OZYMANDIAS

I met a traveller from an antique land
Who said: Two vast and trunkless legs of stone
Stand in the desert . . . Near them, on the sand,
Half sunk, a shattered visage lies, whose frown,
And wrinkled lip, and sneer of cold command,
Tell that its sculptor well those passions read
Which yet survive, stamped on these lifeless things,
The hand that mocked them, and the heart that fed:
And on the pedestal these words appear:
"My name is Ozymandias, king of kings:
Look on my works, ye Mighty, and despair!"
Nothing beside remains. Round the decay
Of that colossal wreck, boundless and bare
The lone and level sands stretch far away.

PERCY BYSSHE SHELLEY

MARC REISNER

CADILLAC DESERT

The American West and Its Disappearing Water

Penguin Books

1986

CHAPTER TWO

The Red Queen

While Los Angeles moldered, San Francisco grew and grew. The city owned a superb natural harbor—the best on the Pacific Coast, one of the best in the world. When gold was struck in the Sierra Nevada foothills, 150 miles across the Central Valley, San Francisco became the principal destination of the fortune seekers of the world. The names of the camps suggested the potency of the lure: New York-of-the-Pacific, Bunker Hill, Chinese Camp, German Bar, Georgia Slide, Nigger Hill, Dutch Corral, Irish Creek, Malay Camp, French Bar, Italian Bar. Those who found their fortunes were inclined to part with them in the nearest haven of pleasure, which was San Francisco. Those who did not discovered that they could do just as well providing the opportunities. With oranges going for $2 apiece at the mines, and a plate of fresh oysters for $20 or more, it was a bonanza for all concerned.

In 1848, the population of San Francisco was eight hundred; three years later, thirty-five thousand people lived there. In 1853 the population went past fifty thousand and San Francisco became one of the twenty largest cities in the United States. By 1869, San Francisco possessed one of the busiest ports in the world, a huge fishing fleet, and the western terminus of the transcontinental railroad. It teemed with mansions, restaurants, hotels, theaters, and whorehouses. In finance it was the rival of New York, in culture the rival of Boston; in spirit it had no competitor.

Los Angeles, meanwhile, remained a torpid, suppurating, stunted little slum. It was too far from the gold fields to receive many fortune

seekers on their way in or to detach them from their fortunes on the way out. It sat forlornly in the middle of an arid coastal basin, lacking both a port and a railroad. During most of the year, its water source, the Los Angeles River, was a smallish creek in a large bed; during the few winter weeks when it was not—when supersaturated tropical weather fronts crashed into the mountains ringing the basin—the bed could not begin to contain it, and the river floated neighborhoods out to sea. (For many years, Santa Anita Canyon, near Pasadena, held the United States record for the greatest rainfall in a twenty-four-hour period, but it may be more significant to state that the twenty-six inches that fell in a day were nearly twice the amount of precipitation that Los Angeles normally receives in a year.) Had humans never settled in Los Angeles, evolution, left to its own devices, might have created in a million more years the ideal creature for the habitat: a camel with gills.

The Spanish had actually settled Los Angeles long before they ever saw the Golden Gate. It was more convenient to Mexico and, from an irrigation farmer's point of view, it was a more promising place to live. By 1848, the town had a population of sixteen hundred, half Spanish and half Indian, with a small sprinkling of Yankees, and was twice the size of San Francisco. A decade later, however, San Francisco had grown ten times as large as Los Angeles. By the end of the Civil War, when San Francisco was the Babylon of the American frontier, Los Angeles was a filthy pueblo of thirteen thousand, a beach for human flotsam washed across the continent on the blood tide of the war. One of the town's early pioneers, a farm boy whose family had emigrated from Iowa, described it as a "vile little dump . . . debauched . . . degenerate . . . vicious."

If anything could be said to have saved Los Angeles it was its reputation as a haven from persecution, a place where one could lose oneself. Since the ranks of the persecuted include those who are too virtuous for their fellow citizens, as well as those who are not virtuous enough, sooner or later the city was bound to attract the victims of mobocracy. And the most persecuted among the virtuous in nineteenth-century America were, besides peaceful Indians and runaway slaves and Mennonites and Quakers, the members of the Mormon faith.

After fleeing Illinois for Utah, the Mormons had always been obsessed with finding escape routes to the sea. The first irrigation canals were still being dug beside the Wasatch Range when Brigham Young dispatched a party of his most loyal disciples, in 1851, to follow

Jedediah Smith's old route to the coast. When they crossed the San Bernardino Mountains, they found themselves in a huge arid basin that reminded them of home and was only a day or two from the sea. The streams were less reliable than those in Utah—the southern mountains received a scantier snowpack that never lasted halfway through the summer—but the San Bernardinos got decent winter rain, and artesian wells below them flowed like geysers. With money earned by selling food and supplies at usurious prices to adventurers bound through Utah for the gold fields, the Mormons purchased a huge chunk of land from an old Spanish rancho. The soil was good, the climate was ideal, and no one was better at irrigation farming than Mormons. Before long they were supplying much of the basin with food. In 1857, the U.S. Cavalry marched on Utah and Brigham Young ordered all distant settlements abandoned, but the Mormons' achievement had left its mark. A Presbyterian colony was soon established nearby, then a Quaker colony, then an ethnic colony of Germans. In this freakish climate—semitropical but dry, ocean-cooled but lavishly sunny—you could grow almost anything. Corn and cabbages sprouted next to oranges, avocados, artichokes, and dates. The capitalists of San Francisco did not remain oblivious; the Southern Pacific ran a spur line to Los Angeles in 1867, finally linking it to the rest of the world. On this same line, huge San Bernardino Valencias found their way to the 1884 World's Fair in New Orleans, where they attracted crowds. No one could imagine *oranges* grown in the western United States. It was then and there, more or less, that the phenomenon of modern Los Angeles began.

They came by ship, they came by wagon, they came by horse. They came on foot, dragging everything they could in a handcart, but the real hordes came by train. In 1885, the Atchison, Topeka, and Santa Fe Railroad linked Los Angeles directly with Kansas City, precipitating a fare war with the Southern Pacific. Within a year, the cost of passage from Chicago had dropped from $100 to $25. During brief periods of mad competition, you could cross two-thirds of the continent for a dollar. If you were asthmatic, tubercular, arthritic, restless, ambitious, or lazy—categories that pretty well accounted for Los Angeles' first flood of arrivals—the fares were too cheap to pass up. Out came Dakota farmers with hopes and wills blasted by blizzards and droughts. Out came farmers who despaired at the meager profits they made growing wheat. *You could grow oranges.* Out came Civil War veterans looking for an easy life, failures looking for another

chance, and the usual boom-town complement of the slick, the sharp, and the ruthless.

The first boom began in the early 1880s and culminated in 1889, when the town transacted $100 million worth of real estate—in today's economy, a $2 billion year in Idaho Falls. Fraud was epic. Hundreds of unseen, paid-for lots were situated in the bed of the Los Angeles River, or up the nine-thousand-foot summits of the San Gabriel Range. The boom was, predictably, short-lived. In 1889, a bank president, a newspaper publisher, and the town's most popular minister all fled to Mexico to spare themselves jail terms, and a dozen or more victims took their own lives. By 1892, the population had dropped by almost one-half, but the bust was followed quickly by an oil boom, and enough fortunes were being made (the original Beverly Hillbillies were *from* Beverly Hills, then a patch of jackrabbit scrub overlying an oil basin) to pack the arriving trains again. Los Angeles soon drew close to San Francisco in population and was crowing with glee. "The 'busting of the boom' became but a little eddy in the great stream," enthused the Los Angeles *Times*, "the intermission of one heartbeat in the life of . . . the most charming land on the footstool of the Most High . . . the most beautiful city inhabited by the human family." Only one thing stood in the way of what looked as if it might become the most startling rise to prominence of any city in history—the scarcity of water.

The motives that brought Harrison Gray Otis, Harry Chandler, and William Mulholland to Los Angeles were the same that would eventually bring millions there. Otis came because he had been an incontrovertible, if not quite an ignominious, failure. He was born in Marietta, Ohio, and as a young man held a series of unspectacular jobs—a clerk for the Ohio legislature, a foreman at a printing plant, an editor of a veterans' magazine. His one early taste of glory came during the Civil War, in which he fought on the Union side, acquired several wounds and decorations, and ultimately rose to the rank of captain. *Captain* Harrison Gray Otis. He liked the title well enough to think himself deserving of a sinecure, and after the war he drifted out to California in search of one. What he got was an appointment as government agent on the Seal Islands, some frigid, treeless, wind-blasted humps of rock in the Bering Sea. His chief duty there was to prevent the poaching of walrus and seals, an assignment that suited

Otis better than he knew, since he bore an odd resemblance to the former and had a disposition to match. He was a large blubbery man with an intransigent scowl, an Otto von Bismarck mustache and a goatee, and a chronic inability to communicate in tones quieter than a yell, whether he was debating the American role in the Pacific or telling someone to pass the salt. "He is a damned cuss who doesn't seem to feel well unless he is in a row with someone," one among his legion of enemies would later remark.

The Seal Islands post was a humiliation that Otis, who was more ambitious than he was clever, couldn't afford to pass up. But after three years he had had enough, and he returned, bilious and frustrated, to California, where he got a job as editor of a local newspaper in Santa Barbara. Otis hated Santa Barbara. It was a hangout of the privileged classes, smug, snobbish, and perfectly content to remain small. Otis despised inherited wealth and class, but he despised a town that was disdainful of growth even more. He believed in it, perfervidly, just as he believed in those who start with nothing and dynamite their way to success. "Hustlers . . . men of brain, brawn, and guts" were the people he admired most, even if he had less in common with them than he thought. Otis would pursue a sinecure as a greyhound chases a rabbit, and it was his rotten luck at it, more than anything else, that finally caused his success. Trying to get himself appointed marshal of California, he was offered the job of consul in Tientsin, an insult that was more than he could bear. In 1881, Otis quit the paper in Santa Barbara and moved his family to Los Angeles.

The city was still small when Otis arrived, but it was already served by several newspapers, one of which, the *Times and Mirror*, was owned by a small-time eastern financier named H. H. Boyce. Boyce was looking for a new editor, and, though the pay was a miserable $15 a week, Otis took the job. Perhaps because he was fuming about the pay, or perhaps because he knew that time was running out, Captain Otis then made one of the bolder decisions of his life. He took all of his savings and, to help offset the low pay, convinced Boyce to let him purchase a share in the newspaper. Privately he was thinking that someday, perhaps, he could force H. H. Boyce out.

Harry Chandler came to Los Angeles for his health. He grew up in New Hampshire, a cherubic child with cheeks like Freestone peaches. His falsely benign appearance, which stayed with him all his life, made him a popular boy model among advertisers and photographers. But cherubic Harry was a rugged individualist and a ferocious

competitor, and if there was money involved he would rarely pass up an opportunity or a dare. While at Dartmouth College, he accepted someone's challenge and dove into a vat of starch—a display that nearly ruined his lungs. Advised by doctors to recuperate in a warm and dry climate, he bought a ticket to Los Angeles. Arriving there, he moved from flophouse to flophouse because none of his fellow tenants could endure his hacking cough. When he was thoroughly friendless and nearly destitute, Harry met a sympathetic doctor who suffered from tuberculosis and owned an irrigated orchard near Cahuenga Pass, at the head of the San Fernando Valley. Would Harry like a job picking fruit?

The work was hard but invigorating. Before long, Harry felt almost cured. The work was also surprisingly lucrative. The doctor was as uninterested in money as Harry was interested, and let him sell a large share of what he picked. In his first year, Harry made $3,000. It was a small fortune, and inspired in Harry an awed faith in the potential of irrigated agriculture and, most particularly, agriculture in the San Fernando Valley. With the proceeds, Harry began to acquire newspaper circulation routes, which, at the time, were owned independently of the newspapers and bought and sold like chattel. Before long, he was a child monopolist, owning virtually all the routes in the city.

By 1886, Harrison Gray Otis had finally managed to hound H. H. Boyce out of the Los Angeles *Times and Mirror*. It was a pyrrhic victory, however, because Boyce had immediately established a rival paper, the *Tribune*, and engaged Otis in an all-out circulation war. With the allegiance of whoever dominated the circulation routes, one or the other was certain to win. It was Otis's luck that he got to Harry Chandler first. Within days, the *Tribune* began to disappear mysteriously from people's doorsteps, and its delivery boys simultaneously contracted a contagion. Meanwhile, new subscribers began to flock, like moths scenting pheromones, to the *Times*. Boyce was broken within months. Before Otis had much chance to gloat, however, he learned that the defunct *Tribune*'s printing plant had secretly acquired a new owner, whose name was Harry Chandler, and that the tactics that they had used together against Boyce could just as easily be turned against the *Times*. Otis, who bore lifelong grudges over provocations infinitely smaller than this, was realistic enough to know when he was had. Besides, this mild-appearing young man was the embodiment of every quality he admired. As a result, the *Times* acquired a new circulation manager and guiding light, whose name was

Harry Chandler, and in 1894 Harry Chandler acquired a new father-in-law, whose name was Harrison Gray Otis.

William Mulholland came to Los Angeles more or less for the hell of it. He was born in 1855 in Dublin, Ireland, where his father was a postal clerk. At fifteen, he signed on as an apprentice seaman aboard a merchant ship that carried him back and forth along the Atlantic trade routes. By 1874 he had had enough, and spent a couple of years hacking about the lumber camps in Michigan and the dry-goods business in Pittsburgh, where his uncle owned a store. It was in Pittsburgh that Mulholland first heard about California. He had just enough money to get to Panama by ship, and after landing in Colón, he traversed the isthmus on foot and worked his way north aboard another ship, arriving in San Francisco in the summer of 1877. Being back on a ship had renewed Mulholland's taste for the sea, and, after a brief failure at prospecting in Arizona—where he also fought Apaches for pay—he decided to ship out at San Pedro, the port nearest Los Angeles. He had ten dollars to his name. Anxious to make a little extra money, he joined a well-drilling crew. "We were down about six hundred feet when we struck a tree. A little further we got fossil remains. These things fired my curiosity. I wanted to know how they got there, so I got hold of Joseph Le Conte's book on the geology of the country. Right there I decided to become an engineer."

