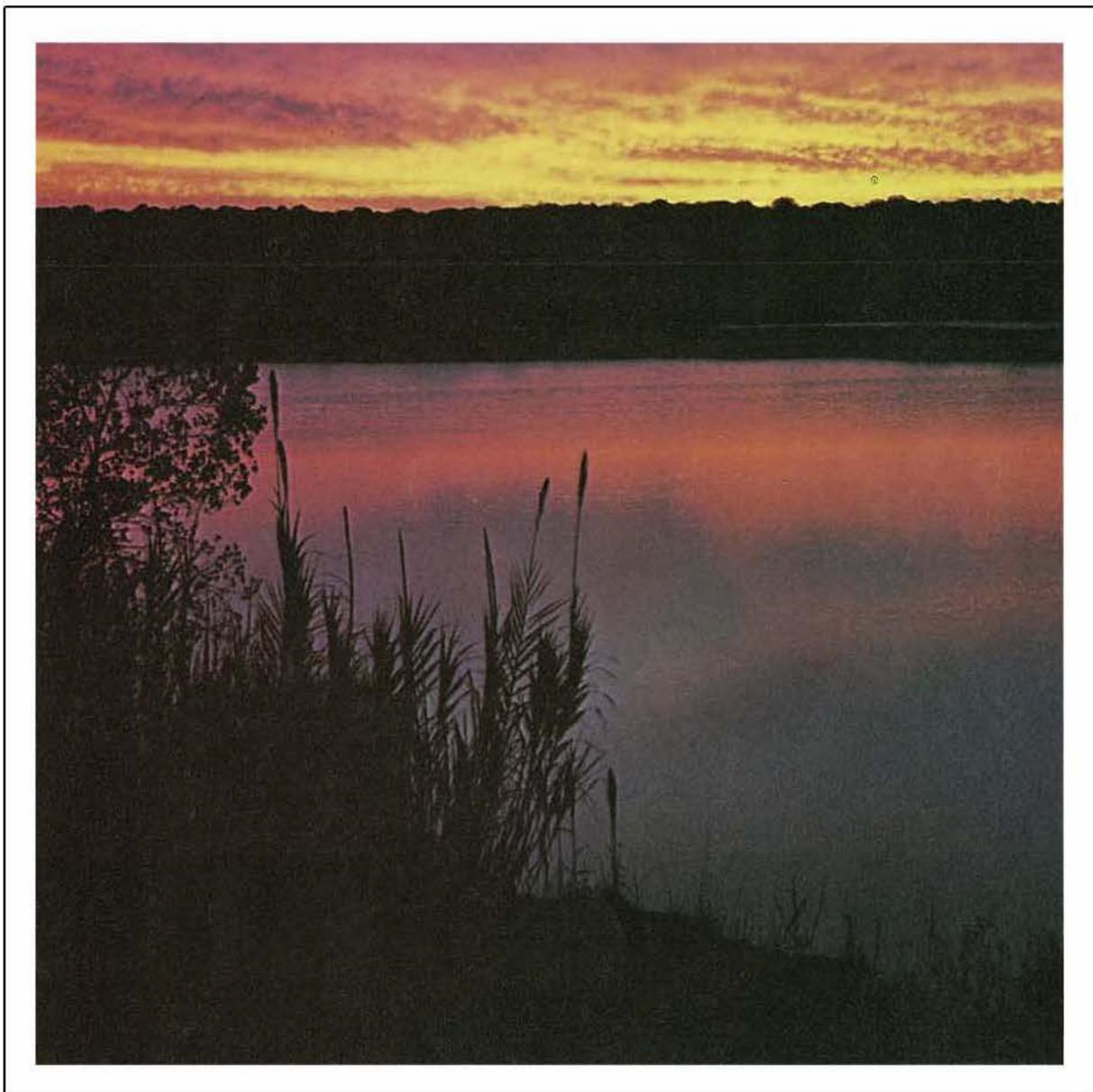


CHAPTER IX CONCLUSIONS AND RECOMMENDATIONS



CONCLUSIONS

All of Oklahoma has great potential for future economic expansion, if adequate supplies of good quality water can be developed and properly distributed. Present water use for all purposes in Oklahoma is estimated to be 2.4 million acre-feet annually, while projections of future water use indicate over 6.9 million acre-feet per year may be needed by the year 2040. Irrigation is currently the largest use of water, however, depletion of ground water resources in western Oklahoma is threatening the future of irrigated agriculture.

In addition, a sharp escalation in population in the central Oklahoma metropolitan area is stretching existing water supplies. Also, many Oklahoma communities lack reliable sources of good quality water due to natural or man-made pollution and inadequate or outdated treatment and distribution systems. Without immediate attention, these problems pose a very real threat to Oklahoma's future growth and prosperity. The Oklahoma Comprehensive Water Plan presents a flexible guide for development of the state's water resources on a regional basis and also proposes a means of distributing surplus water from eastern Oklahoma to water-deficient areas in central and western Oklahoma.

Development of the projects necessary to meet the 2040 water needs of the state is estimated at January 1978 price levels to cost approximately \$11 billion, which does not include local distribution and treatment facilities. Regional plans of development show maximum local water development could cost \$3 billion, but despite optimum local development, five of the eight planning regions will face future water deficits.

A total of approximately 800,000 acres is projected to be irrigated from all the proposed Regional Plans of Development by the year 2040.

An assessment of nontransfer alternatives indicates they can provide only supplemental water sup-

plies and cannot be relied upon to provide the quantities of water required to meet Oklahoma's future needs.

