THE CITY AND THE WATER SUPPLY

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by

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PREFACE

It has been the sole object of the writer in preparing this paper, to show the true relation of the city to the matter of a proper water supply for its inhabitants. All general facts in connection with public water supply, which it was not felt had some very direct bearing on the city's relation to this service, have been omitted, no matter how interesting these facts in themselves, have appeared to be. Nor has there been any attempt at incorporating all facts which did have direct bearing, as it was fully realized that the field, comparatively new, as it is in most features, was quite inexhaustible. An earnest attempt has been made, however, to select the facts that seemed most significant, and the concrete illustrations most to the point.

While the writer has been obliged to rely largely upon information and data collected by others, as indicated in the foot-note references and the bibliography at the close of the paper, all facts and figures have so far as possible been varified by comparison with those of other available works.

The bibliography just mentioned, is no more intended to be exhaustive than is the paper, nor is it intended to indicate all the matter that has been consulted. Only these works are mentioned from which the writer has accepted facts and credited

statements, or has received some important suggestions.

The writer feels prompted by a sense of justice as well as of gratitude, here to acknowledge his obligation to the members of the Faculty of the Department of Economics of the University of Minnesota, and especially to the head of that Department, Dr. John H. Gray, for valuable suggestions and helpful criticism in the preparation of this paper.

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CHAPTER 1.

A PRELIMINARY SURVEY.

Of the numerous problems that urban communities are called upon to solve, none surpasses in importance that involving an adequate supply of pure water. This same problem, to be sure, presents itself to the rural units or members of society, but, here it is usually a simple one and admits of a simple solution. Municipal water supply, on the other hand, is often an intricate and complex problem which challenges and merits the most careful attention, not only of the people as a whole but of trained experts. In every case, it presents two distinct phases, the one involving method and the other involving agency. That is to say, first, what is the best plan by which to secure a supply, as to source, manner of purifying the water, if it needs such treatment, mode of making it available to the individual consumer, etc.? Second, to whom or to what agency shall be entrusted the responsibility of this important work? Shall the municipality itself, through its own officers perform the same, or shall some individual or corporation, led by the motive of private gain, be allowed on certain stipulated conditions and for a specified number of years, to assume the duty in question?

The method of securing water, must to a great extent if not entirely, be determined by local conditions and circumstances, and involves technical questions of chemistry,

geology perhaps, and, above all, hydraulic engineering. It is from the economic and political standpoint that it is desired in this paper to discuss the question of city water supply, and we shall, therefore, confine ourselves to the second phase of the question, viz., that of agency, touching upon the first phase only in-so-far as it appears to have some direct bearing onthe latter. Further, realizing that the argument against drawing conclusions regarding American institutions from facts based upon the experience of European countries, has much to justify it, we propose in this discussiom , to base all conclusions upon facts from the experiences of American cities only. Yet, inasmuch as a majority of our institutions , however different in their present development, originated in European soil, a general backward look may help to bring the question squarely before us.

In the republics of Greece and Rome, as well as in some of the yet earlier civilizations, the larger cities were provided with waterworks of considerable magnitude. It is beside our object to attempt to describe these ancient works. We simply wish to mention the fact that public water supplies did exist, not only in such leading cities as Athens and Rome, but in many others.

Athens had a water supply system as early as 520 B.C. (1) and Rome began her elaborate system,-the remains of

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(1) Mansergn, James. Engineering Record. Vol. 42. p. 517.

which even today are objects of admiration and wonder - in the year 312 B.C. (2) Antioch, Alexandria and Lyons are said to have had excellent systems, as did many other cities before the beginning of the Middle Ages. (3) Jerusalem, to go still farther afield, had an abundant supply of water, the main source of which was a spring on the southwest side of the Kidron Valley, and from this spring the water was led into the city by a circuitous conduit. A number of underground resorvoirs have been found on the site of ancient Carthage.

All these ancient systems were, as we know, public, or more accurately, government enterprises. While the word, public, might with some degree of truth, be used with respect to Greece and Rome, it would, of course, be a misnomer if applied to the form of management in the old time monarchic state. During the middle ages not only were no new waterworks of any importance constructed, but those that had already been built, were allowed to go to ruin. The Moors are credited with having done something along the line of waterworks construction during the period, but, with this exception, little or no attention was given to the question of city water supply until the sixteenth cebtury. By this time, the Renaissance has taken

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(2) Fairlie, J.A. Municipal Administration. p.12.

(3) Jewish Encyclopoedia. Vol. 7. p.122.

place, and by the middle of this century, the great religious struggle following in the wake of the Renaissance is happily ended by the memorable treaty of Westphalia. Men begin once more to take real interest in life and to give renewed attention to their physical well-being. But they find that their governments, almost without exception, are either tyrannical or oligarchic, that practically everything that governments do, is in the interest, not of the nation, or the community as a whole, but in the interest of a favored few and at the expense, both in toil and in material goods, of the masses. Under these circumstances it is quite natural that the public should learn to look with suspicion upon all government enterprise, and that the teachings of the French philosophers of the next century, with their emphasis upon individual freedom to act, and their denunciation of government interference, should strike a responsive chord in the hearts of men. It is not strange that the beautiful non-interference theory which, as someone has expressed it, reasoned that by virtue of the benevolent construction of the universe, each man's pursuit of his own personal welfare must result eventually in the welfare of the whole world, should for the time, be so generally accepted.

Doubtless this sentiment against all government activity largely accounts for the fact that the people even after the government was in their own hands, were prone to leave everything to private initiative and enterprise, and that

even a matter of such impart and universal concern as the providing of their city with an adequate and pure supply of water, was left in the hands of individuals or private companies.

CHAPTER 2.

DEVELOPMENT AND PRESENT STATUS OF THE MUNICIPAL OWNERSHIP PLAN.

During the period just referred to, while the non-interference theory was developing and gaining general recognition, the North American Colonies were growing up, and a group of thirteen of them at last successfully asserted their political independence and assumed the proud title of United States of America. The narrow and selfish policy of the home government which had driven them to revolt naturally made these colonies especially receptive soil for the non-interference doctrine. So firmly imbedded in American soil did this doctrine become and such general recognition as a truly American organism did it gain, that it was not till a score of years ago that we began to realize its dangerous nature. True, we had unconsciously begun to check its growth before this period, but nevertheless, even today it is unduly nourished and reverenced by a large number of American citizens, partly, because of individual greed and selfishness and partly because of honest bigotry. May not this consideration help to shed some light upon our history and present situation as regards municipal waterworks, as well as other

public utilities?

In the United States up to the year 1800 but a single city viz., Winchester, Va., (1) had undertaken through its municipal government to supply its inhabitants with water: while Boston, New York, Providence, Hartford, Salem and ten other leading cities and towns were at that date supplied with water through the agency of private companies. (2) At the end of the first quarter of the last century there were five publicly owned, and twenty-seven privately owned waterworks. During the next fifty years, i.e., from 1825 to 1875 , the number of municipal plants steadily increased in proportion, until by the end of that period, out of a total of 422 waterworks in this country, 227 or 53.8 percent of the total were municipally owned.