In his official photograph for the Los Angeles Department of Water and Power, which was taken when he was nearly fifty, Mulholland still looks young. He is wearing a short-brimmed dark fedora and a dark pinstripe suit; a luxuriant silk cravat circumnavigates a shirt collar that appears to be made of titanium; from a thick, bushy mustache sprouts a lit cigar. The face is supremely Irish: belligerence in repose, a seductive churlish charm. Once, in court, Mulholland was asked what his qualifications were to run the most far-flung urban water system in the world, and he replied, "Well, I went to school in Ireland when I was a boy, learned the Three R's and the Ten Commandments—most of them—made a pilgrimage to the Blarney Stone, received my father's blessing, and here I am." He began his engineering career in 1878 as a ditch-tender for the city's private water company, clearing weeds, stones, and brush out of a canal that ran by his house. One day Mulholland was approached by a man in a carriage who demanded to know his name and what he was doing. Mulholland stepped out of his ditch and told the man that he was doing his goddamned job and that his name was immaterial to the

quality of his goddamned work. The man, it turned out, was the president of the water company. Learning this, Mulholland went to the company office to collect his pay before being fired. Instead, he was promoted.

The Sierra Nevada blocks most of the weather fronts moving across California from the Pacific, so that a place on the western slope of the range may receive eighty inches of precipitation in a year, while a place on the east slope, fifty miles away, may receive ten inches or less. The rivers draining into the Pacific from the West Slope are many and substantial, while those emptying into the Great Basin from the East Slope are few and generally small. The Owens River is an exception. It rises southeast of Yosemite, near a gunsight pass that allows some of the weather to come barreling through, heads westward for a while, then turns abruptly south and flows through a long valley, ten to twenty miles wide, flanked on either side by the Sierra Nevada and the White Mountains, which rise ten thousand feet from the valley floor. The valley is called the Owens Valley, and the lake into which the river empties—used to empty—was called Owens Lake. Huge, turquoise, and improbable in a desert landscape, it was the shrunken remnant of a much larger lake that formed during the Ice Ages. Due to a high evaporation rate and, for its size, a modest rate of inflow, the lake was more saline than the sea, but it supported two species of life in the quadrillions: a salt-loving fly and a tiny brine shrimp. The soup of shrimp and the smog of flies attracted millions of migratory waterfowl, a food source whose startling numbers were partially responsible for inducing some of the valley's first visitors to remain. "The lake was alive with wild fowl," wrote Beveridge R. Spear, an Owens Valley pioneer. "Ducks were by the square mile, millions of them. When they rose in flight, the roar of their wings . . . could be heard . . . ten miles away. . . . Occasionally, when shot down, a duck would burst open from fatness which was butter yellow."

The greater attraction, however, was the river. When whites arrived in the 1860s, Paiute Indians who had learned irrigation from the Spanish were already diverting some of the water to raise crops. In traditional pioneer fashion, the whites trumped up some cattle-rustling charges against the Indians, which appear to have led to the murder of a white woman and a child. The pious Owens Valley citizens then murdered at least 150 Paiutes in retaliation, driving the last hundred into Owens Lake to drown. They then took over the

Indians' land, borrowed their irrigation methods, and began raising alfalfa and pasture and fruit. By 1899, they had established several ditch companies and had put some forty thousand acres under cultivation.

The huge new silver camp at Tonopah, Nevada, consumed most of what the valley grew. With prosperity, several thriving towns sprang up: Bishop, Big Pine, Lone Pine, Independence. The irrigated valley was postcard-pretty, a narrow swath of green in the middle of the high desert, with 14,495-foot Mount Whitney, the highest peak between Canada and Mexico, looming over Lone Pine and the river running through. Mark Twain came to visit, and Mary Austin, who was to become a well-known writer, came to live. But the entrance that most excited the valley people was that of the United States Reclamation Service (later renamed the Bureau of Reclamation). The Service was an unparalleled experiment in federal intervention in the nation's economy, and was being watched so closely by skeptics in Congress that it could not afford to have any of its first projects fail. To Frederick Newell, the first Reclamation Commissioner, the Owens Valley looked like a place where he could almost be guaranteed success. The people were proven irrigation farmers—a rarity in the non-Mormon West; the soil could grow anything the climate would permit; the river was underused; and there was a good site for a reservoir. Sixty thousand additional acres were irrigable, and all of them could be gravity-fed. In early 1903, just a few months after the Service was created, a team of Reclamation engineers was already trooping around the valley, gauging streamflows and making soil surveys. Sixty thousand new acres would even make it worthwile to run a railroad spur to Los Angeles. Los Angeles, everyone thought, was going to make the Owens Valley rich.

Fred Eaton thought differently. Eaton had been born in Los Angeles in 1856; his family had founded Pasadena. Most of the Eaton men were engineers, and when they looked around them it seemed that half of what they saw they had built themselves; it gave them an overpowering sense of pride-in-place. Fred had gone into hydrologic engineering, which is to say that he pretty much taught it to himself, and by the time he was twenty-seven, he was superintendent of the Los Angeles City Water Company. As San Francisco had bloomed into pseudo-Parisian splendor, Fred Eaton had chafed. When Los Angeles finally began to take on the appearance of a place with a future, he had been intensely proud. But he was one of the few people who

understood that this whole promising future was an illusion. With artesian pressure still lifting fountainheads of water eight feet into the air, no one believed that someday the basin would run out of water. Few understood that the occasional big floods in the Los Angeles River were testimony to the *absence* of rain: that the basin was normally so dry there wasn't enough ground cover to hold the rain when it fell. The annual flow of the Los Angeles River (that which ran aboveground) represented only a fifth of 1 percent of the runoff of the state, and because of the pumping the flow was dropping fast, from a hundred cubic feet per second in the 1880s to forty-five cfs in 1902. If growth continued, the population and the water would fall hopelessly out of balance. Everyone was living off tens of thousands of years of accumulated groundwater, like a spendthrift heir squandering his wealth. No one knew how much groundwater lay beneath the basin or how long it could be expected to last, but it would be insane to build the region's future on it.

There was no other source of water nearby. Deserts lay on three sides of the basin, an ocean on the fourth. The nearest large rivers were the Colorado and the Kern, but to divert them out of their canyons to Los Angeles would require pumping lifts of thousands of feet—an impossibility at the time. It would also require a Herculean amount of energy.

But there was, 250 miles away, the Owens River. It might not be quite sufficient for the huge metropolis forming in Eaton's imagination, but it was large enough; there was water for at least a million people. Indeed, Eaton was one of the few Los Angeleans who knew the river even existed. Its distance from Los Angeles was staggering, but its remoteness was overshadowed by one majestically significant fact: Owens Lake, the terminus of the river, sat at an elevation of about four thousand feet. Los Angeles was a few feet above sea level. The water, carried in pressure aqueducts and siphons, could arrive under its own power. Not one watt of pumping energy would be required. The only drawback was that the city might have to take the water by theft.

During their years together at the Los Angeles City Water Company, Fred Eaton and Bill Mulholland became good friends, thriving on each other's differences. Eaton was a western patrician, smooth and diffident; Mulholland an Irish immigrant with a musician's repertoire of ribald stories and a temperament like a bear's. Eaton thought so much of Mulholland that he groomed him to be his successor, and when Eaton left the company in 1886 to pursue a career in politics

and seek his fortune, Mulholland was named superintendent. In the years that followed, Fred Eaton would become messianic about the water shortage he saw approaching. The only answer, he told Mulholland, was to get the Owens River. At first, Mulholland found the idea preposterous: going 250 miles for water was out of the question, and Mulholland didn't much believe in surface-water development anyway. Damming rivers meant forming reservoirs, and in the heat and dryness of California, reservoirs would evaporate huge quantities of water. It made more sense to slow down the rainfall as it returned to the ocean and force more of it into the aquifer. Mulholland preached soil and forest conservation thirty years before its time. He wanted to seed the whole basin, and when he said that the deforestation of the mountainsides would reduce the basin's water supply, everyone thought he was slightly nuts. He had his men filling gullies and installing infiltration galleries and checkdams all over the place. Everything he did, however, was nullified by the basin's growth.

By 1900, Los Angeles' population had gone over 100,000; it doubled again within four years. During the same period, the city experienced its first severe drought. Even with lawn watering prohibited and park ponds left unfilled, the artesian pressure, as Eaton had predicted, began to drop. Gushes became gurgles, then dried up. Pumps were frantically installed. By 1904, the pressure was low enough to prompt Mulholland to begin shutting irrigation wells in the San Fernando Valley, which lay across the Hollywood Hills and fed both the aquifer and the river. The farmers were furious, and Mulholland began spending a lot of time in court. The Los Angeles City Water Company was eventually taken over by the city, and Mulholland was retained in command. (The city didn't have much choice in the matter. Mulholland was such a seat-of-the-pants engineer that the plan of the entire water system resided mainly in his head; the most elemental schematics and blueprints did not exist.) In late 1904, the newly created Los Angeles Department of Water and Power issued its first public report. "The time has come," it said, "when we shall have to supplement the supply from some other source." With that simple statement William Mulholland was about to become a modern Moses. But instead of leading his people through the waters to the promised land, he would cleave the desert and lead the promised waters to them.

There is a widely held view that Los Angeles simply went out to the Owens Valley and stole its water. In a technical sense, that isn't quite

true. Everything the city did was legal (though its chief collaborator, the U.S. Forest Service, did indeed violate the law). Whether one can justify what the city did, however, is another story. Los Angeles employed chicanery, subterfuge, spies, bribery, a campaign of divide-and-conquer, and a strategy of lies to get the water it needed. In the end, it milked the valley bone-dry, impoverishing it, while the water made a number of prominent Los Angeleans very, very rich. There are those who would argue that if all of this was legal, then something is the matter with the law.

It could never have happened, perhaps, had the ingenuous citizens of the Owens Valley paid more attention to a small news item that appeared in the Inyo *Register*, the valley's largest newspaper, on September 29, 1904. The item began: "Fred Eaton, ex-mayor of Los Angeles, and Fred [*sic*] Mulholland, who is connected with the water system of that city, arrived a few days ago and went up to the site of the proposed government dam on the [Owens] River." The person who took them around, the story continued, was Joseph Lippincott, the regional engineer for the Reclamation Service. It wasn't so much this small piece of news that should have aroused the valley's suspicions. It was the fact that Lippincott had already taken Eaton around the valley twice before.

The valley had no particular reason to distrust J. B. Lippincott, although a search into his background would have dredged up a revelation or two. As a young man out of engineering school, he had joined John Wesley Powell's Irrigation Survey, the first abortive attempt to launch a federal reclamation program in the West, but had lost his job soon thereafter when Congress denied Powell funding. Embittered by the experience, Lippincott migrated to Los Angeles, where, by the mid-1890s, he had built up a lucrative practice as a consulting engineer. In 1902, when the Reclamation Service was finally created, its first commissioner, Frederick Newell, immediately thought of Lippincott as the person to launch its California program. He had a good reputation, and he understood irrigation—a science few engineers were familiar with. The post, however, meant a substantial cut in salary, and Lippincott insisted on being allowed to maintain a part-time engineering practice on the side. Newell and his deputy, Arthur Powell Davis (who was John Wesley Powell's nephew), were a little wary; in a fast-growing region with little water, a district engineer with divided loyalties could lead the Service into a thicket of conflict-of-interest entanglements. The centerpiece of the Service's program in California was to be the Owens Valley Project,

and there were already rumors that Los Angeles coveted the valley's water. One of the Service's engineers, in fact, had raised this issue with Davis; with Lippincott, a son of Los Angeles, in charge, a collision between the city and the Service over the Owens River might leave the city with the water and the Service absent its reputation. But the Service's early leadership, unlike those who succeeded them, suffered from a certain lack of imagination. "On the face of it," Davis scoffed, "such a project is as likely as the city of Washington tapping the Ohio River."

The only person who seemed suspicious when Lippincott began showing Eaton and Mulholland around the Owens Valley again and again was one of his own employees, a young Berkeley-educated engineer named Jacob Clausen. His apprehensions had been aroused during Eaton's second visit, when Lippincott and Eaton had ridden up to the valley from Los Angeles by way of Tioga Pass and Clausen, at Lippincott's request, had met them at Mono Lake. On the way down the valley, Lippincott insisted that they stop at the ranch of Thomas Rickey, one of the biggest landowners in the valley. Rickey's ranch was in Long Valley, an occluded shallow gorge of the Owens River, hard up against the giant Sierra massif, which contained the reservoir site the Reclamation Service would have to acquire in order for its project to be feasible. Eaton had told Clausen that he wanted to become a cattle rancher and was interested in buying Rickey's property if he was willing to sell. As they visited the ranch, however, he seemed much more interested in water than in cattle. Clausen understood the dynamics of the Owens Valley Project—the streamflows, the water rights, the interaction of ground and surface water—better than anyone, and Lippincott asked him to explain to Eaton how the project would work. Eaton hung on his every word, and that, Clausen was to testify later, "was exactly what Lippincott wanted." The two Los Angeleans were good friends, and Eaton had been the first to dream of Los Angeles going to the Owens Valley for water. Was it so farfetched, Clausen would remember thinking to himself, to believe that Lippincott was out to help Los Angeles steal the valley's water?

If Clausen's suspicions were aroused, those of his high superiors remained utterly dormant, even though they would soon have equal reason to suspect Lippincott of being a double agent for Los Angeles. In early March of 1905, Lippincott had sent his entire engineering staff to Yuma, Arizona, on the Colorado River, to move the Yuma Irrigation Project forward at a faster pace. Work on the Owens Valley

Project had been held up by winter and by the delayed arrival of a piece of drilling equipment which was on order. During the hiatus, the Reclamation Service received a couple of applications for rights-of-way across federal lands from two newly formed power companies in the Owens Valley. Each was interested in building a hydroelectric project, and Lippincott had to decide which, if any, of the plans could coexist with the Reclamation project. Unable or unwilling to look into the matter himself, Lippincott might have waited for one of his engineers to return later in the spring, but he wanted to dispose of the issue, so he decided to appoint a consulting engineer to look into the matter for him. And though there were dozens of engineers in Los Angeles and San Francisco among whom he could have chosen, he decided to turn to his old friend and professional associate Fred Eaton.

