persons/groups file amicus curiae briefs to provide political support for plaintiffs/defendants;

(f) Judges are involved in interest activity when they decide to hear certain cases and deny others;[3]

Jack Peltason's broadened concept of "political interests" gives precedent to the approach taken herein to Texas' water policy. Various groups involved in Texas' water policy will be discussed in the following sections.

## B. ORGANIZED INTEREST GROUPS AND THEIR INFLUENCE ON TEXAS

A subsequent section will discuss the role of water districts and river authorities acting as interest groups to influence water policies. However, this section discusses the role of traditional-type interest groups. It is intended (a) to show how interest groups operate in general, and (b) to relate specific positions taken on water issues. As suggested by Hugh Heclo's theory, I sought to identify the significant members of the "issues-network" surrounding ground-water policy. Four groups were identified as having considerable input to water policy in Texas: the Sierra Club, Texas Farm Bureau, Texas Water Alliance, and the League of Women Voters. Each one was mentioned frequently during interviews with legislators. The expertise of their spokespersons was evident at legislative hearings. In some instances they seemed influential in bringing about legislative changes; at other times they were equally influential in defeating proposals which were counter to their interests.

### B1. The Sierra Club

The Sierra Club is an organization committed to the conservation and preservation of natural resources. The Lone Star Chapter is strengthened by its affiliation with the national organization of the Sierra Club, which was founded in 1892, and currently has approximately 500,000 members in the U.S. There are approximately 16,000 members in Texas.[1]

The Sierra Club's representatives are typical in their activites on behalf of organized interests. First of all, the group's representative or lobbyist must haunt the halls of the Capital and state agencies continuously if he/she is to serve as the eyes and ears of its members. That person must know how the system works and how to work the system. It is also important to communicate information to members so that they are aware of what is being done on their behalf and also to help them to become more effective politically.

The Sierra Club's influence on Texas water policy at the state level exceeds what one would expect from their available resources. It operates with a paid staff of three persons and a budget for FY 1989 of approximately $129,000. Volunteers are utilized extensively. The organization is headed by a volunteer executive committee, and volunteers are used for grassroots lobbying campaign, agency monitoring, and a variety of other activities.[5] The success of the Sierra is reminiscent of the findings of Zachary Smith. He concluded that the Sierra Club in California was able to offset its limited financial resources by effective use of other resources such as its ability to mobilize its members.[6] The Sierra Club only has 16,000 members in Texas, but they are urged regularly through a statewide newsletter to contact legislators to register support/opposition on pending legislation. The organization also conducts political training workshops to

enhance the political effectiveness of its members. The Sierra creates temporary alliances or coalitions with other environmental organizations and/or diverse groups to support or oppose particular legislation and/or regulations affecting the environment. Also, the Sierra Club maintains good access to legislators, and is prepared to provide them with detailed recommendations for legislative changes. Legislators with outstanding voting records on environmental issues are given service awards.

The Sierra Club demonstrates several components of interest group theory. Mancur Olson, Jr. would say that selective incentives were the prime motivator for interest group participation; i.e. individuals want exclusive benefits from their memberships.[7] The Sierra Club's meetings, conferences, and environmental outings provide such benefits, but this does not seem to be the primary motivation for affiliation. Terry Moe recognizes inducements for membership such as purposive incentives; i.e., the opportunity to support causes when members feel they can make a difference.[8] Graham Wilson also believes that people will join organizations out of idealism.[9] Exposure to Sierra Club members is likely to convince even the skeptic that genuine concern exists for deteriorating conditions in the environment, including the depletion of water resources, that goes beyond immediate economic self-interests. They feel that protection of the

environment is a matter of public trust for present and future generations.

E. E. Schattschneider warns that groups will exploit the notion of a "public interest" to serve their own purpose.[10] Private and public interests, however, need not be mutually exclusive. Groups such as the Sierra Club thrive by exposing threats to the environment. At the same time, the public interest may be served well by forcing policy-makers to consider the impact on the environment of either private or public actions.

Terry Moe also emphasizes the role of group leaders in supplying information to the general membership and in attempting to secure legitimacy for the organization.[11] Dr. Ken Kramer, Director of the Lone Star Chapter based in Austin, is also the Editor of the statewide newsletter, State Capitol Report, the vehicle used to disseminate information to members on both state and federal legislation and organizational activities. Dr. Kramer is frequently the spokesperson at legislative hearings and the environmental representative on various study commissions. His and the other staff members' expertise lends considerable legitimacy to the organization, a factor of influence when dealing with legislators. Interest group theorist Robert Dahl emphasizes that, perhaps, legitimacy is the greatest resource.[12] Dr. Kramer feels that the Sierra Club earned its legitimacy by "winning a number of

court cases and legislative victories at the national and state level, by strong commitment of grassroots volunteers, and by continuity of state lobbying efforts."[13] According to another lobbyist, Dr. Kramer's unique qualifications add a special dimension to Sierra's efforts: "He possesses intelligence, expertise, and experience. He has a very rabid constituency that isn't necessarily plugged into reality. Ken is able to temper [their enthusiasm] by saying, `That's the right thing to do, but not the politic thing to do.'"[14] He is an effective conciliator.

During the legislative hearings on the 1985 water package, a number of interest groups testified as advocates for particular provisions and/or as watchdogs to head off legislative injury before it occurred. The Sierra Club expressed its policy position held since the early 1970's that planned reservoirs would take up most of the rivers' flow to the coast, and disrupt the essential fresh-water flow to the bays and estuaries of the Gulf. Excessive salinity is harmful to marine life, an important contributor to the state's economy. Commercial saltwater fishing contributes an estimated $400 million a year, shrimping $200 million, and recreational saltwater fishing $1.1 billion.[15] Lobbying efforts by the Sierra Club were instrumental in securing statutory language to protect the bays and estuaries for the first time.[16] Draft legislation required permits to store, take or divert water

within 150 river miles from the coast. Environmentalists' concern changed the protected zone to 200 river miles.[17] Accommodation to the Sierra Club's preference was of considerable consequence since the organization openly had opposed the water proposition presented to voters in 1981 because it failed to give protection to bays and estuaries. In 1985, the Sierra Club said it would make no recommendation to voters, that the legislation had some good points but suffered these following deficiencies: (a) lawmakers would be given blanket authority to approve subsequent water projects without having to go back to the voters; (b) ground-water management controls were inadequate; (c) conservation-oriented water rates were left out and (d) skepticism was expressed that state water agencies would actually use their authority to require conservation measures.[18]

During the 70th Regular Session (1987) the Sierra Club supported the creation of underground water conservation districts in all areas designated by the state as critical areas for ground-water protection.* It also wanted the Texas Water Commission to be given authority to set minimum standards for underground water conservation districts to ensure that districts are active and in line with overall state water resources policies. The Sierra wants the State to

*A "critical area" is one that is found to be experiencing serious groundwater problems or is expected to during the next 20 years.

move towards coordinated management of surface water and ground water rather to continue isolated policies for each source.[19]

B2. Texas Farm Bureau

The Texas Farm Bureau has taken positions on Texas' water policy, especially as it relates to ground-water policy and the economic interests of its members involved in irrigated agriculture.[20] The national organization, the American Farm Bureau Federation, "... is the largest, richest and most stable of all farm organizations...."[21] "With over two million members in every state but Alaska, the AFBF is the only organization with an ostensible claim to speak for all of American agriculture."[22] However, its membership is not truly representative of American argiculture. Several sources report that the majority of the Bureau's members live in urban areas who buy insurance from the Bureau-owned companies. "While local farm bureaus may actually be closely tied to farmers in their regions, the relationship is must more obscure at the state level."[23] The Bureau's acceptance as "representative" of farming interests seems based on long-established ties with congressmen at the national level and legislators at the state level

The origins of this interest group are different from others discussed in this paper. It was not a spontaneous movement by American farmers. Rather, the AFBF was founded in

1919 under the auspices of the federal government as a means of helping farmers to improve their productivity through technical assistance from the Agriculture Extension Service. County agents encouraged the formation of local associations of farmers and state farm bureaus, which gave a distinct advantage to the organization in its growth.[24]

Theodore J. Lowi states that this system of local self-government was a politically acceptable means of regulating agriculture. "[But] it amounted to the loan of governmental sovereignty to the leadership of a private sector to accomplish what other sectors could accomplish privately."[25] Lowi contends that the politics of such self-governing programs is triangular: the central agency (Extension Service); support in Congress from long-time Farm Bureau members and the grassroots segment composed of the Farm Bureau Federations and the local extension committees. Lowi is critical of this relationship because of the immense capacity of such as system to maintain itself, resist any type of representaton except its own, and to insulate itself from sources of political responsibility and accountability.[26]

Terry M. Moe explains that early studies of why farmers became members of organizations, such as the Farm Bureau, suggested purposive incentives; i.e., a belief in cooperative principles such as moral values and protection of the agrarian way of life. However, more recent studies suggest that such

motivations, even if they were once a factor, are no longer of great prominence,[27]

Many persons including non-farmers are motivated to join the AFB to take advantage of selective incentives available only to members. "The exact proportion of non-farmers comprising the group's membership is unknown, and the Farm Bureau has consistently refused to give an occupational breakdown."[28] The organization is best known for its life, auto, and fire insurance. In addition, the Farm Bureau also sells products usually related to farmers such as chemicals, fertilizers, etc. Other activities include ownership of real estate, substantial advertising revenues from news publicaton, and a travel agency.[29]

This is a classic example of Mancur Olson's theory of selective incentives. He sees no necessary motivational connection between shared goals and members' support for an organization.[30] Terry M. Moe feels that the absence of shared goals has serious implications for pluralist theory. "There is no guarantee that any dues-payers even agree with those goals. What could be further from pluralist preconceptions?"[31]

Although it is described as a grassroots organization, interest group theorists Moe and Wilson both state that a few Farm Bureau leaders control the organization.[32] Wilson elaborates, "In particular it is often contended that the national leaders of the AFBF use their position to push extremely

conservative policies which often have little to do with agriculture, and when they do are damaging to the interests of American farmers."[33] Examples are given of the AFBF's conservative stance. The Farm Bureau wants minimum interference from government. It sees no difference between property and human rights. Further, it advocates sharp reductions in federal farm price supports, reasoning that artificially high prices kill demand.[34] Wilson states, however, that the central organization has little control over state bureaus and that state organizations can disassociate themselves from a national policy position.[35]

The Texas Farm Bureau has 324,162 members.[36] The state organization seems supportive of the conservative philosophy of the national organization in these respects: Members feel strongly that all ground water beneath their land belongs to them and should not be subject to pumping controls. Pumping restrictions are viewed as taking their property. The Farm Bureau also is opposed to pumping fees which would raise productions costs and lead to higher food prices. It takes the position that energy costs for pumping cause farmers to use water efficiently anyway, and pumping fees would have no additonal effect on conservation.[37] During the investigation of particular pieces of water legislation over several sessions of the legislature, the Farm Bureau seemed consistent in its opposition to any erosion of the "right to capture"

ground water and its effort to negate proposals for the State to mandate formation of underground water conservation districts.

The Texas Farm Bureau is frantic in its attempt to replace Agricultural Commissioner Jim Hightower with someone more attuned to its conservative philosophy.[38] In December, 1989, the Bureau paid the filing fee of $3000 for each of six candidates to oppose Jim Hightower in the Democratic primary. All of the men have served as Farm Bureau officers.[39] A self-styled populist, Commissioner Hightower perceives of government's role as a catalyst for economic growth; seeks additional federal and state financial assistance for farmers, and lobbies for commodity supply management.[40] The Bureau wants someone who will focus on help to farmers and ranchers by promoting the State's major commodities such as cotton, wheat, and beef.[41] Farm Bureau personnel also find some pesticide regulations imposed by the Texas Department of Agriculture to be unduly restrictive unless the regulations can be proven to be on a sound scientific basis rather than on emotion or unreliable tests with small animals.[42]. Hightower is seen as pro-environment rather than pro-farmer.

B3. <u>The League of Women Voters of Texas</u>

The League of Women Voters of Texas has been in existence since 1919. There are 3500 members in Texas, a staff of two in the Austin office, and extensive use of volunteers to

monitor the actions of government at the state and local levels. The group sees its primary goals as education and mobilization. The budget for FY 1989 was $91,000.[43] There are thirty-seven local Leagues, which, in turn, are divided into neighborhood units. From the unit level upward, priorities are set regarding policy issues of concern to members. Every two years, State League delegates from the local chapters debate and vote on the issues to be studied. "A grassroots organization, the League studies and reaches agreement on issues selected by members statewide. The League lobbies on these issues only after consensus among members has been reached."[44]

The League sees itself as being separate from other interest groups: "Now more than ever, Texas needs a non-partisan organization such as the League of Women Voters. In an era of single-interest politics and special interest groups, the League takes a balanced approach toward understanding a broad range of issues."[45]

The psychological benefits of membership include the opportunity to work and socialize with persons who share an interest in political participation. Incentives include local newsletters, the magazine National Voter and the Voter's Guide published prior to primary and general elections.

League members tend to be highly educated; a study indicates that 53% of nationally-recruited members have

graduate or professional education.[46] This would be a matter of concern to interest group theorists such as E. E. Schattschneider who argues that interest groups' upper-class bias is likely to be reflected in policy recommendations.[47] The upper-class perspective is likely to be defended by David Truman. He would be relieved that "elite" [highly educated] League members have taken on themselves the responsibility to define and educate the public on important public policy issues.[48]

Among the League's statement of principles is the belief that "... responsible government should ... promote the conservation and development of natural resources in problems that affect the general welfare."[49]

In the arena of water policy, the League's most effective resource is the expertise of its volunteers. The League's State Water Director Catherine Perrine has held the non-paid position for twelve years. She frequently testifies at legislative hearings, attends academic conferences, updates members on the status of legislation, and keeps touch with current water issues via members in the various chapters. When I began research on this thesis, the Manager of the High Plains Underground Water District No. 1 in Lubbock suggested I contact Mrs. Perrine as one of the most knowledgeable persons in the state on ground-water policy.[50] Mrs. Perrine feels that the League's success in influencing ground-water

policy has been limited, but success has been achieved by making the public more aware of the need to conserve water resources.[51]

The League became active in water conservation and development issues at the time of the 1968 State Water Plan. It opposed a provision calling for the importation of water. Rather, it favored development of additional water supplies within the state and more efficient use of existing resources. After voters defeated the $3.5 billion bond program in 1969, which was to have begun implementation of the Plan, the League conducted a study of state water planning.

In 1976, the League worked to defeat the $400 million proposed increase in water development bonds because it felt the proposal lacked financial safeguards, environmental protection provisions, and adequate information on what projects would be funded.[52]

The League has worked as hard for ground-water protection as an organization could, given its limited resources. In 1978, it issued a report on Texas aquifers relative to regional problems and opportunities and current and projected uses. The report suggests, "Limitation on quantities of water pumped may be feasible in some instances, but these cannot be enforced without accurate metering of pumpage, and few wells

other than those operated for public supply and those of large industries are metered."[*] [53] [54]

In 1981, the League joined the majority of Texas voters who opposed a constitutional amendment that would have dedicated one-half of the surplus unappropriated state funds to a water trust fund. The League did not feel that state revenues should be dedicated within the Constitution, and also questioned whether there would, in fact, be any "excess funds."[55] The League's lack of faith in surplus funds proved to be accurate. When oil prices began to slide in 1982, the entire Texas economy was affected. State tax revenue rose by 11.7 percent in 1982, but fell by 1.8 percent in 1983.[56] While there are now signs that the Texas economy is headed for recovery, it is doubtful that the brightened economic picture will produce revenue surpluses anytime in the near future.

Catherine Perrine, Water Director for the League, was strongly involved in the efforts to update the "Water for Texas" Plan. The plan was released in November, 1984, so that the next legislative session, starting January, 1985, became a time of renewed hope for water activists. The League was

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[*]The primary benefit from metering of wells would come from irrigated agriculture due to its extensive use of groundwater. Farmers generally oppose metering based on costs. Ken Carver of the High Plains Underground Conservation District estimates that meters cost $600 per unit and the H.P. District has 100,000 wells. Too, meters tend to malfunction in the fine sand of the High Plains. Thirdly, farmers fear that meters are only the first step to pumping limitations.

ready with its recommendations for House Bill 2 regarding ground-water management. It proposed the Texas Water Code be changed as follows: delineate underground water conservation district boundaries according to the boundaries of underground water reservoirs and boundaries of political subdivisions in order to create appropriate management areas (Sect. 52.023); more flexible structure and powers for water districts such as allowing ground-water pumpage fees and fewer exclusions of regulated wells (Sects. 52.102 and 52.171); State-determined standards for district operations and State-managed ground water in critical areas where voters choose not to form a district (Sect. 5.03); dissolution of a district if a district fails in its duties or is no longer feasible or beneficial to the land (Sect. 52.501).[57]

Mrs. Perrine of the League and Dr. Ken Kramer of the Sierra Club worked closely to gain legislative suppport for both water conservation and fresh water inflows to bays and estuaries.[58] When Propositions 1 and 2 were presented to voters in November, 1985, the League gave its support. However, it stated, ". . . measures provided for ground-water management and protection of other natural resources represent very small improvements over existing law and fall short of what is needed."[59]

When the Water District and River Authority Study Commission held hearings in 1986, the League stated its

position on management of ground water: "Because there is such hydrologic variation over the State of Texas, we support regional management of ground-water by special district ... problems usually occur on a local or regional level. Therefore, the most responsive and efficient agencies to deal with any problem are those impacted by it. At this point the force of state regulations can be brought to bear."[60]

During the 70th Regular Session Catherine Perrine once again wrote to representatives urging changes to CSHB 1451 to allow the Texas Water Commission to set minimum standards for operations of districts, simplified procedures for creating or enlarging districts, and authority for districts to impose optional well fees.[61]

During the 71st Regular Session (1989), The League was instrumental in streamlining the procedures for creating underground water conservation districts under SB1212. Furthermore, the League came out in support of the Constitutional Amendment 2 (SJR 5) approved by voters on November 7, 1989, which will finance an additional $500 million in water development bonds.

B4. The Texas Water Alliance

A new business-oriented interest group, the Texas Water Alliance, formed in 1985 in response to the State Water Plan, was founded by a cadre of ten-to-twelve business and civic leaders who saw comprehensive planning for water needs as a

component crucial to the over-all economic future of the State. One of the key founders Robert C. Lanier, Chairman of the Highway and Public Transportation Commission, perceived of a broad agenda for economic development, which included highways and water development.[62] The Texas Water Alliance was interested in strengthening the state's role in water financing by reaching out to some groups that historically opposed state water bond programs, e.g., conservationists. Water development bond issues previously had been rejected by voters in 1969, 1976, and 1981. (See analysis of voting patterns later in this chapter.) As a supporter of Proposition 2 (HB2) in 1985, the TWA felt that inclusion of provisions for conservation and fresh water inflows to bays and estuaries would help minimize opposition.[63]

The TWA organization is not a grassroots effort or "bottoms up" kind of approach to policy-making like some other groups involved in water policy. Few volunteers are involved except for special legislative interests. Steve Stagner of the Texas Water Alliance comes the closest of anyone of the interest group spokespersons interviewed to fitting the "entrepreneur" model described by Terry M. Moe wherein the leader is the group's most important resource.[64] Stagner has been the TWA Director since its inception. He set up its structure; makes policy position recommendations to the members; keeps the members informed on water policy issues

which might affect them and effectively lobbies the legislature and state water agencies. He worked previously as an aide to Lt. Gov. Bill Hobby, and based on that experience, has a solid insight into the inner workings of the legislature and water policy issues. On occasion, he involves his organization in "coalition building" (he prefers the term "temporary alliance") on legislation. Stagner states, "Whenever it can be done without a great deal of cost to your cause, you do it. Coalitions are always more effective."[65] He mentioned having worked closely on occasion with both the Sierra Club and the League of Women Voters, but did not specify particular legislation. Stagner feels, "Texas Water Alliance has been successful in trying to find the middle ground, in arguing it factually, and in trying to translate technical considerations to a more general audience."[66]

The primary incentive for membership in the TWA organization is Stagner's effort to keep members abreast of developments in agencies such as the Texas Water Commission and Water Development Board. Access to information on proposed regulations, grants and projects is valuable to members who might be affected.

The organization's membership reached seventy members, but has dropped off recently due to "some loss of momentum for water" and to "general decline in the Texas' economy."[67] Although the membership roster is limited, it is comprised of

persons of prestige and influence. Charter members included Edwin L. Cox Jr., Chairman of the Texas Parks and Wildlife Commission; Senator John Montford, a sponsor of the 1985 water plan; San Antonio Mayor Henry Cisneros; Fort Worth Mayor Bob Bolen; Austin City Councilman Mark Rose; Houston banker Walter Mischer; and multibillionaire Robert Bass of Fort Worth. The political clout of the organization is enhanced by the continued close working relationship between Director Stagner and key legislators, such as Lieutenant Governor Bill Hobby. TWA is mentioned infrequently in subsequent chapters because the group focuses on infrastructure and our emphasis is ground-water protection. However, this researcher observed Stagner of several occasions giving testimony at legislative hearings. He appears to enjoy considerable credibility with the legislators which is important in any coalition-building efforts between infrastructure interests and ground-water interests.

TWA restructured its operation and narrowed its goals in the fall of 1989 because it was never able to attract significant contributions from the industrial and manufacturing sectors. Stagner surmises that the industrial sector is probably more attached instead to trade associations for legislative representation. A good deal of TWA participation comes from major law firms and major utilities. The average budget for 1986-1989 was $110,000.[68]

Stagner said that initially TWA had hoped to assemble an Environmental Defense Fund type of organization, bringing in technical people, planners, biologists, etc. They planned to go beyond lobbying efforts to providing expertise to public policy solutions from certain perspectives. Stagner feels that too little attention is paid to water; no real analytical approach is taken to it other than by water agencies, and they are deficient in long-term planning, policy analysis, and issue identification due to inadequate resources.[69]

The TWA is particularly concerned with expanding the state's financial capability to assist with infrastructure, such as wastewater treatment plants and distribution lines. State participation has become more crucial as federal agencies, such as the Bureau of Reclamation and the Corps of Engineers, retreat from their historic financial support for infrastructure projects. Moreover, billions will have to be spent by local communities to meet increasingly stringent federal requirements for water quality.

In support of this philosophy, TWA members worked for passage of the 1985 Constitutional Amendment 1 (HJR 6) which authorized $580 million in state bonds for loans for water supply facilities, water quality/wastewater facilities, and flood control projects, and $400 million for state participation in reservoirs and regional water and wastewater treatment and transmission systems. In 1987, TWA worked for

Lt. Governor William Hobby's "Build Texas" program which included Constitutional Amendment 23 (SJR 54) for $400 million in water bond authorization. Under the recent reauthorization of the federal Clean Water Act, Texas would be eligible to receive about $625 million over a period of eight years if the state put up a 20 percent match. A revolving loan program was established to provide financial assistance to political subdivisions for construction of wastewater treatment works. The $400 million in water bonds was to be used to fund Texas.[70]

I asked Steve Stagner to respond to Mancur Olson's theory that interest group members will not act to advance group objectives unless there is coercion or some distinct benefit to members individually.[71] Stagner conceded that there might be some economic benefit, at least indirectly, from the urban focus of projects that TWA supports--indirect benefit to member engineering firms, construction companies, development businesses--a "trickle down" effect from more people at work. Further, a cynic might look at TWA and say, "This industry gets some regulatory benefit from information provided by TWA. It's just a matter of how far you take it. The distinction between public and private interests is hard to make."[72]

Stagner feels that water policy is an area of public interest, and that those, such as himself, who represent private interests also have some regard for the public inter-

ests. He gives TWA's support for financial assistance to the colonias in the 1989 bond election as evidence of activities from which TWA members derive no direct economic benefit. He had seen the unsanitary conditions and inadequate water and sewer facilities in the colonias and knew that it was the right thing to do.[73] However, TWA efforts were not totally altruistic.

During the 71st regular session, TWA worked to influence the provisions of SB 2 authorizing the $500 million in new water development bonds including the $100 million for water quality in the Rio Grande area.[74] Stagner believed the merging of colonias aid with additional funding for existing water development programs would boost the chances for voter approval. Incorporation of the colonias bond issue with other water development projects does make the interesting point of how a constituency for a given piece of legislation can be broadened. Stagner's strategy proved to be correct; he cited the example that both Dallas newspapers recommended a "yes" vote for the bond package because it included colonias' assistance.[75] Voters approved Proposition 2 by 59.7 percent on November 7, 1989.

Texas Water Alliance's influence seems indicative of that described by Robert A. Dahl in New Haven, Connecticut. Dahl found support for pluralist theory when he concluded that no cadre of social and economic elites ruled across public policy

areas. Influence was specialized; persons/groups in one policy arena tended not to be influential in another.[76] Stagner states, "Water policy is not that cohesive an issue; water has a lot of sub-issues--water quality, ground water, bays and estuaries, water finance, etc. Even if the players [interest groups] are the same, some may be more intensely committed in certain areas."[77] TWA has chosen to target its resources to promote state financing of water resources infrastructure.

## C. THE POLITICAL INFLUENCE OF WATER DISTRICTS AND RIVER AUTHORITIES

### C1. Surface Water Districts and River Authorities

Organized interests are not the only ones to be considered as "political interests" in Texas water policy. Research suggests that some local and regional water agencies, have a long history of having an impact on state water policy. Surface water districts, river authorities, and underground water conservation districts are all major institutions of Texas water policy. Surface water districts and river authorities are not central to this study, which focuses primarily on ground-water policy in the High Plains Region; however, recognition should be given to their role. To consider ground-water alone would be analogous to trying to see the world with one eye shut. Representative Lena Guerrero is one legislator who has tried to gain official acknowledgment of

the hydrologic interdependency of surface and ground water by calling for their coordinated management.[78]

It is impossible to give a common profile to water districts and river authorities because each unit was created for a specific purpose: water control and improvement, municipal utility, fresh water supply, levee and flood control, drainage, irrigation, navigation, power generation, protection of ground water, etc. Appendix B-12 maps the location of river authorities and water districts. As of October, 1986, 1142 districts were registered with the Water Commission, and 113 districts were active but not registered. The entities have been created by the Water Commission (or its predecessor), by the Legislature, by commissioners courts, and by city councils. Appendix A-4 lists all of the active districts. Water districts were created to meet water needs in specific, limited areas whereas river authorities were created to implement major flood-control and water storage projects over large geographical areas and to coordinate federal, state and local projects conducted within a single river basin.

The interviews for this thesis were conducted partly to determine key political participants in setting water policy and reference was made on several occasions to river authorities. Several respondents felt that historically the river authorities enjoyed too much autonomy. At times, they

were described as being powerful enough to prevent any changes in water law that would diminish their authority. This would seem indicative of the situation portrayed by interest group theorists Grant McConnell and Theodore J. Lowi, wherein certain groups have been able to isolate segments of government and public policy so as to achieve substantial autonomy in the exercise of public authority.[79] Water Districts and river authorities are units of local government. However, on occasion, they act as interest groups in fighting to protect and further their own interests and those of their clients. One source said that the following agencies have been the most politically active: Guadalupe-Blanco River Authority, Trinity River Authority, Sabine River Authority, San Antonio River Authority, and more recently, the Lower Colorado River Authority [80]

A movement is under way to place water districts and river authorities under closer scrutiny by the State. When the Water District and River Authority Study Committee held its public hearing in Lubbock, it was apparent that the districts were fearful the Committee might recommend to the legislature increased state regulation of all water districts. The water district and river authority spokespersons were there to explain their operations, to present their organizations in the most favorable light, and to press for changes they deemed advantageous. They were lobbying in the same way

a representative of an organized interest group does in similar circumstances. For this reason, water districts and river authorities have been included in this investigation of political interests in Texas water policy.

