Water Supply & Waste Disposal in Texas urban areas

January 1975

a report by
the House Interim Committee on
Water Supply & Waste Disposal in the Metropolitan Areas
SPECIAL INTERIM COMMITTEE ON WATER SUPPLY AND WASTE DISPOSAL IN METROPOLITAN AREAS

2815 GREEN RIDGE, SUITE 43 - HOUSTON 77027

The State of Texas
House of Representatives

APPROVAL OF FINAL REPORT

Motion to approve the final report was made, seconded, and passed by a majority of the members present at a meeting of the House Interim Committee on Water Supply and Waste Disposal in Metropolitan Areas on the 25th of November, 1974 at 2815 Greenridge, No. 43, Houston, Texas.

Members present:

Bill Blythe, Chairman

Anthony Hall

Gene Jones

Ed Watson

Members absent:

Bill Clayton, Vice-Chairman

Ron Bird

Al Korioth

**(Approval with reservations, see Page 109)**
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>v</td>
</tr>
<tr>
<td>Summary of Recommendations</td>
<td>1</td>
</tr>
<tr>
<td>Preface</td>
<td>11</td>
</tr>
</tbody>
</table>

## Background

<table>
<thead>
<tr>
<th>Part I—Water Supply and Waste Disposal in Texas Urban Areas</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Municipalities</td>
<td>15</td>
</tr>
<tr>
<td>B. Water Districts</td>
<td>17</td>
</tr>
<tr>
<td>C. Private Water Companies</td>
<td>27</td>
</tr>
<tr>
<td>D. Regional Authorities</td>
<td>27</td>
</tr>
<tr>
<td>E. River Authorities</td>
<td>29</td>
</tr>
</tbody>
</table>

## Recommendations

<table>
<thead>
<tr>
<th>Part II—Houston Metropolitan Area: Use of Water Districts</th>
<th>31</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Legislation on Water Districts</td>
<td>33</td>
</tr>
<tr>
<td>B. Operation and Supervision of Water Districts</td>
<td>39</td>
</tr>
<tr>
<td>C. Additional Local Control</td>
<td>50</td>
</tr>
<tr>
<td>D. Alternatives for Houston Metropolitan Area: Gulf Coast waste Disposal Authority</td>
<td>51</td>
</tr>
<tr>
<td>Part III—Houston Metropolitan Area: Subsidence</td>
<td>55</td>
</tr>
<tr>
<td>Part IV.—Houston Metropolitan Area: River Authorities</td>
<td>67</td>
</tr>
<tr>
<td>Part V—San Antonio Metropolitan Area</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td>80</td>
</tr>
<tr>
<td>Part VI—Dallas-Ft. Worth Metropolitan Area</td>
<td>83</td>
</tr>
<tr>
<td>A. Water Supply</td>
<td>85</td>
</tr>
<tr>
<td>B. Water Rate Controversy</td>
<td>85</td>
</tr>
<tr>
<td>C. Use of Water Districts</td>
<td>86</td>
</tr>
<tr>
<td>Part VII—Special Projects</td>
<td>87</td>
</tr>
<tr>
<td>A. Pond Creek Watershed Authority</td>
<td>89</td>
</tr>
<tr>
<td>B. California Trip</td>
<td>90</td>
</tr>
<tr>
<td>Appendix</td>
<td>93</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>105</td>
</tr>
<tr>
<td>Additional Comments by Committee Members</td>
<td>109</td>
</tr>
</tbody>
</table>
The State of Texas
House of Representatives

To The Speaker of the House
and

The 64th Legislature

Please accept this report as record of the activities of the House Interim Committee on Water Supply and Waste Disposal in Metropolitan Areas during the preceding interim. The Committee has studied and approved the proposals and recommendations included in this report and hopes they will be given full consideration by the Legislature during the 64th session.

This Committee was created with the main purpose of studying the use of special districts to provide water and sewerage service to urban areas in Texas. The geographical focus was on the Houston Metropolitan area where the use of water districts to supply these services prevails over any other system. The past publicity surrounding the use of water districts in this area further indicated a need for a thorough investigation of districts around Houston. It was the Committee's goal to study the operation of districts and criticism surrounding their use by developers as well as claims of abuses in the system. The Committee broadened its study of water districts by looking also at their use in other urban areas of Texas—specifically, in Austin, Dallas-Ft. Worth and San Antonio. An investigation of this nature was deemed necessary in order to fully evaluate the effectiveness of water districts as a viable tool for supplying water and sewerage service to urban developments.

As the investigation progressed it soon became apparent that other broader issues had to be considered: alternatives to water districts had to be reviewed and evaluated; methods of service in other urban areas needed to be recognized and studied; in addition, mass transit, rapid urban growth, the "energy crisis", water pollution, water supply and other urban problems facing the cities of Texas had to be recognized to fully evaluate the specific but related problem of providing water and sewerage service to urban areas.

With rising urban development and the need for government to keep pace with this growth in providing basic and essential services, thoughtful consideration must be given to the role of State and local government as well as special districts in this field. In reviewing the present functions of these entities and their role for the future, the Committee hopes this report will help in understanding overall problems in supplying water and sewerage service as well as in providing direction for the 64th Legislature in its consideration of further legislation in this area.

Respectfully,

Bill Blythe
Chairman

December 1, 1974
SUMMARY OF RECOMMENDATIONS
LEGISLATION ON WATER DISTRICTS

RECOMMENDATION 1

Revise Section 54.001 of the Water Code to provide for definition of "necessary, feasible and practicable, and a benefit to the land."

1. Necessary to mean unavailability of comparable service from other systems, including but not limited to water districts, municipalities and regional authorities.

2. Feasible and practicable to mean projected construction costs, tax rate, and water and sewer rate are not unreasonable.

3. Benefit to mean the district and its system, and the subsequent development therein will not have an unreasonable effect on the following:
   a. Land Elevations
   b. Subsidence
   c. Groundwater Level of a Region
   d. Recharge Capability of Groundwater Source
   e. Natural Run-off Rates and Drainage
   f. Water Quality
   g. Total Tax Assessment on Land Included in a Proposed District

Revise Section 54.015 to require petitioners to submit a district feasibility report including but not limited to the following documents:

1. Evidence showing the district is necessary, feasible and practicable, and would be a benefit to the land as stated in Section 54.021 of the Water Code.

2. Written refusal from neighboring local agencies including but not limited to water districts, municipalities, and regional authorities providing comparable services stating that service cannot be provided.

3. Estimates of costs of service if provided by other neighboring local agencies.

RECOMMENDATION 2

Revise Section 54.305 of the Water Code to provide that creation costs including all necessary application fees, deposits, engineering and legal fees shall be paid by the petitioner and not the proposed district.

This provision shall apply only to developer-type districts.

RECOMMENDATION 3

Revise Chapters 51, 53, 54, and 55 of the Water Code to provide standardization of public notification procedures concerning water district hearings and elections.
RECOMMENDATION 4

Revise Section 50.024; 50.0721; 53.0631; 54.102 to provide for the disqualification of a director of a district who has a continuing business or personal relation with the developer, manager, engineer or attorney for the district.

In recognition of the Attorney General’s opinion (No. H226) on SB 807 on this subject, the Legislature, the Attorney General, and the Texas Water Rights Commission should work jointly in the drafting of necessary legislation to provide for effective but reasonable guidelines for the disqualifications of a director.

RECOMMENDATION 5

Revise the Water Code to provide that the Texas Water Rights Commission shall require all newly-elected water district directors to sign a sworn affidavit attesting to their eligibility for the position as provided by the Texas Water Code and Election Code. This affidavit shall be printed on the Commission's yearly registration form for water districts and filed annually by the district after each general election. A director failing to sign said affidavit shall be punished by a fine of not less than $100 nor more than $1000.

RECOMMENDATION 6

Revise Section 50.374 of the Water Code to provide that a district that fails to comply with the provisions of 50.374 of this code (preparing and filing annual audits) is subject to a civil penalty of not less than $50 nor more than $100 a day for each day the district willfully continues to violate these sections after receipt of written notice of violation from the Commission by certified mail, return receipt requested.

The Texas Water Rights Commission shall require that all districts submit a certified affidavit to the Commission that copies have been sent to all designated public bodies.

It shall be the responsibility of the Commission to file the names of districts failing to comply with this section with the Attorney General for prosecution.

RECOMMENDATION 7

Revise Section 50.374 of the Water Code to Read: “(c) copies of the audit shall be filed in the office of the district and with The City Secretary or other designated official in whose extraterritorial jurisdiction the district is located.”

RECOMMENDATION 8

Revise Section 50.0731 of the Water Code to read: “...The election date for directors of a district proposing to provide or actually providing water and sewer services or either of these services to household users as the principal functions of the district shall be the first Saturday in April.”
RECOMMENDATION 9 ........................................... Page38

Revise Section 54.102 of the Water Code to read: "...he is related within the third degree of affinity or consanguinity to a developer of a property in the district, to a board member..."

RECOMMENDATION 10 ........................................... Page38

Revise the Water Code to provide for staggered terms of directors of water districts.

OPERATION AND SUPERVISION OF WATER DISTRICTS

RECOMMENDATION 11 ........................................... Page39

The Texas Water Rights Commission under its continuing powers of supervision of water districts shall include in its approval of district projects and bond issues a review of nonconstruction expenditures as well as construction costs. Review of nonconstruction items shall include but not be limited to legal services and fees; contingency funds; and in-house administrative expenditures of a district.

The Commission shall review contracts for services, other than contracts for purchasing water and sewer service from the district, made by the district. In reviewing said contracts the Commission shall set guidelines for type of work for which district funds can be expended.

The Commission may waive such authority after the district has more than 25 residents and the majority of district directors are also residents of the district.

RECOMMENDATION 12 ........................................... Page41

Establishment of a coordinating office within the Texas Water Rights Commission to channel information and assistance to water district boards and residents. Functions would include but not be limited to:

1. Information seminar for new directors.
2. Processing of inquiries and complaints to proper state and local agencies.
3. Investigation of complaints regarding operation of water districts, including legal as well as technical problems and channeling of complaints to proper divisions within the Texas Water Rights Commission.
RECOMMENDATION 13

The Texas Water Rights Commission shall require that at least 1% of any water district bond issue be set aside for the Commission to provide for full-time inspection on water district projects. The Commission shall provide its own inspectors for this work.

Provision shall be made to refund to the district any unused portion at the completion of construction.

RECOMMENDATION 14

The Legislature should consider upgrading staff positions in state agencies in recognition of the need to maintain and keep trained and experienced personnel.

Specifically, the Committee recommends the creation of higher levels for the Examiner position within the Texas Water Rights Commission.

RECOMMENDATION 15

As-built plans of a water district’s water and sewer systems shall be filed in the central office of the Texas Water Rights Commission as well as the district’s office. Plans shall be available for review by any interested person.

RECOMMENDATION 16

The Texas Water Rights Commission shall require that any water system constructed by a water district shall be of the correct size and type to maintain an adequate water pressure at all points within the district and at the time of full development.

The Commission shall not permit a district to contract to provide water service to areas outside the district, if such service will have an unreasonable effect on the water pressure and water service within the district.

RECOMMENDATION 17

Water districts shall hire at least one licensed sewerage plant operator on a full-time basis for every 800 taps.

RECOMMENDATION 18

Implementation of a new community college program leading towards State Health Department certification for sewerage plant operator as defined in “Sewerage Plant Operator in Article 4477-1, Section 1, Vernon’s Texas Civil Statutes.”
RECOMMENDATION 19

Revise the Water Code to provide that water districts shall place an identification sign at least at two major entrances to the district.

RECOMMENDATION 20

The City of Houston should use the powers given to municipalities under Article 970a, Section 4 of Vernon’s Civil Statutes and Chapter 54 of the Water Code and extend by ordinance its plat and subdivision regulations to cover water district and other subdivision development in the city’s extraterritorial jurisdiction.

Other urban cities in Texas should pass a similar ordinance if they have not already done so in order to provide for fully planned and coordinated development in the extraterritorial jurisdictions of Texas cities.

RECOMMENDATION 21

Revise Section 54.016 of the Water Code to read “...if the governing body of a city fails or refuses to grant permission... within 120 days (60 days) after receipt of a written request...”.

RECOMMENDATION 22

Revise the Water Code to provide that petitioners of a proposed water district shall submit all reports, plans and other information required by the Commission at the time of creation to the city having extraterritorial jurisdiction over the proposed district.

If the proposed district is located outside the extraterritorial jurisdiction of a city, information will be filed with the county commissioners court within whose boundaries the district is located.

RECOMMENDATION 23

Revise Chapter 54 of the Water Code to give counties the following review powers over water districts:

1. The county shall be given the authority to review creation of all water districts located in unincorporated areas of the county but outside the extraterritorial jurisdiction of a city.

2. The county shall be given the authority to review bond projects and the types of services to be paid from water district bonds of water districts located in unincorporated areas of the county but outside the extraterritorial jurisdiction of a city.

3. County shall send a copy of its review to the Water Rights Commission for their consideration in approving creation of new districts and district projects.
4. Water, sewerage and drainage projects of water districts located in unincorporated areas of the county but outside the extraterritorial jurisdiction of a city must meet county standards as set by the county engineer to protect local drainage and prevent flooding in flood-prone areas.

RECOMMENDATION 24 .................................................. Page 48

The Texas Water Quality Board shall provide for the regulation of septic tanks in unincorporated areas either through direct supervision by the Board or designating the county or another local agency as the administrator of such a program.

RECOMMENDATION 25 .................................................. Page 49

Revise the Water Code to provide that a designated city official shall review engineering plans of a water district located in the city's jurisdiction and certify to the adequacy of the water system for fire protection.

Said engineering plans shall note fire plugs as such and flush valves as flush valves.

In unincorporated areas outside the extraterritorial jurisdiction of a city, approval and certification shall be given by the county fire marshall or other designated county official.

RECOMMENDATION 26 .................................................. Page 49

Revise the Water Code to provide for standardization of tax assessment of water district property within each county. Water districts shall contract with the county tax assessor or the tax department of the largest city in the county in which the district lies for tax assessment and collection.

ADDITIONAL LOCAL CONTROL

RECOMMENDATION 27 .................................................. Page 50

Revise Texas Statutes to provide for local governmental control over the creation of developer-type district:

1. Petitioners of a district shall file a copy of petition, market feasibility reports, engineering reports and plans, and other such information required for creation of a district with a designated local agency in the county in which the proposed district is located.

2. Said agency will coordinate the review of said information with other affected local governments in the region.

3. After receiving written comments from these parties, the governing body of the designated local agency shall vote on whether or not to grant its approval.
4. Decision shall be passed on to the Texas Water Rights Commission with reasons for decision.

5. The Commission shall not approve the creation of a district and the use of public funds when local area governments have expressed their disapproval.

Provision shall be restricted to urban-developing counties with the intent of protecting LOCAL INITIATIVE in planning and regulating large urban development.

ALTERNATIVES FOR THE HOUSTON METROPOLITAN AREA

RECOMMENDATION 28 ........................................ Page 51

A. New developments should contract with neighboring water districts or be annexed by them to decrease the proliferation of water districts in the Upper Gulf Coast region.

B. Consolidation of adjacent districts where economically and technically feasible.

RECOMMENDATION 29 ........................................ Page 53

A. Establishment of pollution control districts by Gulf Coast Waste Disposal Authority over the continued use of water districts.

B. Establishment of a review and inspection procedure for all waste treatment systems within GCWDA's boundaries.

C. Coordination of present and future sewage treatment systems. Such systems shall be in line with the master regional plan formulated by GCWDA.

HOUSTON METROPOLITAN AREA: SUBSIDENCE

RECOMMENDATION 30 ........................................ Page 65

Establishment of one or more authorities with regional jurisdiction for the following purposes:

A. To control, supply, and distribute surface water in the Upper Gulf Coast region.

B. To coordinate the conjunctive use of surface and groundwater in this area.

C. To formulate and administer a groundwater management program in critical subsidence areas.
HOUSTON METROPOLITAN AREA:
RIVER AUTHORITIES

RECOMMENDATION 31

One half of the board of directors of all river authorities shall be elected by the voters in the river authority’s boundaries. Directors shall be elected proportionately by population from defined sections within the authority’s jurisdiction.

Elected offices shall be for a term of two years.

The other members of the board shall be appointed by the Governor with approval of the Senate for a term of two years. The appointees shall reside within the boundaries of the river authority. There shall be one more elected member than appointed on each river authority board.

RECOMMENDATION 32

Projects sponsored by river authorities to construct lakes, reservoirs, and other waterways shall include provision for financing and construction of public parks, public water access facilities, and other recreational facilities along the boundaries of said projects.

Land for these public areas shall be purchased at the time other necessary land and rights-of-way are purchased in order to better secure necessary land at the lowest economic price.

SAN ANTONIO METROPOLITAN AREA

RECOMMENDATION 33

A. Establishment of a regional authority to plan and coordinate the conjunctive use of surface water and groundwater in the San Antonio Metropolitan Area.

B. Establishment of a groundwater management plan to protect the Edwards Aquifer from over-development.

C. Reorganization of the Edwards Underground Water District to provide for enforcement powers to implement the above recommendations or consideration of dissolving the district in its present form.

D. Further use of private water companies and water districts in the San Antonio area should be limited, and wherever possible, existing systems should provide services to the new areas.
PREFACE

The Committee on Water Supply and Waste Disposal in Metropolitan Areas was created in 1973 by the 63rd Legislature. House Simple Resolution No. 209 directed the Committee to three areas:

1. Present legislation dealing with water supply, waste disposal, and drainage in metropolitan areas.
   The Committee was directed to examine pertinent statutes for effectiveness "in dealing with known problems."

2. Evaluation of regional and area-wide systems and special districts supplying these services.
   The Committee was directed to study the operation of present systems for their effectiveness in serving the urban populace.

3. Development of an "overall plan or policy" regarding water, sewerage and drainage service.
   The Committee was directed to present recommendations promoting planned and coordinated action in this area.

Time and other considerations necessitated certain restrictions on these 3 areas. The geographical and topical scope of the report was narrowed to enable the Committee to review in-depth predominant issues surrounding the subject under investigation.

The Committee does not consider this report to be inclusive of all information regarding this subject. It is hoped that the report will give direction to the Legislature, state and local officials, and others in planning and coordinating public action in water supply, waste disposal, and drainage in Texas urban areas.

For the purposes of this report, general restrictions on the Committee study are as follows:

GEOGRAPHICAL SCOPE*

I. Houston Metropolitan Area including Harris, Ft. Bend, Galveston, Chambers, and Montgomery Counties
II. Dallas-Ft. Worth Metropolitan Area
III. San Antonio Metropolitan Area

All of these areas have experienced rapid urban growth with the subsequent demand by new residents for needed urban services. These three areas offered the Committee an opportunity to review particular problems resulting from rapid urban growth and to evaluate how well government was keeping pace with this urban expansion. Each area, while having similar characteristics, used essentially different methods to provide these services and offered the additional opportunity of studying different systems in action.

TOPICAL SCOPE

A. Municipalities
B. Water Districts
C. Private Water Companies
D. Regional Authorities
E. River Authorities

*The Committee also reviewed the policies of Austin in its study on the use of water districts.
Within the geographical and topical limitations, the Committee had directed itself generally to urban systems and urban growth occurring in the extraterritorial jurisdiction (ETJ) of a city. Within a city, new developments are usually supplied by that city's system, and cities for the most part have sufficient legal authority over development within its boundaries. More and more of urban development today however is taking place outside a city's political boundaries in its ETJ. Control over such development varies from place to place.

Overall there is a lack of coordination and planning not only of development in the ETJ but in providing services to these areas. As a result, serious problems have arisen such as the proliferation of water districts in Houston and of private water companies in San Antonio, and the water rate disagreement in the Dallas area. These and other problems demand immediate attention. The Committee has directed itself to these specific problems as well as the overall issue of providing water, waste disposal, and drainage to new urban areas.

In the Houston Metropolitan Area, a problem related to water supply is the phenomenon of subsidence. The extent of subsidence in this area necessitates some type of action. The Committee was asked to review in this report the problem of subsidence and the need, if any, for legislative action to curb subsidence. To this end, a review of subsidence and recommendations on legislation are also included in the report.

In the course of its study, the Committee held five public hearings--two in Austin, one in San Antonio, one in Seabrook and one in Houston, to gather testimony and information to aid in formulating final recommendations. The Committee staff, in conjunction with some of the members, conducted personal interviews with public officials and private individuals in real estate, law, finance, education, and water supply as well as with concerned citizens who had a personal interest and involvement in the subject. In addition, the staff conducted an in-depth review of state agency and water district files, current publications and research documents relating to the report subject.

Recommendations contained herein are based on testimony gathered at the hearings, on interviews and on the overall investigation carried on by the Committee. The Committee solicited assistance from a wide range of sources in the hopes of bringing together all views and information in order to better evaluate the problems and recommend solutions.
PART I

WATER SUPPLY AND WASTE DISPOSAL IN
TEXAS URBAN AREAS
In the urban areas under study, water supply and waste disposal is being provided to new developments by five different types of public and private entities:

A. Municipalities  
B. Water Districts  
C. Private Companies  
D. Regional Authorities  
E. River Authorities

No one entity provides exclusive service in any of the areas except perhaps in the Houston area where the use of water districts dominates over any other system. Service in the other areas is provided by a combination of entities with one in each particular area being more prevalent than the others.

**PRIMARY SERVICE SYSTEMS**

<table>
<thead>
<tr>
<th>Location</th>
<th>Inside City Limits</th>
<th>In ETJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Houston</td>
<td>Municipal Service</td>
<td>WATER DISTRICTS*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Regional Authority</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Sewage Treatment)</td>
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<tr>
<td>Austin</td>
<td>Municipal Service</td>
<td>MUNICIPAL SERVICE</td>
</tr>
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<td></td>
<td></td>
<td>Water Districts</td>
</tr>
<tr>
<td>Dallas–Ft. Worth</td>
<td>Municipal Service</td>
<td>MUNICIPAL SERVICE</td>
</tr>
<tr>
<td></td>
<td>River Authority (Sewage Treatment)</td>
<td>Water Districts</td>
</tr>
<tr>
<td>San Antonio</td>
<td>Municipal Service</td>
<td>PRIVATE WATER COMPANIES</td>
</tr>
<tr>
<td></td>
<td>Private Water Companies</td>
<td>Municipal Service</td>
</tr>
<tr>
<td></td>
<td>River Authority (Sewage Treatment)</td>
<td>Water Districts</td>
</tr>
</tbody>
</table>

*Entities in Bold Face indicate the dominant system in use.

Following is a brief description of each type of entity, its legal authority, and role in providing water and sewerage service.

**A. MUNICIPALITIES**

One of the basic functions of a city is to provide water and sewer service to its residents. The costs of providing service are usually paid by the user, either by a direct tap fee or indirectly in the overall costs of a house and lot.