If our records stopped here we would naturally suppose that the number of municipally owned works had kept steadilt increasing and that by this time 80 or 90 percent were in the hands of the people themselves. But strangely enough this does not prove to be the case. During the next fifteen years not only do the numbers of private works cease to fall behind but the tables are entirely reversed, so that by 1880, 51 percent of the total are private; by 1885 almost 56 percent and by 1890 over 57 percent are privately owned. This latter date however, marks the

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(1) Bemis, Edw. Municipal Monopolies-1899 p.15-16.
(2) Ibid. p. 16.

height of the reaction against municipal ownership and the relative number of municipal works again increases so that in 1896, 53.2 per cent are municipal works and in (1) 1905- the latest available figures - 60 per cent are owned by the municipalities, 205 have changed from private to municipal ownership and 20 have changed from municipal to private.(2) Of the 50 largest cities in the United States, 21 originally built and have continued to own their waterworks; 20 of the others have bought out the companies and only 9 are now supplied by private companies.

Of the 13 largest cities of the United States, all but San Francisco own their waterworks, and of the 38 cities with over 100,000 population in 1900 all but 8,fall in this class- the exceptions besides the city already mentioned being New Orleans, Omaha, Indianapolis, St. Joseph, Scranton, Patterson and New Haven. In some of these cities, notably San Francisco and New Haven, considerable agitation for municipalization has taken place.

(3) In these 38 cities having a total population according to the latest government reports of 16,553,859, the 30 having public water plants have a total of 14,909,075. Thus, taking all our cities of 100,000 , we find that90 percent of the population of these 38 taken collectively live in

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(1) New Encyclopoedia of Social Reform. p.1276.
(2) National Civic Federation. Part 1. Vol. 1. p.118.
(3) Ibid. p. 128.

municipally supplied cities.

It will thus be seen that while there has been a constant counter current and one notable period of retrogression, the general movement has been toward municipal ownership, and it remains to examine to what extent by fact or by theory, by past experience or by prospect, this movement is justifiable.

In passing, it should be pointed out perhaps, that what has taken place in United States so far as municipalization is concerned has also taken place in European countries. In the United Kingdom, for example, while but twelve of the more important towns started out as municipal enterprises, private waterworks are now few compared with those municipally owned, and are confined to the second class and smaller cities. In fact, there are at the present time but (1) 251 private to 1045 municipal enterprises of this kind in Great Britain and Ireland together. Fourteen of these private works are found in Scotland and not a single one in Ireland.

None of the cities having above 300,000 inhabitants in 1895 are now supplied by private companies. Southampton, Plymouth and Oxford form the most striking exceptions in early experiments with municipal water supplies in England, having inaugurated this plan as early as 1420 , 1585 and 1610 respectively. The other Eng-

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(1) New Encyclopoedia of Social Reform. p.790.
(2) Maltbie, Milo R. Municipal Functions ,p 149.

lish towns which were municipally supplied from the first are: Bath, Coventry, Halifax, Hastings, Huddersfield, Hull, Swansea, Worcester and Croydon. Many of these latter however, did not begin to be supplied with water from a general source until the idea of municipal management of this line of public utilities was well under way, which there, as in this country, was not the case until in the last century, and the tendency was by no means marked until the latter half of that century. (1) Manchester took over its waterworks in 1847: Oldham in 1853; Glasgow in 1855: Edinburgh in 1869; Birmingham in 1876: Liverpool in 1877 and so on. London was one of the last of important English cities to be supplied by private enterprise, if enterprise it could be called in this case. The eight companies upon which she relied for water at the close of the century were bought out by the city in 1902.

(2) In Germany, municipal ownership is almost the universal rule - all fifteen cities with over 150,000 population in 1895 own their systems.

(3) In France, the plan is more divided, Unless recently changed, Rouen, Nice and Toulon have pri-

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(1) Maltbie, Milo R. Municipal Functions. p. 149.
(2) Ibid. p. 152.
(3) Ibid. p. 153.

vate waterworks while the other best known cities have their own plants. The leading cities of Austria own their waterworks and the same is true even more universally in Switzerland, Holland, Norway and Sweden. In Copenhagen , the works are owned, not by the city, but by the State.

(1) In the larger Canadian cities municipal ownership, so far as waterworks is concerned is considerably more common than is the case with us, where, as should be recalled, the situation leans but moderately in favor of that form. And, indeed, this problem, like others confronting us, should, as already pointed out, be solved largely on its merits here at home. That a certain system works well abroad under different governments, is by no means conclusive evidence, that it suits our peculiar conditions and will work well as part of our social machinery.

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(1) Maltbie, Milo R. Municipal Functions. p.152.

CHAPTER 3.

A COMPARISON BY MATERIAL RESULTS.

It might, to be sure, at first thought, seem that a fairly equal number of waterworks under the two kinds of management having been in operation in the United States for approximately half a century, an investigation and comparison of the two plans would readily determine their adaptability to American conditions. Unfortunately, however, this hasty inference as to the easiness of the task is far from being correct. A thousand different considerations enter in and make conclusive results from a comparison of any two cities or even groups of cities almost impossible. In the first place, cities vary in size - and consequently water companies, in number of customers- from almost any figure that we choose to place as a minimum to upwards of 4000,000 inhabitants. Some cities have an abundance of fresh water near at hand, others are less fortunate in this respect and have to bring it from catchment areas, scores of miles away: Some are so located that water may be secured from a level above the city, and distributed by gravity to every consumer within city limits, without other aid than pipes and faucets, others have to pump the water from a level below any part of the city to a height which will give a pressure

adequate to make it available both for ordinary use and fire protection to the most elevated building. In some cases it is found necessary to purify the water by some method of filtration, in others it may be safely used without such precaution and expense: in some cases the city is compact and requires a relatively small distance of water mains; in other cases it is scattered over a large area of hilly irregular ground.

The cost of construction material varies greatly, and the cost of fuel, where it is needed to supply power for pumping-machinery varies even more- (1) the cost of bituminous coal for example, varies in different cities from 50 cts. per ton, and even less, to more than ten times that amount . To all these difficulties standing in the way of true comparison must be added the varying cost of labor in different parts of the country together with the difference in efficiency of the class of laborers available, the lack or the presence of large customers in the form of manufacturing or other industrial plants, and almost countless other conditions of greater or less importance.

Also, as already intimated, it is not enough that water be furnished in such quantity as required and at a reason-

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(1) Wright, Carroll D. U.S. Labor Commissioner of Labor. Report '99. Water, Gas and Electric Light plants.

able price, but the quality of the water is of the utmost importance. (1) The death rate per 100,000 from typhoid fever in our cities for the year 1907 varied from 3.9 for Boston to 131.5 for Pittsburg and while other causes beside pure or contaminated water may and do enter in, no one now disputes that in the drinking of contaminated water is to be found by far the most fruitful cause of this disease.