This research found that no one spokesperson or organization spoke for all the entities. However, representatives of the various agencies were persuasive in stating their case. Here are some examples: Danny Vance of the Trinity River Authority was quick to correct any misguided notion about virtual autonomy on the part of river authorities saying, "Many of the assumptions about river authorities are patently incorrect; we do not govern the Trinity; the state retains all regulatory authority via the Water Commission; the authorizing legislation made us a service agency by request, and the cities we serve sign a voluntary contract with us."[81]

Carson Hoge of the Brazos River Authority told the House Natural Resources Committee that if the Legislature were to impose state oversight on river authoriies, it should apply to all water agencies, including stage agencies, such as the Texas Water Commission and the Water Development Board.[82]

The Guadalupe-Blanco River Authority has a keen awareness of the hydrological interrelationship of surface water and ground water. Most of its recharge comes from the Edwards Aquifer. Usage by the City of San Antonio and others' usage of water from the aquifer is diminishing the recharge levels.

When asked how the problems of the Edwards Aquifer and related basins will be resolved, John Specht predicted, "The area will experience a severe drought and will then move towards a solution after the damage is done."[83] As relates specifically to the aquifer, Mr.Specht told the Committee to go back to the Legislature and move towards issuing permits for the Edwards Aquifer very much like surface waters are permitted."[84] Advocacy of ground-water permits is a radical position given the political culture of Texas and current ground-water law. Mr. Specht apparently feels that the water shortage situation in the Edwards Aquifer region is severe enough to bring about a re-thinking of a near-sacred relationship.

C2. Summary of the Influence of Water Districts and River Authorities on Texas Water Policy

Water districts and river authorities are expected to remain strong political factors in state water policy. The sheer number of entities that have been created and the populations they represent afford a potent power base when they unify their efforts. They are effective as an "ad hoc" coalition, coming together to defend their performance and/or to influence legislative changes in their favor. However, such a loose coalition is subject to disintegration owing to the sheer number of agencies involved and the fact that each has responsibility to give priority to its geographical area.

Among most districts, continued local control is clearly preferable as a means of addressing circumstances unique to each area. They recognize the need to improve working relationships among local, regional, and state water agencies, but they do not want the politicians and bureaucracies based in Austin to mandate such initiatives. Additional financial resources are needed to address local and/or regional problems, but it would be politically naive to think that state financial relief would be provided without strings attached.

Water districts and river authorities are currently in a tenuous position of trying to slow the tide of change, diminished local autonomy, without being perceived as detractors from sound water policy. They cannot risk losing credibility as effective water agents as the state moves slowly to meet the challenge of the twenty-first century.

C3. Underground Water Conservation Districts

Underground water conservation districts are similar to surface water districts and river authorities both in experiencing problems unique to their geographic areas of responsibility and apprehensions about the portent of increased state regulation. The first districts were created in the High Plains Regions in the 1950's in response to concern over the falling water table in the Ogallala Aquifer. A combination of depleting ground water and the fear of State control of local

water resources has expanded the number of underground water conservation districts to a total of thirty. Appendix B-13 gives the location of the districts. (Five additional districts were approved by the 71st Legislature in 1989, but they have not been confirmed by local voters. Appendix A-5 lists the new districts.)

Historically, Texas has deferred to local control, if any, of ground water. Texas law gives absolute ownership of percolating ground water to the landowner, subject only to constraints regarding negligence and waste. Texas ground-water law is based on common law or English law, and Texas is the only western state that continues to adhere to common-law principles in ground-water law.[85] Underground water conservation districts set their own rules, but some have little regulatory authority. Dr. Harry Pruett said, "The attitude about the withdrawal of ground water has been that there should be no regulation at all unless there is a problem."[86]

In representing the interests of their citizens, the more active districts have become politically astute in representing their constituencies. District personnel frequently testify at legislative and interim study committee hearings. They are active in numerous civic organizations, promoting water conservation awareness, and cooperate with other water-related interest groups.

The three active districts in the High Plains Region overlying the Ogallala Aquifer are: the High Plains Underground Water Conservation District No. 1, the North Plains Water Conservation District No. 2, and the Panhandle Ground Water Conservation District No. 3. Each of these districts sets its own regulations requiring permits for water wells, well spacing, driller logs, and the capping of wells. Some of the rules are unique to the district. For example, the Panhandle GWCD No. 3 requires a permit to transport water out of the District. Applicants must state the purpose and amount of water to be used, identify any alternative sources which could be used for the stated purpose, and demonstrate the safety of the proposed transporting facility.[87] The North Plains WCD No. 2 prohibits the disposal of hazardous and toxic wastes over the Ogallala Aquifer.[88] These three districts have authority to levy ad valorem taxes as a means of financing their operations. (This is not true of all ground-water conservation districts.) However, districts do not have authority to impose permit fees or pumping limitations. They have the power to bring injunctions against landowners for unlawful use of ground-water but are more likely to employ friendly persuasion with the offending landowner first. They count heavily on maintaining a positive and beneficial relationship with the residents of the districts.

High Plains Underground Water Conservation District No. 1
(fifteen counties in the Southern High Plains)

All of the districts engage in similar activities, but the High Plains Underground Water Conservation District No. 1 is the largest and is recognized for its pioneering effort to develop conservation programs. Since this study deals primarily with ground-water management in the High Plains, it is important to discuss in some depth the underground water conservation districts in the region.

The High Plains Underground Water Conservation District No. 1 monitors ground-water levels and publishes county-by-county hydrologic atlases for use by both governments and the private sector. In addition, the District provides technical assistance to farmers to correct inefficient water usage and administers state agricultural water conservation equipment loans to local farmers. Water conservation textbooks are provided to 65 public school districts.

Robert A. Dahl contends that having gained legitimacy as a spokesperson for a certain economic sector is perhaps the most important political resource.[89] High Plains Underground Water Conservation District personnel have been recognized for their competency for many years. They testify at legislative hearings and working closely with legislators to influence the particulars of legislation. For example, in 1985, Wayne Wyatt worked with Senator John Montford (D-Lubbock), Vice-Chairman of the Senate Natural Resources Committee, to include certain

provisions in HB 2. The District wanted expanded authority to prosecute wasteful irrigation practices and to regulate wells pumping 25,000 gallons per day. (Previous law applied only to wells pumping 100,000 per day.) The District also gained reaffirmation of its preference that local areas will determine the best methods for handling underground water problems.[90] The District uses its publication The Cross-Section to state its positions on pending legislation. This is an effective way for the district to build a constituency for its policies and to enhance its lobbying efforts in Austin.

During the 70th Legislative session, the District opposed giving TWC authoriy to set minimum standards for groundwater regulation and to take over management of districts which fail to perform satisfactorily (SB 674/HB 2276) (The High Plains District wanted districts with a proven track record exempted.)[91] However, the District favored authorization for TWC to establish and manage underground water conservation districts in state-designated "critical areas" if local voters failed to approve formation of a district (SB 675/SB 2288). The District has been an active participant in the agricultural water conservation grant and pilot loan pilot program and supported legislation to extend the program. (The District had made loans of $500,000 and had obtained a third loan of $3 million from the Texas Water Development Board by November, 1987.[92])[93]

North Plains Water Conservation District No. 2
(7 counties north of the Canadian River in the Panhandle)

The North Plains Water Conservation District No. 2 is engaged in the same type of activities discussed in the previous section--monitoring of ground water levels, technical assistance to farmers regarding water conservation, educational projects in the public schools, publication of a newsletter, and testifying at public hearings regarding pending legislation. In addition, the District has "lobbied" both the Texas Water Commission and the federal Environmental Protection Agency. In 1985, it passed a rule prohibiting the import from outside the District to a point within the District of hazardous and toxic wastes for disposal purposes.[94] A waste disposal site was planned by the ANR Pipeline Company in Hansford County. The site was to receive polychlorinated biphenyls (PCB's) even from distant states for permanent disposal. The EPA and the TWC had already approved the site, but District personnel took on the power authorities because they feel that they have the ultimate responsibility for protecting the Ogallala Aquifer from contamination.

Panhandle Ground Water Conservation District No. 3
(4 counties south of the Canadian River)

The Panhandle Ground Water Conservation District No. 3 is not a large district, but it is aggressive in its ground-water management efforts. Richard S. Bowers reminded the Water District and River Authority Study Committee that the three

districts in the High Plains "have been doing something for about 35 years ... These water districts have probably had more foresight as to conservation of water than any other single factor within the state."[95]

The District takes the position that local government control is more effective than state control because "the local people usually are better able to define their problems and find workable solutions than state agencies 500 miles away."[96]

The District also supports the concept of minimum standards for underground water conservation districts; yet it wants the privilege of setting more stringent standards if the local people want them. The District wants the Texas Water Commission to establish underground water conservation districts if local voters do not approve them. This would resolve the situation wherein the residents of a district have to abide by rules regarding well spacing, number of wells, and other decisions where their neighbors in adjacent areas do not have to abide by the same rules.

### C4. Summary of the Political Influence of Underground Water Conservation Districts on Texas Water Policy

Even a brief review of the functions of underground water conservation districts and their positions on water policy issues makes the point that the districts have a political agenda similar to that of organizations more commonly recog-

nized as "interest groups." Their responsibilities to municipalities, farmers, and other client groups place them in the position of lobbying to protect their interests. At the same time, the expertise of their personnel provides a valuable input to water policy. They have established themselves as factors in the formulation and implementation of state water policy.

Some of the problems encountered by underground water conservation districts are shared by all. "Regionalization" seems to make sense in that the public interest would benefit from improved coordination among municipal water districts, river authorities, and underground water conservation districts. This would appear to be true particularly in the High Plains region where the governmental units share common challenges from ground water scarcity, pollution problems, and few alternatives in surface water.

However, a strategy that is solid from an economic perspective still may not be politically feasible. "Political feasibility" of a proposed policy change can be evaluated by the likelihood that legislators will enact it after they have heard from all the proponents and opponents and, hopefully, have added their own measure of informed judgment. Legislators have a keen sense of the relative power of those interest groups which approach them. If certain groups are extremely powerful, then the assumption of pluralism--that all groups

have relatively equal access to their elected officials--is invalid. Policy outcomes would be expected to favor the more powerful groups--more powerful in the utilization of varied resources, such as expertise and legitimacy, which the underground water conservation districts in the High Plains seem to possess.

## D. ARE THERE "POWER BROKERS" INFLUENCING TEXAS WATER POLICY?

> For the most part, they do their business outside the public eye, phantom figures in the legislative process. They gather in the thinly lighted corridors of the Capitol. A word here, an assurance there--a private conversation against the pillars outside the House chamber. They are the lobbyists, and since the early, slaughterhouse days of Texas politics, they have been key players in guiding what the Legislature does--and what it does not do.[97]

The journalists quoted here would concur with Theodore Lowi's evaluation of the influence of certain interest groups on public policy. "So influential are they that some veterans call themselves members of the "Third House" alongside the House and Senate.[98] In 1987, there were 800 lobbyists registered with the Secretary of State. (Lobbyists in Texas are required to register if they are paid $200 or spend that amount to influence legislation.) At least fifty-one registered lobbyists were former legislators or statewide officeholders.[99] Those individuals would certainly enjoy an advantage from knowing the system.

Lobbying activities have changed considerably since the Sharpstown scandal of 1971-72.*[100] Prior to that period, the Speaker and Lieutenant Governor virtually controlled the Legislature and the votes. Lobbyists could target their efforts by garnering their favor. Reform efforts changed the rules so that open meetings are required, and the power of the leadership is lessened somewhat; nevertheless, ample opportunities for influence peddling still exist. However, lobbyists now have to work harder and be smarter. Lobbying has changed in that it is necessary to contact--and contribute money to--as many legislators as possible, especially those members of standing committees or conference committees who are assigned the particular legislation of interest to given lobbyists. The entertainment expenses and campaign contributions may not assure the desired response, but they are considered sound investments in building a bond between the legislators and the lobbyists.[101]

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*The Sharpstown scandal involved legislation promoted by banker-real estate developer-insurance broker Frank Sharp which would have authorized a state insurance program to cover deposits up to $100,000 in state-chartered banks. House Speaker Gus Mutscher and others had profited from stock deals involving Sharp's National Bankers Life Insurance Company. Much of the stock had been (Sharpstown) purchased with unsecured loans from Sharp's Sharpstown State Bank. Governor Preston Smith vetoed the legislation, but Mutscher was indicted and convicted of conspiracy to accept bribes. Lieutenant Governor Ben Barnes was never directly implicated in the scandal, but his promising political career was destroyed.

D1. Politics and Campaign Contributions

Any study of the politics of water planning should give consideration to the level and sources of campaign contributions. Many of the issues addressed by legislators generate both support and opposition because they involve re-distribution of power and wealth. Self-interest would dictate that those persons and corporations affected by proposed policy changes try to influence the outcome in their favor. The perception, if not fact, is that "money talks" and that campaign contributions will at least enhance access to elected officials.[102] Zachary Smith conducted a study of water policy in California and found that agricultural interests were successful in maintaining the status quo [avoidance of state regulation of ground water] because of their influence with the legislature, especially as relates to political contributions.[103]

Texas legislators are more dependent upon campaign contributions and/or outside sources of income than legislators in some other states because of the low annual Texas legislative salary of $7200 plus $30 per diem during legislative sessions.[104] In 1988, the average annual salary of state legislators was $18,986.[105]

Title 15 of the Texas Election Code requires that candidates, officeholders, and political committees make periodic disclosure filings of receipts and disbursements. Texas law

does not allow direct contributions from corporations and labor unions. However, the Texas Election Code (Title 15, Chapter 251) permits members of corporations and labor unions to form political action committees for the purposes of accepting political contributions or making political expenditures. Contributions made in the hope of influencing water legislation probably would be given to members of the House and Senate Natural Resources Committees. A contribution of $500 to a legislator other than a House or Senate leader was thought to be a significant amount. Some of the political action committees who gave this amount or more during 1988 to members of the Natural Resources Committees are shown in Table 1. None of these interest groups have been discussed previously. This makes the point that it is difficult to identify the dominant actors since many groups become involved in water policy from time to time. These donations do not mean that the contributors are "power brokers" in water policy; it simply identifies them as some of the "players in the game." Those listed are not the only PACs and lobbyists who gave to committee members.

Caution should be taken in inferring that the contributions relate solely to the members' positions on the Natural Resources Comittees; several also serve on committees such as Finance, State Affairs, and Criminal Jurisprudence which are

considered more prestigious and powerful than their water-related assignments.

For example, The Texas Good Government Fund made contributions totaling $67,438 to incumbent Texas Legislators and/or challengers during the reporting periods for 1988 (78th Regular Session).[106] Of that amount, contributions of $500 or more were made to members of the House and Senate Natural Resources Committees totaling $7500.[††] In order to make an evaluation about the attempt of these PACs, or any others, to influence water policy, one would have to know the amount of contributions to all legislators over a longer period of time.

This search of the records in the Secretary of State's office was intended as a non-scientific sampling. During the sampled time period, little evidence was found of overt "influence peddling" relative to water policy that would have justified expanded research. The manner in which any "influence peddling" really works in the Legislature is more subtle and less public. The mutually supportive relationship between interest groups and legislators may be built on shared philosophies, long-term working relationships, and shared leisure time.

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[††]Representatives who received the contributions were Chairman Terral Smith, Steve Carriker, Jack Harris, and Sam Russell. The Senators were Chairman Tati Santiesteban, J. E. "Buster" Brown, Ted Lyon, John Montford, and Judith Zaffirini.

Table 1.

CONTRIBUTIONS TO MEMBERS OF THE HOUSE NATURAL RESOURCES COMMITTEE AND THE SENATE NATURAL RESOURCES COMMITTEE IN AMOUNTS OF $500 OR MORE DURING 1988

| PAC NAME AND/OR FOUNDING ORGANIZATION | AMOUNT |
|---|---|
| Texas Good Government Fund<br>Vinson & Elkins, Attorneys<br>Houston, Texas | $7500 |
| FREEPAC<br>Texas Chemical Council<br>Austin, Texas | 7014 |
| Southwest Public Affairs Committee<br>Fulbright and Jaworski, Attorneys<br>Houston, Texas | 3000 |
| Coalition for Transportation & Water Development<br>Austin Industries, Inc.<br>Dallas, Texas | 4500 |
| Beef PAC<br>Texas Cattle Feeders Association<br>Amarillo, Texas | 5250 |
| Coastal Employees Action Fund of Texas<br>Houston, Texas | 3000 |

Source: "General Purposes Committee Monthly Report" and "Candidate/Officeholders Sworn Report of Contributions and Expenditures" disclosure filings for 1988. Office of the Secretary of State, Austin, Texas

E. Divergent Regional Interests in Texas Water Policy
The East-West Hypothesis

Voters in Texas have a strong participatory role in water policy-making because the Constitution requires voter approval of all amendments. For example, proposals to establish or increase the Water Development Fund, a financing mechanism for various water projects, must be approved by voters. F. Andrew Schoolmaster believes that voting patterns on water amendments are reflective, in part, on voters' perceptions of regional benefit-cost considerations implicit in the amendments.[107]

Propositions were approved by voters in 1957, 1962, and 1966. Schoolmaster explains, (a) The state experienced a record drought in the early 1950s; (b) the amendments were accepted as State rather than federal initiatives, and (c) a comprehensive water planning document had not yet been approved (which would later generate controversy).[108] Water development amendments in 1969, 1976, and 1981 had a different outcome--all were rejected. Schoolmaster compared the voting outcomes by county for 1966 and 1969: 58.3 percent supported both referenda; 5.1 percent opposed both; 3.1 percent switched to a "for" vote, and 33.5% which voted "for" in 1966 rejected the 1969 referendum. Figure 1 gives a comparison of the water vote outcomes in 1966 and 1969. Schoolmaster interpreted the change in voter behavior as follows: The western and eastern parts of the state differ in precipitation patterns (annual

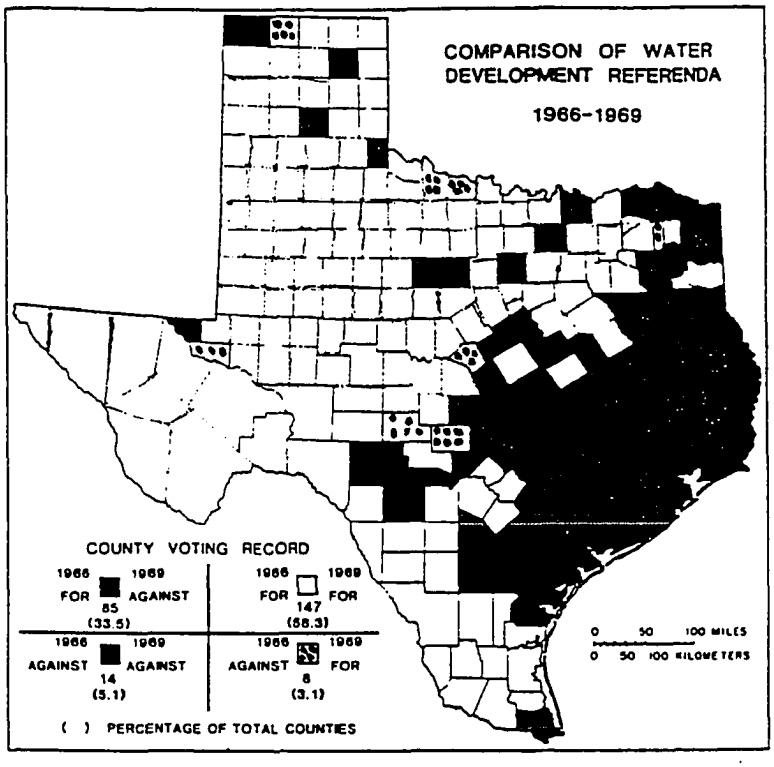


FIGURE 1. COMPARISON OF WATER DEVELOPMENT REFERENDA

Source: F. Andrew Schoolmaster, "A Cartographic Analysis of Water Development Referenda in Texas, 1957-85, Growth and Change, Vol. 18, Fall, 1987, p. 27.

average precipitation is eight inches in far West Texas and fifty-six inches in far East Texas). Regions also differ in their potential for reservoir sites (few streams are capable of reservoir development in West Texas while a concentration of reservoir building has occurred in East Texas). Water consumption patterns differ. For example, Smith County (Northeast Region) had a 1984 water use ratio of .23 acre-feet per capita while Lubbock County (High Plains Region) had a much higher per capita water use ratio of .75 acre-feet reflecting the irrigated agriculture dependency of the region.[109] Schoolmaster concludes that whereas approval of the earlier amendments showed acceptance of "regionally benign" proposals, voter rejection of the later amendments reflected the disparity in perceived regional cost-benefits. For example, the 1969 amendment would have provided $3.5 billion bonding authority to carry out large-scale water diversion projects outlined in the 1968 Water Plan such as importation of water and redistribution of surplus water from East Texas to West Texas and the Lower Rio Grande Valley.

Schoolmaster sees the aggregate voting pattern for the 1969, 1976, and 1981 proposed amendments as approximating Webb's moisture deficient/sufficient regional division along the 30-inch isohyet.[110] Appendix B-1 gives the normal annual precipitation by regions. Amendment support in 1969, 1976, and 1981 was concentrated in water-scarce regions (West Texas,

the High Plains, and the Lower Rio Grande Valley). Source regions for reservoir development and surface water export (Upper Gulf Coast and East Texas) voted almost unanimously against the development proposals.[111] Schoolmaster says the voting pattern "illustrates the regional divergence that has taken place within the State since the 1966 election."[112] In his view, "regional political interests" would be a primary determinant of state water policy.

In 1984, Schoolmaster predicted that voters were not likely to approve future Constitutional amendments dealing with water supply issues since most of the recent population growth had occurred in the metropolitan areas. New residents may not have experienced any long-term water scarcity problems.[113] Schoolmaster's prediction proved to be incorrect because water leaders were able to build a winning coalition. In 1987, Schoolmaster explained why voters approved the water package in 1985: Water supply and water quality funding were both included in the 1985 referendum, whereas they had been treated separately in past referenda. East and Central Texas urban residents were concerned about water quality and apparently perceived themselves as beneficiaries from the proposed funding. At the same time, West Texas residents could see themselves as beneficiaries from funding provisions to increase the water supply. Schoolmaster shows that 1.2 percent of the counties which voted "for" the 1981 bonds voted

"against" in 1985; 10.1 percent remained opposed; 40.2 percent continued support, but 48.4% of the counties which voted "against" the 1981 amendment changed to a "for" vote in 1985.[114] Figure 2 makes a comparison of the water vote in 1981 and 1985. Schoolmaster stated this is further evidence that voters are able to determine the distributional consequences of water resources policy decisions, and the way to overcome regional opposition is by "... careful balancing of competing regional interests."[115]

Some public officials who have been participants in the water resources policy decisions encountered an "East-West" problem. Former House Speaker Bill Clayton agreed that the $3.5 billion bond issue 1969 went down simply because there was an "hysteria of East v. West."[116] Clayton did not think it was a valid issue, but the notion persisted that different regions had opposing interests.

Joe Moore, former Executive Director of the Texas Department of Water Resources, said that West Texas felt "left out" when it was determined that the importation of water to West Texas was not economically feasible. The 1968 Water Plan really had no other solution to offer the region to meet its future water needs.[117]

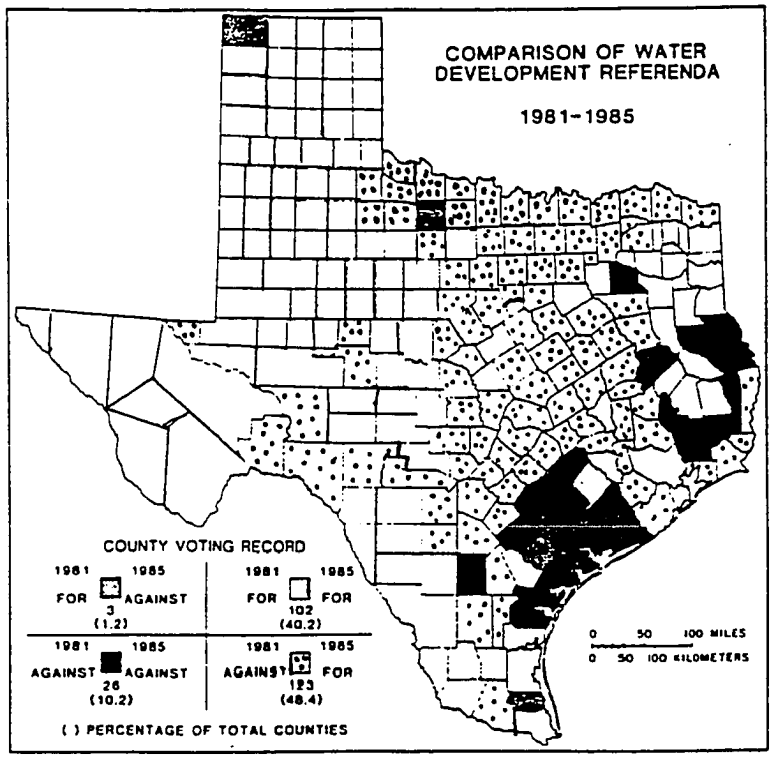


FIGURE 2. COMPARISON OF WATER DEVELOPMENT REFERENDA 1981-1985

Source: F. Andrew Schoolmaster, "A Cartographic Analysis of Water Development Referenda in Texas, 1957-85, Growth and Change, Vol. 18, Fall, 1987, p. 35.

