

TEXAS LAND USE

1-Historical Perspective



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TEXAS LAND USE

A

Comprehensive Land Resource

Management Study

Report No. One: Historical Perspective

Conducted by:

Research and Planning Consultants

Austin, Texas

for

The Division of Planning Coordination

Office of The Governor

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FOREWORD

Throughout its history, Texas has been blessed with an abundant supply of land and other natural resources capable of sustaining a wide variety of uses. This heritage has enabled Texas to grow and prosper in a manner characterized by a diversity of human lifestyles, agricultural capabilities, and business interests which are unique to our nation.

As the State has grown and developed so has the realization that our land resources are indeed finite. There is a need to study various land resource management techniques which may be useful in Texas to preclude or solve certain land use problems similar to those which have been experienced by older, more densely populated and heavily industrialized sections of the country. The seriousness of these problems has resulted in proposed federal legislation which, among other provisions, would encourage the state and local governments to develop planning and management mechanisms conducive to prudent land use practices.

Realizing the importance of these problems and the need for establishing proper land use practices throughout the state, the Governor's Office, through the Division of Planning Coordination, authorized a study of land resource management in Texas. This study is comprised of the following eight technical reports:

- * Historical Perspective - A survey of historical developments, trends, and processes in land resource management in the State of Texas.
- * Existing Mechanisms - A survey of the legal bases for existing land resource management activities in Texas.
- * Problems and Issues - A determination of existing and potential land use problems.
- * Significant Policies - An identification of existing significant public policies relating to land resource management in Texas.

- * Needs for the Future - A determination of the relative need for improving the existing approach or approaches to land resource management.
- * Management Approaches - Consideration of alternative approaches to improve land resource management.
- * Role of Planning - A study of the role and scope of land use planning as a major ingredient of a continuing land resource management program and as an element in an overall state planning process.
- * An Informed Public - Development of recommendations in regard to ways by which to best inform the citizens of the State of Texas about the need for a revitalized state and local role in land use planning and land resource management.

In this manner, factual information and objective interpretation of issues are presented with the expectation that they will provide a basis for action by those private citizens or public officials who will have the responsibility for making land management decisions in the future.

I. INTRODUCTION

The term "land resource management" is exceedingly broad. To refer to "land resource" is to call attention to the varied capacities of land to serve numerous and essential human needs. To speak of "management" is to point to all human efforts, private and public, to utilize those capacities.

It is evident that land resource management has existed in some form since the dawn of human life. It is also evident that the meaning of the term has undergone drastic changes over the years. Science has enhanced, and continues to enhance, understanding of the nature of the land resource. Technology has unlocked, and continues to unlock, treasures of the land resource. The nature and magnitude of human demands upon the land resource have changed, and continue to change.

Despite the advances of science and technology, there is increasing public concern today about the capacity of the finite land resource to satisfy burgeoning human demands upon it. There is also increasing public concern today about the adequacy of traditional management methods to deal with the land resource problems of today and tomorrow.

Since land resource management is a continuing and ever-changing phenomenon with a long history, and hopefully a long future, it should be helpful in shaping policy and methods to gain an understanding of that history. This report is an attempt to promote such an understanding. It will suffice to select as a starting point the year 1836, when the Republic of Texas was born. Attention will be called to selected events indicative of significant trends in the succeeding years. Following the chronological survey, the principal methods and processes of land resource management that have been employed in Texas, together with the roles of levels of government, will be identified and discussed briefly.

II. A CHRONOLOGICAL OVERVIEW

1836 to Reconstruction: Years of Abundant Land

When the Republic of Texas came into existence in 1836, it would have been fatuous to speak of "management" of the vast wilderness within the boundaries it claimed. There were less than 50,000 people residing here, it is estimated, and most of those were located in a few small settlements in a southeastern segment of the Republic. Roads were virtually nonexistent. The first stagecoach line did not commence operation until the following year. People were transported by horseback, horse-drawn wagon and river boat, and all of these modes of transportation were fraught with great difficulties. Far from being managed, the land resources of the Republic were hardly touched by man.

And, while there were no sophisticated plans, private or public, for land resources, there were some goals, both general and specific. Many individuals who came here no doubt had some very specific personal objectives, in addition to an optimistic feeling that they would find opportunity on the frontier. Some looked forward to establishing homes and obtaining a livelihood from the land by farming or raising cattle. Others were promoters who hoped to gain fortunes by encouraging development of various kinds. There were also collective goals, manifested in official policies of the Republic of Texas.

Disposition of the Public Domain. The paramount goal of the Republic of Texas was to encourage settlement. The principal method of accomplishing this goal was the granting of rights to land to settlers. There was still plenty of public domain, although the governments of Spain and Mexico had already granted titles to over 26 million acres to earlier colonists, most of whom had emigrated from the United States. The Republic of Texas recognized those grants as valid. Since the public domain had not been surveyed, it was not possible for the Republic of Texas to confer, at least initially, title to specific lands. The technique employed was to enact general laws entitling settlers to obtain certificates (commonly referred to as headrights) to stated quantities of land, it being the responsibility of the holder to select the land he wanted, have it surveyed and obtain a final grant to that land. Early laws authorizing issuance of headright certificates were more generous than were subsequent laws. Heads of families living in Texas on the day of Declaration of Independence ("except Africans and their descendants, and Indians") were entitled to one league and one labor (4605.5

acres). Heads of families arriving thereafter but prior to October 1, 1837, were entitled to 1280 acres and this was scaled down to 640 acres for heads of families arriving between that date and January 1, 1842. The Republic also entered into contracts with agents to bring settlers to Texas and to locate in colonies, the agents receiving their compensation in land and heads of families receiving 640 acres of land each.

In general, this settlement policy was continued by the State of Texas, which retained title to its public lands when annexed in 1845. Persons who settled upon and improved land were entitled to homestead donations (or pre-emptions) to 320 acres under early statutes and 160 acres under later laws. This policy continued until a court decision in 1898 holding that the unappropriated public domain had been exhausted.

It is apparent that the land settlement policy of both the Republic and the State embraced not only the goal of promoting settlement (which mushroomed, population swelling to over 200,000 by 1850) but also the aim of distributing land to small resident landowners rather than to large landowners. To some extent this policy succeeded, but there were numerous instances of the formation within a short time of huge landholdings, and eventually over half of Texas farmers were tenants, though the percentage of tenant farmers subsequently declined.

Public lands were also disposed of for other purposes, notably to reward veterans of the Texas Revolution and the Civil War, to pay public debts from the sale of land, to construct the capitol building, and to obtain the construction of various improvements, including canals, irrigation ditches, clearance of rivers for navigation, railroads and roads. Grants of land were also offered to private industry to establish certain kinds of manufacturing plants. Finally, some land was granted to eleemosynary institutions and much of the public domain was granted for educational purposes. The Commissioner of the General Land Office has reported that public education received more than 50 million acres, "which is more than one-fourth the areas of the entire State." Much of the land set aside for education has been sold and some of the sales reserved the minerals for the benefit of the particular fund. Income is received by the funds from continuing sales of certain lands and timber, and from leases of grass lands, hard minerals, sulphur, oil and gas.

Aside from the grants of lands to settlers, it is questionable whether the policies governing the disposition of the unappropriated public domain could properly be regarded as land resource management policies. In the main,

land was viewed, not as a resource to be developed or applied to desired ends, but as wealth--a substitute for money--to be bartered for things and services. Decisions as to how land resources of Texas should be used were to be left largely to private owners.

Establishment of Towns. Town planning and "new towns" are commonly regarded as relatively modern concepts, but both go back at least in primitive form to early Texas history, some towns having been established in Texas by the Spanish and Mexican governments. The first step in laying out towns in the Lower Rio Grande Valley (and probably elsewhere) was designation by the surveyors of the public square or plaza, which was placed in the center of the town. Then, Florence Johnson Scott relates, "Outlets for two streets at each corner were allowed and these were ten varas in width. On the street fronting the plaza, sufficient ground was assigned for a church, a jail and a municipal building; the remainder of the lots were assigned for the residences of the captain and other important citizens." Other lots in the town were granted to settlers, who also were often granted rural tracts (porciones), thereby promoting a unity of town and rural interests which might be envied today (though that surely was not the purpose). In addition to grants to individuals, some lands were set aside for common use of all inhabitants of the town for pasture and other uses.

Establishment of towns continued, of course, during and after the existence of the Republic of Texas. Many of these were ventures by private entrepreneurs, whose vigor and ingenuity in promoting their towns seems to have matched or exceeded such attributes of their modern counterparts. Extravagant claims that rivers flowing past promoters' towns were navigable were quite common. The promoters of Houston are said to have advertised it as a "seaport" and to have paid the owner of a steamboat to steam up the river to the site of their town.

Many of these proposed towns were failures, which is indicative of the quality of entrepreneurial management of the era.

Many towns were incorporated by special acts of the Congress of the Republic. Elementary land management powers were conferred by these acts. A common provision was the authorization in an 1837 act that the aldermen of Brazoria "shall have the entire control over the streets of said town, may order new streets to be laid out, and old ones discontinued at their discretion." Another provision found in many of these special charters was authorization of the "removal of nuisances" by the governing body of the town. The 1837 act incorporating the Town of

Liberty contained such a provision. This act also authorized the trustees to sell four leagues of land, "which are now useless," to raise money for construction of a courthouse, jail, and other purposes. The concept of municipal land reserves for future municipal needs evidently was rejected or not considered.

Siting of the capitol was a significant land management decision of this period. In 1840, the Congress of the Republic selected Austin, on the recommendation of a commission which had been created to consider the matter. The scope of their study and the reasons for their decision seem not to have been reported by the historians, but in retrospect the decision appears wise. Not so perspicacious were contentions by critics, including Sam Houston, who favored Houston as the site, that Austin was unsuitable because it was not centrally located with respect to population and was exposed to Indian attacks. This decision involved one of the earliest sectional conflicts in Texas concerning land management, a controversy that raged even after the decision had been made. When President Houston, in 1842, ordered removal of the archives from Austin to Washington-on-the Brazos for their protection from invading Mexicans, residents of Austin seized the archives, which were later captured by Houston's men and then recaptured by the Austinites in an affair that has become known as the "Archive War."

Establishment of the capitol in Austin also marks one of the earliest exercises of eminent domain in Texas, as land for the capitol site was acquired in this manner. Already, despite an overabundance of public land, the government had found that the particular land needed for public use was in private hands and would have to be purchased, voluntarily or involuntarily.

Incentives for Internal Improvements. Other attempts, in addition to grants of land, were made to promote internal improvements of many kinds, most of which were expected to facilitate settlement and other land developments.

High priority was given clearance of rivers and harbors to promote navigation. Several early acts of the Congress of the Republic were addressed to this subject. One of these was an act of 1837 incorporating the Colorado Navigation Company to make the Colorado River navigable for a distance of at least fifty miles upstream from Matagorda, and authorizing the company to collect tolls. In the same year, county courts were authorized to remove all obstructions to navigation of the Attoyac, Angelina and Neches rivers and to levy taxes on bordering lands for this

purpose. Similar efforts at the same time were made to stimulate construction of roads, bridges and railroads. Powers conferred upon such enterprises included the power of eminent domain. Not much was accomplished along these lines until after the Civil War, when transcontinental railroad building really got underway. There were early instances of use of the tax exemption as a device for promoting development. One, intended to stimulate trade with foreign countries, was an act of 1837 exempting steam packets from foreign ports from tonnage duties.

The Emerging Significance of Cattle. While cattle achieved great economic significance in Texas after the Civil War, a trend in this direction had been established long before. J. Frank Dobie has summed up the situation in The Longhorns: "When it had nothing else, Texas had more and more land for the raising of cattle and more and more cattle for the world beyond. At the very hour of the battle of San Jacinto, which gave Texas her independence, a herd of cattle was being trailed to New Orleans. . . . Before the Texans put a single branded cow on the luxuriant grass of the Panhandle-Plains Territory--which began to be stocked in 1876--they had driven millions of Longhorns up the trail."

The Latter Nineteenth Century:
Changing Uses of Land

The Open Range Flourishes and Declines. Despite the settlement policies which had been paramount concerns of the Republic of Texas and State of Texas for over a quarter of a century, by the end of the Civil War population was largely confined to the eastern half of the state, the western line extending generally from Fort Worth to San Antonio. There still remained about 90 million acres of unappropriated land. A noted commentator on this era summed up the situation by observing that population in Texas at this time was "so sparse that half the state's area belonged to the Indian and the buffalo." Regional differentiation in Texas has probably never been sharper, but in this instance the differences were soon to become less sharp.

The western public lands were not going unused. A thriving cattle business had developed on the open range, based upon free grass, branding irons and the Chisolm Trail. As one writer put it, the cattleman "did not own the land upon which his steers fed; he did not want to own it."