On the general subject of municipal and private operations of public utilities , doubtless the most reliable source of information available is the report of the committee on investigation composed of experts in all the various fields concerned, appointed by the National Civic Federation in 1906. Their three volume report which has already been referred to in these pages, appeared the following year. The second best source, so far as impartiality and reliability go, which in some respects is equally valuable for our special line of investigation, is the report of the late Carroll D. Wright as U.S. Commissioner of Labor for the year 1899.

There were at the time this latter report was made, 3,326 waterworks in the United States, 1787 or 53.73 per cent of whichwere owned by the municipalities and, 1539 or 46.27 per cent were owned privately.

The detailed report covers 1034 of the larger plants in the country, 659 of which are municipally owned and op-

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(1(Bemis, Edward W. Report of Water Works Division, 1907 Board of Public Service. p. 10.

erated, the remaining 375 being under private or corporate management.

The items of equipment, fuel conditions , investment, gross income, cost of production, both including and excluding the items of depreciation, taxes and interest-real and estimated, quantity of water furnished, and the prices charged, together with various other information concerning the plants reported on is here to be found. Unfortunately the plants are numbered instead of named, it having been found necessary to promise not to reveal the identity of the plant in order to obtain the required data.

The plants are arranged in the various tables in order of size or rather amount of water furnished per year, and also divided on the same basis into twenty groups as follows:

Group.

1.	Under 1,000,000	Gallons, plants	1 to 5.
2.	1,000,000 and under 5,000,000	" "	6 " 45.
3.	5,000,000 " " 10,000,000	" "	46 " 92.
4.	10,000,000 " " 15,000,000	" "	93 "149.
5.	15,000,000 " " 20,000,000	" "	150 "200.
6.	20,000,000 " " 25,000,000	" "	201 "238.
7.	25,000,000 " " 50,000,000	" "	239 "393.
8.	50,000,000 " " 75,000,000	" "	394 "489.
9.	75,000,000 " " 100,000,000	" "	490 "539.
10.	100,000,000 " " 125,000,000	" "	540 "582.
11.	125,000,000 " " 150,000,000	" "	583 "613.
12.	150,000,000 " " 175,000,000	" "	614 "633.
13.	175,000,000 " " 200,000,000	" "	634 "653.
14.	200,000,000 " " 250,000,000	" "	654 "691.
15.	250,000,000 " " 500,000,000	" "	692 "801.
16.	500,000,000 " " 750,000,000	" "	802 "869.
17.	750,000,000 " "1,000,000,000	" "	870 "903.
18.	1,000,000,000 " "5,000,000,000	" "	904 "1011.
19.	5,000,000,000 " "10000,000,000	" "	"1012 "1021.
20.	10000,000,000 " Gals. or over		"1022 "1034.

Three of the summaries of the elaborate tables given are of especial interest as bear ing on the question before us. The first is that of:

Average cost of Salaries and wages per million gallons of water furnished.

Grp.	PRIVATE PLANTS. Numb. reporting.	Average cost per 1,000,000 gal. Salaries	Wages	MUNICIPAL PLANTS. Number reporting.	Average cost per 1,000,000 gal. Salaries	Wages
1.				1	$34.25	$821.92
2.	3	$31.07	$41.26	17	36.72	120.63
3.	7	31.15	53.03	22	25.07	56 .51
4.	7	42.33	48.25	29	14.40	39.70
5.	9	16.33	37.12	36	16.58	31.99
6.	8	19.99	43.83	23	12.42	23.19
7.	40	16.41	16.61	90	10.18	18.49
8.	38	11.94	11.28	46	6.12	13.70
9.	22	12.81	11.96	21	10.94	15.14
10.	18	11.12	9.52	22	4.91	12.00
11.	7	8.75	8.63	20	7.01	8.96
12.	14	10.22	7.97	5	3.00	4.60
13.	8	11.75	10.27	11	4.50	6.67
14.	22	8.63	9.22	12	7.66	8.38
15.	45	5.93	6.49	53	4.54	6.16
16.	30	5.14	4.78	37	4.03	8.42
17.	14	4.43	4.40	20	3.73	5.60
18.	30	3.90	3.89	77	2.57	4.92
19.	4	7.03	6.59	6	1.57	5.07
20.				13	1.87	3.74

Wright, Op. Cit. p. 31

The first two of these groups, according to the commission, furnish little, if any, basis for true comparison inasmuch as the municipal plants belonging therein furnish water mainly for fire protection and have little, if any, revenue from sale of water to private users. Comparing the remaining eighteen groups, it will be found that the salaries paid are larger in all but one group for the private plants than for the municipal; while a comparison of the wage columns shows that in ten of the eighteen groups the municipal plants have the larger average figure.

This table then, would tend to show that private companies pay higher salaries and municipalities, higher wages, but one cannot assume this comparison as a positive proof, even for the cities compared, inasmuch as the number of men employed to perform this work at the cost indicated would enter in , i.e., the efficiency of the labor employed is one of the factors . In the case of salaries, however, the balance is so decidedly in favor of the private companies that it would seem almost impossible to subvert or reverse the suggested conclusion.

The next summary of especial interest to us here is that involving all items of cost or as given:

Average cost of production per 1000 gallons of water furnished.

Grp.	PRIVATE PLANTS. Number reporting.	Av. cost of production per 1 000 gallons. Exclud. depreciation taxes, and interest on total investment.	Includ. depreciation taxes, and estimated int. on total inv.	MUNICIPAL PLANTS. Number reporting.	Av. cost of production per 1000 gals. Exclud. depreciation and interest on total investments	Including depreciation estimated, taxes, int., on total inv, &c
1.				5	$1.0574	$2.3908
2.	5	$0.1464	$0.6928	35	.2988	.8789
3.	12	.1535	.4966	35	.1503	.4486
4.	12	.1382	.4092	45	.1158	.3050
5.	10	.0962	.30 66	41	.1018	.2636
6.	12	.1020	.2471	26	.0848	.2911
7.	50	.0585	.1874	105	.0606	.1754
8.	44	.0434	.1375	52	.0423	.1180
9.	26	.0511	.1520	24	.0461	.1371
10.	20	.0368	.1084	23	.0342	.1015
11.	9	.0377	.1285	22	.0381	.1265
12.	14	.0408	.1108	6	.0164	.0879
13.	8	.0470	.1339	12	.0254	.0845
14.	23	.0363	.1165	15	.0269	.1046
15.	51	.0251	.0795	58	.0227	.0858
16.	30	.0206	.0762	38	.0252	.0902
17.	14	.0194	.0672	20	.0195	.0745
18.	30	.0176	.0551	78	.0175	.0639
19.	4	.0291	.1163	6	.0107	.0444
20.				13	.0167	.0476

Wright, Op. cit. p. 35.

This table brings out the almost surprising discovery that - again omitting the first two groups - whether we figure cost excluding depreciation, taxes, and interest on total investment, or including these items as actually reported for the private companies and estimated for those municipally owned - the cost in the first case is greater to the private company in thirteen groups out of the eighteen, and in the second case - that including all items, in fourteen groups out of the eighteen.

