Water-related Bureaucracies:
Their Roles, Responsibilities, and Interest in the Resource of Water in California

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INTRODUCTION:

Water is an essential part of all life on earth. In considering its impact on everyday life, it becomes curtail to think about water as a valuable resource, and thereby examine how it is used throughout the entire state. Water usage in California can be approached from a number of perspectives. For example, one might consider water as it relates to agricultural demand, its environmental impact, the economic implications, or even the effort made to deliver safe and healthy drinking water for residence.

Another perspective might be to study specific water-related agencies and examine their roles, responsibilities, and interest in water as a resource in California. A vast number of agencies are in fact directly tied to California's water supply and use. For example, in California alone, there are 62 water districts, including the Turlock Irrigation District. Furthermore, there exist several water-related agencies known as associations. The Association of California Water Agencies (ACWA), the California Rural Water Association, and the California Water Association, are just a few of these organizations (Brandt, 1998-2001, p. 2).

This paper in particular, provides brief overviews of a small handful of water-related bureaucracies and takes into account the relationship these agencies have with the resource of water in California. Among the agencies reviewed will be (1) the Turlock Irrigation District, (2) the California Water Service Company, (3) the California Farm Water Coalition with its interest in educating the public about irrigated agriculture, and (4) the California Municipal Utilities Association. Other background and supporting information regarding the cost, economics, and supply of California's water will also be provided.
TURLOCK IRRIGATION DISTRICT:

If you are a resident of the Central Valley, you may already know the Turlock Irrigation District is an important electric utility company. To meet local energy needs, the District has harnessed the Tuolumne River with a dam and hydroelectric power plant. The District also operates a string of mini-hydroelectric plants on area canals and gas turbine facilities, and is a partner in a geothermal power plant (100 years of Irrigation, 1999, p.2).

At the same time, TID provides an important part of the central Valley's huge agriculture industry with water for irrigation—the crucial difference between an area that is naturally semi-arid and one of the most fertile and productive agricultural areas in the state. It's a very successful system, a model of operation for utilities allover the country. So successful it has lasted more than one hundred years. And, along the way, many different people have made important and unique contributions to making the District work.

A century ago, a California farmer named Henry Stirring opened a channel and let water from an irrigation canal flow onto his newly planted corn crop (Turlock Irrigation District: The First Century, p. 4). An event that today doesn't cross one's mind was a momentous occasion in 1900 that attracted groups of people to Stirrings' Stanislaus County farm to witness history in the making.

On that pleasant day in the middle of March, Stirring's name was etched into the records of history as the first grower in the state to receive water supplied by California's very first publicly owned irrigation District (Weis, 2001). The upstart outfit with huge aspirations was none other than the Turlock Irrigation District.

The introduction of irrigation in 1900 paved the way for the production of an immense variety of high variety of crops to a semi-arid region of the Northern San
Joaquin Valley. Until then, the Valley was limited to vast tracts of wheat and other dry land crops that could be raised to maturity with what Mother Nature provided during only the spring and early summer (IOO years of Irrigation, 1999, p.2). And yet now, Till helps make it possible for farmers to grow many crops such as melons, alfalfa, almonds, berries, pumpkins, and squash.

Till serves over 6,500 irrigation customers covering approximately 150,000 acres of farmland. Each year, the district sets a water allotment for growers based on anticipated runoff in the Tuolumne River watershed. The Tuolumne River is the source of most of the district's water (In Touch, 2000, p.5). In the dry years, the district relies on conjunctive use of ground water pumped into the canal system. The district owns and operates more than 250 miles of canals stretching fro La Grange Dam on the Tuolumne River to the San Joaquin River (Weis, 2001). With few exceptions in the Delhi-area, the system is gravity-fed. More than 90 percent of the canals are concrete lined. Most of the land within TID is flood irrigated, but the district also serves the needs of growers with drip and micro irrigational systems (In Touch, 2000, p.6).