Criticism continued from West Texans because the House Natural Resources Committee (70th Session) had no members from districts west of Interstate Highway 45. Chairman Terral Smith (R-Austin) said in wry humor that he had become known as the "West Texas representative." He recognized that the lack of representation on the Committee is a big issue to the people of the Panhandle because their water supply is scarce.[118]

E1. A Test of the East-West Hypothesis

On November 3, 1987, the voters of Texas approved Constitutional Amendment 23 (SJR 54-70th R.S.) for an additional $400 million in general-obligation bonds for water projects--$200 million for "hardship" water-supply projects, regional water-supply projects and water-supply projects in areas converting from ground water to surface water supplies; $150 million for "hardship" wastewater-treatment projects and regional wastewater treatment projects, and $50 million for structural/nonstructural flood-control projects.[119] This bond issue provided an opportunity to test Schoolmaster's hypothesis that the aggregate voting pattern for the 1969, 1976, and 1981 water bond amendments approximated Webb's moisture deficient/sufficient regional division along the 30-inch isohyet, with support concentrated in water-scarce regions. A comparison of Figure 3, "County-by-County Vote on Amendment No. 23 $400 Million in Water Bonds, November 3,

1987" with Figure 4, "County-by-County Annual Normal Precipitation," indicates that most of the water-scarce counties in West Texas, the High Plains, and the Lower Rio Grande Valley voted for the bonds. Further, a number of water-rich counties in East Texas voted against the bond issue. This result lends evidence to Schoolmaster's conclusion that "regional divergence has taken place within the state since the 1966 election."[120]

F. The Urban-Rural Crossroads

Although some evidence exists that the divergence of water interests between the eastern and western parts of the State persists, I suggest that another alignment of interests may portend even greater significance for State water policy; that is, the potential for urban v. rural conflict. Schoolmaster alludes to the issue when he talks about urban residents perhaps being unknowing and insensitive to water scarcity issues.[121] To a large extent, urban residents are accustomed simply to turning on the tap when they need water. During a period of short-term drought, they may have been inconvenienced temporarily by restrictions on lawn watering or car washing. But urban residents, in general, have little comprehension of what a severe water shortage can mean, especially to agricultural producers in the State. For most people, agricultural products are available in abundance at

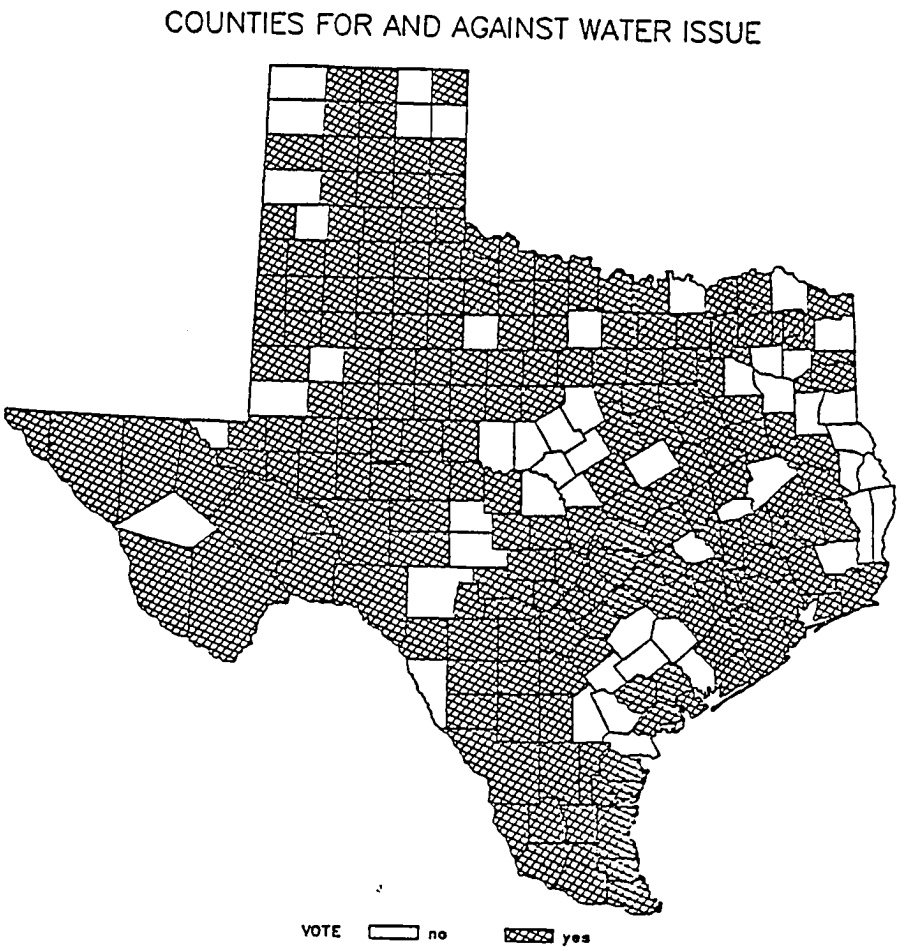


FIGURE 3. AMENDMENT 23
$400 Million in Water Bonds
November 3, 1987

Source: Secretary of State (Texas)
Official Election Returns

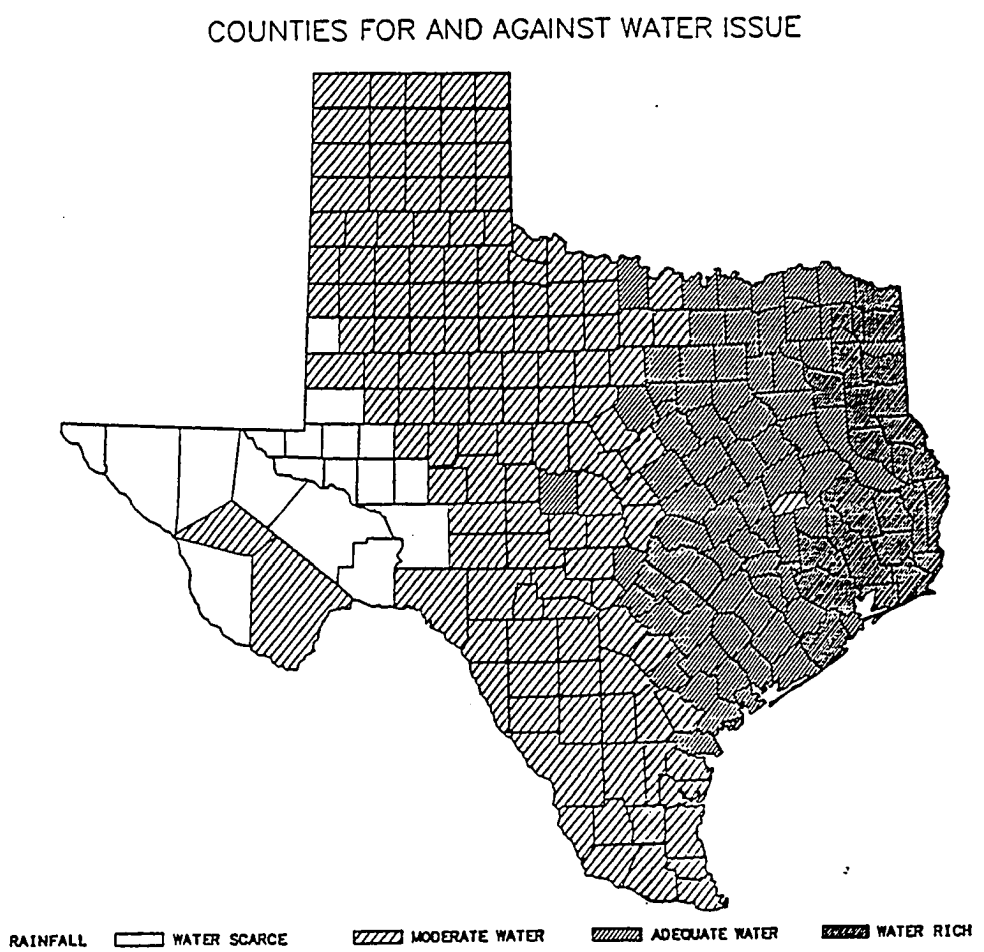


FIGURE 4. TEXAS NORMAL TOTAL PRECIPITATION BY COUNTY

Source: The Dallas Morning News, 1988-1989 Texas Almanac, pp. 116-118.

affordable prices in the grocery stores, and little thought is given to how the produce got there. If they know anything about food production in the U.S., they may have read about the federal government paying farmers not to plant certain crops, federal deficiency payments for low crop prices, or the purchase of surplus commodities with tax dollars. None of these situations is likely to inspire empathy for the plight of farmers facing water shortages and reduced crops. Few urban residents realize that a serious water shortage means reduced crops and higher food prices.

Terral Smith says that people talk about the East-West conflict, but that is not the main issue. "The real issue is urban vs. rural."[122] Representative Smith said that he has tried to tell the farmers that one of these days, industry and urban residents will come in and draw up all the water from the aquifer. Then, the farmers will come to Austin seeking protection, and if institutional structures are not in place, "it (the protection) is not going to be there because the industries will control the politicians and they will have all the urban voters."[123] He said the only reason farming interests had political clout sufficient to defeat issues such as well permit fees during the 70th Session was because urban people do not care--they don't need to. Smith points out,

> When they get thirsty, they are going to get their water ... all they have to do is to buy a one-acre plot of ground, stick a well in it, and suck all they want out of it. They are going to have the

> votes in the Legislature to allow them to keep doing that . . . when that happens, it will be the farmer who is in trouble. He is the one who will have his crops die. The urban people will drink it, use it for entertainment, all kinds of things.[124]

Under Texas ground-water law, landowners can sell their water as long as it is for beneficial use. There is no established market for exchange of water rights in Texas. Contracts for the purchase of water by municipalities appear to be kept low-key in order to avoid political controversy.

The Editorial Research Reports supports this researcher's concern for municipal appropriation of agricultural water resources: "City water departments, trying to fill future needs, in recent years have launched aggressive and innovative drives to obtain rights to future supplies. They have gone to the courts and the state legislatures in quest of 'surplus' agricultural water--water they say is wasted by inefficient irrigation practices. And the cities have bought up land to gain water rights."[125] "The politics of water have taken some new twists and turns ... as the cities start to exercise their clout, challenging the long dominance of ranchers and farmers for the remaining available water."[126]

Under Texas law, municipalities already have a higher priority than agriculture in the adjudication of surface-water rights. If legislation, such as was presented by Representative Lena Guerrero during the 70th Regular Session calling for the adjudication of ground-water rights (HB 1898), should be

enacted in some future session, municipalities would be expected to receive "first call" on the allocation of ground water.

If underground water conservation districts should decide to take a more active role by limiting pumpage, they might set their own priorities for ground-water usage. A Texas Department of Agriculture policy research project posed the questions. "Farmers might be concerned ... that pumping controls would limit agricultural water use in order to make more water available for urban development."[127]

I suggest that any evaluation of "political interest" in Texas water policy should give serious consideration to the potential for "urban vs. rural" alignments in the future. The 1987 Constitutional Amendment No. 23, authorizing an additional $400 million in water bonds provided a test of my "urban vs. rural" hypothesis. All counties lying within Standard Metropolitan Statistical Areas (SMSAs) were defined as "urban" areas. All other counties were defined as "rural" areas. Figure 3 discussed previously in this chapter shows that, with few exceptions, the SMSAs voted for water bonds. Table 2 gives the SMSA's water vote for all regions. The chi-square value, measuring the strength of association between "rural/urban residency" and "no/yes" votes on the water bonds, was 5.595 which was statistically significant at the .018 level. When the variables were controlled for the eight

economic regions of the State, only the Southeast Texas Region was slightly significant. The chi-square test was not valid for the Upper Rio Grande, High Plains, West Central, and South Central Regions because there were no urban areas that voted against the water bonds. The value of phi is .15.

Two reasons why the urban areas might have been more supportive include the following: (a)Greater population concentration occurs in the urban areas, so that these areas are facing increasing costs for wastewater treatment to meet more stringent water quality standards set by the federal and state

TABLE 2

$400 MILLION WATER BOND AMENDMENT 23
NOVEMBER 23, 1987

STANDARD METROPOLITAN STATISTICAL AREAS V. RURAL AREAS

| Frequency<br>Percent<br>Row Percent<br>Column Percent | ALL REGIONS<br>NO | <br>YES | <br>TOTAL |
|---|---|---|---|
| RURAL | 48<br>18.90<br>24.00<br>90.57 | 152<br>59.84<br>76.00<br>75.62 | 200<br>78.74 |
| URBAN | 5<br>1.97<br>9.26<br>9.43 | 49<br>19.29<br>90.74<br>24.38 | 54<br>21.26 |
| TOTAL | 53<br>20.87 | 201<br>79.13 | 254<br>100.00 |

X2 = 5.595; Prob. less than .02
Phi = .15

government. The bond issue included $150 million for water quality projects. (b) Urban areas also would be the primary beneficiaries of monies made available for flood control. The bond issue includes $50 million for flood control.

Since the High Plains Region has strong need for additional water supplies, I sought answers as to why certain counties in the Northern High Plains voted against the bond issue which included $200 million for water supplies. Richard Bowers of the North Plains Water Conservation District suggested that some of the counties may have been influenced in their vote by the prospect of an additional tax burden to pay off the loans from the State. The vote came at a time when the region had experienced a severe loss in income from the declining price of oil, from approximately $28 per barrel to $10 per barrel. Further, the Texas Railroad Commission had recently passed a ruling that wells producing "white oil" were illegal and would have to cease production. Faced with recession in the local economy, residents feared the prospect of a tax increase to repay water development loans.[128]

The statistical analysis and qualitative interpretations suggest only that rural/urban areas are able to differentiate some benefit-cost considerations implicit in a water bond amendment. F. Andrew Schoolmaster felt that the alignment of perceived interests was by region.[129] While regional alignment may continue, the perceived differences in benefit-costs

to rural vs. urban areas may prove to be a factor that policy-makers have to deal with in the future.

## G. SUMMARY OF THE CHAPTER

In the broadest terms, the "political interests" in Texas water policy should include all Texans who want a safe and dependable water supply for our homes, our industries, and sustainable food production in the future. However, in the context of this thesis, I have defined the political interests to include organized interest groups, water districts and river authorities, underground water conservation districts, regional alignments, and urban/rural constituencies. All of these entities have had input into the structuring of water agencies and water policy output. With this variety of organizations and individuals exerting influence on the policy-making process, it would seem that the theory of political participation best represented is pluralism. Political power appears to be widely distributed among groups who have relatively equal access to government officials, and compete effectively with one another in an effort to influence policy decisions.

However, a closer look at the policy positions taken by the various groups suggests a consensus for the "status quo," at least when it comes to forfeiting local and/or regional control over most water policy issues in favor of increased state authority. On occasion, the environmentalists seem to

have a greater sense of protecting the public interest in their holistic approach to natural resources management. For example, the Sierra Club lobbied for State intervention to protect fresh-water inflows to bays and estuaries. However, the environmentalists have an agenda to protect and advance just like any other interest group. Undoubtedly, certain business interest groups would view the environmentalists as holding parochial views and acting as obstructionists to economic growth.

Theodore J. Lowi says that all established interest groups are conservative; they are inflexible and resistant to change.[130] This would seem to hold true because water policy changes are incremental. Lowi further states that when authority is delegated to these groups, interest-group liberalism "seems closer to being the established, operative ideology of the American elite" (rather than pluralistic in nature).[131]

Within the State of Texas the alignment of regional political interests and urban v. rural interests may have as great an influence on water policy as organized interest groups. Regions have differing rsource endowments and water needs and are sensitive to any public policies which fail to make a distribution which is perceived to be at least equitable. Urban residents have both the voting bloc statewide and political representation in the legislature to change

current law to require adjudicated ground-water rights and a mandated scheme of priority usages to favor their needs. This political clout likely will be exercised when urbanites realize that they are faced with water shortages and long-term restricted usage.

## NOTES

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[3]Ibid., passim.

[4]Ken Kramer, Director, Lone Star Chapter, Sierra Club, mail survey dated August 8, 1989.

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[13]Ken Kramer, Survey dated August 8, 1989.

[14]Steve Stagner, Texas Water Alliance, interview by author, Austin, Texas, 7 November 1989.

[15]Jim Morris, "Gulf Fishermen at Odds with System," Dallas Times Herald, 11 July 1988, sec. A, p. 1.

[16]Stagner, interview. Note: Prior to September, 1985, Steve Stagner was legislative aide to Lt. Governor Bill Hobby

working with water legislation and had knowledge of key participants in water legislation negotiations.

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[25]Lowi, Second Republic, 71.

[26]Ibid., 74-75.

[27]Moe, 190.

[28]Ibid, 185.

[29]Ibid, 183.

[30]Olson, 2.

[31]Moe, 30.

[32]Ibid, 185;; Wilson, 22.

[33]Wilson, 22.

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[37]Scott Royder, "Kramer Speaks to Farm Bureau Water Committee," State Capitol Report, December 19, 1984, p. 5.

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[39]Christy Hoppe, "6 to Run Against Hightower in Agriculture Post Primary," The Dallas Morning News, 30 December, 1989, p. A24.

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[53]Ken Carver, High Plains Underground Water Conservation District No. 1, interview by author, Sudan, Texas, 23 July 1986.

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## CHAPTER V

## THE LONG ROAD TO WATER POLICY-MAKING

This chapter explains the development of water law in Texas as it occurred in response to increasing demands for this vital resource. Numerous plans were devised to meet the needs for water. The various interest groups, water districts, regional alignment of interests, and urban/rural constituencies described in the previous chapter played an important role in determining the direction of water policy within the State.

### A. THE YEARS PRIOR TO 1980

The "prior appropriation doctrine"[1] for allocation of surface-water rights was stipulated in the Irrigation Act of 1889. It was originally applicable only to arid regions, and later applied to the entire State. As early as 1904, the need to create legal and institutional arrangements to address certain water problems was recognized. Article III, Sec. 52 of the Texas Constitution authorized the formation of special districts for projects of flood control, drainage, irrigation, and navigation. The districts were intended primarily to

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[1]The Prior Appropriations Doctrine applies to water in defined watercourses. The courts have ruled that the state owns these waters and may allocate use for the benefit of all people of the State. Water use is not related to land ownership; instead, water rights are gained by compliance to statutory requirements.

serve as financing mechanisms for larger projects. As the magnitude and complexity of water problems increased, it became essential to clarify the State's right to regulate water management. Article XVI, Sec. 59 (1917) set forth the State's legal right to regulate and effectuate conservation of natural resources, and specifically authorized the creation of conservation and reclamation districts. Different types of local districts began to form, e.g., surface-water supply districts and water control and improvements districts. Further, the Wagstaff Act (1931) set priorities for surface water use giving municipalities first preference for all streams in the State except the Rio Grande: (1) domestic and municipal uses, (2) processing (industrial), (3) irrigation, (4) mining and the recovery of minerals, (5) hydroelectric, (6) navigation, and (7) recreation and pleasure.[2]

Since the time of early development in the 19th century, the limited number of surface waters in the Texas High Plains dictated that human consumption, livestock, and irrigation would remain dependent upon ground-water resources. In the early 1930s, studies had already begun to show a decline in water levels in some areas. Decline varied from one area to another and from year to year according to the spacing of wells, saturated thickness of the Ogallala formation, and the volume of water pumped. For example, average water level declines in one group of wells in Deaf Smith County

(Panhandle) were 1.4 feet for the 1939-1940 season but amounted to only 1.3 feet in another part of the county.[3]

There was little public concern about the declining water table because many residents comforted themselves with the myth of an inexhaustible supply of water originating in the melting snows of the Rocky Mountains. Residents tended to ignore evidence to the contrary. The U.S. Geological Survey reported, "The supply (of ground water) does not come chiefly from the mountains, as is popularly believed, but from the rain and snow that fall on the Great Plains."[4]

Farmers were philosophical about the vagaries of nature. They were also comforted by the Texas law that upheld their absolute ownership of ground water based on the U.S. Supreme Court ruling in the East case:

The defendant, Houston and Texas Central Railroad Company, held a fee simple ownership of six lots in Denison, Texas. It dug a water well on its property 20 feet in diameter and 66 feet deep which pumped 25,000 gallons per day. The water was used in the company's locomotive and machine shops. The plaintiff, W. A. East, owned the adjacent property with a well 5 feet in diameter and 63 feet deep supplying household needs. The water supply from the neighbor's well had always been adequate until the defendant dug its well; then, the plaintiff's well dried up.

Supreme Court quoted Acton v. Blundell (12 Mees. & W.324) as establishing this principle: If a persons owns the surface land and draws off water from underground springs which fed his neighbor's well, it cannot become grounds for action. The Court also referred to Forbell v. New York (58 N.E. 644) et al which accepted the doctrine of Acton v. Blundell as stated in the following: "An owner of soil may divert percolating water, consume or cut it off, with impunity. It is the same as land, and cannot be distinguished in law from land. So the owner is the absolute owner of the soil and of percolating water, which is a part of, and not different from, the soil."[5]

The Texas Board of Water Engineers had argued for years that Texas needed to enact comprehensive ground-water legislation. In 1934, the Board called for a law, "first, to declare the underground water of the State the property of the State; second, to guarantee vested rights to those who already have made beneficial use of underground water; and third, to exercise proper control over future underground water development...there is no reason why underground water should not be subject to the same control as surface water."[6]

Irrigation in the High Plains expanded in response to favorable crop prices caused by World War II and the postwar economic boom. Technological developments offered cheaper, more efficient irrigation pumps while federal programs extended credit to farmers for the installation of pumping

plants. Farm mechanization and the use of chemical fertilizers contributed to increase farm output as well. Farmers who began to view irrigation as a means to maximize production rather than simply for crop insurance.[7]

Incentives for crop expansion and government financing of irrigation equipment suggest support for and implemention of public policies which encouraged maximum use of water rather than water conservation. By 1964, approximately 5.1 million acres was being irrigated in the High Plains, representing two-thirds of the total irrigated acreage in the State.[8] By 1977, there were 71,417 water wells in the Texas High Plains.[9]

The drawback was that the brighter economic picture came with a price--the rising cost of ignoring ground-water depletion. The High Plains Region was becoming increasingly dependent upon its non-replenishing resource. During the same period, ground water levels were also declining in the Winter Garden areas of the Rio Grande Valley, another primary agricultural production region for the State. Water shortages throughout the U.S. began to receive nationwide publicity.

Joe G. Moore, Jr. stated, "Texans took their first serious step toward statewide water planning in 1944 when the Texas Water Conservation Association was formed."[10] The Association, composed principally of representatives of cities, water districts, and river authorities, was organized "to promote and support the development, conservation, pro-

tection, and utilization of the water resources of Texas for all beneficial purposes."[11] Support was building for a bill to control or regulate ground water in response to the following scenario:

> Farmers were punching holes in the ground with no casing, dropping a pump down with nothing more than a motor at the top; natural gas was three cents per million cubic feet, and they were pumping day and night into unlined ditches, siphoning water into the furrows, letting it run until they came back; if it ran out the end of the furrow and into the roads and ditches, you had lakes down there--that kind of stuff caused the people to organize the districts.[12]

Ironically, although irrigated agriculture was and is the primary consumer of ground water, it was the urban and utility company interests who were among the first in the High Plains to advocate legislation affording ground-water protection. Their concern was the prospect of declining water supplies for municipal and industrial uses as well as the possible fall-out from the future collapse of an irrigation economy.[13]

Irrigation interests quickly came out in opposition. Delegates from about fourteen county organizations met in December, 1946, and formed the High Plains Water Conservation and Users Association as a united opposition to ground-water legislation in the next Legislative session. They took the position that regulation was not necessary since water levels had risen in the last couple of years; if regulation should become necessary at a later time, authority should be vested

in a local agency rather than the State.[14] Opposition was sufficiently organized to defeat the legislation in 1947.

But the issue would not go away. By the summer of 1948, the Texas Water Conservation Association had drawn up a bill "placing ground water under the doctrine of correlative rights"[15] rather than absolute private ownership.[16] Applications for all new irrigation wells would have to be made to the State engineer. Priority of water rights would favor municipal and manufacturers' needs and place irrigation at the bottom of the list.[17]

High Plains irrigation interests presented a counter proposal. The High Plains Water Conservation and Users Association (which aided defeat of the 1947 legislation) proposed creation of ground-water districts, which would be responsible for regulating the spacing of wells, the size of pumps, prevention of waste, and possibly withdrawal limits if ground-water reserves became critical (but only with district voter approval).[18]

The Texas Water Conservation Association conceded the political strength of the opposition and agreed to a compromise bill based on local option, locally controlled districts. Legislation was passed into law in June, 1949. Chapter 52,

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[15]The Doctrine of Correlative Rights "holds that every overlying landowner may make reasonable use of his ground water as the water is plentiful. When supplies are threatened by overuse, each owner receives a share of the resources in proportion to his percentage of the overlying lands."

Subchapter B of the Texas Water Code specifies that property owners in the proposed underground water conservation district area can petition the Texas Water Commission for approval to hold an election to determine if a district should be formed. The Legislature can also act on its own in creating special purpose districts.[*]

Leaders of the High Plains Water Conservation and Users Association warned that if High Plainsmen did not take advantage of the 1949 law and establish local districts, the Legislature might appeal the law because some urban industrial interests wanted ground water controlled by the State Board of Water Engineers.[19] Five districts were created in the High Plains Region during the 1950s.

The 1949 law left intact the private-ownership theory and the "right of capture" of ground water previously upheld in the East case.[20] Districts were careful to assure their residents that they were "not created to do away with the rights of the individual but rather as a local organization designed to maintain those individual rights and at the same time provide for orderly development and wise use of our own water."[21] At least initially, water conservation seemed to be a secondary consideration.

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[*]In 1985 the 69th Legislature enacted a third procedure for creating underground water conservation districts. The Texas Water Commission can initiate the process and call and election if evidentiary hearings conclude that the formation of a district would solve ground-water problems.

The first rules of the High Plains Underground Water Conservation District No. 1 required drilling permits for all wells producing in excess of 100,000 gallons per day and required drillers to keep accurate logs of all wells. A year later (1954) a policy was added forbidding water waste and setting forth rules regarding the spacing of wells and replacement wells.[22]

Although there was optimism that the district would make a difference, ground-water depletion continued in the High Plains Water Conservation District No. 1. Donald E. Green notes weaknesses in the program of water conservation: State law allowed districts to make rules dealing with water conservation but did not require them to make or enforce them. The program relied too much on voluntary water conservation. In addition, local option left some very important areas of ground-water withdrawal outside the districts' boundaries. Green surmises that the ground-water conservation program started too late after irrigators had already invested many millions of dollars in equipment and weren't interested in having any government tell them how to regulate their equipment.[23]

In addition to the program weaknesses, the formation of underground water conservation districts added to the hundreds of other type districts throughout the State, complicating the problem of coordination to meet Statewide needs and objec-

tives. Nonetheless, an organizational structure finally was in place that could take on the task of imposing rules for ground-water protection.

By the 1950s, rapid urbanization and increased pressure on the State's water resources had expanded the focus of water management issues to a State-wide basis.[24] During the period of 1950-1956, the most severe drought in Texas' history started in West Texas and spread across the State. Of the 254 counties, 250 were declared disaster areas.[25] The drought was followed by widespread flooding. These extreme weather conditions made an important contribution to water conservation needs by focusing public attention on the State's water problems.

In addition, urban growth and an expanded agricultural industry gave urgency to local water interests in Texas to join others in southern and western states seeking assistance from the federal government in the form of capital, construction, and engineering resources. Robert Gottlieb states that an "iron-triangle" relationship developed in both the east and west between the water industry at the local level, congressional committees, and federal water agencies which "...held sway over several generations of water projects."[26] The Army Corps of Engineers and the Bureau of Reclamation established programs of irrigation, trade, commercial development, power generation, flood control, and navigation.

Governor Allen Shivers (1949-1957) responded to the public concern about the various water needs of the State by appointing a 90-member commission to prepare a long-range water plan for Texas. A Planning Division was created within the Board of Water Engineers, and the Texas Water Planning Act of 1957 mandated the Board to inventory the State's water resources. The Texas Water Development board was created in 1957 to administer funds from the newly established Water Development Fund. The fund was to be used to help local communities develop water supplies.

The federal government also played a role in encouraging State planning efforts. Senator Lyndon Johnson helped secure appropriations for a U.S. Study Commission--Texas' three-year study of the intrastate river basins of Texas. The Commission issued its report in 1964, projecting water needs of the State for a 50-year period and recommending a plan for development. The report was limited in its usefulness because it covered only a portion of the State's river basins. The State Board of Engineers criticized the 50-year projections as being speculative in nature both as to the quantity and location of future water needs. They felt that the State's needs could be met better by continuous planning and periodic revision.

There was a growing concern that the federal government might gain control over Texas' water planning and development.

While the U.S. Study Commission was preparing its report, Governor Price Daniel (1957-1963) requested the State Board of Water Engineers to prepare a Statewide evaluation of water requirements setting forth its own priorities. The study was limited to the physical structures needed to provide municipal and industrial water supplies to 1980. Meeting the needs of the State was seen as a problem of maldistribution rather than water shortage. "The distribution of our water supply doesn't match the distribution of our people and their needs--and this maldistribution will be aggravated as time passes."[27] This perspective spawned policy proposals for the transfer of water resources from water-rich areas of the State to water-poor regions.

In 1965, the U.S. Bureau of Reclamation released its planning report based on the work of the U.S. Study Commission-Texas. It became known as the "Texas Basins Project." It recommended a collection of East Texas surface water excess to the basic needs of particular river basins by the year 2010, and a channeling of the waters to the High Plains, Coastal Bend and lower Rio Grande Valley for dramatic expansion of irrigated agriculture. A Texas A & M University study indicated that approximately 37 million acres of land in Texas was physically suitable for crops under irrigation. However, the estimate was made without consideration of economic constraints on the development of irrigation, the availability

of irrigation water or the need for the crops produced.[28] The State Board of Engineers was not enthusiastic since they felt there was no demonstrated need to expand agricultural production.

The planning effort gained momentum during the administration of Governor John Connally (1963-69). The Board of Water Engineers was renamed the Texas Water Commission and was restructured to include a new planning function along with its historical quasi-judicial water rights permitting function. Governor Connally directed the Water Commission to develop a comprehensive state water plan. A separate plan was developed for each river and coastal basin detailing recommended projects for the next 50 years.