Taking into consideration then, the two summaries, we must assume that either the private company pays needlessly large salaries, which assumption is not preposterous in cases where the officials are also directors and heavy share-holders, or else the municipality is more successful in securing efficient labor than the private company, which assumption would not be borne out by our experience in other public work.

Another summary of interest is that of average price per thousand gallons for water sold. The figures in this table indicate the absolute average charge for the amount sold, without regard to water furnished by municipal plants for public use free of charge.

Average price per 1000 gallons of water sold.

	PRIVATE PLANTS.		MUNICIPAL PLANTS.	
	Number.	Average price per 1000 gals. of water sold.	Number.	Average price per 1000 gals. of water sold.
1.			5	$0.5608
2.	5	$0.4476	35	.2031
3.	12	.3476	35	.1579
4.	12	.2521	45	.1449
5.	10	.2372	41	.1090
6.	12	.2164	26	.1108
7.	50	.1524	105	.0840
8.	44	.1281	52	.0743
9.	26	.1183	24	.0792
10.	20	.0973	23	.0639
11.	9	.1059	22	.0640
12.	14	.0902	6	.0580
13.	8	.0981	12	.0693
14.	23	.0963	15	.0889
15.	52	.0705	58	.0615
16.	30	.0589	38	.0708
17.	14	.0618	20	.0610
18.	30	.0563	78	.0593
19.	4	.1136	6	.0471
20.			13	.0526

Wright, Op. Cit. p. 42.

It will be noticed that in all but two groups, the sixteenth and the eighteenth, the charge is less , and in most cases, very much less, for the municipal plants. Yet notwithstanding this lower rate charged by municipal plants an examination of Table 11. in the report, (which is too lengthy to be here reproduced) shows that, in the larger cities, with very few exceptions, the income from this rate more than pays the total cost of production including the water used for public purposes by the city. In the smaller town where the private demand is largely supplied by wells and the primary object of the waterworks is fire protection, the reverse of this condition naturally is found to be the case, and the city has to pay for its water out of other public funds.

The National Civic Federation Report mentioned on page (illegible) covers in detail, so far as American waterworks are concerned five cities , viz: Chicago, Cleveland, Syracuse, Indianapolis, and New Haven. The first three of these have municipal waterworks and the last two are supplied by private companies. Chicago was chosen, it seems, especially by reason of the interest that members of the commission had in the plant from the standpoint of the proposed municipalization of the street railways in that city. Syracuse was chosen because it was one of the larger cities which had lately changed from private to municipal ownership and management, and would thus afford, by itself, an in-

teresting and valuable study. It was the plan of the commission to compare Syracuse and Utica because of their many similiarities , due in part to proximity and especially to the fact that both have a gravity system.(1) But the Utica Water Company, in the words of the committee, "did not at first welcome investigation" and hence was not studied with the care bestowed on the others. New Haven and Indianapolis were selected as having two of the largest private companies east of the Mississippi, and are doubtless quite representative of their class. The report does not give any special reason for the selection of Cleveland but it seems reasonable to suppose that the committee were desirous of knowing what could be accomplished by a system of municipal waterworks in the hands of a strong and able man such as Supt. Bemis of that city.

In the first place, it may be well to note the comparative cost of water in these cities as reported by the committee and also to have before us the size of the cities.

The following table gives the population of each and the semi-annual flat rates:

(2)

Place	Population	5-room house	8-room house.
Syracuse	118,880	$5.00	$10.00
Cleveland	460,327	3.00	4.75
Chicago	2,049,185	3.50	6.25
New Haven	121,227	4.00	9.19
Indianapolis	219,154	4.00	12.20

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(1) National Civic Federation Report. Part 1. Vol.1. P.130.

(2) Ibid. p. 131.

In each case these rates are for houses of like fixtures and conveniences so that the comparison is reduced as far as possible to a uniform basis. The charge for five-room houses, it will be seen, is lowest in Cleveland and Chicago and highest in Syracuse, while for the eight-room houses the first two named hold the same place respectively but the highest charges are to be found in Indianapolis. Thus, as pointed out by the committee, the charges on the flat-rate are, as a whole, lower for the municipal plants compared. It is also pointed out that Syracuse has lately raised the flat rates in order, it is intimated but not asserted, to encourage the introduction of meters. If however, we omit Chicago from the comparison, which city by virtue of its size as compared with the rest might be considered in a class by itself, we find the average for the two representing municipal ownership will, so far as five-room houses are concerned, exactly balance the average for the two private representatives, while in the column for eight-room houses the municipal again have the advantage. In the matter of meter-rates taken in connection with the minimum rate, the municipal plants decidedly outclass the private in cheapness.

(1) Place	Rate per thousand gals.	Semi-annual Minimum
Syracuse	18 2/3 ¢	2.38
Cleveland	5 1/3 ¢	1.25-(plus 2.50
Chicago	10 ¢	0 where flat
New Haven	18 ¢	4.00 rate exceed -
Indianapolis-----	18 ¢	8.10 ed 3.¼)

(1) National Civic Federation. Part 1. Vol . 1. p.131.

Chicago, has, since this comparison was made, reduced its meter rate to seven cents.

In New Haven the consumer installs and in Syracuse he both buys and maintains his meter . In all other cases these things are looked after by the company or the department as the case may be, but in New Haven the consumer is charged a rental of 50 cts. for a small meter and for larger sizes , more in proportion, which is not the case in any of the other places.

If the table comparing the special rates to large consumers is studied much the same results will be obtained as in the two cases given. It seems impracticable in this paper to attempt to review all the phases involved in the comparative reasonableness of charge, such as the number of metered services in each instance, the number or per cent of those having meters who pay only the minimum charge, the number of those receiving reduced rates as large users, etc. Suffice it to say that such study does not change the indication already noted but, on the contrary, most of them tend to strengthen the municipal side of the argument.

Attention must, however, be called to the relative interest and dividend charges of the companies.

(1) Syracuse at the time of investigation, had capital charges amounting to $133,057.02 or $6.99 per service. Cleveland had $166,793.26 or $2.54 per service: Chicago had

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(1) National Civic Federation. Part 1.Vol.1. p. 135.

$105,431.64 or $.47 per service: New Haven $220,000 or $12.80 per service; and Indianapolis $160,000 or $9.46 per service. Here is where one of the essential differences between the two systems becomes apparent . The municipal plants have been accumulating a large surplus. Syracuse, in spite of the fact that she only seventeen years ago paid $850,000 for the old private plant, the larger part of which had to be scrapped immediately, in 1906or fourteen years after the purchase by the city, had accumulated a considerable surplus.

(1) There were three reasons why the old plant was of little use to the city. In the first place, the cement pipes composing a large portion of the street mains were not strong enough to bear the pressure of the new system; the iron pipes in use were too small to carry an adequate supply; and the new works, being a gravity system, the pumps, buildings and other apparatus were of no use to the city. Yet, notwithstanding this necessary waste at the outset, the surplus accumulated by 1906 had reduced the net liabilities to 88.9 per cent of the then structural value of the plant.