The news that Lippincott had hired Fred Eaton to decide on a matter that could affect the whole Owens Valley Project left his superiors stunned, but their response, typically, was one of bafflement rather than anger. "I fail to understand in what capacity he is acting" was the only response Arthur Davis managed to give.

Eaton himself had no questions about the capacity in which he was acting, though the public face he presented was very different. With his letter of introduction from Lippincott and an armload of freshly minted Reclamation maps, he strode into the government land office in Independence, claiming to represent the Service on a matter of vital importance to the Owens Valley Project. For the first three days, however, his investigations had nothing to do with the hydroelectric plans. Poring over land deeds in the office's files—deeds to which he might have had no access as a private citizen—Eaton jotted down a wealth of information on ownership, water rights, stream flows—things Los Angeles had to know if and when it decided to move on the Owens Valley's water. Handsome and charming, Eaton even managed to get the land office employees to help him, unaware that the information they were digging out had nothing to do with the matter that had allegedly brought Eaton there. When he finally had what he felt he needed, he turned to the official matter at hand.

The problem of the conflicting power-license applications was straightforward; there could only be one resolution. One of the two power companies, the Owens River Water and Power Company, held water rights senior to those of its competitor, the Nevada Power Mining and Milling Company. Its rights even predated those of the Reclamation Service, and if it was refused its application it might

cause the Service some real legal embarrassment. In addition, its plan of development was far more compatible with the Reclamation project than the Nevada company's; Jacob Clausen had taken a cursory look at both and decided that the Nevada company's project could reduce the Long Valley reservoir to a glorified mudflat during the peak summer irrigation season, when water was needed most. To Clausen, the applications were hardly worth a second look, and he couldn't understand why Lippincott had even bothered to hire someone to review them so carefully. The Owens River company deserved a conditional go-ahead, the Nevada company decidedly did not. But Clausen was far too naive to understand the complexity of such matters: One of the founders of, and partners in, the Nevada Power Mining and Milling Company was a rancher named Thomas B. Rickey.

Eaton's baffling recommendation in favor of the Nevada Power Mining and Milling Company threw Clausen into a state of apoplexy. When Lippincott formally endorsed his judgment a few weeks later, Clausen finally understood that something was terribly wrong, but how wrong even he could not fathom. On the 6th of March, exactly three days after Lippincott had hired Eaton as his personal representative in the matter of the power company applications, the city of Los Angeles had quietly hired its own consultant to prepare a report on the options it had in its search for water. The report had taken only a couple of weeks to prepare—most of the information was in Mulholland's office, and the conclusion was foregone anyway—and the consultant had received an absurdly grandiose commission of $2,500, more than half his annual salary. It was not so much a commission as a bribe. The money, however, was well spent: the name of the consultant was Joseph B. Lippincott.

One other person besides Jacob Clausen had begun to follow the comings and goings of Eaton, Lippincott, and Mulholland with more than detached interest—Wilfred Watterson, the president of the Inyo County Bank. Wilfred and his brother, Mark, were the most popular citizens in the Owens Valley. Their family had founded the bank, and Wilfred and Mark, when still in their twenties, became president and treasurer. Both were attractive young men, but Wilfred in particular was strikingly handsome. He had clean-cut, perfect features, an absolutely even gaze, and the erect, confident air of a nineteenth-century optimist. In his elegant clothes, Wilfred could have passed easily for Bat Masterson instead of a small-town banker. The lending policies of the Inyo County Bank were as much of an aberration as its owners. The Wattersons rarely refused a loan and often stretched out debts;

they displayed a strong interest in the valley's survival and a casual, almost careless attitude toward money.

Wilfred's suspicions that Los Angeles was engineering a water grab had begun to simmer when word got around that Fred Eaton, the would-be cattle rancher, was offering some astonishingly generous sums for land with good water rights. There were stories that Eaton would make an offer that already seemed generous, and, if a landowner gambled and tried to raise him, Eaton would readily meet his terms. It was hard for Wilfred to nail any of this down, because no one wanted to let the Wattersons know that he was thinking of selling out—not after they had loaned money with such abandon up and down the valley—but the stories were enough to make Wilfred skeptical about Eaton's true intentions. Was he rich enough to pay those prices? Where did he get the money?

Watterson's suspicions became intensely aroused one day in the early summer of 1905 when an unidentified young man arrived in the valley, went directly to the Inyo Bank, and displayed a written order from Fred Eaton to pick up a parcel in a safe deposit box. As soon as he had it in his hand, the young man left with unseemly haste and stalked down the street in the direction of the post office. Watterson sprang up from his desk and asked the teller who the man was. He was Harry Lelande, the Los Angeles city clerk—the official legally charged with handling any transactions for the city that involved transfers of water or land.

Watterson burst out the door and ran down the street in the direction in which Lelande had disappeared. He found him across the street from the post office.

Watterson ambled up to Lelande, accosted him in his disarming manner, and said, "I'm sorry, Mr. Lelande, but there's a small formality we forgot to carry out at the bank."

Lelande looked perplexed. Watterson asked him to follow him back to the bank.

Once they were safely inside the president's office, Watterson offered the clerk a seat and some coffee, then walked casually to the door and locked it. "We want the deed back," he said.

Lelande looked stricken. "What deed do you mean?" he asked.

"The deed by which your city is going to try to rape this valley," Watterson answered.

"I haven't any idea what you're talking about."

"Maybe this will help," said Watterson. He opened his desk drawer, removed a revolver, and put it on top of the desk.

Lelande's mouth opened. "I can't give you something I don't have," he begged.

Watterson stood up and hovered menacingly over the clerk. "Take off your coat and trousers," he said.

Lelande, badly frightened, obliged.

Watterson turned all of his pockets inside out and found nothing. He ordered Lelande to get dressed and take him to his room at the Hotel Bishop.

"Eaton's been buying land in an underhanded way to secure water for the city of Los Angeles, hasn't he?" Watterson said to Lelande on the way over. He was inventing the theory as he walked, but Lelande's agonized expression told him he was right. "You've paid high prices not because you're dumb but because you're smart. You're masquerading as investors and all you're going to invest in is our ruin."

Lelande kept insisting that he didn't know what Watterson was talking about. At the hotel, Watterson nearly tore apart his room, but found none of the documents Lelande had extracted from Eaton's box. It was obvious that Lelande had been so fearful of being discovered that he had immediately run to the post office and mailed the deed. Without the document, Watterson had nothing to go on but his hunches, and he was forced to let Lelande go. But, his temper notwithstanding, he knew he would have had to let him go anyway; the clerk had done nothing against the law. Neither, from what he knew, had Eaton. Was it possible, Watterson asked himself, that a distant city could destroy the valley he and his family had worked so hard and gambled so recklessly to build up, and never step outside the law?

Meanwhile, the $2,500 contract accepted by Joseph Lippincott from Los Angeles was, if not exactly illegal, an apparent violation of the most basic ethical standards for government officials. Newell had let Lippincott off with another fatherly lecture, but everyone in the Reclamation Service had heard about it, and since the Service had been created as an answer to the epic graft and fraud associated with the General Land Office, some of Lippincott's associates were furious with him. By July of 1905, Newell realized that the whole thing might blow up in his face; he had to do something to contain the damage. As a result, he decided to appoint a panel of engineers to review the conflict between the Reclamation project and the water needs of Los Angeles and decide whether the Owens Valley Project should move forward, be put on hold, or be abandoned. Newell felt that Lippincott,

as the senior engineer most familiar with the project, should sit on the panel. To his and Lippincott's astonishment, several Reclamation engineers said they would refuse to sit next to him. Lippincott now realized that he, too, would have to mount a damage-control operation in a hurry. On July 26, the night before the panel was scheduled to convene, he dashed off a telegram to Eaton that read, "Reported to me and publicly accepted that you had represented yourself as connected with Reclamation and acting as my agent in Owens Valley. As this is entirely erroneous and very embarrassing to me, please deny publicly or the Service will be forced to do so." The truth of Lippincott's denial can best be judged by Fred Eaton's reaction, which was incendiary. He received the telegram in the federal land office in Independence, where he was still trying to masquerade as Lippincott's agent. After reading it he felt compelled to vent his spleen on the nearest person available, agent Richard Fysh. "Eaton said he had a telegram from Mr. Lippincott and it was a damned hot one," said Fysh later in a deposition, "and he, Eaton, did not like it a little bit, as it put him in a wrong light."

Newell's panel of engineers was convened in San Francisco on July 27. After two days of hearing divided opinions (Clausen testified in favor of continuing, Lippincott in favor of abandonment), the panel reached a unanimous verdict. The Owens Valley Project should not be sedulously pursued, they recommended; the needs of Los Angeles had become too great an issue. But neither should it be formally abandoned until a more persuasive case could be made for doing so. Los Angeles would have to demonstrate that it had absolutely no choice but to go to the valley for water, and it would have to prove that it had the resources to carry out such a gigantic undertaking on its own. Such a recommendation, the panel added, was of course based on the assumption that the Reclamation project was still feasible.

Which, unbeknownst to anyone but Eaton and a select handful of Los Angeles officials, it was not. Four months earlier, after completing his consultant duties for Lippincott, Eaton had gone back to see the stubborn Thomas Rickey, who held the key piece of land in the valley—the land the city had to have in order to block the federal project—but who had refused to sell. In Eaton's hand was his recommendation that Rickey's hydroelectric company be allowed to usurp its competitor's claim on the main power sites on the river. That, Eaton thought, was the sweetener that would surely make Rickey sell. After hours of pleading and cajoling, however, the rancher still

held out. In disgust, Eaton finally stood up, roughly shook Rickey's hand, and stomped out the door. As he was standing at the railroad depot, waiting for the train that would take him back to Los Angeles, Rickey raced up in his carriage. He had had a sudden change of heart; for $450,000, he told Eaton, he would sell him an option clear on the ranch, including the Long Valley reservoir site.

Eaton's jubilation was so great he couldn't restrain himself. He ran to the telegraph office and shot off a cryptic message to Mulholland. "The deal is made," he wired. All it had required was "a week of Italian work."

Los Angeles now had most of what it needed, but Mulholland still wanted some additional water rights in order to kill the Reclamation project once and for all. Within hours of receiving Eaton's telegram, he was frantically organizing an expedition of prominent Los Angeleans to the Owens Valley, using the pretext that they were investors interested in developing a resort. The group included Mayor Owen McAleer and two prominent members of the water commission. For them to see the river firsthand was crucial, Mulholland reasoned, because he and Eaton would need more money to buy the last water rights they wanted, and the city could not legally appropriate money toward a project that hadn't even been described, let alone authorized. A group such as this could easily free up some money in the Los Angeles business community if they fathomed how much water there was.

It went exactly as planned. The group arrived in the valley on the cusp of spring, when even small tributaries of the Owens River were overflowing; days after they returned, Eaton and Mulholland had all the money they needed. They requisitioned an automobile and raced off to the valley by the shortest route, across the Mojave Desert—probably the first time anyone crossed it by car. After a week of frantic, furtive buying, the two men returned. "The last spike has been driven," Mulholland announced to the assembled water commissioners. "The options are all secured."

Like all the other newspaper publishers in the city, Harrison Gray Otis had been operating under a self-imposed gag rule. Although the publishers knew what was going on, not a word of Mulholland and Eaton's stealthy grab of water options had appeared in the papers. However, on July 29, the same day the Reclamation panel reached its verdict, Otis could no longer contain himself. Under a headline that read, "Titanic Project to Give the City a River," the whole unauthorized story spilled out in the Los Angeles *Times*.

Otis seemed to take particular satisfaction in the way Fred Eaton had hoodwinked the greedy but guileless rubes in the Owens Valley. "A number of the unsuspecting ranchers have regarded the appearance of Mr. Eaton in the valley as a visitation of Providence," the *Times* chortled. "In the eyes of the ranchers he was land mad. When they advanced the price of their holdings a few hundred dollars and he stood the raise, their cup of joy fairly overflowed. . . . The farmer folk in the Owens River Valley think that he has gone daffy on stock raising. To them he is a millionaire with a fad." The paper even admitted that the town of Independence, whose neighboring ranchers had been made offers they couldn't refuse, was faced with financial ruin, but it refused to let such a fact spoil its enjoyment of a good joke. The paper also recalled in excruciating detail Joseph Lippincott's career as a double agent, apparently thinking it was doing him a favor. "In the consummation of the great project that is to supply Los Angeles with sufficient water for all time, great credit is given to J. B. Lippincott," it said. "Without Mr. Lippincott's interest and cooperation, it is declared that the plan never would have gone through. . . . *Guided by the spirit of the Reclamation Act* . . . he recognized the fact that the Owens River water would fulfill a greater mission in Los Angeles than if it were to be spread over acres of desert land. . . . Any other government engineer, a nonresident of Los Angeles and not familiar with the needs of this section, undoubtedly would have gone ahead with nothing more than the mere reclamation of the arid lands in view" (emphasis added). It was praise that was to damn Lippincott for the rest of his life.

There was nothing quite as revealing in the *Times*'s story, however, as its very lead sentence: "The cable that has held the San Fernando Valley vassal for ten centuries to the arid demon," it gushed in a spasm of metaphorical excess, "is about to be severed by the magic scimitar of modern engineering skill."

There was something very strange about that sentence. All along, the Owens River had been portrayed as a matter of life or death to the city of Los Angeles. No one had ever said a word about the San Fernando Valley.

