Chapter 10

RECLAMATION AND POLLUTION CONTROL

After the war was ended in 1945, civil engineers, finished with their war endeavors, were again available. On my recommendation the District Directors revised our table of organization in order to permit employment of enough staff members to accomplish the impressive amount of work which appeared imminent if we were to keep ahead of the predicted population and industry influx. Between 1946 and 1950, fifteen graduate civil engineers were employed to supplement the limited staff held during the war period. Of these, four left to engage in private practice; one now holds the position of General Superintendent of the Chicago Sanitary District; one became City Engineer of a neighboring Orange County city; two were retired. The other seven now occupy the top administrative positions in the District's staff.

On the clerical side, Ariel Soule, Chief Clerk and Secretary of the Boards, retired July 31, 1946 at the age of seventy. He was succeeded by Kenneth Harding who had been his chief assistant during the years he (Soule) had been employed. Harding died June 6, 1952 and was succeeded by James Foster, who had been Harding's chief assistant while he, Harding, was Chief Clerk. Foster had been an employee of Los Angeles County in the Audit-
ing Department prior to engagement by the Districts. The experience with the County Auditor was of advantage to the Districts inasmuch as the County Auditor is, by law, the Districts' Auditor also.

The Sanitation District employees were admitted to the State Employees' Retirement System, July 1, 1946, prior to which time no provision had been made for retirement compensation. Social Security was made available to District employees, at the option of each employee in 1958.

Since the formation of the first County Sanitation District in Los Angeles County there have been more than 700 Supervisors, Mayors or their alternates who have served on the Boards of Directors of the several Districts. Subsequent to service as Directors, three City Mayors joined the Districts' staff as employees; Edwards of Watts; and Smith and Lange of San Gabriel. Harold Pomeroy served as Mayor of South Gate after he had served in the clerical department of the Districts. The Mayor of a District City, or his designated alternate, serves as a Director in each District in which any part of his city lies. The Board of County Supervisors is the Board of Directors in a District which includes no incorporated city, or part thereof. The Chairman of the Board of Supervisors represents the unincorporated territory in a District, as member of the Board of Directors.

The South Bay Cities District, for which sewerage facilities were installed in 1925, was sewered to the Los Angeles City Hyperion Plant in the manner and for the reasons heretofore narrated. Following the close of the war, during which conditions at Hyperion had steadily deteriorated, the disposal facilities at the City's plant and the resulting shore contamination in Santa Monica Bay, became so bad as to invoke quarantine by the State Department of Public Health. To his credit, the City Engineer of Los Angeles had tried vainly to secure enough priorities from the War Production Board in Washington to improve the situation. Following the war the City employed the firm of Metcalf and Eddy of Boston, to survey and investigate the Hyperion situation and make recommendations for its correction. The survey completed, the engineers recommended complete treatment of the sewage with disposal of plant effluent through a short outfall to sea.
DISTRICTS’ CENTRAL OFFICE—In 1950, the Districts constructed a central office building at 2020 Beverly Boulevard, Los Angeles. These quarters were occupied in November, 1950.
Investigating the situation, as it would affect South Bay Cities District, I concluded that disposal of the District's sewage at Hyperion would no longer be economical and recommended that the District float a new bond issue based on connection with the jointly owned District system leading to Bixby. It was a somewhat awkward situation, but analysis indicated its soundness. It involved abandonment of a couple of miles of trunk sewer which had been built along the beach to flow sewage to a pumping plant on Los Angeles City property at Hyperion, as well as abandonment of the pumping plant itself. The whole system of trunk sewers in the District had been tipped to the north while the change-over required that the northerly sloping lines be intercepted some miles south of their original destination, their contents pumped over and through the sand hills and then retrace the journey, through sewers in District 5, to the Bixby plant, six or more miles south. The Board concurred in the recommendation, floated the bonds and disconnected from Hyperion.