Cleveland has reduced her net liabilities to 36.5 per cent and Chicago to 9.9 per cent of the structural value of their respective plants.

Thus, if the present efficiency of management can be obtained , which in the case of Syracuse, at any rate, is by no

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(1) National Civic Federation Report. Part 2. Vol.1. pp. 5-6.

means asking much, it is a matter of a comparatively few years before there will be no capital charges and the only really necessary burden on the plants will be depreciation and cost of operation. While in the case of the private companies, the interest and dividend charges will go on undiminished and perhaps be added to by an occasional special shower of blessing upon the stock-holders, unless the public concerned is wide awake enough to take continual precaution to negative the former's entreaty for such showers. In order that there may be no misgivings as to the carefulness of the calculations and hence as to the genuineness of the surpluses of the municipal plant referred to, we quote directly from the report:

(1) "In face of all the extraordinary depreciation charges elsewhere considered and after allowing for all such taxes as it is estimated a private company would have to pay, and after allowing for interest on indebtedness of these plants and such estimated rentals of offices, insurance and help of other departments as might be charged in the case of a private company, and for the value of water furnished free, the three municipal water undertakings showed, according to Marwick and Mitchell, the following surplus for the year 1905:

Syracuse	$31,515.15
Cleveland	61,185.62
Chicago	1,681,512.14 "

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(1) National Civic Federation Report. Part 1. Vol 1. p. 138.

(1) The following table sums up this matter of surplus for the municipal plants:

Place.	Appraisal.	Surplus.	Net liabilities.	Percent of net liabilities to present structural value
Syracuse.	$4,493,718.14	$500,378.50	$3,993,336.91	88.9
Cleveland.	10,930,264.74	6,941,137.92	3,989,126.82	36.5
Chicago.	29,874,762.21	26,909,304.52	2,965,457.69	9.9

A table showing the miles of mains per 100 miles of street does not seem to have any very conclusive argument for either side although it is noticed that the average diameter of the mains is smaller for the private companies taken as a whole than for the municipal. Still another table showing the number of hydrants, seems to tell more of a story. The table follows.

(2)

Place	No. of hydrants.	Hydrants per mi. of main.	Hydrants per mi. of street.
Syracuse.	2809	15.6	11.2
Cleveland.	7642	11.8	11.8
Chicago.	20500	10.1	4.9
New Haven.	992	5.4	5.0
Indianapolis.	2201	8.1	4.9

(3) In connectin with the relatively weak showing for Chicago, it should be stated that only 1485 miles of streets out of its total of 4201.25 are reported by the city engineer as improved.

In the matter of pressure, Syracuse leads and Chicago comes last. The other three are all reported as having satisfactory pressure.

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(1) National Civic Federation Report. Part 1. Vol 1. p. 137.
(2) Ibid. p. 139.
(3) Ibid. p. 139.

In the matter of purity of water supply as indicated by the death-rate from typhoid fever all three municipal plants far surpass the other two. For the years 1905 and '06 the average death-rate per 100,000 in these cities for the two years was as follows:

(1) New Haven 47.4: Indianapolis, 32.2: Chicago, 17.3: Syracuse, 13.2: Cleveland, 17.6. Comparing them with the 38 largest cities in the U.S. before referred to, these places took the following rank in 1906 as regards elimination of this disease: Syracuse, third; Chicago, tenth; Cleveland, fifteenth; Indianapolis, twenty-fourth; New Haven, twenty-ninth.

According to the 1907 report of E.W.Bemis, Supt. of Cleveland Waterworks, where a table is given covering the 42 cities of U.S. which accordingto latest census reports have passed the 100,000 mark, the showing for the private plants in question is somewhat less discouraging. Here we find Syracuse sixth; Cleveland, thirteenth; Chicago, fourteenth; Indianapolis, nine-teenth; and New Haven, twenty-first.

A great deal of weight cannot, of course, be attached to these figures , as in Indianapolis, for example the cause of the large death-rate from typhoid is claimed to be mainly contaminated wells, of which there are a large number in the city.

It has been pointed out however, and we believe with

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(1) National Civic Federation Report. Part 1. Vol.1. p.141.

justice, that were the city municipally supplied, public sentiment would uphold the Board of Health in enforcing the closing of these wells as it will not do under existing circumstances.

A word concerning the situation in Minneapolis seems appropriate at this point.

(1) The waterworks which were established in 1868 have been municipally owned and operated from the first. The source is the Mississippi River and when the works were first established there is little doubt that the water was above the average as to purity. As the city grew, however, and the banks above the pumping station became more densely populated, the water became contaminated and it was found necessary to move the station farther up the river from time to time . The steady growth of cities and towns on the river above Minneapolis, each emptying its sewage into the stream has later made the river water , at any point in the vicinity, unsuitable for domestic use. For a number of years an agitation for pure water has been going on and it seems beyond question that the city in the near future will either find a new source or construct a filter for the purification of the river water. Various plans for a new source have been proposed, of which, the underground artesian basin, Lake Superior and Mille Lac each has its ardent advocates. Others, and these seem to be gaining in strength,

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(1) Minneapolis Waterworks Report. Registrar and Supervisor of Waterworks. ,1907.

are equally pronounced in favor of some plan of filtration of the river water. The delay in providing a pure water supply in the case of Minneapolis is, of course, regrettable, yet, owing partly, no doubt, to the fact that a considerable percent of the population have supplied themselves with well or spring water, the typhoid rate at present is not high. In fact, Minneapolis ranks seventeenth in low typhoid fate among the 42 largest cities of the United States. The death rate (1) from this cause in 1907 was only 26.35 per hundred thousand. This, it will be remembered is less than either Indianapolis or New Haven. Thus, even in its worst feature and one which admittedly should have been remedied a number of years ago, the Minneapolis situation is by no means to be compared with the worst cases that have existed and even now exist. On the other hand, the rate to the consumer is considerably below the average, being only 8 cts. per 1000 gallons. About 75 percent of the service is metered, and meters are required to be placed on all new connections where the amount on the flat rate plan exceeds $4.00 per year. The amount of outstanding bonds in 1907 was $1,930,000. and the average rate on these was 4 percent, making a capital charge of $77,200. The total cost of the works up to the close of that year was

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(1) Board of Public Service. Cleveland, 1907.

$5,936,480.90. The receipts for the same year, over and above the cost of operation and maintenance, were $232,868.62. Thus without venturing to say just what the net profits would be if all legitimate charges such as taxes, depreciation ,etc., were amply allowed for, it is safe to say that the works area financial success.

In respect to fire protection afforded, the Minneapolis waterworks rank with the average of the municipal plants previously reported on, and and is considerably above the private plants referred to in that connection. (1) There are 4,015 hydrants to 348.7 miles of mains or 11.4 plus per mile.