Sesquipedalian tergiversation was the strong suit of Harrison Gray Otis, along with slander, meanness, biliousness, and the implacable pursuit of a good old-fashioned grudge. Under his ownership, the *Times* was less a newspaper than a kind of mace used to bludgeon and destroy his enemies, who, and which, were many. (Otis often said

that he considered objectivity a form of weakness.) The Democratic Party was "a shameless old harlot"; labor leaders were "corpse defacers," labor unions "anarchic scum"; California's preeminent reformer, Governor (later Senator) Hiram Johnson, was "a born mob leader—a whooper—a howler—a roarer." The newspaper owned by Otis's former partner, H. H. Boyce, was the "Daily Morning Metropolitan Bellyache," while Boyce himself was "a coarse vulgar criminal." William Randolph Hearst and his *Examiner,* more serious rivals than Boyce, were, interchangeably, "Yellow Yawp." Even innocent bystanders were vaporized by the General's ire. One morning Otis was greeted by a new neighbor who happened to mispronounce his name. "Good morning, General Ah-tis," said the man cheerily. "It's *O*-tis, you goddamn fool," the General bellowed back.

General Harrison Gray Otis. Otis's military coronation had come through the offices of President William McKinley as a reward for volunteering to send young men into the Philippine jungles during the Spanish-American War. By the time he returned to the States, the twentieth century had dawned, and Otis was utterly unprepared for it. Unions were organizing, the open shop was threatened, and even in Los Angeles the Socialists—the *Socialists*—were getting ready to run a candidate for mayor. Anti-unionism became breakfast fare for *Times* readers, as predictable as sunrise, and Otis was soon ordained public enemy number one by organized labor in the United States—no mean feat for a newspaper publisher in a remote western city. It was a notoriety he loved. To celebrate it, Otis commissioned a new headquarters that resembled a medieval fortress—it even had a parapet with turrets and cannon slots—and had a custom touring car built with a cannon mounted on the hood. The effect of all this on his enemies was inspirational. Hiram Johnson was addressing a crowd in a Los Angeles auditorium when someone in the audience, who knew that Johnson's talent for invective surpassed even the General's, yelled out, "What about Otis?" Johnson, all prognathous scowl and murderous intent, took two steps forward and began extemporaneously. "In the city of San Francisco we have drunk to the very dregs of infamy," he said in a low rumble. "We have had vile officials, we have had rotten newspapers. But we have had nothing so vile, nothing so low, nothing so debased, nothing so infamous in San Francisco as Harrison Gray Otis. He sits there in senile dementia with gangrene heart and rotting brain, grimacing at every reform, chattering impotently at all things that are decent, frothing, fuming, violently gibbering, going down to his grave in snarling infamy. This

man Otis is the one blot on the banner of southern California; he is the bar sinister on your escutcheon. My friends, he is the one thing that all Californians look at when, in looking at southern California, they see anything that is disgraceful, depraved, corrupt, crooked, and putrescent—*that,*" concluded Johnson in a majestic bawl, "that is Harrison Gray Otis!"

The vitriol that Otis and his rivals hurled at one another, however, could be turned off instantly if some more important matter was at hand. In the avaricious social climate of southern California, that usually meant an opportunity to make money; and in the dry climate of southern California, money meant water.

The first sign something was afoot came in the weeks following the *Times*'s disclosure of Mulholland and Eaton's daring scheme, when Otis's newspaper took time out from its usual broadsides to laud the future of the San Fernando Valley, an encircled plain of dry, mostly worthless land on the other side of the Hollywood Hills. "Go to the whole length and breadth of the San Fernando Valley these dry August days," the paper editorialized on August 1. "Shut your eyes and picture this same scene after a big river of water has been spread over every acre, after the whole expanse has been cut up into five-acre, and in some cases one-acre, plots—plots with a pretty cottage on each and with luxuriant fruit trees, shrubs and flowers in all the glory of their perfect growth. . . ." Again on October 10, a so-called news story began, "Premonitory pains and twitches: The San Fernando Valley has caught the boom. It appears just about ready to break. . . ."

What was odd about this was that there was as yet no guarantee—at least none publicly offered by Mulholland—that the San Fernando Valley was going to receive any of the Owens Valley water. In the first place, the route of the aqueduct had not yet been disclosed; it might go through the valley, but then again it might not. Secondly, the voters had not even approved the aqueduct, let alone voted for a bond issue to finance it. Mulholland had been saying that the city had surplus water sufficient for only ten thousand new arrivals. If that was so, and if the city was expected to grow by hundreds of thousands during the next decade, where was this great surplus for the San Fernando Valley to come from? In those days, the valley was isolated from Los Angeles proper; it sat by itself far outside the city limits. In theory, the valley couldn't even *have* the city's surplus water, assuming there was any—it would be against the law.

The truth, which only a handful of people knew, was that William

Mulholland's private figures were grossly at odds with his public pronouncements; it was the same with his intentions. Despite his talk of water for only ten thousand more people, there was still a big surplus at hand. (During the eight years it would take to complete the aqueduct, in fact, the population of Los Angeles rose from 200,000 to 500,000 people, yet no water crisis occurred.) The crisis was, in large part, a manufactured one, created to instill the public with a sense of panic and help Eaton acquire a maximum number of water rights in the Owens Valley. Mulholland and Eaton had managed to secure water rights along forty miles of the Owens River, which would be enough to give the city a huge surplus for years to come. But Mulholland was not saying that he would *use* any of the surplus; in fact, he seemed to be going out of his way to assure the Owens Valley that he would not. For example, the proposed intake for the aqueduct had been carefully located downstream from most of the Owens Valley ranches and farms, so that they could continue to irrigate; Mulholland would later tell the valley people that his objective was simply to divert their unused and return flows.

In truth, Mulholland planned to divert every drop to which the city held rights as soon as he could. Like all water-conscious westerners, he lived in fear of the use-it-or-lose-it principle in the doctrine of appropriative rights. If the city held water rights that went unused for years, the Owens Valley people might successfully claim them back. But where would he allow the surplus to be used?

Privately, Mulholland planned to lead the aqueduct through the San Fernando Valley on its way to the city. In his hydrologic scheme of things, the valley was the best possible receiving basin; any water dumped on the earth there would automatically drain into the Los Angeles River and its broad aquifer, creating a large, convenient, nonevaporative pool for the city to tap. It provided, in a word, free storage. That it was free was critically important, because Mulholland, intentionally or not, had underestimated the cost of building the aqueduct, and to build a large storage reservoir in addition to the aqueduct would be out of the question financially. Even had it been feasible, Mulholland was deeply offended by the evaporative waste of reservoirs; he was much more inclined to store water underground.

Mulholland had an even more important reason for wanting to include the San Fernando Valley in his scheme. Under the city charter, Los Angeles was prohibited from incurring a debt greater than 15 percent of its assessed valuation. In 1905, that put its debt limit at

exactly $23 million, which was what he expected the aqueduct to cost. But the city already had $7 million in outstanding debt, which left him with a debt ceiling too low to complete the project. After coming this far—securing the water rights, organizing civic support—he wouldn't have the money to build it!

Mulholland, however, was clever enough to have thought of a way out of this dilemma. If the assessed valuation of Los Angeles could be rapidly increased, its debt ceiling would be that much higher. And what better way was there to accomplish this than to *add to the city*? Instead of bringing more people to Los Angeles—which was happening anyway—*the city would go to them.* It would just loosen its borders as Mulholland loosened his silk cravat and wrap itself around the San Fernando Valley. Then it would have a new tax base, a natural underground storage reservoir, and a legitimate use of its surplus water in one fell swoop.

Anyone who knew this, and bought land in the San Fernando Valley while it was still dirt-cheap, stood to become very, very rich.

The person who finally began to figure it all out was Henry Loewenthal, the editor of Otis's despised rival newspaper, William Randolph Hearst's *Examiner.* The *Examiner* had been skeptical of the aqueduct plan from the beginning, though it did not oppose it outright; Loewenthal's editorials merely made a point of questioning Mulholland's sense of urgency and, on occasion, his figures. But even such mild skepticism was more than enough to enrage Otis, who attributed Loewenthal's doubts to the fact that the *Times* had scooped the *Examiner* about the aqueduct story. "Anyone but a simpleton or a poor old has-been in his dotage would sing very low over a failure like that," snarled Otis in an editorial, "but the impossible Loewenthal insists on emphasizing his own incompetency."

Such invective simply instilled in Loewenthal a passionate urge to outscoop Otis, and, in the process, catch him with his hand in the till. There *must* be some hanky-panky, Loewenthal surmised. Otherwise why Otis's sudden interest in a desolate valley? And why did Otis's number-one enemy, E. T. Earl, rival publisher of the *Express*, seem as enthusiastic as Otis? In the past, Earl had opposed nearly anything Otis endorsed, and vice versa, as a simple matter of dignity. But now Otis, Earl, and virtually all the rival newspapers, except his own, were united on perhaps the most controversial issue Los Angeles had ever faced. Why? Loewenthal decided to send a couple of his top reporters to the courthouse in San Fernando to find out.

The co-conspirators hadn't even bothered to cover their tracks. They could have invented blind trusts, paper corporations, or some other ruse to conceal their identity; but there they were, caught in the open on an exposed plain.

On November 28, 1904—just six days after Joseph Lippincott was paid $2,500 to help steer his loyalties in the direction of Los Angeles—a syndicate of private investors had purchased a $50,000 option on the Porter Land and Water Company, which owned the greater part of the San Fernando Valley—sixteen thousand acres all told. Innocent enough. But the investors had then waited to consummate their $500,000 purchase until March 23, 1905—*the same day* that Fred Eaton had telegraphed the water commission that the option on the Rickey ranch in Long Valley was secured. On that day, as anyone who had access to Mulholland's thinking knew, Los Angeles was all but guaranteed 250,000 acre-feet of new water—an amount that would leave the city with a water surplus for at least another twenty years. And the only sensible place to use the surplus water was in the San Fernando Valley.

Was the timing mere coincidence? The names of the investors who made up the secret land syndicate strongly suggested that it was not. In fact, their identity had given Loewenthal the scoop of his dreams. The only way he could improve its impact was to wait for exactly the right moment to go to press.

Loewenthal knew that the San Francisco *Chronicle* was, in a vague way, on to the same story. He also knew the *Chronicle* was not nearly as methodical in its investigations as his paper, and would probably publish rumors without supporting facts. On August 22, just as Loewenthal supposed, the *Chronicle* ran a story, unsupported by evidence, to the effect that the Owens Valley aqueduct was somehow linked to a land-development scheme in the San Fernando Valley. Two days later, the *Times* derisively dismissed the allegations in an editorial which, to Loewenthal's delight, ran under the heading "Baseless Rumors." On that same morning, the *Examiner*'s story went to press.

The San Fernando land syndicate, the *Examiner* revealed, was composed of some of the most influential and wealthy men in Los Angeles. There was Moses Sherman, a balding school administrator from Arizona who had moved to Los Angeles and become a trolley magnate—one of the most ruthless capitalists in a city that was legendary for same. (By coincidence, Moses Sherman also sat on the board of water commissioners of Los Angeles; the syndicate could not have prayed for a better set of eyes and ears.) Then there was Henry Huntington, Sherman's implacable rival in the rush to monopolize the region's transportation system. There was Edward Harriman, the chairman of the Union Pacific Railroad and a rival of both Sherman and Huntington. There was Joseph Sartori of the Security Trust and Savings Bank, and *his* rival, L. C. Brand of the Title Guarantee and Trust Company. There was Edwin T. Earl, the publisher of the *Express;* William Kerckhoff, a local power company magnate; and Harry Chandler, Otis's son-in-law, the tubercular young man with the minister's face, the gambler's heart, and the executioner's soul. But Loewenthal reserved the best for last. The person who had signed the check securing the $50,000 option on the immense San Fernando property was the same person who, that very morning, had dismissed talk of such a nest of land speculators as lies—Brigadier General Harrison Gray Otis.

"This is the prize for which the newspaper persons . . . are working and the size of it accounts for their tremendous zeal," wrote Loewenthal, almost squealing with delight. "The mystery of the enterprise is how it happens that Messrs. Huntington and Harriman, who let no one into their [previous] land purchasing schemes, but who bought up everything for themselves, consented to let the others in." Loewenthal was, of course, enough of a cynic to know exactly why they had. The participants, taken together, represented the power establishment of southern California with an exquisite sense of proportion. Railroads, banking, newspapers, utilities, land development—it was a monopolists' version of affirmative action. Besides, William Kerckhoff was a prominent conservationist and friend of Gifford Pinchot, the chief of the U.S. Forest Service, whose influence with President Theodore Roosevelt could prove invaluable. Harriman's railroad owned a hundred miles of right-of-way along the aqueduct path that the city would need permission to cross, and Huntington owned the building that housed the regional headquarters of the Reclamation Service! Including Earl and Otis, the two feuding neighbors and publishers, was the master stroke. Like a couple of convicts bound together by a ball and chain, neither could betray the other without exposing himself.

The *Examiner*'s exposé had Harrison Gray Otis venting steam from both nostrils and ears, but he didn't dare look the accusations directly in the eye, so in the ensuing weeks he tried to hide behind "Mr. Huntington's" skirts, as if Huntington had been solely responsible for the syndicate and he—Otis—had been an innocent seduced

into joining, as a fresh young wayward girl is seduced into sex. Where Otis couldn't weasel out, he blazed away. "Had Hearst's . . . yellow atrocity been the first to announce the plans of the Water Board, it would have claimed the project as its own conception and inauguration," he raved.

> Its front page would have shrieked in poster type about "The *Examiner*'s solution to the water problem," and the public would have been deafened with yawp about how the *Examiner* "discovered Owens River," laid out plans to bring the water to Los Angeles and showed the engineers how to build the aqueduct. The line would have been dubbed, "The Great Hearst Aqueduct," or "The *Examiner* Pipe-line," and Loewenthal the Impossible would have been the Moses of Los Angeles, who smote the rock of Mount Whitney with the rod of his egotism and caused the water to flow abundantly. Deprived of the opportunity for mendacious self-glorification . . . the foolish freak vents its impotent rage in snarling under its breath. . . . The insane desire of the *Examiner* to discredit certain citizens of Los Angeles has at last led it into the open as a vicious enemy of the city's welfare, its mask of hypocrisy dropped and its convulsed features revealed.