The 1968 water planning effort was the first time that the prospective exhaustion of the Ogallala Aquifer had been raised as a critical State issue.[29] The plan stated that supplemental water must be available to the High Plains no later than 1985 and the Trans-Pecos area by 1990: "If adequate supplies are not available, agriculture in the western half of the State must inevitably decline, with Statewide adverse economic impact. . . ."[30] At last, the High Plains Region was offered the hope of imported water. Water would be imported from out-of-state. The tentative source was the lower Mississippi River Basin. In the first phase of importation, 12-13 million acre feet per year would be delivered by the

year 2020 to meet Texas' water needs.[31] Approximately 7.5 million acre-feet of supplemental water annually would be delivered to North Central Texas, the High Plains, and the Trans-Pecos area for irrigation.[32] The estimated cost for the irrigation system for the High Plains Region alone was more than $1.1 billion.[33]

Despite the strong emphasis placed on the State's promise to lend its prestige and power to bring water to the High Plains and Trans-Pecos Regions to supplement the depleting ground-water supply, West Texans claimed they were "left out." The West Texas interests were displeased with the conclusion of the preliminary plan stating, "There is not enough surface water in the rest of the State, excess to other needs, to sustain even the present level of High Plains irrigation use."[34] It further stated that if excess water were available and priced to users according to the cost of delivery, West Texas irrigators could not afford to pay the estimated cost. West Texas farmers were angered because they assumed that their contribution to the State's economy would be recognized by all the people of Texas and that they would respond favorably to shared financing of the imported water.[35] But the State was undergoing a transformation from a rural to an urban society which transformed the thinking as well:

> Heretofore, Texans were agriculturally minded. No longer is this true. Texans, at the moment, appear to be less concerned with the preservation and expansion of irrigation than with the construction

of water development projects for municipal and industrial water supply and recreation.[36]

The final State Water Plan included the recommended development of sixty-seven new reservoirs. It also provided a conceptual plan for water importation should it become available and economically feasible. The total cost for meeting all of Texas' water needs until the year 2020 were estimated at close to $9 billion.[37]

A water development amendment was presented to voters on August 5, 1969, to add $3.5 billion to the Water Development Fund. This was the State's projected share of the cost for the Trans-Texas Canal system proposed in the State Water Plan. Although the majority of counties passed the amendment, voters defeated it in a close vote of 309,516 "For" to 315,739 "Against"--a difference of 6223 votes statewide. The project was considered too costly by some voters; others expressed concern for its environmental impact.[38] F. Andrew Schoolmaster evaluated that the 1969 amendment "marked the beginning of a political cleavage between East and West Texas voters over water resource development and financing that would last until 1985.[39] The bond issue also generated a heated debate between development interests and environmental interests that persisted through the 1970's and early 1980's.[40]

In 1976, a proposal to add $400 million to the Water Development Fund was defeated "For"--937,921 to "Against"--

243,451--this time a difference of 305,530 votes. Opposition to water development funding consolidated in East Texas and spread to other areas as well. Support for increased funding continued in the Southern High Plains and the Lower Rio Grande Valley, the two areas dependent upon irrigated agriculture for their economic survival.[41]

The federal government continued its investigation of water development needs. A newly established agency, the National Water Commission (NWC), was given the task of developing a national water policy. The National Water Commission was given a broader mandate than previous commissions. Earlier councils looked at ways to achieve greater efficiencies in meeting water development objectives. NWC researchers tended to concentrate on the negative "externalities" of traditional water projects such as interbasin transfers. NWC analysts emphasized non-construction oriented solutions to future water supply requirements.[42] For example, they advocated changes in pricing policies and the creation of water markets to achieve greater efficiencies. The NWC also addressed new issues on the water agenda, i.e., greater sensitivity to environmental concerns such as water pollution.[43] Robert Gottlieb states that the NWC report published in 1973 "...provided an interesting commentary on the state of water policy and its

shifting focus, but was received without fanfare and attention, particularly from the water industry."[44]

The National Water Commission's recommendations to Congress in 1973 offered no assistance to West Texas irrigation farmers. "...There appears to be adequate productive capacity in the nation's agriculture to meet food and fiber demand under various alternative futures at least until the year 2000. In such case there would be no need in the next 30 years to continue federally subsidized water resource development programs to increase the agricultural land base of the country."[45]

Numerous regional studies were conducted by the U.S. Bureau of Reclamation, U.S. Army Corps. of Engineers, and the U.S. Geological Survey in cooperation with other federal agencies and with the states of Texas, Colorado, Kansas, Nebraska, New Mexico, and Oklahoma in areas experiencing severe ground-water problems. For example, the Six-State High Plains Ogallala Aquifer Regional Study Council made an investigation of the declining water resources and the impact on the nation's food supply. The study made a number of policy recommendations to Congress and to the Secretary of Commerce, Malcolm Baldridge. Emphasis was given to the necessity of water conservation and little hope was offered for water importation. "It was not possible to conclude that major multi-state conveyance systems will be financially

feasible in the foreseeable future ...or the quantities of water that might be surplus to the needs of adjacent areas...."[46]

Joe G. Moore, Jr. once commented, "It has been said there are enough water plans for the entire State of Texas or some of its area to pave a four-lane highway from Texarkana to El Paso."[47] Still, the publicly-supported plan that would serve as a guide to comprehensive water resources management into the 21st century remained some time and distance away.

## B. WATER POLICYMAKING IN THE 1980'S--A POSSIBLE BEGINNING

By 1981, proponents of an increasing State role in financing water development projects understood that it had become increasingly difficult to secure local financing of water projects because of high interest rates and competing local capital needs. House Speaker Bill Clayton, urged by his familiarity with scarce water conditions in his home district in West Texas, took leadership in pressing what came to be known as "Billy Clayton's Plan" through the Legislature and on the ballot for voters' consideration as Proposition 4 in 1981. The plan called for dedication of one-half of any state excess tax revenues for special funds for water development, water conservation, water quality enhancement, and flood control. State credit would be used to guarantee $500 million in bonds issued by political subdivisions for water projects.

Approximately $3-4 billion in excess funds existed in 1981, and the plan was to place $1-1.5 billion in the special fund for water development. Additional monies could have been added in 1983, during a period when oil was $30 per barrel and the State had record tax receipts from this resource.[48]

Billy Clayton's plan generated opposition from several quarters. The League of Women Voters felt that dedication of tax revenue would restrict the actions of future legislators in responding to the over-all needs of the State. The League also objected to lack of specificity in the plan as to how the monies would be spent.[49] Billy Clayton defended the proposal by explaining that the fund would not be Constitutionally dedicated; any future legislature could change it if they so desired. Also, entities requesting assistance from the fund would have had to prove their needs to the Water Development Board.[50]

Another area of controversy surrounding the legislation related to the absence of protection of fresh-water inflows to bays and estuaries. House Speaker Clayton stated his support, but he felt that the State lacked the data base to know the proper balance of fresh water and salinity.[51] The Sierra Club proved to be a formidable opponent as it contested the absence of protection of fresh-water inflows to bays and estuaries.

East Texas is said to have opposed the proposition out of fear that West Texans would have authority to secure and

transport water resources to water-scarce regions in the West. Clayton said that their fears were groundless because the Planning Act of 1967 gave protection to the basin of origin. Interbasin transfers of water resources could be made only after the basin of origin had been guaranteed supplies to meet its 50-year projected needs.[52]

Voters rejected the Clayton Plan in 1981 by a vote of "For"--339,816 to "Against"--458,721."[53] Schoolmaster claimed the analysis of the 1981 vote reflected increased polarization between the eastern half of the state and the western half.

In 1981, Lieutenant Governor William P. Hobby had opposed the Clayton Plan and was soundly criticized for his stand.[54] His reasoning was primarily fiscal and had little to do with water policies. He opposed the dedication of funds without proposed expenditures being detailed.[55] After defeat of the Clayton Plan, Lt. Governor Bill Hobby decided to develop a plan of his own which would coopt the opposition by incorporating measures of concern to interest groups such as the League of Women Voters and the Sierra Club. Throughout the 1970's, political leaders tended to choose sides and back either the position of the environmentalists or pro-development groups such as the river authorities. Lieutenant Governor Hobby tried to take a middle road between positions. He also sought support of urban areas by including infrastructure

financing in his plan.[56] The following pieces of legislation introduced during the 68th Regular Legislative Session became known as the "Senate water package":

SB 895 - Protection and conservation of fresh water in oil and gas production.

SB 1026 - Relating to ecological protection of bays and estuaries.

SB 1235 - Relating to the development and conservation of water resources and to certain powers of the Texas Water Development Board and the Texas Water Commission

SB 1236 - Creation and operation of a loan assistance program for water conservation, water development, water quality enhancement, or flood control and drainage and a bond insurance program for water

SB 1309 - Creation and operation of the Texas Agricultural Water Conservation Loan Program/Fund

SJR 40 - Constitutional amendment to authorize the issuance of an additional $300 million of Texas Water Development bonds

SJR 41 - Constitutional amendment to authorize the issuance of $200 million in state general obligation bonds, to create a rural water conservation fund, and to authorize financial assistance for rural political subdivisions

SJR 42 - Constitutional amendment to create special water funds for water conservation, water development, water quality enhancement, and flood control and drainage and a bond insurance program for water.

All bills passed handily in the Senate and were referred to the House where House Speaker Gib Lewis sent them to the House Natural Resources Committee. At the House Natural Resource hearings, some representatives of the river authorities and the Texas Water Conservation Association appeared in

opposition to some of the legislation, particularly the bays and estuaries protection Bill SB 1026. Opposition was based on the language of the bill; it sought to guarantee protection of the historical productivity of the bays and estuaries. Dr. Herb Grubb stated that the wording attempted to guarantee a specific output rather than a healthy environment for productivity. Such a guarantee would entail environmental factors little understood or subject to governmental control.[57] The position taken by one interest group at a later hearing explains part of the opposition. Dr. Marsh Rice of the Trinity Improvement Association felt no legislation was needed to protect bays and estuaries or instream flows. Upon questioning, he admitted that the group supported making the Trinity River into a barge canal which would require continuous flows in that river.[58] Any statutory guarantee of river flow to protect bays and estuaries would be thought detrimental to developmental interests.

One source evaluated that the "fatal flaw" in Lt. Governor Hobby's approach to water legislation during the period 1982-84 was in not recognizing that "...traditional water interests [e.g. river authorities] were not and are not interested in an increased commitment to state finance, particularly if they have to give up something to get it. An increased state role is a threat to their autonomy. Changed laws regarding bays and estuaries put more of what they

perceive as hurdles in the way of water resources development, and they are not interested."[59]

Herb Grubb indicated that the various pieces of legislation in the "Senate water package" had interlocking features; i.e., one bill went into effect only if the other bills passed. It was toward the end of the session when the bills were being debated in the House, and time ran out before the conference committee could work out acceptable compromises.[60]

After the "Senate water package" failed in 1984, an interim committee was formed, the Joint Study Committee on Water Resources, to study water issues in the State and to devise a set of legislative proposals that would address those issues. Hearings were held throughout the State. Testimony taken during these hearings, certain legislative proposals from the 1983 "Senate water package," and policy recommendations in the updated State Water Plan (1984) became the foundation for the 1985 water package. Appendix 6 gives some of the details of the projected water needs for Texas up to the year 2030.

The 1985 "water package" was mentioned frequently by persons interviewed as the high point of water legislation during the 1980's. Although it is the purpose of this research to investigate State policies regarding ground-water management, especially as it relates to irrigated agriculture in the High Plains Region, it is pertinent to consider other

provisions of the 1985 legislation since many sources attribute the successes of the 1985 session to the accommodation of multiple water interests.

B1. Provisions of the 1985 "Water Package"

Political subdivisions benefited from the $980 million in loans authorized for water supply, sewage collection and treatment, flood abatement, and reservoir site-acquisition projects. Grants were made available to eligible recipients as an incentive for regional projects. The State also established a guarantee fund of $250 million for repayment of bonds issued by approved political subdivisions. This amount leveraged $500 million in local bond indebtedness.

The farming community was encouraged to conserve water through the Agricultural Water Conservation Loan Program. A $5 million fund (later expanded to $200 million) is available to soil and water conservation districts and water conservation districts. In turn, the districts make loans to farmers to purchase more efficient irrigation equipment. Environmental concerns also were addressed as the Texas Water Commission was given authority to protect the ecological health of bays and estuaries by assuring adequate fresh-water inflows within 200 river miles of the coast.

Several legislators were interviewed and asked the questions: "How did the political environment differ in 1985 from 1983 so that the Legislature was able to pass the water

package? All persons interviewed agreed upon the importance of Governor Mark White, Lt. Governor Bill Hobby, and House Speaker Gib Lewis in its final passage. It was made clear to both houses of the Legislature that their leaders were firmly committed to passage of a State Water Plan.[61]

Senator John Montford named as an additional facilitating factor the absence of open opposition from the river authorities, which had been so vocal in 1983.[62] River authorities were perceived as allied with the Texas Department of Water Resources prior to 1985, with a water supply and development bias and less sensitivity to environmental needs such as protection for bays and estuaries. When the Joint Committee on Water Resources held hearings on draft legislation for the 1985 Legislative session, it tried to resolve differences in the language providing protection for bays and estuaries. The Texas Department of Water Resources (TDWR) surprised environmental groups by supporting legislation to protect bays and estuaries and produced a draft bill for that purpose. The Sierra Club reported that several representatives of river authorities were present, but that "none of them testified; perhaps they prefer to work `behind the scenes.'"[63] Dr. Herb Grubb of TDWR confirmed the "behind the scenes" strategy in 1985 in an attempt to reduce potential opposition.[64]

Senator John Montford also said the "East vs. West" conflict which was prevalent in 1983 was minimized.[65] One

difference in acceptance of the 1985 provisions was that the 1984 Water Plan and legislation based on its recommendations did not push transbasin transfers of water or water importation--factors which previously were rejected by East Texas voters.

Although legislators such as Senator John Montford advocated stringent ground-water controls and mandatory ground-water conservation districts, the final legislation left such districts to local option. The Texas Farm Bureau lobbied for continued local control and negotiated with Senator Montford to ease his position.[66]

Passage of the 1985 water legislation also was assisted by the strong and active support of the League of Women Voters. Ground-water protection is a priority for the League, and it would like to have seen additional measures taken, such as giving the Texas Water Commission authority to set minimum standards for operation of underground water conservation districts. However, the League weighed the benefits versus the shortcomings of the legislation and determined that the State benefited from its passage.

Another key interest group chose to remain neutral. The Sierra Club stated that among its objections to provisions of the 1985 water legislation was inadequate protection of ground water. But it stopped short of opposing the legislation. A major battle had been won in its fight for increased

protection for bays and estuaries. It chose to make no recommendation to voters.[67] With the State executives behind the Water Plan--the Governor, Lieutenant Governor, and House Speaker--the long-term interests of most groups would not be served by coming out in open opposition, especially if the groups thought they could bide their time and achieve their goals in increments over one or two legislative sessions.

Persons interviewed said simply that no effectively organized opposition to the 1985 water package existed. The positions of most of the water-related interest groups was well-known from the legislative skirmish in 1983. Most groups were consulted during the writing of the 1985 legislation and their interests were accommodated sufficiently to gain passage. Persons interviewed kept referring to the legislation as "something for everyone"--urban areas got financing for infrastructure; environmentalists finally achieved recognition of fresh-water flows to bays and estuaries; farmers were assisted in the purchase of water-saving irrigation equipment, and political subdivisions managed to retain local control over ground-water resources.

The provisions of HB 2 which required voter approval were placed on the ballot on November 5, 1985, as Proposition 1, Water Development Bonds, and Proposition 2, Agricultural Water Conservation Bonds. Of the 254 Texas counties, 225 counties voted in favor of Proposition 1. See Appendix B-14 for a

county-by-county map of the election results. The vote was "For"--705,878 or 73.8 percent and "Against"--251,031 or 26.2 percent. Proposition 2 passed in 219 counties. The vote was "For"--651,699 or 69.6 percent and "Against"--284,552 or 30.4 percent.[68] See Appendix B-15 for the county-by-county vote.

New support occurred in East Texas for water development and financing since the rejection of bonds in 1981. A majority of voters in 123 counties who voted against the 1981 amendment, supported Proposition 1 in 1985. This included voters in Harris County (Houston). However, voters in far East Texas and the lower Gulf Coast continued their opposition. The concern in these areas was the environment and the potential impact of new reservoirs, e.g., the effect on fresh-water inflows to bays and estuaries. Voters in the wettest area of the State in far East Texas routinely and consistently oppose water development funding.

Schoolmaster added to the evaluation of factors which aided passage of the amendments the fact that voters were told how much money would be spent and for what purpose. Also, West Texas farmers are primary beneficiaries of the $200 million in agricultural water conservation bonds. Thirdly, widespread drought conditions in Texas during 1984 focused public attention on local water supply problems and the need for both short and long-term solutions. Schoolmaster agreed that the bipartisan support in the Texas Legislature and

support from environmental and civic groups were important factors.[69] A 16-year history of defeat of water development amendments was reversed; Proposition 1 received the strongest voter support (approximately 74% favored ratification) since 1957.[70]

B2. WATER DISTRICT AND RIVER AUTHORITY STUDY COMMITTEE

Approval of the 1985 water package by the Texas Legislature and the voters of Texas signaled significant progress toward a statewide approach to management of water resources. However, for many, it was only a beginning. The 69th Legislature understood that perhaps additional measures would need to be taken. It authorized creation of the Water District and River Authority Study Committee in SB 249 (R.S.) to ascertain if the powers and duties of water districts and river authorities were appropriate for management of the State's water resources and/or whether the State's role in the creation and operations of those authorities should be changed.[71] The Committee concluded that there is little evidence of coordination among the river authorities, local water districts, cities, and counties or between them and the State in the planning process.[72] Specifically, as relates to ground water, the Committee found that it is not regulated in a consistent fashion. "In general, the regulation may range from an information and education activity to a comprehensive regulatory program that controls planning, spacing and

production of water wells in the district. . . . the systems developed at the local level do not adequately address the state's ground water problems." (emphasis mine).[73] Based on their findings, the Water District and River Authority Study Committee recommended that local entities should continue to be responsible for planning, implementing and operating water resource projects as this is the preference expressed in the Constitution and laws of the state; however, all districts and authorities should be subject to uniform rules and regulations by the State. The Texas Water Commission should have continuing supervision over all districts and authorities in the State.[74] The State should be allowed to assume regulation of a critical ground-water areas if an election to create an underground water conservation district does not pass.[75]

The Water District and River Authority Study Committee did not back away from controversial issues. It submitted its report to the 70th Legislature, and most of the recommendations were incorporated into legislation introduced during the regular session. However, by the end of the session, none had survived.

The 70th Regular Session of the Texas Legislature (1987) was a disappointment to individuals/groups who wanted to strengthen protection of the environment, e.g., protection of water resources. Legislators and lobbyists for conservation groups said, "...environmental proposals fell victim to the

Legislature's preoccupation with the state's lingering fiscal crisis."[76] "In a time of state financial crisis, economic downturn, and concern about jobs, ...many legislators feel that the answers to these concerns do not include the maintenance of environmental protection."[77] Texas had a $5.8 billion budget shortfall projected for the 1988-89 budget period.[78] Moody's Investment Service had lowered Texas' bond rating from Aaa to Aa stating, "Economic shock (in Texas) has translated quickly into severe financial dislocation ...medium term prospects for full recovery are weak."[79]

Under the division-of-labor system in the Texas Legislature, standing committees have a great deal of influence on the fate of any legislation. One of the first acts of the House Speaker during any session is to appoint the members to the standing committees. The 70th sessions saw a significant regional shift in the make-up of the House Natural Resources Committee. The Committee went from being a West Texas-dominated group to being an East and Central Texas-dominated group.[80] The regional make-up of the Committee was raised as an issue during a House debate on ground-water regulation. Representative Foster Whaley (D-Pampa) asked Chairman Terral Smith who from west of the 100th meridian he had on his Committee --an inference to the members' lack of exposure to West Texas problems.[81] The Committee had become more urban-oriented and, perhaps, less sensitive to the

dependency of irrigated agriculture on the "right to capture" concept of ground-water rights.

This study's investigation did not indicate that water issues were a priority during the 70th session although one water expert felt that "most bills got the attention they deserved."[82] Of the bills this researcher tracked, twenty-one were either tabled in committee or died on the House and/or Senate floor. One of the "hazards" of the session related to protection of ground water:

B3. Case Study of Ground-Water Legislation HB 1451\SB 967

The primary fight over ground-water rights and expansion of authority for the Texas Water Commission evolved around HB 1451 and its companion bill SB 967. These bills contained some overlap of provisions with other water legislation which had been tabled. HB 1451/SB 967 were described as "by far the most comprehensive of the bills pertaining to ground-water."[83] They provide a case study of how politics and the legislative process can defeat bills:

There was strong opposition to several provisions of the original bills HB 1451 and SB 967. The primary problem existed with the option given water districts to charge permit or user fees along with ad valorem taxes as a means of financing a district's operations. The fees were not mandatory. Districts were given the flexibility to decide whether or not to impose them. Representative Terral Smith,

sponsor of HB 1451, said, "The farmers and agricultural people went through the ceiling over the permit fee proposal."[84] Senator Bill Sarpalius (D-Amarillo), Chairman of the Senate Natural Resources Subcommittee on Agriculture, stood solidly with his farming constituents when he explained that energy costs are approximately 75 percent of the cost of producing a crop. If an additional cost is imposed on the farmers, it will be very difficult for them, especially when the amount of the fee is unknown.[85]

It is not only the dollar costs that is objectionable. In order to impose a variable fee according to water usage, all wells would have to be metered. Some sources express concern that metered wells could lead to State limitations on the amount of water pumped.

Representative Foster Whaley (D-Pampa) argued another reason for opposition. "The people in the boondocks don't want a tax put on the water they think rightfully belongs to them."[86] Since 1904, Texas ground-water law has recognized a landowner's "right of capture" as private property.

Representative Terral Smith said that he assured farmers, "The [underground conservation] districts' people know how important farming is to the community and the economy, and the districts are not going to put user fees on you. But in my part of the State [Austin], we need them because it is not the farmers who use the water. It is industry vying with the

developers ...you ought not to charge everything to the property tax ...that's unfair."[87]

At one point the Farm Bureau allegedly agreed to support user fees in the bill if agriculture was made exempt. The, industry came in and said, "'No way, they [farmers] don't have any more right to get by with free water than we do. We are important to this State."[88] Whereas the industry people were initially in favor of user fees, they decided they would rather not have anything about user fees if agriculture would be made exempt.[89] With that, the Farm Bureau and other agricultural interests remained opposed to the user fees so Representative Smith "cut a deal" with the Farm Bureau and agreed to delete the provision if they would go with the bill. It was his understanding that they had agreed.[90]

Another provision of SB 967 which generated controversy was authority for the Texas Water Commission to set minimum standards for ground-water regulation. Well-run districts such as the High Plains Underground Water Conservation District No. 1 resented the inference that they were not doing their job. Further, they feared being relegated to clerical assistants to the Austin bureaucrats.[91] It is true that districts would have less political, economic, and bureaucratic power if the Water Commission were given additional powers to make rules for the districts. The High Plains Underground Water Conservation District No. 1 wanted State

rule-making authority limited to districts which either are inactive or fail to establish rules appropriate to their water management areas.[92]

In the revised legislation, the minimum standards provision was softened so that the Water Commission could set standards only if a district failed to adopt rules or if there were a demonstrated need for coordination with other districts. Representative Terral Smith said that he envisioned the situation where different rules would be set for different aquifers because some aquifers do not need minimum standards. The water in some aquifers builds up rapidly and empties, as in the Edwards Aquifer. In some other aquifers the water migrates very little, and when it is drawn down, it is not likely to go back up, as in the Ogallala Aquifer. Some aquifers are critical while others are not.[93]

The revised HB 1451 also stated that if rules were "unreasonable" or interfere with State programs, the State can step in.[94] Representative Terral Smith explained why he felt the need for this protection: while some districts might take no active role in protecting ground water, others might "go overboard" with attempts to control land use, zoning, i.e., seek powers currently held by other political entities.[95]

When HB 1451 was brought up for consideration on the House floor, Representative Tom Craddick (D-Midland), former Chairman of the House Natural Resources Committee, raised a

point of order, and killed the bill. The Sierra Club reported: "Some people speculate that his (Craddick) raising of the point of order may have reflected an act of revenge (for his removal from his committee chairmanship) and not just an expression of his opposition to the bill."[96] Representative Terral Smith said that he had gone to Representative Craddick prior to the floor debate to see if there were any opposition, and Smith understood there was none. Later, Representative Craddick refuted such a statement, saying he was always against it.[97]

Rather than lose time correcting the point of order on HB 1451 in Committee, Senator Tati Santiesteban's companion bill SB 967 was ready for presentation. SB 967 was the same as the revised version of HB 1451 negotiated among representatives of the Farm Bureau, Texas Water Alliance, Sierra Club, Texas Water Commission, and several of the underground water conservation districts.[98]

Representative Smith said that he "had to twist arms in my [House Natural Resources] Committee to get SB 967 out to the House. I called in all my chips and by a 5-4 vote got it out."[99] Previously, when companion bill HB 1451 was in the House Natural Resources Committee, most of the members voted for it, probably as a matter of courtesy since it was the Chairman's bill. However, the Committee members were lobbied heavily once the bill left committee.[100] This time it wasn't

the Chairman's bill, and the Committee members felt less obliged to support SB 967.

Chairman Smith went to House Speaker Lewis and requested him to order the Calendars Committee to put it on the agenda. Representative Foster Whaley (D-Pampa) led the charge against SB 967 on the House floor. Among other things, he objected to the increased authority for the Water Commission based on the "miserable regulatory experience" the people of West Texas have had with the Railroad Commission as relates to the injection of salt water in wells.[101] After heated debate, the measure was defeated in a recorded vote of "For"--57 and "Against"--80 with the remaining members either absent or voting "Present."[102]

The analysis of reasons the bill failed suggest these factors: Five of the nine members of the House Natural Resources Committee voted against the bill. All the Representatives in the High Plains Region, except Representative Dick Waterfield, District 88 in the Northern High Plains, voted against SB 967. The Sierra Club reported, "The vote breakdown on the bill indicated a pretty strong rural-urban clash (with a fair number of suburban legislators voting with rural members and only a handful of the rural members voting for the bill."[103] Appendix B-16, "Texas Representative Districts" shows that voting patterns were

mixed for the urban areas of Bexar, Dallas, El Paso, Galveston, Harris, Hidalgo, and Tarrant Counties.

The compromise version of SB 967 gave consideration to the concerns of interest groups such as the Sierra Club, Farm Bureau, certain underground water conservation districts, etc. However, the groups left out of the negotiating process also is noteworthy. When water entities and interest groups met, the personnel of the Texas Department of Agriculture's Rural Water Policy Working Group were not invited to attend the work session "...because they have no ability to get votes."[104] Perhaps this was an erroneous evaluation of their political influence. Perhaps they, after all, could have delivered the necessary rural votes, or it may be all too accurate a portrayal of the changing economic bases in Texas away from oil and agriculture.

In any event, the case study of the fate of HB 1451 and SB 967 is merely one example of the process described by House Speaker Gib Lewis at the end of the 70th regular session: "'The system is designed to kill legislation, not to pass legislation.'"[105]

On the other hand, a few water bills did survive the 70th Legislation session. Senate Bill 410 (70th R.S.) extended and expanded the pilot agricultural water grant and loan program established in 1985. Irrigation districts were added as approved lenders. Agricultural water conservation equipment

grants can now be approved for dryland and rangeland as well as irrigated farmland.

