

TRENDS IN ARIZONA WATER SERVICE ORGANIZATIONS:
A COMPARATIVE SUMMARY

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INTRODUCTION

The pattern of water occurrence profoundly influenced the economic and physical development of Arizona. Water, a vital and elemental resource, was often in short supply, undependable and unevenly distributed in the river basins and valleys. Early solutions to this problem took the form of physical development and were primarily matters of engineering and technology. Dams and canals were surveyed and built, distribution systems were constructed, wells were drilled and pumped.

It soon became apparent that technological development also required effective management. Since water was a public resource, public management in the provision of water supplies became the general rule. In addition to the problems of water engineering, a full understanding of water development in Arizona also requires an appreciation of the experience gained in managing water supplies through public institutions.

Water policy and institutions can be examined at many levels, from the national perspective of coordination and regional development, to the state level of water rights and planning, to the local level of service delivery. This study examines water service organizations at the local and district level. It is here that actual deliveries are made to ultimate water users and here that water policy is directly implemented.

A study done for the Arizona Water Commission (DeCook et al., 1978) provided information on water service districts and organizations, statewide. This information was used to compare the Arizona experience with that of California, which also has a decentralized district system of water service delivery.

ARIZONA WATER SERVICE ORGANIZATIONS

Five types of organizations distribute water in Arizona. Four are public districts; the fifth type encompasses private companies. Table 1 shows the number of each type of organization and cites the enabling legislation.

Irrigation districts are the most numerous public water service organizations in Arizona. Approximately one-half of the irrigated acreage within the state is organized into irrigation districts. The range in district size is from 550 to over 150,000 acres. Districts are municipal corporations with broad powers: they can purchase or acquire water rights, own or sell property and real estate, construct facilities, generate electricity, appropriate water for irrigation and power generation, tax and charge for service, appropriate money, and exercise eminent domain. Irrigation or water conservation districts empowered to conduct drainage activities have the word "drainage" in their titles.

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TABLE I
ARIZONA WATER SERVICE ORGANIZATIONS

Type of District	General Law or Code (Arizona Revised Statutes)	Code Section	Number of Districts (1978)
AGRICULTURAL WATER SERVICE ORGANIZATIONS			
Irrigation District or Water Conservation District	Water (Title 45)	1501 to 1866 1201 to 1396	40
Irrigation Water Delivery Districts	Water (Title 45)	1900 to 1955	23
Agricultural Improvement District	Water (Title 45)	901 to 1041	1
Multi-County Water Conservation District	Water (Title 45)	2601 to 2634	1
Agricultural Water Companies	Corporations and Associations (Title 10)	054 to 509	>40
Water Associations			
Irrigation Companies			
Canal Companies			
MUNICIPAL AND INDUSTRIAL WATER SERVICE ORGANIZATIONS			
Municipal Water Depts. and Utilities	Cities and Towns (Title 9)	511 to 542	37 (>2,500 persons served)
Private Companies	Corporations and Associations (Title 10)	054 to 509	30 (>2,500 persons served)

The purposes of an irrigation district are to provide the landowners within the boundaries with water, electricity, and other public conveniences. A 1971 decision by the Arizona Supreme Court states that a petition for the organization of a district must indicate the purpose of the organizers is to irrigate arid lands and thereby improve agricultural and farming lands. City of Scottsdale v. McDowell Mountain Irrigation and Drainage District (1971), 107 Ariz. 117, 483 P. 2d 532.

Irrigation water delivery districts distribute water for lawns and pasture in urbanized areas. The total acreage organized into water delivery districts is 3,300 and the range in district size is from 10 to 1,300 acres. As lands within irrigation districts and water company service areas are developed for residences, irrigation water delivery districts are often organized to take over distribution and financial responsibilities. The majority are in rapidly urbanizing areas, particularly the Phoenix and Yuma regions.

Irrigation water delivery districts are corporate bodies but not municipal corporations, with perpetual succession and the power to contract; sue; acquire, hold, and sell real and personal property; adopt a seal; incur debts; and contract with the federal government for irrigation services. Irrigation water delivery districts have the powers of eminent domain and taxation.

