Texas House of Representatives

Interim Report to the 69th Texas Legislature

Committee on Natural Resources
The Honorable Gib Lewis
Speaker of the House of Representatives

Members, Texas House of Representatives
69th Texas Legislature

Dear Mr. Speaker and Members:

Transmitted herewith is the Report of the Natural Resources Committee which is to be submitted to the 69th Texas Legislature.

Sincerely,

Tom Craddick,
Chairman
REPORT
OF THE
TEXAS HOUSE OF REPRESENTATIVES
NATURAL RESOURCES COMMITTEE

A REPORT TO THE
HOUSE OF REPRESENTATIVES
69TH TEXAS LEGISLATURE

TOM CRADDICK
CHAIRMAN

STAFF
WILLIAM S. ROSE
At the commencement of the 68th Legislature, the Honorable Gib Lewis, Speaker of the Texas House of Representatives, appointed the House Committee on Natural Resources.

The Committee membership, as appointed, included nine members of the House of Representatives as follows: Tom Craddick of Midland, Chairman; Rodney Tow of Conroe, Vice Chairman; Gerald Geistweitd of Mason, Vice Chairman of Budget and Oversight; J. W. ("Buck") Buchanan of Dumas, Noel Grisham of Round Rock, Arves Jones of El Paso, Hill Kemp of Manvel, Roman Martinez of Houston, and Charles ("Chip") Staniswalis of Amarillo.

The Committee, during the interim, was assigned several charges by the Speaker. In order to undertake the charges effectively and efficiently, Chairman Craddick appointed the following subcommittees to study the charges shown below:

I. Groundwater Subcommittee:
Chairman: Gerald Geistweitd
Members: J. W. ("Buck") Buchanan
Charles ("Chip") Staniswalis
Charge: To investigate and monitor all efforts being made in Texas with regard to, and determine the potential for, increased groundwater production and supplies through enhanced recovery methods.

To investigate and recommend legislation for management of groundwater.

II. Environmental Subcommittee:

Chairman: Rodney Tow

Members: Hill Kemp
          Roman Martinez

Charge: To assess and investigate the need for state action to ensure the future environmental quality of Clear Lake and to preserve the sensitive ecosystems of said Lake.

To investigate and identify appropriate and workable state responses to the problem of non-localized flooding.

III. Water Subcommittee:

Chairman: Tom Craddick

Members: Gerald Geistweitd
          Noel Grisham
          Arves Jones

Charge: To investigate and determine the advisability and constitutionality of enacting a single statute authorizing governing body members of conservation and reclamation districts created by special legislation to serve up to four year terms.

To investigate the need to enact legislation relating to surface water rights.

All subcommittees have completed their hearings and investigations and have issued their respective reports. All subcommittee reports have been adopted and approved by the
Natural Resources Committee to be incorporated as the following final report for the entire Committee. The Committee findings and recommendations are found in the report.

Finally, the Committee wishes to extend its appreciation to the Texas Department of Water Resources and the citizens who testified at our hearings for their time and complete cooperation with the Committee.
All Sections of the following Report have been approved by the members of the Natural Resources Committee listed below:

- Tom Craddick, Chairman
- Rodney Tow, Vice Chairman
- Gerald Geistweidt, Vice Chairman of Budget and Oversight
- Arves Jones
- Hill Kemp
- Roman Martinez

The following members approved only Sections C, D, E and F of the Report:

- J. W. ("Buck") Buchanan
- Noel Grisham
- Charles ("Chip") Staniswalis
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A. Groundwater Management

Groundwater is generally found in water-bearing formations beneath the surface of the earth called "aquifers." There are seven major aquifers in the State: the High Plains (Ogallala), Alluvium-Bolson Deposits, Trinity Group, Carrizo-Willcox, Gulf Coast, Edwards Trinity (Plateau) and the Edwards (Balcones Fault Zone). Additionally, approximately 17 minor aquifers are found throughout the State. A major aquifer is defined as one which yields large quantities of water in a comparatively large area of the State. Minor aquifers yield large quantities of water in small areas or small quantities in large areas of the State.

At the present time, aquifers supply 13.1 million acre-feet of water used annually in the State, or approximately 69% of all the water used in Texas. If current water use trends continue, by the year 2000, aquifers are projected to be capable of supplying only about 6.8 million acre-feet annually or about 52% of the present amount of groundwater used.