Till Management

Till is governed by 5 directors elected to four year terms by voters in 5 separate divisions. District elections are conducted at two year intervals with three board seats decided one year, and the remaining two seats decided the year after. The divisional boundaries are contained within the districts 307-square-mile irrigation service area bounded basically by the Tuolumne, Merced, and San Joaquin rivers, and the foothills to the west (IOO years of Irrigation, 1999, p.10).

Recent Issues

A water management plan developed by Till recently received approval by a statewide council established to certify that local agricultural districts are delivering
and applying water in the most practical and efficient manner possible (In Touch, 2000, p.11).

TID’s plan was the second in the state to be approved under the new program established by the California legislature to conserve and stretch water supplies. The program is patterned after a similar process established several years ago for urban water providers in response to a growing recognition that demand for water are fast out-pacing the available supply (In Touch, 2000, p.11).

In developing the program, TID was required to evaluate its operations against 17 efficient water management practices accepted by the agricultural water industry and identify whether changes were warranted in local operations (In Touch, 2000, p.12).

Over the next two years, TID will focus on improving its water measurement accuracy and look for ways to increase delivery flexibility (In Touch, 2000, p.12).

CALIFORNIA WATER SERVICE COMPANY:

Water is an essential element of life on earth. Without water life would cease to exist. Which brings us to a puzzling dilemma. The dilemma is that there are now more people than there is useable water. This is an important issue throughout the country but especially in our state of California. California holds more people within its borders than any other state, while at the same time is the biggest agricultural provider in the country.

California Water Service Company, also known as Cal Water is the largest investor-owned water utility in the western United States and one of the largest in the country. The company has been providing service to their customers since the 1920s. Cal Water serves more than 1.5 million people in 58 counties in the state of California. It has 21 operating districts that range form as far south as Palos Verdes to as far north
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Water is the most important battle going on in our state right now and it has been since California originated in the middle 1800s. The water issue now is even bigger than the power problems our state is having.

Water prices went up over the past year due to two major factors; first being the power problems the state had this past year. The electrical power pumps that push water from the north to south caused a rate increase of 54% throughout the state. This rate increase was imposed by a federal tax called the electrical power and pump tax.

The other major factor in the price hike is the testing of water purity. Since the terrorist attack on September 11 of this year Cal Water has conducted around 100,000 water quality tests to ensure the water we drink is safe (News Release / Cal Water Service Group 2001). California Water Service Group is the parent company to Cal Water Service Company.

Cal Water gives us ten ways that we can conserve water to make things better and cheaper for Californians: (1) don't over water plants and lawns, (2) water lawns in the morning to keep evaporation loss to a minimum, (3) try not to wash down paved areas, just use a broom, (4) use a bucket of water when washing your car and only the hose to rinse off, (5) repair faucet leaks as soon as possible, as much as 15 gallons a day can be wasted with a slow drip, (6) Avoid toilet water waste. Only use the toilet to flush away body waste, (7) don't fall asleep in the shower, (8) try to use the automatic dishwasher as sparingly as possible, (9) the same goes with the laundry loads, and (10) the biggest of all avoid the running faucet. Turn it off and on when you are standing right in front of it. If a good portion of people in California, and the Country for that matter, would attempt to follow these easy steps, a dramatic change in prices of water could be seen. The biggest change due to the implementation of these rules would most likely result in decreased shortage of supply. It certainly cannot hurt to try.
IRRIGATED AGRICULTURE - CALIFORNIA FARM WATER COALITION:

Cost of Water for Agricultural Use

The average rain in a year in California is 23 inches, with a volume of 200 million acre-feet, over the state's land surface. Of this rain 65% evaporates and is transpired by the trees, plants, and other vegetation. The remaining 35% is the state's average water runoff of 71 million acre-feet. Not all of the 71 million acre-feet can be developed for urban or agricultural use, because the environment uses a large portion of it. In 1995 the water used in California was 46% for the environment, 43% percent for agricultural use, and 11% percent for urban use. Every year about 30% of California's agricultural water is obtained from the ground. Farmers have to pay for water that they use for agriculture. It is an expensive cost if farmers pump or buy water from a supplier like an irrigation district. "Agriculture is often criticized for paying less for water than urban users, agricultural water does not have the same level of quality and reliability as urban water. Also, the delivery distance for agricultural water is usually shorter than for urban water and agricultural water suppliers were developed earlier than many municipal supplies when costs were lower" ("Frequently Asked Questions", 2000, p. 1-2). Water prices depend a lot on the cost of getting water supplies. "For example, the cost of diverting water from a river and using it on adjoining land can be less than $2 per acre-feet. In contrast, the cost of sea water desalination is about $2,000 per acre-foot" ("Urban Water Use in California", 1994, p. 1). Farmers also have extra costs to deliver water supplies throughout their farms.

There are many agencies in the state of California who deliver water for urban or agricultural uses. The two largest agencies are the U.S. Bureau of Reclamation and the California Department of Water Resources. The U.S. Bureau of Reclamation runs the
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Central Valley Project, which delivers about 7 million acre-feet per year to contractors in the Valley. These supplies are used mainly for agriculture use, even though some are municipal and industrial deliveries. The U.S. Bureau of Reclamation pricing policies is undergoing changes because of the Central Valley Project Improvement Act of 1992. This has influenced its water prices, metering water use, fish and wild life restoration activities. The California Department of Water Resources runs the State Water Project, which gives water to 29 contractors located in the state. The main components of State Water Project include a Delta water charge and a transportation charge for the water. "The Delta water charge is paid by all contractors and recovers capital and operation, maintenance, and replacement costs, plus interest, associated with the State Water Project conservation storage facilities." The transportation charge is paid by contractors served by transportation facilities ("Urban Water Use in California", 1994 p. 1-5).

Agriculture & California's Economics

California is the nation's number one agriculture exporter, exports 20% of what is produced in the state. California's agricultural exports were valued at over $6.7 billion in 1997. The California dairy industry is also number one in the nation (The water fact book..., 1999, p. 36).

One of the 10 largest economies in the world consists of California. The Agriculture Department of California contributed $26.8 billion by creating jobs for products and services such as transportation and purchasing. Most of California's counties are tremendously dependent on agricultural employment. The on-farm wage, not including the self-employed and family members, represents 10% of the total employment in over one-quarter counties in the state of California (The water fact book..., 1999, p. 36).
Almost 30% of the land in California is agricultural, and if anything disrupts these industries, it is going to cause tremendous impacts on the economy. The cost of water would "dry up" the agricultural lands of California and eventually dry up the economy as well. This would make the counties of California dependent on welfare (The water fact book..., 1999, p. 37).

Even if farmlands are "retired" to reduce agricultural water demand, it would have severe effects throughout the state's economy. The Western Irrigation Economic Benefits Review stated that, "The combined, direct income earned from California's irrigated agriculture and related industries is greater than the individual income earned from the following industries: electronics manufacturing, communications, automotive sales and service, federal civilian employment and motion picture" (The water fact book..., 1999, p. 39).

California has always experienced water shortages. Whenever there is a water shortage the agricultural supply of water is always shutdown, so the residents of California can have sufficient water. To farmers, droughts are a time of economic uncertainty (The water fact book..., 1999, p. 37).

"In 1991, almost 125,000 acres in the Westlands Water District of Fresno and Kings counties were idled. The resulting loss of gross farm income was estimated at $175 million" (37). Water shortages not only affect the farmers, but also have direct and indirect economic consequences on all Californians. A similar example of the far-reaching impacts of irrigation water reductions is reflected in the study of Mendota, a Fresno county Community almost entirely dependent on farming. After six years of study, it was concluded that the entire community was impacted by the reduction of water supplies to agriculture in an adverse manner. As a result, it led to a decline in employment, personal income, the numbers of small farms and vegetable packing
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businesses, the viability of local businesses and tax revenues (The water fact book..., 1999, p.36).