Cost was not the only factor influencing the South Bay Cities District joint operation with the other Districts. The District felt it would be in a better position to proceed against Los Angeles City for polluting the beaches of the South Bay Cities if the District cities were not contributing to the pollution. Additionally I reached the conclusion that the proposed new works were grossly under-estimated as to cost, that the method proposed for sludge disposal would not be successful and, at the request of the Los Angeles Board of Public Works, joined with two practicing engineers in the area, in so stating. The report had no effect whatsoever on the City's plans. The plant was built as designed by the consulting firm. The cost was much greater than estimated, the sludge disposal method was a complete and expensive flop and within a few years after its completion the plant was rebuilt to conform to views expressed locally by the Los Angeles Board of Public Works engineers. Removal of the South Bay Cities sewage probably made little difference in the outcome but was greatly to the District's benefit financially.

During the decade following close of the war, interest in sewage disposal increased to the extent that the Legislature enacted a law placing the control of water pollution under the jurisdiction
of a State Water Pollution Control Board and nine similar Regional Boards. Responsible for the condition and safety of waters receiving wastes, the new Board established rules and regulations far more stringent and restrictive than were current, governing disposal of sewage plant effluent into salt waters. I served on the State Board as a charter member for eleven years, for seven years as chairman. A former employee of the County Sanitation Districts of Los Angeles County, Vinton Bacon, was its charter executive secretary.

The Pollution Control Board took cognizance of the many recreational and commercial uses to which the ocean waters, bordering the California coast, were put and based its regulations on what it considered a fair division of salt water uses. The Board concluded that, for the readily foreseeable future, certain limited areas in the littoral waters could be subjected to a moderate amount of sewage effluent pollution but that the area so polluted should be limited and continuously monitored by, and at the cost of, the discharging agency. Imposition of the restrictive regulations were not only a potent factor in hastening construction of the Sanitation Districts’ third ocean outfall, at White’s Point, but also inspired the installation of equipment, at Bixby, designed to remove floating particles from sewage and digested sludge and extension of chlorination equipment for use in disinfecting plant effluent at critical times. The Pollution Board’s regulations probably contributed to recent changes at the Los Angeles Hyperion plant now one of the best and most modern in the State. To the credit of both the City and the Districts, it is noteworthy that each recognized the merit of the Pollution Control Board’s regulations and contributed, without stint, to their enforcement.

As a matter of historical interest, it may be well to note at this point, that the State and Regional Water Pollution Control Boards were never very popular with other executive divisions of State government. This was not very surprising because two or three dozen of them had previously had some authority in pollution control. The new law made the Regional Board responsible for determining the advisability of a proposed discharge and for stating discharge requirements. Conflict with other State boards was inevitable and caused some confusion. The Regional Boards
have been expanded over the years and still function as in the past. The name of the State Board has been changed to define its duties as interested in water quality. The original State and Regional Board organization did much to correct water pollution in the State during its fifteen or so years of existence. The Regional Boards are now probably stronger and better established than before, which is good.

As has been stated a number of times in this narrative, the wasting of large amounts of water into the ocean in the form of sewage, has inspired a great deal of thought upon how to get the fresh water separated from what makes it sewage and back into unrestricted use. The Districts' philosophy has consistently been to first complete the sewerage system for the disposal of sewage, and then, when no reliance need be placed on water reclamation for adequate sewage disposal, to institute measures, if acceptable, for developing fresh water using sewage, from certain areas, as the raw water supply. Although convinced that water acceptable for practically any ordinary purpose could be developed from domestic sewage, District investigators were of the opinion that percolation of water, reclaimed from sewage, into underground water pools, from which, mingled with water from other, and perhaps more acceptable, sources, it could be withdrawn for use, would allay any misgiving as to its acceptability. Illustrating such an approach is the fact that for many years underground pools in the area have been replenished with drainage from thousands of cesspools and from inland sewage treatment plants, without trouble or discomfort.

Two reports, bearing on the matter of reclaiming water from District Sewage had been submitted to the Directors and to the County Board of Supervisors. One, prepared in 1949, and submitted to their respective principals by the Chief Engineers of the Flood Control, the Sanitation Districts and, the County Engineer, directed attention to the possibilities inherent in water reclamation from sewage, its potential in the fields of water supply in the area and, in general, its cost. The second report, to the same principals was submitted in 1958. The second report was in much greater detail and formed the basis of a plan which accelerated construction of a Water Reclamation Plant above the Whittier
Narrows, placed in operation in 1960.