When a city extends service lines to a whole subdivision, the costs of such extensions are usually split between the city and the developer of the subdivision. Developers of subdivisions outside the city limits usually pay a larger share of the extension costs than those operating inside the city limits. Most cities in Texas operate on a rebate system, repaying developers over a period of time a certain amount for their share in the extension of approach and other type mains outside the city limits. (See Chart A). Any costs incurred by a developer are passed on to the buyer in his subdivision.
<table>
<thead>
<tr>
<th>City**</th>
<th>On-Site Mains</th>
<th>Border Mains</th>
<th>Approach Mains</th>
<th>Oversize Mains</th>
<th>Fire Hydrants On-Site</th>
<th>Fire Hydrants Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austin</td>
<td>Developer pays. City refunds up to 80% of cost over 25-year period. 95% if sewer is included.</td>
<td>Developer pays. City refunds up to 80% of cost over 25-year period. 90% if sewer is included.</td>
<td>Developer pays. Refunded cost over a 5-year period.</td>
<td>City refunds oversize portion.</td>
<td>Included in main cost</td>
<td>Included in main cost</td>
</tr>
<tr>
<td>Corpus Christi</td>
<td>Developer pays entire cost.</td>
<td>Developer pays entire cost.</td>
<td>City pays for 10 feet of extension per lot. Developer pays balance. No refund.</td>
<td>City participates with Developer and pays oversize portion.</td>
<td>Included in main cost</td>
<td>Included in main cost</td>
</tr>
<tr>
<td>Dallas</td>
<td>Developer pays entire cost.</td>
<td>City and Developer each pay 50% of cost.</td>
<td>City will refund cost to Developer based upon on-site connections.</td>
<td>City pays for oversize portion.</td>
<td>Developer pays</td>
<td>Developer pays</td>
</tr>
<tr>
<td>El Paso</td>
<td>Developer pays $5.28 per foot 'or 6&quot; main. Total cost of larger main.</td>
<td>Developer pays $5.28 per foot for 6&quot; main. Total cost of larger main.</td>
<td>Developer pays. Is refunded at the rate of $2.64/foot.</td>
<td>Developer pays. Is refunded at the rate of $100.00 per acre served.</td>
<td>Included in main cost</td>
<td>Included in main cost</td>
</tr>
<tr>
<td>Fort Worth</td>
<td>Developer pays 80% plus engineering. City pays 20% less engineering.</td>
<td>Developer pays 1/2 actual cost. City pays 1/2 actual cost.</td>
<td>Developer deposits 80% of cost plus engineering eligible for 100% refund of costs.</td>
<td>City pays oversize portion of the cost.</td>
<td>Included in main cost</td>
<td>Included in main cost</td>
</tr>
<tr>
<td>Houston*</td>
<td>City pays all material cost except fire hydrants. Developer pays construction charges.</td>
<td>City pays material costs less hydrants. Developer pays construction costs.</td>
<td>City pays for Approach Main inside City. Developer pays full cost outside. No refund.</td>
<td>City pays oversize portion of the cost.</td>
<td>Developer City pays</td>
<td>Developer City pays</td>
</tr>
<tr>
<td>San Antonio (Sewer)</td>
<td>Developer pays entire cost.</td>
<td>Developer pays entire cost.</td>
<td>Developer pays $50.00/lot ICL or $150.00/lot OCL or $250.00/acre ICL or $750.00/acre OCL. No refund.</td>
<td>Developer pays. Refunded oversize portion on completion.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
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CHART A
COMPARATIVE MAIN EXTENSION POLICIES**
MAJOR TEXAS CITIES
Service from an existing municipal system is a practical and economical means to provide water utilities to new areas, especially when development expands outward from a city's boundaries. It is usually city policy to extend distribution lines and its overall system as growth of the city occurs, thereby making it more economical and easier for a developer to tie on to existing lines than to construct an entirely new system.

Municipal service in Texas urban areas has not kept pace with the rapid growth of housing and other development. New developments are often located way beyond the reaches of a municipal system. Most cities cannot afford to run a water main miles beyond the city limits when there are no customers between an outlying subdivision and the city. Neither do developers have the money to pay for such extensions.

In these circumstances, and with urban areas in Texas spreading beyond city boundaries, developers have turned to other methods of supplying water—usually, by the establishment of private water companies or water districts.

B. WATER DISTRICTS

In this report, the Committee is concerned with the use of water districts by land developers. There are several types of water districts which are similar to each other as to purposes, that is to control, store, preserve, and distribute its waters. Some water districts have more powers than others to fulfill this purpose; some water districts have different legal procedures to follow. For the Committee's purposes, our study of water districts has been restricted to Municipal Utility Districts (MUDs), Water Control and Improvement Districts (WCIDs) and Special Law Districts—these types being the most commonly used by developers as promotional districts (water districts used to finance and construct water and sewer utilities for a new subdivision on land that generally has no permanent residents in the beginning).

The term "developer district" denotes the first phase of a water district's existence when the district's system is under construction. For all practical purposes, the district is an arm of the developer's business.

The term "people's district" refers to the next stage—usually occurring approximately three years after construction has begun. The district's subdivision is becoming developed and residents take an active role in the district's activities. Many of the district directors are residents of the district whereas during the construction phase, most directors are not.

The use of water districts to provide service to rural areas is not covered except when such a district is a functional part of new urban growth in the region. For instance, many older water districts in Travis County were established to serve a rural community. They are now providing service to new subdivisions that are part of the urban expansion of the City of Austin.

Below is a brief summary of pertinent legislation on water districts:

Water districts are considered conservation and reclamation districts and subject to the provisions of Article XVI, Section 59, of the Texas Constitution. Districts may be created by special act of the Legislature or by general law.

Chapter 54, Texas Water Code: MUDs (62nd Legislature, 1971)

This statute provides for the creation of MUDs and operation thereof. Main purpose of Act was to facilitate creation procedures when going through the Texas Water Rights Commission. In essence, the MUD Act was an updating of the WCID statutes to take into account the use of water districts by developers for development purposes. Under the MUD Act, approval for creation of a district is contingent on whether or not "the project is feasible and practicable and is necessary and would be a benefit to the land, . . . ." (Chapter 54.021a) (note benefit is to the land, not to people, recognizing that water districts used by developers have no people at time of creation).

The effect of the MUD Act has been to virtually end creation of water districts by special law and to channel creation through the Texas Water Rights Commission. (Chart B and C) Numerous other water districts are now converting to MUDs, since MUDs have more liberal annexation procedures and broader general powers such as those necessary to . . .
### CHART C

**Active Water Districts in Texas***

<table>
<thead>
<tr>
<th>Type of District</th>
<th>TWRC</th>
<th>City</th>
<th>County Comm.</th>
<th>Legislature</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>WCID</td>
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<td>151</td>
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<td>9</td>
<td>94</td>
<td>221</td>
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<td>34</td>
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</tbody>
</table>

*SOURCE: Texas Water Rights Commission

---

### CHART B

**WATER DISTRICT CREATIONS***

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Texas Water Rights Comm.</th>
<th>Legislature</th>
<th>County Commissioners Courts</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968</td>
<td>6</td>
<td>0</td>
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<tr>
<td>1969</td>
<td>14</td>
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<td>1970</td>
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<td>1971</td>
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<td>1972</td>
<td>44</td>
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<td>44</td>
</tr>
<tr>
<td>1973</td>
<td>71</td>
<td>15</td>
<td>1</td>
<td>87</td>
</tr>
<tr>
<td>1974**—To date</td>
<td>32</td>
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<td>0</td>
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<td>TOTAL</td>
<td>175</td>
<td>208</td>
<td>9</td>
<td>360</td>
</tr>
</tbody>
</table>

* SOURCE: Texas Water Rights Commission

** As of October, 1974
“(1) Supply water for municipal uses, domestic uses, power, and commercial purposes and all other beneficial uses;

(2) Collect, transport, process, dispose of, and control all domestic, industrial, or communal wastes whether in fluid, solid, or composite state;

(3) Gather, conduct, divert, and control local storm water or other local harmful excesses of water in a district;

(4) Irrigate the land in a district;

(5) Alter land elevation in a district where it is needed;

(6) Navigate coastal and inland waters of the district; and

(7) Provide parks and recreational facilities for the inhabitants in the district.”*  

Chapter 51, Texas Water Code: WCIDs (39th Legislature, 1925)  

WCIDs are an older type of water district, designed primarily for use in a rural setting for irrigation purposes. WCIDs began to be used a great deal in the ’60’s by developers as a development mechanism. WCIDs are created under general law with approval from either the Texas Water Rights Commission or commissioners court. With the passage of the MUD Act, WCIDs are no longer as popular with developers.

Chapters 53 & 55, Texas Water Code: FWSD & WID (36th Leg. 1919, 35th Leg. 1918)  

FWSDs (Fresh Water Supply Districts) and WIDs (Water Improvement Districts) are generally not being created any more and, as a rule, are not used by developers. Many are still functioning—primarily in a rural setting. These districts are created by approval of commissioners court under general law provisions.

Special Law Districts

These are created by a special act of the Legislature and the type most frequently used by developers until the MUD Act was passed. The Texas Water Rights Commission has had a harder time supervising these districts because they have no direct power over them. These districts are required to have Commission approval on construction projects and, at this time, the Commission is able to secure compliance in some instances with normal Commission rules covering water districts. Special Law Districts can have different titles, the most common being MUDs, PUDs (Public Utility District), UD’s (Utility District), and IDs (Improvement Districts).

Water districts have the power to issue bonds and levy a tax on the property located within a district. With this power, water districts provide a developer with the needed financing to provide water, sewer, drainage and in some instances recreational facilities such as parks and golf courses to his development. In Texas today, water districts are providing such improvements to subdivisions and second-home developments as well as to commercial and industrial parks.

The use of water districts to provide these services to new developments is most prevalent in the Houston Metropolitan area. Water districts are used almost exclusively there by developers. In Dallas-Ft. Worth, San Antonio, and Austin, there is a rising growth in the number of water districts though not to the degree found around Houston. (Charts D-G)

Water District Bonds

Bond Authorization—amount of bonds voted and approved by residents of a district.

*SOURCE: Chapter 54.201, Texas Water Code, p. 297.
### AUSTIN AREA

**ACTIVE REGISTERED DISTRICTS IN TRAVIS COUNTY***

<table>
<thead>
<tr>
<th>TYPE DISTRICT</th>
<th>TWRC</th>
<th>CITY</th>
<th>COM. COURT</th>
<th>LEGISLATURE</th>
<th>TOTAL</th>
</tr>
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<tbody>
<tr>
<td>WATER CONTROL AND IMPROVEMENT DISTRICT</td>
<td>1</td>
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<td>8</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>WATER IMPROVEMENT DISTRICT</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>MUNICIPAL UTILITY DISTRICTS</td>
<td>2</td>
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<td>0</td>
<td>0</td>
<td>2</td>
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<tr>
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**ACTIVE REGISTERED DISTRICTS IN WILLIAMSON COUNTY***

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<th>TYPE DISTRICT</th>
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<th>COM. COURT</th>
<th>LEGISLATURE</th>
<th>TOTAL</th>
</tr>
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<td>WATER IMPROVEMENT DISTRICT</td>
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<td>0</td>
</tr>
<tr>
<td>MUNICIPAL UTILITY DISTRICTS</td>
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<td>0</td>
<td>1</td>
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<td>0</td>
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*SOURCE: Texas Water Rights Commission*
### ACTIVE REGISTERED DISTRICTS IN DALLAS COUNTY*

<table>
<thead>
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<th>TYPE DISTRICT</th>
<th>TWRC</th>
<th>CITY</th>
<th>COM. COURT</th>
<th>LEGISLATURE</th>
<th>TOTAL</th>
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<tbody>
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### ACTIVE REGISTERED DISTRICTS IN DENTON COUNTY*

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<th>COM. COURT</th>
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### ACTIVE REGISTERED DISTRICTS IN TARRANT COUNTY*

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<th>LEGISLATURE</th>
<th>TOTAL</th>
</tr>
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<tbody>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>MUNICIPAL UTILITY DISTRICTS</td>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>FRESH WATER SUPPLY DISTRICT</td>
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<td>0</td>
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<td>0</td>
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<td>0</td>
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<td>1</td>
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</table>

**SOURCE:** Texas Water Rights Commission
## HOUSTON AREA

### ACTIVE REGISTERED DISTRICTS IN FORT BEND COUNTY*

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<td>9</td>
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### ACTIVE REGISTERED DISTRICTS IN GALVESTON COUNTY*

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<th>COM. COURT</th>
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<td>1</td>
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<tr>
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### ACTIVE REGISTERED DISTRICTS IN HARRIS COUNTY*

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<th>COM. COURT</th>
<th>LEGISLATURE</th>
<th>TOTAL</th>
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**SOURCE:** Texas Water Rights Commission
SAN ANTONIO AREA

ACTIVE REGISTERED COUNTIES IN BEXAR COUNTY*

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<thead>
<tr>
<th>TYPE DISTRICT</th>
<th>TWRC</th>
<th>CITY</th>
<th>COM. COURT</th>
<th>LEGISLATURE</th>
<th>TOTAL</th>
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<tbody>
<tr>
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</tr>
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<td>MUNICIPAL UTILITY DISTRICTS</td>
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<td><strong>1</strong></td>
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</table>

ACTIVE REGISTERED DISTRICTS IN MONTGOMERY COUNTY*

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<thead>
<tr>
<th>TYPE DISTRICT</th>
<th>TWRC</th>
<th>CITY</th>
<th>COM. COURT</th>
<th>LEGISLATURE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER CONTROL AND IMPROVEMENT DISTRICT</td>
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<td><strong>TOTAL</strong></td>
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<td><strong>3</strong></td>
<td><strong>18</strong></td>
<td><strong>40</strong></td>
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</table>

SOURCE: Texas Water Rights Commission
Bond Issue--amount of bonds covering one project and one sale.

Water district bonds are issued to pay costs and charges of construction of water, sewer and drainage improvements including the cost of necessary property and the retirement of any preliminary bonds. Bonds are issued after a water district is created and has adopted plans for construction. Bonds may not be issued for more than the amount of the engineer’s estimate of construction costs plus estimates of nonconstruction costs.

Water district residents may authorize an unlimited amount of bonds; however, water district projects and expenditures of bonds for that project must first be approved by the Texas Water Rights Commission before bonds can officially be sold.

All water district bonds (classified as municipal bonds) must go through the following steps to be approved in Texas:

1. Bonds must be approved by voters in an election held in the district. In a developer district, it is not uncommon for fewer than five people to approve millions of dollars in bonds.

2. Bonds must be authorized by the district board.

3. A transcript of the bond order is sent to the Attorney General. This transcript shows what portion of the bonds are to be sold, bids, interest rates, engineering project, bond election results, and other documents.*

4. Before going to the Attorney General’s Office, the transcript and project report and plans must be approved by the city, county, Health Department, and lastly the Texas Water Rights Commission.

5. The Attorney General issues an opinion as to the legality of the sale. He does not rule on the quality of the bonds. If the bonds were approved by less than eight voters, the Attorney General will investigate election procedures and the qualification of the voters.

6. Bonds are then placed in print.

7. The Attorney General approves the actual bonds themselves.

8. Bonds and transcript are sent to the State Comptroller for registration and filing. Here, the Comptroller places a registration number on each bond and signs every one. The same number is also placed on the transcript. In the transcript, only the name of the first buyer is given. Subsequent buyers are not listed.

9. After the bonds are sold, the paying agent (usually a large bank like Mercantile National Bank in Dallas or Continental Bank in Houston) sends notices to the water district that interest is due and funds should be deposited to meet this payment. After paying interest and principal, the paying agent will tabulate bonds, cremate them and send certification of cremation to the district.

Supervision of Water Districts

Supervision of water districts is divided among several state and local authorities. Through the Texas Water Rights Commission, the Texas Water Quality Board, and the Attorney General’s Office, the State has general regulatory powers over water districts.

On the local level, supervision of water districts focuses primarily on the construction projects financed by water districts. In the Houston Metropolitan area, because of the great number of water districts there, the Texas Water Rights Commission has established a local office to oversee these projects. This responsibility is also shared by local cities, counties, and councils of governments.

There is no single, locally-coordinated procedure to review water district creations and operations. As a result, there is duplication in supervision in some areas and a lack of supervision in others.

*See Appendix: EXHIBIT 1.
Public entities having jurisdiction over water districts are as follows:

**Texas Water Rights Commission**

A. Creation of Districts.
B. Approval of Bond Funds.
C. Approval of Construction Projects.
D. Continuing Supervision of Water Districts.
E. Supervision and Inspection of Water District Projects.

Prior to 1973, the Commission was most concerned with engineering and construction aspects of water districts. With the growth of the use of water districts and criticism of abuses of the system, the Commission has expanded its supervision into the overall operation of water districts.

Because of the great number of water districts in Harris County, the Commission in 1973 opened its local office in Houston. The office's main function has been to carry on inspections relating to water district creations and construction projects. In general, the office's performance has been rated by all involved parties as good and a needed force in the area. However, the office has a staffing problem due to losing personnel soon after training them. In addition, the work load in Harris and surrounding counties is such that the number of inspections the staff can make to any one water district is limited. These problems have reduced the effectiveness of this local office.

**Texas Water Quality Board**

A. Regulation of District's Waste Discharge.
B. Issuance of Discharge Permits.
C. Coordination of Local Regional Waste Treatment Systems.

**Attorney General's Office**

A. Approval of District Bond Sales.

Supervision of water districts by the Attorney General's Office is done through the Bond Division of the Attorney General's Office. Before a water district can legally sell bonds, that sale must be approved by the Attorney General. The Attorney General's Office acts upon each sale only after the Texas Water Rights Commission and other pertinent agencies have given their approval. In its approval of bonds, the Attorney General's Office rules only upon the correctness of the legal procedures involved. The Attorney General does not rule upon whether the bond issue and project is correct. (For actual process, please refer to page 24).

**Texas Department of Health**

A. Approval of District Water Supply and Sewer System.
B. Licensing of District Operators

The Health Department plays a small but vital role in the operation and creation of water districts. When a new district is created, engineering specifications for water and sewer plants must be reviewed and approved by the Health Department if federal funding is involved. Here, the Health Department works closely with the Texas Water Quality Board. Criteria of review is such to insure that the proposed plants would create no public health hazard. The Department also maintains a system of sampling rivers to

*See Appendix: EXHIBIT 2.*
check for water borne diseases and related health hazards. The Health Department divides its water district work between two sections—New Water and Sewage Treatment.

COUNTY

A. Approval of Engineering Plans of District Water and Sewer Systems.

B. Construction and Inspection of District Systems in Floodplain.

At present, counties have little control over the creation of water districts. In the past, when Fresh Water Supply Districts and Water Improvement Districts were used by developers, approval from the local Commissioners Court was needed. Since these types of districts are not commonly used now, the county role has decreased. In Harris County, commissioners have to approve or disapprove the creation of water districts in Floodplain areas to meet federal standards. Urban-oriented counties are pushing for home rule which could strengthen the role of the county with water districts. (See page 47 for further discussion of county role).

CITY

A. Consent Over Water District Creations.

B. Approval of District Bonds and Interest Rates.

C. Approval of Use of Bond Funds.

D. Approval of Water District Projects.

E. Supervision and Inspection of Water District Construction.

Control over the extraterritorial jurisdiction of a city was given to cities in the Municipal Annexation Act (MAA). Under the MAA, no other political entities may be created in the extraterritorial jurisdiction of a city without the city’s consent. Thus, cities have power of consent over creation of water districts. In the MUD Act, cities are given the power of consent over creation of MUDs in their extraterritorial jurisdiction as well as approval power over water district bonds. This power is limited however: if a city refuses to approve creation, it must negotiate with that area within three months to provide service or forfeit its right of consent. Cities also have inspection rights regarding construction of water and sewer facilities. Cities can require that those facilities meet city standards. (See page 45 for further role of City).

Councils of Governments

A. Approval of District Projects When Federal Funds Are Involved.

Recommendations proposed herein are directed to these various supervising authorities, the water districts themselves, as well as to the Legislature for needed legal revisions in water district statutes.
C. PRIVATE WATER COMPANY

Some developers choose not to hook up to an existing system and prefer instead a private water company to serve their developments. Some of the largest developers in the San Antonio area are also in the water supply business, creating new water companies each time a new development goes in.

Private water companies are considered to be private corporations and subject to the laws regulating such bodies. Cities have some regulations requiring private water systems to use certain materials and size specifications. However, as a corporation, private water companies are largely unregulated in comparison to water districts and other public water systems. Rates charged by companies can be raised indiscriminately. Records are not subject to public inspection, and, in many cases, private water companies do not operate adequate systems.

D. REGIONAL AUTHORITIES

As noted previously, urban development in Texas is fast expanding beyond city and county boundaries. The City of Houston now includes most of Harris County, and development of new housing, commercial, and industrial areas reaches beyond established political boundaries. Servicing these areas with sewer and water as well as other services is a regional problem and one that local governments have found difficult to solve.

Regionalization of Texas urban areas may be one solution to meeting the needs of this expanding service area. To some extent, regionalization is already taking place. In terms of water supply and sewer service, the Committee looked at three different types of regional agencies already in operation to see how they functioned and what their future potential was.

Gulf Coast Waste Disposal Authority is a special district created by the Legislature in 1969 to combat a single problem-water pollution in Galveston Bay and the Houston ship channel. Given broad powers to fulfill this purpose, the Authority has the potential capability of providing direction and coordination of all waste treatment in this region. Its jurisdiction covers three counties—Harris, Galveston and Chambers. Its powers include:

(1) "conducting studies and research for control of water pollution and waste disposal within the district

(2) controlling water pollution and waste disposal within the district

(3) inspecting and investigating conditions relating to water quality and waste disposal in the district

(4) prescribing standards and criteria for the waters in the district (subject to the approval of the Water Quality Board)

(5) regulating solid waste

(6) acquiring, constructing, and operating disposal systems

(7) contracting to receive and treat or dispose of wastes."

The Authority is governed by a nine-man board of directors. The Governor appoints three members, one from each member county. The county commissioners of each county appoints one member, and the last three members are appointed by a mayor’s coalition in each member county. All nine members must reside in the district.

At present the Authority has limited its role in this area to treating industrial waste and managing certain municipal waste treatment systems. Participation in these programs is largely voluntary.

*SOURCE: Gulf Coast Waste Disposal Authority, Title 128, Article 7621d-2, VTCS.
On the industrial side, GCWDA opened in 1973 its Washburn Tunnel Plant which is currently handling industrial wastes from Champion Papers, Crown Central and Air Products. Wastes from Atlantic Richfield and Petro-Tex Chemicals will be added as pipelines and expansion of the plant are completed.

Other industrial waste treatment plants operated by GCWDA are located in Texas City. The 40 Acre Plant treats wastes from Union Carbide and Monsanto Company. Another plant under construction nearby will service Amoco facilities located in Texas City.