It is this chapter in Texas history which, more than any other, has aroused popular interest around the

world, has been romanticized in all media of expression, and (fortunately) has been described by a few exceptionally perceptive and gifted writers. J. Frank Dobie spared no superlative in discussing the Chisolm Trail: "The Chisolm Trail was a lone opening out of a vast breeding ground swarming with cattle life to a vacant, virgin range of seemingly illimitable expanse. It initiated the greatest, the most extraordinary, the most stupendous, the most fantastic and fabulous migration of animals controlled by man that the world has ever known or can ever know."

But this situation was not to last forever. It was threatened by the westward push of settlers, spurred by the homestead laws. Open-range practices of cattlemen and the desires of settlers to manage their farms were irreconcilably in conflict with each other. No other conflict of land uses in Texas history has assumed such widespread significance. The settlers won the struggle, with crucial assists from technology and state law.

The technological contribution was the invention of barbed wire, which became widely used on the plains by 1880. Its role has been described by historian Walter P. Webb: "The advent of barbed wire . . . brought about the disappearance of the open, free range and converted the range country into the big pasture country. It sounded the death knell of the native longhorn and made possible the introduction of blooded stock. . . . Barbed wire put an end to the long drive . . . and forced the cattleman to patronize the railroads whether he wanted to or not. . . . [He] now had a system of pastures--summer pastures, winter pastures, bull pastures, pastures for blooded stock, and others for range cattle. Along the fertile river valley, fields were opened up on which hay and other forage crops were grown to supplement the range."

The legal contribution was legislation enacted at a special session of the Texas Legislature called in 1884 making fence-cutting a felony--a law which was vigorously enforced by the Texas Rangers. This law demonstrates that, while the State of Texas has never undertaken to manage the land resources of the state comprehensively and directly, it has on occasion intervened directly to make land resource policy and to carry it out. There have also been other such instances in the course of Texas history, some of which will be referred to subsequently in this report.

Water Scarcity. Resistance by cattlemen was not the sole obstacle to settlement and development of land in West Texas. Nature's apparent stinginess with water in this region seemed to pose a far less tractable problem.

To some extent, this problem was solved by another technological advance--the introduction and widespread use of the windmill on the plains. Bishop and Giles report that thereafter the "General Land Office was again operating at a furious pace. During the four-year period from 1879 to 1882, certificates were issued by the land office to a total of 46,493,913 acres. Never had the public lands gone so fast. In four years almost twice as much land was taken up as had been handed out under both Spain and Mexico. Much of this went to railroads, true, but by no means all. Settlements leaped up."

This pace slowed considerably, if it did not reverse, during the severe drought of 1886 and 1887, when numerous homestead certificates were forfeited, a problem of such magnitude that legislative intervention for the relief of homesteaders soon followed.

One of the responses to the water problem was the staging of rainmaking experiments at San Antonio and Midland in 1891. These projects, involving the making of explosions, are reported to have failed.

Another response of far greater importance was the introduction by the Texas Legislature of the prior appropriation system of water rights in 1889. Previously, since adoption of the common law by the Congress of the Republic in 1840, the riparian rights system had been the legal basis for use of water in most streams and other watercourses. The riparian system, which had evidently served humid regions well, was not well suited to the arid and semiarid conditions of the western United States. According to one theory of riparian rights, no substantial diversion of water from a stream is permissible, thus precluding irrigation. A broader riparian doctrine allows irrigation, but only on riparian land, which is limited to land in one ownership abutting the stream and does not include even abutting land under some circumstances. This means that some of the best agricultural land could not be irrigated. Under the prior appropriation system, water can be diverted for irrigation of lands distant from the river. The stabilizing first-in-time principle of this water rights system, which is not a feature of the riparian system, also tends to encourage farmers to make the expenditures necessary for construction of canals and preparation of land for irrigation. The irrigation act of 1889 was thus of tremendous significance to the development of irrigation in Texas. This act, which has been followed by more sophisticated legislation elaborating the prior appropriation system, did not repeal the riparian system, but rather was the first step in establishing a dual system of water rights for Texas watercourses.

Developments Concerning Local Governments and Regions. During the post-Reconstruction period, the establishment of new towns continued, especially in West Texas, where it became a common practice of ranchers to establish town sites on their ranches and sell part of their lands for this purpose. In such instances, the rancher evidently continued to dominate the affairs of the town. Walter P. Webb relates that often, "The town was named for the ranchman. A bank was opened, of which he became president and chief stockholder."

Some towns which once had boomed subsequently declined in size and importance. A notable example is Jefferson, the East Texas town which for a time Bishop and Giles report was regarded as "the hub of Texas commerce--it is estimated that one-fourth of the entire trade of the state passed through this city. . . . From a claimed population of twelve thousand in 1870, the town declined to two thousand within a decade and continued going downward." Jefferson's decline is attributed largely to a significant change in transportation, namely, a rapid displacement of river traffic by the railroads.

The Constitution of 1876 contained a number of provisions bearing directly or indirectly upon land resource management by local governments.

Among these were directives that counties created by the legislature should have a square shape and a minimum size. In addition, the legislature was prohibited from carving out any new county whose boundary would be situated nearer than twelve miles to the county seat of the county from which it was taken. Also, the vitality of county seats was promoted by requiring railroads to maintain a depot in the county seat of counties through which their lines passed.

Several provisions of the Constitution of 1876 reflect an evidently prevailing attitude that encouragement by the legislature and municipalities of private development of railroads and other internal improvements had often been extravagant, unwise, and corrupt. Section 51 of Article III flatly denied to the legislature "power to make any grant, or authorize the making of any grant, of public money to any individual, association of individuals, municipal or other corporation whatsoever" except in case of "public calamity." The sweep of this prohibition was broadened by Section 52, denying the legislature "power to authorize any county, city, town or other political corporation, or subdivision of the State, to lend its credit or to grant public money or thing of value in aid of or to any individual, association or corporation whatsoever; or

to become a stockholder in such corporation, association, or company."

At the same time that the powers of government to obtain internal improvements from the private sector were being curtailed, the powers of the state and local governments to construct such improvements for themselves were also being subjected to severe restrictions. In addition to the denial by Section 51 of legislative grants to municipalities, other provisions (Art. III, Sections 9 and 10; Art. XI, Section 4) imposed tight limits upon the amount of taxes that could be levied by municipalities and counties. Section 49 denied, with a few exceptions, the state power to incur debt.

Although conditions and problems of localities and regions continued to be unique in many important respects during this period, the Constitution of 1876 prohibited the legislature from enacting any "local or special law" concerning a long list of subjects, including several related to land resource management. Among the latter were: incorporation of municipalities or amendment of their charters; regulation of the affairs of counties, cities, towns, wards or school districts; authorizing the laying out, opening, altering or maintaining of roads, highways, streets or alleys; vacating roads, town plats, streets or alleys; ferries and bridges; cemeteries and public grounds not owned by the state; location of county seats; and incorporation of railroads or other internal improvements. This, of course, was a manifestation of distrust of the legislature in dealing with local and regional matters except on a statewide basis. Experience had evidently demonstrated that legislation applicable only to certain localities is not only likely to result in inequality in treatment of regions, but also is unlikely to receive thorough consideration in the legislative process. It should be noted, however, that the constitutional policy against local and special laws has been circumvented to a large extent by the legislative practice of enacting "bracket" bills applicable to localities having a population within stated limits, and by general judicial tolerance of this practice. It appears that there is something to be said on both sides of this issue.

Exploitation of Forest Resources. The conversion of Texas forests to lumber picked up momentum during this period. As early as 1869, the number of board feet of lumber produced in Texas reached 93 million. By 1899, this figure had risen to 1,189,248,000, which is higher than that for any year between 1955 and 1969, the last year for which figures are available.

Some of the timber cutting during the post-Reconstruction period was in violation of laws authorizing sales of public school lands to settlers for the low price of \$1.50 per acre and a down payment of 1/10th. A common practice was acquisition of forest lands by non-settlers who made the small down payment, quickly stripped the land of its trees, and then abandoned the land. Bishop and Giles report that these "timber thefts" were "stopped" by a law of 1887 which set a minimum of \$5.00 an acre upon classified timberlands, and by an investigation in 1899 which resulted in the arrest of numerous illegal operators."

The Opening Years of the Twentieth Century: Oil Leads the Way

Spindletop. January 10, 1901, was an eventful day for Texas, for it was on this day that oil gushed from a well at Spindletop, near Beaumont, and inaugurated a period of feverish and highly successful exploration for oil. Earlier discoveries had been made, but none of this magnitude. Many other highly productive fields were soon discovered, principally in East Texas. Discoveries in other parts of the state were also made, including the Panhandle field in 1921.

Oil soon became a dominant, if not the dominant, factor in the economy of Texas. Not only was oil a valuable commodity, of which it was becoming clear Texas had an immense supply, but also oil was spawning a lengthening list of enterprises in associated fields, such as production of exploration and drilling equipment, refining, and manufacture of chemicals.

Management of the production of this resource was left during the early years almost entirely to the private sector. The private entrepreneur decided where to drill, how to drill, how much to produce, and how to dispose of the oil produced, waste liquids and waste gases (nearly all natural gas was deemed worthless in those days and was usually flared). When his activities interfered unreasonably with interests of others, typically surface owners, owners of mineral interests in neighboring lands, and users of water polluted by oil production, he was subject to being restrained by the courts, usually applying common-law doctrines. Some municipalities acted, pursuant to their police power, to limit drilling and operation of wells within their boundaries. There were also early statutes providing that wells should be cased to prevent underground mixing of oil and water, that abandoned wells should be plugged, and that gas should not be burned in flambeau lights nor allowed to escape from a gas well.

It finally came to be realized that judicial doctrines and statutory prohibitions were not adequate for handling problems associated with the production of oil and gas. In 1917, regulatory powers were conferred upon the Railroad Commission, which during the years since then has developed an elaborate and comprehensive program of regulation of production and other aspects of the oil and gas industry. Among the major administrative controls are production of production, spacing of wells, pooling, and regulation of disposal of wastes. Among the major policies sought to be implemented by these controls are protection of correlative rights of owners in a common reservoir, maximization of recovery from underground sources, prevention of wasteful production in excess of demand, minimization of costs of production, and minimization of adverse environmental impacts.

Water Resource Development. Another significant resort to administrative regulation of natural resources at the state level during this period was the establishment of the State Board of Water Engineers in 1913. A permit system was substituted for the informal methods of establishing appropriative rights which had been authorized by earlier legislation, and the new board was generally charged with responsibility for supervising utilization of water in watercourses. Its jurisdiction did not extend, however, to rights in water underground (commonly termed "groundwater"), which continued to be governed almost entirely by the judicial doctrine that every landowner is entitled by virtue of his ownership of land to pump all the water he desires from a well located on his land, regardless of the consequences to owners of wells on other lands or to users of related springs or streams.

The door to financing of water development projects, which had been virtually closed to local governments by the Constitution of 1876, was opened wide by the so-called "Conservation Amendment" of 1917. This high-sounding provision, Article 16, Section 59(a), has the ring of a bill of rights for conservation of natural resources, but its main objective was to authorize the legislature to create special districts with powers, fiscal and otherwise, to develop water resources unhampered by limits on taxation or indebtedness. The legislature quickly relied upon this constitutional amendment by creating several river authorities and other water districts and by enacting enabling acts permitting interested persons to initiate creation of special districts for a variety of water-related objectives. These districts have been vehicles for development particularly of projects for irrigation, municipal supply, navigation, drainage, and production of hydroelectric power, although they have served other purposes as well. Their

role as to irrigation was especially important in view of the fact that the Bureau of Reclamation of the United States Department of the Interior, which had the mission of promoting irrigation of arid and semiarid land, did not function generally for many years in Texas, which had retained its public lands upon annexation. In recent years, numerous water districts have been created by land developers for the purpose of supplying water and sewage disposal for new residential subdivisions located beyond municipal boundaries.

Inauguration of Other State Regulatory Programs.

In addition to the commencement of state regulation of production of oil and gas and development of water, the early years of the twentieth century saw the establishment of other important state programs concerning land resource management. The State Parks Board was established in 1923 and made responsible for management of all state parks and most historical parks. The State Highway Department was created in 1917, but its only function until 1923 was administration of a program of state aid to counties for construction and maintenance by them of roads. In 1923, the State Highway Commission was charged with responsibility to "formulate plans and policies" for a comprehensive system of public roads. The Department of Agriculture was established in 1907 and given several functions, including research, education and regulation. One of its regulatory duties was enforcement of horticulture and quarantine control laws. The Texas Forest Service was created in 1915. Responsibilities given it include fire suppression and improvement of forestry management methods, the latter through research and public education. Thus by 1925 if not earlier, the State of Texas had assumed direct responsibility for several aspects of land resource management and had begun to develop administrative expertise and techniques in these areas.