Several bills were enacted during the 70th session which increased State regulation of ground-water pollution. These bills related to underground storage tanks (SB 779); reports of health hazard contaminants to public officials (HB 938); state on-site sewage disposal standards (HB 1875); and water pollution abatement fees (SB 435).[106] (Ground-water quality protection has gained considerable momentum in the 1980's in large part owing to federal initiatives and mandates. The Environmental Protection Agency has extensive programs of regulation and financial incentives for states to act.)

Water finance bills were among the few water policy measures which passed during the 70th session. They included a revolving loan program to assist political subdivisions in wastewater treatment works construction (SB 807); authorization for subdivisions to pledge revenues other than taxes to repay flood control loans and assistance on water supply and wastewater projects to economically distressed areas (SB 585); and creation of the Texas Resource Finance Authority to purchase political subdivision bonds from the Texas Water Development Board in order to free the State from these general obligation bonds (HB 734).

Representative Terral Smith sponsored enabling legislation HB 72 (CS2) for SJR 54 which authorized $200 million for

water supply projects, $150 million for wastewater treatment and $50 million for flood control. This investigator asked Representative Smith how this bond proposal got through a session of budgetary crisis. He indicated that it was part of Lieutenant Governor Hobby's "Build Texas" bond program, and no one questioned those bills although they totaled more than $1 billion.[107] Representative Smith was able to get SJR 54 on the House calendar quickly since it was the Lieutenant Governor's package. However, the enabling legislation HB 72 got on the calendar so late that it was later included in the second called session. Proponents argued that Texas needed the additional bond authorization since federal funding cutbacks had hurt both water-supply and water-quality projects. Whereas federal funds accounted for 81 percent of the total $3.2 billion Texas spent on water-quality projects in the 1973-1982 decade, they constituted only 33 percent in the fiscal period 1985-1989.[108] Voters approved Amendment 23 (SJR 54) on November 3, 1987, with the "For" vote--1,348,322 or 64.1 percent and the "Against" vote--755,791 or 35.9 percent.[109] See Appendix B-16 for the water bond vote on November 5, 1987. (An analysis of the vote was made in Chapter IV as a test of the East-West hypothesis.)

B4. <u>The Post-70th Session Period--Still Another Study</u>

If studying a troublesome situation alone would resolve the problem, Texas would be in excellent shape to meet its

future water needs. Governor William Clements, Jr. established the Governor's Committee on Water Resources Management (Executive ORDER WPC-88-4) and charged it to recommend methods to improve relationships and coordination among various local and state water agencies. The Governor's Commission did not plow any new ground. In fact, it chose to stay on the safe "dry" ground in its recommendations. It seems repetitive of earlier studies, legislative initiatives, and agency priorities. A comparison of the recommendations of the Governor's Commission (1988) and the Water District and River Authority Study Commission (1987-88) is found in Appendix A-7.

When Representative Foster Whaley asked if Representative Smith, as Chairman of the House Natural Resources Committee, had held hearings in West Texas on the proposed minimum standards for underground water conservation districts, Representative Smith replied, "I have reviewed the history for the last five years, and you can fill a room with the testimony and the reports."[110] There comes a point in the policy-making process where decision-makers must progress beyond "studying the problem" and take action.

## C. SUMMARY OF THE CHAPTER

This chapter is entitled, "The Long Road To Policy-making." If one considers the short term, the conclusion is

likely to be that little has changed. Those persons who fought diligently to preserve private property rights to ground water and to hold off State encroachment have won again. However, an impression from the various hearings is that certain changes are inevitable, that opponents, in reality, are negotiating "damage control," i.e., incremental erosion of their local autonomy and constitutional protections. Senator Tati Santiesteban (D-El Paso) has been a State Senator since 1973 and was a member of the House for six years. Here are his sentiments:

> Ever since I've been here, there's always been a lot of talk about water ...I have always been an advocate of local control, and I think it seems to work. But if you look at your State with a population increasing ...that water is the State's. It's ours, it's yours ...but also your neighbor is there ...we recognize a serious problem ...Texas is going to run out of water ...All these bills are earmarked toward conservation of water. We need to try to be involved rather than fighting to keep it out. I don't have any solutions, but I am trying to do what's right and so are members of this Committee because we have lived through this for many years.[111]

State water planners and legislative members who have worked on water policy issues for some time seem to have taken a pragmatic approach to what they can or cannot accomplish. They accede to an incremental approach to public policy-making, a realistic acknowledgment of what is politically and/or economically feasible. Water Commission Chairman B. J. Wynne, III commented, "All we can do is keep trying and

work on it time after time; every session ground water is going to be an issue from now on."[112]

Emphasis has been given to education as a means of urging water conservation by all water consumers. The State Water Plan (1984) was itself an effort to educate the citizens of Texas about the short and long-term water needs of the State versus the available supply. Voter approval of Propositions 1 and 2 in November, 1985, can be seen as a culmination of efforts by water planners, legislators, interest groups, and the media to educate voters about future water needs. House Bill 2 (69th R.S.) authorized and financed several programs of education and demonstration. For example, the $5 million pilot loan program for purchasing and re-tooling existing irrigation equipment is an effort to persuade farmers of the economic benefits to be derived from water conservation. House Bill 2 also provided monies for universities, soil and water conservation districts, and water conservation districts for research and demonstration of water conservation techniques. However, a comment by Representative Gerald Geistweidt (D-Mason) should serve as a warning. He commented that conservation education isn't an effective tool because it is dependent upon a crisis situation to bring home the impact of water scarcity; [then] it rains, the drought is over, and people forget the problem.[113]

C1. Drought--An Incentive to Water Resources Management

Apathy toward water scarcity may be changing. In 1988, much of the nation, including Texas, was faced with the worst drought since the 1930's. Urban residents and farmers alike were trying to cope with drought conditions.[114] In July, 1988, the rainfall level in the Dallas/Fort Worth area was 30 percent below normal.[115] The Edwards Aquifer, the sole water supply for the City of San Antonio was at its third lowest level in more than one-half century.[116] The U.S. Department of Agriculture approved emergency drought assistance to 1428 counties in 30 states including 110 counties in Texas.[117] Ohio State University agricultural economist Scott Erwin predicted that food prices would likely rise faster in 1988 than in any of the previous five years if the drought persisted.[118]

Drought may make citizens of Texas more aware of the need for comprehensive, long-term water planning, urging their representatives in Austin "to do something." Many of the current water policies were enacted during "crisis" situations such as the drought in the 1950's. The prospective situation poses serious questions about future water allocations among competing claimants to an increasingly scarce and valuable resource.

The year 1985 was probably the optimum period for comprehensive water legislation which incorporated water develop-

ment and water conservation projects. House Bill 2 was a practical accommodation of multiple interests but clearly reiterated the State's intent not to interfere with private property rights and local control. The legislation was packaged in such a fashion and language so that most legislative leaders, influential interest groups, and the media were willing to provide the necessary support. Senator Tati Santiesteban saw the 1985 legislation as a "...starting point--not everything we wanted, but the enacted legislation will make it easier to change the State's role in the future, the acceptance of future proposals less reactive."[119] As municipalities and other water agencies go to Austin to request the State's assistance in cost-sharing for water development projects, it may ease acceptance of an increasing State role based upon an evolving financial dependency. Those persons who are philosophically committed to the State taking responsibility to see that the water resources are available to future generations are likely to persist--as will the problems. The range and complexity of water problems themselves are compelling changes.

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## CHAPTER VI

## PROSPECTS FOR THE FUTURE

The earlier chapters explored the role of the legislature, state agencies, local governments, interest groups, and the public in conserving and developing water resources. This summary chapter reiterates some of the opportunities for addressing the ground-water management needs of Texas. It also recognizes some of the constraints for the future.

### Philosophies of Governance

While conducting research in the substantive area of water resources management, this study sought evidence that politicians have abrogated their responsibility to make tough public policy choices by allowing their decisions to be controlled by interest groups. Whether or not legislators are judged to be acting responsibly depends in part on their perception of the proper nature of representation.

Some legislators perceive of themselves as "instructed delegates", i.e., elected officials who simply mirror the will of the majority in their decisions. Former Texas House Speaker Bill Clayton (1975-82) feels that this is appropriate. He states, "In representative government, if people want something, and if they holler loud enough, they ought to get it. That is what America is all about."[1] A legislator may feel that he/she is acting responsibly in casting a vote to

prevent change if that is the input received from constitutents. Public hearings held on proposed legislation afford ideal opportunities for the general public to express their opinions, but attendance at these hearings generally is small in comparison to the consequences of policy changes. The constituents that the legislators are most likely to hear are the organized interests. They know how the political system works. In many instances, interest-group spokespersons are well known to the politicians, having provided valuable information and support for past legislation. Legislators are likely to trust these associations if they have had positive experiences previously.

On the other hand, if a legislator tends to perceive his/her job as a "trustee" relationship, then expectations differ. Edmund Burke, the renowned 18th century British member of Parliament said, "Your representative owes you, not his industry only, but his judgment."[2] Webster defines a "trustee" as "a person to whom another's property or the management of another's property is entrusted."[3] This notion seems to convey responsibility to protect the public interest. The trustee relationship may entail more risk-taking. A legislator can be expected to accept as part of his/her job prescription the task of educating the general public on the importance of the issues. He/she must be willing to take unpopular stances on occasion. It is not certain nor unusual

that such a courageous individual would be voted out of office in the next election. This would depend upon the level of communication developed with constituents prior to making the sensitive decisions, i.e., how well the legislator has explained the necessity for the vote(s). This view may be an overly optimistic assumption about the civic-mindedness of voters since one would suppose that voters act to protect their self-interests. But the private interest and public interest may coincide if the issues and consequences have been adequately understood.

Constraints on Legislative Action

Prior to judging whether or not legislators are good stewards of the public trust, it is important to understand factors that tend to work against legislative action sufficient to address long-term needs of the State.

1. Representatives in Texas and forty-five other states serve two-year terms.[4] These persons must be mindful of the effect of their votes on their prospects for re-election shortly after coming to office. This, undoubtedly influences legislators' willingness to take risks. Richard F. Fenno, Jr. found in his investigation of U.S. representatives' behavior that "the idea that 'if you get too far from your district, you'll lose it' is one that all members believe."[5] Admittedly, I did not find any evidence in the literature that the four states that have four-year terms for state representatives--Alabama, Louisiana, Maryland, and Mississippi--do any better job than Texas in long-range planning. However, it seems reasonable to assume that the state representatives in Texas, and the other states with two-year terms, are likely to share the same perception of two-year term U.S. representatives and play it safe in their voting behavior.

2. The sheer volume of bills considered by the Legislature during a 140-day regular session in each odd-numbered year makes it impossible for legislators to be fully informed on the multitude of issues before they vote. Typically, 4,000-6,000 bills are introduced during a regular session.[6] Legislators in Texas admit that they depend heavily on the reputation of a bill's sponsor(s) and the recommendation of the standing committee to which the bill was assigned.

Support exists in the literature for legislators' dependency upon voting cues from various actors. In a study of voting decisions in Pennsylvania, Massachusetts and New Hampshire, fellow legislators and interest groups were found to be consistently important as sources of voting advice across all three states.[7] Jon Hurwitz found that legislators who hold intense policy preferences seek cues from policy specialists on the staff, interest groups, or from legislators on the reporting committee.[8]

In Texas, the time constraint for becoming familiar with the issues enhances the role of interest groups, lobbyists, and agency personnel, who become valuable to the legislators for the information they provide since resources (budget, time, staff) are limited for independent investigation.

3. Members and the chairman of the standing committees change from session-to-session. Committee appointments are partially set by rules established by each chamber. For example, in the House, one-half of the members of the standing committees are based on a limited seniority system. The other half are the Speaker's choice. Sometime before the start of each session, members fill out cards expressing their preferences for assignments on three committees. House rules say that a member can serve on only two substantive committees. Persons appointed Chairman of the State Affairs or Appropriations Committees only can serve on one substantive committee

but may also serve on a procedural committee like Calendars. There are twenty-eight substantive committees and four procedural committees. (In 1989, two new substantive committees were established--Regions, Compacts, and Districts Committee to handle the redrawing of districts in 1991 and a State, Federal, International Committee for a total of twenty-eight substantive committees. Each house has to approve the establishment of any new committee.)

With members leaving office, new members being elected, committee preferences changing, and the House Speaker and Lieutenant Governors' choices to be considered, the turn-over on committees is fairly high, especially in the House. Of course, one reason for the large turn-over is that House members are elected for a two-year term while Senate members serve for a four-year term.

Most of the legislation considered in this study was assigned to the House and Senate Natural Resources Committees. Appendix A-8 shows the members of the House Natural Resources Committee through six sessions from 1979 to 1990. Table 3 gives the number of repeat members from the previous session:

Table 3. MEMBERS OF THE HOUSE NATURAL RESOURCES COMMITTEE WHICH SERVED IN THE PREVIOUS LEGISLATIVE SESSION

| Session | Year | Number |
|---|---|---|
| 67th | 1981 | Three members out of eleven |
| 68th | 1983 | " " " " nine |
| 69th | 1985 | " " " " " |
| 70th | 1987 | One member out of nine |
| 71st | 1989 | Three members out of nine |

There was some continuity when Chairman Tom Craddick served on the House Natural Resources Committee during the 66th, 67th,

68th, and 69th sessions, and Chairman Terral Smith in the 70th and 71st sessions.

There has been greater stability on the Senate Natural Resources Committee. Appendix A-9 indicates the members of the Senate Natural Resources Committee from 1979 to 1990. Table 4 gives the number of repeat members from the previous session:

Table 4. MEMBERS OF THE SENATE NATURAL RESOURCES COMMITTEE WHICH SERVED IN THE PREVIOUS LEGISLATIVE SESSION

| Session | Year | Number |
|---|---|---|
| 67th | 1981 | Six members out of eleven |
| 68th | 1983 | Five " " " " |
| 69th | 1985 | Eight " " " " |
| 70th | 1987 | Seven " " " " |
| 71st | 1989 | Seven " " " " |

Senator Tati Santiesteban has been Chairman of the Senate Natural Resources Committee since the 67th session.

There is no requirement that the Chairman of any committee has to have served previously on that committee. Likewise, committee members are not required to have any prior experience with the issues which fall under the jurisdiction of a given committee. Houses Speaker Gib Lewis gives consideration to experience in his appointments, but that is his personal criterion rather than a requirement.[9]

It takes time to build expertise in a substantive area. It is erroneous to assume that even multiple-term legislators have given sufficient attention to the issues brought before

a particular committee in light of the volume of bills they handle during even one session.

4. Bills are assigned to various committees within the House and the Senate. Generally, assignment is made according to the statutory rules describing the jurisdiction of each committee. There are instances of overlap of jurisdiction wherein the House Speaker and Lieutenant governor have some discretion in assigning a bill. For example, water-related legislation may go to one of several committees in the House including Natural Resources, Environmental Affairs, and Agricultural and Livestock depending upon the particulars of a bill. It is difficult to achieve coherent public policies when different legislative committees are considering bills on related issues.

A spokesman for House Speaker Gib Lewis was asked if there was any effort made to coordinate policy across committees in a substantive area. He admitted that it is a problem, that the degree of coordination depends upon the cooperation among chairmen of the committees and the role of the author of a bill. Primarily, a bill's author has responsibility to notify other committees and interested parties. The Speaker's office also can play a role if it chooses.[10]

5. Various state agencies deal with water issues, but policy coordination is limited. For example, the Texas Water Commission, Texas Water Development Board, Railroad Commission, Texas Department of Health, and the Texas Department of Agriculture have jurisdiction over some aspect of water resources management. The agencies have achieved some degree of understanding through interagency task forces and memoranda of understanding which specify responsibility for a given policy; nevertheless, procedural inadequacies were pointed out by the Governor's Commission on Water Resources Management in its recommendation that a Water Resources Coordinating Council be created to include the chief executive of each agency handling water matters.

Recommended Changes in Legislative Procedures

Of the institutional constraints discussed above, few seem readily subject to change. However, consideration should be given to the following:

1. Budget allocations for independent research on proposed legislation by standing committee staff. This would reduce dependency on information received from interest groups. Interest group input, while valuable, is less than totally objective.

2. Invitations to out-of-state experts to testify before the committees as a stimulus to new thinking about the issues. For example, the Governor's Commission on Water Resource Management invited the Director of the Arizona Department of Water Resources to explain how Arizona's ground-water law evolved and how it is applied. Persons outside the realm of influence of committee members, with no vested interest in legislative deliberations, may be more candid in their comments and provide valuable insight to the possibilities for legislative action. From what this researcher has been able to determine, invitations to outside experts is unusual for a Legislative hearing or Governor's commission, but a common practice in academic conferences related to water resources management.

3. Balanced regional representation on committees. For example, West Texas' interests felt that the House Natural Resources Committee did not adequately reflect their concerns regarding water policy since there were no members on the committee from areas west of Austin during the 70th Session. The House Natural Resources Committee for the 71st Session has two members "west" of Austin--Representative Jeff Wentworth of San Antonio and Representative Robert Junell of San Angelo. The Committee did not have representation from the High Plains Region.

A regional balance seems to be of particular importance for committees which deal with issues of long-term concern to citizens of the State, yet unique conditions existing within each region. This is certainly the situation with the unique hydrologic conditions of the various aquifers.

A critic says that an attempt at regional balance on a given committee would allow each member to stake out a territory of influence. This is more likely to occur when a committee has a concentration of representatives from one region. For example, the House Natural Resources Committee of the 71st Session has four of the nine members from the South-east Texas and Upper Gulf Coast Region:

Representative John Willy - Angleton
Representative Frank Collazo - Port Arthur
Representative John Culberson - Houston
Representative Steve Holzheauser - Victoria

The Northeast Texas Region has two members:

Representative Jerry Yost - Longview
Representative Dick Swift - Palestine

A more balanced regional representation on the House Natural Resources Committee would partially compensate for the lack of in-depth experience by new committee members. In the 71st Session, the House Natural Resources Committee had six new members. Each member should be expected to make a concerted effort to become familiar with the opportunities and constraints in his/her home district. The potential advantage for sound public policy from a wider geographical distribution on the Committee would be greater knowledge of and sensitivity to local concerns and conditions.

4. Policy Coordinating Vice-Chairman appointed for each committee. The dependency on cooperation of committee chairmen and the efforts of a bill's author to achieve coordination across committees in related areas leaves a lot to chance. Each substantive committee could have a

> Policy Coordinating Vice-Chairman who would be notified by the Speaker of related bills being assigned to other committees. Then, this designated person would know to track the legislation or have the option of sitting in on the other committee hearings when the particular legislation was being considered.

Policy by Consensus--Does It Work?

Throughout the research for this dissertation references were made to the "policy consensus process" in a positive manner, as though the process itself guaranteed the appropriate outcome. Here are some examples:

The 1984 revised State Water Plan points out that the plan involved a broad-based public involvement program to obtain citizens' views and ideas regarding Texas water problems and solutions. "Public input was obtained through: (1) 13 public meetings; (2) written comments; (3) personal interview with community and professional leaders who were knowledgeable in water matters; and (4) a professionally conducted public opinion poll....To the extent possible, the work to amend the Texas Water Plan has been based upon the public input and the committee recommendations."[11]

A National Groundwater Policy Forum was held to discuss Texas's policy of letting local preferences govern groundwater protection and whether it is sufficient to protect the resources. Attendees included state agency personnel, state and local politicians, and interest group spokespersons. Recommendations for policy changes agreed to during the

meeting were to be added to those from similar forums held in various parts of the nation in an effort to formulate a national ground-water policy. During the meeting Harry Pruitt of the Texas Water Commission and Ken Kramer of the Sierra Club commended the Groundwater Forum "policy consensus approach."[12]

During a House Natural Resources Committee hearing Rep. Lena Guerrero explained that a meeting she had called for the purpose of discussing ground-water protection and possible legislation during the 70th Session had been attended by 140 persons. "Bills today are the result of areas of consensus which could be reached."[13]

Prior to making its recommendations the Water District and River Authority Study Committee held eleven public hearings across the State. "Written and oral testimony was provided by members of the public, representatives of districts and authorities, staff from the Texas Water Commission and Texas Water Development Boards, the State Auditor's Office, and the L.B.J. School of Public Affairs."[14]

During a discussion regarding conjunctive management of surface water and ground water in the Edwards Aquifer Region, Allen Bienke, Executive Director of the Texas Water Commission, encouraged the affected parties to seek a "local solution by consensus," but he was not hopeful that a final solution would be found. He recommended use of the

legislature rather than the courts in seeking a solution based on outcomes observed when the courts have appointed special masters to oversee court-ordered changes in correctional institutions, mental health facilities, etc.[15] The implication was that the results tend to be less than satisfactory.

Examples of dependency on public policy consensus to resolve water-related issues call to mind theories of political participation. "Pluralism" assumes widespread participation in the political process to which political leaders are accountable and responsive. Varying viewpoints are heard, and negotiation and compromise are accepted as a normal part of the political process. The outcome is viewed as the "best" public policy because it has maximized public input; hence, the political process itself has furthered democracy.[16]

Theodore J. Lowi challenges the pluralistic assumption that the political process which gives free rein to competition among groups will serve as a self-regulating mechanism and serve the public interest. He feels that public officials have responsibility to make the tough decisions and pass laws to protect the public interest. Unfortunately, in his opinion, this does not occur because the political leaders defer to interest group influences in order to avoid irreconcilable conflict. The result is logrolling elevated to a virtue.[17]

While public input and an open discussion of the issues among water users and water policy-makers is a necessary and desirable part of the policy process, they are not, in the final analysis, substitutes for making the policy decisions that protect the public interest. This investigator's concept of "public interest" is that beneficence which society deems worthy of preservation. Toward that end, society gives government the legitimate right to make and enforce rules. These rules may infringe upon the preferences of certain individuals and interest groups, but they are intended to protect the rights and resources of a larger public which generally has less access to the policy makers. Lowi says that one of the consequences of group-based policy solutions is the parceling out of policy-making powers to the most interested parties while shutting out the public.[18]

Fred Pfeiffer, General Manager of the San Antonio River Authority, makes a succinct evaluation of the problem. He says that planning, by persons of good will investing much time to preserve water, falls apart when it gets to a point of decision. Concerned persons make a list of the things that need to be done but end up cutting the list to those measures that are politically feasible to do.[19]

The matter of policy by consensus relates to the larger question of whether political leaders act responsibly to the public trust bestowed upon them when consensus politics is

weighted heavily in their decisions. This researcher would be reluctant to recommend that political participation be cut short. At the same time, the consequences of failure to move beyond the citizens' input and planning stages toward implementation of sound management practices could be catastrophic. Elected officials would serve the public well if they would be forthright, knowledgeable, and explain the situation. Apparently, they have little tangible incentive to do so. Richard F. Fenno, Jr. says explanation is education, which involves a willingness to spend electoral capital (votes and trust) in an attempt to alter support attitudes. In his study of U.S. representatives in their home districts, he observed an "apparent paucity of education effort."[20]

Many of the legislators and water agency administrators interviewed for this study readily admitted that Texas manages by crisis. Other states probably do not perform significantly better since they also face time and budgetary constraints and pressures from vested interests in the status quo. However, in the area of ground-water policy, Texas remains the only western state to retain the doctrine of absolute ownership. The vast majority of western states employ the concept of "prior appropriation," the concept that states that persons can be granted a permit or license to pump water only if it does not adversely affect prior ground-water appropriations and is used in a beneficial manner.[21] Arizona, which now has

one of the most comprehensive ground-water codes in the nation, was forced to take action by (a) a 1975 Arizona Supreme Court decision outlawing interbasin ground-water transfers, (b) an overdraft of about 2 million acre-feet of ground water annually, and (c) pressure from the U.S. Secretary of the Interior to establish a ground-water management plan as a condition to continued federal funding of the Central Arizona Project (CAP). (The CAP was intended to replace ground-water use in Arizona with surface water from the Colorado River.)[22]

Dr. Eugene Harrington seems to have a realistic picture of what has to be done for an effective water policy. Relative to another public policy matter, he states,

> It has to be sellable and it's only sellable if it's politically feasible, and it's only politically feasible if the Legislature believes the people of Texas want it, and the people of Texas won't want it unless we sell it to the people of Texas first.[23]

This suggests that Texas legislators need to give more thought to the "trustee" aspect of their jobs. This notion is difficult to inculcate after they are in office since such action relates to a person's value system and over-all concept of governance. One study of legislators' voting cues took a measure of personal values and beliefs and found that they were consistently important.[24]

Jon Hurwitz found that when a legislator is strongly concerned about an issue, the legislator will vote his/her own

convictions rather than the positions sought by PACs and/or constituents.[25] This finding supports a "trustee" philosophy and challenges political theorists Theodore J. Lowi's conclusion that legislators perform as "instructed delegates" --taking their "instructions" from interest groups.[26].

This investigator has observed instances indicating both philosophies. Some legislators seem to capitulate to the most dominant interests; others persist in seeking long-term water management solutions. When the executive and legislative leaders--the Governor, Lieutenant Governor, and/or the Speaker--take water policy has a personal priority, action occurs. For example, in 1981 former Speaker Bill Clayton was successful in gaining legislative approval of his plan to set aside State funds for water resources development, although the proposal was defeated by voters. Governor Mark White, Lieutenant Governor Bill Hobby, and Speaker Gib Lewis placed their power and prestige on the line by pressuring legislators to enact provisions of the 1985 water package. Both the Legislature and voters approved the measures. The 1985 legislation is referred to as the high point of legislative accomplishments as relates to water policy. Steve Stagner, former legislative aide to Lt. Governor Bill Hobby, concurs by saying that in his experience, interest groups many times respond to leadership initiatives rather than vice versa.[27] When powerful politicians take a stand, interest groups tend

to make compromises rather than risk long-term alienation from the policymaking process.

Additional Mitigating Factors Influencing Water Policies

In considering the problems Texans face in meeting their water needs, citizens and policy-makers alike seem locked in the 19th century policies in their attempt to meet 20th century needs. Some interest group theorists would lay blame at the feet of group members. Theories that assume that interest groups dominate do not give adequate consideration to the mitigating factors influencing water policies.

1. Cultural constraints on water policy-making in Texas--preference for local control. The well-established tradition of local management of water resources is perceived as being seriously threatened by any suggestion that the Texas Water Commission be given additional supervisory jurisdiction and/or rule-making authority. Legislative proposals in 1985 and 1987 to give the Commission authority to set minimum standards for underground water conservation districts and to create districts in areas of critical ground-water problems went down in defeat.

2. Legal protection of the "right of capture" to ground water. The East case (1904) stated that ground-water is the same as land and upheld the right of a landowner to capture percolating water without regard for the negative externalities imposed on any neighbors or the cumulative impact on the community from excessive pumping. Texans still hold this as a sacred right. Any change in current law will be viewed by many persons as a "taking" of their property.

3. Regional conflicts constrain water policy-making. The "East vs. West" conflict theory may have been overdone, but there is still evidence that this conflict of interests presents a problem in committee representation in the Legislature and in voting outcomes on water bond issues. This makes it very difficult to create any kind

of consensus, especially when it involves major changes in approach to water problems in Texas.

4. Economic factors constrain water policy-making. Before proposals are made that water laws, agency relationships, and governmental authority be changed, i.e., a complete re-thinking as to how we make water policy in Texas, one needs to stop to realize such changes cost money. State, county, cities, and special districts could be required to accept responsibility for programs they cannot afford. Although Texas is forecast to be on the rebound since its low point of recession in 1987, Legislators face other challenges such as court-ordered resolutions of prison overcrowding and equalized funding for poor school districts. Thus, Texans are not in a mood for new taxes.

5. Urban/rural divisions exist over water policy-making. It is difficult for urban residents and rural residents to understand the mindset of the other. Drought conditions are immediate for the farmer and threaten his livelihood. Drought for urban residents, for the most part, presents an inconvenience. Each group may fail to comprehend the necessity for massive spending programs which primarily benefit the other group. For example, urban areas are more likely to benefit from water bond proposals to expand wastewater treatment plants so that they come into compliance with EPA effluent standards.