Many areas of the state are experiencing groundwater problems—not just shortages, but also problems of contamination, saltwater intrusion and subsidence. Some of these areas and their problems are as follows:

1. In the Upper Rio Grande Area (El Paso), groundwater supplies must be shared by Texas, New Mexico and the
Country of Mexico. During the last 30 years, groundwater supplied approximately 35% of the water needed for the El Paso irrigation area. Groundwater from the Hueco Bolson Deposits constitutes the primary source of municipal and industrial supply water, but this source is being "mined," and its water quality is being encroached upon by adjacent saline water-bearing sands. Additionally, groundwater, although projected to meet El Paso's needs through 1995, will be more expensive to pump and will be of poorer quality. Groundwater supplies for smaller cities in the area are currently scarce, expensive to pump, and have high salinity.

2. In the High Plains Area (Odessa, Midland, Lubbock and Amarillo), surface water supplies are short, and the area must depend heavily on the groundwater supplies found primarily in the Ogallala Aquifer. Currently, the Ogallala supplies irrigation water to 5.9 million acres on the High Plains. The capability of the Ogallala to continue supplying the High Plains is diminishing. It is projected by the year 2000 that the aquifer will supply only 5.2 million acres if there is an effective water conservation program implemented and just 3.2 million acres if such a program is not implemented. By the year 2030, it is projected that the Ogallala can supply water to irrigate only 2.2 million acres in the
High Plains. An additional problem is that in many areas the groundwater is higher in fluoride and nitrate concentrations than the federal government and the state allow for public consumption.

3. In the Low Rolling Plains Area (Abilene and Wichita Falls), groundwater is scarce in supply and suffers from high nitrate concentrations due to natural phenomena, septic tanks, cesspools, feed lots, agricultural fertilizers and cultivation practices. Additionally, the groundwater is higher in fluoride than permissible under state standards for public consumption. Further, groundwater is consumed in part by woody species that draw water directly from the water table or from soils just above it. These species (phreatophytes) have little utility and compete with more useful plants for the water.

4. In the North Central Texas Area (Dallas-Ft. Worth), groundwater levels have been substantially lowered in the Trinity Group Aquifer and pumping costs are expected to increase. Additionally, the groundwater quality is deteriorating and fluoride concentrations are high. Smaller cities in the area have inadequate supplies to meet their projected needs.

5. In the Northeast Area (Texarkana, Marshall, Longview, and Tyler), shallow groundwater in many areas has concentrations of iron and high acidity, making the
water undesirable for municipal and manufacturing purposes.

6. In the South Central Area (Austin, San Antonio, San Angelo, Edwards Plateau, and Winter Garden), the Edwards Balcones Fault Zone Aquifer is continually being subjected to the threat of contamination as a result of development over and near the aquifer. Pumping in the Winter Garden Area has lowered the levels in the Carrizo Aquifer more than 400 feet since 1930. Groundwater within that aquifer is being encroached upon by poor quality water, and pumping costs continue to increase. Hydrogen sulfide occurs in some areas of the Edwards, and saline water encroachment may occur if there is overpumping in the future.

7. In the Lower Rio Grande Valley and Coastal Bend Area (Brownsville, Harlingen, McAllen, and Corpus Christi), there are scarce quantities of groundwater to meet projected growth needs for all purposes. Again, in this area phreatophytes compete for groundwater.

8. In the Southeast Gulf Coast Area (Houston, Galveston, Beaumont, Port Arthur, Orange), land surface subsidence and saltwater encroachment occur when the Gulf Coast Aquifer is pumped.

Groundwater problems will exacerbate as the demand for water supplies increases in our state. Texas, as one of the sunbelt states, is being subjected to both population and
economic growth. It has been projected that the State's population will increase from 14.2 million residents in 1980 to about 21 million by year 2000, and that by year 2030 the population of the State will range between 30 to 35 million people. As the population grows, so will the economy and the demand for better water supplies, including the demand for groundwater and the need for protection of aquifers from saltwater intrusion and contamination.

Unlike surface water supplies which are owned by the State under law, groundwater is owned by the surface owner. The rights to groundwater in Texas and Texas groundwater law are found primarily in Texas case law, although Section 52.002, Texas Water Code, does recognize the right of the landowners to underground water.