Expansion of Municipal Powers. The straight jacket fashioned for municipalities by the Constitution of 1876 was loosened considerably by Municipal Home Rule Amendment of 1912, which authorized cities having more than 5,000 inhabitants to adopt or amend their charters, subject to limitations imposed by the legislature. It was no longer necessary for such cities to look to express legislative authorization of programs they wished to undertake. Municipal powers now might vary considerably from city to city. Enabling legislation still could be useful, especially in dispelling doubts as to whether existing statutes might be construed as prohibitions, but would not always be indispensable.

An event in Washington, D.C., in 1926 contributed very substantially to the capability of municipalities to regulate the use of land. The validity of the zoning method of land use control under the United States Constitution was established by the United States Supreme Court in a decision involving a zoning ordinance of a suburb of Cleveland, Ohio, but having far-reaching implications for municipalities throughout the nation. Many state courts, including the Supreme Court of Texas, previously had manifested hostility toward municipal zoning of land uses, but after Euclid v. Ambler they all followed the lead of the United States Supreme Court by holding that zoning was not forbidden by their state constitutions. The Texas Legislature in 1927 enacted an enabling act authorizing municipalities to zone. This act, based upon the model act proposed by the United States Department of Commerce under Herbert Hoover, was upheld by the Supreme Court of Texas in 1934.

The Growing Concern for Conservation. As has been indicated, early twentieth century laws reflect an awakening of interest in conservation of natural resources. The "Conservation Amendment" added to the Texas Constitution of 1917, although aimed at financing of water development projects, nevertheless broadly declared that the "conservation and development of all the natural resources of this State . . . are each and hereby declared public rights and duties; and the Legislature shall pass all such laws as may be appropriate thereto." The term "conservation" was not defined in the amendment. Possibly uppermost in the minds of the drafters and the voters was the thought that water is conserved when dams are built to capture for human needs water which otherwise would flow into the Gulf of Mexico. Conservation and development were thus linked together--at least as to streams. The public policy of preventing escape of natural resources from beneficial use was also manifested in Texas statutes enacted during the same year which required the casing and capping of artesian wells. Similar statutes applicable to oil and gas wells had also been enacted. What additional content the term "conservation" as used in the "Conservation Amendment" was intended to have is conjectural. Did it encompass the concept that some values in natural resources may be conserved by nondevelopment, such as the values associated with wild rivers today? Did this term embrace a policy that natural resources should be saved for anticipated future needs by cutting back present uses, even though the present uses are beneficial? To some extent, the word had already taken on these broader meanings, due largely to the successful nationwide campaigns by Gifford Pinchot, Theodore Roosevelt and others to slow down the cutting of forests and removal of other natural resources on public lands of the United States by withdrawing some of these

lands from disposition. While the Texas Legislature, unlike the Congress of the United States, did not put into effect the practice of conserving natural resources by withdrawing public lands from disposition, Texans certainly understood in 1917 that "conservation" includes such practices.

Subsequently, in the 1930's, conservation received a new emphasis in Texas, this time upon soil and vegetation, including forests. Much of the initiative for these programs came from Congress. It established the Soil Conservation Service in 1935 to aid in preventing or slowing down an alarming destruction of soil by water and wind erosion and intensive agricultural and grazing practices. Organization of local soil and water conservation districts was authorized by the Texas Legislature in 1939. During this decade, national forests were established in Texas by purchase by the Federal Government upon request by the Texas Legislature. These forests were and continue to be administered by the United States Forest Service. The program included a number of national grasslands, consisting of "dust bowl" lands and other denuded lands which were recovered with grasses and native shrubs.

Mid-Twentieth Century and Beyond: Intensification of Land Uses

Population Trends. Every census since the first census in 1850 has shown a substantial rise in the population of Texas. It stood at over 11 million in 1970, up from 9-1/2 million in 1960. This increase was greater than that of all other states except California and Florida. Texas became the fourth most populous state, rising from a rank of sixth in 1960. Texas' rate of growth during this decade, which was 16.9 percent, exceeded the national rate of 14.2 percent. However, the rate of population growth in Texas during the 1960-1970 decade was next to the lowest in census history, the bottom being the 10.1 percent rate for the depression decade of 1930-1940. The rate for the most recent decade is down from a rate of 24.2 percent for the 1950-1960 period. And compared with the growth rates of other states during 1960-1970, the Texas rate may be viewed as moderate. It was exceeded by that of sixteen other states, including Nevada, which led the nation with a growth rate of 71.3 percent. It may be too early to venture a prediction, based upon these figures, that the growth rate of Texas population will continue to decline and that within a few decades Texas will have a constant or declining population. It is possible that the declining growth rate for the past decade is the beginning of a long-range

trend, but it is also possible that the decline in 1960-1970 was an aberration.

In relation to land area of the state, the population per square mile in 1970 was 42.6 persons, compared with a ratio of 0.8 persons per square mile in 1850. The ratio of acres of land per person stood at 15, the figure for the United States as a whole being 11. In a sense, it would appear that land in Texas is still abundant. At least, 15 acres per person could provide ample space for privacy, if the total population of the state were widely dispersed. Whether land in Texas is still abundant in terms of the productivity of Texas land in relation of demands upon it is a more significant and far more complex matter than the amount of theoretical space per person. The multitude and diversity of characteristics which make land useful, regional differentiations in such characteristics, and the nature of changing human demands are relevant considerations in seeking an answer to this question.

Perhaps more important than population figures for the state as a whole are data showing the distribution of population within the state. It is clear that concentration, not dispersal, is the current and long-standing trend. Ninety-eight percent of the population increase in Texas between 1960 and 1970 occurred in the Standard Metropolitan Statistical Areas (an SMSA consists of a county with one or more cities of at least 50,000 population, plus any adjacent counties that are metropolitan in character and economically integrated with the central county). Nearly 74 percent of the total population in Texas in 1970 was clustered within the SMSA's. Even more striking is the fact that about 85 percent of the total population increase occurred within the four largest SMSA's--Dallas, Fort Worth, Houston, and San Antonio. These four SMSA's grew during the decade at a rate of 35 percent and in 1970 had over 46 percent of the total population of the state. The smaller SMSA's had much smaller rates of growth and six of them lost population. Non-metropolitan counties either lost population or grew relatively little during this period. Losses occurred in 146 of Texas' 254 counties. Demographers Bradshaw and Poston have summed up the situation as follows: "By 1970 the population of the state was located primarily along a north-south metropolitan axis extending from Sherman-Denison in the north to Austin and San Antonio in the south, as well as in the southeastern metropolitan complex comprising Houston, Galveston-Texas City and Beaumont-Port Arthur-Orange. It was only within these areas that any sizable population increases occurred between 1960 and 1970."

These trends have very important implications for land resource management. Accelerating concentration of population within large metropolitan areas can be expected to intensify competition for land and to exacerbate the task of harmonizing conflicting and potentially conflicting land uses in the areas of concentration. Indeed, all of the typical problems of huge urban agglomerations, in addition to problems usually viewed as land problems, including transportation, crime, waste disposal, and air pollution, predictably will become difficult to control. Also, the simultaneous phenomena of urban growth and rural decline raise the question whether government should attempt to slow or reverse this trend by such methods as establishment of new towns, provision of incentives for location of new enterprises in regions of declining population, and creation of disincentives for further growth of the very large metropolises.

Major Types of Land Uses. Despite the urbanization trend noted above, a survey under the leadership of the Soil Conservation Service showed that in 1967 the total amount of Texas land devoted to urban uses was only 3 percent of all Texas land. This represented an increase of 504,974 acres during the period 1958-1967. In terms of percentage of total land area of the state, it would not appear that urban expansion is making serious inroads upon competing uses, but there remains the possibility that some of the lands being converted to urban use are especially well suited for agricultural or other uses.

This survey also showed that a total of 6 million acres had been taken out of cultivation during this period and put to other uses.

Increases during this period were achieved by pastureland (6.5 million acres) and "Federally-owned lands (lakes, parks, military, space)" (276,000 acres), in addition to urban and other miscellaneous uses. Decreases were experienced by pastureland (6.5 million acres), non-irrigated crop land (5.8 million acres), forest land (1.6 million acres) and rangeland (1 million acres). Despite these decreases, 51 percent of all Texas land is still being devoted to rangeland and the next largest category--nonirrigated cropland--accounts for 16 percent of the total. Texas is still a land of wide open spaces.

Farming and Ranching Practices. Improved efficiency in farming and ranching practices has been the general objective of the major developments in farming and ranching practices during recent years. Especially significant have been the trends of mechanization of harvesting methods, development of hybrid varieties of grain

(particularly sorghum), and the feeding of beef cattle at large commercial feed lots. Operations have tended to become large-scale. According to estimates by the United States Department of Agriculture, the average size of the Texas farm has steadily increased from 329.4 acres in 1950 to 784 acres in 1971. It is reported that the volume of cattle marketed from feedlots increased 467 percent between 1960 and 1969. The resulting concentration of animal wastes has created environmental problems, the most serious being water pollution.

These trends have been most marked on the High Plains, where the topography is conducive to mechanized harvesting and is underlain by the prolific but limited Ogallala aquifer. Following World War II, pumping of ground water for irrigation on the High Plains grew at an astounding rate. This region soon had far more irrigated acres than all other irrigated regions in Texas combined. However, irrigated acreage on the High Plains is now declining and could drop drastically within a decade or two. The Ogallala, having no substantial natural recharge, is being mined, and pumping from it is treated as mining under the Internal Revenue Code. At the same time, pumping is heavy, this aquifer having been referred to by the Texas Water Development Board in 1968 as "one of the most intensely developed aquifers in the United States."

Increasing emphasis has been placed on soil and water conservation. Programs of underground water conservation districts, particularly the High Plains Underground Conservation District Number 1, have sought to conserve the limited waters of the Ogallala by such measures as well spacing, well casing, avoidance of excessive application of water, and artificial recharge. Preservation of the soil from water erosion, wind erosion, excessive use and related harms has been the object of programs, much expanded since the 1930's, of federal, state and local agencies. About 70 to 80 percent of Texas land is said to be under a "resource conservation plan" devised by local soil conservation districts (of which there are 192 in Texas) with the guidance of the Soil Conservation Service. Local districts are authorized by statute to promulgate land use regulations, but it is reported that all existing programs are voluntary except for an El Paso wind erosion control program.

The Texas Water Plan. During the 1950's, the Texas Water Conservation Association and others began to urge the adoption of a coordinated statewide approach to water resources development. This movement was based upon an understanding that in much of the state, roughly the western half, water was not available from local sources

in sufficient amounts to meet present and anticipated demands. Water was viewed as the "key" resource, indispensable to the development of other resources and to economic development of a region. It was deemed imperative that the available water sources be developed as wisely as possible in accordance with a comprehensive plan rather than on a project-by-project basis. It was also realized that importation of water from East Texas or elsewhere would be essential to continued growth of West Texas regions, including much of the coastal plain. Another factor in the movement for state planning of water resources development was an apparently broadly-held desire that state government play a significant role vis-a-vis that of the federal government, which had long dominated this field but had been unable to coordinate its own fragmented programs.

Comprehensive planning of water resources development on a statewide basis became official state policy with the enactment of the Water Planning Act of 1957 by the Texas Legislature. Responsibility for this function was assigned to the Texas Board of Water Engineers, in addition to its existing duties. As the importance of the comprehensive planning function grew, it was separated from other functions of the Texas Board of Water Engineers and made a major, if not the major, function of a new agency, the Texas Water Development Board. The Texas Board of Water Engineers was renamed the Texas Water Commission.

It is clear that the Texas Legislature contemplated not only that there would be water resources development planning, but also that planned development would actually occur. It proposed a constitutional amendment, which was approved by the voters in 1957, authorizing creation of the Texas Water Development Fund through sale of general obligation bonds of the State of Texas to a maximum extent of \$200 million, subject to being doubled by legislative action. Loans were to be made from this fund to local governments to assist them in financing projects approved by the Texas Water Development Board. This was a most modest entry into the enormously expensive business of financing water resources development, a business which traditionally has been virtually monopolized by the Federal Government.

The culmination of years of planning by the Texas Water Development Board was adoption by it in 1968 of the Texas Water Plan. This was by far the most thorough study ever made of the water resources and needs of Texas, and was adopted after numerous hearings throughout the state. By statute, the Texas Water Plan is a "flexible guide to state policy for the development of water resources in this State. The concept of interbasin transfer of water

is incorporated in the plan and is an important aspect of it. Among numerous proposed interbasin transfers, two are of gigantic proportions. Each would traverse the entire width of the state from east to west--one located on the coastal plain, the other in North Texas. A major objective of the northern transfer is replacement of the declining Ogallala aquifer as the basis for extensive irrigation on the High Plains. To obtain sufficient water, it would be necessary, according to the plan, to import water from the Mississippi River.