In the end, though, the broadsides between the rival papers were all sound and fury, signifying not much. Ever since their foremost minister had fled prosecution for land fraud, the citizens of Los Angeles had grown accustomed to scandal, and the city's temperamant was quite comfortable with graft. Henry Loewenthal would later speak of a "spirit of lawlessness that prevails here, that I have never seen anywhere else." Nature was also smiling on the Owens Valley scheme. On August 30, a week before the scheduled referendum on the aqueduct, the temperature climbed to 101 degrees. The city had gone its usual four months without rain, and there would likely be two rainless months to come. On September 2, Hearst himself rode down from San Francisco in his private railroad car for a quiet palaver with the city's oligarchs. As men of commerce, they understood each other, and Hearst had recently been bitten by the presidential bug; if he was truly serious about the White House, he could use their help. When the meeting was over, the publisher strode into the *Examiner*'s offices, barked Loewenthal into acquiescence, and personally wrote an editorial recommending a "yes" vote. Samuel T. Clover's *Daily News*, the only paper on record opposing the aqueduct, lobbed a potential bombshell when it reported that the city's workers, under cover of darkness, were dumping water out of the reservoirs into the Pacific to make them go dry, thus assuring a "yes" vote. But Mulholland's lame explanation that they had merely been "flushing the system" was widely believed.

On September 7, 1905, the bond issue passed, fourteen to one.

To the Los Angeles *Times*, it was a "Titanic Project to Give the City a River." To the Inyo *Register*, it was a ruthless scheme in which "Los Angeles Plots Destruction, Would Take Owens River, Lay Lands Waste, Ruin People, Homes, and Communities." That sensational headline actually belied the feeling in the valley somewhat. Few people thought, at first, that things would be so bad. A number of the ranchers had made out well selling their water rights, and they would be able to keep their water for years, until the aqueduct was built. The city had bought up nearly forty bank miles of the river and would probably dry up the lower valley, but the upper valley, except for Fred Eaton's purchase of the Rickey estate, had been left mostly intact. When Eaton moved up from Los Angeles as promised and began his new life as a cattle rancher, the valley people were reassured. After a while, they even began to fraternize with him.

Mulholland, meanwhile, had begun his own campaign to mollify the people of the valley, a campaign in which he was joined, somewhat more bellicosely, by the Los Angeles *Times*, which featured headlines such as "Ill-feeling Ridiculous" and "Owens Valley People Going Off at Half-Cock." Inyo County's Congressman, Sylvester Smith, was an influential member of the House Public Lands Committee, and since the city would have to cross a lot of public land it would have to deal with him. Meanwhile, Theodore Roosevelt, the bugaboo of monopolists, had just been elected to a second term. He would never let the Owens Valley die for the sake of Henry Huntington, Harrison Gray Otis, and their cronies in the San Fernando Valley syndicate. On top of all this, the Owens was a generous desert river, with a flow sufficient for two million people. It was laughable to think of Los Angeles growing that big, so even under the worst of circumstances there would be water enough for all. The reasoning was very sensible, the logic very sound, and it was fatefully wrong.

There was one person who knew that it was. She was Mary Austin, the valley's literary light, who had published a remarkable collection of impressionistic essays entitled *Land of Little Rain* that won her recognition around the world. In the course of her writing

she had spent long hours with the last of the Paiutes, the Indians who had lived in the valley for centuries until they were instantly displaced by the whites. The Paiutes showed her what no one else saw—that order and stability are the most transient of states, that there is rarely such a thing as a partial defeat. In a subsequent book, a novella about the Owens Valley water struggle called *The Ford*, she wrote about what happens when "that incurable desire of men to be played upon, to be handled," runs up against "that Cult of Locality, by which so much is forgiven as long as it is done in the name of the Good of the Town." Mary Austin was convinced that the valley had died when it sold its first water right to Los Angeles—that the city would never stop until it owned the whole river and all of the land. One day, in Los Angeles for an interview with Mulholland, she told him so. After she had left, a subordinate came into his office and found him staring at the wall. "By God," Mulholland reportedly said, "that woman is the only one who has brains enough to see where this is going."

No sooner had the city gotten the aqueduct past the voters than it faced the more difficult task of getting it past Congress. Most of the lands it would traverse belonged to the government, so the city would have to appeal for rights-of-way. The Reclamation project, though moribund, was still not officially deauthorized, which was, at the very least, a nuisance to the city. But deauthorization could prove to be even worse, because tens of thousands of acres that the Service had withdrawn would return to the public domain and be available for homesteading. Homesteading in California was another name for graft; half of the great private empires were amassed by hiring "homesteaders" to con the government out of its land. If the withdrawn lands went back to the public domain, every available water right would be coveted by speculators for future resale to the city. Mulholland seemed to believe that the city would never require more water, but others, notably Joseph Lippincott, thought him wrong. The withdrawn lands had to be kept off-limits at all costs.

The instrument for achieving this wishful goal was a bill introduced at the behest of Mulholland's chief lawyer, William B. Matthews, by Senator Frank Flint of California, a strong partisan of Los Angeles and urban water development in general. The bill would give the city whatever rights-of-way it needed across federal lands and hold the withdrawn lands in quarantine for another three years, which would presumably give the city enough time to purchase whatever additional water or land it might need. Flint's bill reached the Senate

floor in June of 1906, and flew through easily. Its next stop, however, was the House Public Lands Committee, where it crashed into Congressman Sylvester Smith. Smith was an energetic and charming politician, a former newspaper publisher from Bakersfield with a sense of public duty and enough money to maintain an ironclad set of principles. The idea of Harrison Gray Otis and Henry Huntington becoming vastly richer than they already were on water abducted from his district inflamed his well-developed sense of outrage. Smith knew what he was up against, however, and realized that his best defense was to appear utterly reasonable. As a result, he said that he was willing to acknowledge the city's need for more water, that he was willing to let it have a substantial share of the Owens River, and that he was willing to grant the aqueduct its necessary rights-of-way. He was not willing, however, to do any of this in the way the city wanted. He suggested a compromise. Let the Reclamation Service build its project, including the big dam in Long Valley—a dam that could store most of the river's flow. The water could then be used first for irrigation, and because of the valley's long and narrow slope, the return flows would go back to the lower river, where they could be freely diverted by Los Angeles. The city would sacrifice some of the water it wanted, the valley would sacrifice some irrigable land. It was, Smith argued, an enlightened plan: sensible, efficient, conceived in harmony. It was the only plan under which no one would suffer. He would add only two stipulations: the Owens Valley would have a nonnegotiable first right to the water, and any surplus water could not be used for irrigation in the San Fernando Valley.

Smith's proposal was obviously anathema to the San Fernando land syndicate, and to the city as well. The chief of the Geologic Survey doubted that it would work, and even if it did, for the West's largest city to settle for leftover water from a backwater oasis of fruit and cattle ranchers was, to say the least, humiliating. The city might have to beg for extra water in times of drought or go to court to try to condemn it. If the Owens Valley held on to its first rights and expanded its irrigated acreage, Los Angeles might soon have to look for water again, and the only river in sight was the Colorado, a feckless brown torrent in a bottomless canyon which the city could never afford to dam and divert on its own. Smith's proposal led directly to one unthinkable conclusion: at some point in the relatively near future, Los Angeles would have to cease to grow.

What was William Mulholland's response? He took a train to

Washington, held a summit meeting with Smith and Senator Flint, and decided to do what any sensible person would have done: he accepted the compromise.

If it was a smokescreen, as it appears to have been, it was a brilliant move. (Mulholland seems to have been a far better political schemer than he was a hydrologist and civil engineer.) For one thing, it put Sylvester Smith off guard, making him believe that the reconciliation he wanted to effect was a success. For another, it gave Los Angeles some critical extra time to plead its case before the two people who might help the city get everything it wanted: the President of the United States, Theodore Roosevelt, and the man on whom he leaned most heavily for advice—Gifford Pinchot.

Pinchot was the first director of Roosevelt's pet creation, the Forest Service, but that was only one of his roles. He was also the Cardinal Richelieu of TR's White House. Temperamentally and ideologically, the two men fit hand in glove. Both were wealthy patricians (Pinchot came from Pittsburgh, where his family had made a fortune in the dry-goods business); both were hunters and outdoorsmen. Though their speeches and writings rang of Thomas Jefferson, at heart Pinchot and Roosevelt seemed more comfortable with Hamiltonian ideals. Roosevelt liked the Reclamation program because he saw it as an agrarian path to industrial strength, not because he believed—as Jefferson did—that a nation of small farmers is a nation with a purer soul. Pinchot espoused forest conservation not because he worshiped nature like John Muir (whom he privately despised) but because the timber industry was plowing through the nation's forests with such abandon it threatened to destroy them for all time. Roosevelt was a trust-buster, but only because he feared that unfettered capitalism could breed socialism. (For evidence he only had to look as far as Los Angeles, where Harrison Gray Otis was whipping labor radicals into such a blind, vengeful froth that two of them blew up his printing plant in 1910 and killed twenty of their own.) The conservation of Roosevelt and Pinchot was utilitarian; their progressivism—they spoke of "the greatest good for the greatest number"—had a nice ring to it, but it also happens to be the progressivism of cancer cells.

On the evening of June 23, Senator Frank Flint left his offices on Capitol Hill for a late meeting with the President. It was a hot and muggy night, and Roosevelt seemed in an irritable mood. Behind him, however, stood a man who seemed a model of coolness and decorum, Gifford Pinchot. Flint, who had just received an intensive

coaching from Matthews and Mulholland, began a passionate appeal.

Smith's so-called compromise, he said, was nothing less than capitulation. Los Angeles had agreed only in despair; it was going to run out of water any day and it couldn't afford to be filibustered to death in Congress. Smith's prohibition on using surplus water in the San Fernando Valley left the city no choice but to leave any surplus in the Owens Valley or dump it in the ocean. In the first case, water rights the city had purchased at great expense might revert to the valley under the doctrine of appropriative rights; in the second case, the city would violate the California constitution, which forbade "inefficient use" of water. The real estate bust of 1889 had depopulated the city by one-half. Imagine what a water famine would do! All of the city's actions in the Owens Valley had been legitimate. It had paid for its water, fair and square, and it wanted to let the valley survive. But there was only so much water, and it was a hundredfold—a thousandfold, said Smith—more valuable to the state and the nation if it built up a great, strong, progressive city on America's weakly defended western flank instead of maintaining a little agrarian utopia in the high desert.

It was a rousing speech—the kind of speech that Roosevelt liked to hear. It was, in fact, just the kind of speech *he* would have made.

Roosevelt turned to his other visitor. "What do you think about this, Giff?"

"As far as I am concerned," Pinchot answered coolly, "there is no objection to permitting Los Angeles to use the water for irrigation purposes."

It was as simple as that. Roosevelt did not even bother to call in the Interior Department's lawyers or the Geologic Survey's hydrologists to ask whether Flint's argument was sense or nonsense. He never invited Sylvester Smith to give his side of the argument. He didn't even tell Smith or his own Interior Secretary, Ethan Hitchcock, about his decision; they found out about it secondhand a day and a half later. Hitchcock, a wealthy, principled man in the style of Sylvester Smith, had been profoundly embarrassed by the two-faced behavior of his employee J. B. Lippincott, and had been looking for a way to make amends to the Owens Valley. Flabbergasted and infuriated by the President's decision, Hitchcock raced over to the White House, where Roosevelt refused to hear him. Instead, he forced him to suffer the humiliation of helping him draft a letter explaining "*our* attitude in the Los Angeles water supply question." As Hitchcock stood by, impotent and enraged, Roosevelt wrote, "It is a hundred

or a thousandfold more important to state that this water is more valuable to the people of Los Angeles than to the Owens Valley." The words could have come right out of William Mulholland's mouth.

The Otis-Sherman-Huntington-Chandler land syndicate was, potentially, enough of an embarrassment to Roosevelt's antimonopolist image that he felt compelled to add an amendment to Flint's bill prohibiting the city from reselling municipal water for irrigation use. In the opinion of the House Public Lands Committee, however, the stipulation was "meaningless." "This water will belong absolutely to Los Angeles," said the bill's sponsor, echoing the sense of the committee, "and the city council can do as it pleases. . . ." Which it would.

Roosevelt's support for Flint's bill was only the beginning of the aid and comfort he was to give to the most powerful city on the Pacific Coast. When the Reclamation Service officially annulled the Owens Valley Project in July of 1907, the hundreds of thousands of acres it had withdrawn were not returned to the public domain for homesteading, on Roosevelt's orders—just as Mulholland wished. It was a decision without precedent, and its result was that the handful of rich members of the San Fernando syndicate could continue using the surplus water in the Owens River that thousands of homesteaders might have claimed instead. Ethan Hitchcock had promised that such a decision, which he already foresaw when Roosevelt closed ranks behind Los Angeles, would be made over his dead body, but Roosevelt spared his life by firing him first. And when the city, immensely satisfied with the result, asked Pinchot whether he couldn't go a step further, the chief of the Forest Service decided to include virtually all of the Owens Valley in the Inyo National Forest.

The Inyo National Forest! With six inches of annual rainfall, the Owens Valley is too dry for trees; the only ones there were fruit trees planted and irrigated by man, some of which were already dying for lack of water. This didn't seem to bother Pinchot, nor did the fact that his action appears to have been patently illegal. The Organic Act that created the Forest Service says, "No public forest reservation shall be established except to improve and protect the forest . . . or for the purpose of creating favorable conditions of water flow, and to provide a continuous supply of timber for the use and necessities of the United States; but it is not the purpose of the these provisions . . . to authorize the inclusion . . . of lands more valuable for the mineral therein, *or for agricultural purposes,* than for forest purposes" (emphasis added). The valley's irrigated orchards were infinitely more valuable than the barren flats and scattered sagebrush that characterized the new national forest, so Pinchot's action was incontrovertibly a violation of the legislation that put him in business. He lamely countered that he was simply acting to protect the quality of Los Angeles' water; but since much of the treeless acreage he included in the Inyo National Forest lay *below* the intake of the aqueduct, it was a flimsy excuse. As a formality, Pinchot was obliged to send an investigator to the Owens Valley to recommend that he do what he had already made up his mind to do. He sent three before he found one who was willing to go along. "This is not a government by legislation," lamented Sylvester Smith on the Senate floor, "it is a government by strangulation."

