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Signs of a Reservoir

Many formerly quiet Texas crossroads now suffer similar afflictions: camper and boat congestion; quick-stop groceries selling minnows and ski ropes; and billboards advertising real estate too good to believe. All are sure signs of a nearby reservoir.

Recreational development around major Texas reservoirs often occurs for many square miles and includes entire communities with supporting roads, services, and commercial establishments.

Reservoir planners as well as local and state officials, therefore, have become increasingly concerned that this large-scale development on previously rural land can seriously affect reservoirs. Development can increase siltation and pollutants such as grease and toxic chemicals as well as change rates of flow into the reservoir.

This development is largely unregulated in Texas because it occurs outside incorporated areas. According to Corwin W. Johnson, a professor at the University of Texas School of Law, the state does not regulate land use directly, though many state actions affect land use. Counties in Texas have very little authority to control development.

Cities in Texas do not have the power to zone outside their limits, but they can set regulations for subdivision of land within their extra territorial jurisdiction. This can amount to as much as a five-mile-wide strip around the city.

City Authority

Two Texas statutes give cities some authority to control water pollution and protect their water supply. A statute passed in 1971 requires every city with a population of 5,000 or more to establish a water pollution control and abatement program. The statute includes the development and execution of "a reasonable and realistic plan for controlling and abating pollution or potential pollution." It specifically gives cities authority to control generalized discharges of waste which are not traceable to a specific source.

Questions concerning this legislation include whether the statute means that cities can regulate land use to abate generalized discharges such as storm sewer discharges or urban runoff of rain water and whether it applies to areas outside city jurisdiction.

No city has enacted a comprehensive program using this statute; neither has there been a court ruling to interpret its meaning. Johnson feels that, despite the failure of this statute to specify regulatory techniques, it could be construed as authorizing any type of land use regulation reasonably related to the declared legislative policy.

An older statute gives a city even broader powers in protecting its water supply. The part of the Texas Civil Statutes dealing with the powers of home rule cities states:

Each city shall have the power . . . to prohibit the pollution of any stream, drain or tributaries thereof, which may constitute the source of water supply of any city and to provide for the policing of the same as well as to provide for the protection of any watersheds and the policing of same....

Johnson observes that this statute also fails to specify regulatory methods, but could be construed as authorizing an effective regulatory program.

Comprehensive Programs

Johnson surveyed and analyzed all comprehensive lake shorelands programs in the United States in a 1976 project funded by the Texas Water Resources Institute. He limited his study to land use programs that are substantially and uniquely related to lakes or reservoirs. Johnson's investigation included all land use regulations intended to protect any public interest in lakes. According to his report, there are only eight statewide and two regional programs which can be considered comprehensive land use regulations for the protection of lakes.

The term "protection of lakes" refers to all interests in lakes recognized by any state or local government as deserving governmental protection. The list of such interests includes navigability, water quality, water supply, biological integrity, recreational opportunity in natural environments, natural visual resources, and flood protection.

Kansas was the first state to enact into a law a lake shorelands program that could be considered comprehensive. In 1963 it authorized counties to establish park districts and to regulate private lands near major lakes.

A much broader and more detailed program became law in Wisconsin in 1966. The state now requires all counties to adopt a shorelands ordinance or submit to direct regulation by the state. The ordinance is applicable to all lands in unincorporated areas within 1,000 feet of a lake.

States which have enacted comprehensive programs since 1966 are Minnesota, Vermont, Michigan, Maine, Washington, and Montana. The two regional programs in Johnson's analysis are for Lake Tahoe and Adirondack Park in New York.

Similar Goals

All of the statewide programs studied by Johnson appear to have substantially similar goals:

1. Concern over any shorelands use that might result in soil erosion or generation of wastes containing nutrients.
2. Maintenance of water quality in lakes suitable for beneficial uses of water.
3. Prevention of harmful activity to aquatic life and other interests within the lake such as filling or dredging.
4. Prevention of harm from floods and other natural hazards.
5. Allocation of shorelands to uses dependent upon, or particularly benefited by, proximity to lakes such as habitats for wildlife, some forms of recreation (including access to lakes and enjoyment of natural scenery), and structures such as piers and docks.