The National Board of Fire Underwriters have this to say of Minneapolis: (2) "Force and supply main adequate and in good condition. Pressure generally satisfactory. Main arteries generally of adequate size, but secondary feeders not complete in outlying districts". After criticising further minor details and commending others- the hydrants being spoken of as in "excellent condition" and the " spacing mainly good," they go out to say in a concise summary of their general summary, which we quote in full, "Water supply from an adequate source: supply works good and supply available in most important section ample. Fire department efficient but slight-

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(1) Annual Report,Registrar and Supervisor. p. 14.
(2) National Board of Fire Underwriters,Report 1907,Nov. p. 41.

ly deficient in men and apparatus. Fire alarm system fairly reliable but inadequate." While the situation at Minneapolis thus leaves much to be wished for, and while friends of municipal ownership would not select her waterworks as a sample of what can be accomplished under municipal ownership, it has, without doubt, a great many points of advantage over the average private plant.

CHAPTER 4.

GENERAL SOCIAL AND POLITICAL ASPECT.

With these essentially material and more or less tangible facts before us, we now propose to take a more general view of the relative advantages and disadvantages of the two kinds of management. In the first place, we wish to point out that whether or not the government, as the representative of the people, shall perform a service directly by and through its own agents, or entrust the performance of such service, to more or less independent private agents , depends upon the nature of said service. If it is open to competition, or if it is of such a nature that while its performance is essential to the present or future welfare of the state or smaller unit of society, but does not immediately or closely affect the safety or welfare of the individual, such service may wisely for just remuneration and under reasonable regulation be entrusted to a private person or collection of persons.

But where the performance of this service is in its nature a monopoly,and at the same time affects the safety and welfare of the individual consciously, in the same way that he is affected by a health department, a police department, or a public school, then we are inclined to believe that the proper agency for the performance of the Service, both theoretically and practically, is the people themselves, through their government. Such we believe is th e nature of the service of providing a munici-

pality with water, an adequate and pure supply of which is a prime necessity from various points of view; for the safety of the individual from destructive conflagrations, for the practice of civilized habits of life, and for the maintenance of life itself. In this respect it differs from other so-called public utilities. In fact, the service of supplying water to a city is more than a public utility: it is literally a public necessity, and to trust its performance to a gain-seeking private corporation, is to place not only one's physical comfort and welfare, but one's life in the hands of such corporation.

Looking at it from another standpoint, which it may not always be possible so to do, we believe that an undertaking essentially public in its nature should logically be placed upon such a basis that the underlying object and aim of the one entrusted with it, shall be the performance of the public service itself, rather than the quite different one of enriching the agent. No one can with reason dispute that this fundamental, logical difference exists in the underlying motive and aim of the two kinds of management. The true aim of the municipality in undertaking to supply its inhabitants with water for their various needs, is that such supply of the best possible quality and in sufficient quantity, may be provided at the least possible cost to the consumer. In ither words, the true and only legitimate aim is the efficient performance of the service itself. The aim and object of the corporation, on

the other hand, is legally and logically , dividends for the stock-holders, and service to the public is not the end sought, but merely the means of the condition upon which the real object may be achieved.

As already intimated, we are not sure that under existing conditions it is never wise to trust the management of a public service to an agent whose first aim , must, in the very nature of the case, be selfish. It may be wise and we believe it is wise in the case of the railroads of United States. This may or may not be true of the trainways or street-car systems of our cities, with their more complex duties and their considerable army of employees. But the water system of a city, with its comparative simplicity and at the same time, its even greater importance , affecting more directly and vitally every individual in the city than is the case with street-car, gas or electric service, it seems to us, should be managed by the municipality directly. Hence, we believe that the tendency of new cities in this country to establish waterworks of their own, and of older cities to take over this branch of the public service, as shown in the early part of this paper, is one entirely justified by the nature of the service. And, as shown by what we believe to be in the one case, the most extensive and in the other case the most extensive and scientific reports on the subject, municipal ownership of waterworks is on the whole giving better service at a more reasonable rate

than private ownership. While, according to Mr. Wright's report, the municipalities are paying out less for salaries, they are both according to his report and the more recent report of the National Civic Federation, paying better wages to the common laborer. And, it is he who from a social stabdpoint needs our concern rather than the salaried official. To quote Mr. Commons, one of the experts employed by the commission, in his comments on the American enterprises investigated. (1)" In the municipal undertakings they (the common laborers) are paid higher wages and given shorter hours than in the case of private employes of the same locality". And again on the following page: "In the U.S. the minimum paid for common labor by the private companies is, in all cases except Atlanta, lower than that of the municipality, and the minimum paid for common labor by municipal undertakings is higher than that of the same locality". Figures fully substantiating this statement are then submitted. An examination of the schedules in Vol.1. Part 2. of this report further substantiates this fact.

It is even admitted by Mr. Sullivan of this same committee, than whom no more bitter opponent of municipal ownership could well be found. (2) Mr. Sullivan says:"For common municipal labor the wages and work day are better than for the average of private labor, the difference being due to

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(1) National Civic Federation. Part 1.Vol. 1. p.106.
(2) National Civic Federation. Part 1. Vol.1. p.63.

several causes, among them the individual superiority of the picked municipal men and the influence of collectiveism , humanitarianism and social politics " That the matter of "picked men" which is unavoidable on the part of municipalities having a comparatively high minimum wage scale, is in part an explanation, is undoubtedly correct and is fully substantiated by the report. Just how Mr. Sullivan reconciled his further explanation of humanitarianism and social politics with his later arguments that municipalities have all the bad characteristics (1) of "impersonal employers", we shall not attempt to explain .

In connection with this topic of relative wages, it is interesting and equally amusing to note the argument of Peter S. Grosscup in the American Magazine quoted in "Concerning Municipal Ownership". (2) Mr. Grosscup argues from a comparison of the wages of motormen in Glasgow and of engineers in Germany, municipal and government employes respectively, with the wages of motormen in Chicago and engineers in U.S. as a whole, that municipalization tends to decidedly lower wages. It does not appear to occur to him that wages paid by municipalities and governments generally must be determined, in a measure at least, by prevailing standards of living and relative prices paid for the satisfying of the various wants of the laborer. He also

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(1) National Civic Federation. Part 1. Vol. 1. p. 74.
(2) Concerning Municipal Ownership. Apr. 1907.

makes the general statement that municipal ownership lowers wages, because it lowers the efficiency of the laborer: and, that the latter may get less than the enterprise can afford to pay, but never more for any length of time. In the first place he does not prove that municipalization lowers the efficiency of the laborer; and it may well be questioned if the longer hours and lower wages , so far as the common laborer is concerned, does not mpre than counterbalance the alleged more skillful and energetic supervision of private enterprises, in its ultimate effect upon efficiency. In the second place, the last part of the statement, viz; that the laborer cannot for any length of time get more than the enterprise can afford to pay, may, it seems to us, quite effectively be met with the argument that public enterprises can afford to pay their laborers mpre than the private, by virtue of their smaller capital charges, as shown by the figures for American waterworks in this paper.