6. Texas remains subject to climatological constraints on water policy-making. The State is so large that great variation exists in climatic conditions. Water scarcity is a far more salient issue for some Texans than it is for others. Policy proposals which might alleviate the water-scarce conditions in West Texas such as interbasin transfers of water have the potential to harm East Texas in reducing its dependable water supply as well as an adequate freshwater inflow to the bays and estuaries in the Coastal Regions. Most climatic conditions remain beyond the reach of policymakers.

Former House Speaker Bill Clayton feels that "everybody now is cognizant of the fact that water is probably the most precious commodity we have. It's life and people realize that."[28] Mr. Clayton expresses the perspective of a long-time West Texas resident. West Texans have experienced drought and

ground-water depletion. They respect the vagaries of nature and are more prepared than most citizens to accept changing conditions. Residents in many regions of the State continue to take for granted the continued abundance of their water supplies.

At water conferences and public hearings across the State, awareness and concern about water resources management seem to correlate strongly with the degree to which the region already had experienced water scarcity. This concern was within groups who came together for the specific purpose of exploring water issues. The general public seemed to exhibit little interest in long-range planning until they personally perceived deprivation.

A sustained drought in the urban areas is likely to be as potent an "educator" available for the majority of the population. Affected citizens will urge their legislators to take remedial action. Then, the allocation of water resources is likely to be changed significantly to favor the burgeoning urban population as urban representation increases in the Legislature. Rural residents, particularly farmers, may find themselves eager to accept State adjudication of ground-water rights in order to salvage their diminishing resources. Property owners will come to understand that the rights they hold to ground water are potentially worthless dry holes.

Representative Gerald Geistweidt remains skeptical about efforts to educate for water conservation. He said that this strategy is not an effective tool because it is dependent upon a crisis situation to bring home the impact of water scarcity. It rains, and when the drought is over, people forget.[29] Policy makers will be back to management-by-crisis.

Summary of Findings Relative to Interest Group Theories of Political Participation

The Introductory chapter asks these questions: Do interest groups tend to set the policy agenda? Do some legislators appear derelict in their duties by being too responsive to certain groups? Has water policy lacked a public interest perspective as a result of interest group activity? This inquiry was stimulated by the thought of some political theorists who believe that interest groups have significant power over the policymaking process to the detriment of present and future generations.

The investigation did not build a clear-cut case for either pluralism or elitism. Examples can be cited to support either position. The involvement of multiple organized interest groups, water districts and river authorities, and underground water conservation districts in public hearings regarding water policy matters seems to satisfy the pluralistic assumption of widespread political participation. This researcher believes that regional alignments of interests

and urban/rural conflicts over water usage will become increasingly important, and these factors will expand political participation as water resources become more scarce. As David Truman suggests, "potential groups" will be converted to "organized groups" when disturbances occur in established relationships and expectations.[30]

Elitist theory can find support when few limitations to campaign contributions exist in Texas. The field is ripe for influence peddling by those groups endowed with ample monetary resources. Further, the upper-class bias of certain interest groups combined with the expertise of their spokespersons as relates to the issues and political strategies may give them disproportionate influence in policy decisions. Such groups probably enjoy greater access to the legislators than lesser organized and resourceful persons.

One notable finding is that the spectrum of group preferences remains basically conservative. This behavior supports elitist theory. One might expect that the predicted water-shortage crisis would give momentum to calls for immediate State control and allocation of ground-water resources in areas experiencing water depletion problems. This has not occurred. Interest groups tend to disagree within a narrow framework of policy options--the framework which offers only incremental changes from the "status quo." This does not suggest a conspiracy among interest groups to thwart policy

initiatives. Rather, it is a manifestation of the shared belief that the public interest is served by defending long-held cultural values--the value of private property rights and individual autonomy--from encroachment whenever possible. These values are the heritage of group members and legislators alike. Some legislators who fail to act to increase the State's power over private decisions related to water usage are convinced that they represent the will and well being of the people. Even the politicians who understand the consequences of failure to take action to insure adequate water supplies seem willing to settle for minor policy changes and to wait for an appropriate time to press their agenda.

The groups involved in Texas' water policy do not appear to be locked into relationships with legislators and agency personnel as suggested by Lowi's theory of segmented government. The relationship is "ad hoc" as individuals and groups coalesce around particular concerns. The groups investigated tend to specialize in their water resources management interests: the Sierra Club provides leadership in water quality issues and bays and estuaries protection; the Texas Farm Bureau in minimizing government involvement in private decisions regarding water usage; the League of Women Voters in water conservation and ground-water protection, and the Texas Water Alliance in increasing the State's role in providing infrastructure.

The observed relationships among interest groups and legislators in Texas reflects more accurately the theory of Hugh Heclo. He concludes that the concept of sub-governments controlled by interest groups is inadequate because it overlooks the large number of skilled participants, in and out of government, who form "issue-networks" around various aspects of public policy.[31] Individuals and powerful interest groups move in and out of the network constantly so that "...it is all but impossible to identify clearly who the dominant actors are...."[32] The members share a common language for coping with the issues, but they do not agree necessarily on any action to be taken.[33] Heclo believes that the loosely-jointed relationships make governance more difficult since group relations are less predictable and more subject to splitting and re-combining around policy issues.[34]

The groups investigated, the Sierra Club, the Texas Farm Bureau, the League of Women Voters, and the Texas Water Alliance, use their resources effectively in their attempts to influence policy outcomes favorable to their interests. They testify frequently at legislative hearings to express their preferences on proposed policy changes. Also, legislators seek out representatives of these organizations for their opinions. This is to be expected. A prudent politician would do well to explore possible accommodations of interests and legislative support rather than to intentionally and perhaps

unnecessarily create an adversarial relationship. However, this does not mean that the politicians are manipulated by the interest groups in setting the overall agenda for water resources management as some theorists would suggest.

Concluding Remarks

To date interest group activity has had limited impact on the enactment or rejection of long-term solutions to Texas' water problems. If the predictions are accurate that Texas faces a severe water shortage in the near future, and this researcher believes that they are, existing attitudes within the general public will change dramatically. Interest groups and legislators alike can play important roles in educating citizens about the problem and in organizing support for emergency accommodations.

Admittedly, the emphasis in this dissertation on water conservation as a desired policy option is a judgment call. If Texans decide to maintain the "status quo" in water policy, that will, indeed, lead to serious problems in the High Plains Region. But that may be the policy preference, to simply continue drawing down the Ogallala Aquifer to the point of depletion. Then, persons and businesses will migrate elsewhere. The economics of agriculture tend to push farmers in a downward spiral anyway. Ground-water depletion will expedite the process. Free market fallout rather than state intervention will dictate the outcome.

However, if the above scenario is not acceptable to policymakers, several actions could be taken to conserve water. This investigation was confined to State policy. However, any discussion of incentives to water conservation must note a federal policy which acts as an incentive to consume rather than to save water. The federal income tax system gives a water depletion allowance for landowners in approved regions of the State. Certain underground water conservation districts measure the water table annually and advise landowners of the amount of depletion and the eligible credit for tax purposes. This tax credit sends the wrong message to landowners. A water conservation objective would require its elimination.

Metering of wells is another conservation measure. At the present, neither the State nor underground water conservation districts have a precise measure of individual use. At some time in the not too distant future, it may be necessary to restrict pumpage and this information would be essential. Further, a well tax could accompany metered wells for excessive pumping which would serve as a further incentive to water savings.

Finally, the alleviation of water scarcity, in areas of Texas such as the High Plains, is not a technical problem. The underlying problem is that Texas law does not recognize the common pool issue relative to ground water. That is, each

landowner will try to maximize his use of ground water because there is no exclusive cost to consuming it or any exclusive benefit from saving it. The U.S. Supreme Court ruling in the East (1904) case upheld the "right of capture" without regard to costs imposed on others from the diminished common pool of ground water. A distinct possibility is that parties concerned about the availability of water resources, seeing no remedy forthcoming in the Legislature, will seek redress in the courts. The courts may override the East ruling and change Texas' "right of capture" to a "correlative right" wherein all members who share a common resource have to cut back in their consumption in times of scarcity proportionate to their share of ownership in the overlying land.

Tough decisions will have to be made as Texans face the challenge of meeting future water needs. This researcher believes that conservation of finite natural resources such as water in the face of a growing population is a matter of public interest. Future generations have only the present generation to protect them.

## NOTES

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[4]Book of the States, 1988-89. Lexington, KY: Council of State Governments, 1988, 89.

[5]Richard F. Fenno, Jr., Homestyle: House Members in their Districts (Boston: Little, Brown & Co., 1978): 144.

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[9]Becky Lammert, Office of the Speaker of the House, telephone interview, 7 March 1989.

[10]Mike Milsap, Office of the Speaker of the House, telephone interview, 7 March 1989.

[11]Texas Department of Water Resources, Water for Texas, November 1985, 6-7.

[12]"National Groundwater Policy Hearings," (Austin, TX: National Groundwater Policy Forum, December 2, 1985): 4 and 6, photocopied.

[13]Representative Lena Guerrero, testimony given during the hearing 1 April 1987.

[14]"Water District and River Authority Study Committee, Report to the 70th Texas Legislature," Draft, December 1986, Preface

[15]Allen Bienke, Executive Director of the Texas Water Commission, statement to San Marcos and Comal Springs Symposium, Southwest Texas State University, San Marcos, Texas, December 2-3, 1988.

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[19]Fred Pfeiffer, General Manager San Antonio River Authority, statement to San Marcos and Comal Springs Symposium, Southwest Texas State University, San Marcos, Texas, December 2-3, 1988.

[20]Fenno, 162-163.

[21]Frederick and Hansen, 133-134.

[22]Herb Dishlip, Deputy Director, Arizona Department of Water Resources, testimony before the Governor's Committee on Water Resources Management, Austin, September 15, 1988, and Arizona Department of Water Resources, "Overview of the Arizona Groundwater Management Code," pp. 1-2, n.d..

[23]Dr. Eugene Harrington, law professor at Texas Southern University quoted in "A Question of Politics," Dallas Times Herald, 10 February 1988, sec. B, p. 1.

[24]Donald R. Sanger et al, "The Influence of Issues on Choice of Voting Cues Utilized by State Legislators," Western Political Quarterly 39 (March 1986), 120 and 122.

[25]Hurwitz, 221-222.

[26]Theodore J. Lowi, The End of Liberalism: The Second Republic of the United States, 2nd Ed., (New York: W. W. Norton & Company, 1979), 51.

[27]Steve Stagner, interview by author, Austin, Texas, 7 November 1989.

[28]Clayton, interview.

[29]Representative Gerald Geistweidt, House Natural Resources Committee, interview by author, Austin, Texas, 8 August 1986.

[30]David B. Truman, The Governmental Process, Political Interests and Public Opinion, 2d ed., New York: Alfred A. Knopf, 1971, p. 511.

[31]Hugh Heclo, "Issue Networks and the Executive Establishment," The New American Political System, Edited by Anthony King, Washington, D.C., American Enterprise Institute for Policy Research, 1978, 102

[32]Ibid.

[33]Ibid, 104, 117

[34]Ibid, 117-118.

# APPENDIX A-1

**Reported and Estimated Population and Water Use in 1980 with Projections of Future Population and Annual Water Requirements for 2000 and 2030, Low and High Series, State of Texas**

| | | | |
|---|---|---|---|
| **1980** | Population[1] | 14,227,571 | |
| | Municipal and Domestic[2] | 2,813,182 | |
| | Manufacturing[2] | 1,519,992 | |
| | Mining[2] | 239,076 | |
| | Steam-Electric[2] | 330,057 | |
| | Agriculture (Irrigation and Livestock)[2] | 12,950,357 | |
| | TOTAL (Water)[3] | 17,852,664 | |
| | | **Low** | **High** |
| **2000** | Population[1] | 19,567,335 | 21,239,279 |
| | Municipal and Domestic[2] | 3,512,065 | 5,080,510 |
| | Manufacturing[2] | 2,407,092 | 2,717,673 |
| | Mining[2] | 267,671 | 267,671 |
| | Steam-Electric[2] | 717,440 | 816,940 |
| | Agriculture (Irrigation and Livestock)[2] | 10,426,908 | 16,542,538 |
| | TOTAL (Water)[3] | 17,331,176 | 25,425,332 |
| **2030** | Population[1] | 28,254,495 | 34,276,928 |
| | Municipal and Domestic[2] | 5,058,994 | 8,177,532 |
| | Manufacturing[2] | 4,230,531 | 5,013,989 |
| | Mining[2] | 387,128 | 387,128 |
| | Steam-Electric[2] | 1,118,619 | 1,417,449 |
| | Agriculture (Irrigation and Livestock)[2] | 11,385,468 | 15,350,638 |
| | TOTAL (Water)[3] | 22,180,740 | 30,346,736 |

[1]Population in number of persons.
[2]Water in acre-feet annually.
[3]In addition, estimated fresh water inflow requirements for Texas' bays and estuaries range from a low (survival limit) of 4.7 million acre-feet annually to a high (enhancement) of 13.6 million acre-feet annually.

Source: Texas Dept. of Water Resources, Water for Texas, Vol. 1, November, 1984, p.25.

# APPENDIX A-2

## HIGH PLAINS (OGALLALA AQUIFER)

The High Plains aquifer of Texas occurs in all or parts of 46 counties in the Panhandle region (Appendix B-6). The aquifer consists of the saturated sediments of the Ogallala Formation, and saturated sediments of Cretaceous, Jurassic, and Triassic ages which contain potable water and that are in hydraulic continuity with the Ogallala Formation. Hydraulically connected Cretaceous water-bearing strata occur in all or parts of 14 counties in the southern High Plains and in northwest Dallas County. Jurassic water-bearing strata occur in north central Dallas County, and Triassic water-bearing strata occur in Hansford, Hutchinson, Moore, and Randall Counties to the north and in all or parts of Andrews, Crosby, Dickens, Gaines, Garza, and Motley Counties to the south and southwest.

The Ogallala Formation, which is the major water-bearing unit of the High Plains aquifer, is composed predominately of unconsolidated, fine-to coarse-grained, gray to red sand, clay, and silt. In places, it contains some quartz gravel and caliche. Water-bearing areas of the Ogallala are hydraulically connected laterally except where the Canadian River has eroded partially or totally through the formation. In this region, the river has separated the High Plains proper into two areas referred to as the North High Plains and the South High

Plains. Ground water moves slowly through the Ogallala Formation in a generally southeastward direction. Its limited effective recharge, which is derived from precipitation on the land surface, is impeded by relatively impervious clay layers and caliche which overlie much of the formation. The Ogallala Formation has a maximum known thickness of almost 900 feet. Its saturated thickness ranges from a few feet to more than 525 feet with the greatest saturated thickness occurring in the North High Plains. Yields of individual wells range from less than 100 to more than 2,000 gal/min. Ogallala ground water is generally hard and contains between 300 and 1000 mg/l of dissolved solids. High chloride concentrations occur locally in the ground water near large saline playa lakes and elsewhere in the South High Plains where the water table is shallow.

APPENDIX A-3

Estimated Crop Production with Projections to 2020, High Plains States: Baseline Case of Projected Water Use, 1977 through 2020[a/]

| State | Year | Crops | | | | | |
|---|---|---|---|---|---|---|---|
| | | Wheat (Mil.Bu.) | Corn (Mil.Bu.) | Sorghum (Mil.Bu.) | Soybeans (Mil.Bu.) | Alfalfa (1000 T.) | Cotton (1000 Bales) |
| Colorado | 1977 | 36.9 | 56.4 | 6.5 | 0.0 | 180 | 0 |
| | 2000 | 49.1 | 68.9 | 3.8 | 0.0 | 174 | 0 |
| | 2020 | 64.5 | 49.0 | 2.6 | 0.0 | 137 | 0 |
| Kansas | 1977 | 127.8 | 91.3 | 37.4 | 0.6 | 999 | 0 |
| | 2000 | 199.2 | 24.4 | 70.8 | 4.2 | 1,370 | 0 |
| | 2020 | 248.2 | 27.5 | 95.1 | 5.2 | 1,367 | 0 |
| Nebraska | 1977 | 79.7 | 539.0 | 108.0 | 8.5 | 3,315 | 0 |
| | 2000 | 57.1 | 1,286.6 | 122.0 | 107.6 | 3,718 | 0 |
| | 2020 | 60.8 | 1,622.0 | 153.3 | 161.3 | 3,795 | 0 |
| New Mexico | 1977 | 9.4 | 12.4 | 11.8 | 0.0 | 243 | 42 |
| | 2000 | 15.4 | 17.3 | 13.0 | 0.0 | 496 | 48 |
| | 2020 | 20.6 | 13.4 | 6.6 | 0.0 | 492 | 55 |
| Oklahoma | 1977 | 22.8 | 6.4 | 14.5 | 0.0 | 230 | 0 |
| | 2000 | 31.6 | 12.1 | 27.6 | 0.0 | 290 | 0 |
| | 2020 | 42.7 | 14.7 | 32.0 | 0.0 | 296 | 0 |
| Texas | 1977 | 50.9 | 157.3 | 121.4 | 5.4 | 546 | 2,921 |
| | 2000 | 32.2 | 19.6 | 180.6 | 7.9 | 677 | 5,701 |
| | 2020 | 35.0 | 11.4 | 191.0 | 3.4 | 846 | 5,896 |
| Total Region | 1977 | 327.5 | 862.7 | 299.7 | 14.6 | 5.5 | 2,958 |
| | 2000 | 384.6 | 1,429.0 | 417.9 | 119.7 | 6.7 | 5,747 |
| | 2020 | 471.8 | 1,738.2 | 480.7 | 169.8 | 6.9 | 5,942 |

a/ For the Baseline Case, it is assumed that there will be no changes in laws of each respective state that directly affect or regulate the use of ground water.

Source: High Plains Study Council, "A Summary of Results of the Ogallala Aquifer Regional Study, With Recommendations to the Secretary of Commerce and Congress, December 13, 1982, p. 11.

# APPENDIX A-4

## ACTIVE, REGISTERED DISTRICTS BY CREATING ENTITIY[1]

| Type of District | Creating Entity: Water Commission or Predecessor | Legislature | Commissioners Courts | Total |
|---|---|---|---|---|
| Water Control & Improvement Districts | 62 | 94 | 69 | 227[2] |
| Water Improvement Districts | -- | -- | 18 | 18 |
| Municipal Utility Districts | 478 | 149 | 27[3] | 654 |
| Fresh Water Supply Districts | -- | 7 | 31 | 38 |
| Levee & Flood Control Districts | -- | 6 | 35 | 41 |
| Drainage Districts | -- | 10 | 34 | 44 |
| Irrigation Districts | 1 | 1 | 18 | 20 |
| Navigation Districts | -- | 8 | 18 | 26 |
| River Authorities | 1 | 19 | -- | 20 |
| Others[4] | 4 | 45 | 5 | 54 |
| | 546 | 339 | 255 | 1,142[2] |

1. Figures are for registered active districts as of October 2, 1986. There are 113 districts that are active but have not registered with the Water Commission: 8 of these were created by Commissioners Courts, 43 by the Commission, and 62 by the Legislature.

2. Two WCID's were created by cities.

3. These districts were originally of another type. They converted to MUD's, which requires Commission approval.

4. "Others" include underground water districts, 12; and miscellaneous types, 42. Numbers are approximate.

Source: "Water District and River Authority Study Committee Report to the 70th Texas Legislature," December, 1986, p. 42.

## APPENDIX A-5

## NEW UNDERGROUND WATER CONSERVATION DISTRICTS APPROVED BY THE 71ST LEGISLATURE (1989)

| NAME | COUNTY |
|---|---|
| Bush Country UWCD | Live Oak |
| Central UWCD* | Burnet |
| Emerald UWCD* | Crockett |
| Fort Bend Subsidence District | Fort Bend |
| Mesa UWCD* | Dawson |
| Plum Creek CD* | Hays, Caldwell |
| Real-Edwards C&RD | Real, Edwards |
| Salt Fork UWCD* | Kent |
| Sandy Land UWCD | Yoakum |
| Santa Rita UWCD | Reagan |
| Saratoga UWCD | Lampasas |
| Springhills WMD | Bandera |

*Confirmation by local voters is pending for this new district.

Source: Texas Water Commission, Ground-Water Section, January 1990 (not published).

# APPENDIX A-6

## SELECTED PROVISIONS OF THE 1984 STATE WATER PLAN

1. Population will range between 28,254,495 and 34,276,928 in the year 2030. Total water needs for 2030 will be 22,180,740 -30,346,736 acre-feet (p. 25) (Table 1 "Reported and Estimated Population and Water Use in 1980 with Projections of Future Population and Annual Water Requirements for 2000 and 2030")

2. Municipal and commercial water use shows an upward trend of four gallons per person per decade for the State.

3. Approximately 4500 new municipal wells will be required between 1984 and the year 2005. (pp. 24, 37) (Figure 14 "Municipal Wells and Facilities Needed, 1984-2005") The projected number of wells is based on municipal needs and the capabilities of respective aquifers to meet local water demands. (p. 37)

4. About 64 percent of the dependable yield of Texas' reservoirs is being used to meet current needs and the remaining capacity is committed to expanded municipal and industrial needs over the next twenty years. With few exceptions, current supplies will not be adequate to meet anticipated needs. (p. 37)

5. Approximately 65 potential reservoir sites have been identified. Of the potential 65 major reservoir projects, 44 have been scheduled over the period 1990-2020. (pp. 37, 42) Figure 15 "Reservoirs, Salt Water Intrusion, and Chloride Control Projects Needed, 1984-2030)

6. Estimated capital costs of reservoir and chloride control projects for the period 1984-1989 will be $1.19 billion; for the period 1990-1999, $4.65 billion, and for the period 1990-1999, $7.6 billion (Vol. II, p. V-13)

7. In estimating the water needs for irrigated agriculture, the "Low" estimate calculated continuing irrigation of the same number of acres as 1980 with water-saving techniques and a more profitable mix of crops. The "High" estimate considered expansion of agricultural production in response to food and fiber demands, along with the adoption of water-saving techniques and a more profitable mix of crops. The "High" series estimated 1.17 million acre-feet shortage for irrigated agriculture in the High Plains and Pecos Regions before 1990. (pp. 28, 44)

8. The importation of water or transport of water over long distance was not considered economically feasible in meeting the State's water needs in the near term but was left for consideration in the future. (p. 5

9. Additional water supply needs not met with reservoir and water-well facilities will be dependent upon secondary recovery of ground water, de-salinization, and water conservation.[1]

Source: Texas Department of Water Resources, Water for Texas, A Comprehensive Plan for the Future, Vol. 1, 1984

## APPENDIX A-7

## COMPARISON OF SELECTED RECOMMENDATIONS OF THE WATER DISTRICT AND RIVER AUTHORITY STUDY COMMISSION AND THE GOVERNOR'S COMMITTEE ON WATER RESOURCES MANAGEMENT

1. Both advocated water conservation programs for all applicants for both water and waste water permits. The Water District and River Authority Commission added the requirement for all applicants of state financial assistance.

2. Relative to the formation of underground water conservation districts in critical areas, the Governor's Commission recommended streamlining the current procedure with no recourse if locals chose not to create a district. The Water District and River Authority Study Commission said the State should be allowed to assume regulation of a critical ground-water area if an election to form a district failed.

3. The Governor's Commission recommended a Coordinating Council of State agencies having major regulatory responsibilities over water resources. The Water District and River Authority Commission recommended regional coordinating mechanisms to close gaps and eliminate overlaps within the existing institutional framework of water entities.

4. The Governor's Commission said the Water Commission should monitor the effectiveness of existing underground water conservation districts' regulations with a report to the Legislature by 1991. The Water District and River Authority said the State should seek authority to impose minimum criteria for regulation of ground water by local management entities.

5. The Water District and River Authority Commission suggested that underground water conservation districts be allowed to charge fees as well as impose ad valorem taxes. The Governor's Commission made no recommendation on this matter.

Sources: Recommendations of the Governor's Committee on Water Resources Management, December 1, 1988; Water District and River Authority Study Committee Report to the 70th Texas Legislature, December, 1986

# APPENDIX A-8

## TEXAS HOUSE[a]

## MEMBERS OF THE NATURAL RESOURCES COMMITTEE[b]

| 66TH SESSION (1979-80) | 67TH SESSION (1981-82) | 68TH SESSION (1983-84) | 69TH SESSION (1985-86) | 70TH SESSION (1987-88) | 71ST SESSION (1989-90) |
|---|---|---|---|---|---|
| *Tom Craddick | *Tom Craddick | *Tom Craddick | *Tom Craddick | *Terral Smith | *Terral Smith |
| **Orlando Garcia | **Gerald Geistweidt | **Rodney Tow | **Larry Don Shaw | **Jack Harris | **John Willy |
| G.R. (Bob) Close | J. W. Buchanan | J.W. Buchanan | J. W. Buchanan | Cliff Johnson | Frank Collazo |
| Collen R. Looney | Jerry Cockerham | Nel Grisham | Kelly Godwin | Sam Russell | John Culberson |
| Tom Massey | Pete Laney | Arves Jones | Ted Roberts | Jerry Yost | Jerry Yost |
| Pete Patterson | Pete Patterson | Hill Kemp | Jerry Clark | Bill Hammond | Robert Junell |
| Paul Ragsdale | Jim McWilliams | Roman Martinez | Jack Harris | Steve Holzheauser | S. Holzheauser |
| Jim Rudd | Kae T. Patrick | Gerald Geistweidt | G. Geistweidt | Dan Shelly | Dick Swift |
| Froy Salinas | Ted Lyon | Chip Staniswallis | C. Staniswallis | Mike Toomey | Jeff Wentworth |
| GeraldGeistweidt | ChipStaniswallis | | | | |
| Jerry Clark | Jerry Clark | | | | |

*Chairman
**Vice-Chairman

[a]House members serve 2-year terms and are elected in even-numbered years

[b]The number on the Committee dropped from eleven to nine members in 1983.