Municipal activities of the Authority currently center around implementing the regional waste treatment system for the Cypress Creek Watershed and approximately six other municipal systems servicing 40,000 or more people. The Authority assumed responsibility for Cypress Creek in 1973, after the Water Quality Board relieved the San Jacinto River Authority of its role in the area (see page 69). At present GCWDA operates 25 municipal plants in the Watershed and is in the process of implementing an overall regional system for the Cypress Creek Watershed.

GCWDA operates on income derived from its contracts with industry and municipal customers. Administrative operations are supplemented by State funds. On special projects such as research and planning, GCWDA uses governmental grants for this purpose. At present the Authority has no power to levy a tax in its district as voters rejected such a proposal in 1970. The Authority does have the power to issue bonds and uses this method of financing for implementing its major construction projects. According to officials at GCWDA the lack of sufficient funding is responsible for the limited role the Authority currently plays in overseeing and enforcing a regional water quality program in the entire district.

With its broad legal powers and wide geographical jurisdiction, an agency like GCWDA has the potential capability of effectively meeting the urban needs for waste treatment. Water pollution and waste treatment are not isolated in their effects. Pollution in Houston is soon felt in Galveston; thus the need for regional coordination in providing waste treatment. Furthermore, in having a broad base from which to operate, the Authority can utilize economy of scale to provide efficient and adequate services at the lowest cost.

The Coastal Industrial Water Authority (CIWA) is another special district created by the Legislature for a single purpose, in this case providing financing for a surface water distribution system for the City of Houston. Though its jurisdiction covers three counties in all— Harris, Liberty, and Chambers— the City of Houston maintains controlling power on the seven-man board. In addition, the distribution system is being paid for from Houston's water revenues, and when completed the system will be a part of the water system of that city. Since its creation, CIWA has issued more than $100,000,000 in bonds to construct the distribution system from Lake Livingston to the Houston area. The CIWA Project and the construction of Lake Livingston combined will cost over $300,000,000.

Created originally to provide surface water to industries along the ship channel, CIWA has the potential to serve the entire Upper Gulf Coast region. The problem of subsidence due to the overuse of groundwater demands conversion to surface water; CIWA will of necessity be instrumental in this changeover as will the City of Houston which through Lake Livingston and the CIWA system controls the largest single source of surface water for this region. Houston's position is of paramount significance relative to subsidence and the overall water supply for the metropolitan region. Through Houston's initiative, a regional water supply and distribution system is a reality; whether this system will operate on a truly regional basis and serve not only Houston but other communities in this region is still a questionable issue.

As CIWA is structured at present, an inordinate disparity exists among its members as to the control, operation, and costs of the regional system. In this context, the Committee in its recommendations reviewed the position of Houston, the other communities involved, the overall well-being of this region as a whole relative to the need for a regional water supply system and the role of a regional authority like CIWA in it.

Termed a water district, the North Texas Municipal Water District (NTMWD) has broader statutory powers than typical water districts located in metropolitan areas. The District operates in Dallas, Rockwall, Collin, and Kaufman Counties, and was created in 1951 by the Texas Legislature for the chief purpose of providing 10 cities in the Dallas area with a potable water supply. Towns of Farmersville, Forney, Garland, McKinney, Mesquite, Plano, Princeton, Rockwall, Royse City, Wylie and later Richardson voted to become a member city of NTMWD, and water rights to the conservation storage at Lavon, Sulphur, and Cooper Reservoirs were transferred to the district.

The NTMWD is ruled by a board of directors comprised of one appointed representative from each city with a population of 5,000 or less. Two representatives are appointed from each city over 5,000 population. Currently, 16 members are on the board.
Under its statutes, the board has the authority to make rules and regulations to preserve sanitary conditions and to control all recreational and business privileges in any reservoir owned or operated by the district. For tax assessment and collection purposes, the multi-city water district has the same structure and authority as water control and improvement districts created under general law. New cities desiring service from the water district must have approval of the District’s board. The District itself must obtain approval from the Texas Water Rights Commission before it proceeds with the construction of any dams and diversion works in connection with its water supply system. The District has the power of eminent domain for dam sites and pipelines, but only in the counties where member cities are located.

Soon after the District’s creation, member cities agreed jointly to fund the construction of a central water treatment plant at Lavon Reservoir. The plant was built by the U.S. Army Corps of Engineers on the East Fork of the Trinity River.

Today NTMWD provides treated water for over 32 small municipalities, industries, and water supply corporations. The District also operates eight waste disposal plants and is rapidly planning to expand its powers in this area. NTMWD is basically a wholesaler of water and waste water treatment and does not compete with local governments for service directly to area residents. Besides its other customers, the District supplies water to six other water districts. Seis Lagos, however, is the only active water district being served by NTMWD. The other water districts-Rockwall County MUD 1, 2, 3 and 4—are dormant at this time and have not yet begun the construction phase of development.

Water rates charged by NTMWD fluctuate yearly from one to two cents. At present member cities are charged 25 cents per 1,000 gallons, and customer cities are charged 30 cents per 1,000 gallons. The distinction between member and customer cities is that member cities are liable for bonds that are sold to finance construction of new facilities or improvements.

NTMWD strives constantly to meet the needs of its customers. In 1973, the Board created the East Fork Water Quality Advisory Council to develop a policy for district operations and contracts with individual cities. The Council is comprised of one member from each East Fork city with a population of over 10,000 and one representative from the smaller cities in both the upper and lower basin. One representative is also selected from each city that has a waste water operating contract with the water district.

In 1973, the Texas Water Quality Board named NTMWD the regional entity of the East Fork of the Trinity River in the Upper Trinity River Basin Comprehensive Sewerage Plan. In this connection the district works closely with the North Central Texas Council of Governments in carrying out the plan. NTMWD is now pursuing a more active role in the sewage treatment business and is developing expertise for advanced waste water treatment management for its area.

NTMWD provides water and waste treatment to small municipalities that by themselves could not economically afford the type of service they now receive as members of NTMWD. With the costs of water supply rising and inherent management and political problems becoming more complex, a regional agency like NTMWD may offer small municipalities in large urban areas a way to meet the service demands caused by rapid urban growth.

**E. RIVER AUTHORITIES**

Texas River Authorities vary according to jurisdiction, powers and duties. Like water districts, river authorities are considered conservation and reclamation districts authorized by the Texas Constitution. Created by special act of the Legislature, river authorities have the power to engage in water supply and distribution, flood control, soil conservation, navigation, generation of hydroelectric power, and water quality.

More recently, under the supervision and authority of the Texas Water Quality Board, some river authorities like the Trinity River Authority (TRA) and San Antonio River Authority (SARA), are playing a more active role in water quality. In many cases, the TWQB has designated river authorities as the regional authority over waste treatment and water quality as well as authority over the use of septic tanks around state lakes.

The Trinity River Authority has been most active in the area of waste treatment in the Dallas-Ft. Worth area. TRA plays a prominent role in regional waste water treatment as well as in raw water supply in this region. A central regional sewage plant serving 10 cities is in operation at Grand Prairie, and another serving five cities is in operation in South Dallas. TRA’s long-range goal is to take over total sewage disposal operations in the entire Dallas-Fort Worth region.
The role of TRA will greatly expand in the future. Its role may possibly serve as an incentive for other river authorities to get more involved in waste treatment operations. TRA will have an influential part in the planning and implementation of water and sewage treatment plants in the Tennessee Colony, a series of lakes now planned for Corsicana, Fairfield and Athens. The Colony will supply water to the Dallas area during the next 30 years.

In general, the bond issuing power of a river authority along with its broad geographical jurisdiction and direct responsibility for state rivers give river authorities a good basis for being in the water supply and waste treatment business. In addition, as public bodies, they are subject to supervision and direction by the state — a fact which can facilitate coordination of activities in the field of waste treatment and regionalization.
PART II

HOUSTON METROPOLITAN AREA:

USE OF WATER DISTRICTS
LEGISLATION ON WATER DISTRICTS

Introduction

Part of the Committee's responsibility was to review existing legislation on water districts for their effectiveness. This review included the "water district package" passed by the 63rd Legislature. The recommended revisions contained in this report are aimed at clarifying certain sections of water district statutes as well as alleviating certain inequities in the present system of laws governing the use of water districts by developers.

For the most part, these revisions are based on the committee investigation of water districts in the Houston Metropolitan area. With close to 300 water districts, this area offered the opportunity of reviewing almost every water district process at any particular stage.

Part II reviews these legislative revisions, as well as the operation and supervision of water districts with background information relative to each recommendation.

Creation Process

To approve creation of a Municipal Utility District under current statutes, the Texas Water Rights Commission must determine whether the district would be "necessary, feasible and practicable, and a benefit to the land." It is left to the discretion of the Commission to define what is necessary, feasible and practicable, and a benefit.

Believing the above determinants are vague and subject to arbitrary decisions, the Committee proposes that all petitioners prove the worth of their proposed district by submitting evidence on the overall impact of their district on the surrounding environment.

Recommendation 1

Revise Section 54.001 of the Water Code to provide for definition of "necessary, feasible and practicable, and a benefit to the land."

1. necessary to mean unavailability of comparable service from other systems, including, but not limited to, special districts, municipalities and regional authorities.

2. feasible and practicable to mean projected construction costs, tax rate, and water and sewer rate are not unreasonable.

3. benefit to mean the district and its system and the subsequent development therein will not have an unreasonable effect on the following:
   a. Land Elevations
   b. Subsidence
   c. Groundwater Level of Region
   d. Recharge Capability of Groundwater Source
   e. Natural Run-off Rates and Drainage
   f. Water Quality
   g. Total Tax Assessment on Land Included in a Proposed District.

Revise Section 54.015 to require petitioners to submit a district feasibility report including but not limited to the following documents:
1. Evidence showing the district is necessary, feasible and practicable, and would be a benefit to the land as stated in Section 54.021 of the Water Code.

2. Written refusal from neighboring local agencies including but not limited to water districts, municipalities, and regional authorities providing comparable services stating that service cannot be provided.

3. Estimates of costs of service if provided by other neighboring local agencies.

The Water Rights Commission shall not approve any district and commit state and other public financing in support of a district that does not offer positive evidence as to the necessity, feasibility and practicality, and benefits of a proposed district.

**Creation Costs**

A developer uses a water district to finance water, sewer, and drainage for his development. It is a benefit to him in two ways: (1) He doesn’t have to put up this front-end money for these improvements, (2) A water district enhances the value of his land by providing these improvements.

Water districts in effect operate as an arm of the developer’s business. Regardless of the restrictions placed on directors’ connections, the developer through the board controls the water district during the construction stage. His engineers plan the system and estimate the necessary costs. Attorneys for the district are chosen by the developer.

Regulating the use of water districts by developers has centered around trying to separate the developer from the water district he has created. Under the present system, however, instead of total separation, a sharing of costs, benefits, and control appears more feasible. The Commission has moved in this direction by requiring developers to contribute 30% of the construction costs. The Committee would expand upon this idea.

**Recommendation 2**

*Revise Section 54.305 of the Water Code to provide that creation costs including all necessary application fees, deposits, engineering and legal fees shall be paid by the petitioner and not the proposed district.*

*This provision shall apply only to developer-type districts.*

During the creation process of a district the attorney and engineer are in fact representing not the proposed district but the petitioners—that is, the developer. Yet, under present statutes, the district pays for costs incurred for creation, i.e., application fees, attorney fees, engineering fees.

Since it is the developer at this particular time that benefits the most if the district is approved, he should pay for that benefit and not pass the costs of creation on to the approved district.

**Notification Procedures**

Within the internal operations of a water district, one of the major problems noted by the Committee was the lack of public awareness of a district’s activities. One of the common complaints about districts was their secretiveness. In many cases the claim that most people living in a district did not know of its existence was borne out by staff inquiries.

The Open Meetings Law and Senate Bill No. 440 did much to eliminate abuses in this area; however, the difficulty of finding out about district business has not been solved. Notification procedures sometimes appear more to prevent public awareness than to insure it.
Notices are required to be posted in the county courthouse. Needless to say if a person lives in a water district 40 miles from the courthouse, he is not going to make a daily check to see when his district is holding a meeting or an election. To solve this problem, notices are required to be posted in the district. The interested resident then must search out the public place where notice was posted. This task is almost impossible when a district is wholly residential and there are no "public places" per se.

Notice of certain district business is required to be published in a newspaper. These notices, however, are published in the Legal Notice Section located in the back of the classified ads in small type. There is no assurance, no matter whether a major city newspaper or a small local is used, that interested persons will see such notices.

In all these instances, the legal procedures have been fulfilled and satisfied. In most cases, however, the intent—that of informing the public—has not. Insuring the public's right to know is a vital responsibility of government. The Legislature should provide for more than just legal verification of a particular action, and in this matter, each water district should try to insure that residents are given the opportunity of knowing about the district.

Senate Bill 440 passed last session by the 63rd Legislature requires that property buyers in a water district be told of the existence of the district, its tax rate and total bond indebtedness.

Again, the intent of this bill was good but there was no guarantee that people were being informed—only that they had signed a certain document. Under this bill, property buyers are required to sign an affidavit saying they have been notified. According to water district attorneys and developers, this paper is usually signed at the closing of the sale along with the numerous other documents required.

The Committee staff in door-to-door inquiries in various districts asked residents whether they knew they lived in a district and if they were told of it at the time of the sale. From the survey, the majority of residents were aware they were living in a water district though they did not know much about its operation. However, the majority of those homeowners who bought houses after the effective date of Senate Bill 440 could not remember having been told they were buying in a water district or if they had signed a statement to that effect.

A common stricture among government officials, attorneys, developers and other interested parties when interviewed about this problem was "how far do you have to hold a consumer's hand. It is up to the consumers, in this case the homebuyer, to be aware of what he is signing."

The Committee agrees that legal protection will not guarantee consumers will act to protect themselves. The Committee, however, does feel that government and legislation should facilitate that protection, not hamper it. In that connection regarding general notification of water district business, the Committee has the following recommendation:

Recommendation 3

Revise Chapters 51, 53, 54, and 55 of the Water Code to provide standardization of public notification procedures concerning water district hearings and elections as follows:

To standardize methods of public notification and provide greater public awareness of district business, the Committee recommends the following amendment to Chapters 51, 53, 54 and 55 of the Water Code:

Section . Notice. (a) Public notice of creation hearings, confirmation elections, general elections, bond elections, rendition and tax assessment hearings, and exclusion and annexation hearings and elections shall be given by districts created under this Chapter or by districts created by special act of the Legislature as provided in this section.

(b) Notice shall be given by mail to all residents and property owners in the district at least 14 days before the date of the hearing or election. Notice shall not be given earlier than six weeks before the date of the hearing or election."

*Costs incurred by this procedure have been estimated as minimal when compared to other costs incurred by a district. WCID 93 sends a monthly newsletter to its 2,200 residents for a cost of approximately $56/month. This comes to about 2½ cents out of the monthly bill of each resident.
(c) One copy of the notice shall be posted at each of four different public places inside the district at least 14 days before the date of the hearing or election. If the district has less than 10 residents and property owners, one copy posted in two different places within the district shall be sufficient.

(d) One copy of the notice shall be posted at the county courthouse in the county in which the district is located. Notice shall be posted in the place where the notices are usually posted.

(e) Notice shall also be given by mailing a copy to each city in whose extraterritorial jurisdiction the district or proposed district is located.

(f) The notice shall be published in a newspaper of general circulation in the county in which the district or proposed district is located, once a week for two consecutive weeks. The first newspaper publication shall be made at least 14 days before the date of the hearing or election.

The Committee recognizes that these legal revisions like the present laws do not fully insure public awareness. Unless water district boards, developers, consultants, real estate agents, and other relevant parties choose to do their part in informing present and future residents of district business and even its existence, these recommendations alone will probably have little effect.

In this connection, many water districts put out a newsletter either separately or as part of the monthly bill to their residents. In addition, many water districts have community associations which have no legal connection with the district, but keep members informed of water district activities.

In the survey carried out by the Committee, the highest awareness of a district among its residents were in those districts which put out a newsletter either on their own or through a community association. The Committee commends these districts for their initiative in communicating the district's activities to its residents and hopes other districts will make similar efforts to encourage resident participation and awareness in its activities and do more than just fulfill legal requirements.

"Water District Package"

The bills passed by the 63rd Legislature provided additional and needed supervision over the internal operation of water districts. On the whole, the bills seem to be working although some major abuses have not been eliminated.

Senate Bill 807, disqualifying certain persons from serving on water district boards, eliminated to a certain extent the close ties between developer and the board. This bill, however, was subject to an Attorney General's opinion, ruling that the length of time regarding a person's connection with a developer, engineer, or attorney was too long and the extent of a person's contractual relationship with a developer was too broad and unreasonable.*

In recognition of this ruling, the Committee recommends the following:

Recommendation 4

Revise Sections 50.024; 50.0721; 53.0631; 54.102 to provide for the disqualification of a director of a district who has a continuing business or personal relation with the developer, manager, engineer or attorney for the district.

In implementing this recommendation, the Legislature should work jointly with the Attorney General and the Water Rights Commission in the drafting of necessary legislation to provide for effective but reasonable guidelines for the disqualifications of a director.

In line with this same bill, the Committee proposes:

Recommendation 5

Revise the Water Code to provide that the Texas Water Rights Commission shall require all newly-elected water district directors to sign a sworn affidavit attesting to their eligibility for the position as provided by the Water Code and Election Code. This Affidavit shall be printed on the Commission's yearly registration form for water districts and filed annually by the district after each general election.

A director failing to sign said affidavit shall be punished by a fine of not less than $100 nor more than $1000.

Senate Bill 435 (Sections 50.371–50.376) requires annual audits to be made by all water districts. Copies of audits are required to be filed with the Texas Water Rights Commission, with the county in which the district is located, and with the city that has extraterritorial jurisdiction over the district.

Review by the Committee indicates that the majority of districts are in compliance with this new law in having annual audits done. In turn, the TWRC has set up procedures to check districts for compliance and is in the process of preparing a manual for water districts to aid in the preparation of audits as well as setting up an audit review system to monitor the fiscal operations of districts.

Information received by the Committee, however, indicates that districts are not filing audits with the other designated offices. There are over 240 active water districts in Harris County alone and under the jurisdiction of the City of Houston. To date, the City has received approximately 50 audits.*

Recommendation 6

Revise Section 50.374 of the Water Code to provide that a district that fails to comply with the provisions of 50.374 of this code (preparing and filing annual audits) is subject to a civil penalty of not less than $50 nor more than $100 a day for each day the district willfully continues to violate these sections after receipt of written notice of violation from the Commission by certified mail, return receipt requested.

The Texas Water Rights Commission shall require that all districts submit a certified affidavit to the Commission that copies have been sent to all designated public bodies.

It shall be the responsibility of the Commission to file the names of districts failing to comply with this section with the Attorney General for prosecution.

In Senate Bill 435, there is no specific office within a city designated to receive audit reports. As a result, those audits filed with the City of Houston were found scattered throughout the city's various departments.**

To counter this problem the Committee proposes to designate a specific city office as the recipient of water district audits.

Recommendation 7

Revise Section 50.374 of the Water Code to read: "(C) Copies of the audit shall be filed in the office of the district and with THE CITY SECRETARY or other designated official of any city in whose extraterritorial jurisdiction the district is located. . ."

The following recommendations provide for correction and clarification of Senate Bills 439 and 807.

*Leonel Castillo, City Controller, City of Houston, Committee Hearing (September 26, 1974), Houston, Texas.
**Leonel Castillo, City Controller, City of Houston, Committee Hearing (September 26, 1974), Houston, Texas.
Recommendation 8

Revise Section 51.0731 of the Water Code to read “...The election date for directors of a district proposing to provide or actually providing water and sewer services or either of these services to household users as the principle functions of the district shall be the first Saturday in April.”

NOTE: In this section of Senate Bill 439 the phrase “to household users” was left out.

Recommendation 9

Revise Section 54.102 of the Water Code to read “…he is related within the third degree of affinity or consanguinity to a developer of a property in the district, to a board member …”

NOTE: In this section of SB 807, the word “developer” was left out.

Recommendation 10

Revise the Water Code to provide for staggered terms of directors of water districts.

NOTE: The intent of Senate Bill 439 was to provide for staggered terms. As passed however, the bill provided for all directors to be elected in the same year for the same term.
OPERATION AND
SUPERVISION OF WATER DISTRICTS

Introduction

The increased use of water districts particularly in the Houston Metropolitan area has necessitated additional supervision over
district operations. Currently the Water Rights Commission carries the major responsibility for this supervision.

In the past year, the Commission and its staff have revised Commission rules and regulations governing water districts as well as
increased the staff handling water district business. New regulations require districts to provide more complete information regarding
construction projects; engineer responsibility for quality of construction; increased inspection during construction; more complete
fiscal procedures; and restrictions on building in floodplains. The Commission further approved recently a new policy requiring district
developers to share in construction costs by 30%. Developers are now also required to prepare market feasibility reports in connection
with proposed districts.

These new procedures have increased the responsibility of developers and given the Commission better information on which to
base their supervisory operations. At the same time, the new rules and regulations have increased the workload of the TWRC and the
time required to process district creation and projects. Commission staff make on-site inspections to every proposed district and
construction project as well as spot inspections during construction. During the review process, the costs of a district’s system,
particularly the construction costs are scrutinized by the Commission and compared with Commission cost estimates for the same
work.

Needless to say, the added regulations approved by the Commission have gone a long way in providing better and more thorough
district accountability. At the same time, there is still a need for additional supervision in certain areas. This section deals with those
areas. Included are recommendations giving additional administrative aid to the Commission as well as review of special aspects of
water district operations that need supervision.

Consultant Fees and District Contracts

During the construction phase of a district, district operations are essentially in the hands of district consultants—construction
operations are directed by the engineers while the administrative end is directed by attorneys for the district. These major consultants
gear a district’s operations to the overall building schedule of the developer—thus during this period, the district is in fact operating as
part of the developer’s business.

Attorneys for water districts play a significant and influential role in water district operations. In the Houston Metropolitan area,
three major law firms handle the majority of district business; this fact and the nature of the water district system creates a built-in
conflict of interest not only for attorneys but other water district consultants, such as engineers, tax assessors, bookkeepers, and
plant-operating firms.

Attorneys during the developer stage run district meetings. They set the agenda and direct board members as to their duty. Most
district meetings during this period are concerned with approving and signing checks, district elections, hiring consultants, and
approving bond issues. Responsibility for these functions is in the hands of the attorney, not the directors. Decisions made by district
attorneys usually go way beyond the traditional role of advising clients. In addition, attorneys are usually responsible for non-legal
administrative duties.

Attorney staff prepare minutes of district meetings and post meeting notices. Some firms also have an in-house bookkeeping
service for their clients. Many of these administrative chores probably could and should be done at lesser cost to the district by either
the board’s secretary or some one other than the attorney and his staff.

