

Metropolitan Water District
Of Southern California:

An Epic of Social Cooperation

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The famed sociologist and theorist Marshall McLuhan has observed that once you are aware of your environment, it is no longer your environment. It has become, rather, something outside your environment: something to be analyzed and historicized as a function, a commodity, a process – but not the totality of society itself. This is the challenge any historian – including your truly this afternoon -- faces when asked to comment on the 75th anniversary of the Metropolitan Water District of Southern California.

The Metropolitan Water District of Southern California is so vast, so crucial, so overwhelming as an achievement of engineering, construction, and management that it has become these past seventy-five years of water delivery not just part of the environment of Southern California, but the first premise of its survival, given the necessity of water to human life itself. The

very name given this celebration, Turning on the Tap, suggests how this almost overwhelming achievement – the greatest water delivery system in these United States, perhaps the world – can only be envisioned not in its statistics or even its history, but in the simple act of turning on the tap and from that tap deriving nothing short of life itself, nothing short of the first and absolutely necessary premise for a 21st century society set in the midst of a semi-arid to arid region. When the ancient Hebrews sought to express the ultimate and mysterious power of water, they chose the evocative description “making the desert bloom.” When water theorist William Ellsworth Smythe was crusading for scientific irrigation on farms in Southern California in the late 1890s, he called his published manifesto as well as the movement itself The Conquest of Arid America (1900), taking up this biblical metaphor and applying it to the deliberate creation of Southern California through water engineering. Since I am the former State Librarian, let me make reference to two books from this era: Harold Bell Wright’s, The Winning of Barbara Worth (1911); and, Thorstein Veblen, Engineers and the Price System (1919). Each of these books – the one a novel of irrigating the desert, the other a philosophical and social scientific treatise – praise the engineer as the hero of the twentieth century, just as philosophers and lawyers were heroes in times past.

California, as we know, invented itself in the 19th century through water engineering. In Northern California, where there was too much water,

the challenge became flood control. In Southern California, where there was not enough water for an emerging society, the question was to bring water to the Southland both from Northern California and from the mighty Colorado River, the Mississippi of the Far West. In each instance – too much water or too little – the equation of water with life and social development was so obvious, and yet so profound, that it did not require much justification. If you wanted to bring Southern California into existence, in short, you would have to do it in great part through water engineering. If you wanted Southern California to bring into existence that new Italy, that new Greece, that new Spain, that new America that the Southern California pioneers dreamed of and struggled towards, then water engineering was your priority.

This Mediterranean metaphor has also documented itself in certain classics of California literature. I am thinking here of such titles as Charles Dudley Warner's Our Italy (1891) and Peter C. Remondino's The Mediterranean Shores of America (1892), in which these authors inventory comparisons between the Mediterranean and Southern California and analyze the implications of Mediterraneanism for Southern California development.

This process of invention through water dated back to the early 1770s when the Franciscan padres of Mission San Diego de Alcalá constructed a dam, reservoir, and channel system at Mission Gorge on the San Diego River

to irrigate their orchards and farmlands. In the decades to come, padres at other missions likewise established irrigation systems to water their vineyards, orchards, and gardens, thereby expanding irrigation culture up the coast of California.

During the Gold Rush, the foundations of industrial California were similarly invented through water technology. The discovery of gold by carpenter James Wilson Marshall and his crew on the South Fork of the American River on 24 January 1848 occurred during the construction of a waterwheel and tailrace intended to provide power for a saw mill. Whether an individual prospector panning for gold in a creek bed, a crew of gold-seekers constructing a dam and aqueduct to divert a stream, or the environmentally destructive industrial techniques of hydraulic mining in which high-pressure hoses washed away entire hillsides – the fundamental technology of the Gold Rush depended upon water. Mining technology involved water engineering, specifically the use of water to move earth. This interaction of land and water through technology became part of the DNA code of California development. From mining, it morphed into agriculture and irrigation, then into dams and reservoirs linked to urbanism via aqueducts. Each stage of this development, moreover, necessitated increasing levels of social cooperation. It took one miner and one pan to work a river. It took a dozen or more miners to divert a river. It took hundreds of workers, eventually thousands, to create the aqueduct empire

of turn-of-the-century agriculture and support the growing urbanism of the Golden State.