In addition to these lake-oriented goals, lake protection programs include goals found in other land use programs such as minimizing conflicts among land uses.

Johnson reports that some form of zoning is incorporated in all comprehensive shorelands programs. Ideally, according to Johnson, the regulatory area should embrace all land draining directly into the lake and perhaps some land draining indirectly into the lake.

All comprehensive lake shorelands programs in existence rely, at least in part, upon some form of discretionary permit system of regulation. The preference for the permit system appears to be greater in shorelands regulation than in traditional urban land use control programs, according to Johnson.

Drafters of lake shoreland programs have relied upon traditional sanctions commonly utilized in land use regulation to obtain compliance by landowners. These sanctions include fines, imprisonment, civil penalties, and payment for injuries to public or private property. Johnson feels that the most severe sanctions are not necessarily the most effective because there is general reluctance to impose them.

He warns that it is quite likely that several restrictive portions of shorelands regulations will be challenged as "takings," another term for confiscation of property. The property rights of private landowners are protected in two amendments to the U.S. Constitution and state constitutions. Courts have upheld that land use controls can be imposed only to the extent that they are reasonably necessary for the public's health, safety, or welfare.

Johnson has presented a broad range of alternative approaches and methods which are in practice in other states. He hopes that his review of land use regulations will be useful to local governments in Texas and perhaps stimulate thinking on a statewide basis.

PROTECTING LAKE AUSTIN

The city of Austin is an example of a local government attempting to regulate land use for reservoir protection.

Urban sprawl—a problem common to most modern cities—is an even greater dilemma for Austin because it threatens the city's water supply.

As many as 14,000 new homes will be built during the next 20 years in the Texas hill country west of Austin which is the Lake Austin watershed. This will mean the development of 4,000 acres of land—all of which drain into the city's source of water. Although the rapidly-developing 92-square-mile area is outside Austin's city limits, it is within its extraterritorial jurisdiction.

Development on the watershed could mean more sediment from construction sites, more rapid runoff when buildings and pavement replace woods, and more toxic chemicals into the lake from streets, yards, and industries. It could also mean more nutrients into the lake from septic tanks.

Austin citizens and city officials are concerned about the lake's future and are taking steps to discourage harmful development on the watershed. Goals and priorities for Austin's growth were identified in 1975 in a report prepared by 3,500 Austin citizens. The goals directly related to Lake Austin watershed recommended that the city:

- Extend land use planning and control beyond the city limits.
- Use municipal services and policies to guide and control growth.
- Protect natural areas.
- Clean up the water and stabilize the volume in creeks, streams, and lakes.
- Promote regional planning.
- Improve intergovernmental coordination in planning for the future of Austin and Travis County.
- Improve quality of development through specific controls.
- Assure acquisition and dedication of more parkland.

These goals were considered in a growth management plan developed for the city by an urban planning firm in 1976. The plan recommends the establishment of three regulatory zones in the Lake Austin watershed: conservation, limited development, and development zones.

Richard Lillie, Director of Planning for the City of Austin, explains that certain parts of the growth management plan may be implemented under existing city ordinances. Other parts of the 44 elements in the plan would require new city ordinances or changes in state

law before implementation. He and his staff have made recommendations to the city planning commission listing the elements of the plan according to ease or feasibility of implementation.

The city currently has no authority to establish land use regulations outside the city limits. The only means that the city has to limit or encourage development in its extraterritorial jurisdiction are subdivision regulations, water and sewer services, and septic tank permits.

One important element of the plan was adopted by the Austin city council in January 1978. The city's subdivision ordinance now considers the potential amount of impervious cover—roads, concrete, buildings—in relation to the type of land and slope gradations in the area.

Whatever the steps taken to regulate development in the Lake Austin watershed, they will assure many more years of dependable, high quality municipal water.

**Two figures in the April issue of Texas Water Resources were incorrect. There are 700 dams in Texas with 200-500 acre-feet capacity and 550 dams in the state with over 500 acre-feet capacity.