The most serious objection, perhaps, to all municipal undertakings, is the undeniable tending for politics and the spoils syetem to enter into their operation. No one will deny, however, that politics has played, and continues to play a demoralizing part, not only in the granting of franchises, but in their fulfillment on the part of the private companies. Has any municipal franchise been granted in the past, or is it likely ever to be granted to a company, which does not in some measure, at least, resort to the tac-

tics of the politician for obtaining terms favorable to itself? If one can be named, it is safe to say that it is a remarkable exception. Indeed, it is expecting much of a company organized to make money, that it should sit quietly by and watch the selection of councilmen and other city officials, knowing, as it does, that these men are to determine in the first place, whether or not a franchise shall be granted at all, or re-issued, as the case may be; that the nature and period of this franchise, within wide limits at any rate, rests with them; and lastly, that the rigidity or laxity with which the terms agreed upon are to be enforced, depends upon the character and attitude of these same officers. It is directly to the interest, and often necessary to the object of public service corporations, to see that officers are elected who either from personal motives, favor them, or through ignorance or weakness are subservient to their wishes.

That they bring about the desired election results without resort to the expenditure of money, when that can be done, is doubtless true, but that money is freely spent by the public service companies as a class whenever by so doing they can hope to get dollars in return for pennies, is equally undeniable. To say that the New Haven Water Company, one of these investiaged by the Civic Federation Committee, is typical of its class, may be putting the matter a little strong. On the other hand, it is in its general record, by

no means the worst one. We give a brief summary of the situation in New Haven.

(1) The city has been contracting with the company to furnish the water for public purposes for a period of ten years at a time. In 1902 the then existing contract was again about to expire. The company apparently had powerful friends in the council. After various squabbles over the appointment of a committee to draw up a new contract, such a body was finally selected just 3 weeks before the old contract expired. A document as favorable to the company as its friends could push through in committee, was finally adopted and the agreement was rushed through and officially signed three days before the old agreement expired. In order to become binding, the contract had to be affirmed by the legislature, and made a part of the city charter, as well as that of the company. Though a majority of the citizens of New-Haven violently opposed the agreement, and at the next city election turned out all but one member of the Court of Common Council who had favored the same, yet they failed to prevent its passage by the legislature. Even their earnest plea that action be deferred until a legislative investigation of the contract could be arranged for, was ignored. They followed the bill to the governor, urging a veto, but all in vain. They did succeed in bringing about an investigation by the city attorney and the assistant states attorney. The investigation, however, was held secret and Prof. Gray of the Civic Fed-

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(1) National Civic Federation Report. Vol. 1. Part 1.p.129.

eration Committee, who investigated this company, was refused the privilege of examining the report of the legal proceedings. He says however: (1) " The City attorney did not deny that the company had spent large sums of money in creating public opinion favorable to the company and to this particular contract. He did deny and probably correctly that there was any just ground for criminal prosecution". Yet the opponents of the company alleged openly in print that the company had spent $40,000 , and there seems to have been pretty strong evidence to the effect that councilmen had been outrightly bribed. A few pages earlier in the same report we find this statement which in view of the facts we have just given will be readily accepted: (2) " The company throughout its whole history, and especially during the last decade, had always exercised a very great influence on the political life of the community, and had never been without powerful friends in official positions in the city government". It is not often that a company is so unfortunate as to arouse the public to consciousness of the situation as was the case there. Yet even after all this, the company goes calmly on distributing water upon the quality of which, the city, under the contract, has no authority to pass, and for this water collecting and distributing interest and dividends, as already noted, to the amount of $220,000 yearly. (3) And, at the same time being

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(1) National Civic Federation. Vol 1. Part 2. p. 135.
(2) Ibid. p. 130.
(3) National Civic Federation. Vol 1. Part 1. p.145.

assured under the contract, that if the city, at the end of 25 years, desires to purchase the works, it must pay for the franchise as well as the plant itself.

We see then, that it is not a question of choosing a system of management into which politics does not tend to enter. It is rather, so far as corrupting political influences are concerned, one of choosing the plan of management under which these influences may be most successfully minimized and, if possible, entirely excluded. In both cases, it is a question of keeping the people politically awake. It seems to us, however, tht the plan under which the majority of the people even after they are awake, can be held in thralldom, so as to speak, is more dangerous than where, at least as soon as aroused, they have it in their power to set matters right.

That private companies can be regulated by wise and determined city councils, is doubtless true, but it is equally well established that municipal plants can be operated without the evils of political influence.

(1) Chicago and Cleveland are practically free from the spoil system, - especially is this true of the latter place where the works are entrusted to a man of exceptional ability and courage.

Under either system, an efficient city government is absolutely necessary. The argument is often made that unless you have efficient city government, you cannot successfully operate the waterworks , or any other public utility, and that if

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(1) National Civic Federation. Part 1. Vol. 1. p.145.

you do have efficient government, then you are assured of proper service at reasonable rates by private companies.

There is truth in the argument, but the innate tendency of these private companies- the fact that it is contrary to their financial interests to have such efficient government - tends to make them always an element of danger.

(1) The mismanagement, or ratherlack of management, of the municipal plant at Mobile, Alabama, as revealed by an investigating committee recently, has been made use of in an attempt to show that even with "good men", that is, men of integrity, at the head of the government, municipal management is apt to result in utter failure.

In this case it is asserted, and we have no good reason to doubt the assertion, that the plant was left almost entirely to irresponsible negro help. The superintendent as well as the council committee seems to have been quite regardless of all responsibility, both as to operation of the plant and the accounts of the department. In fact, a member of the waterworks committee is quoted as saying after hearing the result of the investigation, that if there had been a meeting of his committee in the last four years, he hadn't heard of it. Yet it is asserted that the personnel of the Mobile city council, and the mayor, were "of the highest as to integrity ", and that no petty politics entered into the management.

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(1) Meyer, B.H. Concerning Municipal Ownership. Nov.08.

The case is indeed a bad one for friends of municipal ownership, but before drawing any fixed conclusion from the same, it would be well to raise the question as to what would have happened, had the plant been privately owned and operated with such men in the city government. Greater efficiency from a financial standpoint would likely have existed, but there is no doubt that the company, and not the public would have reaped the benefit. At any rate, it would be well to read the history of some such private company as that of Syracuse prior to the municipalization of those works in 1892, before drawing any final conclusions.

The president of the company openly stated in a letter published by one of the city papers (1) that the company assumed no responsibility for the quality of the water, inasmuch as the city government had once approved the source of supply. As a matter of fact, the water had since that time become polluted and was quite unfit for domestic use. Not only was the water polluted but the supply was uncertain and the pressure was insufficient for fire protection. Worse than that, the company (2) had less than 40 miles of mains in 172 miles of street.

In 1892, as before stated, after much litigation, the city succeeded in buying out the old company. A pure source of supply was found in Lake Skaneateles, a lake 19 miles southwest of the city and 466 ft. above the level of the Erie Canal at the city.

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(1) National Civic Federation Report. Vol.1. Part 2.p.4.
(2)Ibid. p.4.

(1) After some delay caused by the refusal of the Canal Board, on the ground that the lake was a feeder of the canal, the right to take water from this source, was finally secured.