In Houston T.C. Ry. Co. v. East, 98 Tex 146, 81 S.W. 279 (1904), the Texas Supreme Court made it clear that Texas had adopted the English or Absolute Doctrine for groundwater law. Generally, this doctrine provides that the owner of the land owns the percolating water underneath and has an absolute right to withdraw the water. The doctrine was reaffirmed in 1955, by the Texas Supreme Court in City of Corpus Christi v. City of Pleasanton, 154 Tex 289, 276 S.W.2d 798 (1955), wherein the Court upheld the surface owner's right not only to withdraw water but also to sell it for beneficial use 118 miles away. The fact that large quantities of water (up to
74\%) would be lost to evaporation during transit was not considered wasteful by the Court. Further, the landowner can not only sell groundwater, but also sell the right to groundwater. *Texas Co. v. Burkett*, 117 Tex 16, 296 S.W. 276 (1927). However, the Supreme Court in a relatively recent decision made it clear that the right to use groundwater is not absolute and that a landowner may be subjected to a suit for damages if the groundwater is withdrawn in a manner that is negligent, willfully wasteful, or for the purpose of malicious injury, but limited its holding to only those instances when such conduct is the proximate cause of the subsidence of the land of others. *Friendswood Development Company v. Smith-Southwest Industries, Inc.*, 576 S.W.2d 21 (Tex. 1978).

In order to conserve groundwater, underground water districts have been created in some areas of the State. Some of these districts have been created by special statute and others have been created pursuant to the provisions of Chapter 52, Texas Water Code. At least 15 of these districts have been created with 14 still active. The six most active include three in the northern and panhandle regions, one in West Texas, one over the Edward Aquifer, and one that encompasses Harris and Galveston Counties, the latter having the primary purpose of preventing subsidence.

Groundwater districts are authorized to (1) determine the quality and quantity of water being used, (2) determine
the feasibility of recharge, (3) develop plans for the most efficient use of the water, (4) require driller's logs to be filed with the district and to keep records on all wells drilled, (5) require permits before a well producing more than 100,000 gallons may be drilled, (6) space wells and regulate production to prevent interference between wells and excessive depletion of the water table, (7) prevent waste and pollution, (8) see that all abandoned wells are capped or plugged, (9) educate the public in conservation measures.

Most groundwater districts are prevented from buying or selling or transporting water.

In the past, several studies have been done by the State with respect to groundwater management. In a resolution adopted by the Texas Energy and Natural Resources Advisory Council regarding state water resources policy and dated March 30, 1983, it was recommended that the Water Development Board promulgate rules and standards governing the use, conservation and protection of groundwater resources and in those areas where local groundwater districts did not exercise jurisdiction, the Department of Water Resources would. It was also recommended that the Legislature should authorize underground water conservation districts to assess fees for the withdrawal of groundwater within the districts and to allow underground water conservation districts to
purchase and sell surface water. Similar recommendations were made by the Governor's Task Force On Water Resource Use and Conservation in a report issued September 2, 1982.

In its Interim Report to the 65th Texas Legislature, the Natural Resources Committee found that underground water districts are performing a valuable conservation service through their tail-water projects and pumping regulations and further found that effective conservation of groundwater can result through local regulation. In that Report, the Committee recommended (1) that groundwater districts be authorized to purchase and sell surface water, (2) that groundwater districts should have their own administrative provisions independent of the provisions provided by Chapter 51 of the Texas Water Code, and (3) consideration of eliminating the exemption from permits for wells producing 100,000 gallons per day or less.

Some have suggested that groundwater should be regulated by the State in the same manner that surface water is. This Committee is reluctant to recommend that. In Texas, underground water is recognized as being a property right owned by the landowner. In fact, the value of the land often depends upon the quantity and quality of water beneath it; many landowners have paid a higher price because land has underneath it good quality water that is found in abundance. In the North Plains Water District, a survey determined from
recent land sales that as much as 70% of land values were attributed to the availability of underground water. Within that same district, the Internal Revenue Service has recently determined that a depletion allowance should be granted to land over the Ogallala north of the Canadian River. Uninvited, extensive state regulation might result in an unconstitutio-

nally taking of property that would certainly result in substantial and expensive litigation for the State.

Additionally, state regulation of these many aquifers would be difficult and perhaps ineffective because each aquifer is unique, having its own physical and chemical characteristics and subject to its own variable annual rainfall and recharge rates. Use of the ground water from these aquifers also varies from region to region including uses for agricultural, municipal and stream flow needs. Accordingly, the objectives of protection and management may vary from one aquifer to the next. The objective in one area may be declining groundwater supply and in another area water quality, and in another area subsidence. All of this argues for local control and regulation as opposed to state-wide control.