Special districts are of two types: the agricultural improvement district and the multi-county water conservation district. The Salt River Project is the only agricultural improvement district and the Central Arizona Water Conservation District is the only multi-county conservation district in Arizona. An agricultural improvement district stores and delivers water, provides drainage, improves facilities, sells surplus water, and finances construction. It may not acquire water rights. A multi-county water conservation district is a tax-levying public improvement district and municipal corporation that taxes to pay its administrative costs and to repay project costs to the federal government.

Both types of special district have the power of eminent domain. The agricultural improvement district is financed by issuing bonds with the approval of the majority of electors, while the multi-county water conservation district levies an ad valorem tax against all taxable property in the district.

Water companies distribute water to both agricultural and municipal users. Agricultural water companies have many names, including water associations, mutuals, canal companies, and irrigation companies. Some 40 agricultural water companies were identified; others exist, but the exact number cannot be determined as there is no categorical registration of such companies. Generally, the companies distribute water to areas ranging from 500 to 5,000 acres, averaging approximately 1,500 acres.

Agricultural water companies are private corporations and associations with perpetual succession. They do not have the power of eminent domain and are financed by stocks, bonds, and water sales revenues.

About 65 municipal and industrial organizations supply water to communities of more than 2,500 persons. Municipal water departments or municipal utility districts that supply water are subject to the general provisions of the legislation governing municipal corporations and most are regulated as utilities by the state public utilities commission. Municipal water service organizations have the power of eminent domain; industrial water service organizations do not. Revenues and assessments vary according to the license issued by State Public Utilities Commissions.

CALIFORNIA WATER SERVICE ORGANIZATIONS

More than 1,000 public and private agencies share responsibility for management and distribution of California's water. Nine hundred are special districts, most of which are recently organized.

Table 2 shows the 20 types of California water districts. In general, these districts are authorized to levy taxes, issue both general obligation and revenue bonds and set rates. Many of the newer types of districts function as general municipal governments and provide the basic services characteristic of such. In 1971, several of the Community Services Districts provided fire protection, waste disposal, recreation and park programs, lighting, library services, police, and road and street construction (Goodall, Sullivan and DeYoung, 1978).

TRENDS

Several trends, apparent in the formation and functions of water service institutional models in California, can be compared with the Arizona experience. In California, fewer districts formed in recent years are related to agricultural water use (even though 85% of water use in the state is irrigation). Similarly, fewer irrigation districts are being formed in Arizona. Between 1920 and 1950, 21 of the present 40 Arizona irrigation districts were formed. Since 1950, excluding those districts formed for the purpose of obtaining Central Arizona Project water, only 11 relatively small irrigation districts have been organized. In contrast, Arizona irrigation water delivery districts, whose primary function is to distribute water for lawn irrigation, constitute an increasing proportion of the districts being formed. Prior to 1950 only three existed whereas 20 have been organized since then.

Currently, agricultural districts are delivering water to domestic and industrial users. In California, 75 to 100 percent of the districts were predominantly concerned with irrigation water distribution from 1880 to 1930. From 1930 to 1970, 50 to 70 percent of the deliveries were for both irrigation and urban use. At present, over 69 percent of the distribution is for urban users. The pattern is also found among the Arizona districts; approximately one-fourth now deliver domestic and lawn or suburban pasture irrigation water.

Another type of trend is evident in terms of voter qualification as related to district formation and operation. In California, the tendency is toward creation of districts under those enabling acts which require the participation of landowners in formation and which stress an acreage-weighted voting system.