To meet the projected water deficits of central and western Oklahoma, construction of a statewide water conveyance system consisting of a northern system for the Arkansas River Basin and a southern system for the Red River Basin, should be considered. The cost for the northern conveyance system is \$5.3 billion, and for the southern conveyance system, \$2.5 billion. At ultimate development an annual 1.2 million acre-feet of water would be transferred through the northern system, and 1.3 million acre-feet through the southern system for municipal, industrial, cooling water and irrigation purposes.

The systems would be independent, with each being built in stages in order to minimize the necessary investment costs as water demands increase.

Eleven existing reservoirs are included in both systems to maximize the use of existing projects. A total of 12 proposed and two authorized reservoirs would be constructed as part of the conveyance systems. The northern system would be 630 miles in length and the southern system, 500 miles long. Over 900,000 acres would be irrigated with imported water in northwestern and southwestern Oklahoma. The average annual equivalent benefits of irrigation water from the system are estimated to be \$25 million. These benefits reflect only primary impacts and do not include indirect benefits accruing from the water conveyance system.

Neither conveyance system's irrigation component is economically justified under federal guidelines, which assess only primary benefits. The Statewide Economic Impact Study scheduled for completion in 1981 will quantify the indirect benefits, and through inclusion of secondary and tertiary benefits, could prove the systems feasible at least from the state viewpoint. The municipal and industrial component

of each system is economically justified under the assumption that municipal and industrial benefits will equal costs.

According to projections by the Planning Committee included in the proposed Regional Plans of Development, the amount of surplus water available from all sources in eastern Oklahoma is six million acre-feet, after allowances for local use and export. Furthermore, existing Oklahoma statutes provide adequate and positive assurances to eastern Oklahoma that its future water requirements will be met prior to implementation of any large-scale water conveyance system.

Even if future water needs escalate to levels projected by local planners in eastern Oklahoma, there will be enough water to meet such needs, as well as the import needs of central and western Oklahoma, and still have a surplus exceeding 3.7 million acre-feet per year.

If ground water pumping in the Oklahoma Panhandle continues at present rates, it is unlikely that the northern conveyance system could be completed in time to prevent virtual cessation of ground water irrigation, forcing area farmers back to dry-land farming. Nor is it likely that the southern water conveyance system could be finished in time to furnish municipal and industrial water to central Oklahoma before severe water shortages and attendant social and economic reactions become apparent.

Inadequate distribution systems are a statewide problem requiring immediate attention. Numerous cities, towns and rural water districts do not have the fiscal capability to finance needed water systems and therefore require assistance in constructing these facilities from federal programs and/or the state financial assistance program provided by 82 O.S. 1979, Section 1085.31, et seq.

The citizens of Oklahoma must unite in molding their future through endorsement of local and statewide water development plans capable of

providing the water needed to assure the state continued prosperity.

RECOMMENDATIONS

Based upon analyses of the detailed studies documented in the Oklahoma Comprehensive Water Plan, the Oklahoma Water Resources Board offers the following recommendations:

- that the Governor and Legislature accept the Oklahoma Comprehensive Water Plan as a general guidance document assuring the orderly control, protection and management of the water and related land resources of Oklahoma.
- that all state agencies and political subdivisions of the state involved in water-related activities take due cognizance of the Oklahoma Comprehensive Water Plan in carrying out their duties and responsibilities.
- that the Federal Government recognize the Oklahoma Comprehensive Water Plan as a guide in establishing priorities for planning, authorizing and funding of federal projects in Oklahoma.
- that the U.S. Army Corps of Engineers resume currently suspended feasibility level investigations on the water conveyance portion of the Central Oklahoma Project (COP).

(See Chapter VI, page 168 "Alternative Water Transfer Plans Considered" and Chapter I, page 3, "Participation.")

- that the Federal Government recognize that primary authority and responsibility for water resources planning, development and regulation in Oklahoma rest with the state.
- that the Governor and Legislature support continuation and expansion of the state's water development financial assistance program. (See Chapter VIII, page 200, "State Financing" and Appendix C, Figure 6.)
- that the Governor, the Legislature and the Oklahoma Congressional delegation continue to support the Arkansas-Red River Basin Chloride Control projects as the most practical and economical means of achieving needed water quality improvements in Oklahoma. (See Chapter I, page 14, "Desalination and Chloride Control Projects," Chapter VIII, page 204, "Chloride Control Projects" and Chapter IV, page 72, "Natural Pollution.")
- that the Legislature adopt floodplain management legislation adequate to insure every Oklahoma community can qualify for federally subsidized floodplain insurance.

(See Chapter IV, page 70, "Flooding.")

- that the Governor and Legislature strengthen the state's water programs by supporting the Oklahoma Water Resources Board in carrying out its statutory duties and responsibilities. (See Chapter VIII, page 200, "State Financing," "Continued Water Planning Studies" and "Research.")
- that the Governor and Legislature support the development and implementation of a comprehensive weather modification program for the State of Oklahoma. (See Chapter I, page 13, "Weather Modification.")
- that the Governor and Legislature take appropriate measures to promote water conservation in the state in order to lessen the impact of projected future shortages. (See Chapter III, "Water Conservation in Oklahoma.")
- that the Governor and Legislature take appropriate measures to insure that the citizens of Oklahoma are educated and informed in all matters pertaining to water in order that the state's water resources are adequately protected and placed to maximum beneficial use.