The Committee believes that the best solution for most of Texas' groundwater problems is the creation of ground-

water districts. Under present law, the initiative to create these districts must be taken by the local citizenry either
(1) by introducing a bill in the Legislature to create a special legislative district or (2) by the filing of a petition with the Department of Water Resources to form a general law district pursuant to Chapter 52, Texas Water Code. Under present law, if there is no local initiative taken, no groundwater district will be formed, and groundwater problems as a practical matter will remain unaddressed.

Education of the public is perhaps the needed first step. In this connection, several recent polls were brought to the Committee's attention. In one, 98% of West Texas farmers were aware that groundwater supplies in their area were being depleted, but 78% of the farmers either strongly or moderately agreed that "any farmer should be free to determine how much water he can extract from aquifers." Seventy-three percent of these farmers opposed capacity constraints on wells which would limit the amount of water that could be extracted.

Another poll that was conducted statewide for the Governor's Task Force On Water Resource Use and Conservation and the Texas Department of Water Resources in 1982 reached the following conclusions:

Expressing traditionally held views that it is the right of the property owner to control his property, a majority of Texans oppose government regulation of the amount of groundwater that can be pumped on private property. If the pumping of groundwater must be regulated, however, a majority would delegate the responsibility to local government.
Among those who do favor government regulation of groundwater, opinions are fairly evenly divided between local and state regulation. However, among those who oppose government regulation of groundwater, six out of ten say the local government should be responsible if there must be government regulation.

The overall pattern of results is found among all groups of the population, with from six to seven out of every ten in each group opposed to government regulating the amount of groundwater which can be pumped on private property. All basic groups except those with less than a high school education prefer local government control if groundwater must be regulated; majorities range from five to more than six out of ten. A majority of those with less than a high school education favor State regulation.

It is believed that if the public were educated and made aware of the problems that exist and potential solutions for those problems, more groundwater districts would be formed in our State to the benefit of all of our citizens.

RECOMMENDATION

Accordingly, the Committee recommends that a statute be enacted directing the Texas Department of Water Resources to determine areas of existing and near-term critical groundwater problems and to hold public hearings throughout these areas. In these hearings, the Department would inform the public of (1) the serious local problems that exist and (2) what can be expected if nothing is done and (3) the advantages of an effective groundwater district. Additionally, the Department would be directed to hear testimony to help determine in each area where a groundwater district's boundary should be drawn, taking into consideration geological, hydrological,
economical and political factors. The law should also provide for the expansion of existing groundwater districts into new areas wherein local problems exist or threaten to exist. In areas in which it finds that serious local problems do or may exist in the near future, the Department could then make recommendations to the Texas Water Commission as to where boundaries should be drawn. The Commission would then determine after a hearing whether or not the area would be benefitted by a groundwater district and where the boundaries should be located. If the Commission determines that an area would be benefitted by a district, it would order an election within the proposed district boundaries for the purpose of determining whether the district is created.* Additionally, the Committee recommends that, with the exception of those districts already in existence, groundwater districts created under Chapter 52 be authorized to regulate wells producing more than 25,000 gallons per day and be authorized to sell, purchase, and distribute both ground and surface water in order to compensate for temporary shortages and provide for recharge.

*Cognizant that the strict regulation of groundwater rights may be construed as a taking as proscribed by the Texas Constitution, this Committee believes that before any groundwater district is created, the public within the boundaries of that district, including the landowners, should have the opportunity to vote on the district's creation.
In 1981, the 67th Legislature, prompted by a request by the High Plains Underground Water District No. 1, authorized the Texas Department of Water Resources to investigate the feasibility of secondary recovery of groundwater from the Ogallala Aquifer and appropriated funds to the Department for the investigation. The goals of this initial investigation were to (1) determine the amount of water in capillary storage*; (2) identify available or emerging technologies for recovery of capillary water; (3) evaluate capillary water recovery techniques; (4) develop plans to field test a recovery technique; and (5) field test a secondary recovery technique. The investigation was conducted as a cooperative effort primarily between the Department of Water Resources ("Department") and the High Plains Underground Water District No. 1 ("District").