In July of 1907, with the reclamation project in its grave and the Owens Valley imprisoned inside a national forest without trees, Joseph Lippincott resigned from the Reclamation Service and immediately went to work, at nearly double his government salary, as William Mulholland's deputy. He remained utterly unchastised. "I would do everything over again, just exactly as I did," he said as he departed.

The one thing that no one seems to have thought about in all this was that the people of Owens Valley were only human, and there was just so much they could take.

The aqueduct took six years to build. The Great Wall of China and the Panama Canal were bigger jobs, and New York's Catskill aqueduct, which was soon to be completed, would carry more water, but no one had ever built anything so large across such merciless terrain, and no one had ever done it on such a minuscule budget. It was as if the city of Pendleton, Oregon, had gone out, by itself, and built Grand Coulee Dam.

The aqueduct would traverse some of the most scissile, fractionated, fault-splintered topography in North America. It would cover 223 miles, 53 of them in tunnels; where tunneling was too risky, there would be siphons whose acclivities and declivities exceeded fifty-grade. The city would have to build 120 miles of railroad track, 500 miles of roads and trails, 240 miles of telephone line, and 170 miles of power transmission line. The entire concrete-making capacity of Los Angeles was not adequate for this one project, so a huge concrete plant would have to be built near the limestone deposits in the grimly arid Tehachapi Mountains. Since there was virtually no water along the

entire route, steampower was out of the question and the whole job would be done with electricity; therefore, two hydroelectric plants would be needed on the Owens River to run electric machinery that a few months earlier had not even been invented. The city would have to maintain, house, and feed a work force fluctuating between two thousand and six thousand men for six full years. And it would have to do all this for a sum equivalent, more or less, to the cost of one modern jet fighter.

The workers would have to supply their own hard-shelled derby hats, since hard hats did not yet exist, and even if they had the city couldn't afford them. They would live in tents in the desert without liquor or women—although both were available nearby and ended up consuming most of the aqueduct payroll. They would eat meat that spoiled during the daytime and froze at night, since the daily temperature range in the Mojave Desert can span eighty degrees. Nonetheless, the men would labor on the aqueduct as the pious raised the cathedral at Chartres, and they would finish under budget and ahead of schedule. If you asked any of them why they did it, they would probably say that they did it for the chief.

The loyalty and heroics that Mulholland inspired in his workers were a perpetual source of wonder. For six years he all but lived in the desert, patrolling the aqueduct route like a nervous father-to-be pacing a hospital waiting room—giving advice, offering encouragement, sketching improvised solutions in the sand. In sandstorms, windstorms, snowstorms, and terrifying heat, his spirits remained contagiously high. Pilfering, which can add millions to the cost of a modern project, was almost unknown. Although the pay was terrible—Mulholland simply couldn't afford anything more—he initiated a bonus system that shattered records for hard-rock tunneling. (The men were in a race with the world's most illustrious tunnelers, the Swiss, who were digging the Loetchberg Tunnel at the same time.)

Throughout the entire time, Mulholland showed the better side of a complex and sometimes heartless character. If he wandered through a tent city and discovered that a worker's wife had just had a baby, he would stop long enough to show her the proper way to change a diaper. He would sit down and eat with the men and complain louder than anyone about the food. In lieu of newspapers, his wit was breakfast conversation. Once, when a landslide sealed off a tunnel with a man still inside, Mulholland arrived to check on the rescue effort.

"He's been in there three days, so I don't suppose he's doing so well," said the supervisor, a mirthless Scandinavian named Hansen.

"Then he must be starving to death," said Mulholland.

"Oh, no, sir," said the supervisor. "He's getting something to eat. We've been rolling him hard-boiled eggs through a pipe."

"Have you?" said Mulholland archly. "Well, then, I hope you've been charging him board."

"No, sir," said the flustered Hansen. "But I suppose I should, eh?"

And Los Angeles loved Mulholland even more than the men, because its reward would be infinitely greater than theirs—to the thirsty city, he was Moses. And he was that greater rarity, a Moses without political ambition. When a move was afoot a few years later to run him for mayor, Mulholland dismissed it with a typical bon mot: "I would rather give birth to a porcupine backwards than become the mayor of Los Angeles." But nothing that William Mulholland ever said or did quite matched the speech he gave when, on November 5, 1913, the first water cascaded down the aqueduct's final sluiceway into the San Fernando Valley. It had been a day of long speeches and waiting, and the crowd of forty thousand people was restless. Mulholland himself was exhausted; his wife was very ill, and he had slept only a few hours in several nights. When the white crest of water finally appeared at the top of the sluiceway and cascaded toward the valley, an apparition in a Syrian landscape, Mulholland simply unfurled an American flag, turned toward the mayor, H. H. Rose, and said, "There it is. Take it."

It was the high point of Mulholland's life and career.

Very little of the water that was, according to Theodore Roosevelt, a hundred or a thousandfold more important to Los Angeles than to the Owens Valley would go to the city for another twenty years. All through the teens and early twenties, the San Fernando Valley used three times as much aqueduct water as the city itself, the vast part of it for irrigation. During one particularly wet year, every drop of the copious flow of the aqueduct went to irrigate San Fernando Valley crops; the city took nothing at all. Understandably, this news enraged the people of the Owens Valley. For Los Angeles to take their water to fill their washtubs and water glasses was one thing. For it to turn their valley back to desert so that another desert valley, owned by rich monopolists, could bloom in its place was quite another.

The teens and early twenties, however, were extraordinarily wet years—the same wet years that caused the Reclamation Service to overestimate dramatically the flow of the Colorado River—and there

was water enough for everyone. The irrigated acreage in the San Fernando Valley rose from three thousand acres in 1913—the year both the completion of the aqueduct and the annexation of the valley occurred—to seventy-five thousand acres in 1918. Even so, the Owens Valley lost few of its orchards and irrigated pasturelands, and the new railroad to Los Angeles and the silver mine at Tonopah fed in enough wealth to allow the town of Bishop to build a grand American Legion Hall and Masonic Temple, those cathedrals of the rural nineteenth century.

The same uncharacteristically engorged desert river that was keeping the Owens Valley green was responsible, in Los Angeles, for the most transfixing change. Santa Monica Boulevard, once a dry dusty strip, became an elegant corridor of palms; in Hollywood, where the motion picture industry had risen up overnight, outdoor sets resembled New Guinea; and since most Los Angeleans were immigrants from the Middle West, every bungalow had a green lawn. The glorious anomaly of a fake tropical city with a mild desert climate brought people from everywhere. Dirt farmers came from Arkansas; Aldous Huxley moved from England. The Chamber of Commerce, an Otis creation, kept them coming. They arrived on the Union Pacific, a Harriman railroad, and once they were there, the *Times*, an Otis and Chandler newspaper, urged everyone to settle in the San Fernando Valley, an Otis and Chandler property. Few could afford automobiles, so they got around on Sherman and Huntington trolley cars between Sherman-and-Huntington-built homes and Sherman and Huntington resorts in the San Gabriel and San Bernardino Mountains.

As Otis never tired of saying, this was the promised land. All things were possible; anyone could get rich; the cardinal sin was doubt. During the nadir of the Depression, when the city was invaded by homeless Okies so destitute they sat hollow-eyed in the parks and gnawed on the crusts thrown out for the pigeons, the *Times* sent them this holiday greeting: "Merry Christmas! Look pleasant! Chin up! A gloomy face never gets a good picture. The great battles are fought by Caesars and their fortunes, by Napoleons and their stars. Faith still does the impossible! Merry Christmas! Catch the tempo of the times. You have your life before you, and, if you are growing old, the greatest adventure of all is just around the corner. Earth may have little left in reserve, but heaven is ahead! Merry Christmas!" The only greater fraud than such blather from Otis and Chandler's newspaper was the overflowing desert river on which all depended.

In the West, drought tends to come in cycles of about twenty years, and the next drought arrived on schedule. The years 1919 and 1920 were a premonition; rainfall was slightly below average. It rose back to average—a measly fourteen inches—in 1921 and went slightly over that in 1922. Then it crashed. Ten inches in 1923; six inches in 1924; seven inches in 1925. In Florida, a seven-inch rainstorm may occur two or three times a year, but Los Angeles was trying to look like Florida, and grow even faster, on a fifth of its precipitation, and when the drought struck it kept going on a tenth. Mulholland had expected 350,000 people by 1925, but had 1.2 million on his hands instead. The city was growing fifteen times faster than Denver, eleven times faster than New York. And though the city at its core had become a metropolis, Los Angeles County led the nation in the value of its agricultural output. All of this agriculture depended on irrigation, which, together with the phenomenal urban growth, depended on a river draining Mount Whitney two hundred miles away.

As the drought intensified, the Owens River moved perilously close to overappropriation. The problem was not only that the river was small, but also that no carryover storage existed—nothing but some small receiving reservoirs around the basin and the snowfields in the Sierra. The Los Angeles Aqueduct was essentially a run-of-the-river project. If the river didn't run, the city collapsed.

If the city and the Owens Valley were to continue sharing the river, carryover storage would have to be built; otherwise, one place or the other would lose its water during a drought. Mulholland, of course, knew this, but still refused to build the dam at Long Valley. He blamed it on the city's fragile finances, but that was a poor excuse; the real reason was that he and his old friend Eaton had had a nasty falling-out.

Fred Eaton had not even bothered to attend the dedication of the aqueduct in 1913, though its existence was owed mainly to him. He had bought the initial water rights the city needed with his own money, taking a considerable risk; had the voters failed to approve the bond referendum, he would have been drowning in both unusable water and debt. The city had paid him quite adequately for the right, but it had not made him a multimillionaire. Originally, Eaton had hoped to operate the Owens Valley end of the aqueduct as a private concession, which could have made him incredibly rich, but Frederick Newell and Roosevelt had dashed that dream, insisting that the project be municipally owned from end to end. Eaton had also had some bad luck in the cattle business, and had to switch ignominiously to

chickens. He was sixty-five years old; it was time things finally went right. The one item of real value Eaton owned was the reservoir site on the ranch he had purchased from Thomas Rickey. Ideally, a dam built at the site ought to be 140 feet high, the approximate depth of the gorge; that would create a reservoir large enough to provide for both the city and the valley during all but the worst droughts. A damsite of such importance to the city—a site which, if developed, would drown a good portion of his ranch—was worth a lot of money, as far as Eaton was concerned. When Mulholland asked him what his price was, Eaton said $1 million. Mulholland, who seemed personally indifferent to money (though he was reputedly the highest-paid civil servant in California), laughed him off. Time and time again he asked Eaton to accept a reasonable offer—$500,000, perhaps, or a little more—and each time his offer was more angrily refused. By 1917, the two old friends were no longer on speaking terms.

As the drought intensified, Mulholland begged the city fathers to end their abject deification of growth. The only way to solve the city's water problem, he grumbled aloud, was to kill the members of the Chamber of Commerce. When he was ignored, he began to regulate irrigation practices in the San Fernando Valley. First he forbade the irrigation of alfalfa, a low-value, water-demanding crop; then he prohibited winter planting. When these measures proved inadequate, he swallowed his disdain for surface storage and began building reservoirs in the basin—first the Hollywood Reservoir, then a much larger dam in San Francisquito Canyon, a deep fissure in the shaky, shaly topography of the Santa Paula hills.

With the tens of thousands of people pouring in each year, everything was a stopgap measure. By the early 1920s, Mulholland was already lobbying for an aqueduct from the Colorado River. This, however, put him on a collision course with Harry Chandler, who owned 860,000 acres in Mexico that relied on the Colorado, and who was so greedy that, despite his enormous wealth, he put the interests of his Mexican holdings above the welfare of the city he had created out of whole cloth. Chandler's opposition, together with fierce feuding among the Colorado River Basin states, kept the Boulder Canyon Project Act, which would create the storage reservoir that any Colorado River aqueduct would need, bottled up for years. Frustrated at every turn, Mulholland reached the end of his tether sometime in 1923. The only answer, he decided, was to do what Mary Austin had predicted the city would ultimately do—dry the Owens Valley up.

The trouble began where troubles usually begin, in the heart. Wilfred and Mark Watterson, the brothers who symbolized the Owens Valley's mortmain and its success, had a young uncle named George, only ten years older than Wilfred. George's attitude toward his nephews was less avuncular than competitive. Somehow, in competition, George always lost. When Wilfred and George had filed rival claims on a mining right, Wilfred won. George had always wanted to own the first automobile in the valley, but one day he looked down the street and saw Wilfred drive up in a yellow Stanley Steamer, mobbed by adoring crowds. Wilfred and Mark were treasurer of this, president of that; George Watterson was not even a has-been—he was a never-was.

George Watterson had an ally in bitterness. Some years earlier, a lawyer with an adventuresome bent named Leicester Hall had wandered into the Owens Valley from Alaska, taken one look at Wilfred and Mark's sister Elizabeth, and fallen helplessly in love. Elizabeth, however, had spurned him and married Jacob Clausen, Lippincott's former assistant—a symbol, like the Watterson brothers, of resistance to Los Angeles. The Owens Valley was a gossipy place, and the hatred that George Watterson felt for his nephews and the bitterness that Hall felt toward Jacob Clausen were well known. The city had its agents in the valley, and they had ears. When William Mulholland invited George Watterson, Hall, and their friend William Symons down for dinner at his club one evening, they were happy to come.