Prodigality in the use of water had to be discouraged in a number of cases where eastern firms wished to establish manufacturing plants in Southern California. Without exception the Industrial Waste Department of the County Engineer’s Office received excellent cooperation from the prospective locaters in the area. Illustrating the problem is an experience in which the Districts also had quite a stake. A very prominent soap manufacturing company decided on Los Angeles County as a western location. In view of the fact that the process to be employed would produce quantities of industrial wastes their advance representatives were referred to the Industrial Waste Engineer in the County Engineer’s Office, Arthur Pickett. Pickett was informed that their eastern plants each required from eight to thirty million gallons of water a day, depending upon process employed, and that most of that quantity would eventually reach the sewers as industrial waste. Los Angeles County wanted the plant to locate in the area and it became Pickett’s job to guide development of a plant process which would not hamper the manufacturing process but would greatly reduce water, and waste disposal requirements.

Averaging eight and thirty million gallons, one arrives at nineteen million gallons. The Districts were not officially interested in where this amount of water was to be developed but, rather, what would be involved in disposing of it as waste. Although not involved in negotiations with the Company, at the time, the Districts advised the County Engineer that 19 mgd capacity in the Districts system had a construction value of some $4,000,000. To his credit, Pickett worked out a process with the soap company which resulted in a prospective use of four hundred thousand gallons of water a day and an actual use of about half that much.

During the war years, defense authorities built an aluminum recovery plant a little way north of Torrance in District 5. Drainage of plant wastes was to be provided by the District. After much effort and many arguments, I had secured authority to buy a few thousand feet of 24-inch diameter clay pipe for construction in one of the Districts. In building the aluminum recovery facilities the federal official informed the pipe company, from which I was to get the pipe, that they (the pipe) were needed at the Torrance
plant. No amount of argument would convince the federal authorities that a ten or twelve inch diameter pipe would suffice. They pointed out that eastern plants used pipe that large, that the plans called for it, and that it was needed here. Perhaps, where water is not at a premium such size pipe were customary. The 24-inch pipe was installed. At its lower end, where it drained into the District system the entire flow was never, at any time, over two or three inches in depth. The use of water is greatly modified when the user finds himself on the horns of a water-sewerage dilemma such as exists in Southern California.

By 1958 the Districts had built, or otherwise acquired, 530 miles of District trunk sewers; 175 miles of joint outfall sewers; 29 sewage pumping stations; the expanded separate sludge digestion plant at Bixby, including complete power generation and pumping facilities, for designed flow of 410 mgd (peak rate); two six-and-one-half mile tunnels through the Palos Verdes Hills, one of 8-foot nominal diameter, the other, 12-feet; three ocean outfall pipes of 60, 72 and 90-inch diameter respectively; three small water reclamation plants, producing some five million gallons daily of reclaimed water; two surface oxidation plants in the Antelope Valley; a central office in Los Angeles and two field offices, one in Compton, the other in West Covina. The area covered by the Districts in 1958 was 658 square miles in which had been constructed 5523 miles of laterals to serve a District population of 2,820,000. Flow at Bixby averaged 224 mgd for the year 1958. At Lancaster and Palmdale the flow averaged 3 mgd for the year. Additionally, in compliance with the 1949, et seq., amendments to the Sanitation District Act the Districts had established two refuse disposal sites in the District area, to wit, Palos Verdes and Pomona. As of December 1958 the Sanitation Districts had a capital investment of 73 million dollars.

The Districts now had, wholly within their boundaries, 53 incorporated cities and portions of four others. Assessed valuation of the real property in the Districts (upon which the District tax was levied) was $3,873,000,000.

A M Rawn retired from the post of Chief Engineer and General Manager of the Sanitation Districts on November 30, 1958 to be succeeded by Charles Ross Compton. Mr. Compton was
employed as the Districts' Office Engineer during Warren's term of office and as Assistant Chief Engineer during Rawn's term. Compton became an official employee of the Sanitation Districts immediately after Warren's appointment as Chief Engineer in 1925. He had been associated with the District work as a County employee since early 1924. He and one other employee, Harry Chapman, were the only two members of the original staff remaining active at the time of Compton's appointment as Chief Engineer. All others had passed on or were retired.