The study indicated that significant volumes of capillary water are in storage and are recoverable although estimates vary greatly. Five potential secondary recovery techniques were identified: air drive, surfactant/foam, thermal, vibration, and electro-osmosis. Laboratory tests showed that techniques using air pressure were superior to other

*"Capillary water" is that water in the zone between the water table and the land surface that is held between soil particles by molecular attraction and capillarity.
techniques for recovery from a cost-effective and financial standpoint. After a small scale test was conducted in Slaton, a large scale field test using air pressure for secondary recovery of capillary water was conducted near Idalou, Texas. Over 140 acres was pressurized, and water levels and wells around the injection site rose with an estimated additional 460 acre-feet of water available to wells 160 days after the test. It was further concluded that after injection of air, the saturated portion of the aquifer contained additional water which could be pumped by conventional wells. It was determined from an economic standpoint that it would cost about $50.00 per acre-foot to produce the water made available by air injection. At this cost, the water could be used profitably by an irrigation farmer if favorable commodity prices existed. A city could probably afford to pay up to $136.00 per acre-foot for groundwater.

As a result of the initial success, additional funding was provided by the 68th Legislature for further testing of secondary recovery of groundwater from the Ogallala formation using the air-injection system. A project is now underway in the City of Wolfforth. A report is expected on Phase 2 at the end of this biennium. In this second phase, the District and the Department will attempt to determine the exact nature of the processes releasing water and the

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manner of movement of the freed water would be defined so that the process could be mathematically modeled. These models would aid in the injection of air in other areas of the High Plains. After the field data collection procedures were improved, another field demonstration would be conducted.

While the Department and the District differ as to the estimate of additional recoverable reserves that could be made available by the air-injection technique, it is apparent that whatever amount is recoverable would be significant and that the enhanced recovery technique could probably be used in most areas of our state.

RECOMMENDATION

It is the recommendation of this Committee that research in the area of secondary recovery of groundwater should be continued and that the State should continue to finance a substantial portion of this research. Subject matters of future research could include: (1) the development of better surfactants, (2) impact studies relating to the environmental impact of secondary recovery techniques, the threat of subsidence by these techniques and the impact on water quality of the various techniques, (3) whether or not the recharge rate would be slowed after injection, because recharge water would become capillary water rather than going to the water table, and (4) the optimum frequency for repetition of injection.
C. Appropriate and Workable State Responses To Non-Localized Flooding

Many parts of Texas are subject to periodic, damaging flood events resulting from frequent and/or intense rainfall, coastal hurricanes, and generally even terrain. The problem is exacerbated by increased runoff and decreased natural absorption resulting from urbanization and development.

Costs associated with flooding affect both public and private sectors economically, socially, and in lost opportunities. Across the State, these costs have increased dramatically in recent years to as high as hundreds of millions of dollars. Further complicating the situation is the fact that solutions to existing flood control problems are heavily dependent upon capital intensive, structural projects which take many years to implement.

One area, the Gulf Coast, has a well-documented history of flooding problems and has been the subject of considerable flood control research and local action. The Gulf Coast has numerous watercourses, and this fact, coupled with generally low terrain, poorly draining soils, and intense urbanization, has made non-localized flooding a region-wide problem of great importance.

Official studies have shown that the cost of flood damage in the region has increased steadily and is expected
to continue to increase, while state and federal financial assistance will diminish. It has also been found that hundreds of separate, local governmental agencies and entities share authority for flood control and drainage in the region and that few efforts have been made to coordinate activities, implement joint projects, or consolidate fragmented entities. Finally, there is no apparent general agreement on needs, methods, and levels of protection, financing, equity, and responsibility. Further, adequate information regarding flood control matters is not readily available either to the public or to decision makers.

Given the fragmented posture of local government flood control efforts and the diminishing role of the federal effort, there appears to be an emerging role which state government can productively fill. State resources in the planning, coordination, technical assistance and long-term financing areas can offer key, needed assurance of proper long-term solutions. In some cases, state participation can be accomplished through administrative changes while others require legislative and/or other action.