Implementation of the Texas Water Plan received a severe setback in 1969, when Texas voters narrowly refused to authorize issuance of state water bonds to an additional extent of 3-1/2 billion dollars, deemed by the board to be an essential first step in financing substantial development of the Texas Water Plan, the total construction cost of which was expected to be almost 9 billion dollars. Opponents charged that the dominant features of the Texas Water Plan were not needed, were too costly, were unrealistic in assuming availability of water from the Mississippi, and were hazardous to the environment, particularly to the estuarine environment, which critics said would receive insufficient inflows of fresh water.

At this time, the future of the Texas Water Plan is uncertain. This means that the future of irrigation on the High Plains is also uncertain. In other parts of the state, as well, irrigation may be decreased as municipal and industrial demands for water rise, since municipal and industrial water consumers can pay higher prices for water than can irrigators. In instances requiring construction of large, multipurpose projects, it may not be possible to meet even municipal and industrial water needs without governmental financial assistance. It is of considerable significance in this connection, that a recently released review draft of the general report of the National Water Commission recommends the elimination of federal subsidies for water projects and a generally lessening role of the Federal Government in water resources development.

The comprehensive planning process continues. The Texas Water Development Board continues to have major responsibility for performing this function. It was never contemplated that the 1968 plan would be final and rigid, even if the plan were to receive enthusiastic popular support. Now that the voters have been heard from, the Board's main task is to assess the validity of criticisms of the plan and to reconsider at least some aspects of the plan. This is being done. Various spokesmen, official and unofficial, are urging the adoption of new policies and programs.

Attention is increasingly being focused upon the minimal nature of ground water control by the state, compared with its control over surface water. The adequacy of the regional approach, embodied in the Underground Water Conservation District Act of 1949, is being questioned. It is pointed out that few active underground water conservation districts have been created, that no districts exist in some regions having severe groundwater problems, that the state has an interest in pumping practices which deplete or permanently injure aquifers, that the districts have not attempted to provide for future water needs by curtailing production of present uses, and that uses of interrelated surface waters and even uses of the land itself are being threatened or harmed by groundwater pumping in some regions. Specific problems and problem areas frequently identified include: land subsidence in the Baytown-Pasadena and Houston Ship Channel areas; salt water intrusion into fresh water aquifers in the Baytown, Texas City and Galveston areas; the complex interrelationships of interests in the Edwards aquifer, involving pumping of water from this aquifer for San Antonio's water supply, the flow of major springs and streams, and uses of land in recharge areas for farming, ranching and urban expansion; and finally the mining of the Ogallala aquifer. It is evident that groundwater problems vary in nature from region to region, but it does not necessarily follow that the State's interest in such problems is zero or that regional controls would be more effective than state controls, which may, of course, be adapted to local conditions. Popular attitudes, however, at least on the High Plains, appear to be strongly opposed to enlargement of state control over groundwater.

The matter of return flows may have to be reconsidered in light of the current national water quality control policy of decreasing and eventually eliminating wastewater discharges into watercourses. The Texas Water Plan expressly recognizes that return flows are an "essential and valuable water resource" and that their proper management is an "integral concept" of the plan. While the plan takes into consideration the probable effects upon return flows of anticipated increasing water reuse, including disposal of wastewater onto land (particularly for irrigation) instead of discharging it to a watercourse, the now apparent magnitude of this trend may have been underestimated. This situation is another example of the manifold interrelationships of land and water.

Another such example, also highly relevant to the Texas Water Plan, is an apparent trend in popular attitudes and official policy toward minimizing flood damage by limiting uses of flood plains instead of depending entirely upon construction of dams and other flood control structures.

The latter has been the traditional approach to flood control, primary responsibility having been assumed by the Corps of Engineers for on-stream works and by the Soil Conservation Service for watershed works, in cooperation with state and local governments. Despite the expenditure of billions of dollars by the Federal Government on such works since 1936, average annual flood losses increased dramatically during the same period. Congress, in enacting the National Flood Insurance Act of 1968, sought to end this losing struggle by inducing municipalities and other local governments to adopt regulations restricting development of riverine and coastal areas subject to flooding risks. The inducement offered was the availability of federally subsidized flood insurance for owners of existing residential and small business buildings in communities having federally-approved regulations. The Texas Legislature promptly enacted enabling legislation authorizing local governments to participate in this program and designated the Texas Water Development Board as the coordinating agency, but has not conferred any authority upon that board or any state agency either to regulate flood plain land uses directly or to do so indirectly by imposing standards upon local governments. It is reported that 66 Texas cities and towns have adopted flood plain management controls and are currently seeking federal approval. Some Texas cities had adopted such controls, often called "flood plain zoning" years prior to inauguration of the federal insurance program, and the Texas Water Plan comments upon the importance of such measures, but there is a much heavier emphasis upon flood plain management today than at the time of the writing of the Texas Water Plan. Among the probable consequences of this program, if successful, is the likelihood that funds and reservoir capacity allocated to flood control by the Texas Water Plan can be redirected to other purposes.

Petroleum and Other Mineral Resources. Burgeoning demands for energy are subjecting oil and gas to increasing pressures. Prorating of production of oil has not been imposed for several months. Importation of oil is increasing and is expected to continue to grow. Plans are being made to develop a superport in deep water of the Gulf of Mexico. Texas and other coastal states are competing to have the port situated near their coasts. Texas refineries and petroleum industries have a special interest in this matter. Industry spokesmen are urging that governmental incentives for exploration be increased or at least not reduced. They are especially critical of the treatment of oil and gas production by the Internal Revenue Code and regulation of natural gas prices by the Federal Power Commission. Measures to obtain more efficient recovery of oil from the ground, such as waterflooding and other secondary

recovery methods, are increasingly being resorted to. Many are confidently predicting that the next session of the Texas Legislature will enact a compulsory unitization statute, which will permit the development of an entire reservoir or major part of a reservoir according to a comprehensive plan. Texas law now provides for compulsory pooling, but it is much less comprehensive than unitization. Also being urged by some industry representatives is relaxation of leasing restrictions upon federal off-shore lands.

These developments have many implications for land resource management. The superport proposal has raised questions about risks that it would create for the coastal environment, particularly the risk of oil spills. Waterflooding represents another demand upon limited water supplies. The Supreme Court of Texas in 1972 ruled that the implied right of an oil and gas lessee to make reasonable uses of the land includes the right to use substantial quantities of fresh groundwater without any payment to the owner of the land. At one stage of the case, the High Plains Underground Water Conservation District Number 1 interposed a claim that waterflooding would be "waste" under Texas law and therefore should be prohibited, but it later receded from this position. The court's opinion observes that the products of waterflooding have greater market value than the products of irrigation. There are indications that the heightened search for fuel resources will result in increased strip mining of Texas lignite deposits. This development creates risks of environmental harm, including scarring of the landscape, soil erosion, pollution of streams by sediment, acid drainage, and air pollution from the burning of lignite in lieu of natural gas.

Production of oil and gas still occupies a central role in the Texas economy and is expected to continue to do so for many years. Geologist W. L. Fisher warns, however, that "Texas faces an ultimate decline and eventual depletion of these exceedingly critical mineral resources" and that this "underlines the importance of a continued diversity of mineral bases for the state, along with fuller development of the state's other mineral resources." Concerning the latter, Dr. Fisher observes that between 1950 and 1970 "production of nonfuel minerals within the state has increased at a rate faster than that for fuel minerals." The leading nonfuel minerals produced in Texas are sulphur, salt, and lime.

Urban Trends. The trend of central importance to urban areas is the accelerating concentration of population within such areas. This trend, which has been

discussed earlier in this report, has triggered other trends of significance to land uses and management.

Basically, newcomers and their activities can be accommodated in two ways--increasing density of people and activity within the established urban community and expansion of the territorial size of the urban community. Both of these accommodations have occurred in virtually every urban center, but the dominant trend, especially pronounced since World War II, has been an outward movement of people and enterprises from the center of the community. This, of course, is counter to the statewide trend. One gets the impression that perhaps people live in urban centers because they have to, not because they want to.

The intensity of land uses even in the smallest towns made quite apparent long ago a multitude of interdependences of land uses. Construction of wooden houses close to each other created a fire hazard to all. Poorly constructed and dilapidated houses were hazardous to the safety of occupants and neighbors. Outdoor privies endangered the health of the community. Industrial enterprises that emitted foul odors, such as slaughter houses, were intolerable where people lived.

As towns became cities, the need for coordination of increasingly variegated and complex land uses became all the more apparent, although awareness was often too late or not followed by appropriate action to prevent serious community harm, in some instances irreparable. Land uses that ordinarily would not be regarded as noxious came to be commonly regarded as undesirable in residential neighborhoods. Even small retail shops, apartments, and duplexes should be excluded from single-family residential areas, it was thought. It was also deemed conducive to the livability of such areas that houses be surrounded by yards and be set back a uniform distance from the street. Other things considered important by the prospective home builder or buyer included proximity to schools, parks, his place of employment, downtown or other shopping centers, and the streetcar line. The industrialist seeking a location for his plant was interested in the availability of a sufficiently large tract near a railroad, a port with adequate facilities or a highway, or some combination of these. He also often was interested in a suitable water supply and some means of disposing of industrial wastes. Municipal officials were responsible for providing a lengthening list of services for inhabitants, including streets, water supply, fire and police protection, sewerage, perhaps electricity and gas (although these may have been provided by utilities with cooperation of municipal government, as in the case typically of telephone service),

schools, parks, hospitals, and libraries. Large capital outlays were required to provide many of these services and substantial time periods were needed to construct them and pay for them. If officials miscalculated the nature of the city's prospective growth, some parts of town might go without needed services, while facilities in other areas would be underused. In addition, development would tend to occur where the facilities existed, whether such areas were otherwise desirable or not. Public facilities adequate when built often became obsolete soon when unexpected growth occurred. Streets had to be widened, often at great expense, especially if buildings had been erected near existing streets. Water mains and sewer lines often had to be dug up and replaced with larger ones.

When automobiles became numerous, many of these problems were exacerbated by an acceleration of dispersal of development, and some new problems arose, also. Streets suitable for the horse and buggy became clogged with faster-moving autos. Places to park in the downtown district became difficult to find. Retail commercial enterprises began to appear along major streets. This "strip development" slowed traffic, made it more hazardous, and presented a displeasing appearance, the latter due in part to the "sign clutter" which invariably accompanied such development. Along such streets and in other places within the city, developers rarely provided sufficient space for off-street parking. New commercial development frequently occurred near or within existing residential neighborhoods. The trend toward construction of shopping centers on large tracts of land with adequate parking space and controlled access to major highways was a welcome development (except to downtown merchants), which accompanied a trend toward construction of limited-access highways. Land in the vicinity of highway interchanges became much sought after for a variety of commercial enterprises, especially motels and restaurants, which drained business from downtown hotels and restaurants.

New residential subdivisions tended to be located far from established development, sometimes even beyond municipal boundaries, where it was difficult or impossible to provide essential services, where development patterns might be incapable of integration with intracity development, where farmers were induced by high land prices and high taxes to convert rich agricultural land to homesites, and where scenic rural vistas were replaced by the familiar urban scene. Airports quickly became obsolete, due partly to the rapid growth of air travel, but also to the encroachment of residential subdivisions upon land over which planes had to pass at low altitudes during takeoff and landing operations, and upon land needed for extension of runways.

Industrial plants also joined the exodus from the central city to take advantage of cheap land and proximity to major highways. If they went beyond the city boundaries, they also would escape city taxes and regulations, at least for a while.

The impact of these centrifugal movements was felt by the central city in many ways. Profitability of downtown businesses typically declined. Vacancies in commercial buildings rose. Maintenance and renovation of buildings lagged. Tax revenues suffered while demands for municipal services increased. The quality of housing in the central city declined, as owners were reluctant to maintain or modernize their buildings and occupants (typically low-income, black and Mexican-American tenants) were unable financially either to pay rents sufficiently high to warrant renovation of their dwellings or to join the exodus to newer housing in outlying areas, from which they were also barred by racial prejudice. Some of the non-affluent were able to escape to the mobile home park, situated often in areas not well-suited to residential use.