In the year 1887 – during the boom years of Southern California following the arrival of the Atchison, Topeka and Santa Fe Railroad directly connecting Southern California to the East – a breakthrough occurred when state senator C. C. Wright of Modesto succeeded in passing through the legislature and having the governor sign the Wright Act named in his honor, which, along with adjusting riparian rights, made it legal for farmers to create irrigation districts with authorized powers of issuing bonds and constructing cooperative irrigation districts.

The Wright Act was a major breakthrough because at the core of it was the issue of social cooperation on a local or regional level. The Wright Act represented a triumph of localized democracy based on the principle of subsidiarity, which is to say, it allowed local irrigation districts to do what was best done on a local level, while remaining under state sponsorship. Through the Wright Act the sovereign state of California took a major step towards the localization of water engineering and delivery. True, in the decades prior to that, the cities enfranchised by the sovereign state of California met their own water needs. But they tended to meet them through private companies. The Wright Act, by contrast, empowered local communities to create democratically run districts with governmental and

quasi-governmental powers to meet water needs, either for agriculture or for urban development.

In the early twentieth century, California metropolitanized itself through such vast projects as the Los Angeles Aqueduct completed in October 1913, the Hetch Hetchy Dam and distribution system bringing the waters of the Tuolumne River to San Francisco in 1934, and Hoover Dam, the greatest project of them all, whose waters and hydroelectricity were serving Southern California by the late 1930s.

In each instance, vision drove the process: prophetic vision through which Californians beheld the future and made it happen through water engineering. The Franciscan padres showed vision when they created the first irrigation and domestic water systems to be built by Europeans in the Far West. The Mormon settlers arriving at Rancho San Bernardino in June 1851 showed vision when they set up their irrigation and domestic water system and laid out the city of San Bernardino in 1853. The physician William P. Blake exercised vision when in 1855, writing in the fifth volume of Pacific Railroad Reports, he suggested that the Colorado Desert might one day be irrigated from the Colorado River. May I at this point refer you to John Wesley Powell's Lands of the Arid Region (1878), in which Powell lays out a program for the irrigation of the entire Far West? State engineer William Hammond Hall exercised a comprehensive vision when in the 1880s he began to produce a series of published studies calling for the integration

of all California, north, south, and central, into one irrigation and urban aqueduct system that, among other tasks would bring the waters of the Far North to Central and Southern California.

Quite simply, the Wright Act empowered local communities to form irrigation districts that could tax, issue revenue bonds, acquire land by eminent domain, and divert river water to dry lands for irrigation and/or flood control. As such, the Wright Act served as a model for the creation of municipal water districts in 1911, state and county water districts in 1913, municipal utility and public utility districts in 1921. In 1923 the Wright Act also served as a model for the creation of a multi-county Bridge and Highway District Act authorized to span the Golden Gate. And in 1928 it established the model for the creation of the Metropolitan Water District of Southern California.

As California became more complex, so did the water issues it faced. It was one thing for the Wright Act to authorize the creation of irrigation districts in 1887, when the population of the state was barely approaching the 1.2 million mark. It was quite another challenge, however, to meet the water needs of a growing urban-industrial society and an agricultural economy edging into hemispheric status. With the electrification and urbanization of California in the late nineteenth and early twentieth centuries came a growing need for hydroelectricity, which made of water engineering an even more crucial component of growth. The entrance of the federal

government into water engineering in the Far West with the passage of the Reclamation Act of 1902 further complicated the picture. Would water in California increasingly pass into federal jurisdiction, and if so, how much? Or would state and local control over water be sustained? During the boom years of the 1920s, new and growing industries – the motion picture industry in Southern California, for example, an agricultural industry that was now feeding the nation, an industrialized Los Angeles County and the San Francisco Bay Area – coalesced to create for the water community of California a rapidly increasing complexity.