RECOMMENDATIONS

Legislation

- The Committee recommends the granting of clear legislative authority for, and to encourage, inter-jurisdictional flood control and drainage projects.
- The Committee recommends in special instances broadening the powers of counties in matters of flood control and drainage.
The Committee recommends granting plat approval authority to drainage districts;

The Committee concurs with the TDWR Draft Proposal for a constitutional amendment to create a bond insurance guaranty program for use in water development, water conservations, flood control, and water quality enhancement;

The Committee concurs with the TDWR Draft Proposal for amendment of the Water Assistance Fund Act to include flood control as a purpose for which Water Assistance funds can be used;

The Committee concurs with the TDWR Draft Proposal to require water use permit applications for single purpose reservoir projects, to address their effect on downstream flooding;

The Committee concurs with the TDWR Draft Proposal to require disclosure of floodplain status in a contract that would transfer ownership of real property;

The Committee recommends providing for State review of plans for flood control projects to ensure control of erosion and sediment and the development of appropriate maintenance programs; and

The Committee concurs with the TDWR Draft Proposal for an Amendment of the Texas Water Code to require all political subdivisions to apply standards which would safeguard against flooding in approving or disapproving land development which would divert surface waters, and to prohibit surface water discharges which would increase existing peak discharges within receiving watercourses.

Planning

The Committee recommends development of a strong State floodplain management program;

The Committee recommends inclusion in the Texas Water Plan of flood control as an integral part of State water policy and programs;

The Committee recommends state cooperation with local political subdivisions to develop long
range, comprehensive flood-plain management plans by watershed to be used as the basis for permit issuance and funding priorities;

The Committee recommends State action to assure that flood control is considered in all State planning efforts, including parks and recreation, conservation, and water quality; and

The Committee recommends establishment of State policies oriented toward flood mitigation and assuring that State development actions will not contribute to flooding.

Financial Assistance

The Committee recommends State provision of grants or low interest loans and in-kind services to help satisfy local matching requirements in funding flood prevention studies and construction projects; and

The Committee recommends development of a funding mechanism for non-federal, inter-county capital improvement and major maintenance efforts.

Technical Assistance

The Committee recommends State development of a drainage design manual and provision of assistance to local governments in its application;

The Committee recommends use of State computer systems to identify potential flooding, to recommend appropriate structural and non-structural solutions, and to estimate costs of solutions;

The Committee recommends State provision of direct planning assistance when local governments are unable to cope with flood control and drainage problems; and

The Committee recommends State assistance to local governments in disputes involving the National Flood Insurance Program.

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Miscellaneous

. The Committee recommends State support for flood control and drainage projects awaiting Congressional approval;

. The Committee recommends State encouragement of non-structural, as well as structural, solutions to flood control and drainage problems;

. The Committee recommends promotion of flood control and drainage solutions which offer multiple benefits, such as flood control, water conservation, and recreation; and

. The Committee concurs with the TDWR Draft Proposal for assignment of responsibility to an existing State agency to develop materials and programs designed to increase public awareness and understanding of flood control issues.
D. Clear Lake Study

Clear Lake is used primarily for recreation and propagation of fish and wildlife. State concern about the water quality of Clear Lake and its watershed began as early as September of 1963, with public meetings held by the Texas Water Pollution Control Board to discuss potential water pollution problems in Clear Lake which were created by growth and development in the watershed. In August of 1964, the Texas Water Pollution Control Board established requirements for all sewage treatment plants operating in the Clear Lake Watershed. Interest in pollution control was shared by local citizenry and industries. Much of the concern related to Clear Lake as a recreational source.

In July of 1969, the Texas Water Quality Board adopted a Board Order directing waste dischargers to discontinue waste discharges or to provide more stringent treatment levels for wastewater that could not be diverted from the basin. In 1971, the Environmental Protection Agency determined that the treatment levels for systems in the latter category were not stringent enough to qualify for federal financial assistance. In 1974, the Texas Water Quality Board adopted more stringent treatment standards, and the Board's order was later adopted by the Texas Department of Water Resources (after the merger of the three major water agencies) as a permanent rule in January of 1978. The State has adopted
state-wide water quality management programs with each of the 23 major river and coastal basins divided into 311 segments, and for each of these segments, specific uses have been identified and criteria have been established to protect those uses. Designated uses for Clear Lake (Segment 2425) include recreation as well as propagation of fish and wildlife. The criteria applied to Clear Lake are consistent with other estuarine systems in Texas. These standards are reviewed for needed revisions every three years.

With the establishment of stream standards, technical studies are done in order to determine what action may need to be taken to maintain the stream standards. These studies relate to both wastewater treatment levels and evaluation of non-point sources.

Permits for treatment and discharge of wastewater contain conditions based on statewide requirements. Once permits are issued, both the wastewater and the stream are monitored for compliance with the permit and for determination as to whether the stream standards are being maintained.