The tactic was the old reliable one: the lightning strike. Symons was the president of the McNally Ditch, which held the oldest and largest water right among all the irrigation cooperatives in the valley. Hall and George Watterson were officers in the Bishop Creek Ditch and the Owens River Canal Company. On March 15, 1923, the three men returned to the valley and went immediately to work. "Leave none of the ranchers out," Mulholland had told them. "We want them all." Within twenty-four hours, Watterson, Symons, and Hall owned options on more than two-thirds of the McNally Ditch's water rights. They had paid as much as $7,500 per cubic second-foot of water, and the total cost to the city was more than $1 million—the price Fred Eaton had wanted for access to his damsite.

The size and length of an irrigation ditch depend critically on the number of people who use it. Since all the irrigators must spend a substantial amount of time maintaining it—clearing out weeds,

desilting it, repairing earthslides—losing just a few farmers can put a terrible burden of responsibility on those who remain. So many farmers who belonged to the McNally Ditch had sold out that the cooperative was quickly put out of its misery; those who remained couldn't possibly maintain it by themselves, so ultimately they would have to sell out, too. By the time the three men moved on the other ditch companies, however, pockets of resistance had formed, and they had to seek out the more avaricious or vulnerable souls. Hall had managed to raid the confidential files of the collective ditch companies, making off with critical information about who was in financial trouble, who was a poor farmer, who was inclined to move on. He and his collaborators, therefore, didn't waste much time on people who were unlikely to yield to temptation; they knew who would. But their strategy—a strategy of division and attrition—was especially cruel, not only because it placed an even larger burden of responsibility on the farmers and ranchers who held out, but because it pitted neighbor against neighbor, wife against husband, brother against brother.

Meanwhile, the master strategist, off in Los Angeles, was sixty-nine years old and a changed man. Thirty years earlier, Mulholland had spent his idle hours in a cabin at one of the city's outlying reservoirs, reading the classics and planting poplars. When the city had first talked about tapping the Owens River, his concern about the valley's welfare led him to suggest that the city plant millions of trees which the residents could sell for firewood to the barren mining camps in Nevada—until someone informed him that so many trees would suck up enough groundwater to bleed the river dry. In his later years, however, the William Mulholland who had read Shakespeare and quoted Alexander Pope was hardly recognizable. No person ever put his imprint on an agency as strongly as Mulholland left his on the Los Angeles Department of Water and Power, and that agency was now using secret agents, breaking into private records, and turning neighbors into mortal foes. And, worst of all, Mulholland was ignoring a solution that would have satisfied everyone—a dam at Long Valley—out of petty niggardliness and almost fanatical pride.

In 1980, there were few people still alive who remembered Mulholland, but one who did was Horace Albright, the director of the National Park Service under Herbert Hoover. Albright could no longer remember the year—he was eighty-two—but it was probably 1925 or 1926, and he was a young park superintendent invited to attend a testimonial dinner for Senator Frank Flint, the man who had engineered the dubious federal decisions that allowed the Owens Valley aqueduct to be built. Albright was seated at Mulholland's table, a couple of chairs away, and midway through dinner he felt a rough tap on his shoulder.

"You're from the Park Service, aren't you?" Mulholland demanded more than asked.

"Yes, I am," said Albright. "Why do you ask?"

"Why?" Mulholland said archly. "Why? I'll tell you why. You have a beautiful park up north. A majestic park. Yosemite Park, it's called. You've been there, have you?"

Albright said he had. He was the park's superintendent.

"Well, I'm going to tell you what I'd do with your park. Do you want to know what I would do?"

Albright said he did.

"Well, I'll tell you. You know this new photographic process they've invented? It's called Pathé. It makes everything seem lifelike. The hues and coloration are magnificent. Well, then, what I would do, if I were custodian of your park, is I'd hire a dozen of the best photographers in the world. I'd build them cabins in Yosemite Valley and pay them something and give them all the film they wanted. I'd say, 'This park is yours. It's yours for one year. I want you to take photographs in every season. I want you to capture all the colors, all the waterfalls, all the snow, and all the majesty. I especially want you to photograph the rivers. In the early summer, when the Merced River roars, I want to see that.' And then I'd leave them be. And in a year I'd come back, and take their film, and send it out and have it developed and treated by Pathé. And then I would print the pictures in thousands of books and send them to every library. I would urge every magazine in the country to print them and tell every gallery and museum to hang them. I would make certain that every American saw them. And then," Mulholland said slowly, with what Albright remembered as a vulpine grin, "and then do you know what I would do? I'd go in there and build a dam from one side of that valley to the other and *stop the goddamned waste*!"

"It was the tone of his voice that surprised me," Albright said. "The laughingly arrogant tone. I don't think he was joking, you see. He was absolutely convinced that building a dam in Yosemite Valley was the proper thing to do. We had few big dams in California then. There were hundreds of other sites, and there were bigger rivers than the Merced. But he seemed to want to shake things up, to outrage me. He almost *wanted* to destroy."

It was the same tone, the same bitter and unreasoning quarrelsomeness, that Mulholland displayed when a reporter from the *Times* asked him why there was so much dissatisfaction in the Owens Valley. "Dissatisfaction in the valley?" said Mulholland mockingly. "Yes, a lot of it. Dissatisfaction is a sort of condition that prevails there, like foot and mouth disease." It was the same unreasoning rage that made him say, when his war of attrition against the Owens Valley had finally caused events to take a drastic turn for the worse, that he half regretted the demise of so many of the valley's orchard trees, because now there were no longer enough live trees to hang all the troublemakers who lived there.

Trees or no trees, that George Watterson, Leicester Hall, and William Symons had not yet been lynched themselves said something about the valley's self-restraint. Symons and Watterson had prudently taken to carrying sidearms, but, aside from an occasional curse or jeer, they were left alone. The valley thought it had a better means of taking revenge on the city than assassinating its agents. Soon after the McNally Ditch coup was engineered, the ditch companies that still had control of their water began opening their headgates and letting water flood uselessly over their fields. Before long, only a trickle was reaching the intake of the aqueduct. Mulholland demanded that the diversions stop, but the farmers refused. In exasperation, he tried a bit of double psychology: he sent more purchasing agents to reinforce Watterson, Symons, and Hall, and at the same time sent his attorney, William Matthews, to meet with the ranchers to see if the matter could still come to an amicable settlement. Just hours before Matthews was scheduled to sit down with the ditch companies, however, Mulholland went into one of his sudden fits of anger and telephoned his maintenance crews to demolish the intake of the largest diverter, the Big Pine Canal.

The reaction was instantaneous. The leaders of the Big Pine Company were the worst people Mulholland could have chosen to antagonize: the Watterson brothers, a resort operator and speculator named Karl Keough, and Harry Glasscock, the incendiary editor of the *Owens Valley Herald*. As soon as news arrived of what was happening, a posse of twenty men, bristling with guns, roared out to the canal intake. As guns were trained on Mulholland's crew, the rest of the men dumped their equipment into the Owens River. The valley mood veered suddenly from bitterness to wild exuberance. "Los Angeles, it's your move now," exulted the Big Pine *Citizen*. And yet the Big Pine farmers

were soon to prove as indifferent to the valley's fate as the members of the McNally Ditch. When Mulholland shrewdly responded with ever higher offers for the cooperative's water rights, a majority (not including the Watterson brothers) finally agreed to sell out for a price of $15,000 per second-foot, twice what the city had paid for the McNally Ditch rights. Mulholland was jubilant, but victory carried a heavy price. To satisfy his vendetta against his oldest friend, he had now spent twice what the Long Valley damsite would have cost, and made himself evil incarnate throughout an entire valley as well.

As the farmers who held out felt increasingly alone, their methods grew more and more violent. On May 21, 1924, a group of men "broke" into the Watterson brothers' warehouse, "stole" three cases of dynamite, and blew a large section of the aqueduct to smithereens. From that moment on, William Mulholland refused to refer to anyone in the Owens Valley by any other name than "dynamiter." Then, in August, Leicester Hall, who had been warned to stay away forever, returned to the valley and was abducted from a restaurant as he ate. He was driven blindfolded to a road's end, where he found himself facing a grim-looking group of men and a noose strung over a tree. Hall saved himself by uttering the Freemason's distress call; there were so many Masons among the valley population that one was in the gang of would-be lynchers, and he managed to talk the others out of murder. But the dynamitings continued. When the Department of Water and Power released a report that recommended "destroying all irrigation"—those were the exact words—in the valley, and it turned out that the main author was Joseph P. Lippincott, the response was a fresh series of blasts. Glasscock's paper was now openly counseling sabotage. The Ku Klux Klan, sensing a perfect battle stage between "Hollywood"—which was to say, cities, big business, liberalism, and Jews—and the small-town, revanchist values it cherished, was sending recruiters into the valley and getting good results. Even Fred Eaton, after holding himself aloof, finally entered the fray against the city of which he had been mayor. "Wherever the hand of Los Angeles has touched Owens Valley," he wrote in a letter to the editor, "it has turned back into desert."

Joseph Lippincott, whose one admirable quality may have been prescience, had said twenty years earlier that the Owens Valley was doomed as soon as Los Angeles obtained its first water right. Mulholland, however, kept insisting blindly that the valley could live on—he didn't say how—even as he turned life there into a kind of hell.

No one knew when his neighbor would be approached and persuaded to sell out; no one knew when the city would move to condemn; no one knew when the armed guards who patrolled the aqueduct would receive orders to shoot to kill. "Suspicions are mutual and widespread," a visitor from Los Angeles observed. "The valley people are suspicious of each other, suspicious of newcomers, suspicious of city men, suspicious, in short, of almost everybody and everything. . . . Owens Valley is full of whisperings, mutterings, recriminations. . . ." It seemed only a matter of time before the onset of real war.

On November 16, 1924, as the drought continued to hold Los Angeles in a deadly grip, a caravan of automobiles rumbled slowly southward through the town of Independence. In the first car, behind drawn blinds, sat the grim figure of Mark Watterson. The cars turned toward the Alabama Hills, a small range of barren rises at the foot of the Sierra escarpment. Weaving through the hills was the Owens River aqueduct, and somewhere along its course were the Alabama Gates. In wetter times, the gates had turned floodwaters in the aqueduct onto the desert to keep them from straining the capacity of the siphons below. They hadn't been used in years, but they still worked. When the caravan arrived at the gatehouse, a hundred men got out of the cars, walked up to the spillway, and turned the five huge wheels that moved the weirs. For the first time in many years, the Owens River flowed back across the desert into Owens Lake.

The effect of the seizure was electrifying. Mulholland was in a murderous rage. He dispatched two carloads of armed city detectives to take back the gates, but news of their imminent arrival prompted the local sheriff to go down to meet them. "If you go up there and start trouble," he told the detectives, "I don't believe you will live to tell the tale." They never went. Mulholland, in the meantime, secured a court injunction against the seizure, but when the papers were served to the men at the gates they threw them into the water.

And then, to everyone's surprise, what could easily have produced bloodshed turned into a picnic. Wives, children, grandmothers, and dogs joined the lawbreakers. Tom Mix was filming a movie nearby, and when he heard what was happening he sent over his salutations and his orchestra. By evening a huge cloud of smoke began to rise from the scene, but it came from a barbecue pit. After dinner, the sheriff arrived and joined in. The crowd was now seven hundred strong, and the strains of "Onward Christian Soldiers" filled the desert night.

Events were finally swinging to the Owens Valley's side. To Mulholland's disgust, even the Los Angeles *Times*, now that Otis was dead, was sympathizing with the lawbreakers. "These farmers are not anarchists or bomb throwers," it said in an editorial, "but in the main honest, hardworking American citizens. They have put themselves hopelessly in the wrong by taking the law into their own hands, but that is not to say that there has not been a measure of justice on their side." Meanwhile, as Mark Watterson led the seizure of the Alabama Gates, Wilfred had wisely gone to Los Angeles to closet himself with the Joint Clearinghouse Association, a roundtable of the city's bankers. After several hours, he emerged and sent Mark a telegram. "If the object of the crowd at the spillway is to bring their wrongs to the attention of the citizens of Los Angeles, they have done so one hundred percent," he wired. "I feel sure that the wrongs done will be remedied."

But such a simple happy ending could occur only on a Hollywood movie lot. As soon as the Alabama Gates were released and Wilfred Watterson had returned home, the bankers with whom he had met rejected his price for the consolidated valley water rights, to which he swore they had agreed. Meanwhile, Mulholland's public relations department was flooding the state with a booklet "explaining" the Owens Valley crisis. "Never in its history has the Owens Valley prospered and increased in wealth as it has in the past twenty years," it said. And it was true, as long as you looked at only the first nineteen of those years; in the twelve subsequent months, the city had almost brought the valley to its knees. Shops and stores were closing for lack of business—thousands of people had already moved out—but Mulholland dismissed pleas for reparations out of hand. If business was down, he said, the shopkeepers could move, too.

The first order to shoot to kill came on May 28, 1927, a day after the No Name Siphon, a huge pipe across a Mojave hill, lay in shards, demolished by a tremendous blast of dynamite. As city crews hauled in 450 feet of new twelve-foot pipe, another blast destroyed sixty feet of the aqueduct near Big Pine Creek. On June 4, another 150 feet went sky high. In response, a special train loaded with city detectives armed with high-velocity Winchester carbines and machine guns rolled out of Union Station for the Owens Valley. Roadblocks were erected on the highways; all cars with male occupants were searched; floodlights beamed across the valley as if it were a giant penitentiary. Miraculously, though the Owens Valley water war had gone on for more than twenty years, though it had turned violent during the past three,

there were still no corpses. Harry Glasscock, however, was predicting in his editorial columns that the aqueduct would "run red with human blood," and no one was prepared to argue with him. But before it could happen fate cast a plague on both houses. First came the collapse of the Watterson banks, and the revelation that the Owens Valley's leading citizens were felons. Then, a few months later, came the collapse of the Saint Francis Dam.