Fees charged water districts for legal services are often at extremely high rates when compared to fees other public agencies are
charged for the same services. This is due in part to the fact that under the present system, there is no negotiator for the district who is
directly concerned with getting the best representation at the best rate. At the same time part of a district’s legal expenses are for
non-legal services; administrative services provided by legal firms raise the total amount of money a district may expend for legal
representation.
The Gulf Coast Waste Disposal Authority like water districts requires the services of bond attorneys. Yet, their costs for such legal work is significantly lower than what most water districts are charged. For instance, the legal fee for processing a $1,000,000 bond issue for GCWDA is $10,000; for a $5,000,000 issue, it is $40,000. These rates are based on 1% of the first million dollars issued; 3/4% for the next 4 million; and 1/2% for the next 5 million.*

Brookfield MUD on the other hand was charged $20,000 for a $1,250,000 bond issue; College View MUD was charged $24,000 for only a $600,000 bond issue; and Cypresswood UD was charged $25,000 for a $1,700 issue.** All of these fees were well over the rates charged to GCWDA for its bond issues.

Under the current system, there is no personal incentive to cut costs of the district, particularly during the developer stage. Hiring of consultants, though approved by the board, still rests in the hands of the attorney and the developer. The board in most instances will accept costs and services recommended by the attorney.

For this reason the Committee sees the urgent need for close supervision of district activities by the TWRC during the developer stage. In the absence of those directly concerned with the welfare of the district over the welfare of the developer and his project, the TWRC should take all steps necessary to protect the district and future residents who ultimately have to bear the costs incurred during the development stage. The Commission currently reviews every construction contract, cost of materials, and other construction related expenditures. Similar review should be done on nonconstruction costs also.

** Recommendation 11 **

The Water Rights Commission under its continuing powers of supervision of water districts shall include its approval of district projects and bond issues a review of nonconstruction expenditures as well as construction costs. Review of nonconstruction items shall include but not be limited to legal services and fees; contingency funds; and in-house administrative expenditures of a district.

The Commission shall review contracts for services, other than contracts for purchasing water and sewer service from the district, made by the district. In reviewing said contracts the Commission shall set guidelines for type of work for which district funds can be expended.

The Commission may waive such authority after the district has more than 25 residents, and the majority of district directors are also residents of the district.

During the course of its study, the Committee noted that new resident boards often experienced problems with present consultants. In some instances, this was due to an exaggerated mistrust by residents of a developer board which, previous to the resident takeover, worked hand-in-hand with the developer. In other cases, however, problems with consultants were very real and based on differing viewpoints by resident boards and district consultants. Indicative of the lack of satisfaction in attorneys is the trading or hiring of a new attorney when residents of the district "take over" the board. This change is a result in many instances of former attorneys failing to represent the district to their fullest capacity.

The Committee was told by district directors of attorneys failing to come to district meetings, of failing to inform directors of necessary legal procedures such as registering with the TWRC and filing of annual audits, and reluctance on the part of attorneys to pursue specific legal actions. In one particular case, the attorney told the board he would not pursue negotiations with the City of Houston because the City had jurisdiction over several other water districts his firm represented, and action by the district in question might affect his other clients. Another district's officials reported of the reluctance of their attorney to advise appropriate action against the developer and engineer of the district to gain monies the board thought was due them. The board felt this attitude shown by their attorney was due in part because of the close business ties through other districts their attorney had with the developer and engineer in question.

* SOURCE: Jack Davis, General Manager, GCWDA, interview with.
These are examples of the conflict of interest that is perpetuated under the current water district system. Some attorneys out of economic self-interest feel more loyalty to a developer that may create more water districts, and thus more business for them than to the water districts they supposedly represent and which pay their fees.

Additionally, possible conflicts of interest exist under the current situation where one firm handles several water districts which may be negotiating with each other for service of some type. In these instances, which district is being represented by the attorney? What guarantee is there for either district that its interest will be protected since they both have the same attorney? Or in fact, is the attorney representing neither district but the developer or developers involved? The water district field is a closely knit system, and possible conflicts of interests as in the situations noted above need to be fully recognized and dealt with by the Texas Bar, its members and, if necessary, by the Legislature. Every district and their residents demand impartial representation by their consultant. Under the present nature of the water district field, it is doubtful if they are receiving it.

Aid to Districts

The complexity of water district operations has created a demand for some informational and advisory office. Many district directors have no experience either in the field of water and sewage treatment or government. Resident boards particularly find themselves at a loss when they take over responsibility of running the district from a developer board and his consultants. As noted above, resident boards are often unable to work with present consultants and are faced with a lack of assistance from anyone.

The logical alternative is help from the TWRC. Yet, under the present Commission structure, its staff is not able to offer the assistance that is needed. The Commission is geared to solving engineering and construction problems. Many of the problems directors faced are neither, but legal or administrative. This need will not lessen but will probably increase as more districts become established, electing resident boards.

The operational aspect of districts also needs the resources of an information office. When small districts have maintenance problems, who can they turn to if their operators lack the experience to handle them? The TWQ; EPA; GCWA? The choice is great, but which will guarantee assistance and resulting action?

The difficulty in locating the proper advisory agency and the needed help has been noted by district boards, operators, and others in the water district field. All have expressed the need for some type of office to channel district problems to respective agencies in the district business and to provide assistance when needed.

In response to this need, the Committee proposes the following:

Recommendation 12

Establishment of a coordinating office within the TWRC to channel information and assistance to water district boards, residents and others. Function would include, but not be limited to:

1. Information and orientation seminar for new directors.
2. Processing of inquiries and complaints to proper state and local agencies.
3. Investigation of complaints regarding operation of water districts, including legal as well as technical problems. Channeling complaints to proper divisions within the TWRC.

Construction Supervision

Present statutes give the Commission, counties, and cities authority to inspect water district construction projects. In many instances there is overlap in this inspection authority. At the same time, despite the numerous agencies involved in inspection, water district systems are still substandard in many instances.
Even though the Commission has a local office in the Houston Metropolitan area specifically to inspect district projects, the Commission cannot provide assurance that construction is being done to specifications. On-site inspection is a recognized necessity by government officials. Under current Commission procedures, many construction inadequacies are covered up before the Commission can finish administrative requirements necessary to request action by the Attorney General to halt inadequate construction. At most, the local Commission staff is able to visit district sites only once or twice a month.

Even though the City of Houston has the authority to inspect district projects, it rarely does. Like the Commission, it does not have the manpower to do the job. There is also a tendency to push the responsibilities on to the Commission and use the City's resources elsewhere.

The responsibility for insuring adequate construction lies not with the Commission or other local agencies, but with the district’s board. Section 54.227 (Texas Water Code) states:

"(a) The board shall have control of construction work being done for the district under contract to determine whether or not the contract is being fulfilled and shall have the construction work inspected by the district engineer or his assistants."

In recognition of this responsibility, the Commission is requiring new districts to provide on-site inspections and district engineers to sign a statement certifying work has been done according to specifications.

To insure that all districts adequately oversee projects and to provide adequate inspection, the Committee proposes the following:

Recommendation 13

The TWRC shall require that at least 1% of any water district bond issue be set aside for the Commission to provide for full-time, on-site inspection or water district project. The Commission shall provide its own inspectors for this work.

Provision shall be made to refund to the district any unused portion at the completion of construction.

(Implementation: Legislature; TWRC)

Commission Staff

The complexity of water district procedures requires experienced staff to process water district business. Currently, the Commission is having difficulty in keeping qualified and trained personnel due in part to the lack of advancement under current salary levels. The Commission finds it almost impossible to compete with the private sector in attracting qualified people to work for the Commission.

Currently the top salary for Commission legal staff is Group 20 at $16,682 a year. This can in no way compare with what a water district lawyer can earn in private law firms. In essence, the State is spending time and money training attorneys, engineers, and others for private industry because the State cannot offer incentives to encourage such professionals to stay with State Government.

Under these circumstances, the Commission cannot expect to retain adequate, qualified staff. Without qualified staff, it additionally cannot expect to fulfill its regulatory responsibility over water districts. An agency that has a continual turnover in its staff cannot build up a viable organization to meet on an equal level of experience and expertise similar professionals working for those groups the Commission regulates.
Recommendation 14

The Legislature should consider upgrading staff positions in state agencies in recognition of the need to maintain and keep trained and experienced personnel.

Specifically, the Committee recommends the creation of higher levels for the Examiner position within the Water Rights Commission.

Funding

The districts division of the Water Rights Commission is currently the most active section within the Commission. The enormous activity of districts has created an equally enormous burden of responsibility for the Commission and its staff. The difficulties involved in fulfilling this responsibility are great and fully appreciated by this Committee.

Given this role by the Legislature, the Legislature in turn should support the TWRC and other State agencies as well, with adequate funding to enable these agencies to implement their statutory responsibilities as well as specific recommendations provided herein.

As-Built Plans

Before the Texas Water Rights Commission set new regulations, districts often had no up-dated plans of their water and sewer system to refer to when repairs were necessary. Maintenance of systems was made twice as difficult by having to search out bad lines without adequate plans.

The Commission now requires district engineers to file as-built plans with the district at the time construction is completed. These plans are required to be kept in the district files.

To aid pertinent state agencies and others who may require as-built plans of districts in the course of their work, the Committee proposes to have district as-built plans located in a central repository.

Recommendation 15

As-built plans of a water district’s water and sewer systems shall be filed in the central office of the Texas Water Rights Commission as well as in the district’s office. Plans shall be available for review by any interested persons.

Maintenance of Adequate Water Pressure

Though most district engineers plan the district’s water system to meet the needs of the planned subdivision, there are no guidelines insuring the system can maintain adequate water pressure at the time of full development and provide a sufficient water supply to all residents along distribution lines.

Recommendation 16

The Texas Water Rights Commission shall require any water system constructed by a water district to be of the correct size and type to maintain an adequate water pressure at all points within the district at all times.

The Commission shall not permit a district to contract to provide water service to areas outside the district, if such service will have an unreasonable effect on the water pressure and water service within the district.
Water District Operators

In line with operating an adequate system in each water district is the need for proper maintenance at all times. Qualified and experienced operators are a first requirement in providing that adequate maintenance is available to water districts.

The proliferation of water districts in the Houston Metropolitan area has created a demand for additional qualified operators. At present, the training of such persons does not supply the demand. Texas State Technical Institute at Waco is the only facility teaching classes to prepare persons for state operators’ licenses. As a result, districts usually have operators that are under-trained and have no experience other than the basic procedures involved in operating such systems. Operators of small treatment plants find themselves lacking expertise to deal with especially complex problems surrounding advanced sewage waste treatment.

The State Health Department requires that sewage treatment plants have at least one licensed operator. Operators are licensed according to training and experience. Most district operators hold the minimum license—Level C. Research indicates that a great many water districts in the Houston area are operated by companies that handle many water districts and the amount of time spent by operators of these companies at any one district is not sufficient to insure adequate operations. For example in the area of north Harris County, that is marked by numerous water districts, one operator holding a state license often operates as many as 10 or 15 water districts at one time. The district is sometimes inspected once every week or two by this operator. Other days, when trouble occurs, the person in charge of the plant, who is often inexperienced and unlicensed, has to wait for the operator to correct the problem. Sometimes critical problems cannot be attended to immediately. When this happens to several districts, more severe problems can occur. Since it would be economically unfeasable to have one licensed operator at each district, the Committee recommends one licensed operator for every 800 taps. (A water district with 800 taps is considered well developed and would have an adequate budget to employ such an operator.

Recommendation 17

Water districts shall hire at least one licensed sewerage plant operator on a full-time basis for every 800 taps.

(Implementation: State Health Department, TWDB)

To meet the demand for qualified operators, the Committee further proposes:

Recommendation 18

State support for the implementation of a new community college program leading towards State Health Department certification for sewerage plant operator as defined in “Sewerage Plant Operator in Article 4477-1, Section 1, Vernon’s Texas Civil Statutes.”

(Implementation State community colleges)

Water District Identification Signs

At present there is no physical means to identify and distinguish the boundaries of one water district from another. There are no signs along thoroughfares crossing district boundaries indicating the existence of a district. Residential communities located in a district are referred to by their subdivision name. Districts themselves do not always have the same name. More frequently district names are made up of the name of the county in which it is located followed by a number.

States, counties, and cities all have boundary signs indicating the limits of their jurisdiction. There is a practical need for districts to do likewise. Such identification would inform potential homebuyers that they would be buying into a water district. It would also inform present residents of the district of its existence and boundaries.
Secondly, such identification would greatly facilitate locating particular districts. There are a great many public and private agencies that do business with water districts, and employees of these agencies frequently have business within the district itself. Under present circumstances, one virtually needs a specially-prepared water district map to find a district. Much time and effort wasted in searching for districts could be eliminated by the simple procedure of using boundary location signs indicating the existence of the district and its name.

Recommendation 19

Water districts shall place an identification sign at least at two major entrances to the district.

Local Supervision: Municipalities

As mentioned in Part I, municipalities have jurisdiction over the creation and operation of districts under the Municipal Annexation Act and Section 54.016 of the MUD Act. The effectiveness of city control is only as good as each individual city chooses. Presently the City of Houston exercises only minimal rule over districts, allowing virtually every proposed district to be created with few restrictions. In effect, Houston has relegated the responsibility of providing water and sewer service in its ETJ to water districts.

The City of Austin on the other hand has used the legal authority granted it to the fullest extent, in order to keep a strong supervisory hand over districts operating in its territory. Petitioners of proposed districts must pay certain costs relative to creation procedures; districts will be approved only to provide water and sewer service; further, Austin will not approve a district under normal circumstances if the city can provide the same service within three years.*

While the past policy of Houston has been to annex water districts indiscriminately, the City of Austin will not do so until the district meets certain requirements: A district's bond indebtedness and operation costs must be reduced so as to equal incoming revenue; that is, the district must be paying itself. Before annexation, Austin contracts with the district to operate the system. Only when the district is operating on the same basis as other outside city customers does Austin consider annexation and assumption of the district's bond indebtedness. This policy is to protect city residents from having to assume the bond indebtedness of annexed water districts.

In Houston, residents are currently paying approximately $37,655,000 in water district debts.* *Last year, Houston had to transfer $1,777,000 from the general fund to pay the bond service of annexed water districts.*** In addition to this, residents were forced to support annexed districts by also having to pay through taxes the costs of providing additional city services to these newly annexed areas.

The actual benefit of annexing new areas with the subsequent increase in property tax revenues when compared to the costs of providing city services to new areas has not been estimated. Many people assume however that newly annexed areas more than pay their way when they come into the city. The fact that Houston must borrow from its general fund to pay for district bond services negates in part this theory.

The physical nature of the water supply of both Austin and Houston has played some role in influencing the particular policies of each city toward water districts. The Austin area is almost totally dependent on surface water; Austin is the sole proprietor of the rights to this supply. Districts must contract with Austin for water and thus, Austin has a powerful lever to use in getting districts to follow its regulations.

The Houston area however is at present almost totally dependent on groundwater. Districts can sink a well almost anywhere and have an adequate source of water. Houston has no control over this and as a result has no added pressure like Austin to use to enforce any policy it may have.

***Leonel Castillo, Committee Hearing (Sept. 26, 1974), Houston, Texas.
With the powers given them under the Municipal Annexation Act and the MUD Act, cities have the most influential role on the local level in terms of overseeing the use of water districts. The responsibility for failing to provide adequate supervision lies with the city.

The role of Houston is of paramount importance due to the number of districts under its jurisdiction. Houston in the past however has chosen to play down its responsibility in this area. The council’s policy of playing no role at all in the creation process other than “rubber-stamping” city consent, has contributed to a situation necessitating less local control and more responsibility at the state level. The ultimate payers of the lack of leadership shown by Houston in this area is and will be for sometime, the citizens of Houston.

The Municipal Annexation Act gives Houston authority over districts. To implement this authority cities must pass an ordinance extending its plat and subdivision regulations to the ETJ. Houston has never done so, preferring instead to use moral and political persuasion to get developers to abide by city regulations. By this policy Houston is clearly showing its lack of interest in providing local control and coordination for growth in its ETJ.

Recommendation 20

The City of Houston should use the powers given to municipalities under Article 970a, Section 4 of Vernon’s Civil Statutes (Municipal Annexation Act) and Chapter 54 of the Water Code and extend by ordinance its plat and subdivision regulations to cover water districts and other development in the city’s ETJ.

Other urban cities in Texas should pass a similar ordinance if they have not already done so, in order to provide for fully planned and coordinated development in the ETJ of cities in Texas.

To enable cities to exercise their consent power in the creation of districts, the Committee has two additional proposals relating to the role of cities in this area:

Section 54.016b of the MUD Act reads, “If the governing body of a city fails or refuses to grant permission for the inclusion of land within its ETJ in a district within 60 days after receipt of a written request, a majority of the electors in the proposed district...or the owner or owners of 50 percent or more of the land to be included may petition...the city” for service.

Testimony gathered at public hearings held by the Committee indicated that the 60 day-limit was not sufficient time for a city to properly consider approval.*

Recommendation 21

Revise Section 54.016b of the Water Code to read “...If the governing body of a city fails or refuses to grant permission...within 120 days (60-days) after receipt of a written request...”

Petitioners of proposed districts as a matter of form should provide the same information regarding the district to cities as they do to the Water Rights Commission.

*Lila Cockrell, Councilwoman, City of San Antonio; testimony before Committee, San Antonio (Sept. 7, 1974).
Recommendation 22

Revise the Water Code to provide that petitioners of a proposed water district shall submit all reports, plans and other information required by the Commission at the time of creation to the city having extraterritorial jurisdiction over the proposed district.

If the proposed district is located outside the ETJ of a city, information will be filed with the county commissioners within whose boundaries the district is located.

Local Supervision: Counties

County government is given authority within its boundaries to perform certain public functions not delegated to other public agencies. The county has no independent power to govern. County can engage only in activities required or permitted by the State. Thus, the result is that policy making in a county is confined mainly to deciding whether or not optional programs authorized by the State legislature will be undertaken. Historically, counties engage in conducting elections, and administering county hospitals, welfare programs, libraries and parks. Each commissioner is in charge of the county road and bridge programs in his own precinct. The county also functions as the central repository for land and vital statistical records. In Texas urban areas, county jurisdiction has decreased as cities have extended their boundaries and taken over many duties previously performed by counties. At the same time as urban growth has expanded even beyond city boundaries, counties are being faced with a demand for services that they find they cannot meet under their present statutory powers.

In the Houston Metropolitan area, the proliferation of water districts has accentuated the lack of county authority in certain areas. Many water districts now locate beyond the ETJ of Houston and other cities. Such water districts are not subject to any local control regarding building standards and material specifications, since counties lack the power to establish such regulations. In addition, the use of water districts has increased the population in unincorporated areas and the county is left to provide basic services to these areas. Most counties do not have the manpower or funds to provide police, fire, and other county services to this essentially urban populace.

Montgomery County is just one of many counties experiencing serious problems because of its lack of authority to regulate water districts within its boundaries. Less than six years ago, Montgomery County, north of Harris County, was a quiet small rural community with the city of Conroe as the center of activity. The use of water districts however has made this one of the most booming counties in East Texas. The county is now a bedroom community for Houston. Over 35 districts now exist and more MUDs are on the developers’ planning boards.

At present the county has no review powers regarding the creation of these water districts. In addition the county has no say over improvements put in by water districts. As a result, water districts have presented severe drainage problems to Montgomery County.

Water district subdivisions were rapidly erected in the floodplain along the San Jacinto River. Water district drainage improvements failed to consider the natural flooding tendencies of this area, and development in this county has already cost the county and residents millions of dollars in flood damage and repairs.

In general, counties have no authority over improvements put in by a district unless the area is covered by Federal Flood Insurance and improvements are being built in the floodplain. In this circumstance, a county like Harris, is the implementing agency of the Federal Flood Insurance program, and has authority to set minimum building standards for floodplain areas.

To give all counties some check on the use of water districts from creation through other stages of development, the Committee proposes to extend to counties certain review powers already given to cities under their jurisdiction.
Recommendation 23

Revise Chapter 54 of the Water Code to give counties the following review powers over water districts:

1. The county shall be given the authority to review creation of all water districts located in unincorporated areas of the county but outside the ETJ of a city.

2. The county shall be given the authority to review the bond projects and the types of services to be paid by bonds of water districts that are located in unincorporated areas but outside the ETJ of a city.

3. County shall send a copy of its review to the Water Rights Commission for their consideration in approving creation of new districts and district projects.

4. Sewage, water, and drainage projects of water districts located in unincorporated areas but outside the ETJ of a city must meet county standards as set by the county engineer to protect local drainage and prevent flooding in flood-prone areas.

Local Control: Septic Tanks and Red Flag Subdivisions

In some unincorporated areas in Texas many subdivisions with substandard sewage systems can be found which create problems for local cities and counties. Instead of a developer installing a water and sewage treatment system, he can choose to have the home buyers install their own water well and septic tank. There is no city ordinance or county regulation to govern this type of development, usually referred to as red flag subdivisions. This type of development is poorly planned; the developer depends on the homeowner to provide the services that large scale developers provide for their clients. In other cases, a single landowner can decide to subdivide his tract of land selling lots by metes and bounds without any planning. When homeowners apply to the nearest city for utility service, they are sometimes refused such service.

Selling by metes and bounds allows the developer to escape restrictions on subdivisions that are platted. Such development generates housing with individual water wells and septic tanks, and dirt roads instead of completely planned housing with full service that more responsible developers provide as a matter of course.

The major problem with this type of development is that some land in unincorporated areas where these subdivisions are located often has severe drainage problems. Developers can buy this land because of the poor drainage at a low cost per acre and install minimal utilities. With the homeowner putting in his own water and sewer system, the developer has made a successful venture with little front-end money on his part. The homeowner on the other hand is left with his money invested in a home that is continually inundated with sewage from his septic tank because the land is not suited for such a sewage system.

As the population in Texas Metropolitan areas increase more developments of this type will be installed. Some type of regulation must be implemented to insure homeowners that soil conditions will permit installation of a private septic tank.

The septic tank situation in some areas of north Harris County and Montgomery County are examples of problems that have developed with the present lack of septic tank regulations. One particular subdivision with about 200 homes was in severe need of a sewer system. After months of negotiations, this subdivision was finally granted a permit by the TWDB to build a treatment plant. Before that, the soil was in such poor condition that septic tank wastes were infiltrating into the drinking water system. With each rainfall, septic tanks would overflow into the ditches in front of residences. Citizens complained to Harris County Commissioners Court, but the County was unable to do anything as it had no power over situations of this type.