For the results of municipalization, we beg to refer to the statistics on Syracuse water work in the previous chapter. It might be added, however, that the mortality of the city for the six years immediately preceding the change of management, (2) was 16.89 per thousand while immediately after the introduction of water from Skaneateles it fell to 13.89, and for the seven years preceding 1902, it was but 13.1 per thousand .

Besides a considerable reduction in water rates, the city was saved $150,000 annually in reduced fire insurance premiums, the rates having been lowered 25 percent by the insurance companies.

The case of the proposed contract of New York City with the Ramapo Water Company, in 1900, seems too suggestive to be passed by without a brief review.

(3) The Ramapo contract provided that the company for the period of forty years, furnish the city with an adequate supply of water up to the amount of 200,000,000 gallons daily, at the rate of $70. per million gallons. This rate covered literally the supply of water and nothing more: the city was to retain and maintain its own distributing system,

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(1) W.R.Hill. Municipal Affairs. Vol. 6. P. 730.
(2) Ibid. p. 730.
(3) Report of Merchants Assn. New York.

The Commissioner of Water Supply had already recommended the contract to the Board of Public Works for their approval, when an investigation was instituted by the Merchant's Association of that city.

A committee consisting of thirty-three members, men recognized as experts and in most cases of national reputation, was appointed to do the work. Their investigation covered every important phase of the question and their carefully written report forms a volume of six-hundred twenty-seven pages.

The commission found, as must have been anticipated, or at least suspected, by the Merchant's Association, that the approval of the contract would mean an enormous unnecessary charge on the city, amounting, it seems, almost to an outrage against the public.

We quote briefly from a summary of their conclusions: "From a financial point of view, the acceptance of the Ramapo Contract means, therefore, that the City of New York will lose over $108,000,000 upon a supply from 40,000,000 to 250,000,000 gallons of water daily. It means further, that at the end of the period, the city will own nothing instead of possessing a plant fully worth $37,000,000 ". It goes on to show that even this sum is an underestimate and that, in fact, a fair allowance for the additional supply needed, before half of the forty years period has expired, would materially raise the sum that could be saved by the extension of the existing system and the continuance of the policy of municipal supply.

(1) The committee further says: "Whatever views may be had with regard to the policy of private control of public utilities, there cannot be two opinions as to the folly of giving to a private company the control of the water supply for New York City. The financial history of the New York Water Supply, as well as of the water supply of Brooklyn, alike demonstrates that, considered merely as a financial investment, city ownership and control is profitable and exceedingly advantageous."

Again, in the same summary we find this statement: "The facts show not only that municipalities furnish a more abundant supply than private corporations, but also that they supply purer and more wholesome water."

Even more to the point in its bearing, upon the question before us, is the history of the Duluth, Minnesota, waterworks. Until a decade ago, the works at this place were in the hands of a private company, whose record, according to what seems to be reliable authority, (2) was one of "poor service, extortionate and discriminating charges, an impure water supply which became a serious burden on the health of the community and a most corrupting influence in the political life of the community".

In 1898 after a bitter fight lasting for nearly a decade the predatory private interests were finally overcome by the more progressive and enlightened element of the community, and

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(1) Report of Merchant's Assn. New York. p.607.
(2) Joerns, W.G., Annals of Am. Acad. Nov.1907.p.162. (Also Baker's Manuel 1897.

the plant was municipalized. The waterworks in the hands of the city has proven an unqualified success. Pure water has been provided from a new intake and the system has been vastly extended.

We quote from the writer above referred to, " The pipe lines have been more than doubled, the reservoir capacity increased sixfold since the city took charge of the plant and the rates have been reduced to practically one half the rates that were charged under private management." Notwithstanding all these improvements and astonishing reduction in rates, a considerable surplus has resulted which has been expended in extensions of the plant.

Sioux Falls, S.D. and many other places among the smaller or medium sized cities where municipal ownership has recently supplanted private, have much the same sad story to relate as Syracuse amd Duluth, both as regards service and the dangerous political control over the community, that public service corporations always aspire to and so often succeed in gaining.

Last, but not least, we wish to point out as an argument in favor of municipal ownership of the waterworks that the civic pride which all worthy citizens feel in a successful municipal enterprise, means much to the city. The fact that a person is conscious of part ownership in the enterprise and that he has something to say concerning its management can not help giving a little of that feeling toward it that he is credited by the poet with having toward that land his country

and that spot his home. There seems no room for doubt that if a municipal enterprise is successfully carried on, as at least a decided majority of municipal waterworks are, its influence in this direction is not to be ignored.

CHAPTER 5.

SUMMARY and CONCLUSION.

Before attemtping to draw a general conclusion as to the proper relation of the American city to the water supply, we wish briefly to sum up the facts as they appear to us.

The movement toward municipal owmership is very decided, the plants of this description having increased from six percent of the total number at the beginning of the last century, to sixty percent of the total at its close. The period of retrogression for the municipal plan between 1875 and 1890 may doubtless to a great extent, be accounted for by the fact that this was a period of almost feverish development, and that any way to get a city supplied immediately, was adopted without serious thought of consequences. This view is strengthened by the fact that the total number of waterworks grew during the period, from 422 to 1878, thus mpre than doubling their number twice in the fifteen years. It has also been pointed out that it was not till about this time that promoters discovered the real value of waterworks franchises, and that hence they were unusually active.

It must this be accounted for by the aggressiveness of private promoters and the fact that the public gave little heed to the question we are considering, rather than to a recurrence to the idea of extreme individualism and the non-interference doctrine, which, as we pointed out, held such complete sway at the time when public service enterprises

first developed in America. This theory, however, is doubtless much to blame for our backwardness in the development of this line of public activity as compared with European countries. That this same theory is utterly untenable under existing conditions, must be admitted by all thinking Americans. The question is no longer, Shall the government step in? but rather, To what extent and how shall it step in?

It has been shown that while definite conclusions as to material results are difficult, yet there can be little doubt that municipal ownership of waterworks is the best plan from a purely financial standpoint, the rates to the consumer almost invariably being lower, while the service is generally better. Wages, to the common laborer employed, tend to be higher and the hours shorter. The quality of the water furnished by the city, is generally better than that furnished by the private company. The main reason for these differences we find in the underlying motive of the two forms of agency. The ruling motive in the one case is service, in the other it is private gain. The simplicity of the water supply service, coupled with the fact that it so directly and intimately concerns all, makes it even better adapted to the plan of the city's being the direct agent, than is the case with other utilities. While politics and the spoils system tend to enter all public enterprises, they can be eliminated, and they are no less common and even more dangerous in the case of

monopolistic private corporations, whose direct interest it is to make the government corrupt and weak and to keeping it in this condition. The civic pride and public spirit that successful municipal enterprise tends to instill is absent under the other plan, regardless of either its efficiency or the lack of it.

In view of these reasons, we do not hesitate to say that the proper agency with rspect to city water supply, is the municipality itself, or, in other words, the proper relation of the city to the water supply, is that of owner and operator of the water plant.

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