Danville, Ill.—Although Danville has been using the hypochlorite treatment as an adjunct to its rapid sand-filter plant for only a very short time (since February, 1912), nevertheless the bacterial data on the filtered water are very interesting. During the time that hypochlorite was used the average bacterial content of the sterilized filtered water was only 57 per c.c. During the period from March 20-25, inclusive, the supply of hypochlorite was exhausted and so none was used. The bacterial content of the untreated filtered water during this period was 4100 per c.c. With hypochlorite treatment in use Mar. 19, the count was but 20 per c.c.; on Mar. 20, without hypochlorite, the count jumped up to 8400 per c.c. The removal by filtration without hypochlorite, from the raw water averaging 67,000 bacteria per c.c., was 93.9%; by filtration and hypochlorite from the raw water averaging 52,496 bacteria per c.c., the removal was 99.89%. Without sterilization, B. coli was present in the filtered water on five of the six days; with sterilization, B. coli was present on one day out of 34. The turbidity of the raw water was so low from May 26 to June 1, 1912, that no coagulant was used and only hypochlorite added to the filtered water. The average reduction in bacteria during this period was 99.6%.

Typhoid Statistics.—A comparison of typhoid-fever statistics before and after the introduction of hypochlorite is very interesting.

North Yakima, Wash.—In 1910 there was a typhoid epidemic caused by a contamination of the domestic supply through a cross-connection with a highly-polluted fire service. During the period September, 1911, to June, 1912, there was not a single death from typhoid fever and only one case was reported between Dec. 22, 1911, and June, 1, 1912. The water sterilization began July 9, 1911. The source of supply is a mountain stream which is open to contamination. The reduction in the number of cases and deaths from typhoid fever is due in part to the general clean-up and condemnation of many polluted shallow wells as well as to the hypochlorite treatment in this booming city of the Northwest.

Council Bluffs, Iowa.—The wonderful efficiency of hypochlorite is shown by a typhoid-fever epidemic in Council Bluffs, Iowa, which began in the fall of 1909 and ended with the introduction of hypochlorite in April, 1910. Since this treatment was inaugurated, a period of 25 months to June 1, 1912, there have been but five deaths from typhoid fever in this city with a population of 30,000 and one of these five deaths was that of an imported case. This is a remarkable record. For the eight months following the introduction of hypochlorite there was not a single death from typhoid fever.

Cleveland, Ohio., draws its water-supply from Lake Erie, which is polluted in part by its own sewage and in part by neighboring cities. After typhoid fever had been prevalent to a great degree in this city for years a remarkable reduction in the number of cases and deaths from this disease followed the beginning of the treatment with hypochlorite in September, 1911. There was 159 cases and 19 deaths reported for that month. For the eight months, Oct. 1, 1911, to June 1, 1912, there were totals of 180 cases and 28 deaths reported. During similar periods in previous years the figures are:

	Cases.	Deaths
Oct. 1, 1907 to June 1, 1908	290	46
Oct. 1, 1908 to June 1, 1909	311	52
Oct. 1, 1909 to June 1, 1910	343	66
Oct. 1, 1910 to June 1, 1911	347	65
Average 1907-1911	323	57

These figures compared with 180 and 28 cases and deaths, respectively, for 1911 to 1912 show reductions of 44% in the number of cases and 50.8% in the number of deaths. This represents an average of 29 fewer deaths in eight months, while hypochlorite was being used compared with the period before the water was treated. Taking the figure of $5,000 as the value of each life sacrificed to typhoid fever, the financial saving effected by hypochlorite in eight months has been $145,000, which amount capitalized at 5% represents the tremendous sum of $2,900,000.

Erie, Penn.—Although it is acknowledged that the typhoid epidemic at Erie was water borne, nevertheless the exact point of introduction of the contamination has not been definitely determined. The water-supply is taken from Lake Erie and, previous to Mar. 15, 1911, was not treated with hypochlorite. December, 1910, with 31 cases and 2 deaths was followed by January, 1911, with 239 cases and 24 deaths. The Pennsylvania State Board of Health began treating the water-supply with copper sulphate Jan. 28, 1911, and this was continued until the hypochlorite was substituted. The latter process has been in use without cessation since Mar. 15, 1911. The number of cases and deaths from typhoid fever during the twelve months from June 1 to May 31, during the past four years, is as follows:

	Cases.	Deaths.
1908-1909	153	16
1909-1910	202	29
1910-1911	1140	136
1911-1912	91	11

Thus it will be seen what a good record the hypochlorite treatment has made at Erie in the reduction of typhoid fever. The average number of cases and deaths for the three years 1908-1911 was 498 and 60 compared with 91 cases and 11 deaths since hypochlorite has been used. The value of 49 lives saved from typhoid fever at $5,000 each is $245,000, which, capitalized at 5%, amounts to a total of $4,900,000. The raw water averaged 674 bacteria per c.c., with B. coli present in 11% of the samples tested, while the treated water averaged only 49 bacteria per c.c., with B. coli present in only 1 sample out of 1,025 examined—less than 0.1%.

Toronto, Ont.—During the first two months of 1910 there were 723% more cases and 450% more deaths from typhoid than the average for the same two months during the five years previous. Hypochlorite treatment was begun in March, 1910, and an immediate reduction in the number of cases and deaths was effected. The cause for a rise of cases to 90 for two consecutive months in 1911 is explained in a quotation from a letter from Dr. Geo. C. Nasmith, Director of Municipal Laboratories:

I may say that last year our intake plugged with sand and we were forced to short circuit our water-supply and take it from the Bay into which all our sewage empties. We had the makings of the largest typhoid epidemic ever known on this continent, but fortunately we had hypochlorite to depend on and we came through with a typhoid death rate of 20 per 100,000 in 1911, as compared with 45 per 100,000 in 1910, which, you will agree, was an extremely satisfactory showing.

The first four months of 1912 show 64% fewer cases reported than the same period in 1911 and 65% fewer cases than the average for the same periods 1905 to 1910 inclusive and 50% fewer deaths.

Baltimore, Md., drawing its water-supply from two impounding reservoirs, began to sterilize the water with hypochlorite on June 6, 1911, to keep down the annual autumn typhoid-fever epidemic. Since then both cases and deaths have been lower than before the use of hypochlorite. For the period June 1, 1910, to May 31, 1911, there were 1,964 cases and 233 deaths from typhoid fever, while from June 1,