Cities responded to these growth pains by resorting to numerous devices, including ordinances prohibiting or regulating particular land uses, master plans for community development, planning of capital improvements, zoning (but not in Houston), subdivision control, building codes and housing codes. Cities also participated in a number of programs of the United States Government, including public housing, urban renewal, financial aid to private housing, and attempts to upgrade the quality of many municipal services. In addition, cities made efforts to coordinate their programs with those of other local governments operating within or near the city, such as school districts and other special purpose districts, the county and other municipalities. A major step in this direction was the creation of regional planning organizations, the Councils of Government. Finally, cities assisted in coordinating their programs with those of the state, particularly those concerning health, water and highways. Despite this array of weapons brought to bear upon the problems of urban growth and decay, the problems remains intractable.

These problems are being attacked not only by government, but also by some private developers of large-scale projects. Some developers with great financial strength have been able to combine residential, commercial and other land uses within a single project. Some are sufficiently comprehensive in area and types of land use as to constitute virtually self-contained neighborhoods or new towns. Developments of such scale offer great opportunities for well-planned development. Many formidable

obstacles face such projects. In addition to the huge costs involved and the long time period before profits can be realized, a period during which construction costs may rise higher than anticipated, the needed land usually consists of separately owned tracts which must be acquired without the benefit of eminent domain from owners who may demand outrageously high prices.

Nevertheless, several large-scale land development projects with multiple types of uses have been undertaken in Texas. Among the larger ones which might be deemed new towns are Clear Lake City (near Houston), Flower Mound (near Dallas) and the Mitchell Corporation new town north of Houston. Shopping centers are becoming much more than a collection of retail commercial establishments, if Houston's Galleria is indicative of a trend. It is a complex which includes two office buildings, a hotel, and an ice skating rink, in addition to a four-level, glass-roofed, air conditioned shopping arcade. The Galleria is itself surrounded by other stores and office buildings comprising a total complex of thirty-three acres. A notable industrial development is Humble Oil and Refining Company's Bayport, a 7,250-acre tract providing industrial sites, internal roads and railroad tracks, pipeline right-of-way, water supply, central waste collection, treatment and disposal system, and environmental standards to control air and water pollution, glare, noise, vibrations and radioactive emissions.

Due to land costs and divided ownerships, such projects by private developers are especially challenging when situated within or near the built-up part of the city. They are also rare. Perhaps the most spectacular is Houston Center, being developed by Texas Eastern Transmission Corporation, encompassing 33 city blocks (74 acres) in the heart of downtown Houston. This land was held by about 150 owners, from whom options to buy were obtained by an apparently independent realtor, who later assigned them to Texas Eastern. It is reported that to date 95 percent of the land has been acquired, the rest awaiting closing. Texas Eastern will continue to own the fee in these lands and enter into leases with occupants. Much of this land will be devoted to office use, but the planned mix of uses also includes apartment, hotel, motel, retail, restaurant, theatre, banking, auto parking, sports, and park uses. Much of the area will be enclosed and air conditioned. Automobiles will be restricted to the periphery of the project area, within which there will be moving sidewalks and other mechanical "people-movers."

Other similar projects, farther removed from Houston's center, are also underway. Allen Center, a joint

venture of Trammell Crow Company and Metropolitan Life Insurance Company, will occupy 21 acres adjacent to the downtown section. Plaza Del Oro, an investment of the Shell Oil Company, will be situated on a 544-acre tract near the city line in the vicinity of the Dome Stadium and will include hospitals as a component. Parcels of this tract will be sold, rather than leased, to developers for construction and operation in accordance with land use regulations.

Traditional zoning and subdivision control laws prevent developments such as these, as well as more modest undertakings involving mixing of types of buildings and land use, substitution of common open space for traditional yards, or other modern approaches. Some cities have endeavored to make their land use controls more flexible and at the same time avoid subordinating public to private interests. A major product of this effort is the "planned unit development" (PUD) ordinance.

Industrial Development. Industrial plants occupy very little of Texas' land area, but they have very significant economic and environmental impacts upon other land uses.

Concerning their economic impacts, Robert H. Ryan has generalized in a recent issue of the Texas Business Review that "One of the main supports of Texas population growth today is the expansion of manufacturing. Between 1960 and 1980 Texas manufacturing plants will probably have quadrupled their output." The environmental impacts of industrial plants are imposed by their generation of substantial amounts of environmentally harmful waste products that are often difficult to dispose of in a nonharmful manner.

Existing industrial plants for the most part are located in or near the large centers of population and new plants are continuing this trend. Petroleum refining and the manufacture of chemicals and synthetic rubber, a major component of the state's industry, is concentrated largely along the Gulf Coast between Orange and Brownsville, especially in the upper reaches of that environmentally fragile strip. Stanley A. Arbingast, Director of the Bureau of Business Research, reported that about two-thirds of all new plants and 70 percent of plant expansions reported in 1970 "were concentrated in the standard metropolitan statistical areas. Furthermore, the lion's share of both categories was located east of a line running through Fort Worth and San Antonio. . . . Most areas of West Texas, however, were fairly well represented in both new plants and expansion." In an address on October 14, 1971, Governor Preston Smith called attention to a significant aspect of the instances of industrial growth in West

Texas. He pointed out that such instances could be credited with reversing a declining population trend in 16 counties. He also expressed support for programs to encourage "decentralization of the state's economic development" to "bring about more balanced growth in Texas." Implementation of this goal is an objective of the Texas Industrial Commission, which has undertaken preparation of a Comprehensive State-wide Rural Industrial Development Plan.

Transportation. Substantial changes in the relative importance of forms of transportation occurred after World War II. Transportation of passengers by auto and airplane grew at a rapid rate. So also did movement of freight by truck. Railroads were weakening, railroad mileage in Texas having declined by more than 3,000 miles between 1932 and 1969. Navigation, the oldest mode of transportation in Texas, continued to show strength, in terms of the value of exports and imports handled by Texas Gulf Coast ports and tonnage moving through the Texas section of the Gulf Intracoastal Waterway.

As in the past, transportation facilities continue to exert a controlling influence upon land uses. Land resource development is stimulated by the availability of adequate transportation facilities and stifled by their absence. In addition, a new concern has been manifested in recent years about the adverse effects in some circumstances of highways and airports upon neighboring lands and the environment. It has even been contended that the land occupied by some highways and airports could be put to better use. However, except for urban streets and alleys, which occupy about one-third of most urban communities, the quantities of land devoted to transportation uses do not appear large. Fairly recent surveys show that nationally roads and highways occupy not much more than 20 million acres and airports cover less than 2 million acres.

Planning and construction of Texas highways continues to be the responsibility of the Texas Highway Department, subject to conditions attached to federal funds, which currently represent over one-third of total financing of the Texas system. Funding at both state and federal levels is aided substantially by gasoline and other highway user taxes, the revenues of which are partially earmarked for highway planning and construction. The role of cities and counties in planning and constructing highways is essentially cooperative. Three major highway systems exist in the state: the interstate system, which got under way with the enactment of the Federal Aid Highway Act of 1956; primary highways; and secondary highways (farm-to-market and ranch-to-market).

Relationships between highways and land resources have not always been considered adequately in highway planning, but during the past 15 years the scope of highway planning has been broadened to embrace a wide range of factors, including land-highway relationships. Congress has provided the major initiative for this trend. Successive amendments of the Federal Aid Highway Act have directed the Secretary of Transportation to withhold approval of plans for construction of federally-aided highways which fail to meet any of a lengthening list of guidelines and standards. Highway planners are now charged with responsibility not only to select routes and designs which are most efficient and safe, but also to consider fully "possible adverse economic, social, and environmental effects." Lest there be any doubt as to the meaning of these broad terms, Congress has provided explicitly that they include:

- (1) air, noise, and water pollution; (2) destruction or disruption of man-made and natural resources, aesthetic values, community cohesion and the availability of public facilities and services; (3) adverse employment effects, and tax and property value losses; (4) injurious displacement of people, businesses and farms; and (5) disruption of desirable community and regional growth.

Requirements for public hearings are also imposed by Congress.

In addition to insisting upon full consideration in highway planning of land impacts and other matters deemed relevant, Congress has accorded a preferred status to a few land uses. The Federal Aid Highway Act of 1968 declared that "the Secretary shall not approve any program or project which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance as determined by the Federal, State, or local officials having jurisdiction thereof, or any land from an historic site of national, State or local significance as so determined by such officials unless (1) there is no feasible and prudent alternative to the use of such land, and (2) such program includes all possible planning to minimize harm to such park, recreational area, wildlife and waterfowl refuge, or historic site resulting from such use." It was this statutory provision that blocked extension of San Antonio's North Expressway through Olmos/Brackenridge Park.

Some land uses near highways are disfavored by Congress. Billboards and junkyards are not merely subjects

to be considered in highway planning, but are to be eliminated or controlled by the states, on pain of losing a portion of their share of federal highway funds.

In addition to highway legislation, federally-aided highways also are subject to the environmental impact statement requirements of the National Environmental Policy Act of 1969.

Planning of airport location and design has been primarily a function of municipalities, which also typically own and operate them. Federal control, however, has escalated, especially in recent years. The State of Texas, in sharp contrast to its very active highway role, played virtually no airport role until creation of the Texas Aeronautical Commission in 1945, and even this agency was entrusted with only minimal powers. Its principal function of relevance here is the providing of technical and financial assistance to local governments. In addition, all political subdivisions of the state have been authorized by the legislature to zone land around airports for the purpose of curtailing hazards to airport operation.

Use of land for a modern airport is likely to conflict in many ways with other uses of nearby lands. In addition to the safety hazard to aircraft posed by the construction of buildings and other structures, noise from aircraft, especially jets, may be intolerable to occupants of neighboring lands. Air and water pollution in the area also may be worsened. Development of land near airports drives up the cost of land acquisition for airport enlargements. To avoid such problems, airports may be located on lightly used lands many miles from the city. Not only does this impair the efficiency of air travel by increasing travel time between the city and airport, but the very characteristics of the land which make it attractive as an airport site may also make it ideal as a habitat for wildlife. This type of conflict was dramatized for the nation by the threatened destruction of the Everglades National Park and its wildlife by the proposed Miami jet port. This episode also showed the muscle of the federal government in this field, as the project was halted by the decision of the President and the Secretary of Transportation to deny funds under the Federal Airport Act of 1964.

Following the Miami jet port debacle, Congress sought to improve the quality of planning of airport development. The Airport and Airway Development Act of 1970 directs the Secretary of Transportation to prepare a national airport system plan for the development of public airports in the United States and to withhold

approval of proposed airport developments which are not shown on the national plan or which fail to satisfy planning requirements of the act. Standards which the secretary is instructed to establish include those for "site location, airport layout, grading, drainage, seeding, paving, lighting and safety of approaches." He must withhold approval from a project which he fails to find is "reasonably consistent with plans (existing at the time of approval of the project) of planning agencies for the development of the area in which the airport is located." If he finds that a project would have an adverse effect upon natural resources, including "fish and wildlife, natural, scenic, and recreation assets, water and air quality, and other factors affecting the environment," he shall not approve that project unless he finds in writing, "following a full and complete review, which shall be a matter of public record, that no feasible and prudent alternative exists and that all possible steps have been taken to minimize such adverse effect." This, of course, represents a policy of preferring certain land uses over others. It is similar to the preference noted in the Federal Aid Highway Act, but is broader in number of respects than the latter.

Land for Parks. State and national parks in Texas are distinctive phenomena of the past fifty years. Unlike Congress in its handling of the federal public domain, the Texas Legislature did not carve out of the public lands of Texas a system of parks. And since there was no federal public domain in Texas, there were no national parks here either, until land was purchased for such parks during recent years. Big Bend National Park was established in 1944 and much later Padre Island National Seashore and Guadalupe Mountains National Park were created. Efforts to establish a Big Thicket National Park have not yet succeeded. Several national wildlife refuges are in Texas. A policy of land acquisition by the state by donation and purchase for a system of state parks was inaugurated in the 1920's, but substantial acquisitions did not occur until the 1930's. Acquisitions for state parks after World War II have been criticized by many political leaders of Texas as pitifully small. In 1970, the Texas Parks and Wildlife Department administered 66 recreational, historical and scenic parks containing more than 62,000 acres.

The high cost of land acquisition has been the major obstacle to expansion of the state parks system. Efforts to overcome this obstacle in Texas have taken the forms of legislative appropriations, federal matching grants-in-aid, and issuance of bonds to be retired from park entrance fees.

Some hard questions are involved in developing a state program of acquisition and management of land for parks. How much land should be acquired? Where should it be acquired? For what purposes should it be administered? Relevant to all of these questions is the fact that lands suitable for parks typically are unique and especially vulnerable to irreparable harm from many types of land uses.