Drainage problems in southern portions of Montgomery County are a common occurrence particularly in Commissioners Precinct 4. Many new homeowners were not told of this fact when they installed septic tanks. Complaints were directed to Montgomery County Commissioners Court along with the County Health Department. Both agencies recognized the need for some type of regulation since the abuse of septic tanks often created health hazards, but in this instance they were unable to help county residents under their present powers.
Possible solutions to the septic tank problem would be for the TWQB to have closer regulation of septic tanks in unincorporated areas of the county either through direct supervision by the board or by designating the county or another local agency as an administrator of such a program. Either TWQB or its appointee would have the authority to decide whether a proposed septic tank is feasible. When application is made to TWQB or its appointee, a set fee would be paid for two inspections by a district office of TWQB or the County Health Department. In turn, the inspectors would report back to the TWQB or its appointee for granting of a final permit.

Recommendation 24

The Texas Water Quality Board shall provide for the regulation of septic tanks in unincorporated areas either through direct supervision by the Board or designating the county or another local agency as the administrator of such a program.

Inspection of District Water Systems

Investigations by the Committee found that in some districts there were inadequate water systems for fire protection. Districts were confused as to whether the system should be inspected by the city, county or some other authority. Thus, the Committee recommends the following:

Recommendation 25

Revis[e the Water Code to provide that a designated city official shall review engineering plans of a water district located in the city’s jurisdiction and certify to the adequacy of the water system for fire protection.

Said engineering plans shall note fire plugs as such and flush valves as flush valves.

In unincorporated areas outside the extraterritorial jurisdiction of a city, approval and certification shall be given to the county fire marshall or other designated county official.

District Tax Assessment

Under the present system districts hire their own tax assessor-collector. In the Houston Metropolitan area, this business is divided among approximately less than 10 people who specialize in district tax work. There is no uniform system as to rates of valuation. Districts assess property anywhere from a 100 percent base and lower. As a result, property on district rolls may be assessed a particularly high value, while on the county rolls, the same property is valued significantly lower.

A uniform county system would help insure equitable assessments for all county residents. Placing this responsibility in traditional tax offices like the county or city could provide greater coordination as well as allow such local agencies to keep a fiscal tab on districts to aid in future annexation decisions.

Recommendation 26

Standardization of tax assessment of water district property within each county. Water districts shall contract with the county tax assessor or the tax department of the largest city in the county in which the district lies for tax assessment and collection.
ADDITIONAL LOCAL CONTROL

The use of MUDs and other water districts by developers to finance water, sewer, and drainage improvements raises serious constitutional questions about the basic purpose of State and local governments. The use of MUDs places State government in the position of subsidizing private business and of joining in the speculation of a development.

Water districts enable developers to escape local municipal regulations by providing a means to service remote areas of a county. The county itself is unable to regulate such development because of the lack of authority. The State, then, through its creation of a MUD has abetted the developer in his escape from local authority and in fact placed the State in favor of special, private interests at the expense of local government.

Local control over development, which is aimed at insuring adequate building standards and utilities, is taken out of local hands by the use of MUDs. Under the present system of creating water districts, local units of government have no effective voice in the creation of a district. They can protest the creation, but the TWRC has ultimate authority over creation of districts.

What then is the role of the State to be in this area? The Committee supports more authority for local governments in the creation process of special districts. It does not support the use of public financing of private interests to escape local regulations regarding development.

Recommendation 27

Revise Texas Statutes to provide for local governmental control over creation of developer-type districts.

Suggested Procedures to be Included in Legislation

1. Petitioners of a district shall file a copy of petition, market feasibility reports, engineering reports and plans, and other such information required for creation of a district with a designated local agency in the county in which the proposed district is located.

2. Said agency shall coordinate the review of said information with other affected local governments in the region.

3. After receiving written comments from these parties, the governing body of the designated local agency shall vote on whether or not to grant its approval.

4. Decision shall be passed on to the TWRC with reasons for decision.

5. The TWRC shall not approve the creation of a district and the use of public funds when local governments have voiced disapproval.

Provision shall be restricted to urban-developing counties with the intent of protecting LOCAL INITIATIVE in planning and regulating large urban development.

The Committee has not defined the implementing agency on the above procedure; this can be designated later, but there are two possibilities that can be considered:

1. Giving some existing local agency the authority to act as the administrator. This could be the county, city, or local regional authority in any particular area.

2. Creation of an entirely new agency for the express purpose of administering the above procedure.
California presently operates a similar program under Chapter 6.6 of the Government Code: The Local Area Formation Commission (LAFCO). Its basic operation offers several good ideas that could be adapted to fit Texas’ particular needs.

Each county in California has its own LAFCO to rule on the creation of new districts. In Texas, it might be more viable to limit such agencies to counties that are experiencing difficulty in planning urban development and coordinating special districts in their area. As the need arose, other counties could institute its own LAFCO in response to specific local problems.

Each LAFCO in California consists of 5 members with provision for enlargement to 7 under special circumstances. Two members represent the county; two represent the cities in the county; one chosen by the other four members, represents the general public. Representatives from the county and city are also officials of those bodies. All members are elected for a four-year term.

Under the California LAFCO system, each local LAFCO has statutory power to review, approve, or disapprove not only the creation of new special districts, but also the (1) incorporation of cities and, (2) annexation and deannexation of territory to local agencies in its boundaries.

Section 562506, Title 6, of the California Government Code states, “In all instances, the Commission shall consider whether proposal, plans or organization, and recommendations ... are in conformity with applicable city or county general and specific plans.”

Under this system, LAFCOs consider the following factors in the review of a proposal brought before it:

54796. Factors to be considered in the review of a proposal shall include but not be limited to:
(a) Population, population density; land area and land use; per capita assessed valuation; topography, natural boundaries, and drainage basins; proximity to other populated areas; the likelihood of significant growth in the area, and in adjacent incorporated and unincorporated areas, during the next 10 years.
(b) Need for organized community services; the present cost and adequacy of governmental services and controls in the area; probable future needs for such services and controls; probable effect of the proposed incorporation, formation, annexation, or exclusion and of alternative courses of action on the cost and adequacy of services and controls in the area and adjacent areas.
(c) The effect of the proposed action and of alternative actions, on adjacent areas, on mutual social and economic interests and on the local governmental structure of the county.
(d) The definiteness and certainty of the boundaries of the territory, the nonconformance of proposed boundaries with lines of assessment or ownership, the creation of islands or corridors of unincorporated territory, and other similar matters affecting the proposed boundaries.
(e) Conformity with appropriate city or county general and specific plans.
(Amended by Stats. 1970. Ch. 1249.)
5480-54813. (Repealed by Stats. 1970. Ch. 1249.)

When the LAFCO system was established in California in 1965, many urban areas of California were facing some of the same problems which urban areas in Texas are now dealing with relative to urban development. The central purpose of the California LAFCO system was to discourage urban sprawl and encourage “the orderly formation and development of local governmental agencies based upon local conditions and circumstances.”

The Committee agrees with this precept in that it believes that local government is much better equipped to analyze the needs in the area under its jurisdiction than State agencies such as the TWRC. Serious consideration should be made on the correctness and feasibility of local control over the creation of special districts in Texas versus continued State control through the TWRC.

ALTERNATIVES FOR HOUSTON METROPOLITAN AREAS

The use of water districts in Harris and surrounding counties while providing needed services has created several problems relating to the growth of this region. The increased number of water districts has added to the burden of responsibility for regulating these districts as well as for meeting the additional urban needs of district residents. Other local agencies such as neighboring cities, school districts, and counties are expected to serve the increased population in water district subdivisions; yet, these agencies do not have the resources and opportunity to coordinate this new demand before it arises.
Before other districts are created in this and other urban areas in Texas, their impact on the region must be fully considered. At present, Harris County is reaping the consequences of having uncontrolled proliferation of water districts.

The number of districts in this area has made effective supervision impossible. In fact, the number of districts has allowed abuses in a few districts and necessitated a more active role of the TWRC over these districts.

It costs approximately $775,000 a year to maintain State supervision over water district activities.* At the same time, the Commission still lacks the staff to adequately cover all the districts in the Upper Gulf Coast region. The Commission is unable to keep track of all the districts, and enforcing its regulations over these districts is impossible as there are simply too many districts to watch over.

The effect of these districts on the financial credit of the State and local governments is of paramount concern. During the period of this study, districts issued approximately $200,007,000 in bonds.** Interest rates varied approximately 6% to 8%, with the higher rates being more common. This is occurring during a period of high inflation when even "rated" municipal bonds are having difficulty being sold. There is no lever to regulate the sale of these bonds except the ability of the bond market to buy or not. The current practice now authorized by the Commission is when a district cannot sell its bonds at one interest rate, it may get Commission approval to sell them at a higher rate. Thus, the Commission is in effect negating any market control there is by creating an artificial incentive to buy the bonds through the allowance of a higher interest rate.

Payment of these bonds depends on the development of district subdivisions. This year has been one of the slowest years for builders. The majority of districts are not developing at full capacity, yet the TWRC continues to approve public funds for new districts. A prime example of this is Stanley Lake MUD in the Lake Conroe area. The Commission recently approved a second bond issue for the district even though the district had not developed the system paid for under its first issue. Commission approval was given over the Commission's staff recommendation that it not be approved.

A survey taken by the Commission of the Lake Conroe area showed that adjacent districts were underdeveloped and there were more than 4,580 connection units. The Commission's staff did not feel the area could support additional units at this time. Yet the Commission approved the project and the bond issue. The effects of this particular bond issue and other district sales on an already saturated market may not be felt until later after bonds have been sold, after property and taxes committed, and it is too late to reverse the situation.

The proliferation of water districts has also increased the number of sewage treatment plants in the area and increased the burden of pollution agencies. The TWQB checks district plants for discharge violations on an infrequent basis. There are too many and the tendency is to go for the big dischargers. The effect of the total discharge of all districts on pollution, however, is significant. As mentioned elsewhere, adequate maintenance is not carried out in the majority of districts, the result being lower quality discharges.

The many individual, poorly-operated plants are having an impact on the whole regional water quality program. The efforts of GCWDA in its regional program are largely hindered by the continued allowance of new sewage treatment plants to be built outside a regional plan.

Overall, there is a lack of public control over water districts in the Houston Metropolitan area; the number of water districts operating in the area demand such supervision; at the same time, it makes such supervision impossible.

Within the system of water districts itself, circumstances have arisen that defeat proper operation. One example of this is the perpetuation of the use of water districts by the very nature of the system. District consultants can earn much more through new districts which have new projects and bond issues, and thus need more help from consultants than older districts. As a result, there is the built-in conflict of interest and a lack of loyalty on the part of some consultants toward their employer—that is, the district. Districts do not create other districts; developers do, and the tendency for consultants to put the developer's interest over the interest of the district and its residents out of economic self-interest has already been noted by the Committee.

This built-in conflict of interest works against any particular district and for the perpetuation of the system. There is a built-in need to continue the use of districts to continue business for consultants and to justify the activities of State agencies involved in their creation and operation.


** Amount includes bond issues of MUDs, FWSDs, WCDs, and other districts supplying services to residential users approved by the Attorney General for the period 1973-1974 (as of Oct. 1, 1974). Source: Municipal Advisory Council of Texas.
The water district system also is having an adverse effect on major regional issues in the Houston area. Houston desperately needs a viable mass transit system; yet, due to water districts which encourage urban sprawl and styles of living that work against mass transit and other energy-saving policies, the majority of citizens in this area will probably not benefit from a mass transit system. Living in a water district community has chained them instead to the automobile.

Subsidence is also being affected by the use of water districts. Each time a new water district sinks a new well it adds to the total withdrawal from this area's aquifers and increases the incidence of subsidence. In addition, allowing new wells by water districts or any other user makes it that much more difficult to get all users off groundwater and on to surface water. While municipalities south and east of Houston are trying to convert to surface water, water districts west and north are indiscriminately sinking wells and thus equalizing any effect conversion may be having on subsidence.

The need for thoughtful action in regard to the continued creation of districts in the Upper Gulf Coast Region is apparent by the effects districts are having on this area. To aid in that consideration, the Committee has the following proposals:

Recommendation 28

A. New developments should contract with neighboring water districts or be annexed by them to decrease the proliferation of water districts in the Upper Gulf Coast region.

B. Consolidation of adjacent districts where economically and technically feasible.

(Implementation: Legislature; TWRC)

Gulf Coast Waste Disposal Authority

Within the area of water quality and waste treatment, the Gulf Coast Waste Disposal Authority under its enabling statute currently has the authority to act as an arm of the Texas Water Quality Board to implement a regional water quality management program in its three county jurisdiction.

As an alternative to the continued proliferation of water districts and the fragmented approach to sewage waste treatment used in this highly urbanized area, the Committee recommends that GCWDA exercise its legislative powers in this region to effectuate a regional waste treatment system.

Particularly the Committee recommends the implementation of the following powers delegated to GCWDA:

Sec. 3.01e – “Subject only to the authority vested by general law, and particularly the Texas Water Quality Act . . . , as now or hereafter amended, in the quality board and the state agencies represented on the quality board, the authority is empowered to control water pollution and waste disposal within the district.”

Sec. 3.03 – “(a) Under the same provisions and restrictions applicable to the quality board or its successor, the authority may enter public or private property for the purpose of inspecting and investigating conditions relating to water quality and waste disposal in the district. (b) The authority shall transmit the results of its inspections and investigations to the quality board.”

Sec. 6.01 – Power to create Pollution Control District.*

Using this legal authority provided in the above statutes, the Committee recommends the following activities be placed under the jurisdiction of the GCWDA:

*GCWDA, Article 7621d-2, VTCS.
Recommendation 29

1) Establishment of pollution control districts by GCWDA over the continued use of water districts. (See appendix-exhibit 3 for procedures on pollution control districts).

2) Establishment of a review and inspection process for all waste treatment systems within GCWDA’s boundaries.

3) Coordination of present and future sewage treatment systems. Such systems shall be in line with the master regional plan formulated by GCWDA.

In designating GCWDA as the regional arm of the TWQB the Committee is not recommending that the Authority take over the operation of all systems, merely the responsibility for enforcing state water quality standards.

Operators of plants within the Authority’s jurisdiction in turn shall be expected to cooperate with the Authority in implementing a regional plan for sewage treatment. Failure to do so would result in action by the TWQB.

The Committee further recommends that in response to the above recommendations, the GCWDA shall formulate an implementation plan including the following information:

1) necessary funding to implement programs;
2) necessary staffing;
3) other legal implementation.

Upon completion, plan shall be presented to the TWQB and the Legislature.
PART III
HOUSTON METROPOLITAN AREA:
SUBSIDENCE
Subsidence in the Upper Gulf Coast region is now reaching phenomenal proportions. The need for action to solve this problem is urgent. In the area, civic groups, public officials, technical experts and private citizens have played an important role in bringing the problem of subsidence to public attention. The need for action in this area spurred the Committee to include a study on subsidence, local efforts to stop it and legislative alternatives in its report.

The Committee's study on subsidence focuses on the issues surrounding the problem along with a brief historical and technical background on subsidence. In compiling information and forming recommendations regarding subsidence, the Committee spent many hours talking with individuals in the area concerned with this problem. The Committee has attempted to take into consideration the needs and wishes of the people in this area in formulating proposed legislative recommendations.

Regardless of the administrative system devised to stop subsidence, the Committee strongly believes in a regional approach to the problem, and the need for concerted action by all. The safety of citizens in this area and the economic well-being of the region demand action immediately by the State and local area governments. The Committee hopes this report will provide needed direction in the effort to halt subsidence.

Technical Aspects of Subsidence

Subsidence, a term generally applied to the compaction of subsurface clays resulting in a lowering of surface elevation, is at a critical stage in the Gulf Coast area. The chief cause of subsidence is the withdrawal of large amounts of groundwater by industrial, commercial and municipal users. It is believed that the compaction of the clays is caused by pressure due to hydraulic declines associated with the removal of subsurface fluids, mainly, water, oil and gas. *

Numerous articles and reports have been published that have been directed to the problem of land subsidence. The most recent report, by Mr. Bob Gabrysch and Mr. C. W. Bonnett of the U.S. Geological Survey has the most up to date information on subsidence and include data that was published earlier by U.S. Geological Survey and other experts.

Historical Background

Cities in this area began to rely on groundwater as their water source as early as the late 1800's. In 1887, when the City of Houston purchased a private water supply company, the demand for water for municipal supply was 1 to 2 million gallons per day (mgd). This demand has grown steadily, and by 1972, the Houston Water Department was using 164 mgd of groundwater and about 58 mgd of treated surface water. In 1973, the water department increased the use of surface water to 63 mgd and decreased the use of groundwater to 156 mgd. Prior to 1954, at which time the groundwater supply was supplemented by surface water from Lake Houston, the total municipal supply was obtained from the groundwater reservoirs.

Houston and surrounding municipalities are the largest users of groundwater but the industrial complexes located along the ship channel area also demand a great deal of water. With groundwater being an inexpensive source of water, these users have continued to rely on underground resources. As a result of heavy concentration of pumpage through the years by municipal and industrial users, pressure in the underground artesian aquifers has steadily declined.

In the Pasadena area, pumping of groundwater for industrial purposes began near the end of World War I and grew steadily until 1936, when annual pumpage was about 15 mgd. In 1937, the construction of a paper mill increased the pumping rate to 30 mgd. Production increased rapidly during and following World War II. Surface water from Lake Sheldon and the San Jacinto River was brought into the area in 1942, but the amount of surface water used was less than 20 mgd until Lake Houston was completed in 1954. In 1953, 87 mgd of groundwater was used in the area. In 1972, 120 mgd of groundwater and 82 mgd of surface water was used. In 1972, about 104 mgd of groundwater was pumped for industrial use.

In the Baytown-LaPorte area, groundwater pumping from large capacity industrial wells began about 1918. The pumping rate increased from about 5 mgd in 1919 to about 9 mgd in 1927, averaging about 15 mgd from 1928 to 1946, then gradually, increasing to about 32 mgd in 1972. In 1972, 24 mgd of the groundwater was pumped for industrial purposes.

### Harris County
**Reported Ground Water Pumpage**
**Millions of Gallons Per Year**

<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Houston</td>
<td>51708.3</td>
<td>57922.0</td>
<td>59681.9</td>
<td>56989.1</td>
</tr>
<tr>
<td>Pasadena</td>
<td>2701.9</td>
<td>2633.1</td>
<td>3148.7</td>
<td>3253.6</td>
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<tr>
<td>Katy</td>
<td>123.1</td>
<td>99.4</td>
<td>119.4</td>
<td>*</td>
</tr>
<tr>
<td>Baytown</td>
<td>1853.0</td>
<td>2029.2</td>
<td>2084.6</td>
<td>2090.0</td>
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<tr>
<td>La Porte</td>
<td>305.0</td>
<td>264.9</td>
<td>332.2</td>
<td>346.6</td>
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<td>Nasa</td>
<td>383.0</td>
<td>349.4</td>
<td>413.2</td>
<td>341.9</td>
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**Totals**

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<tbody>
<tr>
<td></td>
<td>57074.5</td>
<td>63298.1</td>
<td>65780.3</td>
<td>63021.5</td>
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</tbody>
</table>

| County Other Municipal | 14123.2 | 18383.2 | *        | *        |
| County Industrial     | 54306.0 | 42287.3 | *        | *        |

*Water for Irrigation not available beyond 1969*

*Not Available*

### Galveston County
**Reported Ground Water Pumpage**
**Millions of Gallons Per Day**

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Alta Loma</td>
<td>49.4</td>
<td>54.6</td>
<td>58.6</td>
<td>65.1</td>
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<tr>
<td>Galveston</td>
<td>4418.0</td>
<td>4520.3</td>
<td>4694.1</td>
<td>4225.1</td>
</tr>
<tr>
<td>Hitchcock</td>
<td>187.3</td>
<td>212.9</td>
<td>204.2</td>
<td>224.9</td>
</tr>
<tr>
<td>La Marque</td>
<td>629.4</td>
<td>601.4</td>
<td>597.8</td>
<td>578.9</td>
</tr>
<tr>
<td>Texas City</td>
<td>1853.7</td>
<td>1994.5</td>
<td>1841.5</td>
<td>1942.5</td>
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**Totals**

<table>
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</thead>
<tbody>
<tr>
<td></td>
<td>7138.0</td>
<td>7383.9</td>
<td>7396.2</td>
<td>7036.6</td>
</tr>
</tbody>
</table>

| County Other Municipal | 1353.3 | 1351.0 | *        | *        |
| County Industrial     | 2915.0 | 3261.4 | *        | *        |

*Water for Irrigation not available beyond 1969*

*Not Available*
FIGURE 1.—Locations of principal areas of ground-water withdrawals and average rates of pumping in 1972

*Taken from "Land-Surface Subsidence In The Houston-Galveston Region, Texas," by U.S. Geological Survey.
FIGURE 2.—Subsidence of the land surface, 1943-73

*Taken from "Land-Surface Subsidence In The Houston-Galveston Region, Texas," by U.S. Geological Survey.
Farther south, the City of Galveston began pumping from a well field in the Alma Loma area in 1894. Withdrawals gradually increased from approximately 2 mgd in 1896 to nearly 5 mgd in 1937. Between 1937 and 1944, the withdrawals increased to around 2 mgd and remained at about that rate until 1972. In 1972, the groundwater pumping increased to 13 mgd.

Groundwater is also pumped in the Texas City area. Here it increased from less than 2 mgd in 1930 to about 12 mgd in 1940, then increased to approximately 24 mgd in 1944 and 1945. Withdrawals decreased slightly at the end of World War II, then decreased rapidly after 1948 when surface water from the Brazos River was piped to the area.

The withdrawal of groundwater and the subsequent effect of subsidence in any particular area has an overall regional impact. However, the greatest degree of subsidence is located in the area of the greatest withdrawal of groundwater. Subsidence has caused land damage in each of the areas mentioned above and is most critical in the historical San Jacinto Monument area near Deer Park. Subsidence is still occurring throughout the Greater Houston area with the greatest amount along the Houston Ship Channel. Between 1937 and 1943, pumping caused subsidence in excess of 1.0 feet. (See figure 3.) For the period from 1943 to 1973, as much as 7.5 feet of subsidence occurred. In the period from 1964 to 1973, the amount of subsidence was approximately 3.5 feet; the average maximum rate of subsidence was about 0.4 foot per year. (See figure 4.)

The Gabrysich-Bonner report includes data showing that the area of active subsidence is expanding. Between 1943 and 1954, about 350 square miles and subsided 1 foot or more; by 1964, 1,350 square miles had subsided 1 foot or more. About 4,700 square miles subsided 0.5 foot or more between 1943 and 1973. Except at low altitudes near the waterfront, subsidence is not generally recognized because it is regional in nature. The changes in altitudes are not abrupt, and subsidence has not caused widespread structural damage. Low-lying areas adjacent to tidal waters, however, are feeling severe effects of subsidence with each increment of subsidence enlarging the area subject to flooding.

The Gabrysich-Bonner report states that 80-85 percent of the expected subsidence due to clay compaction caused by water pressure decline to date has already occurred. In the future, subsidence will continue at a rate dependent on the decline in pressure resulting from groundwater pumping.