The Wright Act sounds like a simple idea, doesn't it? But when you put that idea together with the rise of social cooperation in the late 19th and early 20th century, it becomes a major idea and powerful social force. Already, by the late 19th and early 20th century, Californians were showing a special talent for social cooperation in the private sector. The citrus growers of Southern California, for example, were forming the Southern California Fruit Growers Association in 1895 and the California Fruit Growers Exchange in 1905 that empowered these fruit growers to standardize the cleaning and packing of fruit in jointly owned exchanges and market the product under the trade name Sunkist. As a result, oranges, a luxury item in earlier years, became commonplace across the nation. The raisin growers of Fresno likewise formed a cooperative and those of us of a certain age remember the

small red packages of Sunmaid raisins in our school lunch bags. Today, numerous other agricultural cooperatives carry on this tradition.

But in the 1920s, even bolder visions of social cooperation – this time in the public sector – began to emerge in California, north and south. In 1922, under the leadership of Herbert Hoover, a Colorado River Compact was finalized by the seven states along the Colorado calling for the joint creation of great dam and aqueduct system bringing the waters of the Colorado River to these states and to California.

At the same time the counties ringing San Francisco Bay, together with Del Norte County on the Oregon border, using the Wright Act as their model, formed a voluntary entity to bridge the Golden Gate and succeeded in getting the Golden Gate Bridge and Highway District formally recognized by the legislature and the governor in mid-January 1923 to start the process that resulted in the completion of the Golden Gate Bridge in 1937. In this drama we see similar dynamics to the creation of the MWD in such issues as inter-county cooperation, state approval, and construction. Financing is different, however. The Golden Gate Bridge was privately financed by the Bank of America.

The Colorado Compact, meanwhile, agreed upon at the same time that the Golden Gate Bridge project was agreed upon, prompted Southern Californians to look ahead into the future and ask a simple question. How

would the water of the great Colorado be delivered to Southern California? To think about Boulder Dam, as the Hoover Dam was then called, was by definition to envision the delivery of the water it impounded. For more than a half century Californians, north and south, had been asking this question in terms of water from the north being brought to the south and water from the Colorado River being brought to Southern California.

In this process, Californians envisioned the future, then set about to make that future happen. As I tried to suggest in my book Material Dreams, the 1920s was a take-off decade for Southern California, surpassing even the boom of the 1880s that transformed a remote and undeveloped region into a rising society that the American novelist Henry James – responding to its climate and beauty – characterized as an Italy awaiting its history. Already Los Angeles had – temporarily – secured its water needs with the opening of the Los Angeles Aqueduct in October 1913, when Los Angeles city engineer William Mulholland said simply, “There it is. Take it.” But we must remember that even as the Los Angeles Aqueduct was completed, Mulholland began making plans for an aqueduct to bring the waters of Colorado to Southern California via a Colorado Aqueduct, on which construction began in the foothills of the Coachella Valley on 25 January 1933. Five years earlier, in 1928, the California legislature – following the same Wright Act precedents that had guided its authorization of the Golden Gate Bridge District in Northern California – authorized the creation of a

Metropolitan Water District of Southern California – a cooperative in the public sector, with thirteen original cities -- to build and operate the Colorado River Aqueduct.