The California Farm Water Coalition

Because the industry of agriculture is so dependant on the state's water supply, several agencies have formed to provide a voice for the agricultural community. One such agency is the California Farm Water Coalition. The CFWC is a non profit, educational organization (The water fact book..., 1999, p. 67) who's members are comprised of farmers, agricultural water districts and agencies, agri-business representatives (What is the..., 2001, p. 1), cooperatives, financial institutions, agricultural suppliers, processors, engineers, and other people and organizations with an interest in agriculture (The water fact book..., 1999, p.67). The agency works to provide information about the social, economic, and environmental impact of irrigated agriculture. The California Farm Water Coalition has administrative offices in the valley, located in the city of Sacramento (What is the..., 2001, p. 1).

The California Farm Water Coalition was created in 1989, during a drought in order to, "...increase public awareness of agriculture's efficient use of water and promote the industry's environmental sensitivity regarding water" (What is the..., 2001, p. 1). The CFWC's three primary goals are to, (1) "serve as the voice for agricultural water users, (2) represent irrigated agriculture in the media, and to (3) educate the public about the benefits of irrigated agriculture" (What is the..., 2001, p. 1).

Public outreach is critically important to the CFWC. Throughout the year, the agency makes direct contact with the public through exhibits at county fairs, farmers markets, participation in farm day, and participation in other public events. The major driving force behind CFWC's public outreach program is known as Farm Water Works!
Through public relations, advertising, and marketing, the agency promotes the idea that irrigated agriculture is beneficial to everyone in California (What is the..., 2001, p. 1).

The cornerstone of our outreach effort is our highway sign program. This grass roots campaign was developed in partnership with Coalition members, local farm bureaus, water districts and farmers. Our colorful signs along the highways have helped introduce agriculture and our message to the traveling public (Farm water works!, 2001, p. 1).

In 1999, to reach urban area residence, the program began placing signs on public transit systems like buses. In the following year, the program worked with a number of agencies in Salano County to create a permanent exhibit at Six Flags Marine World in Vallejo. The exhibit is located in the park's Planet Water area and includes an interactive section, which provides information about agriculture usage of water. In the same year, the program also began advertising in San Diego and Monterey county theaters (Farm water works!, 2001, p. 1).

This year, Farm Water Works! began posting its signs on 18-wheeler trucks that travel on California highways. Furthermore, in May of this year, the program went on the airwaves through a Bay Area radio station to deliver its message of the benefits of irrigated agriculture. This was done throughout May, which was considered Water Awareness Month (Farm water works!, 2001, p. 1).

Other promotional efforts were also made this year when Farm Water Works! joined two other organizations to produce peach recipe cards that, in addition to recipes, provided information about conservation efforts made by farmers in California. The participating organizations were the California Cling Peach Board and California Women for Agriculture. Through the efforts of a volunteer program, an excess of
20,000 cards were distributed in grocery stores throughout California (Farm water works!, 2001, p. 1).

The CFWC also partakes in other types of activities that provide information to the public. For example, by working with the California Foundation for Agriculture in the Classroom, the organization provides education to school children about agriculture's use of water (What is the..., 2001, p. 1). This is done by supplying teachers with educational materials, supplies for students, and the establishment of an interactive children's website (Farm water works!, 2001, p. 1). The CFWC also promotes responsible water use through its participation in the California Water Awareness Campaign (What is the..., 2001, p. 1).

The Coalition is active in continually developing new material for publication and interactive multimedia. One publication is The Water Fact Book: California Agriculture and Its Use of Water. There is also a website that provides up-to-date information about water issues as well as general background information. "These materials help reinforce the Coalition's message of agriculture's economic vitality, environmental sensibility and its contributions to the quality of life in California" (What is the..., 2001, p. 1).