APPENDIX A-9

TEXAS SENATE[a]

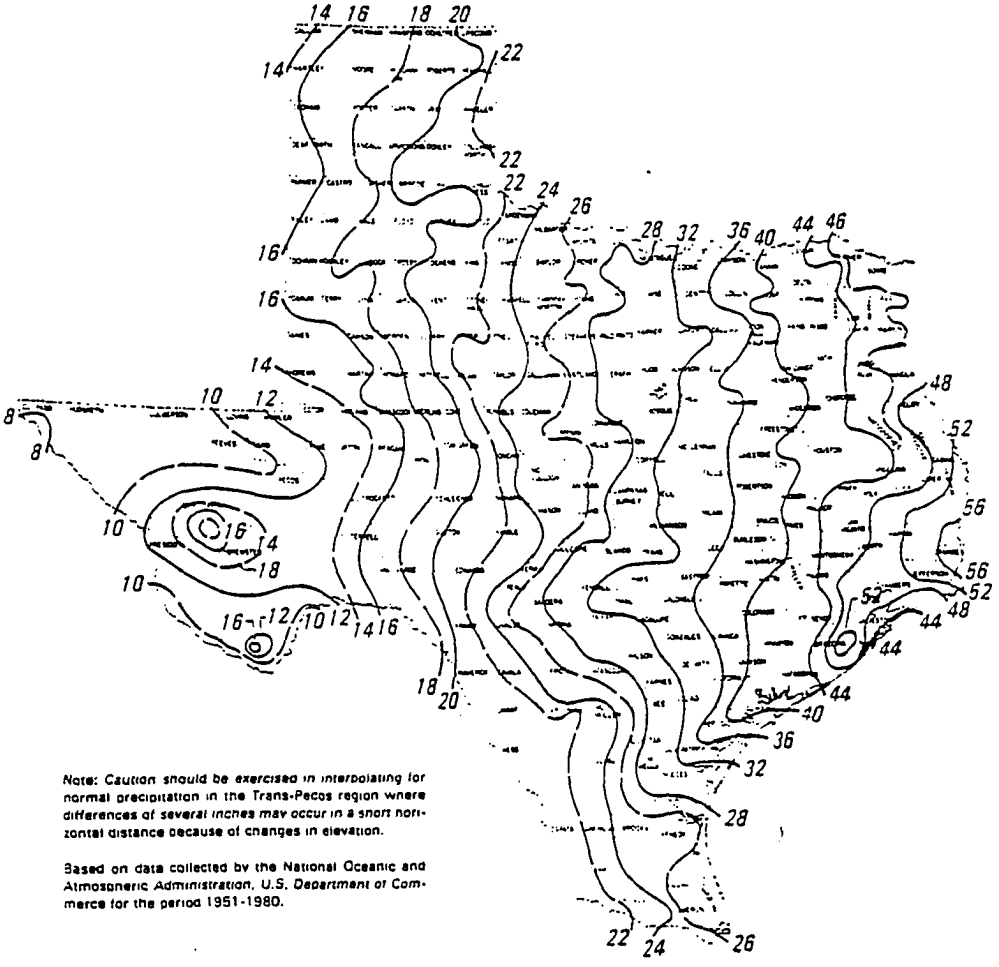
MEMBERS OF THE NATURAL RESOURCES COMMITTEE

| 66TH SESSION (1979-80) | 67TH SESSION (1981-82) | 68TH SESSION (1983-84) | 69TH SESSION (1985-86) | 70TH SESSION (1987-88) | 71ST SESSION (1989-90) |
|---|---|---|---|---|---|
| *Aaron Robert Swartz | *Tati Santiesteban | *Tati Santiesteban | *Tati Santiesteban | *Santiesteban | *Santiesteban |
| **Lindon Williams | **Lindon Williams | **Lindon Williams | **Lindon Williams | **J. Montford | **Ted Lyon |
| Tom Creighton | John Wilson | John Montford | John Montford | K.Armbrister | K.Armbrister |
| Ray Farabee | Jack Ogg | Ted Lyon | Ted Lyon | Ted Lyon | Teel Bivins |
| Glenn Kothmann | Glenn Kothmann | Glenn Kothmann | Glenn Kothmann | Frank Tejeda | J. Montford |
| Walter Mengden | Walter Mengden | Hector Uribe | Hector Uribe | Hector Uribe | Hector Uribe |
| William N. Patman | Buster Brown | Buster Brown | Buster Brown | Buster Brown | Buster Brown |
| Bob Price | Bill Sarpalius | Bill Sarpalius | Bill Sarpalius | B. Sarpalius | SteveCarriker |
| E. L. Short | E. L. Short | Bill Sims | Bill Sims | Bill Sims | Bill Sims |
| Carlos Truan | Carlos Truan | Carlos Truan | Carlos Truan | JohnWhitmire | Bill Ratliff |
| R. L. (Bob) Vale | R. L. (Bob)Vale | R. L. (Bob) Vale | Cyndi Krier | JudithZaffirini | J.Zaffirini |

*Chairman
**Vice-Chairman

[a]Senators serve 4-year terms. One-half of the Senators are elected in even-numbered years.

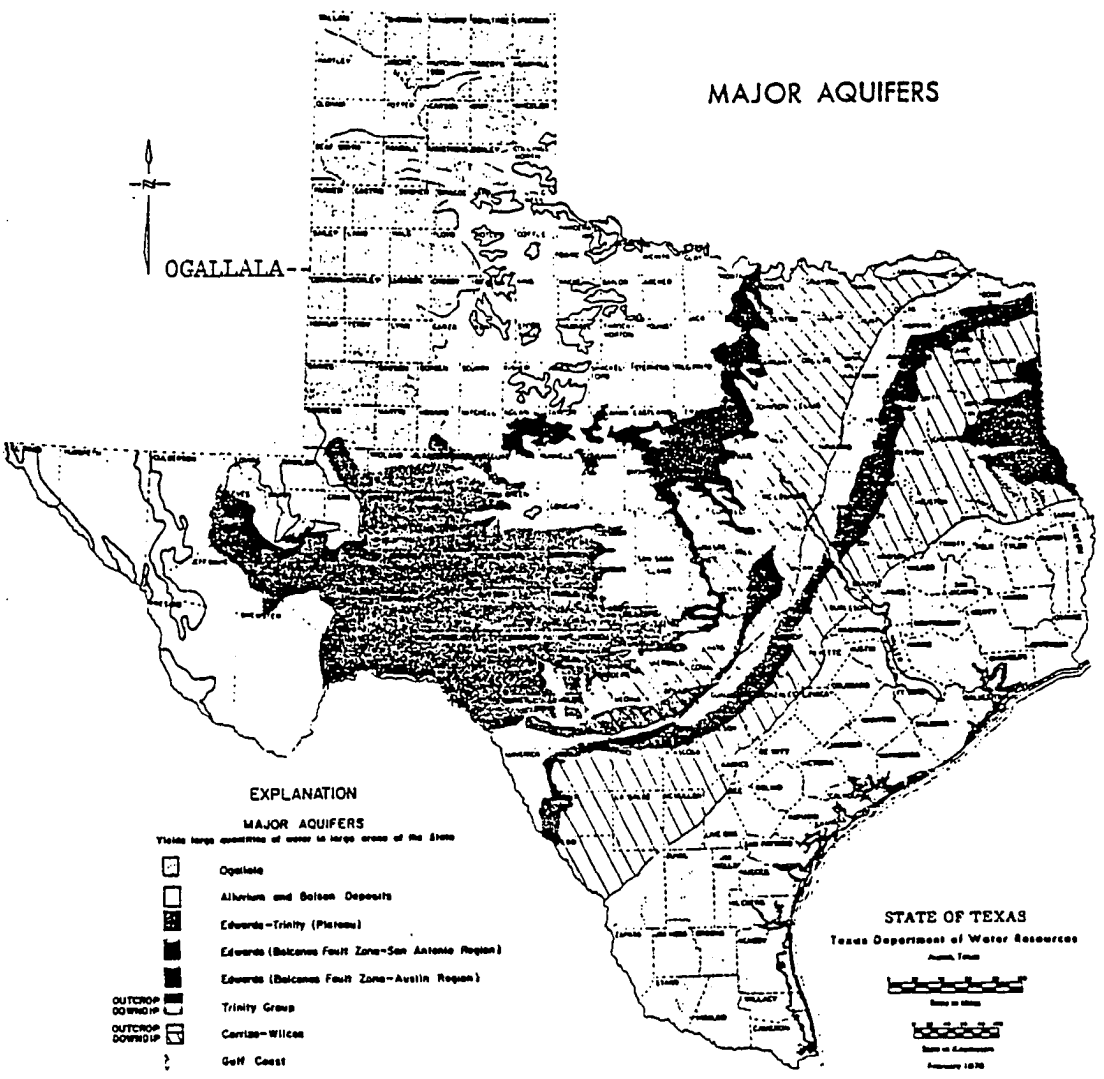
APPENDIX B-1




**Normal Annual Precipitation (Inches)**

Source: Texas Department of Water Resources, Water for Texas, A Comprehensive Plan for the Future, Vol. 1, November, 1984, p. 16.

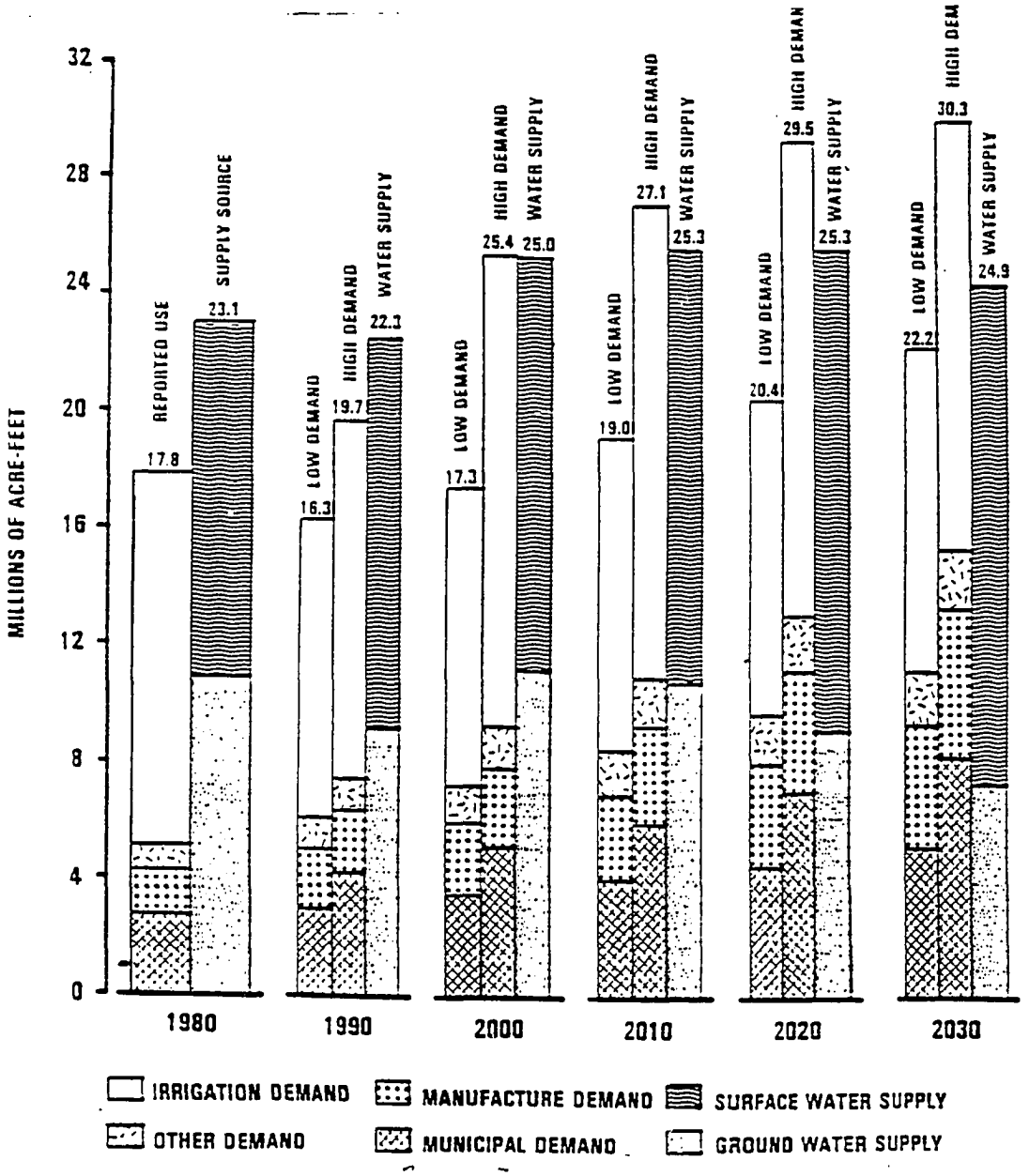
APPENDIX B-2




Source: High Plains Underground Water Conservation District No. 1, An Introduction to Water and Water Conservation with Emphasis on The High Plains of Texas, p. 20.

APPENDIX B-3

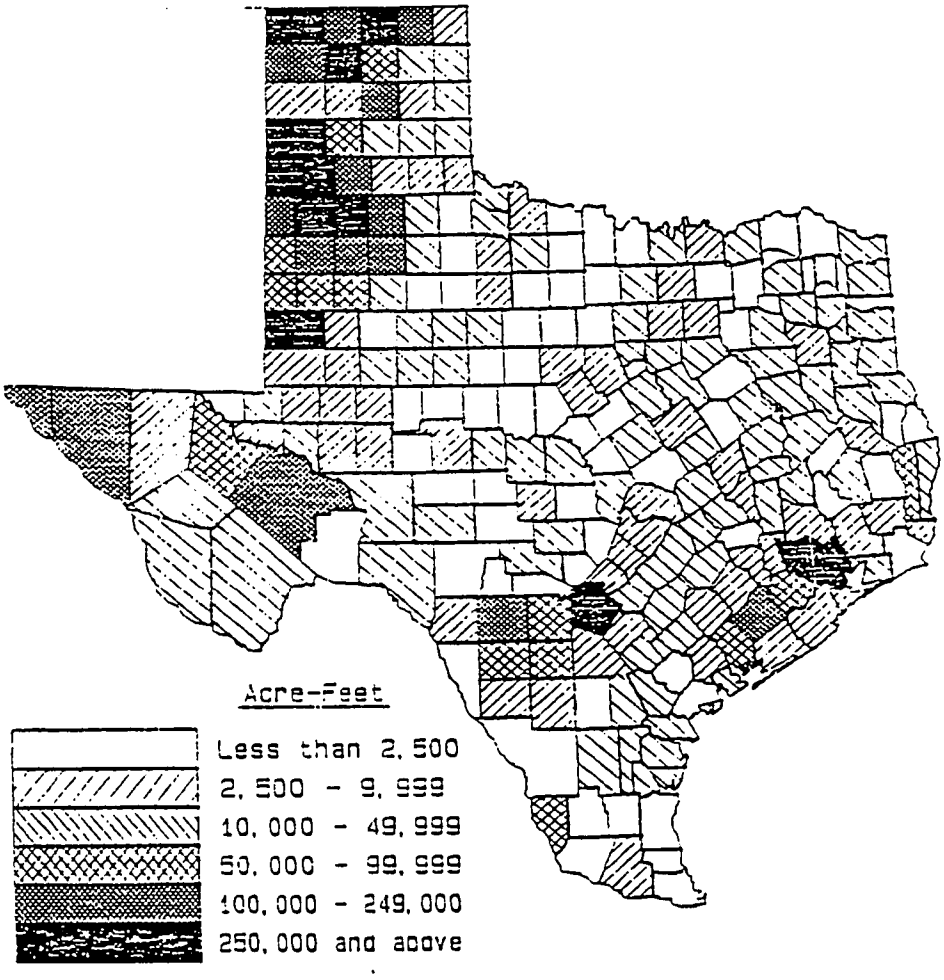
PROJECTED WATER DEMAND AND SUPPLY--TEXAS




Source: Water District and River Authority Study Committee Report to the 70th Texas Legislature, December, 1986, p. 32.

APPENDIX B-4

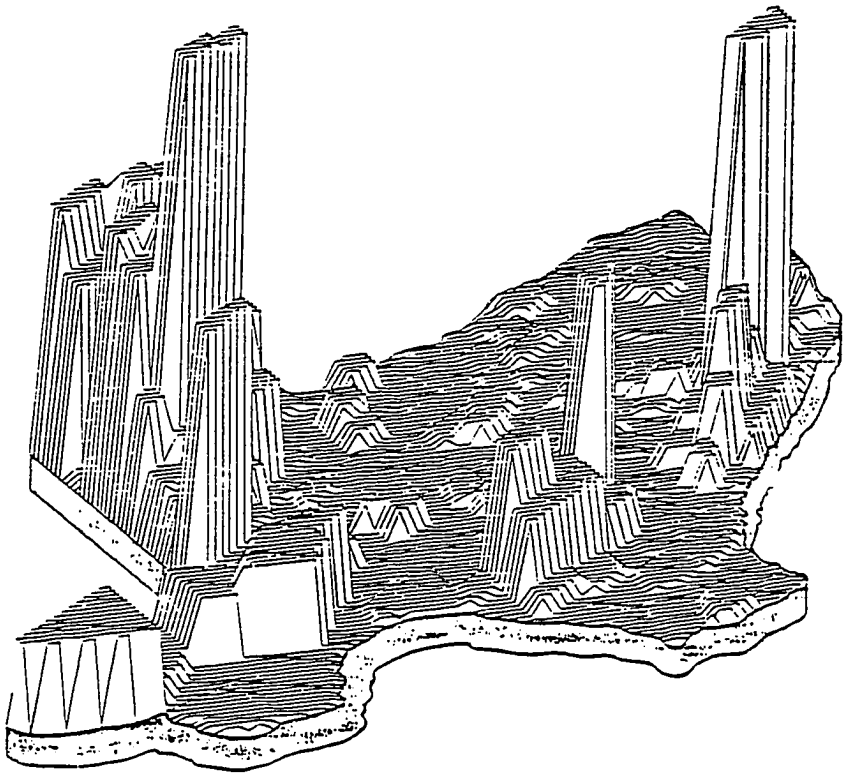
1984 GROUND-WATER PUMPAGE, BY COUNTY, IN ACRE-FEET IN TEXAS




Source: Texas Water Development Board, Ground-Water Conditions in Texas, 1980-1985, October, 1988, p. 50.

APPENDIX B-5

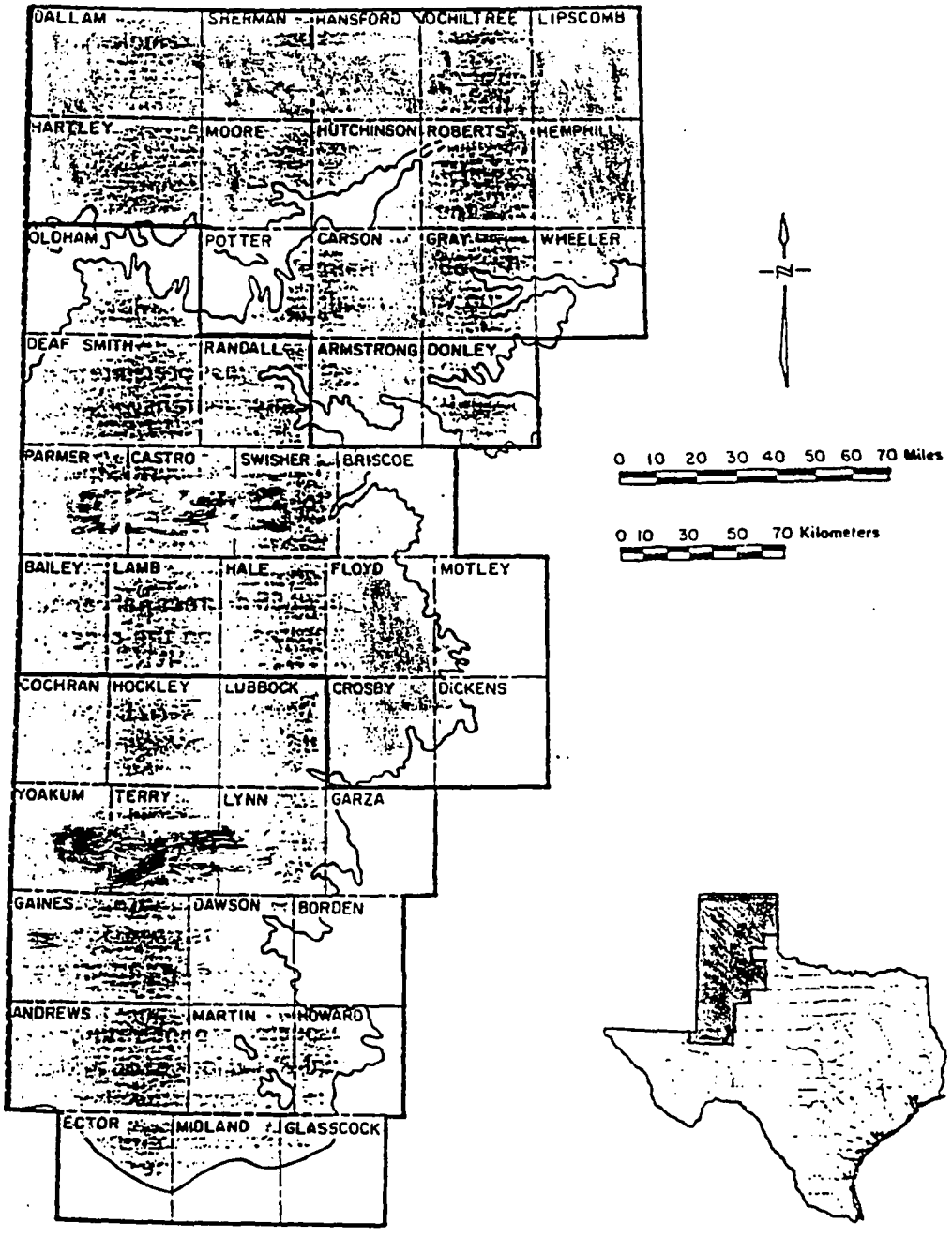
GRAPHIC ILLUSTRATION OF 1984 PUMPAGE BY COUNTY--TEXAS



Source: Texas Water Development Board, Ground-Water Conditions in Texas. 1980-1985, October, 1988, p. 51.

# APPENDIX B-6

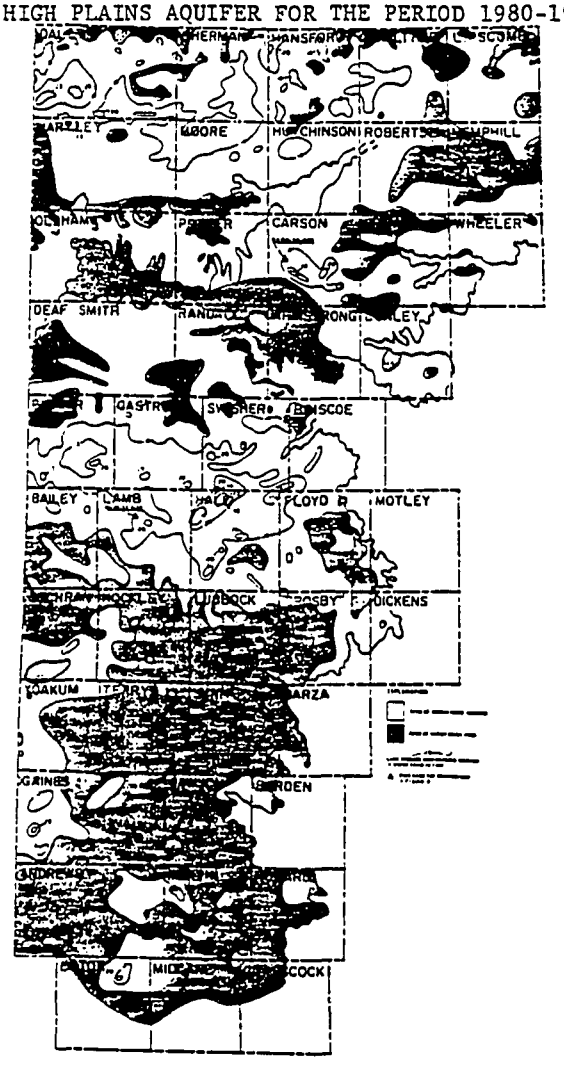
## EXTENT OF THE HIGH PLAINS AQUIFER IN TEXAS




Source: Texas Dept. of Water Resources, Evaluating the Ground-water Resources of the High Plains of Texas, Vol. 1, May, 1984, p. 3.

APPENDIX B-7

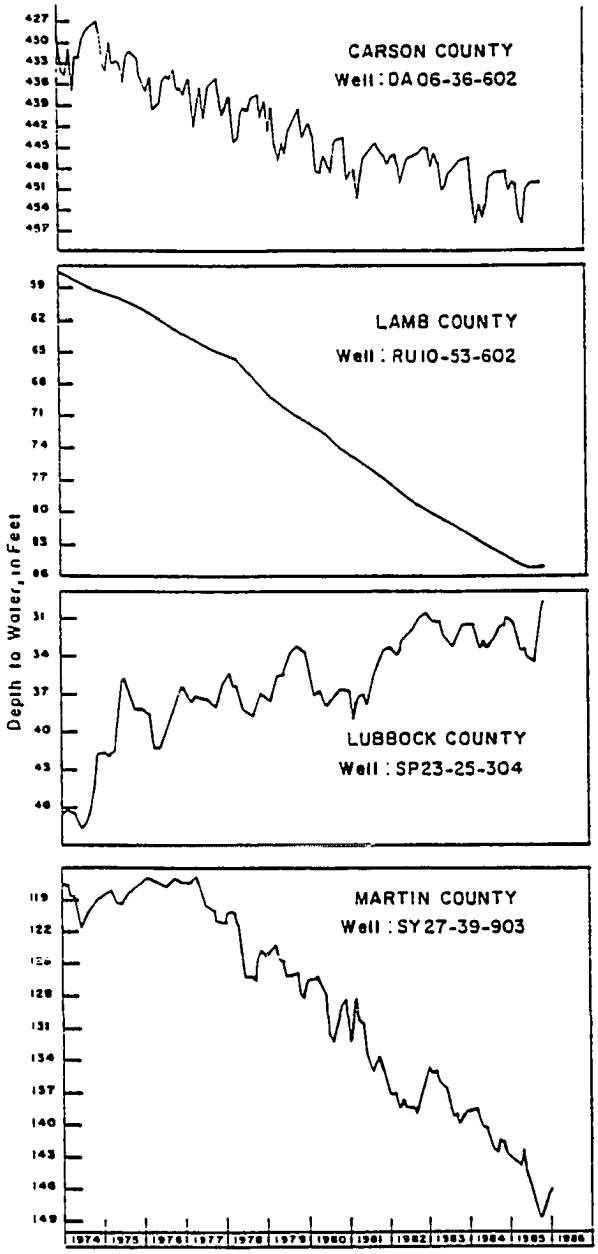
MAP SHOWING APPROXIMATE CHANGES OF WATER LEVEL
IN THE HIGH PLAINS AQUIFER FOR THE PERIOD 1980-1985




Source: Texas Water Development Board, Ground-Water Conditions in Texas, 1980-1985, October 1988, p. -.

APPENDIX B-8

HYDROGRAPHS OF SELECTED WELLS COMPLETED IN THE HIGH PLAINS AQUIFER

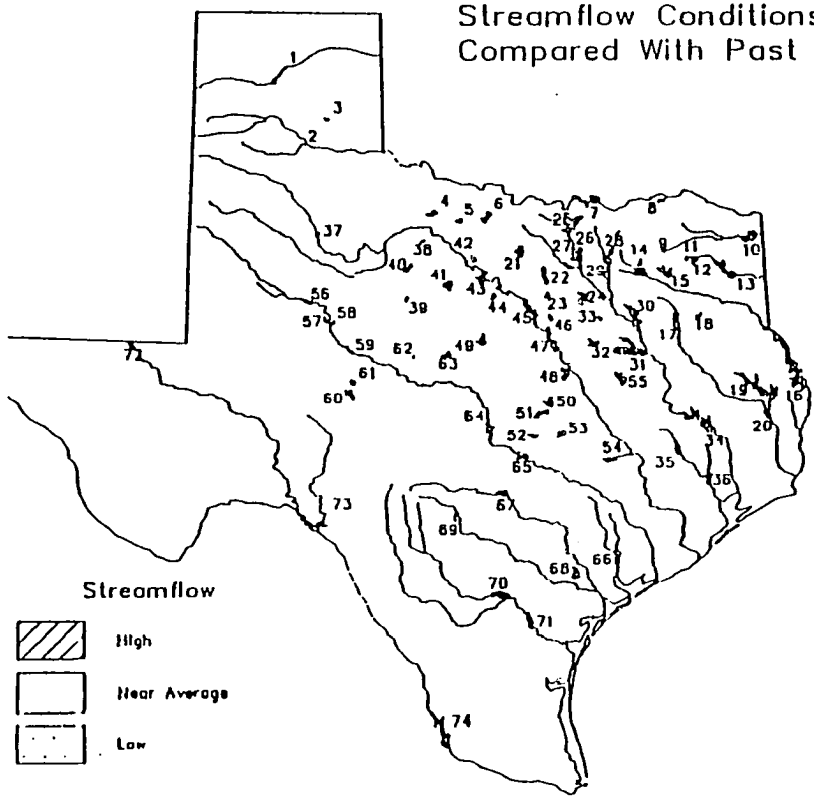



Source: Texas Water Development Board, Ground-Water Conditions in Texas, 1980-1985, October 1988, p. 6.