In recognition of the critical importance of obtaining sound answers to such questions, Congress required in the Land and Water Conservation Act of 1965 that grants to states be approved by the Secretary of the Interior only for projects in accordance with a state comprehensive plan deemed adequate by the secretary. The Texas Parks and Wildlife Department completed a State Comprehensive Outdoor Recreation Plan (SCORP) in 1966 and is currently revising it.

Among other things, the federal act requires that the state plan contain "an evaluation of the demand for and supply of outdoor recreation resources in the state" and that it "shall take into account relevant Federal resources and programs and shall be correlated so far as practicable with other State, regional, and local plans." Guidelines issued by the Bureau of Outdoor Recreation of the Department of the Interior include the provision that "priority should be given to meeting urban needs." SCORP lists five general needs of Texas outdoor recreation, including not only "planned acquisition of outdoor recreational areas near large urban population centers," but also "preservation of many of the State's unique, irreplaceable natural and scenic resources."

Despite the existence of SCORP, controversy flared over the proposed purchase of a portion of Mustang Island. A central issue was whether this purchase was in accordance with SCORP. Although this purchase was approved by the Bureau of Outdoor Recreation, a United States District Court held that the purchase was inconsistent with SCORP and therefore invalid. On appeal, the United States Court of Appeals in 1972 disposed of the case on a procedural ground, allowing the purchase to be made without reaching the substantive issues in the case. At the heart of this controversy is the policy question whether, assuming all other relevant factors are balanced, limited funds for park acquisition should be spent for lands near urban centers in great need of outdoor recreational facilities or for lands elsewhere which have unique natural qualities and which may not be available at a later time. Perhaps the

forthcoming version of SCORP will focus more sharply on this issue. Two factors could be expected to skew the department's judgment on this matter. One is the dependence upon park entrance fees for land acquisition funds and the other is the magnitude, in relation to its other functions, of the department's engagement in the task of calculating demands for outdoor recreation.

Environmental Degradation and Protection. When Americans suddenly became alarmed during the late 1960's about the condition of their natural environment, which appeared to be endangered far more seriously than they had realized earlier, their responses included establishment of numerous new governmental programs and refurbishing of some old ones. This activity occurred at all levels of government, but was most evident at national and state levels. Some of these programs are more closely related to land resource management than are some others, but in view of the growing awareness of the interrelatedness of all natural resources, one must be hesitant about dismissing any environmental protection program as irrelevant to land resource management. Unless adequate environmental protection measures exist, some land uses will be impaired or destroyed. On the other hand, the existence of strict environmental controls may divert environmentally hazardous land uses away from areas with serious environmental problems to other less vulnerable regions. Thus, programs to control air pollution, water pollution, solid waste disposal and other environmental harms are significant aspects of land resource management.

Prior to the 1960's, the traditional approaches to control of waste disposal, air pollution and water pollution had been (1) judicial enforcement of a few state and local legislative prohibitions and common law doctrines and (2) narrow administrative regulation incidental to other programs of state agencies, particularly the Railroad Commission, Department of Health, Parks and Wildlife Department, and the General Land Office. The Texas Legislature supplemented these piecemeal approaches significantly when it established comprehensive programs for these fields by enacting the Clean Air Act in 1965, the Water Quality Act in 1967 and the Solid Waste Disposal Act in 1969. Environmental control at the state level continued to be shared by several agencies, but was vastly expanded and two agencies, the Water Quality Board and the Air Control Board, were assigned functions which were exclusively environmental. In subsequent legislative sessions, the Texas Legislature has continued to augment these programs in terms both of authority and appropriation of funds.

During the same period, there was a transition in the role of the Federal Government in environmental protection from an essentially supportive role to a leadership role of giving direction to state programs and even intervening directly in some instances to apply environmental controls. Escalation of federal involvement reached high points with enactment by Congress of the Clean Air Amendments of 1970 and the Federal Water Pollution Control Act Amendments of 1972.

Also during the past decade, popular and official attention was focused upon the importance of lands along the Texas Gulf Coast, their susceptibility to environmental degradation, the currently rapid development of such lands for industrial and residential uses, and the complex relationships of public and private interests in this region. Pursuant to Senate Concurrent Resolution 38 of the 61st Texas Legislature, a comprehensive investigation and analysis of the State's coastal zone was undertaken by the Natural Resources Section of the Division of Planning Coordination, Office of the Governor of Texas. Based upon this study, a report containing recommendations for legislation was issued in January, 1973. National concern for coastal zone resources and uses was reflected in enactment by Congress in 1972 of the Coastal Zone Management Act, which seeks to encourage and aid states in developing coastal zone management programs.

III. METHODS AND PROCESSES OF LAND

RESOURCE MANAGEMENT IN TEXAS

As the general historical review of land resource management in Texas has shown, a variety of methods of management have been utilized since establishment of the Republic of Texas. It may be useful now to give special attention to the principal methods and processes of land resource management that have been employed in Texas, and to summarize the roles of levels of government.

Private Development

Throughout Texas history, the policy has been followed that land development and management generally should be done by private owners. When the Republic of Texas owned most of the land in Texas, it could have chosen to retain that ownership and manage the land in the manner it deemed best. Theoretically, each acre of land could have been classified as to its optimum potential use and a comprehensive plan could have been prepared for achieving such uses. Actual users of land would have been employees of the Republic or possibly licensees, lessees or grantees subject to restrictions compelling adherence to the comprehensive plan. For many reasons, this was not done and was probably never even considered. The major public lands policy of the Republic and the State of Texas was to transfer title to land as quickly as possible into the hands of settlers, who would then make the decisions as to how the land should be managed.

Government has aided private management in many ways. Legislatures and courts have protected the private owner against trespassers, have developed a system of conveyancing, have sanctioned a variety of methods of private financing of land development, have provided a variety of forms of business organization (partnerships, corporations, etc.), have evolved a body of landlord and tenant law, have permitted land use regulation by easements, restrictive covenants and defeasible fees, and have made other contributions too numerous to mention to the general goal of supporting land resource management decisions made by private owners. This type of governmental support, which is neutral as to the nature of management decisions by private owners, is to be distinguished from governmental incentives offered to private owners to induce them to make certain management

decisions. The latter is essentially joint government-private enterprise management, with government often playing a dominant role. As has been seen, this type of government support also goes back to the earliest days of the Republic.

Although the record of private management is mixed, with some success and some failures, and although it has been deemed necessary that government limit private discretion in many respects, private owners are still looked to to provide the main initiative and judgment in managing Texas land.

Judicial Doctrines

When one owner's use of his land conflicts with another owner's use of his land, government must intervene. Some of these interventions are by the legislature, but others are by the courts, applying doctrines developed by them over a long time. Some of this development is centuries-old, as the Congress of the Republic in 1840 adopted the common law of England, and Spanish law also influenced Texas law in some respects. Conflicts among uses of neighboring lands are usually resolved by the law of nuisance. The judicial process in nuisance cases is essentially a balancing of the interests involved. This includes a determination by the court of the relative value to society of the competing land uses. The court's judgment may take the form of an injunction limiting or prohibiting certain uses of the lands involved. In so doing, the courts are engaging in the land resource management process. Such a case was Burditt v. Swenson, in which the Supreme Court of Texas in 1856 ruled that a livery stable on Congress Avenue in Austin, complained of by the owner of a mercantile store on an adjoining lot, was a nuisance and should be terminated.

When a land use adversely affects the public generally, it may be forbidden as a public nuisance in a suit brought by a public official.

Nuisance litigation continues to be important in modern times, despite the prevalence today of legislative and administrative controls of land use. Even though a particular land use may be sanctioned by a zoning ordinance, a court may nevertheless hold that it is a nuisance.

There are also other similar judicial doctrines fashioned for particular types of land use conflicts. Among these are conflicts arising from excavation, causing adjoining land to collapse, and changes in drainage of

surface water, causing nearby land to be flooded. In the excavation cases, courts have referred to the "right of lateral support," i.e., the right of a landowner to have his land supported by his neighbor's land. In the drainage cases, two antithetical doctrines have competed for recognition: one is the theory that unwanted surface water is a "common enemy" which each landowner may repel as best he can without liability for adverse consequences to his neighbors; the other is the theory that the natural drainage cannot be altered to the detriment of a landowner without invading a "natural servitude." The latter finally gained the ascendancy in Texas after intervention by the legislature.

The old doctrines do not always neatly fit new types of controversies. Such a case was that reaching the Supreme Court of Texas in 1958 involving a conflict between some farmers and ranchers in West Texas over a weather modification program undertaken by the farmers to suppress hail and complained of by the ranchers, who alleged that the program had deprived them of needed rain. This case was disposed of without clarification of the applicable legal principles.

Legislative and Administrative Regulation

In General. Legislatures may command that private owners not make certain uses of their lands. The power of state legislatures to do this is an aspect of the police power, which is a broad governmental power to regulate human conduct for the protection of public health, safety, morals and general welfare.

Except for home rule cities, local governments may exercise the police power only to the extent it has been delegated by the Texas Legislature. Home rule cities derive their powers from the Texas Constitution, subject to general limitations imposed by the Texas Legislature.

Theoretically, the United States Congress does not have police power, but it does have regulatory powers substantially as broad in scope by virtue of several grants of other powers in the United States Constitution. Among these are powers to regulate interstate commerce, provide for national defense, and protect national property. When Congress acts within the scope of its enumerated powers, its acts prevail over inconsistent state laws.

Historically, the great bulk of legislative regulation of land use has consisted of municipal ordinances.

Regulation of land use by the United States Congress and by the Texas Legislature has been much less extensive.

Legislative regulatory powers are limited by due process and equal protection clauses of the Texas Constitution and the United States Constitution. A multitude of court cases have attempted to apply these broad limitations to regulations of land. It is quite difficult to draw precisely the line between valid and invalid regulations. In general, it may be said that such regulations will not be deemed to deprive owners of land or property without due process of law if they are reasonable and that they will not be deemed to deny owners of land of equal protection of law if they are not discriminatory. Legislative controls are also presumed valid until the contrary is proved. Occasionally, the view has been expressed that virtually any regulation of land use is a taking of property without due process. As late as 1921, the Supreme Court of Texas in Spann v. City of Dallas, an early zoning case, declared: "The right to acquire and own property, and to deal with it as the owner chooses, so long as the use harms nobody, is a natural right. . . . It is not a right, therefore, over which the police power is paramount. Like every other fundamental liberty, it is a right to which the police power is subordinate." Subsequent opinions by the Supreme Court of Texas have repudiated this language. Compare, for example the words of the court in the 1934 case of Lombardo v. City of Dallas, upholding a later zoning ordinance: "The police power may be exerted to regulate the use, and where appropriate or necessary prohibit the use, of property for certain purposes in aid of the public health, morals, safety, and general welfare, and . . . the constitutional limitations form no impediment to its exertion where enactment is reasonable and bears a fair relationship to the object sought to be obtained."

Pressures appear to be mounting today for land use restrictions which leave the landowner very little development opportunity. Among these are efforts to halt development of flood plains and natural areas having wilderness, ecological or scenic values. Also, a city which has grown as large as it wishes to be, or as large as its schools, water supply or sewerage can handle, may seek to prohibit or delay development. Such attempts not only raise a serious issue of confiscation of property, but the latter (urban growth control) may also be vulnerable to charges that it excludes people, or certain classes of people, from the community and that it unreasonably diverts unwanted development to neighboring communities.

Legislative bodies may either act directly or through administrative agencies. The latter approach is better suited for handling problems which are broad in scope, complex or which require a measure of discretion in handling specific situations. The latter approach has been resorted to with increasing frequency during the past fifty years, in land resource regulation as well as in other regulatory fields. However, statutes or ordinances directly prohibiting specific land uses may be useful in some situations and continue to be utilized. Indeed, the last case in which the United States Supreme Court passed upon a land use ordinance, Town of Hempstead v. Goldblatt, decided in 1962, involved this type of ordinance, sometimes characterized as "single-use zoning." In this case, the court approved an apparently successful attempt by a municipality to terminate continued use of a long-established gravel pit, around which residences had been built, simply by prohibiting any excavation in the town below the water table.

The most comprehensive land use regulatory programs in Texas are zoning, subdivision control, building codes and housing codes. Salient trends in these programs will be traced briefly.

Zoning. In 1927, the year following approval of zoning by the United States Supreme Court, the Texas Legislature enacted an enabling act authorizing municipalities to adopt zoning ordinances. Many Texas cities promptly adopted such ordinances, but some (notably Houston) never did.