Other helpful data recently devised by the U.S. Geological Survey is a mathematical model that is capable of forecasting water level reactions to various groundwater production rates at specific locations. This will be useful in determining the degree of groundwater usage that can be tolerated without causing subsidence; however, at this date the validity of this analog has not yet been established.

Another study that has had substantial impact in presenting technical analyses of subsidence was completed last year by Mr. A. Frank Marshall of McClelland Engineers, Inc. in Houston. Marshall summarized that the location and amount of subsidence is directly related to declines in groundwater level due to the withdrawal of water from wells. He predicted that by the year 2000, total subsidence is expected to reach 19 ft. in the Pasadena-Deer Park area and 10 ft. in the Clear Lake area. These estimates assume that the water level declines will stop by 1980 which requires that by 1980 much of the water demand will be furnished by surface water. If the transition to surface water is delayed, and water levels continue to decline after 1980, Marshall says further subsidence will likely be more than predicted. On the other hand, if a rapid shift to surface water by the major water users can be accomplished and the water levels permitted to rise significantly, future subsidence can be reduced. Like Gabrysich and Bonner, Marshall confirmed that if future subsidence is to be minimized, major water users in the Pasadena, Deer Park, Baytown and Clear Lake areas must convert to surface water as soon as possible.

Subsidence has caused great monetary damages in this area. This was recently confirmed in a report by the Texas Water Resources Institute at Texas A&M University. Completed in July, 1974, this study concluded that all costs and losses associated with subsidence in the Houston-Baytown region are indirect in nature. Tidal and freshwater flooding, either temporary or permanent, is reported to be the chief cause of subsidence-related damages. (Temporary tidal flooding refers to unusual inundation of normally dry areas due to storm tides.) Flooding of this kind was severe during Hurricane Carla in 1961 and again on a more limited scale during Tropical Storm Delia in 1973. (Permanent tidal flooding generally results in total or near total loss. This refers to the actual loss of the use of property of formerly dry land areas and improvements thereon due to encroachment and inundation by normal tides.)

As subsidence continues in these coastal areas, more and more property is being overtaken by the sea. Evidence of this is seen in many areas in the Houston-Baytown region and in the subsiding area as a whole, where land is adjacent to bodies of water that are affected by tides. The A&M report includes estimated damages due to land subsidence, by time period, and losses in property value at the time researchers at A&M carried out the interviews. (See table 1) Analysis of the table indicates that the estimated costs of subsidence-related damages in the areas have risen sharply in recent years. From reported damages of $8,775 in the period from 1943
FIGURE 3.—Approximate subsidence of the land surface, 1906-43

*Taken from "Land-Surface Subsidence In The Houston-Galveston Region, Texas," by U.S. Geological Survey.
FIGURE 4.—Subsidence of the land surface, 1964-73

*Taken from "Land Surface Subsidence In The Houston-Galveston Region, Texas," by U.S. Geological Survey.
TABLE 1

Estimated total private costs and losses attributable to subsidence for the period 1943-1973, in the area of Houston and Baytown, Texas.*

<table>
<thead>
<tr>
<th>Category</th>
<th>Below 25 Feet</th>
<th>Above 25 Feet</th>
<th>Industrial</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Damages 1943-54</strong></td>
<td>8,775</td>
<td></td>
<td></td>
<td>8,775</td>
</tr>
<tr>
<td><strong>Damages 1955-64</strong></td>
<td>1,408,875</td>
<td>4,825,000</td>
<td>600,000</td>
<td>6,833,875</td>
</tr>
<tr>
<td><strong>Damages 1965-73</strong></td>
<td>6,446,223</td>
<td>42,875,826</td>
<td>4,512,000</td>
<td>53,834,049</td>
</tr>
<tr>
<td><strong>Losses in Value of Property</strong></td>
<td>19,538,025</td>
<td>29,428,112</td>
<td></td>
<td>48,966,137</td>
</tr>
<tr>
<td><strong>Total Damages Plus Losses</strong></td>
<td>27,401,899</td>
<td>77,128,938</td>
<td>5,112,000</td>
<td>109,642,837</td>
</tr>
<tr>
<td><strong>Property Value</strong></td>
<td>111,396,967</td>
<td>3,987,801,248</td>
<td>1,809,000,000</td>
<td>5,908,198,215</td>
</tr>
<tr>
<td><strong>Property Losses as a percent of Value</strong></td>
<td>17.5%</td>
<td>0.74%</td>
<td></td>
<td>0.83%</td>
</tr>
</tbody>
</table>

*Taken from Costs of Land Subsidence Due to Groundwater Withdrawal by the Texas Water Resources Institute, Texas A&M University, July, 1974.
to 1954, estimated costs increased to over $53 million for the period from 1965 to 1973. Such large increases probably reflect a continued rate of subsidence and overall rising property values.

Solutions to Subsidence

The most obvious solution is conversion from groundwater to surface water. Most public officials in the areas directly affected by subsidence are anxious to get a program started to halt subsidence. A voluntary movement is now underway to get off groundwater. At the present, the City of Houston through the construction of the CIWA system is planning for partial conversion to surface water. Industries along the ship channel have signed letters of intent to take CIWA water when the system is completed in 1976. It is felt by many, however, that unless all industries and municipalities convert to surface water, little effect in subsidence will be seen.

Many groups in this region have been active in calling public attention to the crisis of subsidence. The Gulf Coast Waste Disposal Authority was commissioned by the 63rd Legislature to investigate legislative solutions to the subsidence situation and to present their recommendations to the 64th Legislature.

The Clear Lake Area Mayor’s Association on Subsidence is planning extensive lobbying efforts to get subsidence abatement legislation passed during the next legislative session. In addition, the Harris and Galveston County Mayor’s and Councilman’s Associations have appointed an ad hoc committee to study needed legislation on subsidence, and the Clear Lake Chamber of Commerce has a committee studying the role that the Chamber can play in effecting a solution.

At the federal level, along with the U.S. Geological Survey and the Geodetic Survey, the U.S. Army Corps of Engineers is working on the subsidence problem in the Gulf Coast area. This agency has been charged with studying various aspects of subsidence, including how much has occurred and what rate of subsidence is expected.

In the months spent reviewing possible solutions for halting subsidence, the Committee has concluded that legislation is necessary to implement positive action in this matter. Some legal mechanism is essential to insure that everyone contributing to subsidence will cooperate with efforts to stop it. The Committee applauds voluntary action to this end but does not believe such efforts alone will effectuate a change. At present there is no mechanism to prevent new well owners from coming in and withdrawing indiscriminate amounts of groundwater regardless of the effect on subsidence.

To prevent the above situation from occurring and to provide for a coordinated regional approach to halt subsidence and the subsequent need to convert to a surface water supply, the Committee recommends the following:

Recommendation 30

Establishment of one or more authorities with regional jurisdiction for the following purposes:

A. To control, supply, and distribute surface water in the Upper Gulf Coast Region.

B. To coordinate the conjunctive use of surface water and groundwater in this area.

C. To formulate a groundwater management program in critical subsidence areas.

Possible Implementing Agencies:

1. Authority created by Legislature for this specific purpose.

2. Creation of underground water district--with needed amendments indicative of specific requirements for this area.

3. Gulf Coast Waste Disposal Authority.

4. City of Houston--with mechanism to provide for distribution of costs and equitable water rates to other area municipalities.
5. Coastal Industrial Water Authority—with changes to distribute administrative power and costs across member counties.

The Committee further recommends that such an authority should have among others the following powers to implement a groundwater management program:

**Power:**

1. To regulate existing and future well permits,
2. To space wells,
3. To regulate withdrawal of groundwater in critical subsidence areas, and
4. To operate an overall well permit system based on location and amount of groundwater withdrawn.

Such a groundwater management program should extend to Harris, Galveston, Fort Bend, Chambers and Montgomery Counties.

**Major Provisions of a Groundwater Management Program**

1. Regional operation for the issuance of well permits to present and future well users in this area. (At present, statewide program is under the direction of TWRC.)

2. Division of region into sections based upon the degree of land subsidence. Determinations to be based upon the findings of the U.S. Geological Survey, the National Geodetic Survey and other recognized factual data.

3. a. System of permits shall be based upon well location in designated areas and amounts of withdrawals. Example:

<table>
<thead>
<tr>
<th></th>
<th>Permit</th>
<th>Well Location</th>
<th>Rate of Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest Type Permit</td>
<td>“A”</td>
<td>Low subsidence effect</td>
<td>No limit</td>
</tr>
<tr>
<td></td>
<td>“B”</td>
<td>Some subsidence effect</td>
<td>Less than X gal. per day.</td>
</tr>
<tr>
<td></td>
<td>“C”</td>
<td>Some subsidence effect</td>
<td>More than X gal. per day.</td>
</tr>
<tr>
<td>Highest Type Permit</td>
<td>“G”</td>
<td>Critical subsidence effect</td>
<td>More than X gal. per day.</td>
</tr>
</tbody>
</table>

b. A regular TWRC Permit would be issued for wells in all sections that had a total withdrawal rate computed to have no effect on subsidence.

c. Permits shall be renewable at certain specified times to allow for reclassification based on changing subsidence conditions.

4. Fees for permits shall be based on type of permit granted with type “A” having the lowest fee charged and type “G” having the highest fee.

5. Revenues from permit fees shall go for administration costs and for the implementation of surface water distribution systems.

6. All wells in the region will be required to have locally issued permits.
PART IV

HOUSTON METROPOLITAN AREA:

RIVER AUTHORITIES
In reviewing the role of river authorities in the area of waste treatment, the Committee made a brief study on the overall functioning of Texas river authorities. Below are the Committee's findings and recommendations.

River authorities in Texas operate under a specific enabling statute. Authorities are usually empowered to oversee water operations along a designated river basin. This authority includes the power to construct, maintain and operate navigable canals or waterways using the natural bed and banks of the river. River authorities engage in water conservation, storage, procurement and distribution. In many cases, river authorities are major suppliers of water for irrigation and agricultural lands. More active authorities are involved in sewage treatment and solid waste disposal to prevent pollution. In addition, river authorities are active in the operation of parks and water recreational facilities along Texas' rivers and reservoirs. In general, the fiscal powers of river authorities vary. Five river authorities have the power to levy an ad valorem tax for limited purposes; all river authorities have the power to issue revenue bonds with the approval of the voters. Five river authorities have the power to issue general obligation bonds.

For the purpose of this report, the Committee focused on one river authority, the San Jacinto River Authority (SJRA) to study the actual workings of a river authority. This report includes a brief historical background on this Authority's activities, analyses of recent problems surrounding its operations and recommendations for this and other river authorities. Most river authorities are similar to SJRA in operation and long-range goals. SJRA itself is located in a metropolitan area under investigation by this Committee and thus it serves as an appropriate case study on river authorities and their real or potential role in the field of waste treatment.

**Historical Background**

Created in 1937, as the San Jacinto River Authority and Reclamation District, the Authority was renamed San Jacinto River Authority by a later special legislative act. SJRA is governed by six directors appointed by the Texas Water Rights Commission for six-year terms. Income for authority activities is derived from the sale of water, power and electrical energy. At present, the Authority has no power to issue bonds to finance Authority projects. (Some present SJRA officials believe the Authority should have this power to provide needed financing for flood control and other improvements. SJRA must obtain voter approval before it can have this power, and at present such approval is probably unlikely in view of voter attitudes toward SJRA.) Overall SJRA has a history of financial difficulties in the San Jacinto River Basin.

Originally, the Authority was formed to prevent soil erosion, to provide flood control, to aid and encourage reforestation, to build a series of small dams along San Jacinto River tributaries and to impound water for sale to cities and industries and agricultural users. Originally plans also called for extending the water supply canals near the mouth of the river and tentatively to Texas City and Galveston. However, SJRA met severe opposition from Houston and Harris County who had their own water plans.

During World War II, the federal government built a water supply system for war industries at the lower end of the San Jacinto River. This Federal Works Agency (FWA) consisted of a pumping station with a canal and reservoir system on each side of the river. SJRA purchased part of the system east of the river for $862,572.78 while the City of Houston purchased the west half. SJRA went into the water supply business with systems east of the reservoir (Highlands Reservoir). SJRA then contracted with Humble Oil and Refining Co. and today, Exxon is still a SJRA customer.

**Present Role**

SJRA has legal responsibility over the watershed of the San Jacinto River except for the portion in Harris County. Counties included in this watershed are Grimes, Liberty, San Jacinto, Walker and Waller Counties. As this area has developed, the duties of the Authority have increased. Today, SJRA supplies water to area rice farmers as well as to such industrial customers as Ashland Chemical, Gulf Chemicals, Gulf States Utilities and Exxon. At present, a contract with the Baytown Water Authority is pending.

In July, 1970, the Authority undertook the treatment of sewage waste in the Cypress Creek watershed at the request of the Texas Water Quality Board. In conjunction with that agency the Authority attempted to organize a regional sewerage system to serve the waste disposal needs of 8,000 to 10,000 residents and to maintain and enhance the quality of water in Cypress Creek.

The Creek flows into Lake Houston, a source of drinking water supply for Houston; therefore the need to protect this source was paramount. Lake Houston was threatened with high volumes of sewage caused by the rapid growth of water districts in the area. SJRA was given the project since it was the "quasi" state agency working in that area.
The system proposed by the Authority would have taken in some 70 water districts along Cypress Creek. Each operated their own individual small treatment systems. Difficulties arose in negotiating with these districts and ultimately the Authority was unsuccessful in persuading the districts that the regional system would be beneficial. The Authority had no enforcement powers to implement this program. Along with the TWOB, its only force was moral persuasion. Disagreements between the Authority, the TWOB, and the TWRC added to the difficulty of implementing the system.

After approximately one-third of the water districts had signed contracts with SJRA, two other districts, WCID 99 (North Hills Estates subdivision) and WCID 116 (Huntwick Forest Estates subdivision) refused to sign and to allow the SJRA to take over ownership of their sewage treatment plants. At the same time, the TWOB refused to allow WCID 116 to expand their system until it signed with SJRA. Residents of WCID 99 were still on septic tanks and refused to pay for a system that they would not own. Even though raw sewage was floating in the ditches in North Hills subdivision and creating a potential health hazard, the district refused to go along with the regional plan.

Eventually both districts sought relief through a court suit, but a district court judge ruled against the water districts.* Despite the court ruling, the water districts still refused to cooperate. A group of citizens went to the Legislature to seek assistance from the Harris County delegation in the House. The delegation drafted a bill which would have granted the water districts permits for sewage treatment plants outside the regional system proposed by SJRA.** The bill passed by the House, but while it was being considered by the Senate, the TWOB announced that SJRA was pulling out of Harris County and designated the Gulf Coast Waste Disposal Authority to take over regionalization of the Cypress Creek watershed.

Many reasons have been cited for SJRA’s failure in the Cypress Creek area. Opponents claim the regional approach was unworkable and say publicity damaged both SJRA and the TWOB. Others blame consultants of the Authority for playing a too active role in the decisions surrounding the regional plan. Attorneys for the Authority eventually backed out of the project because they felt the ensuing incidents were endangering their professional reputation.

The Authority and its lack of initiative and planning has also been blamed for the failure. SJRA did not have a regional system mapped out, yet they were trying to implement one. Their lack of enforcement powers certainly hampered efforts to get total cooperation. Officials at SJRA claim the chief reason for failure was lack of adequate funding.***

SJRA like similar river authorities is handicapped by the lack of power to issue bonds to implement long-range and regional projects. Under present financing powers of river authorities it may not be feasible to expect them to carry on specific functions in their watershed unless funding is also provided. In addition, delegation of responsibility should not be passed out without the necessary authority to aid in implementation. The present board order procedures of the TWOB exemplify this method of delegating duty without recognized legal enforcement powers. As seen in the case of SJRA and Cypress Creek, such procedures usually are not effective.

As Texas’ water needs increase, river authorities will play an active and needed role in the areas of water supply and waste disposal in addition to their other statutory powers. SJRA’s experience in the Cypress Creek area indicates a greater need for long-range planning along with greater understanding of regional needs, and local accountability for its actions.

Under the present system, many river authority boards are far removed from direct public control. The directors of SJRA are appointed by the TWRC, a state body also made up of appointed officials.

* Judge John V. Singleton, U.S. District Court, Southern District of Texas, Houston Division, March 8, 1972.
** Sponsor Rep. Don Henderson of Houston.
The following is a chart of river authorities in Texas, including the number of members on the board of directors, terms of office and who appoints the directors:

<table>
<thead>
<tr>
<th>Texas' River Authorities</th>
<th>Members</th>
<th>Terms</th>
<th>Appointed By</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazos River Authority</td>
<td>21</td>
<td>6 yrs.</td>
<td>Appointed by Governor</td>
</tr>
<tr>
<td>Central Colorado River Authority</td>
<td>9</td>
<td>6</td>
<td>Appointed by Governor</td>
</tr>
<tr>
<td>Guadalupe River Authority</td>
<td>7</td>
<td>4</td>
<td>4 directors appointed by TWRC; 3 directors are employees of TWRC</td>
</tr>
<tr>
<td>Guadalupe-Blanco River Authority</td>
<td>9</td>
<td>6</td>
<td>Appointed by Governor</td>
</tr>
<tr>
<td>Lower Colorado River Authority</td>
<td>12</td>
<td>6</td>
<td>3 appointed by Governor 3 appointed by the Attorney Gen. 3 appointed by Land Commissioner 3 appointed by TWRC</td>
</tr>
<tr>
<td>Lower Concho River, Water and Soil Conservation Authority</td>
<td>9</td>
<td>6</td>
<td>Appointed by Governor</td>
</tr>
<tr>
<td>Lower Neches River Conservation District</td>
<td>9</td>
<td>6</td>
<td>Appointed by TWRC</td>
</tr>
<tr>
<td>Neches River Conservation District</td>
<td>9</td>
<td>6</td>
<td>Appointed by Governor</td>
</tr>
<tr>
<td>Neches River Conservation and Reclamation District</td>
<td>21</td>
<td>6</td>
<td>Appointed by Governor</td>
</tr>
<tr>
<td>Red River Authority</td>
<td>9</td>
<td>6</td>
<td>Appointed by Governor</td>
</tr>
<tr>
<td>Sabine River Authority</td>
<td>9</td>
<td>6</td>
<td>Appointed by Governor</td>
</tr>
<tr>
<td>San Antonio River Authority</td>
<td>12</td>
<td>6</td>
<td>Elected</td>
</tr>
<tr>
<td>Sulphur River Conservation and Reclamation District</td>
<td>12</td>
<td>6</td>
<td>Appointed by TWRC</td>
</tr>
<tr>
<td>Trinity River Authority</td>
<td>24</td>
<td>6</td>
<td>Appointed by Governor</td>
</tr>
<tr>
<td>Upper Colorado River Authority</td>
<td>9</td>
<td>6</td>
<td>Appointed by Governor</td>
</tr>
<tr>
<td>Upper Guadalupe River Authority</td>
<td>7</td>
<td>6</td>
<td>Appointed by Governor</td>
</tr>
</tbody>
</table>

In a review of the tenure of SJRA directors, the average length is over ten years. One board member has served since 1951. Another, who recently died, had served since 1937 when the Authority was first created. Two other board members have served since 1966 and 1968 respectively.

Certain attitudes reflected by river authority officials indicate that a change in the appointive system is needed as well as a change in attitudes. Under the present system, river authorities in some instances work in isolation from the area they are supposed to be serving. The activities of the SJRA reflect an attitude that the river authority's purpose is not to serve the public at large but particular private interests. The Authority in general has been lax in using its resources to provide services for the citizens that support it. For instance, public funds financed the construction of Lake Conroe. Most of the land around the lake is privately or federally
owned and there are few public access areas on the lake or public parks. The public as a whole paid for the lake but only a few are enjoying its benefits.

Recommendation 31

One half of the board of directors of all river authorities shall be elected by the voters in the river authority's boundaries. Directors shall be elected proportionately by population from defined sections within the authority's jurisdiction.

Elected offices shall be for a term of two years.

The other members of the board shall be appointed by the Governor with approval of the Senate for a term of two years. The appointees shall reside within the boundaries of the river authority. There shall be one more elected member than appointed on each authority board.

Recommendation 32

Projects sponsored by river authorities to construct lakes, reservoirs, and other waterways shall include provision for financing and construction of public parks, public access facilities, and other recreational facilities along the boundaries of said projects.

Land for these public areas shall be purchased at the time other necessary land and rights-of-way are purchased, in order to better secure necessary land at the lowest economic price.

Some river authorities like the TRA appear to be actively pursuing not only programs in service-oriented fields such as waste treatment but doing so in recognition of local needs and interests. In addition the TRA has attempted to provide public access and recreational facilities along its major water projects. The Authority in the past year has held several public hearings to inform citizens within its boundaries of the activities of the Authority and to get them to participate in planning for future projects in the river basin. The Committee applauds the type of public approach to its responsibilities the TRA has taken. The Committee further hopes other river authorities will, in their activities, reflect a similar attitude to enable such agencies to work with and for the residents in its area.
PART V

SAN ANTONIO METROPOLITAN AREA
The San Antonio Metropolitan area is facing serious problems relative to water supply and urban development in this region. Recognizing the need for action, Committee member Representative Ron Bird from San Antonio, requested that the Committee consider San Antonio as one of its study areas.

In this regard, the focus of the Committee’s investigation in San Antonio has been on the following issues facing this area:

A. Operation of City Water Board as the “sole purveyor” inside city limits and in the ETJ of San Antonio.
B. Opposition of local developers to CWB; developers favoring instead continued use of private water companies.
C. Use of Water Districts as the alternative.
D. Overall effect of development on the water supply from the Edwards Aquifer.

SOLE PURVEYOR VS. PRIVATE WATER COMPANY

Introduction

Water supply in the San Antonio area is characterized by the use of private water companies within and outside the city limits. In the past, this has been the most common method used to provide water service to new developments. In attempts to institute a regional water system for San Antonio and the immediate vicinity, the San Antonio City Water Board (CWB) and city council took steps in 1972 to reduce the number of water companies and make the CWB the sole purveyor in the area. For the past two years, San Antonio has been fraught with disagreement among the CWB, city council, and developers over this policy.

Historical Background

In May, 1972, city council proposed annexation of 63 square miles which included 19 private water companies. Under 1960 city regulations, these private companies would no longer be able to expand inside city limits.

Developer Ray Ellison and others expressed opposition to the proposal and proceeded to file suit to stop annexation. In June, the annexation was voided. Various parties began seeking some means of allowing the companies to continue operation when brought into the city. A franchise system was discussed, but never came to fruition since under the city’s bond restrictions no competing systems are allowed.

In the Fall of 1973, the San Antonio Homebuilders Association presented to the city its evaluation of city services and city processing of plats. Regarding water supply, the developers objected to having to pay the full cost of on-site mains. A Special Task Force set up by Mayor John Gatti reviewed the Homebuilders’ report and was successful in solving several areas of disagreement; however, no solution regarding water supply was brought forth.