For more than 50 years, California has been the leading state to produce agricultural products throughout the entire U.S. In 1997, 10 of California's 58 counties reported at least one billion dollars in farm-product sales. Those counties were: Fresno, Tulare, Monterey, Kern, Merced, San Joaquin, Stanislaus, San Diego, Riverside, and Imperial. Furthermore, four of the top five agriculture producing counties in the entire United States are located in California. Using only 4.4% of the nation's farmland, California produces 50% of the U.S.'s fruits, nuts, and vegetables (The water fact book..., 1999, p. 9). Looking at such astounding figures demonstrating the impact of agriculture
to California's economy, it's easy to understand the significance of water as it relates to the state's agriculture.

CALIFORNIA MUNICIPAL UTILITIES ASSOCIATION:
The California Municipal Utilities Association has a mission to advance its interests in its member agencies by monitoring, encouraging, assisting, and promoting. It monitors its legislative bodies and governmental agencies on issues of concern to member agencies representing and advocating municipal utility interests on those issues. It encourages and facilitates an exchange of information, innovation, and productivity improvements to increase the overall efficiency and effectiveness of publicly owned utilities. It also assists publicly owned utilities and their customers to prepare for and take advantage of future change. Another way the company advances interests through its member agencies is by promoting a positive image and enhancing public confidence in publicly owned utilities.

The California Municipal Utilities Association brings publicly owned utilities together to speak with one voice to the legislature and regulatory agencies of the state. The agency was "formed in 1937 to protect the interest of California's consumer-owned water, electric and gas utilities before the legislature" (Felder, 2001, p. 1). As the state government has grown, the association's coverage has expanded to take in the many administrative and regulatory agencies that effect the utility operations. Most of CMUA effort involves representing its members' interests before the legislature and the "maze of regulatory bodies including the state water resources control board, department of health services, department of water resources and the California Energy Commission" (Felder, 2001, p. 1). The agency also monitors the activities of the administrative agencies, presents the testimony, and participates in the role making.
Legislation is followed on a day-to-day basis and the association's legislative committee meets frequently to set policy and adopt positions on bills.

The impact of the utilities acting together is considerably greater than the power of even the largest individual utility. Some public-owned utilities may go several years without specific legislative or administrative problems; yet they need to belong to a strong association. They always have need for an organization to represent them on general issues. When the need arises for concurrent legislative action, that need becomes urgent. Maintaining active participation in an association speaking for all utilities is an insurance policy. "It insures against adverse developments and assures that specific critical needs can be dealt with as they arise" (Felder, 2001, p. 3).

Besides monitoring and testifying on legislation, CMUA sponsors bills on behalf of member utilities and the utility industry. For example, CMUA sponsored and attained enactment of legislation to allow the Sacramento Municipal Utilities District to issue short-term revenue bonds to have more flexibility and financing. This type of specific service is available to all CMUA utility members. It also sponsors legislation benefiting all of its members such as the "ultra low flush toilet bill" which required all new construction as of January 1992 to install ultra low-flush toilets using no more than "1.6 gallons per flush" (Felder, 2001, p. 3). In an era of continuing state budget deficits and the constant search by state agencies for additional sources of funding it is even more critical that the utilities be represented by a strong active association.

CONCLUSION:

It is clear that water is not only a necessity of life on earth, but that it is also a powerful force that drive's California's economy. It is one of the most essential resources needed to produce the state's supply of foods. It provides thousands of jobs
for a host of people. Therefore, as the population of the state continues to increases, greater demand will be placed on all available resources, including water. Because of its importance, it is vital to understand how people use water, and the roles and interests water-related bureaucracies have in the recourse of California's water supply. By understanding how agencies like the Turlock Irrigation District, the California Water Service Company, the California Farm Water Coalition, the California Municipal Utilities Association, and many others, it becomes easier to examine the issues of water use, cost, and shortage, as they affect the Golden State of California.
References


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