One purpose of zoning, possibly the major one, was to separate potentially incompatible land uses, especially to exclude commercial and industrial uses from residential neighborhoods. By so doing, nuisances might be prevented from developing. But, as the enabling act clearly showed, zoning is a means of achieving many other purposes. The enabling act authorized not only the establishment of separate districts for residential, commercial and industrial uses, but also authorized creation of districts based upon permitted height of buildings, size of buildings, the percentage of a lot which may be occupied, the size of yards and other open spaces, and the density of population. Thus, a particular lot might be within a use district, a height district, an area district and possibly others. The stated purposes in the enabling act included the prevention of congestion in the streets, safety from fire, promotion of health, provision of adequate light and air, prevention of overcrowding of land, avoidance of undue concentration of population, and the facilitation of adequate provision of transportation, water, sewerage, schools, parks and "other public

requirements." Such regulations, the act provided, "shall be made in accordance with a comprehensive plan." In short, zoning was viewed as a means of implementing a comprehensive plan for the physical development of an entire municipality.

Cities endeavoring to embark upon a program of land resource management as comprehensive as that contemplated by the zoning enabling act were confronted with a task of major proportions. Preparation of a comprehensive community plan, which is indispensable to meaningful zoning (though not insisted upon by courts in Texas and most states), was alone a substantial task. To handle this vital function, cities of medium or large size whose governing bodies were serious about zoning, engaged planning consultants and created planning departments. A planning commission, a citizen advisory body, was also established. To deal with instances of hardship and special exceptions allowed by the ordinance, another citizen-staffed agency--the zoning board of adjustment--was established. Two basic zoning ordinances were adopted, one setting forth the general zoning scheme, the other actually classifying all land in the city.

Zoning has been a continuing function of considerable magnitude in most cities. The original zoning map typically has been amended repeatedly. Sometimes these amendments have been made necessary by the annexation of new land or by new developments not contemplated by the original plan, such as construction of an interstate highway. Most amendments, however, have been made in response to applications by landowners desirous of using their land in a manner not permitted by the existing zoning map. Reports from a number of cities show that a very large majority of these applications are granted by the municipal governing body. Some observers view this development as destructive of the integrity of the entire zoning program. Others view it as a necessary adaptation of a formally rigid plan to the realities of development as they occur. A development related to the proliferation of zoning map amendments is the frequency of grants of variances and special exceptions by zoning boards of adjustment. Investigations in a number of cities throughout the nation have shown that these grants are very numerous and often given without legal authorization. In general, the courts, evidently fearful of becoming drawn into the role of super zoning commissions, have displayed reluctance to hold local zoning practices illegal.

The basic zoning ordinances have undergone major changes since 1927. These changes reflect a widespread

view by municipal officials and others that the early zoning ordinances were too rigid and crude to deal adequately with the complexities and changing conditions of land development. In view of the large range of uses permitted typically within a single zone, there was still much opportunity for conflicts to occur. A common response to this problem was the creation of more numerous, and hence less broad districts. The Dallas ordinance in the early thirties provided for six use districts. The current Austin ordinance provides for thirteen. The common practice of classifying land uses on the basis of type of use failed to take into account the wide variations possible in external impacts of several enterprises of the same type. Most foundries are noisy neighbors, but they may be made less so by soundproofing of buildings and other measures. Some ordinances have been amended to allow commercial or industrial uses within certain zones on the basis of satisfaction of performance standards rather than on basis of type of enterprise. Another approach to make zoning more flexible has been widespread use of the special permit device, which involves the exercise of governmental discretion in the particular instance. Standards for open space and other aspects of intensity of land use have become more sophisticated. It came to be realized that single-family residences, apartments, and some commercial uses could exist near each other if their siting were well planned. The planned unit development ordinance (PUD), which represents a combination of zoning and subdivision control, permits such mixing of uses and other departures from traditional zoning. The common thread running through these and other innovations in zoning is a trend away from rigid ordinance requirements toward discretionary control. Despite this trend, however, many presently effective zoning ordinances differ little from the early traditional pattern. In part, reluctance by some Texas cities to modernize their zoning ordinances may be due to the fact that the Texas zoning enabling act has not been amended so as to authorize expressly the new approaches.

Public Enforcement of Deed Restrictions. After several unsuccessful attempts by zoning advocates over many years to obtain approval by the voters of the City of Houston of zoning, the Texas Legislature in 1965 authorized Houston (and other cities in a specified population range) to bring suits to have enjoined land uses in violation of restrictions in private deeds affecting land use, lot size, and buildings. In 1971, this privilege was extended to all Texas cities not having zoning. This is not nearly as comprehensive as zoning and is a very limited mechanism for achieving community plans.

Subdivision Control. When the Texas Legislature authorized municipalities in 1927 to engage in zoning, it also authorized them to regulate the subdividing of land. Subdividers were required to prepare plats accurately describing the tract and complying with the city's subdivision regulations. The statute does not specify the nature of such regulations, but rather gives the cities broad discretion to promulgate such regulations as will promote "orderly development" and the "general welfare." Typically, subdivision regulations cover many of the subjects covered by zoning ordinances and in some respects may be more effective methods of control than zoning. Subdivision control is imposed at a critical point in the land development process, before establishment of street layout and ownership patterns which impose constraints upon subsequent regulatory programs. Incidentally, Houston does have subdivision control.

Perhaps the most noteworthy trend in subdivision control is the raising of standards as to facilities which must be installed or paid for by the subdivider. Paved streets, water mains and sewers have not always been required, but they generally are now in urban areas. Some Texas cities adopted a practice of reimbursing subdividers for some of these costs, but a number of cities have abandoned this practice in whole or in part, as they are free to do. Requirements that subdividers donate land (or money in lieu of land) for parks and schools to satisfy needs generated by their subdivisions have encountered mixed reactions by courts in various states. The major problem is the difficulty of fashioning a formula which distinguishes satisfactorily community and developer responsibilities.

Building and Housing Codes. Many municipalities have enacted ordinances establishing minimum standards for construction and maintenance of buildings for the protection of health and safety. The term building code usually refers to the former, while the term housing code usually refers to the latter. Such codes have a long history. However, many cities adopted modern building and housing codes only after 1954, when this became a condition for obtaining federal funds for public housing, FHA and urban renewal programs.

There has been much criticism of building codes in recent years. The traditional building code specifies types of materials, building design and construction methods. These specifications surveys have shown, typically are not kept up to date and thus tend to prevent use of improved types of materials and methods. There is also lack of uniformity from city to city and from

state to state. These two factors are said to be important frustrations of efforts to reduce the cost of housing in this nation by mass production of prefabricated units and adoption of modern construction methods. Suggested reforms include substitution of performance standards for specification standards and adoption of state or national codes. These proposals have in turn been criticized. Performance standards may be technically difficult to administer at the municipal level, and state or national codes may fail to take into account local needs and may tend to confer a monopolistic position upon producers of certain materials and processes, it is argued.

The major problem with housing codes that has developed over the years is the difficulty of enforcement against landlords. Inspections, orders and fines have not succeeded in obtaining a high level of compliance. One reason suggested is that the cost of bringing buildings into compliance with the housing codes is often higher than fines and penalties which may be imposed. In some states, but not Texas, legislatures have authorized tenants to make the required repairs and deduct the cost from the rent due. Some court decisions in other jurisdictions, even in the absence of such statutes, recently have held that a tenant need not pay rent as long as housing code violations persist. Some legislatures in other states have authorized courts to employ a receivership proceeding for the purpose of making repairs when the owner refuses to do so and impounding rents to pay for such repairs. Reports indicate that even these drastic measures have not enjoyed great success. The fundamental problem appears to be that occupants of substandard dwellings typically are simply unable to pay rents sufficiently high to maintain dwellings in compliance with housing codes.

Public Ownership of Land and Facilities

Governments typically have broad powers (and responsibilities) of management of land they own. Examples of publicly owned land in Texas are the remaining public domain of the State of Texas, parks, wildlife refuges, national forests, military reservations, reservoirs and other water projects, public housing, streets and highways, airports, harbors, garbage dumps, sewers and sewage treatment plants, irrigation systems, utility lines, the Manned Spacecraft Center, university campuses, public schools, and other governmental buildings.

Internal Management. Internal management of some of these public lands pose substantial opportunities and problems. The Texas Highway Department has received

much praise for its management of highway rights-of-way, which have been seeded with wild flowers and dotted with roadside parks. The General Land Office has promulgated regulations and clauses in leases designed to prevent abuse of public lands. Among these are regulations governing production of oil and gas in coastal waters, a grazing lease clause to prevent overgrazing, and a mining lease clause requiring filling of mine pits. For many years the Parks and Wildlife Department has regulated dredging of shell, marl, sand and gravel in state-owned coastal waters for the protection of marine life and breeding grounds, navigation and the state's proprietary interests. Several lawsuits alleging that the department in issuing dredging permits has not adequately protected marine life and other wildlife, have been brought during recent years, but these failed on procedural grounds. County commissioners courts have been authorized by recent legislation to regulate dredging of public beaches on the Gulf of Mexico to prevent creation of hazardous conditions and exposure of beaches to storm waters. Other regulations of beaches have also been authorized. Many management opportunities have not been realized. One example is the under development of public recreation areas around most Texas reservoirs. In part, this is due to inadequacy of powers of river authorities.

External Impacts. External impacts of governmental land uses have sometimes been harmful and sometimes beneficial. Among the former have been instances of pollution of air and water and other environmental harm. Typically, governmental land uses tend to stimulate development of nearby private land. Some of these impacts have been incompatible with plans and programs of another government in the area. Activities of federal agencies are not subject to local or state control unless the Federal Government consents. Congress attempted to deal with this problem by enacting the Intergovernmental Cooperation Act of 1968, title VIII of which contains the Federal Urban Land-Use Act, which requires federal agencies to coordinate land acquisition, disposal and changes of land use in urban areas with local plans. An executive order of the President also directs federal agencies to follow similar practices. National land use planning bills considered by Congress in 1972 would have provided for still closer integration of national, state and local land use programs. The National Environmental Policy Act of 1969 requirement of environmental impact statements was addressed to one aspect of this problem.

Programming of Facilities and Site Selection. The mere programming of facilities by each governmental entity that provides facilities is an important method of

obtaining coordination of land uses and land use programs. If the needs for roads, schools, sewage treatment plants, airports, and other facilities are ascertained in advance for a substantial period of time and the proposed locations of those facilities are designated, both internal management and coordination are enhanced. Programming forces the agency engaging in it to establish priorities and tends to reduce the risk of interference with other programs of the agency. When capital improvements plans exist, they tend to influence programs of other governmental entities and private developers. Urban master plans for many years typically have included a capital improvements planning section. The Highway Department and the Parks and Wildlife Department also plan land acquisitions and facilities in advance. The prohibition in the Texas Constitution against state indebtedness, except to the extent authorized by that document, has made realistic programming at the state level difficult since it eliminates a means of providing certainty as to future funding.

When land acquisition by a state or local government is partially funded by the Federal Government, planning processes and standards governing site selection typically are imposed. One example: federal regulations require that public housing sites be consistent with local plans, within easy walking distance of public transportation, and not within areas of minority concentration.

Relocation of Persons. The problem of relocation of residents of land acquired by government has been a difficult problem, especially in the urban renewal program, and relocation policies have not been uniform for all types of programs. To meet this problem, Congress enacted the Uniform Relocation Assistance and Property Acquisition Policies Act of 1970. States must provide assurance of compliance with this act in order to obtain federal financial assistance for any project involving relocation of persons.

Reconveyance with Restrictions. Public ownership of land may serve as a device for controlling development of private land. A prime example is the urban renewal program, the central feature of which is public acquisition of land by eminent domain or otherwise for sale to private developers subject to deed restrictions compelling adherence to the public plan. The question naturally comes to mind whether municipalities and other governmental entities could use the device of acquisition and resale with restrictions generally to obtain private land development of the character they desire. The legal question is whether such exercise of the power of eminent

domain would satisfy the requirement of the Texas Constitution that land be condemned only for a "public use." It appears doubtful that the constitutional test would be satisfied. However, the Supreme Court of Texas was able to find that exercises of eminent domain for irrigation projects, public housing and urban renewal were for "public uses," despite the fact that the direct beneficiaries of these acquisitions were private owners of irrigation project lands, occupants of public housing, and private developers of urban renewal land, respectively. In each of these instances, the court found that substantial public interests were also served.

Excess Condemnation. A closely related question is whether an agency condemning land for a highway, reservoir or some other project would be permitted to capture increases in land values caused by those projects by condemning land in the vicinity of the project and selling it. Texas courts and courts elsewhere generally have held that this practice, characterized as "excess condemnation," is invalid because not for a "public use." However, in some cases such condemnations have been upheld on the ground that the acquisition primarily served a proper purpose other than the pecuniary purpose. Thus, a navigation district was permitted to condemn land near a port and lease the land to private industrial enterprises, since operation of the port was thereby enhanced. In some states, but not Texas, excess condemnation has been expressly authorized by constitutional amendment.