At this same time, the City Water Board was proposing an additional restriction on developers: As a condition of plat approval, developers would agree to give the CWB first option at supplying service to new subdivisions in the ETJ of San Antonio. If the CWB refused, developers would then have approval to seek other available sources such as establishment of a private water company. As expected, developers were strongly opposed to this proposal.

City council planned to consider annexation once again on December 14, 1972. Developers however threatened to stop it if the problem with CWB wasn’t settled prior to annexation. In November, the Mayor appointed a Special Committee to look at the following unresolved issues between the CWB and developers:

1. CWB policy in the ETJ regarding first option.
2. Purchase of existing private systems in the city by the CWB.

H. B. Zachary, a major developer but one that favored CWB control over water supply, was appointed chairman of the Mayor’s Committee.
Zachary proceeded to organize the committee and make recommendations to the city council before the December 14th annexation. When Zachary delivered a draft of the committee's first recommendation to the Mayor on December 6th, it was with the participation of both sides and with, what he thought, agreement from both sides. All major developers were asked to submit their position and solutions. Ray Ellison delayed until December 11th in submitting his reply. Another major developer, Clifford Morton, expressed general approval of the recommendation with some suggested changes, some of which Zachary incorporated.*

** Recommendation of  
Mayor's Special Committee  
December 11, 1972  

CITY ACQUISITION OF  
PRIVATE WATER SYSTEMS — PRIVATE SEWER SYSTEMS

"The City Acquire Private Water Systems and Private Sewer Systems at present appraised value. This policy to apply within the extraterritorial jurisdiction as it exists prior to the proposed annexation effective December 26, 1972, as well as future extensions of its extraterritorial jurisdiction. These are to be paid for out of the earnings from each separate water system ownership, managed by its present owner in accordance with prescribed guidelines and accounting principles. The net earnings would constitute payment by city to owner; receipt by city of an equal equity interest. Thus no tax accrues; a fee equivalent to normal interest could be paid on investment equity and would be taxable. A limited period for amortization should be made 10-15 or more years and no time extension therefrom permitted; each unit thus becoming property of City Water Board at expiration date regardless of amount earned or paid. A new unit or extension of same system could be created to serve additional adjacent acreage owned by Developer.

For evaluation select approved firms of San Antonio Engineers—criteria previously established—approved firms listed, no new additions until next evaluation period two years hence—and guidelines jointly established before proceeding. (A three-appraiser appointment-developer, city, their selection of the third could be chosen).

City to select San Antonio based, nationally known auditing firm for two-year period and set guidelines—excess overhead and maintenance costs to be deducted from capital account or a "maintenance reserve" set-up with initial valuation.

This procedure requires no expenditure of City Water Board or City funds; on the contrary it will add assets without cost or obligation other than to make available supplemental surface water when needed. No management problem or need for additional City Water Board employees will exist.

New private water systems, including City Water Board wholesaling water to them, can be thus approved when economics so dictates."

City Council passed the annexation ordinance December 14 along with a resolution approving the Zachary Plan to acquire private water companies by the CWB.

In January the CWB adopted new procedures to implement this plan. These included:

1. Giving CWB first option in the ETJ.
2. Power of eminent domain over private water companies.
3. Full payment by developers of on-site main costs.**

**See Appendix: EXHIBIT 4
When the CWB attempted to get the procedures adopted by the City Planning Commission and City Council, developer opposition came to the fore, resulting in a bitter confrontation between city agencies and private developers.

Zachary's committee was reinstated to work out a solution. New proposals supported the CWB with some changes to meet developer objections:

1. The CWB was still given first option in the ETJ.
2. Private water companies in the city could expand their distribution capacity to meet production capacity.
3. Developers would still pay on-site main costs.

On March 28, 1973, the Council passed Ordinance No. 42018 to this effect.

Developers were not reconciled to this action, and the water policy of the CWB has become a major political issue. In the Spring elections of 1972, C. Morton was elected to the Council; Charles Becker, closely tied to developer interests, was chosen Mayor. Soon after, City Council appointed developer John Schaefer to the CWB. Developers were fortunate in having supporters on both Council and CWB which helped in getting a softer position regarding the further use of private water companies.

In August, the Homebuilders Association presented to the City Council its white paper on CWB policies, claiming Ordinance No. 42018 was having a detrimental effect on development. The CWB answered these claims, but the City Council on August 30, 1973, passed Ordinance No. 42718, amending No. 42018 to allow developers to expand distribution and production facilities in plants located in the ETJ without giving the CWB first option.

Developer Position

Developer views on the sole purveyor concept and CWB policy on on-site main costs centered around the following objections:

1. The plan is confiscatory and requires developers to give property to the city.
2. The policy makes home prices in San Antonio more expensive than in other Texas cities.
3. The policy does not allow the developers to expand previously built water companies to maximum capacity. (This was remedied by the No. 42718).
4. The policy has been a major factor in driving developers outside the city limits. This has deprived the city of tax revenues.
5. The right of first refusal will allow the CWB to become a monopoly.
6. The new policy caused the refusal of at least 15 plats which were to have been started, and if continued, the policy will put more and more of the 50,000 people involved in construction in the San Antonio area out of work.

The growth statistics of San Antonio show that two-thirds of the development which has taken place in the last 10 years has taken place outside the city limits. The developers state that the compelling reason for this lack of growth within the city has been the difference in CWB policy for homes built within the city and those built in the ETJ. While the developer within the city had to bear the water facility costs and pass them on to the homebuyer, the builder in the ETJ had the option of forming a private water company and paying for water development costs out of the revenues of the water system.

This policy has left a good deal of land within the city limits underdeveloped, resulting in at least a two and one-half million dollar tax revenue loss to the city each year. According to developers, the total effect of the policy had led to higher home prices in San Antonio, lack of availability of single-family dwellings, squabbling between the public and private sectors of the economy, and the discouragement of industry to move to the area.

They further believe that the new policy enactments would only further hurt the growth of San Antonio. The developers do not want to be forced to dedicate on-site and border mains to the city and call the demand confiscatory. They point to the potential work
shortages in the construction industry in San Antonio which is the second largest industry in the area and employs directly and indirectly 50,000 people. A continuation of the no-refund policy and the method by which the city proposes to buy existing water systems (on a reimbursement rather than a revenue basis) will only drive the developers outside the ETJ and away from San Antonio altogether.

The developers point out that they are required to follow city specifications as to equipment and facilities and State standards as to health. They claim that the service they give is at least as good as that which the CWB gives, and in some cases better and less expensive.

The builders claim to recognize that new sources of water may have to be found in the near future and state that they will be willing to share in the research and development costs of finding sources of surface water. At the same time they want to maintain the use of private water companies.

CWB Position

The CWB's main purpose in becoming sole purveyor and requiring on-site main costs by developers was to protect old customers, to maintain low costs for all customers, and to insure what it felt was an equal distribution of costs. To this end, Ordinance No. 42018 was passed.

San Antonio's policy regarding on-site mains is not unique; several cities have similar or even more stringent policies. The issue of costs and who should pay them is a central factor in water supply systems in any urban area. More and more in Texas and elsewhere, developers have been able to get government to support their developments. Who should bear the cost: government, developer, old customers of existing systems, or new customers? In Crown Homes, Inc. vs. San Antonio, et al., the court upheld the idea that government should not subsidize private development when it stated, "It is not a municipal function to speculate in concert with developers in subdivision business."

In the opinion of the CWB, the sole purveyor policy and requiring developers to pay for on-site costs is the most equitable plan.

According to a CWB report on Ordinance No. 42018, "The cost to the City Water Board under the policy approved by Ordinance No. 42018 passed on 29 March 1973 is clearly outweighed by short and long term gains. The benefits from this policy may be concisely stated as:

a. An expanded customer base to support the surface water acquisition program both from a cost and political standpoint.

b. More effective management of the combined ground and surface water resources of the area.

c. Elimination of dual payments to the property developer for on-site main costs.

d. No discrimination to present customers for the benefit of new customers.

e. Fosters growth within and immediately adjacent to the city limits because of the approach main policy which enhances the potential of an orderly annexation program."

In general the CWB feels that the past policy of allowing the creation of private water systems has deprived the city of new customers and kept the city from providing a wider, and therefore more economical base, for its water service. Figures show that the city does not run a monopoly on water service although the basic principles of running a utility efficiently are grounded on using as wide a base of customers as possible. So long as there are good effective controls on a public utility, competing entities only decrease the efficiency and price advantages of a public service.

Analyses

Many of the figures which the developers quote are misleading or taken out of their proper context. San Antonio has indeed shown a slower growth rate than most of the large cities in Texas, but this is due in large part to the less than aggressive annexation program followed by the City Council in the past decade. San Antonio has in fact the highest population density of any city in Texas of a population of 100,000 or more. When the developers state the fact that San Antonio has the most restrictive development policy of any Texas city with a substantially adequate underground water source, they fail to mention that San Antonio is the only large Texas city with an adequate underground water source.

The claim that the city water policy is the determining factor in discouraging development within the city and in keeping industry from moving to the San Antonio area is also misleading. Other factors such as lower taxes outside the city, lack of the necessity for obtaining a building permit, fewer restrictions on building materials, and the general desire to move “away from it all” are discarded by the developers as important considerations for those who are in the market for a home or industrial site. Figures show that the additional $250-$300 per house which must be passed on to the buyer under the no refund policy increases the average mortgage by less than $3.00 per month, while the tax differential (on the average) inside and outside the city is about $18.00.

Another figure often quoted by the developers is that 6,000 of the 9,000 homes built in the San Antonio area last year were built outside the city. Yet when pressed as to how many of the 6,000 were built in the ETJ, the President of the Greater San Antonio Builders Association would state only that a majority of the 6,000 were actually built in the ETJ. Again, the basic desire of many people to simply move as far away from a city as possible while still being within driving distance was simply ignored as a factor in home site choice.

When the builders speak of putting 50,000 people out of work, they are both exaggerating and putting too much blame on the water policy for any slowdown which may be occurring. In fact, while much of Texas has been experiencing a slowdown in building rates for comparable periods of 1972 and 1973, San Antonio experienced a 36% increase in the building of one-family dwelling units and a 178% increase in apartment construction in 1973. Although duplex building had decreased 16% in the same period, Houston construction of duplexes has decreased 58%. When taken in relation to the general market slowdown nationwide due to rising interest rates and rampant inflation, San Antonio has been feeling the squeeze in a minor way only.

The argument of what expansion policy is fairest to the present customers of the CWB can be twisted in several directions. Those building within the city within the last decade have paid for their water facilities as part of the price of their homes and have rates which reflect that policy. A refund policy to the developers for the system built in the ETJ by the developers will necessarily place a heavier burden on present city customers no matter what method of purchase is used because of increased maintenance and the burden of taking over unplanned fragmented companies.

Moreover, the use of private water companies enables many developers to charge twice for their outlay for water equipment when they are reimbursed by the city. The FHA or VA value placed on homes, which are the values almost universally used by the large developers, include the cost of the water equipment in the price of the home which the buyer pays. When a developer decides to sell to the city (at his own option) he is again paid for the equipment and capital outlay. In the meantime, there has been no regulation on the use amounts or rate charged the customers of the private system.

Conclusion

The developers and the CWB are basically addressing themselves to different problems. The developers are interested in the fastest, easiest return on their capital and have found that development has several guiding lights to this end. The first is that the place to go to develop is where land is cheap, taxes low, and there are the fewest restrictions. The second is that often good money can be made through developing private water systems for their subdivisions. A primary reason developers are reluctant to sell their water companies is because they are a profitable business. While a good balance must be struck in attempting to regulate development activity, or growth or new housing will be stifled, there are several matters to which the developers, naturally enough, do not address themselves. Among these are the ultimate relative burdens on all the water users of the area, the natural efficiency of a utility working on the largest possible scale, and perhaps most important, the necessity to plan for the future.

San Antonio is in a unique position so far as water supply is concerned, and control of its use and of the development over it must be considered in order to insure an acceptable future water supply to the city and surrounding areas. The continued strife and controversy surrounding the water and utility situation of the San Antonio area will only serve to discourage whatever sought after industry would consider moving to the area, even with its lack of resources and transportation facilities. The future market for
homebuyers in the area will certainly not be enhanced by this situation. The developers need to look away from the short run and start looking at what San Antonio will be like 10 or 15 years from now.

The policies of the CWB in their first refusal and mandatory dedication apply to all of the developers equally, and none will be affected adversely in relation to any of the others. The buy back plan, which is not even mandatory, serves to allow the city to proceed with development on the only terms which are possible with the limited amount of capital which is available to the CWB. Continued allowance of the growth of private water systems, with the accompanying refund program to the developers, is simply not a feasible method to continue using in developing the water resources of San Antonio.

Use of Water Districts in San Antonio

San Antonio has not been plagued with the problem of the proliferation of water districts that Houston has. One reason for this is that growth in San Antonio has not been at the same rapid pace as in Houston. To date, there has been available service from numerous existing systems to meet the growth demands for service. The economic benefits from operating private companies provide an additional incentive to use private companies over water districts.

In the past two years, however, there has been an indication that water districts will be used in this area if the City of San Antonio and other local governmental entities cannot restrict their use. Water districts serving major new developments have been created or are in the process of creation. Last year the TWRC approved creation of San Antonio MUD 1 which will provide improvements to a large development north of San Antonio. Presently, the Commission is considering creation of Cibolo MUDs 1 and 2, also located north of San Antonio.

Creation of these districts are of particular significance to the overall future development of this area. All three districts are located on or adjacent to the Edwards Aquifer Recharge Zone. Protection of this area has been a basic concern to citizens in this area. The use of water districts facilitate development in this area, and it behooves local and State officials to recognize this fact. Caution must be exercised in approving districts for developments which may have an adverse effect on critical environmental areas.

The current policy of the CWB will encourage those developers who want to avoid the local regulation, to move outside the jurisdiction of the Water Board and the City of San Antonio. Water districts will additionally facilitate this escape from local control.

When the TWRC approves the creation of districts for such outlying developments, the Commission and the State of Texas is in effect supporting and approving developers’ efforts to circumvent local development ordinances. This in itself defeats the basic purposes of local government and negates local efforts at planning its future growth.

In the absence of strict local enforcement over the creation of water districts, the Committee takes the position that the State should not approve the expenditure of public funds for such developments. Developers should work within local standards in the ETJ or in the city. The State and its agencies in turn should respect local ordinances and coordinate its policy to that end. If a developer chooses to step out beyond city jurisdiction, the costs of such fragmented development should be borne by private interests. Public funding should be used to encourage planned development, moving outward from the central city in line with a city’s master plan. It should not be used to encourage isolated development which only increases the energy problems facing the entire nation.

Development and the Edward’s Aquifer

As mentioned, the use of water districts to finance development over the Aquifer is of paramount importance. The Aquifer is the major source of water for San Antonio and its vicinity. Pollution of the Aquifer by ill-conceived development is a real possibility in view of the lack of relatively effective and definitive restrictions on development over the Aquifer.

The effect development has on this water supply in terms of increasing the demand for water is also of considerable importance. At present anyone can pump from the Aquifer, regardless of the impact on present users. Developers of large subdivisions have the right to meet the water supply needs of his development by pumping from the Edwards. The increased water needed to supply a major subdivision will have a significant effect on the future withdrawal capability of the Edwards. In addition, while users are free to pump from the Edwards, the need to find new water will not be encouraged. Large suppliers such as the City of San Antonio will be forced into action first, while small users will continue pumping to supply their needs. The CWB will then probably bear the cost of developing new sources resulting in higher water rates for its customers. Such a situation will only further discourage the implementation of a single water supplier for the region.
In view of these circumstances, the Committee believes in the urgent necessity for some type of regional plan regarding water supply and development in the San Antonio area. San Antonio is unique in its position of recognizing future problems and being able to take corrective action now before it faces more severe problems in development and water supply.

To aid in formulating a local plan, the Committee proposes the following:

**Recommendation 33**

A. **Establishment of a regional authority to plan and coordinate the conjunctive use of surface water and groundwater in the San Antonio Metropolitan area.**

B. **Establishment of a groundwater management plan to protect the Edwards Aquifer from overdevelopment.**

C. **Reorganization of the Edwards Underground Water District to provide for enforcement powers to implement the above recommendations or consideration of dissolving the district in its present form.**

D. **Further use of private water companies and water districts in the San Antonio area should be limited, and whenever possible, existing systems should provide services to new areas.**

In addition, the Committee believes that the implementation of its recommendation on local control over the creation of districts (page 50) will be of significant use in the San Antonio area.
PART VI
DALLAS-FT. WORTH METROPOLITAN AREA
Water Supply

City planners in Dallas-Ft. Worth areas recognized the need for a long term master water plan before the region began to expand. The region witnessed severe drought in 1911 and for several years in the '50's. This led city officials to develop a comprehensive plan to meet water needs beyond the year 2000.

Dallas owns water rights to five lakes--Lewisville Reservoir, Grapevine Reservoir, Lake Tawakoni, Forney Dam and Lavon Reservoir--that supply the total water needs to the city. Aubrey Reservoir and Lakeview Lake, joint projects of the U.S. Army Corps of Engineers and the City of Dallas, are now being planned to further meet the growing residential and industrial communities. Funds for purchasing the land for the reservoirs have been allocated in the 1975 federal fiscal budget. Upon completion of the reservoirs, the City of Dallas will be supplied with more than 462 million gallons of water per day.

Ft. Worth and neighboring municipalities get their water supply from Tarrant County Water Control and Improvement District No. 1 which has the water rights to Lake Benbrook and Lake Worth.

A new project, Cedar Creek Lake, is another potential source of water for cities and industry. Water will be piped some 80 miles to customers.

Water Rate Controversy

Dallas is also a wholesale water supplier to the suburban municipalities that encircle the city limits of Dallas. A fee is charged to each city for the amount of water used and the distance the water has to be piped. Disagreement over rates charged is currently a major issue in this area. The controversy reached a high point in 1973 when the City of Farmers Branch, joined by Grand Prairie, filed a suit against Dallas charging the present water rates were too high. The central issue in the suit focused on just what is a reasonable water rate for Dallas to charge, and what formula should be used in calculating this rate.

At the time of the suit, Farmers Branch's contract with Dallas was due to expire. Just before it ended, Farmers Branch also requested the Texas Water Rights Commission to rule on the terms of a new contract. Due to hot weather, Farmers Branch at this time was using more water than allowed by Dallas. When Dallas refused to increase the rate of flow to meet the additional demand, Farmers Branch raised the flow rate themselves. Farmers Branch went to court to enjoin Dallas from interfering with its water supply. The court took the case under advisement, but the suit was eventually dropped when the TWRC stepped in.

The small cities served by Dallas contend that Dallas has exclusive control over the water rates of the 21 cities that it supplies. At present, Dallas charges about 38 to 40 cents per 1,000 gallons. The rate formula is calculated by multiplying the capacity times the demand charge. Small towns point out that the North Texas Municipal Water District, which serves cities northeast of Dallas, pumps water a greater distance but charges only about 30 cents per 1,000 gallons. Officials object to any other formula to set rates. They claim a study in 1970 showed present water rates to be insufficient to cover costs of piping water to these small municipalities and that rates must also be based on the piping distance to prevent Dallas from subsidizing outside cities.

The testimony phase of this case before the TWRC has now been completed. Each side is scheduled to present position briefs by January 15, 1975. March 1 has been set as the deadline for each side to reply to legal allegations. Briefs containing additional replies are due by March 15, 1975. Examiners will then convey these briefs to the Commission; later a time will be set for oral arguments. The last step will be a decision by the TWRC which will include an appropriate formula for determining a fair water rate.

The decision on the case will have an impact on all metropolitan areas since similar situations exist throughout Texas. This particular case, however, may end up in federal court. Most small towns not involved in the suit agree with the positions of Farmers Branch and Grand Prairie but did not get involved because of possible repercussions that could arise.

The TWRC is holding this rate hearing under the powers granted it by the state. Under its rules and regulations, the Commission has the power to investigate rate charges if complaints are made against a water wholesaler. After a complaint is made, the TWRC plans an open hearing at which time both sides of the case present their testimony. Counsel for both sides usually present arguments. TWRC calls pertinent witnesses to hearings of this type. Technically when all witnesses have appeared, the TWRC then closes the case. A comprehensive study is made of the testimony gathered at the hearings then a recommendation is handed down in the form of a formal report.
The decision regarding fair water rates will be the first time the Commission has been asked to decide a case of this type. In the past, TWRC has ruled on irrigation water rates but never on a fair municipal rate.

Water Districts

Unlike the Houston Metropolitan area, Dallas-Ft. Worth is not scarred by leap-frog developments encouraged by the proliferation of water districts. Studies indicate water districts are increasing in this area, but stringent restrictions in Dallas and Ft. Worth make this method of development undesirable. The major source of water is surface water which is in the hands of the City of Dallas and Tarrant County WCID 1. Districts must negotiate with these entities for water supply. Thus the nature of the water supply provides a needed lever to control the creation of districts in this area.

Each city works with water district developers on a case by case basis. It is the general mood in the area that water districts are not in public interest. (Cities have made this decision based on knowledge of water district abuse and misuse in Harris County. Officials are trying to avoid this type of political structure at all costs.) Cities prefer to deal with individual homeowners seeking a water district rather than a developer. In most cases, if a developer plans to build a large subdivision in an area outside of city limits where no ample water and sewer facilities exist, city officials in Dallas and Ft. Worth encourage annexation of the land before construction begins, since cities will not sell water to the development should a water district be created.

Housing development patterns in Dallas and Ft. Worth are different than in the Harris County area. Development outside their city limits has in the past resulted in the eventual incorporation of the developments. These new municipalities for the most part have the same strict policy as do Dallas-Ft. Worth toward water districts. Thus the use of districts in this area is severely restricted.

In Dallas and Tarrant Counties there is no space for additional commercial or residential development. Adjacent counties are now experiencing rapid growth. As for districts created in this area, they also have a slim chance of obtaining an adequate water supply or sewage treatment facilities unless the district is annexed by some municipality. The few water districts that do exist, like Rockwall County MUDs 1, 2, 3 and 4 are customers of North Texas Municipal Water District in Wylie.

The Dallas-Ft. Worth metropolitan area could serve as a model for regional water and sewer systems in Texas. Growth indicators point towards an increased population with a large industrial expansion that will demand greater water and sewage treatment needs. Through adequate planning and implementation of programs to meet this challenged growth, the Dallas-Ft. Worth area will continue to grow in a planned, uniform fashion.
PART VII

SPECIAL PROJECTS
POND CREEK WATERSHED AUTHORITY

While the scope of the Committee deals with problems of metropolitan areas, the Committee was requested to investigate a situation involving a watershed authority in Falls County, a rural area near Temple. Questions about the Pond Creek Watershed Authority in Rosebud, Texas, were presented to the Committee, and an investigation was launched to answer citizen queries and obtain background data.