The relationship between George Watterson and his two nephews had gone from one of competitiveness to one of bitterness to one of rancid hatred. In the early months of 1927, George saw his opportunity to invest in their final ruin. Four years of drought and rapidly declining business had left all five branches of the Inyo County Bank severely weakened. At the same time, the election of a new governor, Clement Young, on a huge infusion of campaign cash from A. P. Giannini and his Bank of Italy had resulted in the liberalization of the state banking laws, mainly to Giannini's advantage. It was no surprise, then, when George Watterson filed, in the name of the Bank of Italy, an application to launch a competitive bank in Inyo County. But it was no surprise either when the state banking commissioner voided the application on the strength of Wilfred Watterson's testimony that the bank was a front which Los Angeles would use to drive the valley into submission. Nor was it a surprise when, in response, an infuriated George Watterson, with considerable help from the Los Angeles Department of Water and Power, began a dirt-gathering investigation into his nephews' bank. The surprise was what they ultimately found.

To say that the Wattersons had played fast and loose with their investors' capital was an understatement. For at least the past two years, they had been using the amalgamated capital of the Owens Valley to shore up their failing financial empire—their resort, their mineral water company, their tungsten mine. They had recorded deposits in other banks that were never made, recorded debits that were already paid, entered balances that never existed on ledger sheets. They had loaned the entire life savings of their friends and neighbors to enterprises which were, at best, unlikely to succeed. When it was all tallied, there was a $2.3 million discrepancy between the bank books and reality. The brothers had always been the valley's best and last hope. Now they were going to go to jail for embezzlement and fraud.

They had done it, they said, for the good of the valley, and as

outrageous as it sounded, it was probably true. None of the money had ever left Inyo County. With the irrigation economy dying at the hands of Los Angeles, the valley's only chance of surviving at all was to develop its minerals, its mining, its potential for tourism. During the trial, people who had lost everything nodded and agreed. Even as the Wattersons were being charged with thirty-six counts of embezzlement and grand theft, the citizens of Owens Valley were pledging $1 million to keep them in business.

It was too late. On August 4, 1927, all five banks were permanently closed. People wandered over to gawk at their final sign of defeat, a bitter message posted on the door: "This result has been brought about by the past four years of destructive work carried on by the city of Los Angeles."

The prosecuting attorney was a lifelong friend of both Wilfred and Mark. If he had not been the prosecutor, he said, he would have agreed to be a character witness. He cried openly as he made his final argument, and the judge and jury wept along with him. On November 14, the Wattersons were sent to San Quentin for ten years, later reduced to six. As the train taking them to San Francisco passed outside Bishop, someone was putting up a sign. It read, "Los Angeles City Limits."

William Mulholland had only four months to savor his triumph.

By refusing to pay Fred Eaton the $1 million he wanted for his reservoir site, Mulholland had left himself short of water storage capacity. It was a serious situation to begin with, and it was compounded by the drought, the dynamitings, and the phenomenal continuing influx of people. His power dams were also running day and night, spilling water into the ocean before it could be reused. The water he had obtained at such expense and grief was being wasted. As a result, he turned to the dam he had under construction in San Francisquito Canyon, and, ignoring the advice of his own engineers, decided to make it larger.

The reservoir behind the enlarged Saint Francis Dam reached its capacity of 11.4 billion gallons in early March of 1928, and immediately began to leak. Few dams fail to leak when they are new, but if they are sound they leak clear water. The water seeping around the abutment of the Saint Francis Dam was brown. It was a telltale sign that water was seeping through the canyon walls, softening the mica shale and conglomerate abutment.

It was also a sign that William Mulholland chose, if not exactly

to ignore, then to disbelieve. After all, it was *his* dam. Would the greatest engineering department in the entire world build an unsafe dam? To reassure the public, Mulholland and his chief engineer rode out to the site on March 12 for an inspection. The last of the season's rains was falling, and muddy water was running from a nearby construction site. After a perfunctory look, Mulholland decided that the site was the source of the mud, and pronounced the dam safe. On the same night, at a few minutes before midnight, its abutment turned to Jell-O, and the reservoir awoke from its deceptive slumber and tore the dam apart.

There are few earthly phenomena more awesome than a flood, and there is no flood more awesome than several years' accumulation of rainfall released over the course of an hour or two. The initial surge of water was two hundred feet high, and could have toppled nearly anything in its path—thousand-ton blocks of concrete rode the crest like rafts. Seventy-five families were living in San Francisquito Canyon immediately below the dam. Only one of their members, who managed to claw his way up the canyon wall just before the first wave hit, survived. Ten miles below, the village of Castaic Junction stood where the narrow canyon opened into the broader and flatter Santa Clara Valley. When the surge engulfed the town, it was still seventy-eight feet high. Days later, bodies and bits of Castaic Junction showed up on the beaches near San Diego.

The flood exploded into the Santa Clara River, turned right, and swept through the valley toward the ocean. It tore across a construction camp where 170 men were sleeping, and carried off all but six. A few miles below, Southern California Edison was building a project and had erected a tent city for 140 men. At first, the night watchman thought it was an avalanche. As it dawned on him that the nearest snow was fifty miles away, the flood crest hit, forty feet high. The men who survived were those who didn't have time to unzip their canvas tents, which were tight enough to float downstream like rafts. Eighty-four others died.

When the flood went through Piru, Fillmore, and Santa Paula it was semisolid, a battering ram congealed by homes, wagons, telephone poles, cars, and mud. Wooden bridges and buildings were instantaneously smashed to bits. A woman and her three children clung to a floating mattress until it snagged in the upper branches of a tree. They survived. A rancher who heard the deluge coming loaded his family in his truck and began to dash to safety. As he stopped by his neighbors' house and ran to the door to warn them, the flood arrived

and swept his family out to sea. A four-room house was dislodged and floated a mile downstream without a piece of furniture rearranged; when the dazed owners came to inspect it, they found their lamps still upright on their living-room tables. A brave driver trying to outrace the flood could not bring himself to pass the people waving desperately along the way; his car held fourteen corpses when it was hauled out of the mud. The flood went on, barely missing Saticoy and Montalvo, and, at five o'clock in the morning, went by Ventura and spent itself at sea.

Hundreds of people were dead, twelve hundred homes were demolished, and the topsoil from eight thousand acres of farmland was gone. William Mulholland, whose career lay amid the ruins, was still alive, but as he addressed the coroner's inquest he bent his head and murmured, "I envy the dead." After a feeble effort to put the blame on "dynamiters," he took full responsibility for the disaster.

But the great city his aqueduct had created was, for the moment at least, willing to forgive him. "Chief Engineer Mulholland was a pitiable figure as he appeared before the Water and Power Commission yesterday," the Los Angeles *Times* reported on March 16. "His figure was bowed, his face lined with worry and suffering. . . . Every commissioner had the deepest sympathy for the man who has spent his life for the service of the people of Los Angeles . . . his Irish heart is kind, tender, and sympathetic."

Nine separate investigations eventually probed the collapse of the Saint Francis Dam. No one is even sure how many lives were lost, but a likely total is around 450: it would become one of the dozen worst peacetime disasters in American history. The precise cause of the collapse was never officially determined, but when an investigator dropped a piece of the rock abutment into a glass of water, it dissolved in a few minutes. It was also learned that Mulholland had ordered the reservoir filled fast—a violation of a cardinal engineering rule—because he didn't want Owens River water to go to waste.

The city took full responsibility for all losses and paid most of the claims without contest, which cost it close to $15 million. For much less than that, Mulholland not only could have bought the Long Valley site, but built the dam, too.

In the ensuing months, in hearing after hearing, Mulholland was dragged through an agonizing reappraisal of his career. It was learned that two other dams in whose design and construction he participated as a consultant eventually collapsed, and a third had to be abandoned when partially built. He was a bold engineer, an innovative engineer;

he was also a reckless, arrogant, and inexcusably careless engineer. His fall from grace was slow, awful, and complete. By the time he wearily resigned, in November of 1928, at the age of seventy-three, his reputation was sullied beyond redemption. His wit and his combativeness vanished in retirement, and even in the company of his perfervidly loyal children he often lacked the energy to speak. He told them, "The zest for living is gone."

The city finally settled with Fred Eaton, who lost almost everything in the collapse of the Watterson banks, for $650,000. A few weeks later, the two old and broken men moved to heal their twenty-year rift. Lost in despondency at home, Mulholland received a message that Eaton, who had since returned to Los Angeles, would like to see him. Without a word, he got his hat and strode out the door. Eaton had suffered a stroke; he needed a cane to walk, and he looked ancient. "Hello, Fred," said Mulholland as he approached Eaton's bedside. Then both of them broke down and wept.

The dam in Long Valley was ultimately built, and the reservoir that formed behind it, which was named Lake Crowley in honor of a priest who devoted the latter part of his life to healing the rift between city and valley, was, in its day, one of the largest in the country. By then, however, all hope of fruitful coexistence had died. On a map, the Owens Valley was still there, but it had ceased to exist as a place with its own aspirations, its own destiny. By the mid-1930s, Los Angeles was landlord of 95 percent of the farmland and 85 percent of the property in the towns. In the town of Independence, the Eastern California Museum, which tells the story of the battle largely from the valley's side, sits on land leased from the city.

Los Angeles leased some of the land back to farmers for a while, but the unpredictability of the water supply discouraged most of those who tried to carry on. There might be enough for twenty or thirty thousand acres in wetter years; then there might be enough for only three or four thousand. As the city grew, the river became utterly appropriated; when that happened, the Department of Water and Power sank wells and began depauperating the aquifer, as would happen—as is happening—in so many places in the West. The last of the ranchers quit in the 1950s and the economy shifted to tourism; most of those who remain now pump gas, rent rooms, or serve lunch to the skiers and tourists driving through on Highway 395. By the

1970s, even that tenuous existence was threatened; the aquifer was so drawn-down that desert plants which can normally survive on the meagerest capillary action of groundwater began to die, and the valley went beyond desert and took on the appearance of the Bonneville Salt Flats. When the winds of convection blow, huge clouds of alkaline dust boil off the valley floor; people now live in the Owens Valley at some risk to their health. The city has refused every request that it limit its groundwater pumping, just as it has refused to stop diverting the creeks that feed Mono Lake to the north—another casualty of its unquenchable thirst. Some sporadic dynamitings began to occur again in the 1970s, and reporters arrived eager to cover the "second Owens Valley War," but the war was long since over—there was nothing left to win.

As for Otis, Chandler, Sherman, and the rest of the syndicate that called itself the San Fernando Mission Land Company, they became rich—phenomenally rich. While presiding over the San Fernando Valley's metamorphosis from desert to agricultural cornucopia, they used the profits to constantly acquire more land. In 1911, Chandler, Otis, and Sherman purchased another 47,500 acres nearby and began to develop them—the biggest subdivision in the world. Within a year, they were assembling the third-largest land empire in the history of the state, the 300,000-acre Tejon Ranch, straddling Los Angeles and Kern counties. (Besides the Los Angeles *Times*, the Tejon Ranch, undiminished in size, remains the principal local asset of the Chandler family.) In a speech given in 1912, Theodore Roosevelt singled out Otis as "a curious instance of the anarchy of soul which comes to a man who in conscienceless fashion deifies property at the expense of human rights." But Roosevelt, as much as anyone, was responsible for setting this anarchic soul loose. No one knows how great a profit the syndicate realized from the initial seventeen thousand San Fernando acres, but one writer, William Kahrl, estimates that Chandler was worth as much as $500 million when he died, and the San Fernando Valley was the soil from which this incredible fortune grew. It may not have been the most lucrative land scam in United States history, but it ranked somewhere near the top.

Between the arrival of William Mulholland and his death, Los Angeles grew from a town of fifteen thousand into the then most populous desert city on earth. Today it is the second-largest, barely surpassed by Cairo. Its obsessive search for more water, however, was never to end. While Lake Crowley was filling, the city was already

completing its aqueduct to the Colorado River, whose construction almost precipitated a shooting war with Arizona, a rival as formidable as the Owens Valley was weak. And though the first Colorado River aqueduct was supposed to end its water famines forever—as was the Owens River aqueduct—the city was soon planning a second Colorado River Aqueduct and plotting to seize half of the Feather River, six hundred miles away, at the same time. No sooner had it managed to do all of that than the city fathers were secretly meeting with the Bureau of Reclamation, mapping diversions from rivers a thousand miles distant in Oregon and Washington. Like the Red Queen, Los Angeles runs faster and faster to stay in place.

No one says or remembers much about the Reclamation Service's involvement in the Owens Valley story, which is ironic, because nothing in its history may have affected the interests of the nation-at-large quite as much. Almost as soon as it was created—well before it metamorphosed into the mighty Bureau of Reclamation—the agency found itself working on behalf of the wealthy and powerful and against the interests of the constituency it was created to protect, the small western irrigation farmer. In California, to a surprising degree, it has done so ever since. Small farmers do not matter much in the worldly scheme of things; if they did, their numbers would not be declining by the tens of thousands every year. But large farmers do, and explosively growing desert cities do, too, and the Bureau of Reclamation, after learning this lesson in the Owens Valley, would remember it well. Its largest dam is San Luis in central California; its most magnificent dam is Hoover. Above all, the Bureau loves to build great dams, and were it not for Los Angeles, the odds are low that either Hoover or San Luis would exist.

The Owens River created Los Angeles, letting a great city grow where common sense dictated that one should never be, but one could just as well say that it ruined Los Angeles, too. The annexation of the San Fernando Valley, a direct result of the aqueduct, instantly made it the largest city in the world in terms of geographic size. From that moment, it was doomed to become a huge, sprawling, one-story conurbation, hopelessly dependent on the automobile. The Owens River made Los Angeles large enough and wealthy enough to go out and capture any river within six hundred miles, and that made it larger, wealthier, and a good deal more awful. It is the only megalopolis in North America which is mentioned in the same breath as Mexico City or Djakarta—a place whose insoluble excesses raise the specter of some majestic, stately kind of collapse. In *The Water Seekers*, Remi

Nadeau, a city historian, says, "They brought in so much water for so many people that few cared any more whether Los Angeles grew at all. . . . Indeed, one might say that . . . they have brought in too much water. For if California now has enough water to more than double in population, then much of California is doomed to be insufferable."

That, in any event, is the way it appears some days from atop Mulholland Drive.