Advance Acquisition. Another related problem is the extent to which advance acquisition of land by eminent domain will be allowed. A school district, for example, might condemn prospective school sites many years in advance of need for a variety of purposes, possibly to include prevention of preemption of sites by other uses, to influence development of private land nearby, to relieve the hardship of owners of the proposed sites due to the practical freezing of development of such sites during the interim by the mere existence of the school site plan, and to save money. The legal problem stems from the fact that the land might not be devoted to any public use for many years and that even the proposed school use might be abandoned eventually. Courts have upheld advance acquisition in situations indicating that the proposed use will occur within a reasonable time, but prediction of judicial treatment of particular acquisitions may be difficult.

Development Rights. Another means of employing eminent domain as a land use control device is acquisition

of development rights. If it is desired that owners of scenic land along a highway or a river not develop their lands in ways which would impair their scenic value, the rights of owners to so develop their lands could be condemned. The owners would retain their rights to use their lands in other ways and the government theoretically would not be required to pay as much for development rights as for the entire fee simple. There appears to be no constitutional obstacle to this technique in Texas. Statutory delegations of eminent domain in Texas are typically broad enough to embrace this kind of taking. Condemnation of various kinds of easements is quite common. The Texas Parks and Wildlife Department has manifested an intention to utilize development easements for the protection of scenic rivers. Some states have had much experience with such easements.

Incentives

Direct grants of land and money to private entrepreneurs were relied upon heavily during early Texas history for obtaining navigation improvements, roads, railroads and other public works, and even private industrial plants. Abuses of this practice led to the banning of it by the Constitution of 1876. Since then, neither the Texas Legislature nor local governments have been permitted to make grants of loans to private developers.

The incentive of tax exemption is also generally forbidden by the Texas Constitution, which requires that taxation be "equal and uniform," but to a limited extent this device is sanctioned.

The most significant tax exemption of significance to land resource management is the constitutional amendment adopted in 1966 allowing assessment of land used for agricultural purposes to be based solely upon its value for such purposes rather than upon its market value. Adoption of this amendment was urged on the ground that assessment of agricultural lands near cities at market value tends to hasten conversion of such lands to urban uses and accelerate undesirable urban growth.

Historic sites owned by institutions of purely public charity were exempted from taxation by the Texas Legislature in 1969, on the basis of the constitutional exemption generally of "institutions of purely public charity."

The Texas Legislature in 1963, in the Municipal Annexation Act, authorized municipalities to exempt

Regional Institutions. Some districts are multicounty or regional in territorial extent. Among these are some river authorities and districts. Also in this class is the Gulf Coast Waste Disposal Authority, created in 1969 to provide regional waste disposal and regulation within three counties surrounding Galveston Bay.

Despite the obvious need for comprehensive programs in metropolitan regions, no governmental entity with general powers has been created for such regions in Texas. The 1933 amendment of the Texas Constitution authorizing county home rule and transfer to a home rule county of functions of municipalities and other local governments has proved to be unworkable and no county has adopted a home rule charter. The availability of various forms of intergovernmental cooperation has not produced a metropolitan land resource management program.

In response to requirements in federal financial assistance programs of regional planning, the Texas Legislature in 1965, authorized local governments to organize regional planning commissions, often known as councils of government, to engage in regional planning, intergovernmental cooperation, review and comment on applications by local governments for federal or state financial assistance, and to render advice and assistance to local governments. The act describes the general purpose of the new regional entities to be "to make studies and plans to guide the unified, far-reaching development of the area, to eliminate duplication, and to promote economy and efficiency in the coordinated development of the areas." Specifically, their plans "may include recommendations on major thoroughfares, streets, traffic and transportation studies, bridges, airports, parks, recreation sites, school sites, public utilities, land use, water supply, sanitation facilities, drainage, public buildings, population density, open spaces, and other items related to the general purpose." Membership in regional planning commissions is voluntary. Commissions have no power to regulate or tax.

The Texas regional planning commission approach appears to be gaining widespread acceptance. The Office of the Governor of Texas recently referred to it as a "milestone in intergovernmental relations." It reported in 1972: "Today, every area of the state is served by one of the 24 regional councils of governments. All but 30 of Texas' 254 counties hold membership in their respective organizations. Ninety-seven per cent of Texas' 11.2 million population reside in member counties."

Mention should be made of two types of federal regional organizations in Texas. Economic Development Districts are federally designated with state concurrence to promote economic development of seriously depressed areas. Resource Conservation and Development Projects are administered by the Soil Conservation Service, which describes them as "rural-urban" projects to "help multi-county areas speed up resource programs." Approved projects in Texas are development of a youth recreation center at Kountze, a low-rent housing development in Johnson City, and a cooperative fruit packing shed at Stonewall. There is no indication that this program has produced regional planning.

The State. The role of the State of Texas in land resource management has undergone many changes. Its role during the nineteenth century clearly overshadowed activity by local governments and the federal government. Throughout most of this period, the state was concerned primarily with disposition of the public domain and encouragement of private development. Toward the end of the century, the Texas Legislature intervened decisively in bringing about the demise of the open range and introduced the prior appropriation system of water rights.

Early in the twentieth century, administrative regulatory programs were established for production of oil and gas and use of surface water. State programs for highway development and parks were established. The Department of Agriculture and the Texas Forest Service were created during this period.

For at least three decades after 1925, no new state programs of significance were launched apart from establishment of the State Soil Conservation Board in 1939, although existing programs continued to expand. During this period the state remained aloof from the urban scene, where municipal governments with federal aid and guidance were actively developing land resource programs.

During the 1960's, there was a renewed stirring of activity at the state level. Serious state planning occurred in the preparation of the Texas Water Plan and the State Comprehensive Outdoor Recreation Plan. New state agencies were created to administer regulatory programs for control of air and water quality. A solid waste disposal act was passed.

Steps were also taken to coordinate programs of state agencies and to assist with local and regional planning of land resource and other problems. In legislation

industries from municipal taxation and other municipal regulations indirectly by designating any part of the area located within the territorial jurisdiction of municipalities as an "industrial district, and to enter into contracts with owners of land within such districts conferring immunity from annexation for a period of seven years, renewable for successive seven-year periods.

Federal taxes have many impacts upon land resource management. Some examples: the deductibility of interest and taxes, which tends to encourage home ownership rather than renting; the depreciation allowance for income producing improvements, which tends to encourage investments in buildings rather than land; the depletion allowance for oil and gas development, which tends to encourage exploration; and the accelerated depreciation allowed for rehabilitating low-income rental housing and facilities for control of air and water pollution, which tends to encourage expenditures for those purposes.

By far the most significant governmental incentives for various types of land development today, and for the past forty years, are the multitude of financial assistance programs of the Federal Government. Grants, loans and other financial aid generally have been made to local governments and states, rather than directly to private developers. Some of these programs have been intended to induce action by private developers. Others have sought to induce local governments and states to adopt and pursue programs along desired lines. An early example of the former is the creation of the Federal Housing Administration in 1934 to provide low cost housing mortgage insurance to private lending institutions. A modern example is the Urban Growth and New Community Development Act of 1970, which seeks to encourage private developers (and states) to develop new towns. A recent significant example of federal inducement of state action is the Coastal Zone Management Act of 1972, authorizing grants to coastal states to assist them in developing management programs for the land and water resources of the coastal zone and for administration of federally-approved state programs.

Roles of Levels of Government: A Summary

All levels of government are involved in land resource management, but the nature and magnitude of their involvement vary widely today and have fluctuated over time.

Municipalities. Municipalities were clearly playing the dominant role by 1930, when urban planning,

zoning and subdivision control were being undertaken by most cities of substantial size and many small ones. It soon became evident, however, that municipal programs were not succeeding. Inadequacy of financial resources of municipal governments was a major factor. Another was the inability of municipalities to control land development beyond their borders. Extraterritorial powers of Texas municipalities were, and remain, minimal. They do not include zoning. The original subdivision regulation enabling act of 1927 authorized cities to extend this control five miles beyond their boundaries, but a 1931 statute was judicially construed as repealing this extraterritorial power. Subsequent legislative attempts to restore this power were not entirely successful. Finally, in 1963, the Municipal Annexation Act authorized cities to make their subdivision regulations operative within their "territorial jurisdiction" as defined in the act, which may extend from one half mile to five miles, depending upon municipal size.

Counties. Compared with municipalities, counties have never played a significant role. They do not engage in comprehensive land use planning. They do not have power to zone, except to a very limited extent, the exceptions being airport zoning, flood plain zoning and zoning of two recreational areas--southern Padre Island and Amistad Reservoir. Counties were authorized in 1931 to promulgate subdivision regulations outside municipalities, but the types of subdivision control which counties may impose are limited. Counties do perform several functions which significantly affect land development. Among these are road construction and maintenance, acquisition and maintenance of parks, waste disposal and septic tank regulation.

Special Districts. Special districts and authorities play widely varying roles in land resource management. Generalization is difficult in view of the great variety of types of districts and functions they perform. None, however, engages in a comprehensive program of land resource management. Many engage in functions having significant impacts upon land development. Conspicuous among such districts are water districts formed to furnish water and sewerage for subdivisions located beyond municipal boundaries. These tend to stimulate residential development in such areas with consequences which are sometimes undesirable. Some districts have regulatory powers over limited aspects of land resource management. Among these are soil conservation districts, which generally have not exercised their regulatory powers, and airport authorities, which may zone land near airports for limited purposes.

enacted in 1967, the Governor of Texas was designated the Chief Planning Officer of the State and was directed to appoint Interagency Planning Councils "to coordinate joint planning efforts of the various functional areas of government." One of the councils created is the Interagency Council on Natural Resources and Environment. It consists of the heads of fifteen state agencies and a representative of the Office of the Governor. Its stated purpose is "to provide a forum for interagency communication and cooperation to foster the development and protection of the natural resources and the environment of the State of Texas in consonance with Legislative policies." This council has proposed that environmental impact statements be prepared on state-supported projects. The State Planning and Development Section of the Division of Planning Coordination reviews environmental impact statements on both state and federally funded projects. It also reviews applications for state or federal aid from regional planning councils. Applications from local governments are reviewed when they are of regional or statewide importance; in other instances, the review function is delegated to the regional councils. The division of Planning Coordination is also engaged in research. It has recently completed a study of coastal resources management in Texas.

The Federal Government. The major role of the Federal Government in land resource management has been, and continues to be, to provide funds for planning and development.

Some federal agencies, notably the Corps of Engineers and the Bureau of Reclamation, have actually planned, constructed and operated public works. This federal role has a long history, but has been confined to a few types of large-scale projects and there are indications that it will be cut back. The recently released review draft of the National Water Commission points in that direction.

Perhaps the dominant trend in federal programs is the steady broadening of their scope, in terms both of the range of factors embraced and of the land area covered. In other words, these programs reveal a growing awareness of interrelationships which must be considered if land resource projects are to succeed. This trend is quite evident in federal urban programs. The urban renewal program developed into much more than a slum clearance and redevelopment program after its inception in 1949. It soon was broadened to embrace rehabilitation and conservation, to require that municipalities adopt and enforce adequate building and housing codes, zoning

and subdivision ordinances, and in other ways to endeavor to create conditions which tend to prevent blight and preserve redeveloped areas. The focus was broadened still wider by the Model Neighborhoods in Demonstration Cities ("Model Cities") Program, instituted in 1969, which goes beyond physical planning to include employment, education, health, social services, transportation, crime and recreation. Encouragement of development of entire new towns has been national policy since 1966, reinforced by the New Communities Act of 1968 and by the Urban Growth and New Community Development Act of 1970. To be eligible for federal financial assistance, a new town project must meet requirements including compatibility with comprehensive planning in the region, a "proper" balance of housing for families of low or moderate income, and adequate commercial, educational, transportation, and recreational facilities. The Coastal Zone Management Act of 1972 seeks to obtain a comprehensive management program for a large segment of each coastal state. Planning on a statewide basis has been increasingly insisted upon in a number of federal programs. Proposed legislation would seek to make statewide planning comprehensive, embracing all aspects of land resource management, and to implement that planning with effective management.

One aspect of the expanded focus of federal attention is the likelihood that state-federal relations will tend to grow while local-federal relations will tend to decline.

Texas Land Use

Developed by

Research and Planning Consultants
Austin, Texas

Project Director: Ron Jones

Individual Reports Authored by:

Historical Perspective	Corwin Johnson
Existing Mechanisms	John Mixon
Problems and Issues	Ron Jones, Robert Waddell
Significant Policies	Kingsley Haynes
Needs for the Future	Ron Jones, Ron Luke
Management Approaches	Jared Hazleton
Role of Planning	Ron Jones, Ron Luke
An Informed Public	Christian, Miller & Honts, Inc.