The roll call of these thirteen cities casts a wide net across Southern California history, for these cities differed in size, economies, and origins – although they each had one thing in common: finding in their communities a lens, a prism in which to envision the future. Many of the original thirteen cities – Anaheim, Santa Ana, Fullerton, and Torrance – shared a similar past: mid-19th century origins, agricultural communities into the early 1900s, and in the 1920s in the process of suburbanization. Even Beverly Hills, although a 20th-century creation, had consisted of lima bean fields in its earlier identity. Pasadena – now a center of academic refinement – had begun in the 1870s as a cooperative of ranchers and agriculturalists from Indiana before morphing into a city of choice during the Boom of the 1880s. The coastal cities of Santa Monica and Long Beach had deep roots in the rancho era and had developed as urban resorts at the turn of the 19th and early 20th centuries. These great resort hotels, incidentally, became the nucleus of cities. I’m thinking here of the role played by the Hotel Virginia in the rise of Long Beach and the Huntington Hotel in the rise of Pasadena. From this perspective, resort hotels functioned as cities-in-the-making, paradigms of urbanism. Like Glendale (first named Tropico), these were cities being discovered in the 1920s and 1930s not only by suburbanites,

thanks to their accessibility via the Big Red Cars, but by artists and writers – Raymond Chandler and James M. Cain come to mind – who found in these communities dramatic instances of the new American culture that was emerging in the south California coast. And of course, even more recently emergent townships such as Compton, Fullerton, and Torrance – also original founders – had long lived under the shadow of Los Angeles, the most populous of the founders, and could see in the self-actualization of Los Angeles in the 1920s, thanks to its temporarily adequate water supply, a model for their own development.

Dramatically, then, these founding cities of the Metropolitan Water District were envisioning and inventing Southern California through water engineering across gaps of size, wealth, current status. They each believed in the value of their community as a local place, however large or small, and the value of the Southern California they could create together through the Metropolitan Water District they were organizing. In brief, these communities transcended their differences in pursuit of a common good, a destiny even.

In the 1850s, Southern Californians, Mexican-American Californios and Americans alike, were committed to Southern California as supporting cattle on a thousand hills, as historian Robert Glass Cleland describes this period anchored in the rancho economies of the Mexican era. In the 1870s, this cattle economy yielded to an economy anchored in agriculture that kept is

preeminence for the next eighty years. In the 1880s, Americans envisioned Southern California as a cascade of citrus groves moving past agricultural townships in a newly emergent region committed to civility, education, and the genteel tradition. The 1890s witnessed a new vision – the integration of Southern California through streetcar transportation into a coherent region as well as the rise of great resort hotels on its coastline. The first two decades of the 20th century reinvented Southern California, in this instance paced by Los Angeles, as an aqueduct empire analogous to ancient Rome in its triumphant water engineering. Now, in the 1920s, the founding communities of the Metropolitan Water District were envisioning the consolidation of all these identities into an even more impressive future.

From today's vantage point – celebrating the arrival of Metropolitan Water District water to Pasadena on 16 June 1941 -- we should also celebrate the 75 years of expansion and progress that followed that first turning of the tap. In this regard, the support extended by the Metropolitan Water District to Proposition 1 in November 1960 is, aside from the founding of the Metropolitan Water District itself in 1928, the next most important milestone. We must remember that Proposition 1, authorizing the State Water Plan, was passed by the voters with a margin of less than one percent because of Northern California versus Southern California differences. Northern California saw the State Water Plan primarily in terms of flood control. Southern California envisioned the State Water Plan as the

necessary next step for its continuing viability. In terms of the Northern California/Southern California dynamic, that election was the most divisive in the history of the state.

Yet – and here there is a great paradox – the passage of Proposition 1 and the subsequent construction of the State Water Plan, as well as its integration into the Metropolitan Water District of Southern California water system, has also been the single most powerful force across the past half century in unifying the state of California through water engineering. Remember: if the Pilgrims had landed in Santa Monica Bay in the 1620s instead of Massachusetts Bay, there might very well have been six or more states within the boundaries of present-day California. Superimpose California on a map of the East Coast and you see that it runs from Maine to Georgia. At the first Constitutional Convention, held in Monterey in the summer of 1849, the delegates to that convention struggled with the fact that Mexican California contained the present-day states of Arizona, Nevada, Utah, and Southern Colorado within its boundaries.

California, in brief, is supersized, a nation-state, the eighth largest economy on the planet. But water engineering as represented by the Metropolitan Water District, its fourteen cities and twelve water agencies, in conjunction with the State Water Plan, which is in turn reinforced by Federal Bureau of Reclamation projects, has at long last brought to California an engineering unity in service of its vibrant diversity and ecumenical spirit.