In the earlier part of the century, most California districts were tied to agrarian purpose and voting was generally open to registered resident voters. Presently, three methods are used to fill principal positions and to decide bond issues: one-person-one-vote elections; property-weighted voting based on number of acres or value of acreage; and appointment by the county board of supervisors. In Arizona, property

TABLE 2
CALIFORNIA WATER DISTRICTS BY TYPE OF ENABLING LEGISLATION AND
NUMBER OF DISTRICTS, 1970-71 AND 1974-75

Type of District	General Law or Code	Code Section	No. of Districts 1970-71 1974-75	
1. Community Services ^a	Government	61000 et seq	103	116
2. Flood control & water conservation	General laws	b	7	8
3. Harbors & ports	Harbors & Navig.	6200 et seq	1	1
4. Municipal Improvement	General laws	b	4	4
5. Maintenance	Sts. & hwys.	5820 et seq	33	34
6. Reclamation	Water	50000 et seq	8	10
7. Recreation & parks ^c	Public resources	5780 et seq	6	6
8. County Service Area	Government	25210.1 et seq	28	43
9. Municipal Utility	Public utilities	11501 et seq	3	3
10. Public Utility ^d	Public utilities	15501 et seq	52	52
11. California Water	Water	34000 et seq	160	162
12. County Water	Water	30000 et seq	192	189
13. Metropolitan	General laws	e	1	1
14. Municipal Water	Water	71000 et seq	50	47
15. Water Agency or Authority	General laws	b	24	27
16. Water Conservation	Water	74000 et seq	8	11
17. Water Replenishment	Water	60000 et seq	1	1
18. Water Storage	Water	39000 et seq	8	8
19. County Waterworks	Water	55000 et seq	90	88
20. Irrigation	Water	20500 et seq	107	103

- a. includes one special-act district
b. special-act districts only
c. includes four special-act districts
d. includes two special-act districts
e. includes Metropolitan Water District only.

Source: M. R. Goodall, J. D. Sullivan, and T. DeYoung, California Water: A New Political Economy, (Montclair, N.J.: Allanheld, Osmun/Universe Books, 1978).

ownership is a requirement for voter eligibility in nearly all public districts: the exception is the multi-county water conservation district. Two-thirds of the irrigation districts in Arizona have the one-person-one-vote participatory system, the remainder employing the property-weighted (usually one vote per acre) method. The enabling legislation for irrigation water delivery districts stipulates that each landowner is entitled to 1/5 vote per acre. The agricultural improvement district employs the acreage voting system while the taxing is ad valorem. All registered voters residing within district boundaries may vote in the multi-county water conservation district elections.

A California study (Goodall, Sullivan and DeYoung, 1978) shows a greater turnout (45 to 60 percent) for elections in those districts employing the one-person-one-vote system. Under this system, politics are generally more competitive than under the property-weighted system because there are fewer appointments or uncontested seats. In districts where property-weighting is used, the average estimated turnout was only 5 percent and elections were fewer.

One-person-one-vote districts tend to gain revenue as a function of expenditure, incur relatively less debt and, in general, exhibit relatively modest fiscal policy. The districts with weighted voting systems commonly incur greater debt and show erratic financial behavior.

SUMMARY AND CONCLUSIONS

Three principal trends have been identified relative to the organization and operation of water districts in both Arizona and California: (1) Proportionately fewer districts are being organized for the primary purpose of serving agricultural irrigation; (2) existing districts are increasingly delivering water to urban domestic and industrial users; and (3) provisions for district voting show a preponderance of property ownership-weighted voting systems.

Since water districts are providing water services not only to irrigators but also to a growing number of municipal and commercial users, their activities are more than physical and economic; districts are inherently legal and political entities, especially when they determine how and when water is delivered and who pays the cost of distribution.

Water service organizations deserve careful and complete study by those interested in revising state water law and developing a rational and effective system of water resources management. As illustrated by comparisons with California, local water organizations can expand and develop in various ways, sometimes accepting functions beyond the original intention of their institutional charter. This suggests that a careful examination of the dynamics of these extremely important limited-purpose agencies is in order. In a time of changing institutional purpose and political responsibility, Arizonans need to appreciate more fully the role of local water service agencies in order to assess the equity, efficiency, and stability of their operations and functions. Rational water management in an arid state requires a thorough understanding of the institutional arrangements for controlling and allocating water, a limited natural resource.

REFERENCES CITED

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