In addition to the prior studies mentioned, the Department of Water Resources has completed modeling studies for the Clear Lake Watershed. These studies are needed to justify treatment levels for watershed projects eligible for federal funding assistance. For evaluation purposes, the Department collects water quality data on a quarterly basis in at least 12 locations in Clear Lake, Clear Creek and
Armand Bayou. This data, together with other data, is reviewed every two years and included in a report to the Environmental Protection Agency to comply with the Clean Water Act.

The Department of Water Resources indicates that the overall water quality of Clear Lake has been relatively stable over the past 10 years. Levels of nitrogen and phosphorous have decreased slightly in the last four years. Occasionally, fecal coliform levels exceed criteria levels, but it is difficult to determine the reason for this, and it may possibly be due to runoff of both urban and undeveloped areas and does not necessarily indicate the discharge of untreated or poorly treated wastewater.

The Committee, based on all the testimony received, is of the opinion that adequate measures are being taken by the Department of Water Resources and the citizenry to ensure the maintenance of the present acceptable level of water quality. In fact, the Department of Water Resources has adopted an additional regulation for wastewater discharge in the form of a permanent rule which contains effluent quality requirements that are more stringent that those required for discharge to any other stream in the State of Texas and are among the most stringent treatment levels required for domestic wastewater in the United States. These treatment levels are included in wastewater permits, and generally the facilities impacting Clear Lake are doing a good job in meeting the requirements.
E. Terms of Members of Special Legislative Districts

On November 2, 1982, the electorate of Texas approved an amendment to Article XVI, Section 30 of the Texas Constitution, providing as follows:

(c) The Legislature may provide that members of the governing board of a district or authority created by authority of Article III, Section 52(b)(1) or (2) or Article XVI, Section 59, of this Constitution, serve terms not to exceed four years.

Prior to the adoption of this amendment, under the provisions of Article XVI, Section 30, of the Texas Constitution, directors of conservation and reclamation districts could not serve terms in excess of two years.

There are presently hundreds of special legislative conservation and reclamation districts* in existence in the State of Texas with directors serving two-year terms. As a result of the constitutional amendment adopted in 1982, in 1983 several of these districts sought during the 68th Legislative Session the passage of legislation that increased the terms of their directors to four years.

The Committee considered the advisability of passing one statute that would authorize four-year terms for special legislative districts. One possibility that was considered would be to pass a statute changing the terms of the directors of all special legislative districts to four years. This

*districts created by a separate statute and not pursuant to the general law provisions found in the Texas Water Code.
idea was rejected on the basis that (1) there might be many
districts that do not want their directors to serve more
than two-year terms and that (2) such a statute would also
require the State to publish in each county the names of all
the local districts that would be impacted in order to
comply with Article XVI, Section 59(d) of the Texas Constitution.
Section 59(d) requires the publishing of (1) a notice of the
intention to introduce a bill and (2) the general substance
of the bill, at least 30 days and not more than 90 days
prior to the bill's introduction in a newspaper or newspapers
having general circulation in the county or counties in
which a district or any part thereof is or will be located—if
the bill alters the "...terms of office of the members of
the governing body of the district."

It was also suggested that the Legislature might pass
one law authorizing the directors themselves to determine by
resolution the number of years to be included in their terms
of office, but it was believed that such a statute might
well be an unconstitutional delegation of the legislative
authority provided for in Article XVI, Section 30(c).

After considering the possibilities, the Committee
determined that there would be numerous districts that would
want to retain two-year terms for their directors and that
the best course of action is to allow the districts that
want to change the terms of their directors to file separate bills amending the statute that created the district.
F. The Need To Enact Legislation Relating to Surface Water Rights

The above assignment arose as a result of a case styled "Lower Colorado River Authority vs. The Texas Department of Water Resources" which in part was concerned with the definition of "unappropriated water" within our statutes. In 1982, an opinion was issued by the (Austin) Court of Appeals, Third Supreme Judicial District (see 638 S.W.2d 557), but the decision of that appellate court has been appealed to the Texas Supreme Court. While oral arguments have been heard in the latest appeal, no decision has been issued by the Texas Supreme Court. Given the fact that the state of law at this point in time is about to be declared by the Texas Supreme Court, the Committee deemed it advisable not to investigate this subject matter but reserve it as a possible interim study for the future.