From the perspective, over the years, the expansion, diversification, and upgrading of the Metropolitan Water District has helped bring into being California as a society as well as a state.

And it continues to do so. The droughts of the 1980s and 1990s, for example, challenged this region to diversify its water supplies through an integrated Water Resources Plan. The ability of the Metropolitan Water District to employ conservation, recycling, and recovery is today equivalent to building a second Colorado River Aqueduct. In the year 2000 the District completed Diamond Valley Lake, the largest reservoir in Southern California, which secures for this region a six-month emergency supply.

In times past – in the case of Proposition 1, in November 1960 – the whole question of water, as far as Northern California and Southern California were concerned, was a case of either/or, winner or loser. The whole question of drought, however, to include the recent entrance of the Colorado River into a semi-millennial period of drought, has made a win-lose mentality worse than out of date: as something threatening the very future of California itself. No one region of California has the right to declare a water war on any other region. In point of fact, most recently – meaning across the past quarter century – the very opposite mindset has occurred: one of operating a truly statewide system through the development of an innovative mix of exchange, transfer, and storage agreements throughout the state and along the Colorado River. In the creation of this new water

culture, the Metropolitan Water District of Southern California – having the most to lose if the old win/lose system continued – led the way in the formation of this culture of cooperation and environmental stewardship. I might make mention here as well that the Contractors' Hospital organized by Dr. Sidney Garfield to treat injured or ill workers contained within itself the DNA code of today's Kaiser Permanente Health Plan. From this perspective, in approving Dr. Garfield's pre-payment program, the MWD exercised social cooperation in medical care. We must also remember, with gratitude, the approximately eighty construction workers who lost their lives during this period of epic construction.

The Metropolitan Water District of Southern California, in short, has played an important role in the evolution of a water policy that is at once statewide, regional, and local. In times past, water engineering prophesied California and then invented California. In times present, water engineering is reasserting the integrated, interdependent, yet thoroughly regional and local nature of California. Thus the Metropolitan Water District, so powerfully identified with Southern California, continues to pursue solutions in the San Joaquin-Sacramento Delta that balance environmental protection with water supply reliability to the benefit of the entire state, every region of the state, and every local consumer. At the same time, the District is pursuing development of a major water recycling partnership with Los Angeles County Sanitation Districts that is making even more effective an

environmentalism that blends nature and technology to the benefit of society.

Here, then – as is documented in the magnificent exhibition many of you will now be able to enjoy – is one of the great engineering projects of the planet. Here is perhaps the single most notable water engineering project of the planet. And here is Southern California, which over the past half century – supported in significant measure by water engineering – has played the major role in recreating California as a global nation-state.

“Turning On the Tap” is nothing short of being able to turn on the tap of civilization itself. For without water we perish. Energized by social cooperation – the social cooperation so powerfully evident in the creation of the Metropolitan Water District of Southern California – propelled by a sense of the common good and the comprehensive nature of society, skilled in managing the give and take of negotiations and policy development, animated by an awareness of limits as well as the grand possibilities that lie ahead, we shall be able across the next 75 years to turn on the tap and, once again, encounter a Southern California that invented and sustained itself through water engineering, just as the founders of Southern California dreamed of doing and, over time, made a gift of that Southern California to each of us.

Turning on the tap, we make a connection with the past, present, and future of Southern California. Water is life, and so is history life as well. We're gathered this afternoon to remember water, history, the rise of Southern California, and the water delivery system that made that rise possible. This is the history of each of us, together as Americans, inventing Southern California through water engineering: through the agencies and institutions we have created together in the past when we cooperated socially as we did seventy-five years ago on an heroic scale. Turning on the tap, we brought modern American Southern California into existence. Let's keep turning on that tap in the decades to come and bring into existence an even finer and more socially cooperative Southern California.