A retired couple who own farm property in Rosebud claimed that the Pond Creek Watershed Authority had taken their property for easement purposes to build a flood control lake. The couple received no compensation for their land, and they were never informed of the exact metes and bounds of the easement on their property. There was the possibility that the easement could extend under their home. According to this couple, they were told by an official representative of the Authority that the federal government would take over their land if they did not sign the easement papers.

The proposed lake in question is one of 22 lakes to be built under the auspices of the Authority in the Rosebud area to curb severe flooding. An initial survey completed by the federal government several years ago to determine causes of flooding in the area was jointly sponsored by the Soil Conservation Service and the U.S. Corps of Engineers. Another survey by Mr. Mike Woodson of Temple recommended that the lakes be constructed in the area. To date, all easements for the 22 lakes have not been obtained. Corings have not even been completed to determine exact location of the lakes.

The Authority now has the right to move the lakes a few inches up or downstream depending on soil conditions. This is why the metes and bounds of the lake were not spelled out in the contracts signed by the retired couple and other landowners along the Pond Creek Watershed. The actual lake is designed at elevations. Hence, eventually the lake will be constructed at the lowest elevations in that area.

All present board members are also major property holders along Pond Creek. They have all signed property easements. Directors would not comment on whether they received any compensation themselves for their property. When the staff made their preliminary investigation of the Authority, books on financial matters were at a Waco auditor and could not be checked for accuracy. Other residents along the creek claim that after they delayed on signing easement papers, they were offered compensation for their land. However, this amount was below fair market value. At present, the Authority’s tax rate is $1 per $100 valuation; the Board says this amount is insufficient to pay the fair market value for all property needed. Taxes are used instead to hire a real estate man to represent the Authority in securing easements.

According to the directors, the retired couple was most happy with the agreement at the time they signed the papers. Only later when a loan on the property was delayed because of the easement did the couple have regrets, according to the Authority.

Committee staff inquiries were unable to confirm these citizens’ complaints regarding easements. The man who represented the Authority in the easement negotiations with the couple is now retired. Because of ill health, the staff was unable to interview him on this matter. At present, settlement of the easement question will have to be in court.

In the process of investigating the easement controversy, however, the staff discovered that no general elections for the Authority's board had taken place since its creation. The original members still held office. The enabling statute of the Pond Creek Watershed Authority provided that each director would serve until his successor had been duly elected or appointed and had duly qualified. The first three directors, Thomas J. Hickerson, Sam Ed. Duncan and Ira L. Burns were cited to serve until the second Tuesday in January, 1966, and the last three, John Raabe, Marion Mitchell and A. T. Garrett, were named to serve until the second Tuesday in January, 1967. Provision was made for elections to be held on the second Tuesday in January of each year for the election of three directors thereafter. Directors must be property owners within the boundaries of the Authority and residents of Milam or Dalls Counties. They do not have to reside within the boundaries of the Authority itself.

At the time of the Committee investigation, no efforts had been made to hold any elections even though the Authority’s statute requires elections every four years. The first election in 1957 confirmed the creation of the Authority, approved the board of directors and gave the board of directors the authority to sell $200,000 in bonds. Bonds were sold within the next 18 months. The Authority’s board claimed that an election had not been held since 1957 because the people did not ask for an election and there were not enough property owners in the Pond Creek Watershed to vote in an election if one was held.

The Committee reported this situation to the Texas Water Rights Commission which has supervisory powers over the Authority and requested an immediate investigation by the Commission. The Committee recommended that an election be held at once to elect new directors.
In response to the Committee’s request, the Commission immediately notified the Authority’s board of being in violation of its statute. The Commission pushed for an immediate election in July, 1974, but the Authority made no move to comply with the Commission’s official request. Frequent correspondence by the TWRC’s legal staff and the Committee was ignored by the Watershed Authority. TWRC contacted Taylor, Taylor and Gaunt in Temple who are general counsel for the Watershed Authority, but still no attempt was made to hold an election. Each director of the Pond Creek Watershed Authority was also sent copies of the statute stating that elections must be held.

As of today, the Commission has ordered the Authority to hold an election on the second Tuesday in January of 1975. If an election is not held at this time, the case will be referred to the Attorney General’s office in Austin for further action.

The stately capitol complex at Sacramento was visited by the Committee and staff during the trip to California. Construction of the Capitol was completed in 1874 and enhances a 40-acre area of green lawns, ancient trees and colorful flowers.

CALIFORNIA TRIP

Interviews with water resources officials and tours of water plant facilities highlighted the Committee’s information-gathering trip to California in October. Reps. Bill Blythe, Ron Bird, Anthony Hall and Joe Allen, the Committee staff, and Paul Davis of the Gulf Coast Waste Disposal Authority visited with officials of the Metropolitan Water District of Southern California (MWD), the Orange County Water District, the Water Resources Board and others. In Sacramento, the Committee visited with California Assemblyman John Knox and his staff. Knox, a California authority on special districts, discussed with the Committee the use of special districts in California. (See Page 5 for discussion of the California “LAFCO” system.)
Like Texas, California once had severe water shortages. But through regional planning, the state now can insure water to every resident throughout all parts of the state. More than two-thirds of California’s water supply originates in the northern third of the state but more than three-quarters of the water need lies in the southern two-thirds. In order to deliver surplus northern water to areas of need, as well as provide flood control, recreation, fish and wildlife protection and enhancement, and other benefits, the California Water Plan was developed. At an election in November, 1960, approval was voted for the State of California to issue $1.75 billion in bonds to help finance the construction of the first stage of that plan. Despite some opposition to the project in recent years, construction has proceeded on schedule. The Committee learned that the State Water Project, also known as the Feather River Project, is the largest such undertaking in the history of water development and encompasses a vast complex of reservoirs, pumping plants, power plants, canals and tunnels that will be owned and operated by the state. The construction program has been underway for over 13 years and a substantial portion of the project is now in operation.

The 770-foot-high Oroville Dam on the Feather River north of Sacramento was completed in the fall of 1967 and stores more than 3 million acre-feet of water. Water is released as needed down the channels of the Feather and Sacramento rivers to the delta of the Sacramento and San Joaquin Rivers 135 miles to the south.

From this delta, the northern water is delivered to parts of Alameda and Santa Clara counties, as well as to Napa and Solano counties, and is transported to the California Aqueduct through the San Joaquin Valley. The system is now providing water as far south as Kern County.

Along the main line of the Aqueduct, eight separate pumping plants lift the water from the sea-level delta. Crossing the Tehachapi Mountains requires a pump line of nearly 2,000 feet with a capacity of more than 100 million gallons an hour. Construction of the four tunnels that will carry the water through the Tehachapi Mountains into Southern California was completed late in 1971.

The Committee toured one pumping plant operated by the MWD near Bakersfield. A guided tour was conducted through the A. D. Edmonston Pumping Plant which lifts water from the Aqueduct to the San Joaquin Valley. The Committee was briefed on how the plant is technically operated, types of pumps, power supplies, and other equipment at the pumping station.

South of the Tehachapis, the Committee was told that the Aqueduct splits into two branches, with the West Branch terminating at Castaic Reservoir in Los Angeles County and the East Branch at Perris Reservoir in Riverside County. The Metropolitan Water District of Southern California takes deliveries of water from the north from Castaic Reservoir and from several locations on the East Branch.
In all, this project will ultimately make 4,230,000 acre-feet of water a year available to areas in Northern and Central California as well as Southern California. More than 30 different agencies have already contracted for water from the State, but MWD is by far the largest in terms of the number of people served, the quantity of water required and the total amount of the payments to be made to the state.

California however is not satisfied with this current plan because it may not meet the demands of the people beyond the year 2000. So, the State is already looking ahead for the means to assure continuance of an ample water supply.

Previous planning for construction of a large plant to desalt seawater was terminated in 1968 because of high costs. However, other plans for desalting seawater are being considered by the Metropolitan Water District of Southern California.

Other future sources of water might be developed from new supplies transported and delivered into the Colorado River.

California water agencies illustrated a high degree of “water management” that has been developed for the conservation and balanced use of all available water resources because of limited local water supplies. Over a period of years, by mutual accommodation, negotiation, agreement and sometimes litigation, the many agencies involved have organized a program of water management that is probably more highly developed and more effective than in any other area in the country.

Other agencies visited in California were the Orange County Water District and its Water Factory 21. This water factory located in Fountain Valley, is a sophisticated manufacturing plant designed to produce high quality water to meet the requirements of the Orange County community. The project is being recognized by many as the prototype of many facilities to be constructed to produce supplemental water supplies for the United States during the 21st Century. This unique program will provide water to meet the increasing demands of the County by optimizing the use of local resources and avoid the traditional reliance on surplus supplies of district watersheds. Water supply here will be produced from reclaimed waste water and desalted seawater. Water produced by these two methods will be blended and injected into the Orange County groundwater basin through a series of wells. The injected water will prevent seawater from flowing into the groundwater basin, as well as replenish local groundwater supplies.

The total cost of this project will be $24,475,000. The waste water reclamation portion of the facilities were constructed with funds provided under Public Law 95-100. The seawater desalting segment of the factory is being constructed under a cooperative agreement between the U.S. Department of the Interior, Office of Saline Water and the Orange County Water District.

The Committee toured the factory’s advanced design waste water reclamation plant, advanced design seawater desalting plant and the wells where water will be injected into the ground, all of which is expected to get into actual operation in early 1975.
Exhibit 1 - Contents of Bond Transcript

Name of District (General Law):

Incumbency

1. Certificate showing terms of all directors and officers.
   1a. City's consent resolution.

Creation of District by Texas Water Rights Commission

2. Petition of landowners.
3. Affidavit that signers of petition are landowners within the district. (mineral owner, mortgage holder)
4. Notice of hearing on petition before T.W.R.C., which notice contains order of said commission setting hearing.
5. Affidavit of posting said notice.
6. Publishers' affidavit of publication of said notice.
7. Certificate that newspaper is of general circulation in county and district.
9. Certificate of no appeal from said order of T.W.R.C.
10. Certificate of County Clerk as to filing and recording of petition, T.W.R.C.'s order creating district, and directors bonds; and approval of bonds by County Judge.

Organization of Board of Directors

11. Minutes of first meeting of directors.

Confirmation and Directors Election

13. Notice of confirmation and directors election, which notice contains order calling said election.
15. Publishers affidavit of publication of said notice.
16. Certificate that newspaper is of general circulation in county and district.
17. Voter registration receipts of voters in confirmation and directors election.
18. Affidavit of voters in said election.
19. Election returns.
20. Order declaring results of said election and declaring district legally organized.


Adoption of Engineer's Plans for District

22. Excerpts from minutes showing adoption of plans.

Exclusions Hearing

23. Order calling exclusions hearing.


26. Publisher's affidavit showing publication of said notice.

27. Certificate that newspaper is of general circulation in county and district.

28. Order showing no exclusions.


Addition of Lands

30. Certified copy (by County Clerk) of entire proceeding, i.e. petitions, orders, etc.

31. Excerpts from minutes showing adoption of engineer's plans for district as enlarged.

Bond Election

32. Notice of bond election, which contains a copy of order calling such election.

33. Certificate of directors absent.

34. Publisher's affidavit of publication of said notice.

35. Certificate that newspaper is of general circulation.

36. Voter registration receipts of voters in bond election.

37. Affidavits of voters in said election.

Bond Order

38. Engineer's certificate as to construction period.

39. Bond order.

40. Certificate of directors absent.
Current Certifications

41. Certificate of president and secretary as to:

1. Qualification of officials
2. Board of equalization
3. Taxes on ad valorem basis
4. Unincorporated area
5. No contract with U.S.
6. No limitation of indebtedness
7. Non-encumbrance
8. Debts
9. No income
10. Depository
11. No-Litigation
12. Rate Order
13. Current boundary
14. No fire-fighting equipment
15. Incumbency

Map

42. Boundary map.

43. Certificate of Secretary and Engineer to map.

Approval of Texas Water Rights Commission

44. Order by district's board of directors authorizing filing of application with T.W.R.C.

45. Certificate of directors absent.

46. Application to T.W.R.C.
The powers and duties of all districts and authorities created under Article III, Section 52, and Article XVI, Section 59, of the Texas Constitution, are subject to the continuing right of supervision of the State of Texas, by and through the Texas Water Rights Commission or its successor, and this supervision may include but is not limited to the authority to:

"(1) inquire into the competence, fitness and reputation of the officers and directors of any district;

"(2) require, on its own motion or on complaint by any person, audits or other financial information, inspections, evaluations and engineering reports;

"(3) issue subpoenas for witnesses to carry out its authority under this subsection;

"(4) institute investigations and hearings using examiners appointed by the commission; and

"(5) issue rules necessary to supervise the districts."
EXHIBIT 3 — GULF COAST WASTE DISPOSAL AUTHORITY
MEANS OF ESTABLISHING
"POLLUTION CONTROL DISTRICTS"

House Bill No. 1035, the 1971 Amendment to the Gulf Coast Waste Disposal Authority Act, provides that the authority may create "Pollution Control Districts." The authority may create "Pollution Control Districts" by complying with the following procedure:

I. ESTABLISHING THE DISTRICT

A. Resolution Calling for the Creation of a District: The board of directors of the authority may call for the creation of a "Pollution Control District" by adopting one of the following resolutions, or both of the following resolutions, simultaneously.

1. Resolution for the Issuance of Bonds: This resolution shall (a) call for the creation of a "Pollution Control District" (b) define the boundaries thereof (See II) (c) estimate the amount of and state the purpose of the bonds proposed to be issued on behalf of the district (d) declare that the taxes for payment of the proposed bonded indebtedness shall be levied upon taxable property within the district and (e) fix a time and place for a public meeting on the matters set out in the resolution.

2. Resolution for Maintenance Taxes: This resolution shall contain the same provisions as set forth above in 1(a), (b) and (e) and shall further provide that taxes for the maintenance of the authority and its improvements shall be levied upon the taxable property within the proposed district.

B. The Public Hearing on the Creation of the Proposed "Pollution Control District":

1. The public hearing may be conducted by either a quorum of the board of directors, or by one or more directors or employee(s) designated by the board who may accept evidence and make recommendations to the board.

2. Notice of the public hearing must be published in a newspaper of general circulation within the proposed district once not less than fifteen (15) nor more than thirty (30) days prior to the public hearing. At least three (3) days preceding the day of the public hearing, the authority must also post notice in its administrative office at a place convenient to the public, and shall furnish notice to the clerk(s) of the county or counties in which the proposed district will be located for posting at a place convenient to the public at the county courthouse(s).

3. The public hearing must be held within the boundaries of the proposed district and may be held concurrently with any other public hearing conducted by the board.

4. Any interested person may appear at the public hearing and present evidence relevant to the resolution calling for the creation of the district. All persons residing within the proposed district may appear and present evidence as to whether they will receive benefits from the proposed improvement.

C. Resolution Creating the "Pollution Control District":

1. The board may change any provision of the resolution calling for the creation of the proposed district after the public hearing, except that the boundaries of the district may not be expanded without further notice as provided for in II.

2. The board may adopt a resolution creating the "Pollution Control District." This resolution shall: (a) state the purpose for which the district has been created (b) designate the district’s boundaries (See II) (c) declare that the indebtedness to be incurred or cost of services to be rendered for the benefit of the district will be payable from taxes levied upon property within the district (d) state that the property within the district will benefit from the indebtedness proposed to be incurred or services proposed to be rendered on its behalf and (e) call for an election to authorize the indebtedness and/or maintenance tax, stating (i) the date of the election, (ii) the proposition(s) to be voted on (iii) the location of the polling places and (iv) names of officers of the election.
3. The election may be held in conjunction with a general election, or any special election except a primary election. The Texas Election Code shall govern the election so far as consistent with the Gulf Coast Act.

4. The resolution creating the district will be final and conclusive, and shall be subject to judicial review only on the question of whether the resolution is supported by substantial evidence.

5. The resolution must be filed in the deed records of the county or counties in which the district is located.

6. All proceedings contesting the validity of the board's resolution creating the district must be commenced within thirty (30) days from the effective date of the resolution.

II. BOUNDARIES OF A "POLLUTION CONTROL DISTRICT"

A. Establishing the Boundaries: The boundaries of a district may include any territory within the authority. However, if any portion of the proposed district falls within the boundaries or the exclusive extraterritorial jurisdiction of an incorporated city, town or village, the board must first obtain the consent of that political subdivision. This consent must be evidenced by a duly enacted ordinance of the governing body of that political subdivision.

B. Annexation of Territory

1. Proceedings for the annexation of territory to an existing district may be initiated by (a) a resolution of the board (b) a petition signed by the owners of at least 50% of the value of the land to be annexed or (c) a petition signed by a majority of the residents of the land to be annexed.

2. This petition shall contain substantially those matters set forth in I(A) and shall request a public hearing on the matters set forth in the petition.

3. The public hearing shall be held substantially according to the provisions set forth in I(B).

4. If the board decides to seek annexation, it shall adopt a resolution calling for separate elections on the annexation issue. The annexation must be approved by (a) the majority of the qualified voters in the district and (b) by a majority of the qualified voters within the boundaries of the land to be taxed for maintenance purposes and/or assume its pro rata share of indebtedness, and further authorize the board to levy a tax on the annexed land for payment of voted but unissued bonds, when issued.

5. Upon passage of the annexation issue at both elections, the board shall adopt a resolution redefining the boundaries of the district, which shall be recorded in the deed records of the county within which the annexed territory lies.

C. Addition of Territory

1. When less than (3) qualified voters reside in the territory to be added to the district, proceedings may be initiated by a petition signed by these owner(s).

2. The petition shall contain substantially the matters set forth in I(A) and shall request a public hearing.

3. The public hearing shall be held according to the procedures set forth in I(B).

4. After the hearing, the board may adopt a temporary resolution adding the territory, which shall not become final until approved by a majority of the qualified voters within the district as it exists after the addition.

5. Upon passage of the issue, the board shall redefine the boundaries of the district substantially as set forth in II(B) (5).

III. ISSUING BONDS AND LEVYING TAXES

A. If the qualified voters authorize the authority to incur indebtedness for the benefit of the district, the board may issue bonds of the authority supported only by taxes levied on taxable property within the district.

B. The requirements set forth in III(A) apply also to ad valorem taxes levied for the maintenance of facilities within the district.
EXHIBIT 4 — PAST REFUND POLICIES

City of San Antonio

1. 1945-1956: The developer could receive a 100% refund of costs for approach mains, on-site mains, and fire hydrants. The refund contract extended for five years.

2. 1956-1960: The developer could receive a 50% refund of the costs of on-site mains and fire hydrants and a varying percent refund of the cost of approach mains in excess of 2,000 feet.

3. 1960-1974: The developer is not entitled to any refund of the costs of on-site mains. The developer recovers his approach main costs from CWB payments to him for each active metered service line connection to the on-site mains within the developer’s subdivision.
The Committee would like to express its appreciation to the following individuals and organizations for their help and cooperation with the Committee's study:

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Ben Blackledge  
Mayor, City of Kemah  

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Research and Planning Consultants  

Dan Kennerly, Attorney  
Houston
Preston Kirk
WCID 93

Dr. Charles Kreitler
Bureau of Economic Geology
University of Texas at Austin

Herman Lauhoff
Greater Houston Civic Council

League of Women Voters
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Mike Loftin
Leonel Castillo's Office

Frank Mancuso
Houston City Councilman

Bob Mansell
North Texas Municipal Water District

Frank Marshall
McClelland Engineers, Inc.
Houston

John Mixon
University of Houston Law School

Clifford Morton
San Antonio City Councilman

Don Newman
Soil Conservation Service, Houston

George Nichols
Tax Research Association
Houston

Mike Noblet
Commissioner Tom Bass's Office

H. R. Norman
Water Division, City of Houston

Keith Ozmore
Congressman Bob Eckhardt's Office

Edgar Perry
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Jesse Poston
City Public Service Board
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Homer Reed
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Carl Rheim
North Texas Municipal Water District

Sam Scott
Trinity River Authority

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Gene Smith
Mayor, City of Nassau Bay

Larry Sullivan
Mayor, City of Seabrook

Taylor, Taylor and Gaunt, Attorneys
Temple

Buck Tinsley
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Richard G. Toler
City Water Board, San Antonio

Rep. Carlos Trujan
Corpus Christi

Robert P. Van Dyke
City Water Board, San Antonio

Vinson, Elkins, Searls & Smith, Attorneys
Houston

Joan Wade
Nassau Bay City Councilwoman

Ed Watson
Conroe Daily Courier

Bill Williams
Nash Phillips-Copus, Austin

Phyllis Wilson
San Antonio

Jack Woods
Taxpayers Rights Association

H. B. Zachary
San Antonio
Organizations

Alamo Area Council of Governments
American Institute of Architects
American Institute of Planners
Attorney General's Office
Bexar County Metropolitan Water District
City of Dallas Water Department
City of Fort Worth Water Department
Clear Lake Water Authority
Environmental Protection Agency
Greater Houston Builders Association
Gulf Coast Waste Disposal Authority
Houston-Galveston Area Council
Intergovernmental Affairs Committee, Texas Legislature
North Central Texas Council of Governments
Pond Creek Watershed Authority
San Antonio River Authority
San Jacinto River Authority
Soil Conservation Service, Temple and Rosebud
Southwest Center for Urban Research
Texas Water Development Board
Texas Water Conservation Association
Texas Water Quality Board
Texas Water Rights Commission
Trinity River Authority
U. S. Army Corps of Engineers, Galveston
ADDITIONAL COMMENTS

by

COMMITTEE MEMBERS
December 4, 1974

Honorable Bill Blythe
Chairman, House Interim Committee on Water
Supply and Waste Disposal in
Metropolitan Areas
P. O. Box 2910
Austin, Texas 78711

Dear Bill:

This letter is to express my reservations to the report which our interim committee will make to the 64th Legislature.

Among the objections I have, is my belief that in several areas the report goes beyond practicality and necessity in suggesting legislation which would overburden unnecessarily the Water Rights Commission by giving it functions which should be left to local entities or by pressing on the Commission regulating tasks which will completely encumber the Commission in the pursuit of its current, more essential duties. On the other hand, I disagree with the concept herein of returning control of many district and regulatory matters back to a stage which will inject local politics into a process which should be as objective and apolitical as possible.

I commend you and the committee staff for the excellent job you have done in preparing the reports. I'm only sorry that I'm not able to give it my full endorsement.

Most sincerely,

Bill Clayton
BC/dbh
In approving this report, I take exception to Recommendation 11 to the extent that it singles out a specific profession in as much as there are other groups involved in the creation and operation of water districts. In my opinion, Recommendation 11 would raise serious ethical problems.

Further, in the text on Recommendation 11, legal fees for certain district bond issues are compared to other agencies' costs for similar work. In my judgement, this comparison in itself does not in any way prove that cited fees are excessive.

For these reasons, my approval is given with exception to Recommendation 11.

[Signature]

Gene Jones