APPENDIX B-9

MAJOR RESERVOIRS IN TEXAS

## Streamflow Conditions for September Compared With Past Records

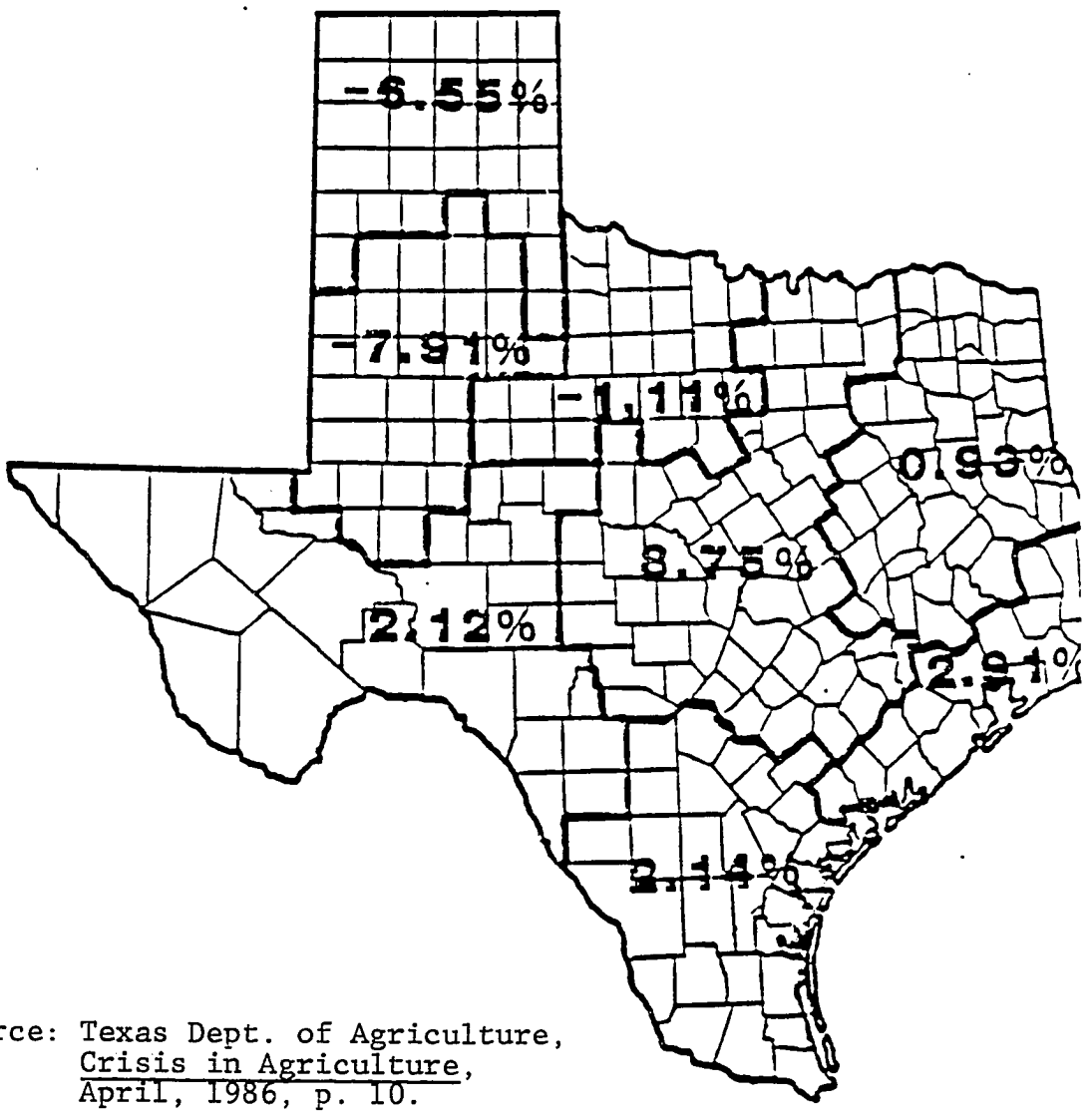



Adapted from Texas Water Development Board
Texas Water Conditions, November, 1988

### Reservoirs Shown on Map

1. Lake Meredith
2. Mackenzie Reservoir
3. Greenbelt Lake
4. Lake Kemp
5. Lake Kickapoo
6. Lake Arrowhead
7. Lake Texoma
8. Pat Mayse Lake
9. Lake Sulphur Springs
10. Wright Patman Lake
11. Lake Cypress Springs
12. Lake Bob Sandlin
13. Lake O' The Pines
14. Lake Tawakoni
15. Lake Fork Reservoir
16. Tadalo Bend Reservoir
17. Lake Palestine
18. Lake Tyler
19. Sam Rayburn Reservoir
20. B. A. Steinhagen Lake
21. Bridgeport Reservoir
22. Eagle Mountain Lake
23. Benbrook Lake
24. Joe Pool Lake
25. Ray Roberts Lake
26. Lewisville Lake
27. Grapevine Lake
28. Lavon Lake
29. Lake Ray Hubbard
30. Cedar Creek Reservoir
31. Richland-Chambers Lake
32. Navarro Mills Lake
33. Bardwell Lake
34. Lake Livingston
35. Lake Conroe
36. Lake Houston
37. White River Lake
38. Millers Creek Reservoir
39. Fort Phantom Hill Res.
40. Lake Stamford
41. Hubbard Creek Reservoir
42. Lake Graham
43. Possum Kingdom Lake
44. Lake Palo Pinto
45. Lake Granbury
46. Pat Cleburne Lake
47. Whitney Lake
48. Waco Lake
49. Proctor Lake
50. Belton Lake
51. Stillhouse Hollow Lake
52. Lake Georgetown
53. Granger Lake
54. Somerville Lake
55. Lake Limestone
56. Lake J.B. Thomas
57. Lake Colorado City
58. Champion Creek Reservoir
59. E.V. Spence Reservoir
60. Twin Buttes Reservoir
61. O.C. Fisher Lake
62. Hords Creek Lake
63. Lake Brownwood
64. Lake Buchanan
65. Lake Travis
66. Lake Texana
67. Canyon Lake
68. Coleto Creek Reservoir
69. Medina Lake
70. Choke Canyon Reservoir
71. Lake Corpus Christi
72. Red Bluff Reservoir
73. Intl. Amistad Reservoir
74. Intl. Falcon Reservoir

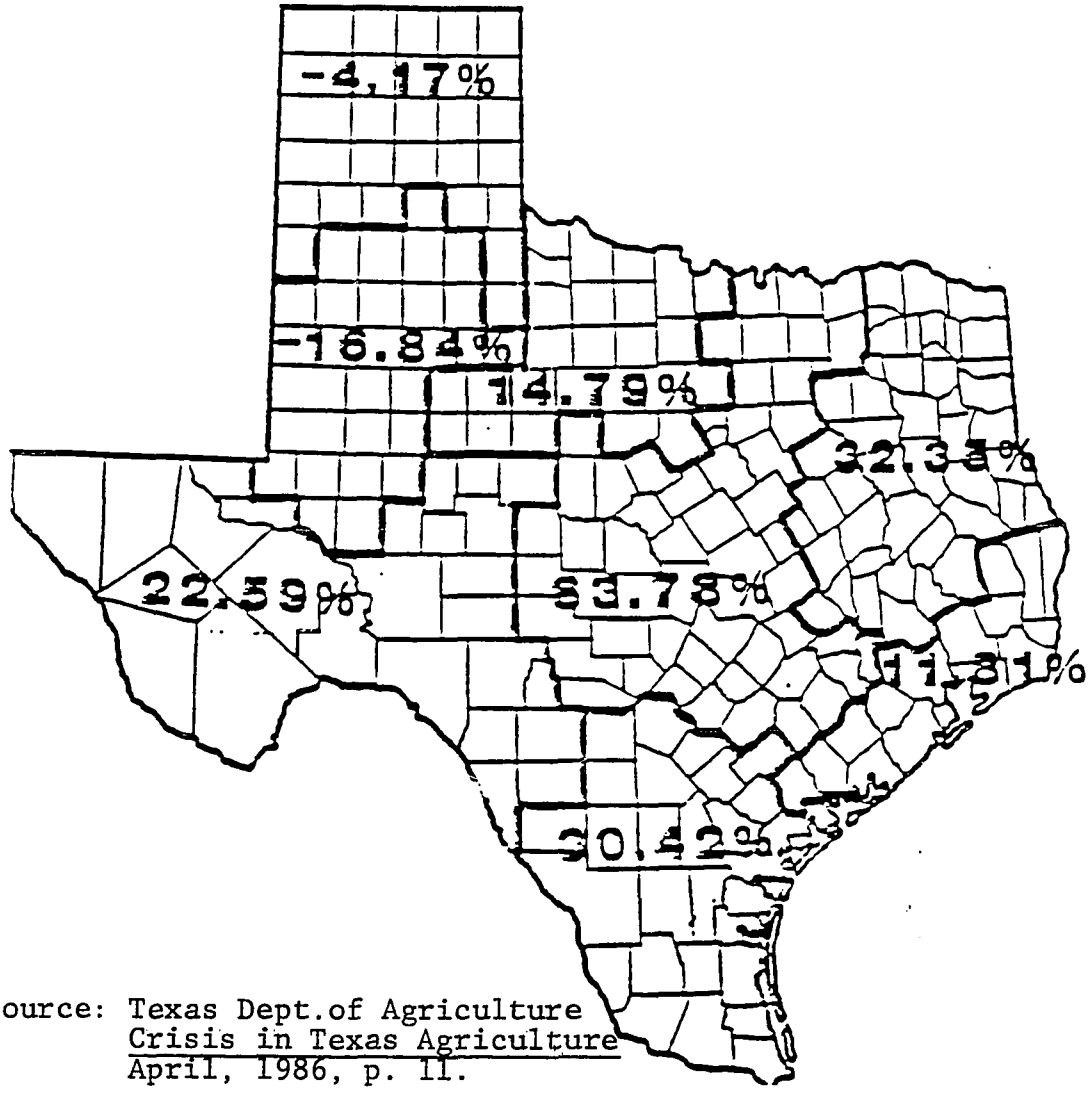
PERCENT CHANGE IN FEDERAL LAND BANK
BENCHMARK VALUES: 1984-1985




Source: Texas Dept. of Agriculture,
Crisis in Agriculture,
April, 1986, p. 10.

The information contained in this map was developed for internal planning by the Federal Land Bank of Texas. This information does not constitute representation of value to any third party.

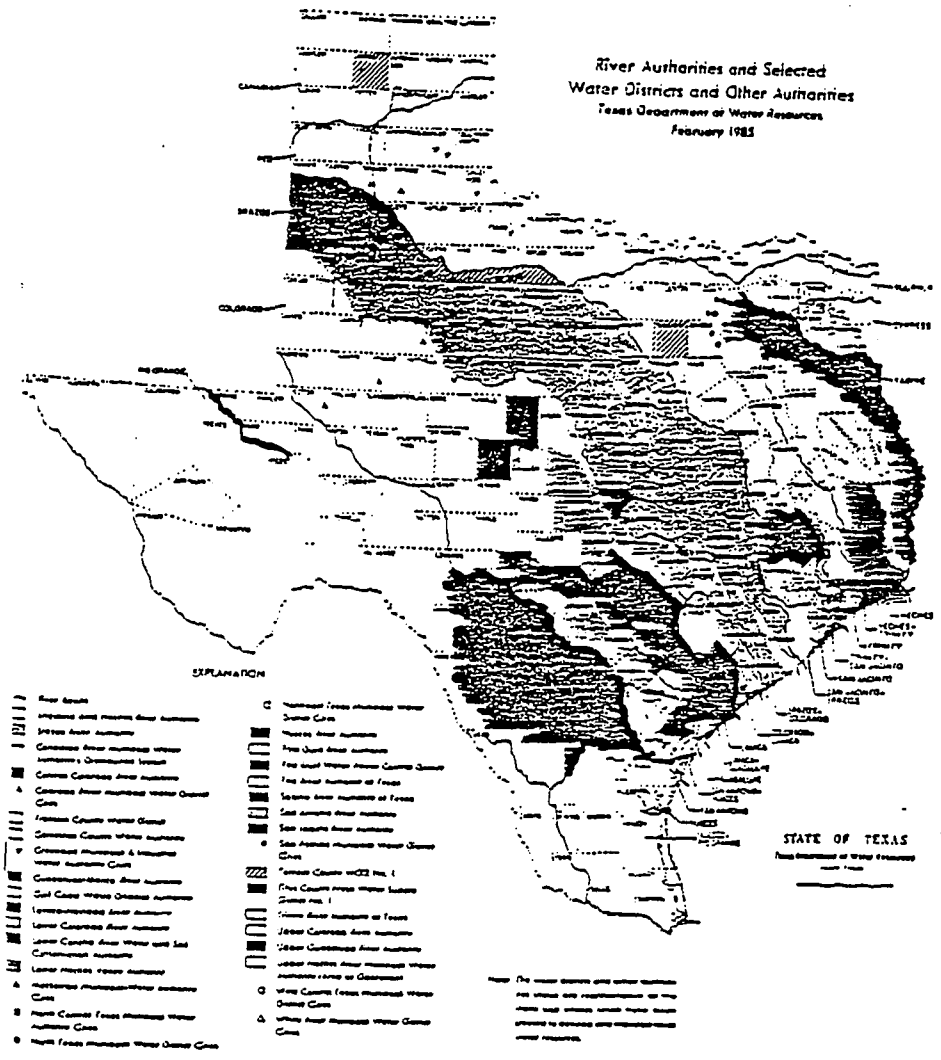
PERCENT CHANGE IN FEDERAL LAND BANK
BENCHMARK VALUES: 1981-1985




Source: Texas Dept.of Agriculture
Crisis in Texas Agriculture
April, 1986, p. 11.

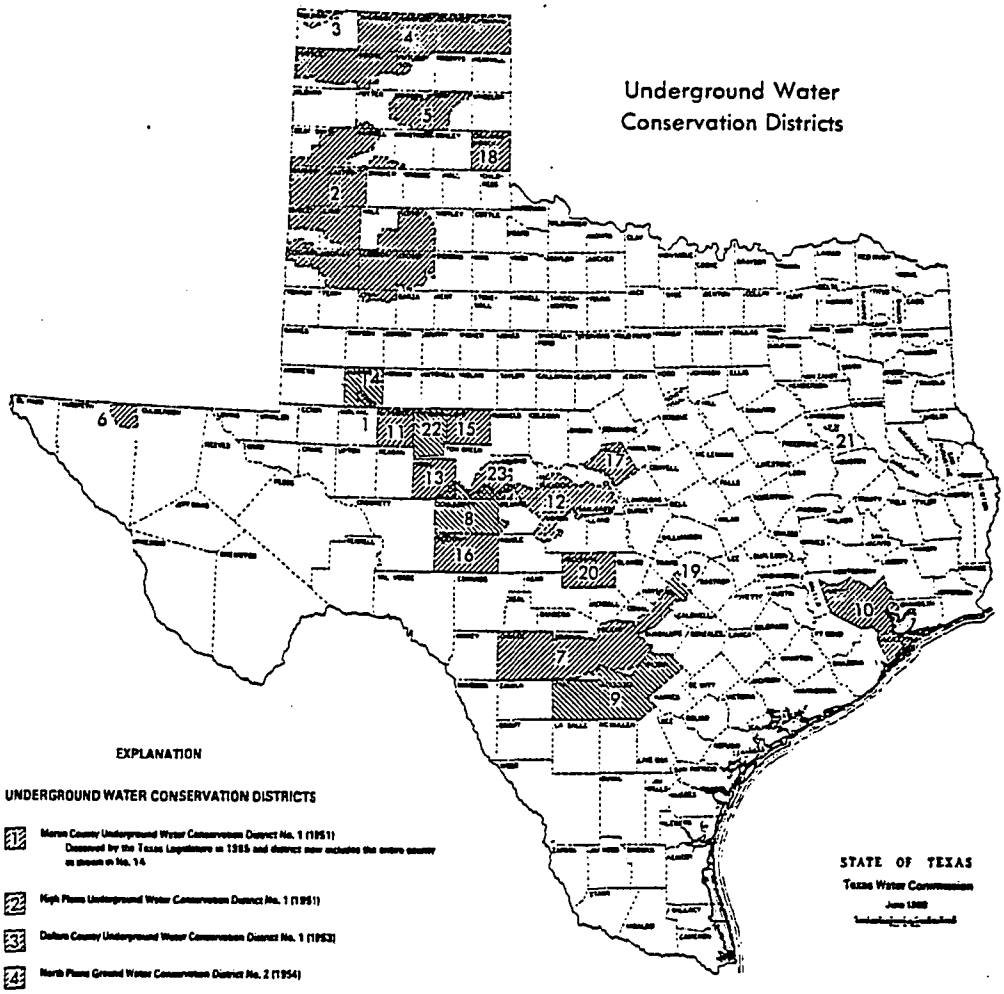
The information contained in this map was developed for internal planning by the Federal Land Bank of Texas. This information does not constitute representation of value to any third party.

APPENDIX 3-12




Source: Water District and River Authority Study Committee Report to the 70th Texas Legislature, December, 1986, Appendix B

APPENDIX B-13




EXPLANATION

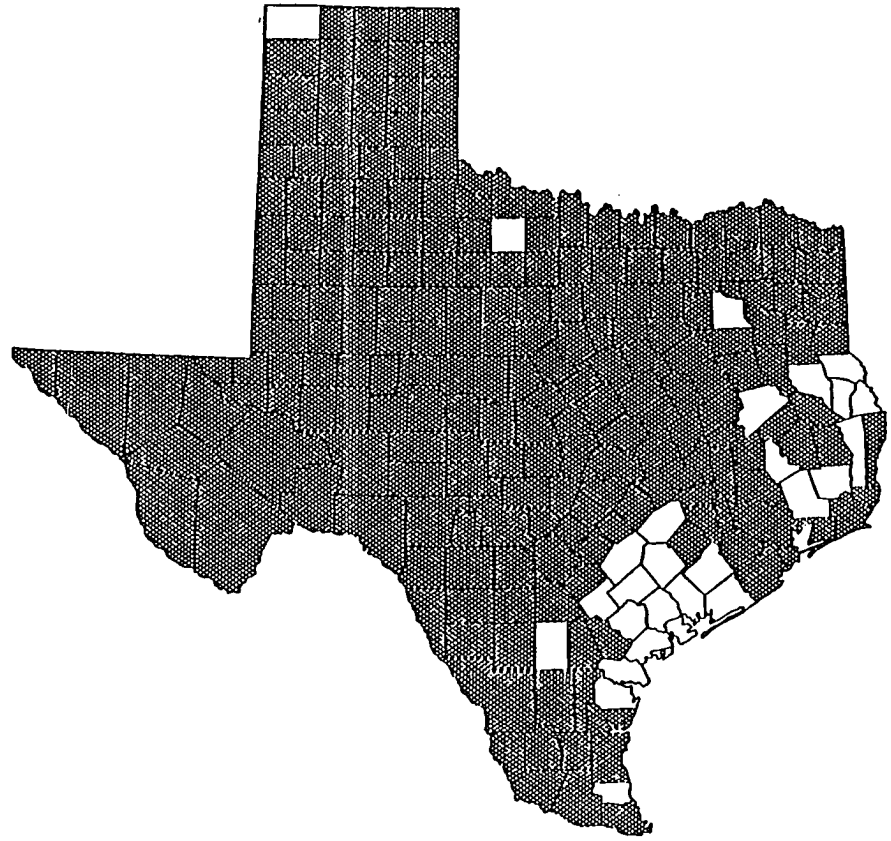
UNDERGROUND WATER CONSERVATION DISTRICTS

1. Morton County Underground Water Conservation District No. 1 (1951)
Dissolved by the Texas Legislature in 1985 and district now includes the entire county as shown in No. 14
2. High Plains Underground Water Conservation District No. 1 (1951)
3. Dallam County Underground Water Conservation District No. 1 (1953)
4. North Plains Ground Water Conservation District No. 2 (1954)
5. Panhandle Ground Water Conservation District No. 3 (1956)
6. Hudspeth County Underground Water Conservation District No. 1 (1957)
7. Edwards Underground Water District (1959)
8. Plateau Underground Water Conservation and Supply District (1965)
Northwest portion of district also included in Irion County district as shown in No. 13. The southwest portion of the district also included in Sutton County district as shown in No. 16
9. Evergreen Underground Water Conservation District (1965)
Five County added to district in October 1985 after election following passage of SB-1253
10. Harris-Galveston Coastal Subsidence District (1975)
11. Glasscock County Underground Water Conservation District (1981)
12. Mahony Underground Water Conservation District No. 1 (1982)
13. Irion County Water Conservation District (1985)
Southeast portion of district also included in Plateau district as shown in No. 8.
14. Morton County Underground Water Conservation District (1985)
15. Coke County Underground Water Conservation District (1986)
16. Sutton County Underground Water Conservation District (1986)
Northwest portion of district also included in Plateau district as shown in No. 8. A small area on the northeastern part of the county was excluded from district
17. Fox Crossing Water District (1986)
18. Collingsworth County Underground Water Conservation District (1987)
19. Barton Springs—Edwards Aquifer Conservation District (1987)
20. Hill Country Underground Water Conservation District (1987)
21. Anderson County Underground Water Conservation District (1987)
22. Sterling County Underground Water Conservation District (1987)
23. Upton-Kickapoo Water Conservation District (1987)
Southwest portion of district also included in Plateau district as shown in No. 8
12 14. Limits of underground water conservation districts (numbered in the order in which they were established)
(1959) Date of establishment of district

Note: This is the most recently published map. Map does not show districts approved by the 71st Texas Legislature (1989).

# Appendix B–14

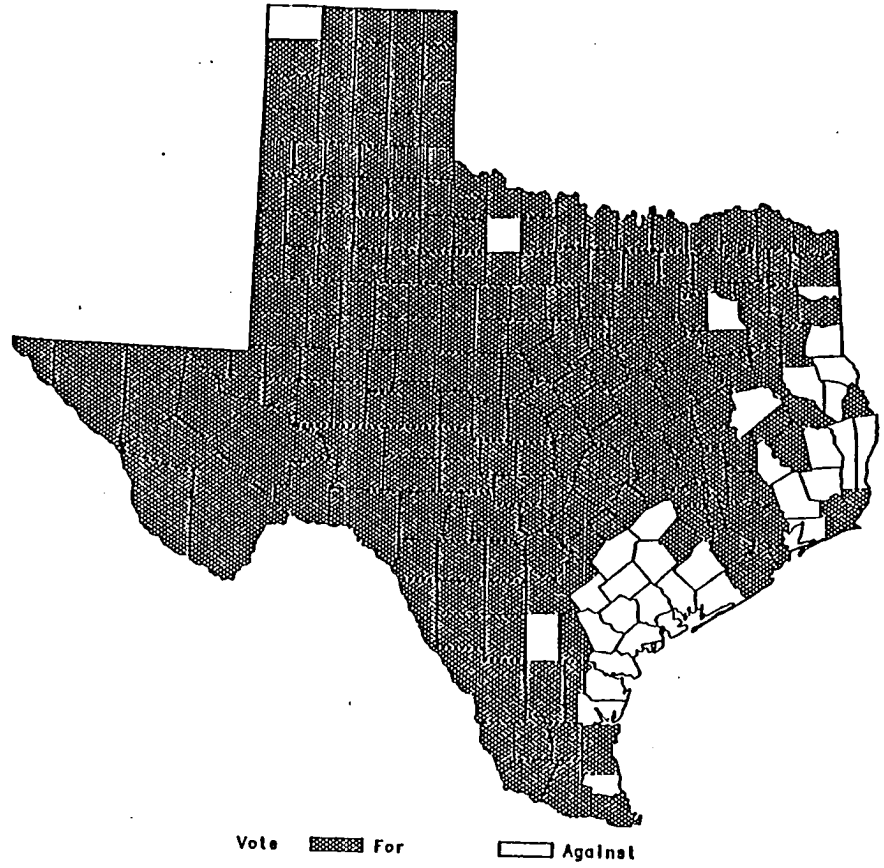
**Proposition 1 Water Development Bonds**
**County–by–County Results**




Source: "Official Election Returns," November 5, 1985
Secretary of State, State of Texas

# Appendix B–15

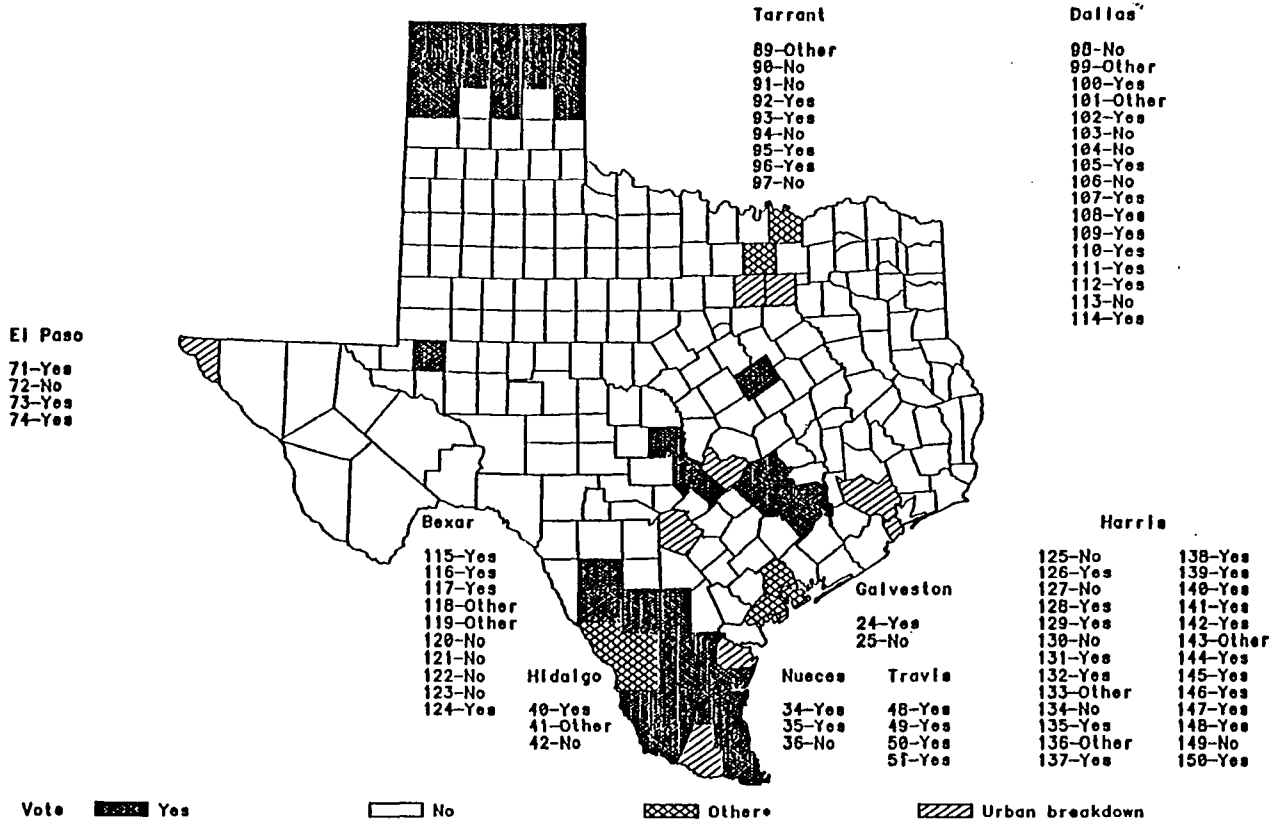
**Proposition 2 Water Conservation Bonds**
**County–by–County Results**




Source: "Official Election Returns," November 5, 1985
Secretary of State, State of Texas

# Appendix B–16

## Texas House of Representatives
## Vote on S.B. 967
## 70th Regular Session




* Other – excused absence, "present" or off the floor

Source: "House Vote on Groundwater Bill," State Capitol Report, June 4, 1987, p.4

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# VITA

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